5th NATIONAL SMALL FARM CONFERENCE
September 15-17, 2009
Springfield, Illinois

Proceedings

of the
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May 3, 2010

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United States
Department of
Agriculture

Office of the
Assistant Secretary
for Administration

1400 Independence
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AUG 2 7 2009

Dear Participants,

Congratulations on your 5th National Small Farms Conference. Your dedication and commitment are greatly admired and we at the Department of Agriculture (USDA) are working hard to give you the tools you need to be successful. Please know that you have my full support in this important work that assists us in reaching our goals.

I am pleased to report that USDA, through Secretary Tom Vilsack's vision, is transforming itself to ensure we meet the needs of all our customers. I note that your conference theme is "Roadmap to Success for Small Farmers and Ranchers." A critical stop on your road map to success should be the new Office of Advocacy and Outreach at USDA. This office will be open and operational on October 1, 2009.

Established in the 2008 Farm Bill, this office will serve as a window to USDA programs and services for small farmers and ranchers, and improve access to USDA programs and the viability and profitability of small farms and ranches.

The Office of Advocacy and Outreach will have four key program areas: Small and Beginning Farmers and Ranchers; Farmworker Coordination; Socially Disadvantaged Farmers; and Higher Education, as well as functional areas, Community Engagement and Accountability.

This office will also serve as an accountability mechanism. We will not only connect small farms to the Department, but we will ensure that as policy is made the voices of small farmers are heard. We will also gather data on outcomes so that we can be sure that the programs being delivered truly benefit those who need them and, in turn, revitalize rural communities and expand economic opportunities.

Best wishes for a successful conference.

Pearlie S. Reed
Assistant Secretary
for Administration

Preface

The conference's theme, "Roadmap to Success for Small Farmers and Ranchers," provided a forum to discuss local, state, regional and national small farm research, extension and outreach issues identified by stakeholders from land grant colleges and universities, community-based organizations and others working with small farmers and ranchers. Successful programs and projects were shared so as to promote and encourage innovative ideas that can be replicated in order to enhance economic opportunities and improve the quality of life for small farmers and ranchers. This Conference built upon the successes of previous conferences held in Nashville, Tennessee; St. Louis, Missouri; Albuquerque, New Mexico; and Greensboro, North Carolina. This is a train-the-trainer conference consisting of several preconference short courses and oral presentations. Posters, exhibits and educational tours were also built into the conference functions to promote partnership and collaboration among conference participants. The preconference short courses were as follows: The Winning Educator, Challenges and Opportunities in Establishing Performance Measures, Farm Financial management, Computer Tips/How to Get Started Using Computers for Small Farmers, Reaching New and Beginning Farmers, and Interactive Grant writing: USDA Stakeholders Grant Writing on Wheels.

This is a train-the-trainer conference consisting of several preconference short courses, and program tracks focusing on: Implementing the 2008 Farm Bill Provisions to Assist Small Farmers and Ranchers; Exploring Alternative Enterprises and Marketing Opportunities; Meeting the Needs of Small and Beginning, Underserved and Diverse Farmers and Ranchers; Building Community Support for Small Farm and Ranch Viability; Developing Sustainable Farming Systems; Managing Business: Keeping the Farm and Ranch; and Meeting Energy Needs.

The educational tours provided included Beginning Farmer —Farm Beginnings and Bio-energy, Small Farm Energy, Building Community Support, Developing Sustainable Farming Systems, Exploring Alternative Enterprises and Marketing Opportunities, Managing Business: Keeping the Farm and ranch, Tour of Lincoln Sites and the 100th Commemoration of the 1908 Springfield Race Riot. As a train-the-trainer, we hope you will find these proceedings helpful in strengthening your programs and services to enhance the economic opportunity and quality of life for the small farmers and ranchers you serve in your communities.

Acknowledgements

On behalf of the U.S. Department of Agriculture and its stakeholders, including land-grant university partners, community-based organizations, foundations, farmers and ranchers, and other public and private sector organizations, we would like to thank Ms. Deborah Cavanaugh-Grant of the University of Illinois Extension and her administration, faculty and staff for hosting the Fifth National Small Farm Conference in Springfield, Illinois.

Great thanks to the following for sponsoring the conference. The United States Department of Agriculture agencies: Agricultural Marketing Service, Agricultural Research Service, Animal and Plant Health Inspection Service, National Institute of Food and Agriculture, Farm Service Agency, Food and Nutrition Service, Food Safety and Inspection Service, Foreign Agricultural Service, Forest Service, Grain, Inspection, Packers & Stockyards Administration, National Agricultural Statistics Service, Natural Resources Conservation Service, Risk Management Agency, SARE (Sustainable Agriculture Research and Education), Rural Development. The Farm Credit Council, Illinois Department of Agriculture Conference management provided by Division of Conferences & Institutes, Office of Continuing Education, University of Illinois at Urbana-Champaign. Elaine Wolff, Program Director and Nancy Simpson, Program Associate. Conference hosted by the University of Illinois Extension.

Appreciation is extended to all the members of the Conference Planning Committee, including the Steering Committee, Program Committee, Local Planning Committee, Poster Presentation Committee, Evaluation Committee, Proceedings Committee, and the Publicity Committee. Ms. Debi Kelly of the University of Missouri and Fitzroy Bullock of Tennessee State University for serving as Program Track Co-Chairs, Steve Engleking of Purdue University, Educational Tours' Chair, Dan Anderson of the University of Illinois Extension, Exhibit Committee Chair, Mary Peabody, University of Vermont, Evaluation Committee Chair, Kathryn Hill, USDA, Publicity Committee Chair, and Cassel Gardner, Florida A&M University, Poster Presentation Committee Chair.

Thanks and appreciation to these individuals for their assistance and support: Dr. Dennis Campion (Associate Dean, Extension & Outreach, Office of Extension and Outreach, University of Illinois Extension), Karen Taylor (Extension and Outreach, College of Agricultural, Consumer & Environmental Sciences, University of Illinois at Urbana-Champaign) Lindsay Record (Executive Director, Illinois Stewardship Alliance), Donna Ortman (West Central Regional Office, University of Illinois Extension), Donna Cray (West Central Regional Office, University of Illinois Extension), Shirley Eck (Convention Services Manager, Springfield IL Convention & Visitors Bureau, Springfield, Illinois), Alison Fong Weingartner (Communications & Media, Office of Continuing Education, University of Illinois at Urbana-Champaign) Gretchen Wieshuber (Studio 2D, Champaign, Illinois), Colien Hefferan (Administrator, USDA – NIFA (formerly CSREES)), Franklin Boteler (Deputy Administrator, USDA – NIFA (formerly CSREES)), Joe Reilly (Associate Administrator, USDA -NASS), Patricia McAleer (Program Specialist, USDA – NIFA (formerly CSREES)).

Many others provided assistance to the overall success of the conference who we are unable to mention, and to all of you, we express our sincere appreciation. Sincere appreciation and thanks to Marietta Pannell and Arthur L. Pridemore, Jr. of the United States Department of Agriculture, The National Institute of Food and Agriculture for their assistance in designing the layout and formatting of this conference proceedings.

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Conference hosted by the **University of Illinois Extension**.

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Partial Client List, Including *Multiple Engagements (in Italics)*

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Comments:
"Thirty-five years in professional and educational theatre have taught me that the prime requisite for a performer is to know his audience. Fritz Klein as Abraham Lincoln not only knows the characteristics of particular age groups and interests, but he has that magical ability to adapt his performance to varying groups without sacrificing a whit of authenticity. Within a month's time I saw Mr. Klein hold forth for a full-length performance mesmerizing an adult crowd that included many professional historians, and then a lively audience of elementary school children. Both performances grabbed and enraptured his audience. I've seen (and often directed) many Lincolns over the years, but Fritz Klein has distilled our 16th President into a living, breathing national treasure." Dr. Ken Bradbury, (Educator, playwright, actor, musician, composer, and syndicated newspaper columnist.) "Just a quick note to thank you for your help this season. I know Lloyd (Thaxton) enjoyed his time with you and you certainly are the perfect Abe Lincoln. Hopefully we'll get to work together again in the future on other projects." Ian Toporoff, America's Funniest People, (Vin Di Bona Productions) "Wonderful job! Visitor feedback was outstanding! On a scale from 1-10, a 10! Erin Kelley, Indiana History Train, Indiana Historical Society "Thank you for making me a popular person! Two days after your visit I continue to hear positive comments" Dr. Christopher Gregory, Truman State University. " I wish I could adequately express my delight regarding your performance as Abraham Lincoln during the Indiana Chamber of Commerce Annual Awards Dinner..." "Your performance was absolutely outstanding and I was completely mesmerized throughout its duration. I can also relay to you how profoundly moved our attendees were that evening. My telephone has not stopped ringing!" Christopher LaMothe, President, Indiana Chamber of Commerce "Fritz Klein IS Abraham Lincoln - He exhibits all the complexity, wisdom, and great country humor that Lincoln possessed. We could not imagine a better Lincoln impersonator - our audiences spoke in raving terms about his appearance at our recent Civil War reenactment. We have invited him back." Jeff Schultz, Wade House State Historic Site, Greenbush, Wisconsin.

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Web Site

Web Site developed by Elaine Wolff (University of Illinois Conferences and Institutes) in collaboration with Deborah Cavanaugh-Grant, Conference Chair and 5th National Small Farm Conference Committee member

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Pre-Conference Short Courses

I. The Winning Educator (Part A)

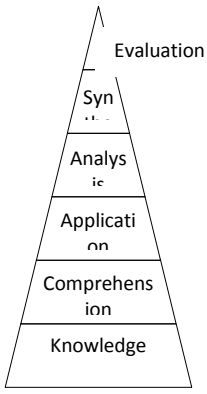
Juan Carlos Rodriguez, University of Florida, Family, Youth and consumer Science, UF/IFAFS
Mickie E. Swisher, University of Florida, Family, Youth and consumer Science, UF/IFAFS

There are different types of learning. Some educators often focus on the content of the information they provide and very little on the processes through which adults learn and apply new information. Many people might find learning new information difficult. Additionally, as students we may not always know what educators expect of us. Although we attend lectures regularly, we may be confused about what we are supposed to learn. This could lead to students becoming disinterested or frustrated with the topics and less likely to actually apply them in real life. Educators should know which mental skills they expect students to acquire through the learning experience. Developing specific and adequate learning and application objectives prior to the delivery of information is key to developing trainings and improving the likelihood students will learn and use new information.

One of the first steps in planning educational activities is to define your goals. That is, after a person has completed your training session, what new skills, knowledge, and/or attitudes should that person have acquired? As a trainer we may, be interested in participants acquiring Educators often assume that some people are ignorant about certain topics and that by "educating" them or providing them with the information that is lacking, they will use this new "knowledge" in their daily lives (Figure 2). However, this approach may be too simplistic and perhaps not appropriate to the accomplishment of good learning objectives. A better way to approach teaching and educating individuals is to first make sure that we identify or determine the need that training

knowledge of important terminology or specific facts. Note that in this particular case, knowledge would be defined as the recollection of previously learned information. Some of the skills associated with knowledge include: defining, describing, enumerating, and listing. On the other hand, your goal might be for participants to be capable of synthesizing concepts and information by the time they complete your training. This means that training participants can creatively apply prior knowledge and skills to produce new ideas or solve problems. Skills such as adapting; anticipating, communicating, composing, creating and designing are all part of the ability to synthesize. Knowledge and synthesis are categories of a cognitive domain identified by Benjamin Bloom and his colleagues in 1956. Understanding the different categories in what today is better known as Bloom's Taxonomy (Figure 1) can help us define and determine what the learning objectives for our training .

Figure 1. Bloom's taxonomy of education objectives.



participants have. This means that as an educator we would have to do our homework and find out what are some of our target audiences' difficulties, deficiencies or even interests to effectively design or develop a training program. The next step will be to deliver or present the training in a way that is effective. We all learn in different ways. Some people learn by watching, while others might learn by doing, thinking or feeling. Finally, as educators we should measure the results of our training efforts. Find out if the training has made a difference. All of these four steps should be part of a good training cycle (Figure 3) and one that we should consider when putting together educational programs.

Figure 2. Model of a simple training program.

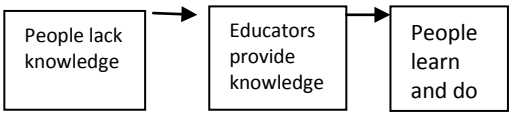
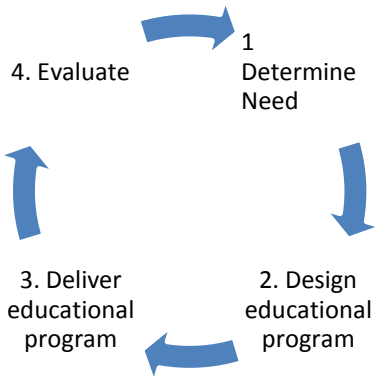


Figure 3. The training cycle.



Once you have identified the needs of your target audience and are about to design your training program, you should consider thinking about possible ideas and perceptions that you believe your audience might have about the particular training that you will conduct. Trainers like Julius Eitington suggest that this is good exercise for educators to do, because it can help them plan how to start off their training and make people feel better about being part of it. For example, he suggests that the trainer might feel that the participants might have thoughts such as:
"I wonder if I made the right decision in coming here."
"Will the trainer be nice or just the usual know- it-all."
"I bet it's the same old stuff."
"I hope the lectures won't be too boring."

Educators will either start their trainings by introducing the participants to the content immediately or by easing the participants into topics before getting them to become deeply involved in the topic. Regardless of how you start things off, as a good educator you should be aware that participants will likely recognize your philosophy of learning, your style of training, your attitudes toward them as learners, and your anxiety level. Your first effort in communicating with your audience will create attitudes toward you and your training program. This is perhaps why many trainers who depend on visual tools like the dreaded Power Point slides to communicate with their audiences are less effective in engaging with them than trainers who use more interactive and participatory learning activities.

It is not that Power Point slides are never a useful tool in trainings, but rather that evidence has shown we have all become so dependant of them that in some cases it is the only thing that is used to communicate with our audiences. Recently, there have been numerous critics of "the art of slide-ology". Even high level officials in Government have expressed their concern and suggested that "Power Point is dangerous because it can create the illusion of understanding and the illusion of control". Educators should keep in mind that learning is an active process and that dependence on of visual aid tools like

Power Point slides rarely results in people learning new information.

Effective trainers must always determine which specific learning and application objectives they will try to accomplish through their training program. Next they must also consider any existing knowledge and experience that participants have and build on if it is applicable. The trainer must also make an effort to make learning an active experience for the audience. Finally, a good trainer should whenever possible measurement whether people have gain knowledge through the training experience. Once easy way to evaluate changes in knowledge is through pre- and post-tests. The pre-post test method is calculated as a percentage change in correct responses to a standardized set of questions.

II. Farm Financial Management

Mr. Dale Nordquist, Center for Farm Financial Management, University of Minnesota, St. Paul, MN

Is there a difference in the financial management of small farms versus larger conventional farms? The answer is yes and no. Small farms:

- Tend to use less debt than larger conventional farms;
- Rely more on labor than technology;
- Manage risk through diversification;
- Earn more non-farm income;
- Have a more complex combination of goals (other than just maximizing profit);
- Tend to be more entrepreneurial;
- Need to focus on margin rather than volume (marketing and operating efficiencies).

But there are similarities in the financial management of small and large farms.

- All want to be profitable;
- All need to be able to pay their bills on time;
- Most if not all want net worth growth;

Economists tend to differentiate between commodity producers and value added producers. Commodity farm managers produce a product that is indistinguishable from the product produced by their neighbor. There is nothing wrong with being a commodity producer but there is a difference in the focus of management. Commodity producers need to focus on being the lowest cost producer, since they are going to take the same price as their neighbor. They will generally earn a small margin on sales, but the efficient commodity producer sells enough volume to make a profit on a small margin (think Wal-Mart).

As a small farmer, you will generally have trouble if you try to compete with commodity producers. You need to differentiate your product enough that you can sell it at a profitable margin and that margin needs to be high enough to make a profit on a low volume of sales. To do that, you need to be more entrepreneurial, to take advantage of niche markets and market opportunities.

All businesses need to focus on financial management in order to monitor and improve profitability. Financial analysis of past performance is a much neglected part of financial management. Most farmers, no matter what their size, like to look forward to where they want to go and how they will get there more than looking back at past performance. But it is difficult to project forward unless you know where you are coming from.

It is important to recognize the limitations of financial analysis and to distinguish between financial analysis and business management. Financial analysis focuses just on the numbers. In business

management, you apply your knowledge of your business to those numbers. Financial analysis tends to be diagnostic only. It might tell you that the patient is sick but it will not often tell you what the cure is. Business management takes the numbers from financial analysis to determine prescriptive solutions to problems. Financial analysis helps you keep score; to track trends in our business. Business management uses those trends for decision-making.

The Farm Financial Standards Guidelines (www.ffsc.org) suggest that farm business managers should routinely complete four financial statements: balance sheets, accrual income statements, the statement of owner's equity, and the statement of cash flows and/or cash flow budgets. (Accrual means that income is recognized when it is earned rather than when cash is received, and expenses are recognized when they are incurred rather than when they are paid.) Most agricultural producers routinely complete only one of these statements, the balance sheet. A shrinking number of farms still complete only the upside-down balance sheet, where the lender completes it and farmer sits on the other side of the desk supplying the numbers.

All of these statements are important. It is my wish that every farmer completed an accrual income statement at least at the end of every year. But, since most farmers, including small farmers, don't do them, and because it is beyond the scope of this presentation to discuss each of these statements, this presentation is going to focus on the balance sheet and what you can learn from your balance sheet in the absence of the other statements.

A balance sheet is a snapshot of the assets owned, debts owed and resulting net worth of your business at a specific point in time.

To be most useful, a balance sheet should be completed at the end of each fiscal year at the very least. Most businesses have seasonal variation in sales and inventories. Completing a balance sheet at the same time each year takes out some of these seasonal variations. More importantly, you bring discipline to your accounting practices if you wrap up each year by putting together a balance sheet to monitor your financial position.

Most balance sheets categorize assets based on the liquidity of the asset, with cash and other assets that are very liquid, meaning that they can be easily converted to cash, at the top. Assets are categorized as *current*, meaning they are cash or will be converted to cash or used up in production within one year; or *non-current*, all other assets. In agriculture many balance sheets further categorize non-current assets as either *intermediate*, assets with an original life of one to ten years, or *long term*, assets with an original life of greater than ten years. Liabilities are similarly categorized into *current*, debts due and payable within one year, *intermediate,* with an original term of one to ten years, and *long term*, those with an original term of greater than ten years.

Financial analysis can be broken into two components: *financial position* and *financial performance*. Because the balance sheet is, by definition, a snapshot of the business, its major purpose is to monitor financial position. It shows the strengths and weaknesses of the business as it is positioned on the date of the statement. However, it does not tell us much about the financial performance of the business. For that, we need to use a tool that measures business activity over a period of time (i.e., an income statement).

We use the balance sheet to monitor financial position in four major areas. First

is current position or the relationship between total current assets and total current liabilities. We look at this relationship to evaluate financial liquidity, the ability of the business to meet its financial obligations when they come due. To be really comfortable, we would like to see two times as much in current assets as current liabilities, in other words, a 2:1 *current ratio*. We also look at *working capital*, the difference between total current assets and total current liabilities. We like to see working capital at least 20%, preferably 25%, of a year's gross sales.

Secondly, we look at balance sheet structure. This really means continuing to look at the relationship between assets and liabilities as we move down the balance sheet. Where is there a lot of equity and where are things tight? Does it look like debt is properly matched with the assets that were financed? Has current debt ever been refinanced onto long term? There is no right or wrong balance sheet structure, except that we would never like to see more debt than assets in any category. Beyond that, the structure of the balance sheet tells us about the strengths and weaknesses of the financial position. High current debt to assets indicates potential liquidity problems. High intermediate debt may signal problems replacing equipment. High long term debt reduces borrowing capacity for expansions and limits alternatives if debt needs to be restructured.

The third area we look at is the bottom line of the balance sheet, total solvency (total assets versus total liabilities) and net worth. Solvency is the relationship of total assets and total liabilities. Here we are looking at the overall financial risk position of the business and the ability of the business to carry more debt. We measure solvency with the *Debt to Asset Ratio* (total liabilities ÷ total assets). We usually feel very comfortable when the debt to asset ratio under 30%, a little concerned when it's over 40% and very concerned when it's over 60%.

I said earlier that the balance sheet is used to measure financial position, not financial performance. But the last area we monitor is a measure of financial performance – that being net worth change. Of course this takes two balance sheets, one from the beginning of the year and one from the end. If there is one number that measures overall progress and performance, it is net worth change. Net worth can only grow in two ways: 1) you earned more than you consumed, meaning net farm income and off-farm earnings exceeded withdrawals for family living and taxes, or 2) you changed the market value of assets from the beginning to the end of the year. If net worth increased, and you haven't raised the market value of assets, you know you made real progress. Simply said, your earnings paid for all your living expenses; the extra went into net worth.

Small farmers rarely have the resources to hire financial management services. They have to be their own chief financial officer. And they rarely have the type of sophisticated financial information system that larger main-street businesses use. But they can learn a lot about their business by monitoring their balance sheet at the end of each year to analyze changes in their working capital, balance sheet structure, debt to asset ratio, and earned change in net worth.

AgPlan

How can we help small farm managers be better positioned to succeed during good times and bad? We think a key is to help them develop a business plan. A business plan is a formal statement of business goals, the reasons why those goals attainable, and the plan for reaching them (Wikipedia).

The purpose of a business plan is the help you communicate. It communicates what your business is all about externally – to lenders and investors; and internally to family members, partners, and employees. It can also clarify what your business is all about to you. Completing a business plan forces you to think through your vision and goals, and your operations, marketing, financial and human resources plans. A business plan guides good decision-making. If you have a well developed business plan, each time a major decision needs to be made, you just ask yourself: Does this fit into our business plan?

A business plan helps producers take charge of their own businesses. It also provides your lender more than he or she is likely to receive from your neighbor – it demonstrates to lenders that you have taken the time to think through the details required to make the business succeed. A business plan is particularly important for new or expanding businesses and for creative, non-traditional enterprises. We have learned through experience that writing a business plan is very time consuming, or it is very expensive if you hire it done. And if you hire it done, will it really reflect your values? A business plan, to be really useful, needs to be written by the farm managers.

The Center for Farm Financial Management has developed a tool to make business planning easier. *AgPlan* is a web-based business planning tool with innovative features to solve some the business planning challenges. It is designed to develop business plans for traditional commodity farms, value added businesses, rural small businesses, and commercial fishing. Each type of business plan includes an outline of topics that might be included, tips for each section, web-based resources, and sample business plans. Most small farms will probably best fit the value added business model.

What really sets AgPlan apart is its ability to facilitate interaction between business owners and their educators or advisors. Business owners can give access to their educators/advisors so they can comment or even edit the plan. So as an educator or consultant, you can get a business owner started and then use AgPlan's reviewer feature to monitor and communicate from a distance.

AgPlan is available to the public at www.agplan.umn.edu.

Organic Farm Business Management

Organic producers do not have access to the same financial benchmarks that exist for conventional Ag producers. There are several farm business management associations and farm management education programs that publish financial summaries for conventional producers. The Minnesota Department of Agriculture, the Center for Farm Financial Management, and Minnesota Farm Business Management (FBM) programs have now completed three years of a project to encourage organic producers to enroll in FBM programs. In 2008, 46 organic farms completed a full FINPACK financial analysis. Summary results are available at: http://www.mda.state.mn.us/news/publications/food/organicgrowing/2008orgfarmperf.pdf

The results can also be queried based on size of farm, type of farm, and several other criteria on the FINBIN website at: http://www.finbin.umn.edu/

Interpreting Financial Statements and Measures

One of the unique things about agriculture is that most Ag producers are also their own chief financial officer. Small farm managers, perhaps more than commodity

producers, need to understand and communicate in the financial world. The Center for Farm Financial Management has created a new online workshop series to help Ag producers (and anyone who works with them) understand and use common financial statements and measures. Interpreting Financial Statements and Measures (IFSaM), is intended to teach producers the basics of interpreting the 4 major financial statements and the 21 financial measures recommended by the Farm Financial Standards Council.

IFSaM is a series of online videos that producers can work through at their own pace. Each session provides benchmarks, based on actual farms, that producers can use to evaluate their own financial position and their financial performance. Case farm examples are used to bring the data to life. There are also optional "test your knowledge" quizzes at the end of each session. In total, there is over 2 ½ hours of information. Best of all, it's free. This series was created with funding from the North Central Risk Management Education Center. IFSaM is located at http://ifsam.cffm.umn.edu/.

III. Computer Tips/How to Get Started Using Computers for Small Farmers

Ms. Marcia Kirkpatrick, North Carolina A&T State University, Greensboro, NC
Dr. Henry English, University of Arkansas, Pine Bluff

ADOPTING COMPUTER TRAINING (FACT) PROGRAM

Purpose: To Bridge the "Digital Divide" of Small, Part-time and Limited-Resource Farmers and Build Sound Farm Business Management and Recordkeeping Skills through Computer Literacy and Technology

ISSUE:
Inaccurate recordkeeping and filing systems reduced some farmers' abilities to obtain loans and legal settlements, and to effectively market their crops. Poor recordkeeping also was influenced by computer illiteracy, low levels of education, lack of managerial ability, and lack of electronic buying and marketing skills to compete in the marketplace. Surveys revealed that these farmers kept farm records "on the dashboards of trucks, under truck seats, and in shoeboxes, paper bags, record books, file cabinets, or file boxes." As a result not adopting modern recordkeeping strategies, some have been unable to keep accurate documents of income and expenses associated with their farming operations.

WHAT HAS BEEN DONE?
The Farmers Adopting Computer Training (FACT) Program was designed to help small, part-time and limited-resource farm families eliminate some of the problems they faced regarding poor recordkeeping and farm management practices. FACT identifies resources and provides computer training to boost computer literacy and enhance knowledge of technology. Collaboration with community colleges to assist with FACT computer training has helped bridge the digital divide at a faster rate.

IMPACT:
During the 3-year pilot program, FACT provided limited-resource farmers with approximately 16 hours each of one-on-one computer training in the comfort of their homes. This computer training enhanced their confidence and eroded their fear of using computers. This enhanced self-esteem and confidence resulted in part-time, limited-resource, small farmers exploring structured sessions at community colleges across North Carolina. Through the FACT Program, these colleges offer 30-36

contact hours of tuition-waived FACT training sessions to qualifying small farmers in keyboarding, Microsoft Word, Internet, and Excel over a 5-week period. In addition to these courses, community college instructors and Cooperative Extension are helping small farmers become familiar with and practice how to complete USDA e-forms, Web page design, and PowerPoint presentations so they can better market their farm products and livestock. Since 2004, these classes have improved the quality of life for over 450 small farmers by providing them with the knowledge and skills to maintain better records and better manage their farms.

The program has distributed more than 160 refurbished computers to participating small farmers. Community colleges have offered more than 60,720 instructional contact hours to farmers who attend Cooperative Extension's FACT computer literacy classes. More farmers are now transacting much of their business via the Internet, including pricing farm products and equipment, checking markets, ordering products online, conducting research on purchasing and best growing practices, and sending correspondences and e-mails.

Participants are also accessing loan information from governmental and non-governmental agencies via the computer, which enables them to be competitive in today's high-tech society. Before entering the FACT Program, 75–85 percent of participants had little or no formal computer training or experience. At the completion of the program, 95 percent or more have acquired solid fundamental computer skills that they can apply to on-farm or off-farm jobs if they need to supplement farm income. The program has less than a 5 percent drop-out rate. Upon completion of FACT trainings at community colleges, participants are provided refurbished computers (Pentium IIIs and IVs), if available, donated from governmental and non-governmental agencies. To qualify, participants who do not own modern computers must be actively engaged in farming keep farm records in their homes; have a farm income of at least $1,000 per year. Only one computer is allowed per household.

Since 2004, 17 community college campuses have participated in the FACT Program. Small farmers are attending FACT classes in 36 of the 100 counties across North Carolina with recruitment assistance and support of county farm management agents, technicians, extension associates, specialists, county extension directors, and small, part-time and limited-resource farmers. On average, three new community colleges collaborate with North Carolina A&T State University's Cooperative Extension FACT Program yearly.

IV. Reaching New/Beginning Farmers

Ms. Kathy Ruhf, Land for Good and North East Sustainable Agriculture Working Group, Belchertown, MA
Dr. Stephan Tubene, Small Farm Institute, University of Maryland-Eastern Shore, MD

Pre-Conference Course Outline

i. Introduction: purpose, overview; sense of who's in the audience
ii. Who are beginning/new farmers? (*not the same as small farmers*)
    a. Typologies (USDA, Farm Credit, Growing New Farmers)
    b. Characteristics and learning preferences
    c. Needs
    d. New farmer programming (targeted versus relevant)
    e. Q&A/Discussion
iii. Special populations of new farmers
    a. Immigrant farmers (Asian, African, Caribbean, and Hispanic)

i. Unique characteristics
ii. Unique needs

b. Minority new farmers (African American, Native American, Asian American, Hispanic American, and Women)

c. Q&A/Discussion

iv. How to reach new farmers

a. Challenges to reaching new farmers
i. Lifestyle/scheduling
ii. Cultural
iii. Language, messaging
iv. Resources (time and money)

b. Outreach methods: what works?
i. Land grant/Extension approaches
ii. Other educational institutions (e.g., community colleges, high school)
iii. Other partners
iv. NGO/community organizing approaches
v. Internet-based (Kathy)

c. Q&A/Discussion

v. Interactive/exercise

a. Who are you trying to reach? What are their characteristics?
b. What is the program?
c. What are your outreach options?

vi. Wrap-up

a. Resources
i. References
ii. Useful Links
iii. Related Publications
iv. Contact Persons

I. Who Are Beginning/New Farmers? (Kathryn Ruhf)

A. Typologies

It is important to understand various typologies that are used to describe populations of new farmers.

- Beginning Farmer (USDA definition):

✓ A Beginning Farmer or Rancher means an individual or entity who:

i. Has not operated a farm or ranch, or who has operated a farm or ranch for not more than 10 consecutive years. This requirement applies to all members of an entity.
ii. Will materially and substantially participate in the operation of the farm or ranch.

- Young Farmer (Farm Credit):

✓ A young farmer is a farmer under the age of 35.

✓ A young farmer may be working with the older generation on the family farm

- Next-Generation farmer

✓ Any person who will be the next generation on a farm, or more generally, all successors and entrants.

Sometimes the term specifically suggests the next generation of the family to take over an existing family farm.

- Sub-categories of beginning farmers (The Growing New Farmers Project) The first major sub-category articulated by this beginning farmer project are prospective farmers. A prospective farmer has not yet begun to farm.

✓ There are three categories of prospective farmers:
i. "Recruits": They might consider a career in production agriculture. For example students in vo-ag high schools
ii. "Explorers": They are investigating farming in the future, and may be gathering information, and making connections
iii. "Planners": Have made a choice to pursue some sort of commercial production agriculture; not actually farming yet; actively gathering information and resources; seeking land and finances

✓ The second major sub-category constitutes those who have begun farming:

i. "Start-Ups": Have been farming for three years or less
ii. "Re-strategizers": Making adjustments in their fourth to seventh year
iii. Establishing": Stabilizing in years eight to ten of the beginning farmer phase

These sub-categories are important and useful because each has unique learning needs. Outreach should be customized to reach particular audiences.

Demographics: new and beginning farmers come from all backgrounds and demographics:

i. Young, non-farming background
ii. Young, farming background
iii. Next-generation on the farm
iv. Career changers
v. Geography (rural, peri-urban, urban)

Other categories of beginning farmers include:

- ✓ Limited-resource farmers
- ✓ Minority
- ✓ Women
- ✓ Immigrant
- ✓ Ethnic group

B. Characteristics and Learning Preferences.

Beginning farmers vary widely in what they bring to farming—background and experience, assets, goals and learning preferences.

- Background and Expertise
- ✓ Farming skills and knowledge
- ✓ Farm management expertise
- ✓ Farming background
- Assets and Resources
- ✓ Degree or stage of commitment to farming
- ✓ Family/community support and connection to networks
- ✓ Resources (land, capital, etc.)
- Livelihood Goals
- ✓ Percent time farming
- ✓ Standard of living
- ✓ Decision-making and risk role
- Business Goals
- ✓ Production system and philosophy
- ✓ Marketing strategies
- ✓ Learning Preferences

HANDS-ON experience

- ✓ From other farmers
- ✓ Targeted
- ✓ Contemporary (electronic)

Service provider can reach and serve new farmers in the following ways:

- ✓ *Recruiting:* awareness, opportunities, information
- ✓ *Training/educating*: skills and knowledge
- ✓ *Advising*: resources and information
- ✓ *Consulting*: technical and business support
- ✓ *Counseling*: support, networking

Providers need to consider audience (which segment of the beginning farmer sector), content (what does that sector need to know) and delivery (How? Where? When?).

C. New Farmer Programming

When designing programs for new farmers, several issues must be taken into account. Most important is whether the program is targeted exclusively for new farmers ("targeted") or whether the content is general in nature and may be useful ("relevant") to new farmers, but is not uniquely designed for them.

II. Special Populations of Small Farmers (Stephan Tubene)

The complex nature of the U.S. small farm sector makes it difficult to provide a homogeneous and unambiguous definition of the small farm. Small family farms vary in size and other characteristics such as business organization and arrangements,

production methods, success measurement, source of household income, financial returns, and government payment shares. A farm typology developed by the Economic Research Service (ERS) categorizes small family farms (sales less than $25,000) into four groups, namely (1) limited-resource (i.e., gross sales less than $100,000, total farm assets less than $150,000, and total operator household income less than $20,000); (2) retirement famers (i.e., retired people); (3) residential/lifestyle farmers (i.e., small farms whose operators reported a major occupation other than farming); and (4) farming-occupation (i.e., operators whose primary/major occupation is farming). The implication of this typology is that policies are to be targeted to specific groups of small family farms taking into consideration their specific needs. However, critics think that this typology leaves out other significant groups of small family farmers such as immigrant farmers, beginning farmers, farms in transition, and seasonal farmers whose needs are totally different from those of the mainstream widely recognized groups. This section attempts to describe these special populations of small farmers widely referred to as socially disadvantaged farmers and ranchers (USDA, 2009). As indicated in Table1, these special groups of farmers can be grouped in (1) immigrant farmers; and (2) minority farmers.

A. Immigrant Farmers

Beside U.S. limited-resource and minority farmers, there is a growing influx of newcomers into the agricultural business commonly known as new immigrant farmers. They comprise farmers from several countries and diverse ethnic groups including Asians (i.e., Hmong, Koreans, Chinese, Vietnamese, etc.); Africans (i.e., Sudanese, Togolese, Somalis, Congolese); Caribbean (i.e., Jamaicans); and Hispanic (i.e., Mexicans, Cubans, Chileans, Columbians, etc.) According to NIFI (2004), immigrant farmers are immigrants and refugees, including farm workers, who aspire to have a farm business or are currently farming for the social and economic benefit of their family and community. Immigrant farmers as well as beginning farmers, not properly framed into the Economic Research Service's farm typology (Hoppe, and MacDonald, 2001) have special needs that must be addressed by institutions interested in their survival and success (Tubene, 2002). This new category of farmers is a new rising star, which deserves much attention from policy makers and agricultural service providers. In fact, new immigrant farmers have little or no knowledge of the U.S. agriculture and U.S. farming requirements even though most of them were farmers in their homeland. Their needs must be identified within this new frame in order to better know them and serve them effectively.

Table 1. Non-traditional Farmers: Characteristics and Needs

Farmer	*Characteristic*	*Need*
Immigrant Farmers	- Lifestyle (i.e., off-farm jobs)	- Outreach programs to be scheduled to fit farmers' lifestyle (i.e., on week-end)
Asians: Hmong, Koreans Africans: Sudanese, Togolese, Somalis	- Cultural barrier	- American culture training needed
	- Language barrier	- Training on English language
Caribbean: Jamaican	- Limited resources	- Training on local, state, and federal programs and other funding opportunities
Hispanic: Mexicans, Cubans, Chileans,	- Unaware of government programs	- Networking opportunities needed

Columbians	- Lack of professional connections -New environment	- Training on subject matters (i.e., agriculture 10, and risk management tools)
Minority Farmers African American Native American Hispanic American Asian American Women	- Lifestyle (i.e., off-farm jobs) - Limited resources - Not using government programs - Lack of professional Connections - Potential discrimination (USDA programs)	- Outreach programs to be scheduled to fit farmers' lifestyle (i.e., on week-end) -Earning trust of farmers critical to program success -Networking opportunities needed -Re-assuring farmers about un-biasness of USDA programs needed

As less Americans are interested in farming, immigrant farmers are these new farmers that constitute the next generation of the U.S. agriculture and as such, deserve much attention by agricultural professionals, and policy makers.

B. Minority Farmers

Minority farmers include African Americans, Native Americans, Hispanic Americans, Asian Americans, and women. Very often, these farmers are limited-resources, lack professional network, are part-time farmers and/or have off-farm jobs. Based on these characteristics, minority farmers have unique needs, which are different from those of traditional farmers. As discussed in the case of immigrant farmers and in Table 1, agricultural professionals who work closely with minority farmers are expected to carefully identify their needs in order to respond effectively and effectively. Minority farmers' needs range from scheduling Extension programs on week-end to providing network opportunities. Given previous discriminatory experiences between some minority farmers and USDA agencies, special care is advised when reaching out to these groups of farmers. Building trust with minority farmers is the right path to attending to their needs and helping them succeed.

III. How to Reach New Farmers

Kathryn Ruhf and Stephan Tubene

Reaching new farmers is both challenging and rewarding. This section discusses challenges and methods used to reach new farmers.

A. Challenges to Reaching New Farmers

Partnerships and collaboration among agencies and organizations are key components to identifying new farmers and their needs, and to increasing the capacity of collaborating organizations to provide technical and/or financial assistance to beginning farm clientele. Challenges to reaching new farmers discussed below include farmers' lifestyle, farmers' cultural background, language and messaging barriers, and resource availability.

i. Lifestyle/Scheduling

For agricultural service providers, helping new farmers to start and succeed in their business requires careful identification and understanding of their needs. This includes

understanding their daily struggles and designing programs around these specific needs.

- ✓ Need to be creative in scheduling programs since many new farmers have non-farm occupations
- ✓ This may require meetings on weekends
- ✓ Locating events so that new farmers can attend (very local, or as part of another event they would be going to)

ii. Cultural
- ✓ Need to be sensitive to new farmers' culture
- ✓ Winning their trust could help reach them more effectively

iii. Language and Messaging
- ✓ Language barriers can be overcome by providing interpreter services
- ✓ Outreach and program materials in appropriate language(s) should be used when possible

iv. Resources (Time and Money)
- ✓ Create time for new farmers
- ✓ Work around their schedules
- ✓ Leverage resources across agencies
- ✓ Go after grants to bring in additional money

B. Outreach Methods: What Works?

Outreach methods used to reach new farmers are discussed below. They include land-grant institutions, community colleges and high-schools, NGO and community-based organization and Internet-based approaches.

i. Land grant/Extension Approaches

Traditional Extension methods used to reach farmers include: farm visits, one-on-one technical assistance, farmer focus groups, hands-on workshops and seminars, networking events, trials and demonstrations, on-farm research projects, and targeted scheduling strategy.

ii. Other Educational Institutions
- ✓ Community colleges
- ✓ Private colleges and universities
- ✓ High schools

iii. Other Partners
- ✓ USDA agencies
- ✓ NGOs
- ✓ Farm organizations
- ✓ State Departments of Agriculture
- ✓ "Buy local" groups

iv. NGO/Community Organizing Approaches
- ✓ Apprentice networks (e.g., CRAFT)
- ✓ NGO programs (site-based and not)
- ✓ Conferences, meetings, workshops
- ✓ Bulletin boards
- ✓ Advertisements
- ✓ The "Greenhorns"

i. Internet-Based Approach
- ✓ Social networking sites
- ✓ Online courses and tutorials
- ✓ Blogs, YouTube, Facebook
- ✓ Other organizations' links
- ✓ Online newsletters (others or your own)
- ✓ List serves

vii. Other partners can include:
- ✓ RC&D; Natural Resource Conservation Districts
- ✓ Conservation community
- ✓ Lenders
- ✓ Dealers, suppliers
- ✓ Other beginning farmers/leaders
- ✓ Community education programs

- FFA and 4-H

IV. Interactive/Exercise: Break into Small Groups

Participants were assigned to 5 groups of 5 to discuss and document the three questions below. Each group designated a group leader who reported its findings to the conference audience.

A. Who Are You Trying to Reach? What are their Characteristics?
B. What is the Program?
C. What Are Your Outreach Options?
D. Resources

v. References

Hoppe, Robert and J. MacDonald. 2001. *America's Diverse Family Farms: Assorted Sizes, Types, and Situations*. USDA-ERS, Agricultural Information Bulletin Number 769. Washington, DC.

NASULGC. 2005 http://www.nasulgc.org/publications/Land_Grant/Land_Grant_Main.htm

Rasmussen, Wayne. 1989. Taking the University to the People. Iowa State University Press, Ames.

Tubene, Stephan. 2001. *Agricultural and Demographic Changes in the Mid-Atlantic Region: Implications for Ethnic and Specialty Produce*. Fact Sheet 793. University of Maryland Cooperative Extension.

Tubene, Stephan and David Holder. 2001. *Serving Small Farms in the 21stCentury*. Small Farm Institute, Maryland Cooperative Extension, University of Maryland.

Tubene, Stephan. 1999. *A Survey of Minority Limited-Resource Farmers in Anne Arundel County.* Maryland Cooperative Extension. The Small Farm Institute. Report #99-1.

vi. Useful Links

http://www.immigrantfarming.org National Immigrant Farming Initiative (NIFI)

1. Listening to New Farmers: Findings from New Farmer Focus Groups. http://growingnewfarmers.org/uploads/uploads/Files/LISTENING_TO_NEW_FARMERS.pdf

2. Growing New Farmers: About New Farmers. http://growingnewfarmers.org/main/for_service_providers/about_new_farmers/

3. Making Effective Referrals to Help New Farmers http://growingnewfarmers.org/uploads/uploads/Files/Making_Effective_Referrals.pdf

4. Addressing Gaps in New Farmer Programming http://growingnewfarmers.org/uploads/uploads/Files/Addressing_Gaps.pdf

5. Targeted and Relevant New Farmer Programming http://growingnewfarmers.org/uploads/uploads/Files/Targeted_and_Relevant_New_Farmer_Programs.pdf

6. What Does the Term New Farmer Mean? http://growingnewfarmers.org/uploads/uploads/Files/GNF_PD_What_does_the_term_new_farmer_mean.pdf

7. Online Learning: Sharing What You Know with New Farmers and Agricultural Service Providers: A Workbook for Designing, Constructing and Delivering an Online Course http://growingnewfarmers.org/uploads/uploads/Files/OnlineLearningWorkbook.pdf

8. USDA. 1999 Class lawsuit http://www.usda.gov/cr/OCR/Pigford/consentdef.htm

9. Tubene, Stephan. 2002. The Small Farm Institute World Wide Homepage. http://extension.umd.edu/agriculture/smallfarms/program.cfm

E. Contact Persons

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http://umes.edu/Agriculture/Content.aspx?id=3136

http://extension.umd.edu/agriculture/smallfarms/index.cfm

http://www.marylandethnicvegetable.com

V. Inter-Active Grant Writing:

USDA/Stakeholders Grant Writing on Wheels

Team Members:

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James Hill, Sustainable Agriculture Research and Education Program
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Donna Hines, Food and Nutrition Service
Jorge Comas, Farm Service Agency
Edgar Lewis, Rural Development

September 16, 2009
Concurrent Sessions

Writing a winning proposal, The Basic Proposal Outline

We will go through a generic proposal outline; draw insight, you should attempt to "spell out" what is expected, section by section in a good proposal; formats will vary based on the grantor. It is "critical" to always use the specific request for application, and to follow the grantor's format.

The basic proposal outline consists of the following: title, application cover page with signatures, table of contents, project summary, abstract, project description, budget, budget narrative, current and pending support, resume, vitae of Principal Investigator and key personnel, appendix.

How important is the title? The title sets the tone for the proposed work. The title must be descriptive, specific and appropriate, and should reflect the importance of the proposal. One way to achieve an effective title is to have a two part title, the first general and the second should be more specific. Some examples of acceptable titles are as follows—Bridging the Urban Rural Divide: Marketing Local Foods in the Mid Atlantic; Partnerships for Sustainable Communities; Mentoring in Alabama.

The cover page with signatures—Each copy of each grant proposal must contain "a proposal cover page", form CSREES 2002 "in response to a USDA request for application; include required signatures. Table of contents—a detailed table of contents should be inserted just after the cover page for consistency and ease in locating information. There should be page numbers for each component of the proposal.

The project summary is very important, typically 250 words or less, and this should be placed immediately after the Table of Contents. Make your summary brief, clear, and interesting to read. Your challenge is to draw in, "hook" the reviewer. The keys to the summary statement are what is known, what is not known, why is it essential to find out?

The Abstract of the proposal should be briefly and clearly stated, with accurate description when separated from the proposal; must be able to stand on its own, take it seriously and write the abstract last.

Project Description should include introduction, objectives (hypothesis), rationale and significance, materials and methods, timetable, facilities and equipment, literature review, and appendix. The project description also provides the background and understanding of the project, it clearly states who is applying, and it should indicate that you have an understanding of the topic. The project description should refer to the funding agencies' purpose and goals, and likely results and benefits the stakeholders. It provides evidence of your accomplishments and demonstrates why you should be funded. This section should be free of jargon.

Objectives should contain what you intend to accomplish with as few words as possible, enumerate the objectives, and when stating your objectives, state them such that you are attempting to increase, decrease, or reduce something.

Rationale and Significance—connects your proposal to the purposes of the competitive grants program, also try to relate the proposal to the purpose of your organization and state the need for the proposed project in terms of the end users.

Materials and methods (procedures)—This section should flow from the stated problems to be addressed and the associated objectives; present the scope of your proposed activities in the context of the resources that are available and needed, and setting the stage for the proposed budget, and the sequence of activities should be reasonable to lead into the next section, the timetable. Try to provide a balance of enough information to be convincing.

Timetable—This section should be organized in a logical sequence and include target dates for task completion; it should have brief statements, with no unnecessary detail. The timetable should indicate the times at which you expect to notify the grantor that the component has been completed.

Facilities and Equipment—Services that are available to you at no cost to your project (even if a match is not required). If you are located at a university, you have a lot of resources to draw on. Land-Grant and Research University faculties have a large advantage.

Literature Review—you must demonstrate that you know the literature, know the activities of others working in your area; quite likely, panel members will know of this and other work.

Budget—use the correct budget form if provided by the grantor. Your grant proposal's budget totals should be itemized and not simple totals. Salaries for support personnel and clerical work should be included. Remember to add fringe benefits, funds for travel, and also include small amounts for photocopying, telephone, postage, and supplies and materials. Equipment request must be handled thoughtfully and carefully. Small equipment requests are not risky if you have adequate justification. Indirect cost

rate is somewhat flexible depending upon the source to which the funding request is directed.

Budget Narrative—details the reason for all the items that you have requested. Give some examples of supplies and needs for equipment. Specify planned trips and/or local travel. Show cost sharing if you think you need it.

Budgetary Detail—personnel services, position or name, % time/effort on project; length of time expected to work, what will the workers be doing? Secretarial/clerical must be exceptional in nature and justified as it relates to the project; fringe benefits—total allowable fringe benefits, provide calculation %

Travel—purpose of trip, destination (if known), number of travelers, estimated cost per trip/person international travel is not allowed depending on the type of grant project.

Materials and supplies—normal operating supplies: office supplies, educational supplies, field supplies, fertilizers, and other supplies necessary for fulfilling the objectives of the project.

Outreach---field days, workshops, educational brochures, factsheets and other outreach activities.

Field Days & Workshops—include costs of holding a field day or workshop, (e.g. rental of facilities, costs of refreshments, equipment or supplies needed for the field day or workshop and any other expenses associated with the preparation and execution of educational field days or workshops,). Provide full details in the budget narrative. Printing of brochures—include costs associated with printing and distribution of educational factsheets or brochures relating to the project and sustainable agriculture.

Miscellaneous All Other Direct Costs
Direct project charges not included in other categories. Description and cost must be included in budget narrative for each item. Other/ Miscellaneous all must be detailed and identified

Examples of direct charges include—Honorariums—provide recipient information, and fee associated with the honorarium.

Subcontracts—include plan of work, budget, and detailed budget narrative. Use the same required budgetary detail guidelines.

Consultants—Provide the name and organization of the consultant, a statement of work, a breakdown of funds being charged to the project.

Matching Funds/Cost Share
May or may not be required by the grantor.

Current and Pending Support—You should ensure that one agency is not funding a project that another agency is already funding. So a word to the wise, don't even try to double dip! Criminal penalties are severe.

Resume/Vitae—include Principal Investigator and key personnel, keep this section short and to the point; briefly state or list your educational and work background; and focus on the last five years

Appendix—are useful to supply valuable information, but often are overdone. Avoid pictures unless absolutely necessary. Word to the wise—if any information in the appendix is critical in advancing the understanding of the proposal, you need to find a way to include it in the body of the proposal.

Slide 1
STAKEHOLDERS' GRANT WRITING WORKSHOP

5th National Small Farm Conference

Springfield , Illinois
September 15, 2009

Slide 2
WRITING A WINNING PROPOSAL

Slide 3
The Basic Proposal Outline

- We will go through a generic proposal outline; draw insight.
- Attempting to "Spell Out " what is expected, section by section, in a good proposal.
- Formats will vary by agency. It is " critical " to always use the specific RFP, and to follow the agency format.

Slide 4
The Basic Proposal Outline

1. Title
2. Application Cover Page with Signatures
3. Table of Contents
4. Project Summary
5. Abstract
6. Project Description
7. Budget
8. Budget Narrative
9. Current and Pending Support
10. Resume /Vitae (For PI, Key Personnel)
11. Appendix

Slide 5
How Important is the Title ?

- The title sets the tone for the proposed work.
- The title must be descriptive, specific and appropriate, and should reflect the importance of the proposal
- One way to achieve an effective title is two have a two part title, the first general and the second more specific.

Slide 6
How Important is the Title ?

- Bridging the Urban – Rural Divide: Marketing Local Foods in the Mid Atlantic
- Partnerships for Sustainable Communities
- Mentoring in Alabama

Slide 7
The Cover Page with Signatures

- Each copy of each grant proposal must contain a " Proposal Cover Page"'
- Form CSREES -2002 if in response to a USDA RFP
- Names of Institutional and/or organizational officials
- Includes relevant phone numbers, fax numbers and email addresses of the PI/PD
- Include required signatures

Slide 8
Table of Contents

- Detailed Table of Contents just after the cover page.
- For consistency and ease in locating information.
- Should contain page numbers for each component of the proposal.

Slide 9
The Project Summary

- Summary is very important(Typically 250 words or less)
- Immediately after the Table of Contents

- Make your summary brief, clear, and interesting to read.
- You challenge is to draw in “HOOK” the reviewer

Slide 10

Keys to the Summary Statement

- What is Known ?
- What is not known ?
- Why is it essential to find out ?

Slide 11

The Abstract

- Should be briefly and clearly stated and accurate description when separated from the proposal
- Must be able to stand on it’s own
- Take it seriously, write this component last

Slide 12

Project Description

- Introduction
- Objectives (Hypothesis)
- Rationale and Significance
- Materials and Methods
- Timetable
- Facilities and Equipment
- Literature Review
- Appendix

Slide 13

Project Description

- Provides the background and understanding of the project
- State clearly who is applying
- Indicates you have an understanding of the topic

Slide 14

Project Description

- Refer to the funding agencies purpose and goals, and likely results and benefits for the stakeholders.
- Provide evidence of your accomplishments and demonstrate why you should be funded.
- Be brief and free of jargon.

Slide 15

Objectives

- What you intend to accomplish with as few words as possible
- Enumerate your objectives
- When stating your objectives, state them such that you are attempting to:

“ Increase ….,”

“ To Decrease ….,” or

“ To Reduce …..,” something.

Slide 16

Rationale and Significance

- Connects your proposal to the purposes of the competitive grants program
- Also, try to relate the proposal to the purpose of your organization
- States the need for the proposed project in terms of the end users

Slide 17

Materials and Methods (Procedures)

- This section should flow from the stated problems to be addressed and the associated objectives
- Present the scope of your proposed activities in the context of the resources available and needed …
- Setting the stage for the proposed budget

Slide 18

Materials and Methods (Procedures)

- Sequence of activities that is reasonable to lead into the next section ……. timetable
- Try to provide a balance of enough information to be convincing

Slide 19

Timetable

- This section should be organized in a logical sequence and include target dates for task completion.
- Brief statements, with no unnecessary detail.
- Timetable should indicate the times at which you expect to notify the granting

agency the component has been completed.

Slide 20
Facilities and Equipment
- Services that are available to you at no cost to your project (even if a match is not required).
- If you are located at a university, you have a lot of resources to draw on
- Land Grant and Research University faculty have a large advantage

Slide 21
Literature Review
- You must demonstrate that you know the literature
- Know of the activities of others working in your area
- Quite likely, panel members will know of this and other work

Slide 22
Budget
- Use the correct budget form if provided by the granting agency
- Your grant proposal's budget totals should be itemized and not simple totals
- Salaries for support personnel
- Remember to add fringe benefits
- Remember to add clerical

Slide 23
Budget
- Includes funds for travel
- Include small amounts for photocopying, telephone, postage, and supplies and materials
- Equipment request must be handled thoughtfully and carefully. Small equipment request are not risky, if you adequately justify
- Indirect cost rate, is somewhat flexible depending upon on the source to which the funding request is directed

Slide 24
Budget Narrative
- Details the reasons for all the items you have requested.
- Give some examples of supplies and needs for equipment
- Specify planned trips and/or local travel
- Show cost sharing if you think you need it

Slide 25
Budgetary Detail
PERSONNEL SERVICES
Position or Name
% Time / effort on project
Length of time expected to work
What will they be doing?
***** Secretarial / clerical must be exceptional in nature and justified as it relates to the project.
FRINGE BENEFITS
Total allowable fringe benefits
Provide calculation %.

Slide 26
Budgetary Detail
TRAVEL
Purpose of trip
Destination (if known).
Number of travelers
Estimated Cost per trip / person
∗ International Travel is NOT ALLOWED
MATERIALS & SUPPLIES
Normal operating supplies: office supplies, educational supplies, field supplies, fertilizers, and other supplies necessary for fulfilling the objectives of the project.

Slide 27
Budgetary Detail
- OUTREACH
  Field Days, Workshops, Educational Brochures, Fact Sheets and other outreach activities.
  Field Days & Workshops – includes costs of holding a field day or workshop. (e.g. Rental of facilities, cost

of refreshments, equipment or supplies needed for the field day or workshop, and any other expenses associated with the preparation and execution of educational field days or workshops.) **Provide full details** in the budget narrative.

Slide 28
Budgetary Detail

- OUTREACH
  Printing of Brochures – includes costs associated with printing and distribution of educational fact sheets or brochures relating to the project and sustainable agriculture.
- MISCELLANEOUS ALL OTHER DIRECT COSTS
  Direct project charges not included in other categories. Description and cost must be included in budget narrative for each item.
  Other / Miscellaneous all must be detailed and identified.

Slide 29
Examples of direct charges include:
Honorariums – Provide recipient information, and fee associated with the honorarium.
Subcontracts – Include a plan of work, budget, and detailed budget narrative. Use these same required budgetary detail guidelines.
Consultants – Provide the name & organization of the consultant, a statement of work, a breakdown of funds being charged to the project.
MATCHING FUNDS / COST SHARE
May or may not be required by the funding agency

Slide 30
Current and Pending Support
To insure that one agency is not funding project that some other agency is already funding
So a word to the wise, don't even try to double dip !
Criminal penalties are severe

Slide 31
Resume /Vitae

- Include PI and Key Personnel
- Keep this section short and to the point
- Briefly state or list your educational and work background
- Focus on the last five years

Slide 32
Appendix

- Are useful to supply valuable information, but to often are overdone.
- Avoid pictures unless absolutely necessary
- Word to the wise ---- if any information in the appendix is critical in advancing the understanding of the proposal, you need to find a way to include in the body of the proposal

Slide 33
THANK YOU !

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September 16, 2009
Concurrent Sessions

SESSION 1A
How Diversity and Equity Became Law: Gaining a Seat at the Table in the 2008 Farm Bill

New Opportunities for Small-Scale Farmers and Ranchers—How New Set-Asides, Advance Payments and other Tools Can

Improve Accessibility of USDA Programs for Producers
Unique Approaches to Sustaining Small Farmers Community Food: Where the Farm Meets the Market Energy Efforts across the Country
Marketing, Disaster Prep, Economics of Dairy
Direct Marketing Opportunities: Farmers' Markets, CSAs, Restaurants and Institutions
Niche Marketing for Dairy, Meat and Vegetables
Sustainable Farming Course Series (Part I)
Sustainable Farming Course Series (Part II)
Gaining Community Support through Community Markets, GAP, Training, and Networking
Using Special Projects and an Institute to Build Community
Support USDA Funding Opportunities for Small Farmers
Understanding the USDA Peer Review Process–Views from the Peer Review Process
Improving USDA's Focus for Small, Beginning and Socially Disadvantaged Farms at USDA
Implementing Farm Policy: Preserving and Enhancing Diversity Initiatives in the Regulatory Process
Sustainable Livestock in a Small Farm System
Ecosystem Approaches to Small Farm Production
Farm Succession Recordkeeping and Business Planning
Enterprise Planning and Market Assessment Tools
On-line Marketing, Legal Issues and Urban Farming
Engaging a Multi-Cultural Farming Audience (Part I)
Engaging a Multi-Cultural Farming Audience (Part II)
Understanding the Small Farm Audience Needs Assessment and Evaluation of Program Impacts
Farmer-to-Farmer Networking and On-line Formats for Knowledge Exchange
USDA Boards and Committees—How You Can Participate and Why You Should
Resources and Programs for Immigrant, Refugee and Other Beginning Farmers and Ranchers

How Small Farms Can Market to Local Collegiate Food Service Operations

Shermain Hardesty, University of California, Davis

Farmers are seeking new ways to tap into the growing interest for locally produced foods in the United States. Farmers markets, community supported agriculture programs and farm stands are some popular direct marketing options for smaller producers. The institutional market is a less obvious opportunity; however, 131 colleges were listed as operating farm-to-college programs on September 1, 2009, at the Web site www.farmtocollege.org. In this paper we assess the prospects for smaller producers to market locally grown produce (LGP) to colleges, universities, and teaching hospitals. We present our survey[1] results regarding current local produce purchasing practices at California's colleges, universities, and teaching hospitals, along with information regarding the barriers to entering this market. We conclude with a discussion of approaches small producers can take to tap into this potentially lucrative market.

Research Findings

We conducted three research projects in 2007 to assess the potential for small- and mid-scale producers to market their produce to foodservice programs at local colleges, universities, and teaching hospitals; this paper focuses on the findings

from interviews with foodservice managers at California colleges and teaching hospitals. A detailed analysis of the survey findings is available at: http://www.agecon.ucdavis.edu/people/faculty/facultydocs/hardesty/the-growing-role-of-local-food-markets.pdf

Twenty-eight percent of the institutions had a LGP buying program, while 22 percent were developing one. They also expressed significant interest in locally produced dairy products and baked goods, with average purchase interest ratings of 5.8 and 5.7, respectively, on a Likert scale ranging from 1 to 7.

As shown in Table 1, 4-year colleges are much more likely to have local produce buying programs, than were 2-year community colleges. There was more administrative support for such programs at the 4-year colleges and universities and the teaching hospitals. Also, foodservice operators at the 4-year institutions and teaching hospitals were either the institution itself, or a regional or national company with a commitment to utilizing locally-grown foods; meanwhile, foodservice operations at 2-year campuses are usually "mom and pop" businesses that are very price sensitive.

Table 1. Status of Local Produce Programs by Type of Institution

Type of Institution	No Program	Developing Program	Have Program	TOTALS
U. of California	1 (7%)	3 (21%)	10 (71%)	14
CA State Univ.	14 (61%)	7 (30%)	2 (9%)	23
Private 4-year	4 (17%)	5 (22%)	14 (61%)	23
Community College	22 (88%)	1 (4%)	2 (8%)	25
Teaching Hospital	8 (57%)	6 (43%)	0 (0%)	14
TOTALS	49	22	28	99

This research was supported by the National Research Initiative of the USDA Cooperative State Research, Education, and Extension Service (now the National Institute of Food and Agriculture (NIFA)); grant number 2006-55618-17015
Here is a summary of our key findings:

- **Among the institutions with LGP buying programs**
  - Their produce purchases averaged $527,000 and ranged from $50,000 to $1.5 million
  - Average food service budget for 2006-07 was $3.5 million among colleges with a local produce buying program and ranged from $200,000 to $12 million
  - Proportion of produce purchases that were locally grown averaged 28 percent and ranged from 3-70 percent
- Price Is Important
  - Average premium paid for locally grown produce with LGP program was 13 percent, ranged from 0-35percent
  - Pricing exercise to measure willingness to pay for locally grown strawberries
  - Average price premium for those with local buying program was 47 percent, compared to 12 percent for those with no local buying program, ranged from -10 percent to 100 percent premium
- 28 percent indicated they would pay no premium
- Criteria Important to Foodservice Managers regarding local Produce supplier

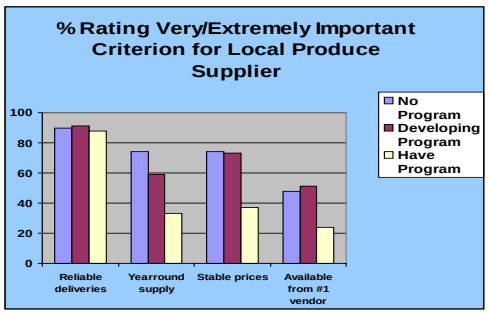

Table 2, Importance Ratings of Production Attributes by LGP Program Status, 1-7 rating scale

Attribute	No Program	Developing Program
Inexpensively price	6.2	5.7
Certified organic	2.3	4.3
Sustainably produced	2.8	5.0
Locally grown	3.7	5.0
Grown by small- or mid-size producer	2.4	3.9

- Barriers To Selling Local Produce to College Foodservice Programs
- Campus' "business as usual" attitude
  - Low prices and convenience can be more important than the "values" of supporting local food buying
  - Contract/bidding regulations and liability insurance requirements
  - There is an inherent lack of understanding of seasonality, "eating locally"
- Challenges in the delivery system, such as logistics, timeliness, and consistency of deliveries
  - Challenges of supply and demand, including limited selection, volume, and seasonality
- Challenges in communication, both with consumers and among those involved in setting up purchasing systems

Tapping the Potential

We offer the following tips to small growers who are interested in marketing to foodservice operations at local colleges, universities, and teaching hospitals. They are divided into three categories: things to remember, distribution strategies and outreach strategies.

Things for Growers to Remember

- Reliable deliveries are non-negotiable. If you are going to be late in making your delivery and/or you are short on product, call the manager and let them know ahead of time so that they can plan accordingly
- Put primary emphasis on the "localness" of your produce to foodservice managers; the fact that you are a small farmer is not as important to them
- Pay close attention to the manager's specific product needs. Check in with them periodically to make sure that you are delivering products of the right

variety, packaging, size, maturity and other specifications.

- Look at the publication, Building Local Food Programs on College Campus at: http://www.caff.org/publications/BuildingLocalFoodProgamsonCollegeCampus.pdf

Distribution Strategies for Small Farm Support Organizations

- Increase number and viability of distributors that work with local, small to mid-scale family farmers—non-profit allied distributors
- Work with specialty, regional, or general produce distributors to increase the number of local/ small to mid-scale growers they buy from

Outreach Strategies for Small Farm Support Organizations

- Create more educational opportunities for food service professionals in their own settings (NACUFS, etc.)
- Bring chefs/food service buyers, distributors and farmers together for networking, partnerships, negotiations, business deals, relationship building
- Conduct more farm tours for foodservice personnel, including chefs
- Create handbooks, and written or on-line materials that include contact information for each sector
- Create seasonal availability lists and online recipes for creative cooking with seasonal local vegetables

Tools to Enhance the Success of Farmers' Markets

Garry Stephenson, Oregon State University Small Farms Program

Farmers' markets across the United States are experiencing exceptional popularity with consumers and growth in numbers. Nationally, farmers' markets numbered over 4,685 as of 2008, an increase of nearly 2,000 markets in 10 years. However, success is not assured. Keeping these markets open and operating efficiently is important both for the farmers who sell at these markets and the communities these markets serve.

This paper summarizes information and resources for three important areas:

1. Matching management tools and structures to specific sizes of markets
2. Why some markets fail
3. What managers identify as the three key
4. Characteristics of farmers markets

Market Size and Management Tools
Each market creates internal structures within its available resources. Markets add management and organizational structure or management complexity as they increase in size (Table 1). Each market size category uses a specific array of management tools. The selection of management tools changes among market size categories. Knowledge of these changes may help markets plan for maintaining efficiency as they grow.

Table 1. Market Size Categories

Category	Number of Vendors
Micro	5 to 8
Small	9 to 30
Medium	31 to 55
Large	56 to 90

Micro and Small markets use more management tools as they grow. This adds more management organizational structure with growth. Tools include site management tools such as maps to assign spaces, and market governance tools such as written rules and boards of directors. Because the management structure used by smaller size markets is already in place for Medium and Large markets, these markets

add “management complexity” as they increase in size. This complexity consists of planning for and acquiring a paid manager and additional employees and stable revenue to support these positions, as well as increased effort in the form of the number of hours worked in-season and off-season. The tasks performed by managers in these size categories are more complex, for example, budgeting and planning systems are more sophisticated.

Not all Markets are Successful

Although farmers’ markets are currently growing rapidly, the number that fails is high. In Oregon, between 1998 and 2005, 62 new markets opened. During the same period 32 markets closed. This indicates the struggle many markets experience as they attempt to provide a sustainable management organization. There are significant differences in the ability of farmers’ markets to obtain financial resources. Administrative revenue has an impact on the ability of market organizers to hire labor to perform functions that help grow and sustain markets. Smaller markets often experience a circular condition in which they cannot attract sufficient customers because they do not have sufficient vendors, but cannot attract sufficient vendors because they do not have sufficient customers to do so. These markets are challenged to garner resources needed to support a paid market manager, a key function of which is to recruit vendors and customers and handle other important operational aspects of the market.

Five interconnected factors were identified with markets that fail:

1. Small size
2. A high need for products
3. Low administrative revenue
4. Volunteer or low-paid manager
5. High rate of manager turnover

Managing to Maximize Atmosphere, Products, and Community

Market managers identified atmosphere, product, and community as key elements of good farmers’ markets. These elements should be seen as a target or goals for market organizers. Farmers’ markets operate in an environment made up of natural and political influences ranging from the dependence of crop production on local agro-ecozone conditions to the impacts of state and federal regulations. Successful markets adapt to these conditions through skilled management and their adaptations are visible: they create an atmosphere conducive to socializing and sales, they procure a variety of high quality products, and they build community support via a loyal customer base and integration into local social and economic systems.

Plan for Success: Recommendations for Farmers’ Market Organizations

1. **Plan New Markets Carefully to Assure Success and Avoid Market Failure**

   Market organizers should spend considerable time deciding whether and how to open a new market. Better planning and promoting before a new market is opened may help with some of the issues that arise during the first year of operation. An important part of the planning process is setting a goal for market size in general or a goal by year, so that cash flow can match the scale of the market and appropriate management tools can be provided

2. **Management Organizational Structure Should be Appropriate for the Size of the Market**

   As pointed out in Recommendation 1, planning for the size of a market is an important step in creating an organization that will have the skills and financial resources to sustain long term operation. There is a relationship between markets of specific sizes and the management tools they use.

3. **Some Markets Should Pursue Community Financial Support**
   Some markets will always have difficulty generating enough administrative revenue to support a paid manager and other important market functions. Some smaller farmers may be viable only through financial or labor resources provided through other civic or government entities. Farmers' markets are an important part of a local economy and enhance the quality of community life. There is justification for government and economic development sector support. Additional organizations to support farmers markets include: the faith community, environmental organizations, and health care providers.

4. **Focus Market Resources on the Local Market and Focus Collective Resources to Address State and Federal Policy**
   Individual market organizations should focus their limited resources on the three core traits of successful markets—atmosphere, products, and community. It is difficult for individual market organizations to have any impact on higher level issues (state, national, international). While regulatory barriers are an issue for farmers' markets, they are not the best use of time for an individual manager and would waste valuable resources. These issues can be engaged and changed collectively. This is one of the reasons for having a statewide farmers' market association.

5. **Applied Research and Outreach is Necessary for the Success of Farmers' Markets**
   There is a need for continued applied research supporting farmers' markets and educational outreach to managers, boards of directors, and vendors. Applied research provides markets with the information they need to impact public policy. It can also assist markets in making strategic management decisions.

Further Reading:

Stephenson, Garry. 2008. *Farmers' Markets: Success, Failure and Management Ecology.* Amherst, NY: Cambria Press.

Stephenson, G., L. Lev, and L.J. Brewer. 2008. "Things are getting desperate:" What We Know About Farmers' Markets that Fail. *Journal of Renewable Agriculture and Food Systems*. 23(3): 188–199.

Lev, L., L.J. Brewer and G. Stephenson. 2008. Tools for Rapid Market Assessments. OSU Extension Service, Special Report 1088-E. Oregon State University. http://extension.oregonstate.edu/catalog/pdf/sr/sr1088-e.pdf

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Stephenson, G., L. Lev, and L.J. Brewer. 2006. Enhancing the Success of Northwest Farmers' Markets: An Executive Summary. *Oregon Small Farms Technical Report Number 22*. Oregon State University. http://smallfarms.oregonstate.edu/sites/default/files/TechReport22.pdf

Wasatch Front Community Supported Agriculture (CSA) Collective: Growing Possibilities and Seeking Local Solutions to Food Production

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CSA Utah: Connecting Local Consumers and Farmers: Challenge or Opportunity?

Northern Utah's Wasatch Front is geographically constrained by the Great Salt Lake to the west in Weber, Davis and portions of Salt Lake counties and the steep slopes of the Wasatch Mountains to east. This relatively small area which provides many of the economic opportunities in Utah and the Intermountain West has been losing prime farmland for several decades with more and more farms selling out to residential, commercial, and industrial developers. Ironically, this high level of development is associated with a population with relatively high levels of education and income, a population that values the importance of local farms and access to fresh local produce. The Great Salt Lake Resource Conservation and Development (GSL RC&D) Council, Inc. has been sponsoring open houses for farms offering a Community Supported Agriculture (CSA) program for the last five years with increasing levels of interest from consumers. However, it quickly became apparent that the limiting factor was farms and farmers, not shareholders. How could the GSL RC&D facilitate access to farm-fresh food by the public within an environment that was increasingly under threat by high rates of rapid development? How could the farmers be convinced that there was a market that would provide them a stable and higher price for their goods? The GSL RC&D needed to bring farmers and consumers together in mutually beneficial manner where both parties could get what they needed; so CSA Utah was created. The GSL RC&D is interested in growing consumers as well as farms and farmers and maximizing both sides of the demand and supply equation.

The GSL RC&D Council is one of 375 Councils that serves the needs of the local community. Over 85 percent of the US is represented by an RC&D Council. This unique and often overlooked resource is comprised of two parts: a USDA program side and a nonprofit decision making side. The USDA RC&D Program has been administered by the NRCS since 1962, which provides many of the supplies, equipment, office space and salary for the RC&D Coordinator. This significant investment allows the RC&D Council to focus their efforts on project implementation. The RC&D Council is a separate nonprofit and is responsible for the decisions, finances, and outcomes of the organization. RC&D Councils vary considerably depending on the challenges and opportunities as well as level of involvement by local leaders. The GSL RC&D Council serves the needs, opportunities, and challenges of Tooele, Salt Lake, Davis, Weber and Morgan counties as well as the Confederated Tribes of the Goshute Reservation. The Council promotes conservation, development and stewardship of natural and human resources; promotes sustainable economies; and enhances the quality of life. The GSL RC&D area has a population of about 1.6 million people or about 75 percent of Utah's population.

CSA is a direct marketing method farmers can use to reduce their marketing risk and operating loans. In its truest form, it is owned and operated by a dedicated group of community members. They buy the land, hire a farmer to grow produce and manage

day-to-day operations and reap the benefits in the form of fresh locally produced fruits and vegetables. However, it has been my experience that CSA is not a hard and firm definition. Farms in Utah have allowed consumers to become shareholders in their operation and in return receive a portion of the harvest throughout the growing season. This is a mutually beneficial relationship that is growing in popularity around the country and in Utah. The farmers get to enjoy decreased marketing risk since shares are usually purchased before the growing season. And shares typically sell for a closer to retail price rather than wholesale price, putting the grower in a "price maker" rather than "price taker" role. In addition, if the farmers provide a good product for a reasonable price, they have the opportunity to retain consumers and keep them coming back season after season. And better yet, their satisfied customers may tell their friends and families about their positive experience and thereby increase the customer base for the CSA farm. Loyalty among specific CSA farms has been quite prevalent. However, there are costs associated with CSA, including pressure to perform. Just like the stock market, if shareholders are not pleased with the results, they may not invest the following year and may tell other community members about their disappointing experience.

The GSL RC&D was successful in competing for USDA Agriculture Marketing Service Farmers Market Promotion Program funds in 2008 to promote CSA in Utah. The scope of the effort has expanded from the Wasatch Front in Northern Utah to the entire State of Utah to better serve the needs and opportunities of farmers and consumers. The Council was eager to let partners and farmers know about the grant, which created an exciting environment that proved to be both an important catalyst and a temptation. By clearly communicating the terms and purpose of the funds, expectations were clearly defined and kept in check. It was made clear that this effort would be for the promotion of all CSA farms, not specific operators or sizes of farms. To accomplish this in an effective and efficient manner was a challenge; however, it was decided a CSA program was the most fair and equitable method. In this case, the GSL RC&D created a program that educated shareholders about the different CSAs in Utah and informed farmers who wanted to learn more about CSA. The GSL RC&D wanted to create a venue to connect consumers and producers, maximizing the supply/demand equation, and increase the capacity of CSA in Utah. CSA Utah was created and has taken a variety of different forms and functions. The main objective is to build the capacity of both shareholders and CSA farmers through marketing, providing technical assistance, encouraging business and conservation planning and modest financial incentives.

Branding the concept was the first step. Brainstorming, dialoging, editing, and designing became a standard process loop during this effort. The first step of this journey was naming the effort. Although the title of the grant was descriptive, it was too long for general use: "Wasatch Front Community Supported Agriculture (CSA) Collective: Growing Possibilities and Seeking Local Solutions to Food Production." CSA Utah was concise and memorable. A tagline or slogan was added to tell a bit more about the effort. Carefully examining the different aspects of CSA that we wanted to emphasize, "Rooted in Your Community, Harvested for Your Table" was selected to describe the local importance of food production. At the same time, efforts to locate a talented graphic artist and verbally describe a unique and identifiable graphic representation or logo of the project were underway. This included networking with partners and previewing potential

contractors' past work and interviewing several to assure they shared the same vision as the project managers. As with the other CSA Utah products, the creative process was cycled over a number of days and weeks in an attempt to meet an early spring deadline that would have the most benefit to CSA farms and shareholders. The main emphasis for this program was communicating with an audience across the state of Utah, educating them of the benefits and challenges and encouraging them to consider joining a local CSA. This has been done in a number of different ways, including purchasing graphic ads in newspapers, periodicals, and weekly supplements in traditional and nontraditional publications, purchasing Public Service Announcements or PSA as underwriters on local radio stations, issuing press releases in both English and Spanish, and creating a website. Participation in public events, such as Earth Day topical film screenings, open houses, celebrations, farmers markets and panel discussions were also useful in building the public awareness of CSA Utah. In addition, we contacted local journalists to make them aware of this effort and further facilitate the outreach effort through a number of articles about farms involved in CSA Utah.

The website has proven to be a significant undertaking that has measurable results and reached a variety of audiences. Many aspects of the project have been incorporated, including the name, logo, slogan, videos, PSAs, photographs, and much more. The blog also serves as an important venue for both consumers and farmers to communicate.

The project manager was able to leverage PSA underwriting efforts by working with local NPR affiliates to have CSA farmers contribute coupons good for a week's worth of produce or equivalent that were made available for fundraising drives. Communication and flexibility were essential for fruitful recording sessions that were narrated by project staff and produced by local technicians. Crafting the script, scrutinizing it for tone and feeling, time (usually 30 seconds or less), and pace proved to be more of a challenge than initially thought, especially when mixed with the various different personalities and radio stations. Negotiating days and times that the messages were broadcast also proved to be important. Different stations had slightly different target audiences that they thought would be the best fit for the message. In addition, grant funds were used to build the capacity of CSA farmers through business plan training, encouraging conservation planning with the Natural Resources Conservation Service and partnering agencies and organizations, and cost sharing for CSA related equipment purchases. Outreach efforts were also fortified with both small and large CSA Utah signs for the farms participating in the program to display, as well as for the GSL RC&D to exhibit at the various events they attended. Further, high quality reusable bags with the logo, slogan, and website were purchased for CSA farms to use as part of their share packaging as well as sold to individuals who wanted to support the cause.

The role of the GSL RC&D has been an objective facilitator, bringing shareholders together with local farmers. The Council has been careful not to make subjective recommendations or evaluations of any of the CSAs, since they differ in so many ways, including but not limited to cost, size of share, location, variety of products and services offered, newsletters and other farm communication, length of season, events, and other variables. The underlying message was to encourage potential customers to ask questions and establish a direct relationship with the people who were responsible for growing their food.

CSA Utah encourages participants to find out what practices farmers use: cultivation methods; how weeds, insects and diseases are dealt with on the farm; who is doing the actual day to day labor; where is the farm located; and a host of other questions that may affect the quality, appearance, and flavor of the produce. The new and existing shareholders have been encouraged to poke and prod to learn about the CSA farm; it is an active not passive exercise. It is the responsibility of each shareholder to ask the questions and assure that they are either satisfied with the answer or find another CSA that meets their requirements. It is up to the CSA farm to assure that each shareholder understands what they will receive for their investment and do their best to communicate with shareholders about the operations of the CSA. It is important for consumers and producers to understand that CSA is a mutually beneficial relationship which requires some effort and patience, as well as commitment.

Maintaining detailed records, documentation and bookkeeping is proving to be an important task. The Council has both a treasurer and a paid accountant to receive invoices, issue checks, collect receipts, and document that services and products are delivered as indicated, requests for payment are properly completed, and deposits are received in a timely. Detail oriented people were best suited for these tasks. Assuring that reports are completed in a timely manner will build the credibility of the GSL RC&D and hopefully lead further funding for this effort.

To date, there are about twice as many farms offering a CSA program in Utah as there were last year. The number of CSA shareholders is unknown at this time; however, it is estimated there is probably a 25 to 50 percent increase or 3,000 to 4,000 CSA shareholders in Utah this year. Display ads have been in publications with well over 100,000 readers. PSAs were broadcast on NPR affiliate stations across all parts of Utah. Several hundred reusable bags were sold and distributed. An estimated 500 personal contacts were made at organized events and farmers markets. Almost $30,000 in CSA related equipment was purchased with $7,000 of equipment reimbursements. Graphic ads were run for several weeks in local Hispanic newspapers. Ad space was also purchased in a weekly gay publication. The CSA Utah website has become highly interactive and content rich, including audio files, links to CSA resources and CSA farms in Utah, photographs, detailed descriptions of CSA operations in Utah, a blog for consumers and a blog for farmers, videos of CSA farms, a place to make donations to CSA Utah, and more.

The CSA Utah program has been very popular and successful with financially secure and conscience consumers and as well as flexible and progressive farmers. Shareholders have enjoyed a unique and rewarding relationship by understanding where and by whom their food is grown, and farmers have had an opportunity to educate their customers about their CSA. However, there is still a large portion of the population in Utah that could benefit from participating in CSA as either a consumer or grower. There is also the challenge of making CSA accessible to low income and diverse audiences. Growing farmers along the Wasatch Front is a need that will become more and more critical as the average age of farmers continues to increase. A beginning farmers program would help train and nurture new and young growers and hopefully increase the number of CSA farms in Utah. Encouraging planning commissions to allow for small farms in new developments would help provide more opportunities for more local farms located in close proximity of new developments. Further funding for CSA

Utah will help these and other opportunities and challenges associated with CSA in Utah.

CSA Utah is one of many ways that local farmers can market their goods and services in a way that will increase the diversity and sustainability of their operations. Consumers can make a positive difference in their communities by supporting a local farm. This connection, both physical and social, between producer and consumer is becoming less common in our economic world. CSA may increase the likelihood that farmland will be preserved even in the most developed areas. Shareholders can enjoy the many benefits, such as a varied and healthful diet, decreased transportation costs, having a voice in what and how their food is grown, and more.

I would like to thank the current GSL RC&D Council Board members for making CSA Utah a reality: Therese Meyer, Juan Arce Larreta, Judy Henline, Avis Light, Jessie Walthers, and Dave Brown, who would like to acknowledge the generous financial support from the USDA Agriculture Marketing Service Farmers Market Promotion Program.

More Information:
Sharing the Harvest by Elizabeth Henderson, Alternative Farming Systems Information Center: http://www.nal.usda.gov/afsic/pubs/csa/csa.shtml

CSA Farm Farms: Management and Income: http://www.cias.wisc.edu/economics/community-supported-agriculture-farms-management-and income/
CSAUtah: www.csautah.org

Building Extension and Agriculture Networks for Farm-to-School Program Success

Patrice Barrentine, Washington State Department of Agriculture
Fred Berman, WSDA Small Farm & Direct Marketing and WSU Small Farms Team
Tricia Sexton Kovacs, WSDA Farm-to-School Program

Description

In 2008, the Washington state legislature passed the Local Farms-Healthy Kids Act (LFHK), establishing a Farm-to-School Program in the Washington State Department of Agriculture (WSDA), creating a Washington Grown Fresh Fruit and Vegetable Grant program to be administered through the Child Nutrition Services Department at the Office of the Superintendent of Public Instruction. The LFHK Act also included other provisions that support access to locally-grown foods for vulnerable populations, such as an Electronic Benefit Transfere (EBT) technology pilot program for farmers markets and a Farms to Food Banks pilot program.

The WSDA Farm-to-School Program, which began development in December of 2008, has an overall goal to facilitate increased procurement of Washington-grown food by schools through the following objectives set out by the Washington state legislature:

- Identify and develop policies and procedures and practical recommendations for schools
- Assist food producers, distributors, and food brokers to market Washington-grown foods to schools
- Assist schools in connecting with local producers
- Identify and recommend mechanisms that will increase predictability of sales and adequacy of supply for purchasers
- Identify and make available existing materials and programs that educate students on the nutritional,

environmental, and economic benefits of preparing and consuming locally grown food
- Support other farm-to-school efforts, such as school gardens and farm visits
- Seek additional funds to leverage state expenditures (as resources allow)

When the bill was passed, it included funding for 2.5 Full Time Equivalent (FTE), but due to state budget cuts, the program was set up with 1.5 FTE instead. The full-time program manager and half-time program assistant serve state-wide. We have joined in with the Small Farms and Direct Marketing Program to form a tiny 4.5-person team that makes up the Domestic Marketing and Economic Development Program.

Success of individual farm-to-school programs and direct purchasing is heavily dependent on the appropriate match of farm and school. The scale, culture, and working realities on each side affect potential project viability. The necessary relationships are best built using locally-based knowledge within each community, which presents a challenge in developing a statewide program with limited staff. To provide the best service, the Farm-to-School Program is building on strong existing relationships and partnerships between WSDA, Washington State University Extension, and other agriculture partners through the WSU Small Farms Team. A farm-to-school committee provides feedback, outreach and ideas, and agricultural professionals around the state serve as an information network and help link up the most appropriate farm partners in their communities.

Additional partners are engaged on the school side, through the Washington Office of the Superintendent of Public Instruction (Washington's department of education) and the Department of Health, to gather and disseminate knowledge and work on shared goals within the school system.

While recognizing that statewide agriculture partners would be necessary to successfully identify and support farms with potential and interest in selling to schools, we also recognized that farm-to-school is a relatively new phenomenon. Schools are not a traditional agricultural market, at least in recent decades, and those working with farms need an introduction to the concept and the market requirements. So, we built a 1-day workshop to train agricultural professionals to support local farm-to-school connections, covering the following topics:

- The farm-to-school concept, including the benefits of school markets to our agricultural stakeholders, the broader goals of food and farming education and local food consumption for students, and the importance of locally-based knowledge to building successful partnerships.
- Tools, tips, and resources for locating and purchasing Washington agricultural products
- Food safety and Good Agricultural Practices (including audits and certification)
- Liability insurance requirements
- Resources and ideas for tying farms to education goals for food, farming, nutrition and agricultural stewardship

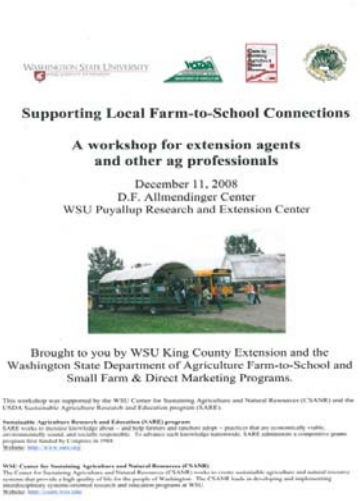
This workshop was presented in December of 2008 with full attendance at our principal site and several attending from three other extension offices around the state via WECN videoconference technology. There was demand for similar outreach in other parts of the state, but it was not possible at that time. Each participant received a binder full of resource materials to be able to support farm-to-school in their county or region of the state. Participants were not all agriculture professionals, but instead

included educators, farmers, and policy advocates in addition to the target audience. This was testimony to the fact that there is increased interest in farm-to-school and a dearth of opportunities for education on the topic, but also meant that the network of farm-to-school support around the state had a more diverse make-up than originally conceived. Farm-to-School presentations since have drawn environmental educators, family and consumer science teachers, high school agriculture and horticulture teachers, and Future Farmers of America (FFA) leaders, foodservice directors, public health professionals, and school garden coordinators.

The original vision of agricultural extension network has also evolved as the funding landscape has changed. State budget cuts have presented a challenge with the original notion of WSU Extension partners based in counties around the state. WSU took significant cuts in a very rough budget session this year, and extension offices are taking funding and staff reductions that make it difficult for the remaining extension agents to support projects like farm-to-school. Other agriculture partners have also faced financial shortages and shrinking capacity. Interest is still high, and we are hopeful that federal funding opportunities such as specialty crop grants will help to fill in some of the gaps and allow for some staff increases and project funding.

The work so far …

In 2009, as the program developed, it became clear that the work to be done would require patience and careful use of staff time and energies. Interest around the state continues to grow and requests for information and technical assistance are increasing in frequency. Rather than attempting to develop workshops in-house for all the necessary actors for farm-to-school success, we elected to speak to stakeholder groups at their existing conferences and workshops. This model has worked well, building on introductory meetings with leaders in the individual agencies and organizations. In the past few months, our "F2S" manager has been invited to speak at the state Healthy Schools Summit, orientation meetings for nutrition directors receiving federal and state grants for fresh fruit and vegetable snack programs, the Washington Family and Consumer Science Educators Conference, the Washington School Nutrition Association Fall Workshops, the Washington State Food and Nutrition Council, and the Environmental Educators of Washington Conference, as well as to speak or facilitate discussions at Healthy Communities Coalition meetings and summer institutes on food and farming education and school gardens. One notable gap is that we have not been able to speak to Extension professionals beyond the Small Farms Team. We were scheduled to present at the annual meeting, but the physical meeting was cancelled and many sessions were cut as they got reduced to a videoconference 1-day format due to funding limitations.



Supporting Local Farm-to-School Connections

A workshop for extension agents and other ag professionals

December 11, 2008
D.F. Allmendinger Center
WSU Puyallup Research and Extension Center

Brought to you by WSU King County Extension and the Washington State Department of Agriculture Farm-to-School and Small Farm & Direct Marketing Programs.

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8:30	Registration and Coffee
9:00	**Farm-to-School, The Local Farms-Healthy Kids Act and the Immediate Opportunity** – Tricia Sexton Kovacs, WSDA Farm-to-School
10:00	**How to make connections for buying WA produce** – Patrice Barrentine, WSDA Small Farm & Direct Marketing
10:45	15 minute break
11:00	**DISCUSSION: Known barriers and potential solutions**
12:00	Lunch
1:00	**Food Safety: Good Ag Practices** –Karen Killinger Mann, WSU
1:45	**Food Safety: USDA GAP/GHP Audit Program for Fruits and Vegetables** – Chuck Dragoo, WSDA
2:15-2:45	**Liability Insurance** – Lesa Boxx, Country Financial
3:00	**Education Resources** – Tricia Sexton, WSDA Farm-to-School
3:30	**DISCUSSION: Next Steps** - Farm contact lists, distribution solutions, processing assistance/projects
4:30	Adjourn

SESSION 1B
Sustainable Farming Course Series (Part I)
Conducting a Small and Beginning Farmer Series

John W. Clendaniel, Delaware State University

Situation

To be successful and competitive, small and beginning farmers in Delaware may take advantage of market niches in high-value alternative enterprises that are more conducive for small operations. The proximity of farmers in the state to large diverse and ethnic populations in the northeast United States presents enviable opportunities for the production and marketing of desirable alternative enterprises and ethnic crops to feed these potential markets. However, production, management, and marketing information about these enterprises are not readily available to the new influx of small scale landowners/farmers that are trying to generate a profit from their land. The first educational step these farmers need is learning the basics. New landowners may have never used farm equipment or have limited experience with working the soil, planting, or harvesting.

Outreach Program

This program was designed as a farming introduction course for all new landowners to inform new farmers through monthly workshops and hands-on trainings. With the help of the Delaware State University (DSU) extension professionals, DSU farm staff, farmers, and Ag Vendors; we developed a 2008 Small and Beginning Farmer Series. The workshops in this series covered all topics needed to start up a new Ag enterprise and were designed with both classroom and hands-on field settings training methods. The educational component of the series for farmers and landowners focused on cultural practices, farm management, marketing, and environmental aspects of niche markets.

<u>The 2008 topics covered:</u>

- **Aquaculture - "What is it and why should I care?"**
  An educational overview of the aquaculture industry in the United States and the opportunities in Delaware.

- **Using Small Scale Tillage Equipment and Mowers.**
  Take an opportunity to learn about and operate a variety of equipment that is just the right size for small acreage.

- **Irrigation for Your Crops and Water Quality.**
  Since we never know how much rain we will get during the growing season, come learn about effective ways to

provide water to your plants and keep your well protected.

- **Tractor Driving 101.**
  Here is the opportunity to attend a hands-on training on how to safely operate and drive a compact tractor.

- **Open House – Come see our Research and Demonstration Pl**ots.
  We have pole lima beans, ethnic vegetables, a high tunnel, small fruits, and many more.

- **Niche Market Opportunities.**
  Learn about specialty crops to meet the needs of diverse populations in the Mid-Atlantic region.

- **Farm Planning 101.**
  Create a business plan for your farming enterprise and learn more about recordkeeping and tax information.

- **Introduction to Sheep and Goats.**
  Do you want to get started in the sheep and goat business? Come and learn about housing, feeding, and breeding sheep and goats, as well as common diseases.

- **Marketing and Value-Added Production**
  Learn about opportunities with retail sales with both unique and common vegetables as well as processing to create value added products for market.

Program Outcome
During the 2008 series workshops, DSU extension professionals reached 82 small and beginning farmers that attended one or more workshops to receive information to assist them with their operations. The impacts directly linked to this program are an increase in awareness by farmers and landowners of both practical agricultural as well as the latest advances in cultural management practices, crop varieties, irrigation technologies, and integrated pest management strategies for agronomic, vegetable, and horticultural crop production. The second impact was a 15 acre increase in the amount of land used in Delaware for farming and producing high value, niche market crops, such as pole lima beans, ethnic crops, and other vegetable crops.

The 2009 Small and Beginning Farmer Series are underway and are providing a new variety of educational classes to some of the farmers from 2008 as well as new farmers.

Engaging Sustainable Small Farms and Farmers in the Teaching-Learning Process: New Directions for "Cultivating Success"

Cinda Williams, University of Idaho
Ariel Lynne Agenbroad, University of Idaho Extension, Canyon County

The Cultivating Success program is a collaboration of University of Idaho Extension, Washington State University Small Farms, and non-profit Rural Roots, providing sustainable small farms education in Washington and Idaho. Since 2000, the program has increased knowledge, skills, and opportunities for producers and strengthened consumer understanding and support of sustainable local and regional farming systems.
Cultivating Success offers a series of courses and on-farm education. Over 35 county

extension offices, college campuses, and/or farms in Washington and Idaho have served as course sites. Over 2,645 students have participated, including 646 Latino and/or Hmong immigrant farmers.
The project team's experience with more than 2,000 community members and farmers taking the Cultivating Success courses indicated that beginning and transitioning farmers have educational needs based on different levels of skills, education, and background. Some of our traditional educational models may not be appropriate due to length of time commitment, relocation limitations, travel requirements, and lack of enough "hands-on" opportunities.

In 2006, program partners implemented a study to reassess the experiential education needs of Idaho and Washington farmers. A Western Region Sustainable Agriculture Research and Education (SARE) research and education grant funded this project which helped to identify specific experiential educational needs for beginning farmers and ranchers in Washington and Idaho and identified the types of opportunities which can be made available on working farms to most effectively meet those needs.

The objectives of this project were:

1) Identify and evaluate existing models for delivering experiential learning that have potential for contributing to a whole-farm or ranch systems approach to small acreage farming and ranching.
2) Assess the relevance of existing experiential learning models to determine how well they will meet the needs of beginning farmers wanting to learn practical, whole system-based sustainable farm and ranch management.
3) Develop the capacity of experienced sustainable farmers and ranchers, extension educators, and researchers to offer effective and meaningful experiential educational opportunities on working farms, university farms, and research stations.
4) Provide experiential education opportunities in small acreage farming and ranching in Washington and Idaho and evaluate their impact on resource management and farm profitability.

This presentation will focus on Objectives 2 and 4; a producer survey and documenting and assessing the on-farm learning opportunities.

The Cultivating Success educational program has been a farmer driven program since its inception. Farmers have been key partners in all aspects: leadership team and advisory board members, instructors, mentors, and tour hosts. This project reached out further to engage an even broader group of farmers to meet these goals: 1) Increase opportunities for and facilitate success of farmer-to-farmer learning, and 2) Seek farmer input to develop learning opportunities that work. We conducted 12 focus groups in Idaho and eastern Washington. Six of the focus sessions were with beginning farmers and the other six involved experienced farmers. Particular attention was given to how existing farmers can offer on-farm experiential educational opportunities while continuing to accomplish their same level of production. Valuable input was provided by 125 people who attended one of the focus groups in six locations of Idaho and eastern Washington.

A survey instrument was designed from the results of the focus group sessions to evaluate interest and preferred format/content of on-farm learning activities. The survey was conducted by the University of Idaho Social Science Research Unit (SSRU) in the fall of 2006. Survey data collected from 412 producers were

compiled and reviewed by SSRU and project team members. The SSRU presented a completed report of their findings in February 2007, titled "Cultivating Success: Surveying the Needs of Small Farm Producers in Idaho and Washington."

Survey results include educational topics of interest, formats, scheduling, amount of on-farm education needed, and interest in attending and/or providing on-farm education.

The survey found that the highest rating topics that would be most useful for farmers to learn from other farmers were soil building; weed and pest management; sustainability and holistic management; organic production methods; marketing; irrigation systems and water management; value-added topics; and business management.

The two highest rating responses for producers preferred scheduling to make on-farm learning possible were weekend class or activity (1 day only) and periodic visits throughout the farming season. They also indicated interest in attending specific farm events (e.g., calving and harvest) and intensive weekend workshops (2-3 days).

The two highest rating responses for preferred methods to learn from other farmers were to visit other farms/have a mentor visit my farm, and farm tours/farm walks. Phone calls or e-mails, shadow or work with experienced farmers, farm mentor visits my farm, and informal farmer to farmer gatherings (grange model) also were of interest to about 10 percent of respondents.

Experienced farmers' top three preferred formats for teaching are farm tours or farm walks, on-farm workshops, and informal one-on-one visits. About 25 percent chose the following as other preferred methods: answering questions by phone or email, in-class presentations, and apprenticeships.

Surveyed producers showed a strong preference for on-farm learning. Almost half of respondents felt that 75 percent of new farmer education should occur on-farm. On-farm activities were the most preferred educational formats for both new and experienced farmers. Some 87 percent of respondents thought farmer-to-farmer learning would be useful or extremely useful. About 72 percent of respondents indicated they are likely to participate in these opportunities.

When asked about the amount of organized education needed for beginning farmers, approximately 62 percent of producers felt a new farmer needs at least 1 year. Most of those (42 percent) believed that more than 2 years of education was required.
The survey asked the respondents if they considered themselves an experienced farmer. Farmers selecting "yes" had an additional set of questions to answer about their interest, incentives, and barriers to providing on-farm education. Farmers self-selected themselves as "experienced" when they had farmed an average of 10 years or more. Approximately 86 percent of experienced farmers would consider teaching new farmers

The survey results were presented at three farmer workshops to gain feedback to aid in the identification of experiential educational formats to document and assess. The project team collaborated with producers on eight experiential educational programs, three in Washington and five in Idaho, for beginning farmers and ranchers. The educational approach, the learning process, and the success of each activity was documented and assessed through post-workshop online surveys or interviews of participants and interviews of farmer mentors/instructors.

The different formats of on-farm education were: 1) Intensive week-long on-farm offering of the Sustainable Small Farm course; 2) Summer internship supplemented with weekly half-day educational classes that are open to public for a fee; 3) Internship on cattle ranch; weekend on-farm work and learning sessions throughout spring and fall; 4) Two topic focused, 1-day, on-farm workshops (lambing school and hoop house construction); 5) Mentorship through a series of on-farm educational work days; instruction in exchange for work hours; 6) 3-hour pasture walk with producers and agricultural professionals; and 7) Organic Farming Practicum course at Washington State University's Organic Farm.
Project team members worked closely with the farmer-mentors and their students during the educational experience and through follow-up after the event. Students were surveyed to determine skills and knowledge gained. The strengths and challenges of learning experiences were evaluated from both the beginning farmer and the farmer-mentor perspectives. Case studies were developed for each on-farm learning format.

Information gathered from interviews with the farmers answered questions about their incentives, challenges and lesson learned. The interviewed farmers indicated they provide on-farm education to other farmers because of the following: a commitment to help build our future food system, enjoyment in sharing their knowledge, desire to give others the hands-on experience to help them be successful, rewards of seeing new farmers apply techniques, reward of watching mentees grow and develop their skills, and interest in sharing where food comes from and helping them get the big picture of farming.

Other ways farmer mentors benefit from offering on-farm education: alternate source of income, give back to community (foster link with community), help new farmers to build future food system and get help on the farm (labor).

Farmers suggested requirements for others providing on farm educational activities. They should have: deep knowledge on what they are sharing, clear understanding of their operation, ability and desire to explain things, patience, good communication skills, be well prepared, and be excited about teaching.

More advice for other farmers doing on farm events included in the following: give thought to why you want to do this, allow preparation time, start with a cohesive structured plan, assess the knowledge base and experience level of student, provide demonstration type skills, use extra helpers/volunteers for some activities, and make yourself available to be a long-term mentor.

Workshop or event participants benefited from on-farm learning because of the following: the information learned was applied directly in the field, they received a lot of one-on-one attention from instructor, the team atmosphere, they got to work on a self directed project of interest, and some indicated they had the flexibility to coordinate on-farm learning schedules around their other obligations.

Students and workshop participants indicated a few challenges with the on-farm learning events they attended. Some felt the experiences might be too overwhelming for those new to farming. They indicted both the week-long and 1-day workshops covered a great deal of information in too short a time frame to absorb. Students learning at university farms indicated that these farms may not reflect a realistic portrait of the operation of a working farm. Examples were provided that indicate

intermittent schedules often provide fragmented learning.

Outcomes of participants' on-farm learning were very positive. Approximately 90 percent indicated the on-farm workshop was "extremely" or "very" effective in helping to learn information or provide a skill. One hundred percent indicated they are better able to perform tasks they practiced at the workshop. All participants listed one or more practices that they have or would adopt after learning at the workshop. About 87 percent said they are better prepared to manage their own farm and 88 percent indicated the information learned helped them save money or be more efficient.

The project results have led to some recommendations for educators who work with farmers in providing educational events. Focus on 1-day on-farm participatory workshops that provide demonstration of skills and time for practicing skills. Provide opportunities for participants to engage in an open discussion amongst themselves. The farm walk (or pasture walk) format that Washington Tilth and Washington State University are offering are excellent examples. Educators can also help by taking on logistical preparation for events will help some farmers. Farmer-mentors and instructors should be paid for their time to teach new farmers. Outside organizations who organize the events should include payment to farmers in the budget. Alternately, they can encourage farmers to hold the event, collect their own fees and then partner by providing logistical and advertising help as needed.

Resources for more information on this project include two publications: Enhancing Farmer to Farmer Education in the Inland Northwest: Case Studies of On-Farm Experiential Education, and Cultivating Success: Surveying the Needs of Small Farm Producers in Idaho and Washington. Both can be found on the Cultivating Success Web site at: **www.cultivatingsuccess.org.**

Farm Beginnings®—Sowing the Seeds for New and Transitional Farmers with Training and Support

Deborah Cavanaugh-Grant, University of Illinois Extension

What is Farm Beginnings®

Farm Beginnings® is a year-long training and support program for beginning and transitioning farmers that provides training and hands-on learning opportunities through classroom sessions, farm workshops and mentorships. Farm Beginnings was born out of the recognition that many new farmers who have the passion to farm sustainably do not have the tools they need to build an economically sustainable business. For this reason, Central Illinois Farm Beginnings® begins its program with a seminar series to give students these tools. The main product of these seminars is a complete business plan that each student creates for their prospective farm business. All seminar content and homework assignments contribute to the development of this important final product. Every seminar, in the nine-seminar series, focuses on a specific aspect of business planning and includes one or more farmer presenters, creating a unique farmer-led learning opportunity.

The farm and classroom workshops provide students with the practical knowledge and training required to begin farming sustainably. The farm workshops are hosted by successful farmers allowing students to gain knowledge while establishing new connections with the sustainable farming community.

Personal, season-long mentorships play a key role in the Central Illinois Farm Beginnings® program. The one-on-one mentorships provide students with an opportunity to learn the practical aspects of running a farm business through interaction with an experienced farmer-mentor. Mentorships are custom-fit to address the specific needs, goals and limitations of each farm family or farm business. They range from very time-intensive (daily for the growing season) to a few farm visits with periodic phone calls.

Overview and History

The Farm Beginnings® program is an initiative of the Land Stewardship Project (LSP), a private, nonprofit organization founded in 1982 to foster an ethic of stewardship for farmland, to promote sustainable agriculture and to develop sustainable communities. The program came out of one-to-one meetings with LSP farmer members who were concerned about who would be farming the land in the next generation. A committee calling themselves the Wabasha County Give-A-Damns formed and began to work informally to help beginning and established farmers make connections. They quickly realized there needed to be more focus around beginning farmer training. With the guidance of an established farmer steering committee they created and launched the first Farm Beginnings® course in 1997-1998.

In 2005, LSP received a North Central Region Sustainable Agriculture Research and Education (NCR SARE) grant to train other organizations in other states in the Farm Beginnings® model. Four programs were trained (two in Illinois, one in Missouri and Nebraska, three of which continue to operate Farm Beginnings® programs today (Illinois and Nebraska).

Current Farm Beginnings® Programs

Currently, there are ten organizations offering nine Farm Beginnings® programs in seven states - Illinois, Minnesota, Nebraska, New York, North Dakota, South Dakota and Wisconsin.

Illinois

- Central Illinois Farm Beginnings: http://central.illinoisfarmbeginings.org
- Stateline Farm Beginnings: www.learngrowconnect.org

Minnesota

- Lake Superior Farm Beginnings (NW Wisconsin/NE Minnesota); www.lakesuperiorfarming.org
- Farm Beginnings (Land Stewardship Project); http://www.landstewardshipproject.org/fb
  - Driftless Region (SE MN, Western WI, NE Iowa)
  - Prairie Region (Western MN, SE S. Dak., NW Iowa)

Nebraska

- Farm Beginnings Nebraska (University of Nebraska Lincoln Extension, Nebraska Sustainable Agriculture Society, Center for Rural Affairs, and Nebraska RC&D's); www.nebsusag.org

New York

- Hawthorne Valley Farm Beginnings; www.hawthornvalleyfarm.org/education/farmbeginings.htm

North Dakota

- Organic Farming 101 (Foundation for Agricultural and Rural Resources Management and Sustainability (FARRMS));

http://www.farrms.org/farming101.html

South Dakota

- Farm Beginnings (Dakota Rural Action); www.dakotarural.org

Farm Beginnings® Collaborative

The Farm Beginnings® Collaborative is a coalition of organizations that run Farm Beginnings® programs and work with a farmer-to-farmer educational model. The purpose of the collaborative is to share best practices and offer mentorship to new and emerging programs. The Farm Beginnings® Collaborative acts as an educational and governing body to help shape common evaluation and educational materials for the group.

Farm Beginnings Programs in Southeast Nebraska Assist Beginning Diversified Farmers

Gary Lesoing, University of Nebraska, Lincoln Extension
Debi Kelly, University of Missouri
Dean Wilson, University of Missouri Extension
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The Land Stewardship Project, a non-profit organization out of Minnesota, is entering its 27th year of keeping the land and people together. This organization works with farmers, policymakers, Ag professionals, and consumers of local foods. They focus on education, policies, research and marketing, and fostering stewardship for farmland. The Land Stewardship Project programming includes: 1) Local, State, and Federal Policies, 2) Community-Based Food Systems, and 3) Farm Beginnings©.

The Farm Beginnings© program focuses on training beginning farmers to be sustainable, emphasizing the holistic management approach. What is meant by "Sustainable?" In a farming business to be sustainable, you must find sustainability in your quality of life, financial viability and environmental practices. Some of the environmental practices that are emphasized include grazing, cover crops, crop rotations, and permaculture. In 2004, the Land Stewardship Project received a Sustainable Agriculture Research and Education (SARE) grant to initiate a Farm Beginnings© pilot program in 2005-2006 in Nebraska.

After receipt of this grant, Karen Stettler, from the Land Stewardship Project, worked with Jim Peterson, University of Nebraska-Lincoln (UNL) extension educator, and Martin Kleinschmit, from the Center For Rural Affairs, to begin planning for the Farm Beginnings© program. Initially, a steering committee of farmers, University of Nebraska-Lincoln representatives, state and local government agencies, and non-profit organizations was formed in eastern Nebraska to evaluate and plan for the program. A partnership formed between UNL, Nebraska Sustainable Agriculture Society, the Center for Rural Affairs, and the Nebraska Department of Agriculture. Facilitators, presenters, and mentors were selected for the program, with financial partners providing assistance to the program through scholarships.
Farm Beginnings© was selected as a program because of its proven track record of success. Of the graduates from this program, over 60 percent are currently farming. This program trains graduates in innovative low-cost sustainable agriculture. In Nebraska, we are seeing a decline in rural populations, with many counties losing over 5 percent of their population. There is an increasing demand for food grown locally, using sustainable practices, and this demand is not being met. The Farm Beginnings© program provided an opportunity for people to learn firsthand about low-cost, sustainable methods of farming and see potential opportunities. A

unique characteristic of the Farm Beginnings© program is that it utilizes farmers in teaching and as mentors, with extension faculty also providing facilitation and expertise. This program works because participants are learning from farmers who are sustainable and have become successful in their farming operations. Farm Beginnings© is a hands-on education/training program that includes 34 seminar in-class training. The training involves sessions on goal-setting and whole farm planning, business planning/coaching, marketing, financial resources, and resources available to assist them with their farming enterprises.

Through its many years of programming, Farm Beginnings© has dispelled a number of myths related to farming, including: You can't start farming without having grown up on a farm. In reality, beginning farmers are teachers, engineers, high school or college students, city planners, secretaries, computer programmers, and bankers. This was a cross-section of several of the participants we had in southeast Nebraska for our Farm Beginnings© program. Another myth is: No one cares about the future of farmers and the farming community. As Farm Beginnings© mentor Bev Stoutness said, "My idea of a mentor program isn't to be an expert but to have an understanding and willingness to share experiences about the operation. We see ourselves as part of the network." In our Farm Beginnings© classes we had a number of farmers volunteer as mentors and also as presenters to share their expertise with the participants. They realize the importance of training the next generation of farmers or else agriculture as we know it will die. Another myth has been: You need to go into debt to start farming. In reality, many beginning farmers are finding ways to get started that are low-input and land-intensive, while keeping their exposure to risk low. While some of the conventional systems of farming may require several acres of land and thousands of dollars of machinery to get started, some beginning farmers have low input pasture poultry or pasture laying hen operations. Other beginning farmers are intensely managing small parcels of land and are growing vegetables or fruit or have constructed low-cost high tunnels to grow vegetables or fruit 10-12 months out of the year. Another myth we hear is: Get big or get out or; there is only one way to farm. The past few years we have seen beginning farmers develop profitable value added farming enterprises on a small scale. Finally the myths: Farming is a way of life and farming is a business. The reality is, farming is a way of life and a business. The challenge is to manage the business in a way that helps you achieve the quality of life you desire.

As previously mentioned, Jim Peterson and Martin Kleinschmit provided the initial leadership for the Farm Beginnings© class in 2005-2006. The class was co-facilitated by Gary Lesoing, extension educator in southeast Nebraska, and Paul Rohrbaugh, former executive director of the Nebraska Sustainable Agricultural Society. The initial class began in November 2005 in Syracuse, NE. The class met for 10 sessions on Saturdays from November–March. In the spring and summer the class toured several sustainable farms in southeast Nebraska. There were 12 families (farmers) that completed the class. Class participants came from eight counties in Nebraska. While most of the participants came from counties in southeast Nebraska, some of the participants came from as far as 250–300 miles away in north central Nebraska. We had a very diverse group of participants in our initial Farm Beginnings© class. They came from all walks of life. Some were young single men wanting to learn about the business side of farming. College students came to research and evaluate potential farming opportunities. Young

couples and families who are currently supplementing their income with part-time farming enterprises came to learn more about farming. Recently or soon-to-be retired individuals came looking to start a second career.

As previously mentioned, a major part of the Farm Beginnings© class focuses on goal setting, farm planning, financial planning, marketing, and connecting with resources. According to all the participants, the networking that takes place and the connections that are made was one of the most important aspects of the class and will last a lifetime. The networking between class participants and presenters has benefitted a number of people in the region. It has provided the opportunity for farmers to learn about different products, methods of farming, markets, and resources they can use to improve the sustainability of their farms. We had an excellent group of farmers who served as teachers for the program. The first two classes focused on holistic management and were taught by two certified holistic management teachers, Terry Gompert and Paul Swanson. At the second class, we toured the Jim Bender Farm, a long-time (20 year) organic crop/livestock producer from Weeping Water, NE, in Cass County in eastern Nebraska. Jim has a very philosophical approach to organic farming and has written a book about it: *"Future Harvest: Pesticide-Free Farming."* Our other presenters in the first Farm Beginnings© class provided valuable information on a variety of topics. Dave Welsch, a long-term organic farmer, discussed direct marketing. Paul Rohrbaugh, a natural grass-fed beef and pasture poultry producer, discussed his operation and the importance of quality and customer service. Tom Larson, an organic crop/livestock farmer, discussed his diversified farming operation and farm planning. Martin Kleinschmit gave a presentation about the Natural Resource Conservation Service's organic transitioning program. A local banker shared information on what bankers require when people request farm loans. Dave Goeller, with the UNL Ag Economics Department, discussed the process of farm transitioning from one generation to another. A representative from the Nebraska Department of Agriculture gave a presentation about Premise ID and on different resources available through their office. Gary Lesoing gave a presentation about resources available from UNL and other resources available through SARE and the ATTRA (National Sustainable Agriculture Information Service). Throughout the in-class training period, participants worked on a farm and business plan and presented their plan to the class during the final two sessions.

After the classroom sessions, the class visited Paul Rohrbaugh's "Pawnee Pride" natural grass-fed beef and pasture poultry operation. They also visited "Shadowbrook Farm," an organic vegetable farm, and "Branched Oak Farm," an organic dairy and cheese producer, both near Lincoln, NE. The participants also used mentors and networked with other farmers whom they met through the Farm Beginnings© Program throughout the summer.

Of the 12 families that participated in the first Farm Beginnings© Program, 10 are involved in production agriculture at some level. Participants are selling produce and managing local farmers markets, selling meat, eggs, and produce through the Nebraska Food Coop, selling eggs at the local grocery store and direct marketing Ag products. One of the families that participated in the program has put up an on-farm store. They are also making soap from milk from their goats and selling at their store and through the Nebraska Food Coop. So what did participants of the first Farm Beginnings© class say about the class? Class members stated the holistic

management portion of the class was very useful. The network of people and contacts they made was very valuable. Some said the class was like the MasterCard commercial, "Priceless." Other participants said they become better stewards of the land and provide food to their family and community in a healthy way. Some of the beginning farmers spoke of several resources they learned in the class. Participants say they are contributing from $1,000 to $25,000 to the economy of the community. An evaluation of the class indicated an average score of 6.16 on a scale of 1-7, with one being poor and 7 being excellent.

A second Farm Beginnings© class was held in 2008-2009. Seven families participated in the class. Farmers came from counties in southeast Nebraska and one young family from across the Missouri River in Missouri. Class members were interested in dairy, livestock, produce, fruits, trees, grain, and agritourism. We had an excellent group of farmer presenters for this class. While we had some of the same presenters from our first class, we also had some new presenters. Actually, Ralph Tate, a member of the initial Farm Beginnings© class who is training to become a certified holistic management instructor, was involved with the holistic management sessions. Melisa Fulton, a member of our first class, also came and addressed the group on some of the challenges she is encountering as their family's farm, "Grazin' Acres," develops. Rebecca Bloom, an organic vegetable and herb producer from Omaha, with her farm about 20 miles northeast of Omaha in Iowa, discussed marketing her produce. Everett Lundquist explained how his Community Supported Agriculture operation worked. Recent graduates of this year's class are doing a variety of different enterprises. One young couple has just purchased some land and hopes to develop a grazing system and other enterprises. They are also interested in working with several organizations to conduct research and other projects on their farm. Some families are already diversifying into cattle, sheep, and chickens. Others are raising vegetables and starting to raise bees for honey. Still others are deciding what the best path is for them to follow. The two Farm Beginnings© classes demonstrate the benefit of this program to the economy of communities in southeastern Nebraska and agriculture in Nebraska. These programs help increase the food production network in southeast Nebraska and help train and demonstrate potential opportunities for beginning farmers in the region. In the long term they will keep some of the youth home and slow down their migration out of rural areas. This program will also help meet the growing demand for producers of local food. An evaluation to measure impacts of Farm Beginnings© is being developed. This will help secure funding to assist with the cost of administering the program. We expect to plan and initiate future Farm Beginnings© classes in the years to come and expand the program to other areas of Nebraska where there is a demand and a need.

Grow Your Farm

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According the 2007 USDA Agricultural Census, Missouri has the second highest number of farms of any state in the nation. Missouri has 107,825 farms, of which 28,958 meet the definition for beginning farm. Approximately 42,987 of the 107,825 farms make their primary income off the farm, according to the Ag Census. A significant portion of these 42,987 farms would like to convert to full-time farming.

In the last 2 years, a multi-week course for beginning farmers was developed by University of Missouri Extension, called "Grow Your Farm." This is primarily a financial planning course for beginning farmers. The main goal for the Grow Your Farm course is to have participants leave the course with a written farm business plan that can be taken to a lender or to have available for other sources of funding, whether it be USDA or stat sources. Participants receive a Grow Your Farm binder with eight chapters and an appendix of agricultural terminology; information for informal mentoring, such as expectations and tips; mentoring activity record; farmer participant application and mentorship agreement written specifically for this course; and the *Building a Sustainable Business: A Guide to Developing a Business Plan for Farms and Rural Businesses* (Minnesota Institute for Sustainable Agriculture) book, which is used as "homework." The 10-week course consists of eight classroom sessions and two sessions of visits to area farms. All class sessions include a presentation by an extension educator or agency personnel and successful farmer(s). Topics include identifying values and goals, assessing farm resources, keeping track of finances, marketing farm products, understanding legal issues, and writing a farm plan. The extension specialist who led the Grow Your Farm program noted that the participants have an optimistic approach to agriculture and a willingness to think creatively. These producers generally consider values to be as important as profit and often have an interest in organic or sustainable production.

Comments from Grow Your Farm graduates

Matt Nuckolls' 10-year military career ended with an improvised explosive device in northern Afghanistan. He and his family moved to southern Missouri to live off the land and become commercial farmers. The learning curve was steep. "If you grew up around here, you knew who to talk to," he said. "I didn't grow up around here." The Grow Your Farm course has linked Matt with established producers in his and surrounding communities who can offer advice and war stories, or even mentoring relationships. Matt's plans are modest. The 20-acre tract he purchased last year still needs work and his wife has both an office job and a Web business to help make ends meet. But the prospect of starting over and tapping into the resources his new neighbors can offer provides hope. "I'm discovering opportunities I didn't know I had," he said.

Alan and Liz Northcutt knew little about agriculture when they decided to move from Arizona to Missouri. Alan commented, "It was kind of like, here we are; we're farmers. We were totally green. We had seen farms; that's about it." The Northcutt farming venture is modest, earning $5,000 the first year, paying a ranch hand to tend the alfalfa crops while hoping to eventually branch out and grow garlic or perhaps sunflowers.

Nancy and Greg Rasmussen knew they were going to return home to Missouri to farm, but they knew they wanted to do it differently than what they had done before. Before their move, the couple attended a Farm Beginnings© course in Minnesota. Once in Missouri, the Rasmussens raised broilers on 65 acres and slowly built their successful farming venture. When they heard that the University of Missouri (MU) Extension was offering the Grow Your Farm course, Nancy said she was excited to become a farmer instructor when asked. "It saves them from learning by trial and error. You're talking with people who have actually tried sustainable farming. It can hook you up with networks and resources.

Plus, it offers me an opportunity to give back."

Grow Your Farm

- Have a creative farming idea?
- Need practical guidance to help turn your farm into a profitable business? If you answered yes to these questions, then the Grow Your Farm course is right for you. Grow Your Farm will help you translate your farming ideas into a successful business venture.

Course specifics

Grow Your Farm is designed for prospective farmers, beginners with some experience, and seasoned farmers who want to make a "new beginning" with alternative farming methods. MU Extension specialists and experienced, innovative farmers teach the sessions. Grow Your Farm meets 11 times over a 16- to 18-week time frame. Classes include eight seminars with three farm tours.

Course objectives

Information on production techniques is relatively easy to find and use, but what many landowners need is help to develop the farm as a profitable business. With this in mind, Grow Your Farm is designed to assist you, the producer, in creating and planning your farm as a business.

This course will help you:

- identify and prioritize personal and family values and use them as the foundation for the farm mission statement and goals;
- learn how to "walk the farm" to assess the land and its facilities;
- learn to evaluate the feasibility of particular farm opportunities;
- understand the components of a business plan and create one of your own;
- understand financial aspects of a business plan and review popular tools to manage financial records;
- consider different types of agricultural marketing and draft a marketing plan;
- become familiar with a variety of legal issues that pertain to farming enterprises; and
- network with other farmers.

For additional information on the Grow Your Farm course, contact:

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SESSION 1C
Gaining Community Support through Community Markets, GAP, Training, and Networking

Building Support for Local Agriculture through Community Markets

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A coalition of community organizations and local farmers, ranchers, and other producers has been working in Fort Collins, CO, since 2006 to build community support for local agriculture through developing wintertime farmers' markets and promoting other direct-sales channels. Partly as a result of these efforts, the City of Fort Collins and its Downtown Development Authority have committed over $700,000 towards feasibility studies for a year-round, permanent public market venue. We anticipate the new Fort Collins Public Market will open for business in the spring of 2012.

History

Fort Collins is a small city of about 135,000, located 60 miles north of Denver along Colorado's Front Range. Beginning in December 2006, local non-profits Be Local Northern Colorado and the Northern Colorado Food Incubator (NCFI) have sponsored a series of winter farmers' markets in downtown Fort Collins. The effort has grown from a single event in 2006 to 10 semi-monthly markets in the 2009-2010 season, bridging the off-season gap so that Fort Collins now has at least one farmers market every month. During the 2008-2009 season, the winter farmers' markets produced sales over $100,000 for local producers and have brought an average of over 1400 people into downtown Fort Collins for each market (See Table 1). Community support for the producers has grown, participation in Community Supported Agriculture (CSA) programs and other producers' initiatives has increased, and several businesses have provided information that their economic survival during the current recession has been positively impacted by the winter farmers' markets, both through sales at the markets and additional sales from new customers generated from the markets.

Table 1

Winter Farmers' Market Performance						
3rd annual Winter Markets, 2008-2009						
	11/22/08	**12/13/08**	**1/10/09**	**2/14/09**	**3/28/09**	**Average**
Attendance	1,488	1,757	1,111	1,451	1,208	1,403
Economic & Other Performance						
Total # vendors	41	42	42	43	46	
Total sales	$ 15,215	$ 27,589	$ 19,897	$ 19,727	$ 18,670	**$ 101,098**

Community Impact

The growth in the wintertime farmers' markets has happened in the context of rapid growth in interest in local food and local agricultural production, an increasing number of small farms in Colorado in general, and greater numbers of CSAs and

other businesses devoted to local agricultural production. Some key factors and their growth are shown in Table 2.

Table 2

Local Food in Northern Colorado - Trends				
	2006	**2007**	**2008**	**2009**
# area farmers markets	5	5	7	10
# of CSA farms	4	5	8	10
# CSA shares (approx)	850	1250	2000	4500
# Late-season CSAs	0	1	2	3
# new business starts				
Inquiries	28	43	62	80*
Began operations	6	8	13	18*
** Projected; NCFI data*				

At least partly as a result of the wintertime markets, there have been three parallel developments:

First, more farmers are exploring and (for 2009) using late-season extension techniques in order to have fresh produce to sell at the winter markets. Several farmers have also begun early-season greenhouse production, and others are using cold-frames and other late-season protection methods to have produce for at least the markets through January. One farmer is beginning to plan for commercial-scale greenhouse production.

Second, the buying public is becoming accustomed to shopping at "the farmers' market" year-round. It is exactly this parallel development that is needed to support the growth of small-scale, direct-sales local agricultural production. During the 2009-2010 season we will measure more fully the spending of consumers and also undertake two surveys about consumer attitudes and purchasing behavior.

Finally, new young farmers have begun to start their own operations. Four new farms have begun in the past 3 years and, while none can be attributed solely to the winter-time markets, all have cited them as evidence of the increasing market for locally-produced food sold through direct-to-consumer channels.

What Remains to be Done

Between now and the time the Fort Collins Public Market opens in the spring of 2012, several important developments in the local food system need to take place:

- Better aggregation of products from small producers needs to be developed, coupled with distribution to restaurants, markets, and schools. Currently, one local grower
- is developing distribution capacity, and the NCFI is working with them to develop a business plan and investment requirements. They expect to be fully operational by early 2010.
- Additional regional production is needed for most types of food, including produce, dairy (other than cheese), meat, poultry, and value-added products. Presently, demand sometimes outstrips supply, and those producers who are motivated and able to expand production have

opportunities to do so. New farmers also are finding ready acceptance in the market, provided their produce and other products meet quality standards.

- One type of vendor needed for the public market is a full-service butcher shop. There are individuals who have the necessary skills, but few independent butcher shops remain in the region. The public market planning team and NCFI are beginning to work on identifying possible vendors and are considering what type of business incubation assistance would be appropriate if needed.
- As in many parts of the country, processing facilities for meat and poultry are operating at or near capacity, and ranchers sometimes have difficulty arranging for their own processing. Finding processors capable of meeting organic standards is likewise difficult and currently there is no regional organic pork processor at all. Local ranchers, particularly beef and lamb producers, are beginning to explore developing additional cooperatively owned processing capacity.

The Fort Collins Public Market

The vision for the Fort Collins Public Market is to bring together the vibrant local food system and the engaged customers and households of Fort Collins and the region. By supporting the local food system through the creation of a community marketplace, this project seeks to give increased vitality to the local and regional economy and enhance Fort Collins's already widely recognized character as one of the best places to live in America (Money Magazine, 2006 & 2008 identified Fort Collins as one of leading places to live and do business, and Forbes Magazine, 2009, listed Fort Collins as the second best place to do business in the country, up from third in 2008). The public market will create an attractive, dynamic and diverse experience for shoppers and community members who choose to purchase and consume in ways that support their social and environmental values, while bringing greater economic well-being and sustainability to their local community.

In addition to a market hall of approximately 30,000 sq ft, the public market plan currently calls for two upper floors that will provide office space, meeting space, multi-purpose event, and classroom space. Tenants are expected to include local businesses operating in renewable energy, green building, socially responsible investing, and other areas oriented toward sustainability and local economic development. Upper-floor tenants will be selected and incubated for their commitment to operating with a so-called triple bottom line focus. (Triple bottom-line businesses consciously focus on environmental sustainability and social equity as well as the traditional requirement of economic viability.)

One of the keys to the success of the planning effort, which began in early 2008, has been the involvement of many different stakeholder groups right from the early months. These groups include city and county government, local businesses, farmers and ranchers, representatives from Colorado State University (located in Fort Collins), community organizations, and others. (A complete list follows.)
If there is any lesson to be learned from this effort that would apply to other communities working to improve the health of the local food system, it would be to involve all relevant stakeholders' right from the beginning. Indeed, NCFI began bringing a large number of players in the local food system together for regular conversations since 2005, even before the public market became a formal proposal. That groundwork of shared relationships has

been an important factor in the development of a cohesive planning group for the public market project. Information about the Fort Collins Public Market project can be found online at http://bit.ly/SlVvh, including copies of planning documents and reports.

For further information, please contact
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Fort Collins Public Market – Planning Team
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Northern Colorado Food Incubator
Center for Fair and Alternative Trade (CSU)
Wolf Moon Farm
UniverCity Connections
MMA Mennonite Foundation
Larimer County Extension
Downtown restaurants

Fort Collins Downtown Development Authority
Be Local Northern Colorado
Osher Lifelong Learn Institute (CSU)
Dept. of Agriculture & Resource Economics (CSU)
Fort Collins Food Cooperative
Rural Land Use Center (Larimer County)
Colorado State Extension
Other Downtown business representatives

Training, Engaging, and Marketing Support for Small Farm Sustainability

Dorathy Barker, Operation Spring Plant Inc

Operation Spring Plant Inc. partnered with Dr. Keith Baldwin at NCA&T State University on Education for the NC Fresh Produce Safety Task Force. In that capacity, I participated in and coordinated activities related to a "beta" curriculum on Fresh Produce Safety. Nine draft modules are contained in that curriculum. These modules consisted of power point presentations and related instructor resource materials on the following topics:

- Food Safety Hazards Associated with Fresh Produce

- Personal Health and Hygiene
- Animals, Animal Bi-products, and Site Selection

- Field Practices (GAP)
- Packing Facility Sanitation (GHP)

- Water Quality
- The Three T's: Transportation, Trace back and Trace forward

- Risk Management

- Crisis/Issue Management Communications

These modules were beta-tested with Cooperative Extension Agents in two-day training sessions that were held regionally Beta-testing the curriculum with socially-disadvantaged and limited-resource farmers was planned and held on January 8th, 9th and 10th, 2009, at the Operation Spring Plant Annual Conference. The plan was to test each of the modules with a group of farmers in order to determine what changes in content and delivery may need to be made to fully communicate the information in a meaningful way. The objective was to seek changes in knowledge and behaviors on farms, and follow-up surveys and visits will be conducted to assess impacts.

Beta-testing took place at the conference. Attendance was spotty with approximately 10 participants receiving instruction. However, we were encouraged that 40 people signed up to take the training. The feedback provided by participants will result in changes to the curriculum. We followed-up with further training in targeted counties later that Spring and Summer. In particular, we held a "Good Handling Practices" training session at the Prize of the Harvest packing facility in Faison, NC, that summer.

The Annual North Carolina Cooperative Extension Program Small Farm Week Educational Forum will be held Tuesday, March 24th and Wednesday, March 25th, 2009, in Greensboro, NC. The Educational Forum will focus on Food Safety and Good Agricultural Practices this year. Modules from the curriculum, as well as a "mock" farm audit at the A&T University Farm will be primary activities at the Educational Forum. Over 100 growers attended the forum. Operation Spring Plant's farm technician participated on the panel discussion.

Operation Spring Plant, Inc., along with The Cooperative Extension Program at NC A&T State University, has instructed the community of socially-disadvantaged farmers with information about food safety and GAP at additional meetings and workshops in 2008 and 2009. A listing of these information sessions follows:

Trainers Date	Place	# in Attendance
OSP/Extension 01/24/08	Granville County	35 growers
OSP RMA Conference 12th/2008	Raleigh, NC01/11th-	100 growers
Concentric Mgmt. 06/19/08	Roseville, NC	25 growers
Am. Indian Mothers Conf. 11/25/08	Pembroke, NC	75 growers
NC A& T University 08/07/08	Greensboro, NC	75 growers
OSP Annual Conference 01/09/09	Raleigh, NC	10 growers
OSP Annual Conference 01/09/09	Raleigh, NC	50 growers

Many socially disadvantaged farm communities do not have a facility to certify or sell fresh fruits and vegetables. For this reason, Operation Spring Plant, Inc. rents a 3,700 square-foot packing shed in Eastern North Carolina. Since it is hard for socially disadvantaged farmers to get assistance with infrastructure, we had to piece mill the needed tools together to ship fresh fruits and vegetables. In all that we have done

after going through all of the trainings on GHP and GAP, our facility is still not up to standards. When one of our vendors sent us a letter for The Country of Origin information we began coordinating farmers at the shed to show them the Country of Origin process that has to be applied to each container of produce shipped from the shed. Our strategies were to first train the active farmers and later train the new and regenerative farmers and landowners. We also brought in the buyers who gave us first hand instructions on varieties, size and packaging requirements. They also showed the proposed problems for us at the packaging shed that could cause rejection and reduction in prices. Many farmers who wanted to grade from the field had all sizes in one box. Some of the sizes were ok and others were not separated into small, medium or large sizes. Another barrier was the inability to add value. We had a market for long green cucumbers that required waxing. If we had the equipment to wax the cucumbers we could have received a premium price instead we received less than market prices. These socially disadvantaged farmers were hit with another barrier when it comes to being paid for their goods. No one vendor that we have or had a market with paid on time. The payments were often received 45 -90 days after shipment of goods. Many small farmers can't afford to wait over 10 days maximum. Most small farmers have to pay each day. We encouraged many of our small farmers to form a cooperative or an association. This method will allow these farmers to collectively purchase in bulk and to plant staggering crops as to not flood the market. Everyone was not able to come up with their share to take advantage of the 20 -25% savings for booking early. Another production barrier is the all time high cost of fertilizer, nitrogen, lime and seeds. One last attempt for socially disadvantaged farmers in our service area is to develop the next generation of family farmers by launching the National Youth in Today's Agriculture. The reason for "Today s" Agriculture is what it takes to farm in the 21st Century as a socially disadvantage farmers.

The training impact over the last three years has resulted in eight hundred African and Native American small family farmers being trained on good agricultural practices, good handling practices and best management practices in an effort to supply safe food products to developing markets. Last year, we were able to put the products from two cooperatives into Wal-Mart Super Centers. We will also enter into Whole Foods after growing a specialty food crop for 2010. Moreover, additional sales will be made in markets developed in churches along the eastern corridor. These new markets will reduce our marketing risk from chain stores and warehouses by creating outlets within our own communities.

Building Community through the York County Farmers' Network—Strengthening Local Agriculture

Frank Wertheim, University of Maine Cooperative Extension

Relevance: York County has a diverse farming community ranging from apple orchards, to red deer farms, traditional dairy and beef operations and mixed vegetable, herb and flower farms. As a result of diverse operations agricultural producers often do not have the opportunity to come together and address common needs and have expressed a feeling of isolation. Common needs identified include farmland preservation in a rapidly developing county, marketing agricultural products, housing and equipment, soil health, pest management and farm energy. In 2004 the York County Farmers' Network was developed through the efforts of UMaine Extension Associate

Professor, Frank Wertheim working collaboratively with a group of diverse farmers who served, and continue to serve as a farmer planning team. The groups' mission is to "be a community of farmers that promotes supports and strengthens local agriculture through informal gatherings, demonstrations, and information and resource sharing".

Response: The planning team, led by Wertheim created and extensive mailing list of county farms, surveyed farmers and began holding a series of educational and social (farmer to farmer) meetings. Pot luck meetings are a mainstay of York County Farmers' Network gatherings to encourage informality and create an environment which fosters friendship and community. During the growing season meetings are held on farms with a specific focus identified by the planning team or through a unique aspect of a particular farm. Examples of on farm meetings held include demonstration of cultivation equipment, new orchard trellising techniques, crop production practices, bio diesel production, a weed identification workshop, farm tourism (corn maize), and multiple examples of direct marketing techniques. In the off season meetings move indoors includes pot luck dinners and meeting topics identified by the network. Examples of indoor meeting held include: Round robin discussions of issues and concerns; what worked well and what did not in the past year's season; farmland preservation opportunities such as land trust and easements; farm transfer and estate planning; enhancing soil health; marketing farm products; and farmer grant opportunities. In 2006 we also began a series of monthly winter breakfast meetings held at a local restaurant which provides us our own space. During these meetings we socialize, discuss common farming issues, and share program announcements and resources. Dues and grants have paid for postage for mailings, York County Farmers' Network promotional materials including brochures, purchase of network poster boards to promote the network and announce upcoming events, development of the www.ycfn.org web page for communications and group marketing (includes a map of the county for the public to identify and find county farms, products offered and hours of operation and contact information). The network has grown to include 85 farms in York County.

Results: A survey conducted in July of 2008 as well as anecdotal stories indicated that farmers involved in the network had appreciated a sense of community, have frequently utilized connections made to address issues such as helping each other to repair farm machinery or share equipment. Network members have consulted with each other and with UMaine Extension on pest management and cultural practices issues. The network has resulted in new marketing opportunities such as one farmer carrying product of another through their farm stand or store, developing new markets by joining a farmers market, and development of new clientele as a direct result of the website. Farmland preservation meetings and network connections have resulted in at least 5 farms beginning exploration of obtaining conservation easements through local land trusts and state programs. Farmers in the network have learned and begun practicing sustainable farming practices such as new cultivation techniques to reduce pesticide use and improve weed management, have improved soil health via compost cover crops and no till practices. Overall farmers express a warm affiliation for the network, the sense of community gained and the feeling that they have an extended network of associates, both professional and amongst fellow farmers for which they can depend on to address a wide range of issues.

Collaborators/Contributors: Volunteer Planning Team (leaders amongst the farming community); Maine Department of Agriculture; Farm Family Insurance; Three Rivers Land Trust; Maine Farm Bureau/York County Chapter

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Good Agricultural Practices Impacting Small Acreage Farmers in New Mexico

Nancy Flores, New Mexico State University

Food borne illness outbreaks have been linked to farm-level contamination of California lettuce and spinach, Guatemalan raspberries, Mexican strawberries and cantaloupe. While highly publicized produce-related outbreaks raised consumer awareness of food safety problems current data demonstrate that the proportion of food borne illness outbreaks associated with handling of fresh produce is very low. However, to ensure a safe food supply, it is imperative that those who handle raw produce at every stage, from the field to the point of consumption, understand and implement safe handling practices to prevent contamination and outbreak of disease. Contamination sources and pathways have been identified that exist in a farming operation that could contaminate fresh fruit and vegetable crops. Additionally, only one outbreak where severe illness or death occurs can devastate a business and adversely affect an entire produce sector. In today's global political climate, it is also easy to envision the devastating effects of a food borne illness outbreak from an "on farm" act of agro-terrorism.

The Good Agricultural Practices or GAPs program initiated by Cornell University with support from the U.S. Department of Agriculture and the U.S. Food and Drug Administration addressed consumer concerns about food borne illness in fresh produce. The GAPs Manual was designed for growers to do a crop-risk assessment of their operation. The GAPs program has management areas addressing bio-security, trace back, recall, and crisis management at the farm level. A grower implementing a GAPs program will fully address all areas of concern, minimizing risk for food borne illness outbreaks associated with on-farm produce handling. Furthermore, once GAPs trace back, recall, and crisis management are in place on New Mexico farms accurate data could be collected on food borne illness outbreaks associated with fresh produce. Currently the USDA does not require growers to implement GAPs on their farms. However, large retail grocery stores require that produce suppliers be "GAPs certified." These retailers are requiring annual independent "third party" audits from growers showing GAPs compliance for each crop. GAPs offers a mechanism to consolidate existing agricultural best management practices and post-harvest practices used to produce an economical and safe product.

Small-acreage growers, particularly those that move their fresh produce through local farmers' markets, or more recently through direct sales to New Mexico public schools are conscience about food safety. However, the costs associated with GAPS can prohibit full implementation. Small-acreage growers are less likely to perform such an assessment, or may not even be aware of basic food handling and food safety issues, or may just lack the time and financial resources to implement food safety programs. Many of these growers have an incentive to implement GAPs because of the farm to school program. For the 2006-09 school years there were 10 farmers actively participating in the program, sales

last year were approximately $200,000 and consisted primarily of sales of apples, pears, peaches and plums. It should go well over that number this year, perhaps doubling. There are 13 school districts last year and in one private school participating in this program. This year the state of New Mexico will receive approximately $900,000 for schools to purchase fresh fruits and vegetables for snack programs.

Small-Scale Farmers of African-American Descent and Contamination Events

Louie Rivers, Michigan State University
Marion Simon, Kentucky State University
Kenneth Andries, Kentucky State University

The Kentucky State University Procedure:

1. Specialists were notified by the state veterinarian by email to their offices
2. Telephone calls from the specialist to the county agents via office or cell phone were preferred for notification, followed by FAX and email
3. Visit to the feed dealer, or telephone calls to the manager only, were the preferred methods for delivering information to the animal feed-supply retailers

What were the response times?

1. 15 minutes to 4 days from the FAZD notification to the state veterinarian to the email notification to the state specialists (alerts were only sent on weekdays)
2. 15 minutes–2 hours from the time the state veterinarian's emails arrived to the state specialists until notifications went to the county staff
3. 1 hour–4 days from the time the specialist notices went to the county staff until all local feed-supply retailers were notified

Overall Impressions:

1. The state veterinarian valued the opportunity to share information with state and county staff, but feared overreaction from the feed retailers
2. State and county extension staff valued the opportunity to work with feed/supply retailers and agreed that they may have more contacts with hobby farms and/or very large farms

Results of the Kentucky State University Experience:

1. Over 75 agriculture agents and small farm assistants in Kentucky were trained on the CASHN system and foreign animal diseases
2. It stimulated excitement for county security networks to address a multitude of emergencies
3. It stimulated the need for credible information to be available at the local level
4. It provided excellent training on the potential for foreign animal diseases to enter the United States

205 farmers from 22 counties were trained within the first 6 months on both the CASHN network and foreign animal diseases. Since then, numerous farmer training programs have occurred.

SESSION 1D
Unique Approaches to Sustaining Small Farmers

Use and Management of Water in Sustainable Agriculture

Cassel Gardner, Florida A&M University

Water is a vital natural resource and is required by all living organism. Thus it must be protected, secured and defended. Water

is intrinsic to civilization and development. Is it a myth or a fact that "water is also abundant and renewable"? It is a fact; the amount of water on earth today is the same as in prehistoric times. *Figure 1* shows the approximately how much of earth's water is usable by humans. Despite significant developments in recent decades our water supply faces threats from anthropogenically derived contamination and pollution. So what or who are the causes and sources of pollution. Urbanization, population growth and industrialization are amongst the basic factors which cause environmental problems in lakes and reservoirs (*figure 2*). The availability of water is a hot topic for the 21st century and there is grave importance on the need for wise use of this essential natural resource. The issue of water is not just a U.S. matter but one of a global perspective. A dire need exists for integrated water management strategies that bring together government institutions, Non-Government Organizations (NGOs), public participations and research institution to promote equitable water use and security. One of the most important aspects of environmental research is developing a sense of stewardship among young people who will inherit the problems we create today. Water usage in the U.S. by youngsters shows a great difference to that of youngsters of other nation. *Table 1* illustrates per capita water use by continent (cubic kilometer/year). The idea that population growth and limited resources lead to conflict over limits resources is not new: This natural inequality of the two powers if population and of productivity in the earth… form the great difficulty that to me appears insurmountable… the contest (is) a struggle for existence, and… fought with a desperate courage, inspired by the rejection that death was the punishment of defeat and life the prize of victory (Thomas Malthus. 1798). Only 0.3% of all available water is usable by humans, thus management of this resource is expected to emerge as one of the greatest challenge facing humankind during the 21st century. The conflict of water has been going on for decades. In the mid 19th century in Mexico the dispute access of the water of a disputed river created bitterness and animosity between two drought hit Southern Indian States; water is a fugitive resource. An illustration of this is depicted by the ongoing dispute between Georgia, Florida and Alabama over the Apalachicola Chattahoochee – Flint (ACF) River Basin and its ecologically impressive estuary, the Apalachicola bay. The fight over water privatization is also becoming violet. Many experts speculate that the shortage of water could lead to major political conflicts around the world or in the worst case, war. Over 20 countries depend on the flow of water from other nations for much of their water supply. And more than 300 of the world's river basin are shared by two or more countries. According to a 2005 United States Geological Survey (USGS), it is estimated that about 408 billion gallons of water is used per day throughout the United States (US). Approximately 79% of this was withdrawn from surface water and the remainder from ground water. About 85% of total withdrawn were fresh water because it is required for so many uses. The principal uses of water in the U.S. are industrial, commercial, Domestic and agriculture. The USGS has been documenting water usage since 1950; they now collect water use data at a five year interval. Figure 3 thru 7 illustrates this usage.

The sustainable society is one which meets its food and fiber needs without diminishing the requirement of future generation. Humanity can make development sustainable or unsustainable. So how do we achieve this? General actions have been taken by the agricultural BMPs in crop and livestock management for water quality.

Actions such as consideration tillage, strip cropping, terraces and waterways, watershed management protection of stream banks, flood control, nutrient management planning, proper handling and storage of agricultural chemicals, organic sources of plant nutrients and agricultural waste management systems (six major functions-figures 8). Management of agriculture waste includes type of waste, location and volume. Proper treatment, storage, utilization and recycling (irrigation on crops or woodland, export of use) of agriculture waste are ways in which humans can minimize water contamination. These strategies and techniques will improve water conservation and reduce soil erosion. We cannot solve problems by using the same kind of thinking we used when we to created them. The problems we are facing in protecting and maintaining our water resources and quality are growing ever more complex and will require combined efforts and creativity to solve. It is through discussion and conferences at (local, regional, national, and international) that we may find the collective knowledge necessary to actually make a breakthrough that will benefit all stakeholders.

Figures and Tables.

Figure 1

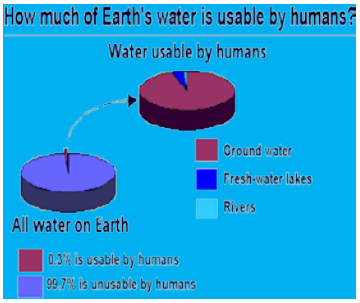

Figure 2

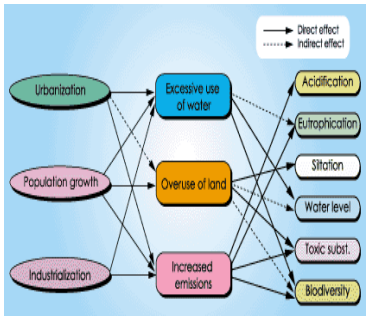

Figure 3

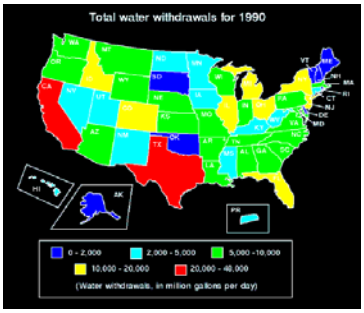

Figure 4

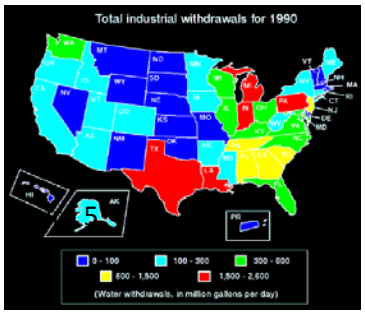

Figure 5

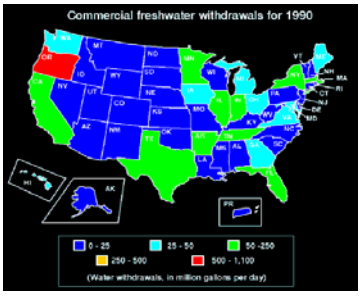

Figure 6

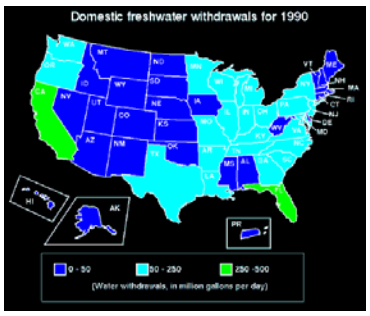

Figure 7

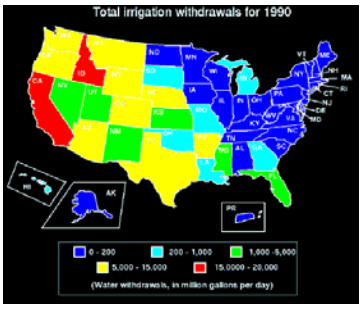

Figure 8

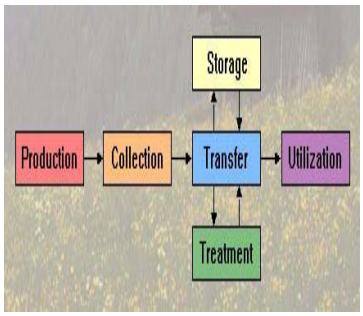

Table 1

Continent	1950	1960	1970	1980	1990	2000*
Africa	56	86	116	168	232	314
North America	286	411	556	663	724	796
South America	59	63	85	111	150	216
Europe	94	185	294	435	554	673
Oceania	10	17	23	29	38	47
Total	1,360	1,982	2,594	3,316	4,138	5,189
Continent	1950	1960	1970	1980	1990	2000*
Africa	56	86	116	168	232	314
North America	286	411	556	663	724	796
South America	59	63	85	111	5,189	216
Europe	94	185	294	435	554	673
Oceania	10	17	23	29	38	47
Total	1,360	1,982	2,594	3,316	4,138	

Opportunities and Challenges for Developing a Small Ruminant Industry

Fidelis E. Okpebholo, Virginia State University; Cooperative Extension, School of Agriculture

Meat goat enterprise is a small ruminant enterprise, and it is currently one of the fastest and viable agricultural businesses in the United States. This growth has created opportunities for small- scale farmers struggling to profit from production of dwindling traditional crops like tobacco, to diversify and integrate meat goat production into their production systems. However, there are challenges that must be addressed in order to develop a successful small meat goat industry. The opportunities and challenges will be addressed in this paper, in the context of sustainability for small, limited–resource, and socially disadvantaged farmers.

Opportunities

There are several opportunities for the small-scale farmers to supplement their incomes by integrating meat goat production into their farm enterprises. Such opportunities are created by many factors such as high demand for goat meat, low start- up cost, less labor intensive; use of goats for brush control and multi-species grazing, and the prolificacy of goats.

High demand for Goat Meat

Demand for goat meat in the United States is high and will continue to increase. Data from 2006 USDA-NASS report indicate that between 1999 and 2006 goat meat imported to the United States increased by 329%, and value for the same period increased by 535%. Import accounts for 60% of goat meat currently sold in this country. High demand can be attributed to increase in the number of immigrants (ethnic groups) from countries where goat meat is traditionally consumed. The current ethnic demand for goat meat is expected to be higher due to the expected increase in population of immigrants, and the improvement in their purchasing power. Other potential goat meat consumers are the health conscious individuals looking for alternative meats. Goat meat provides this alternative because compared to chicken and other red meats, it is relatively low in total and saturated fats and high in protein. The current and expected increase in demand for goat meat in addition to the lack of enough domestic production, create an ample opportunity for limited resource farmers to fill the vacuum and enhance their business prospects by integrating meat goat production into their farm enterprises.

Low Start-up Cost

Low start- up cost is another factor that creates opportunity for farmers with limited resources to invest in meat goat production. For example, start up cost for meat goat operation is considerably lower than that of cattle. Five does can be acquired for the price of one cow; goats require less land than cattle (six goats can browse an area for one cattle); goats can do well on low forage diets, and thrive on harsh terrain and therefore, are less expensive to feed and do not need expensive structures. However, the animals do need some sort of shelter which can be constructed from inexpensive materials. No special or unique equipment is needed for a meat goat project as existing equipment for young calves could be converted for goat use.

Less Labor Intensive

Meat production is less labor intensive when compared to the production of larger animals. Due to size and friendly nature of goats, women and children in the family can easily handle them. Most goats are good tempered and the chances of kids and women getting injured are very limited. Therefore, everybody in the household can

contribute to the labor force in a meat goat enterprise.

Brush Control and Multi Species-grazing

An added value to goat production is that the animals can be used for grazing and vegetation management. Goats are very suitable as vegetation management tools because of their ability to consume a wide variety of forages and their apparent resistant to many plant toxins. Goats can be used effectively to control kudzu, poison ivy, and many other plants that are not utilized by cattle. Additionally, goats seem to be a choice in multi-species grazing systems as they tend to integrate well with cattle. In fact, one or two goats per cattle can be grazed together in a herd without adversely affecting the well-being of neither the cattle nor the goats. By suppressing or eliminating these brushes and weeds, goats reduce the need for herbicides for weed control and reduce competition for scarce soil nutrients, which could ultimately result in increased pasture yield. Apart from being environmentally friendly, using goats to control brushes and weeds will save the farmer some money by reducing his expenses for herbicides and other weed control measures.

Prolificacy of Goats

Although goats are seasonal breeders, a doe (mature female goat) can be bred and successfully kid three times every two years. Moreover, goats have more reproductive cycles than cattle within the same period of time. In a period of two years, it is possible for a doe to give birth to six kids because of its high twinning rate, whereas a cow is most likely to produce two calves for the same period. This quick turn over rate is an advantage to the producer in terms of cash flow.

Challenges

Although, there several opportunities for limited- resource farmers who decide to invest in meat goat operation, the challenges they face are real and must be addressed. The main challenges that pose obstacles to the development of meat goat industry are the lack of effective control of internal parasites, lack of effective marketing strategies for meat goat and its products, inadequate expertise information, and limited access to credit facilities.

Control of Internal Parasites

The control of infestation of small ruminants by internal parasites (especially nematodes) is the most serious problem that challenges the small ruminant production today. Infestation caused by these parasites can cause major economic losses to the producer in the form of cost of treatment, loss of value of the product, and death of the heavily infested animals.

Proper and effective management of internal parasites is extremely important for the survivability of the small ruminant industry. The ability to detect the clinical signs of a major worm infestation, to properly treat the infected animals, and to effectively reduce the herd's exposure to these parasites are all very important for effective internal parasite management. Worms that infect goats have developed resistance against most of the available and widely used anthelmintics (dewormers). This is mainly attributed to the fact that many of these drugs are not specific and not approved for use in goats, the frequent use, and wrong dosage. Since there are few anthelmintics approved for use in goats, the dosage used for goats is normally "extra-label" or the same dosage rates that are recommended for cattle and sheep. Goats are known to metabolize anthelmintics faster than cattle and sheep, which points to the fact that they require a higher dosage. Even though there is need for drugs that have approved rates for goat, it is unlikely there will be any new types of anthelmintics for these animals in the near

future because limited markets for these drugs do not validate the high discovery and developmental cost needed to create the drugs. Although preventive measures such as low stocking rate, pasture rotation, and proper nutrition could reduce the level and the effects of infestation by these parasites, prevention strategies that effectively reduce the need for anthelmintics and decrease parasitic infestations would bring a huge boost to the development of the meat goat industry.

Marketing Goat Meat

Despite the high demand, marketing goat meat is still a major challenge to the development of the meat goat industry. The current market situation is erratic and not organized. There are no established standards for marketing goat meat. Also there are also not enough government-approved processing plants for goats, and the few approved plants are mostly located in large cities and are far from farmsteads. Consequently, the producer's ability to market his products is limited because of the difficulty and expense required to transport the animals to these slaughter facilities. Additionally, the link between the producers and the ethnic consumers is very weak. This link needs to be strengthened because these ethnic groups prefer fresh meat slaughtered on the farm. Buying directly from the farm increases the farmer's profit margin as compared to marketing through stock yard auction.

Other serious marketing challenges facing the goat production industry is how to convince the mainstream sector of the population to consume goat meat, and how to establish a viable marketing outlet for this group. Large and established grocery companies are skeptical about the inclusion of goat meat in their stock because of the uncertainty of reliable and constant supplies, the uniformity of cuts, and the lack of a wide range of products from goat meat that would appeal to these potential consumers. Predictable and consistent products like pre-cooked and pre-packaged products from goat meat should enhance the consumption by the mainstream. Also, a boost in the consumption of goat meat may come when the mainstream population becomes better informed about the health benefits they can receive from consumption of goat meat. These are vital issues in the development and long term sustainability of the meat goat industry.

Inadequate Expertise Information

Available expertise information for meat goat production is very limited compared to what is available for the production of traditional meat animals such as cattle and swine. For example, there are no accurate statistics on the number of goats produced or sold, appropriate feeding regime for goats is not yet determined, and standard goat herd health program is not very developed. However, researchers are working on these areas and hope to develop a standard of production and marketing of meat goat in the near future.

Limited Access to Credit Facilities

Meat goat production is a relatively new industry in the United States. Lenders are skeptical of this enterprise because of the little or no available information for them to determine its profitability. This makes it difficult for owners of small farms to secure loans for meat goat enterprises.

Conclusion

With the existing market from ethnic groups, and the potential market from the mainstream consumers, the demand for goat meat will continue to increase. The high and rising demand, coupled with other factors such as low start- up cost, less labor requirement, ability to use goats for brush control and multi-species grazing, and the prolific nature of goats, has made meat goat production systems a viable profitable alternative enterprise to revive or upgrade

small-scale farms. Although there are several opportunities, there are also challenges plaguing the industry. While the most serious of these challenges is the control of intestinal parasite, other challenges such as marketing goat-derived products, inadequate expertise information, and limited credit facilities also pose problems for the development of this industry. These challenges must be addressed in order for meat goat industry to get to its potential level as one of the main livestock production systems in the United States.

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On-Farm Sustainable Integrated Systems
Magid Dagher, Alcorn State University

SESSION 1E
Energy Efforts Across the Country

Biodiesel Production and Its Implications for Small Farms

Dorathy Barker, Operation Spring Plant Inc

Operation Spring Plant Inc, embarked upon a venture of producing bio diesel fuel using used cooking oils gleaned from fruits and vegetable developed markets within a fifty mile radius' Risk Management Agency funded Operation Spring Plant to learn and pass on the art and science of bio diesel production to be used on small farms.

There is a lack of access to training and educational programs in rural areas of North Carolina. This is true for the general population and especially so for farmers with limited resources. Inadequate training, low income, and soil that require best management practices for crop production have curtailed life for minority and limited resource farmers in central and eastern North Carolina.

We will share with you the barriers we faced and what lessons were learned. There were many learning curves to the art and science of bio diesel production from used cooking oil. The first and foremost barrier is that with the down turn of the economy the small restaurants and local stores within a fifty mile radius sales were reduced therefore less used oil was gleaned. The second barrier was dog Food Company started to pay the restaurants cents per gallon for the used oil. We also found out that the Asian restaurants used oil contained too much water content for use to produce a quality fuel. Small Ma and Pa stores had dirtier used oil, simply because they used it longer. Therefore some used oil had to sit to settled longer before the fuel making process could start. We also found out that over time a buildup ring around the fuel tank, gaskets therefore clogging filters.

Some diesel tractors gaskets were sensitive because the fuel was not washed. One of the objectives for this project is to produce a quality fuel that will work in all diesel engines and conform to the FDA Fuel regulations.

Farmland has been lost due to the farmers' inability to repay loans. Some of the farmers remaining fears already restrict them from venturing into new enterprises or crop production. Their fear is losing family farmland because they would not be able to repay loans for production. Lack of educational access, low crop prices or no markets, crop diseases, and weather have all contributed to the condition of the limited resource farmer. Over the last three years many disadvantage farmers report to OSP that the all time high in their farming career that diesel fuel has kept them from getting into the fields early to take advantage of the early spring profitable fruits and vegetable markets. The other risk they faced was fuel to harvest and transport products and goods to the market place. The condition of limited resource farmers has been problematic, and now loss of tobacco sales worsens the condition. There are approximately 5,000 limited resource farmers in 25 North Carolina counties.

The final impact was that the farmers reported that they needed more than the sample gallons OSP gave them to try. Many had older model tractors and the bio diesel worked well with their engines. Newer models were more sensitive. Having the ability to produce fuel for on farm use will enhance the ability of disadvantage to get into the fields earlier , reduce the carbon foot print since bio diesel is a cleaner burning fuel, and collectively can spur economic growth in small farm communities.

Can Sweet Sorghum and Sweet Potato Ethanol Contribute to Self-Sufficiency of Small Farms?

Michael Bomford, Kentucky State University
Tony Silvernail, Kentucky State University

Introduction

US biofuel mandates require production of 36 billion gallons of ethanol fuel annually by 2022, more than triple the 11 billion gallons produced in 2009 (HR 6, 2007; RFA 2009). Almost all ethanol fuel produced today is made by fermenting and distilling sugars derived from corn starch, using a process that reduces greenhouse gas (GHG) emissions, relative to gasoline, by about 13% (Farrell et al., 2006). Mandates require that most ethanol produced in 2022 will use advanced processes that depend on feedstocks other than corn starch and reduce GHG emissions by at least 50%, relative to gasoline (HR 6, 2007). Combustion of 36 billion gallons of ethanol will yield about 3 quadrillion BTU of usable energy, roughly 3% of the energy – or 7% of the petroleum-derived energy – currently used in the USA each year. Current ethanol production methods are less petroleum-intensive than gasoline, but draw roughly three-quarters of the energy released during ethanol combustion from other non-renewable sources, such as natural gas and coal (Farrell et al., 2006). Ethanol derived from corn starch could therefore be considered about one-quarter renewable. Advanced processes should increase the renewable proportion. Achieving ethanol production targets for 2022 will do little to reduce US dependence on non-renewable energy sources, but will have dramatic impacts on the agricultural landscape. Ethanol production demanded about 30% of the US corn yield in 2009. This proportion will grow slightly over the next decade, to about 35%. Most of the remaining growth in demand for ethanol feedstocks will come from increased acreage devoted to cellulosic crops, such as switchgrass; and

non-corn crops that produce starches and sugars, such as sweet potato or sweet sorghum. Although ethanol has little potential to substantially reduce US fossil fuel use, it could already entirely eliminate petroleum consumption by US farms. Between 1978 and 2002, petroleum consumption by US farms fell by 39%, to 0.6 quadrillion BTU (Miranowski, 2005). This represents one-fifth of the energy released through combustion of corn-based ethanol in 2009. Replacing fossil fuels with renewable fuel on US farms is achievable, and may enhance food security in the event of a petroleum crisis. Ethanol-driven demand for corn has chiefly benefited large Midwestern farms. About 16% of farms grow corn, and these farms tend to be 80% larger than average (USDA, 2008). Most ethanol is produced in large refineries that require hundreds of thousands of acres of corn to run at capacity (RFA 2009). Ethanol refineries are currently concentrated in the Midwestern Corn Belt (RFA 2009). The argument for small-scale, decentralized ethanol processing is stronger for advanced ethanol than for conventional corn-based ethanol. Feedstocks proposed for advanced production tend to be bulkier than corn grain, and less amenable to long-distance hauling. Attempts to haul advanced feedstocks to large centralized ethanol refineries could compromise the lifecycle GHG and renewable energy advantages otherwise associated with their use. Advanced ethanol production may offer greater opportunities for small farmers.

Other potential advantages to small-scale, decentralized ethanol processing include:

- Opportunities to promote biodiversity by using a more diverse set of feedstocks;
- Opportunities to promote food security and food system resilience by ensuring that geographically diverse farms have access to locally-produced renewable fuel for food production;
- Opportunities to promote resource cycling by keeping nutritious byproducts of ethanol production close to their farm source, where they can be returned to farms as feed or fertilizer;
- Opportunities to produce feedstocks on small farms, which tend to use land more efficiently than large farms;
- Opportunities to reduce farm input needs through promotion of regionally-appropriate, low-input feedstock crops;
- Opportunities for more equitable distribution of wealth, and greater retention of wealth, by rural communities.

The opportunities associated with small-scale ethanol production suggest potential advantages in terms of economic, social, and environmental sustainability. Howard and Bringezu (2009) argue that small-scale biofuel production offers social and environmental benefits, but liabilities exceed benefits at larger scales.

Synthesis of pesticides and fertilizers – particularly nitrogen fertilizer – represents the largest component of indirect farm energy use in the US, accounting for about one-third of total farm energy use (Miranowski, 2005). Producing biofuel feedstocks without depending on synthetic pesticides or fertilizers could dramatically improve the lifecycle energy and GHG balance of biofuels. A recent report from the United Nations Food and Agriculture Organization (Zeisemer, 2007) suggests that:

> *Because of its reduced energy inputs, organic agriculture is the ideal production method for biofuels. […] As the aim of biofuels is to reduce dependency on nonrenewable energy sources and to mitigate environmental damage of fossil fuel emissions, organic production of biofuels furthers these goals in a way that conventional agriculture does not.*

In 2008 we began a four-year study to assess effects of biofuel feedstock production scale on land, labor, and energy use efficiency on small organic farms in Kentucky. We evaluated four feedstock crops: corn, sweet potato, sweet sorghum, and soybean. Sweet potato and sweet sorghum are both potential alternatives to corn grain; rich in carbohydrates and suitable for fermentation into ethanol. We hypothesized that these crops would be better adapted to low-input production on small farms than corn, and could be strong candidates for decentralized advanced ethanol production. Here we report preliminary results from the first two years of the four-year study.

Methods

The study was conducted on certified organic land at the Kentucky State University Research Farm that had been in alfalfa for three years previous.

Crops were grown at three scales, replicated four times in a randomized complete block design:

- Biointensive plots measured 11 x 20 ft. (5.1 x 10-3 ac) and were managed entirely with hand tools according to Jeavons (2002);
- Market garden plots measured 24 x 60 ft. (3.3 x 10-2 ac) and were managed with a combination of hand tools and walk-behind tractors with appropriate implements;
- Small farm plots measured 72 x 125 ft. (0.21 ac) and were managed with a combination of hand tools, walk-behind tractors, and conventional 4-wheeled tractors with appropriate implements.

Plots were evenly divided into four strips, which were randomly assigned to food and biofuel varieties of corn, sweet potato, sweet sorghum, or soybean, and planted in May, 2008. Following harvest, all plots were seeded to a winter cover crop mixture of winter rye and hairy vetch in late

October, which was incorporated at vetch flowering in late April. Crops were rotated in subsequent years so that corn followed soybean, which followed sweet sorghum, which followed sweet potato, which followed corn.

The following data were collected for each plot for the duration of each year:

- Time and intensity of human labor expended;
- Volume of gasoline and diesel fuel used by machinery; and
- Crop yield. Here we report yields of biofuel varieties of corn (var. 56M30), sweet sorghum (var. 'M81E) and sweet potato (var. 'Beauregard') only, since these are the most suitable ethanol feedstocks among the crops tested.

Metabolic energy associated with human labor was estimated using Metabolic Equivalent of Task (MET) index values of 2.5 for light work (e.g. driving a tractor), 4.0 for moderate work (e.g. hoeing or operating a walk-behind tractor), and 8.0 for intense work (e.g. deep cultivation with a spading fork or hand harvest of sweet potatoes). MET values were converted to energy values at 5 kJ per MET minute (Schwarz et al., 2006). Fossil energy density values of 32 MJ L-1 and 36 MJ L-1 were used for gasoline and diesel fuel, respectively (USDOE-ANL, 2009). Potential ethanol yield was estimated at 350 L Mg-1 (85 gallons per ton) for corn grain, 58 L Mg-1 (14 gallons per ton) for sweet sorghum cane, and 167 L Mg-1 (40 gallons per ton) for sweet potato tubers (Mathewson 1980).

Results

Biointensive plots used the most labor per unit area in both years, and small farm plots used the least (Table 1). An effect of farm scale on energy use was observed in 2009

only, when small farm plots used the most energy per unit area and biointensive plots used the least (Table 1). Metabolic energy accounted for all of the energy used at the biointensive scale, but only 19 and 8% of energy consumed at the market garden and small farm scales, respectively.

Table 1. Labor and energy use at three organic ethanol feedstock production scales in 2008 and 2009. Energy use includes energy released by combustion of gasoline and diesel fuels in internal combustion engines and energy released by human metabolism during farm labor.

	Labor use (min m-2) ± S.E.		Energy use (MJ m-2) ± S.E.	
Farm scale	2008	2009	2008	2009
Biointensive	26.3 ± 1.6 a	16.76 ± 1.49 a	0.81 ± 0.11 a	0.46 ± 0.04 c
Market garden	7.8 ± 0.2 b	3.27 ± 0.08 b	0.77 ± 0.02 a	0.52 ± 0.02 b
Small farm	3.7 ± 0.1 c	2.05 ± 0.03 c	0.80 ± 0.05 a	0.65 ± 0.01 a

Corn and sweet sorghum yields were higher during the cool, wet summer of 2009 than the hot, dry summer of 2008; but sweet potato yields were lower in 2009 (Table 2). Sweet sorghum gave the highest theoretical ethanol yield among the crops tested in both years (Table 3). Theoretical ethanol yield was similar for corn and sweet potato in 2008, but sweet potato gave the lowest theoretical ethanol yield in 2009 (Table 3).

Table 2. Yield of corn grain, sweet sorghum cane (2008) and juice (2009), and sweet potato tubers grown organically at three production scales in 2008 and 2009.

	Corn grain yield (kg m-2) ± S.E.		Sweet sorghum yield (kg m-2) ± S.E.		Sweet potato tuber yield (kg m-2) ± S.E.	
Farm scale	2008	2009	2008 (cane)	2009 (juice)	2008	2009
Biointensive	0.38 ± 0.03	0.67 ± 0.02	1.6 ± 0.7	1.85 ± 0.15	1.1 ± 0.3	0.88 ± 0.28
Market garden	0.57 ± 0.01	0.90 ± 0.10	4.2 ± 0.6	1.56 ± 0.38	1.2 ± 0.1	0.50 ± 0.09
Small farm	0.67 ± 0.04	0.71 ± 0.12	7.2 ± 0.4	0.80 ± 0.08	1.4 ± 0.1	0.69 ± 0.14

Table 3. Theoretical ethanol yield from corn, sweet sorghum, and sweet potato grown organically at three production scales in 2008 and 2009.

	Theoretical ethanol yield (L m-2)								
	Corn		Sweet sorghum		Sweet potato		All feedstocks		
Farm scale	2008	2009	2008	2009	2008	2009	2008	2009	All
Biointensive	0.13	0.23	0.09	0.91	0.18	0.15	0.14	0.43	0.28
Market garden	0.20	0.31	0.24	0.77	0.20	0.08	0.21	0.39	0.30
Small farm	0.23	0.25	0.42	0.40	0.24	0.12	0.30	0.25	0.27
All scales	0.19	0.27	0.25	0.69	0.21	0.12	0.22	0.36	0.29
Both years	0.23		0.47		0.16		0.29		

Labor and energy use efficiencies in 2009 were double those in 2008 (Table 4). The effect of farm scale on labor use efficiency was similar between years, but the effect on energy use efficiency was not (Table 4)

Table 4. Labor and energy efficiency of organic ethanol feedstock production at three scales in 2008 and 2009. Respective efficiencies are measured as theoretical ethanol yield per minute of labor and per MJ of energy invested in feedstock production. Labor and energy used to process ethanol is not included.

	Labor efficiency (mL min-1)		Energy efficiency (mL MJ-1)	
Farm scale	2008	2009	2008	2009
Biointensive	5	26	173	935
Market garden	27	119	273	750
Small farm	81	122	375	385
All scales	38	89	274	690

Discussion

We observed different effects of scale on land, labor and energy efficiency of ethanol feedstock production between 2008 and 2009. The first year was unusually dry for the region; the second was unusually cool and wet. Other differences between years included poor crop establishment at the biointensive and market garden scales in 2008, and greater sweet potato plant density in 2008 than 2009. These year-to-year differences emphasize the need to continue the study for several seasons to identify consistent trends and draw more rigorous conclusions. We plan to repeat this study in 2010 and 2011.

The national average ethanol yield from corn feedstock was 0.40 and 0.43 L m-2 in 2008 and 2009, respectively (RFA, 2009). Our small scale organic corn plots did not approach this theoretical yield in either year. Sweet sorghum consistently performed better than corn in our small scale organic plots, demonstrating the potential to generate substantially more ethanol per unit land area without resorting to high input production.

Since sweet sorghum cane is a bulkier and more perishable feedstock than corn grain, it is better suited to decentralized processing systems. Sweet sorghum juice extraction can occur on farm to reduce hauling costs. Sweet sorghum juice is approximately 20% sugar, making it ideal for direct fermentation.

It is unclear whether relying on more human labor to offset machinery use at small production scales increases energy efficiency. Labor efficiency was highest at the small farm scale and lowest at the biointensive scale in both years, but the biointensive scale only showed greater energy efficiency in 2009 (Table 4).

Current farm wages and ethanol prices in North America do not justify small-scale production of organic ethanol feedstocks, even if an energy efficiency advantage is observed. Ethanol prices in 2007-2010 have fluctuated around $0.5 L-1 ($2/gal), and average farm labor compensation is around

$12 hr-1 (TFC, 2010; Edwards and Sletten 2006), so any ethanol production rate below 400 mL min-1, including growing and processing the crop, is uneconomical. The labor efficiency observed for crop production alone did not approach this threshold in either year (Table 4). The crops would have far greater value as organic food or feed than as ethanol feedstocks. A farmer's decision to dedicate a portion of small-scale organic crop yield to on-farm ethanol production might be justified as a means of promoting self-sufficiency, resource cycling, or use of waste products, but ethanol feedstock production would be a poor economic choice as a principal means of income for the small organic farmer.

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How Are Energy Costs Affecting Greenhouse Growers?

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Background

In 2003, the average greenhouse in New Jersey spent 5.3 percent of sales on heating fuel (Brumfield, 2007) and had profits of 9.4 percent of sales. Up until the middle of 2008, crude oil prices continued to rise and reached a high of $147 per barrel. Fuel oil used to heat greenhouses almost tripled in price, but has since come down to levels experienced during the middle of the decade (DOE, 2009). If, as expected, oil prices start to climb again, a typical commercial greenhouse operation would experience significant difficulty making a profit, and the industry would be in peril. Significant parallels, but also some significant differences exist between now and the energy crisis of the 1970s. The general consensus remains that fossil fuels

represent a finite supply that must eventually be replaced with sustainable energy resources and that it is prudent for our country to take steps to free itself from its dependence on foreign oil. Modest oil prices following the early energy crisis and through the 1990s have shifted much of the attention away from increased self-reliance and/or the development of alternative energy sources. The results of research efforts in the 1970s and 1980s led to substantial reductions in greenhouse energy use (double polyethylene greenhouse films, energy curtains, root-zone heating, and environmental controls). Now that the most obvious and effective steps to reduce fossil fuel consumption have been taken, further significant improvements are much more difficult (and costly) to identify and implement.

In a 2003 mail-in survey of the New Jersey greenhouse industry, we found that 61percent of respondents were considering energy saving technologies, 17 percent were considering alternative energy sources, and 10 percent were considering co-generation. We conducted another survey in 2008 to obtain information to help growers find ways to cope with ever increasing energy costs. One option some growers were considering was to produce their own bio-fuels. We wanted to find out how many growers had enough land to consider this option. We also wanted to know how growers were handling the fuel cost increases.

Methods

A total of 397 surveys containing a list of 21 questions related to energy use were mailed to greenhouse growers in New Jersey in September 2008. A total of 56 (a 14 percent return rate) usable surveys were returned.

Findings

Heating Fuel Type

Oil, propane, and natural gas were the most common types of heating fuels used either alone or in combination as their primary heating source by the respondents (Table 1). Wood, kerosene, and bio-fuel were each the primary heating source for one respondent. Oil, propane, and wood were the most common secondary fuel types respectively. Natural gas, electric, natural gas/propane, and fuel oil/wood were the secondary fuel type for one respondent each.

Table 1. Primary and secondary fuel type by numbers and percentage of respondents using them.

Fuel	Primary Fuel Type		Secondary Fuel Type	
	Number	Percentage	Number	Percentage
Oil	17	30%	8	14%
Propane	16	29%	6	11%
Natural gas	15	27%	1	2%
Oil/propane	3	5%	0	0%
Oil/natural gas	2	4%	0	0%
Wood	1	2%	4	7%
Kerosene	1	2%	0	0%
Bio-fuel	1	2%	0	0%
Electric	0	0%	1	2%
Natural gas/propane	0	0%	1	2%
Fuel oil/wood	0	0%	1	2%
No Answer	0	0%	34	61%
Total	56	100%	56	100%

Energy Saving Technologies

In the 2003 survey of New Jersey greenhouses, 61percent of the respondents were considering energy saving technologies. In the 2008 survey, 45 percent of the respondents had implemented energy saving technologies since 2003 and 39 percent are considering implementing energy saving technologies (Table 2). Energy curtains (11 percent), lower set point temperatures (9 percent), bottom heat (7 percent), and closing down a portion of the year (7 percent) were the most common energy saving technologies that have been implemented. Wood boilers (5 percent), new coverings (5 percent), growing in less space (5 percent), new heaters (5 percent), tightening the greenhouse (4 percent), new wall materials (2 percent), new equipment (2 percent), environmental control computers (2 percent), changing to hardy plant crops (2 percent), new thermostats (2 percent), and pad and fan cooling (2 percent) were energy saving technologies that some growers had adopted since 2003.

Solar (14 percent) and wind (13 percent) were the most frequent energy saving technologies respondents are considering. Some 9 percent of respondents were not sure what energy saving technologies to adopt, but were considering all options. Energy curtains (7 percent), wood burning furnaces (7 percent), more efficient heaters/boilers (4 percent), alternative heat source (2 percent), rigid plastic walls (2 percent), geothermal (2 percent), and fuel pre-heaters (2 percent) are other energy saving technologies being considered.

Table 2. Number of respondents who were considering implementing energy saving technologies in 2003, and number of implemented energy saving technologies or number of respondents considering implementing them in 2008.

Response	2003		2008			
	Considering		Implemented since 2003		Considering	
	Number	Percentage	Number	Percentage	Number	Percentage
Yes	70	61%	25	45%	22	39%
No	33	29%	28	50%	14	25%
No Response	11	10%	3	5%	20	36%
Total	114	100%	56	100%	56	100%

Alternative Energy Sources

In 2003, 17 percent of the respondents were considering alternative energy sources. In our 2008 survey, only 2 respondents (4 percent) were using alternative energy. Both of these respondents were using wood burning furnaces. Some 45 percent of the respondents in 2008 were considering alternative energy sources. The alternative energy sources being considered were wind (23 percent), solar (20 percent), wood (7 percent), anything (5 percent), biomass (4 percent), electric (2 percent), corn (2 percent), geothermal (2 percent), and double energy curtains (2 percent).

Co-generation Consideration

In 2003, 10 percent of the respondents were considering co-generation. In the 2008 survey, 4 percent of the respondents were using co-generation, and 9 percent were considering co generation.

Fuel Surcharges
Some 84 percent of the respondents indicated that their vendors were charging a fuel surcharge. Twenty-three percent of respondents had asked their vendors to waive the fuel surcharge, and 13 percent have switched vendors because of fuel surcharges. Twenty-three percent of respondents were charging their customers a fuel surcharge. Thirteen percent of respondents had customers who have asked them to waive the fuel surcharge, and 25 percent would consider waiving the fuel surcharges in the future. Nine percent of respondents felt they had lost customers from charging a fuel surcharge, and 66 percent thought fuel surcharges were bad for business.

Bio-fuels
Thirty-nine percent of the respondents would consider growing bio-fuels. Respondents who indicated how much land they had available for growing bio-fuels had an average of 59 acres which could be devoted to growing bio-fuels, and would be willing to devote an average of 50 acres to growing bio-fuels.

Information Sources
Most respondents did not indicate where they got their information in making decisions about energy conservation and alternative energy.

Summary
While only 4 percent of New Jersey growers had adopted alternative energy, 45 percent of them were investigating new methods of energy use, storage, and generation. Some of the alternative energy uses included biomass (wood, corn, switch grass, etc.), co-firing (coal and biomass), solar, wind, electric, geothermal, and double energy curtains. Most greenhouses are seasonal businesses with maximum production in the spring. Adding energy production to their business will help spread their overhead costs over more of the year as well as extend employment opportunities.

Survey respondents did not feel that fuel surcharges were the answer in dealing with increasing fuel costs, and 9 percent of respondents felt they had lost customers from charging a fuel surcharge. Sixty-six percent thought fuel surcharges were bad for business. While 84 percent of the respondents indicated that their vendors were charging a fuel surcharge, 23 percent of respondents had asked their vendors to waive the fuel surcharge, and 13 percent had switched vendors because of fuel surcharges. Only 23 percent of respondents were charging their customers a fuel surcharge, 13 percent had customers who asked them to waive the fuel surcharge, and 25 percent would consider waiving fuel surcharges in the future.

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Preparing County Extension Staff to Help with Consumer Energy Questions

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The winter of 2007-2008 saw home energy fuel prices sky rocket with gasoline and diesel prices. Residents in Maine are having problems meeting the bare minimum of their needs for heating, transportation and food due to these rising costs. A needs assessment confirmed that in addition to learning about home energy conservation methods Maine residents were interested in information on the relative value of alternative heating fuels, hybrid cars, and value of home grown foods.

A special Consumer Energy Initiative was established to assist county extension staff in addressing client's needs for energy information. The goal of the Consumer Energy Initiative includes: Extension staff will access energy related resources to respond to client requests; Clients will report increased knowledge about energy conservation and alternatives; Clients will make informed decisions to upgrade or replace energy systems in their home, vehicles or businesses; and Clients will reduce the amount of energy used in their daily lives. A four pronged approach to this issue was implemented.

First a web site was opened that carried links to reliable information of interest to home owners

including: conservation, heating, alternative energy, business, and transportation. External links include the U. S. Department of Energy – Energy Efficiency and Renewable Energy web site. Currently we have over 179 pages of content that have been accessed over 30,000 times since June 2008.

- "In keeping with our conversations about saving energy-our very own Cooperative Extension has a wonderful site-there is something for everyone here www.extension.umaine.edu/energy " J. W., Vice President for Administration and Finance to Classified staff on June 18, 2008.
- That is my go-to place for information, if it's not right there, the links take you to all kinds of other resources." M. S., Energy and Utility Manager, Facilities Management.

This was followed up with a number of UMaine Extension publications on energy conservation, safety, heating alternatives and alternative energy options. The following publications are available free on our publications web site at http://extensionpubs.umext.maine.edu/

- Saving Energy in Apartments Item #7211
- Weather-Stripping Windows and Doors Item #7215

- Stop Window Drafts With Homemade Indoor Shutters Item #7213
- Insulated Window Treatments and Coverings Item #7214

- Home Heating Safety Item #7218
- How Much Heat per Dollar Item #7216
- How To Do a Home Evaluation Item #7212
- Options for Home Heating Fuels and Energy Systems – An Overview #7217
- Draft Stoppers #7220

A program curriculum (sample flyers, news releases, PowerPoint Presentations, and post meeting evaluation) was written and presented to staff to deliver a two hour program to clientele on heating and energy saving tips. An internal web site held this information as well as county office protocol to follow to answer energy related questions and other home energy resources for staff.

An evaluation of this training session attended by 36 staff with 26 responding to the evaluation revealed that before the training 38% of staff and after the training 69% of staff had considerable understanding of energy program resources available to them. After the training 100% of staff indicated they were confident in their readiness to do an energy program in their county.

Seven of the sixteen Maine counties offered a total of 12 energy saving programs and they were attended by 111 folks. A post meeting evaluation revealed that 81% of participants gained new information on saving energy, 91% felt the program activities and handouts were useful and 96% felt the programs were a value in terms of time, money and energy to attend. As a result of attending the program 58% of participants intend to weather-strip doors and windows, 67% intend to do an energy audit and 74% intend to seal cracks in crevices in their homes.

And finally a display on home energy education was developed that included a box of demonstration materials. Due to

increased need for this display multiple copies were deployed throughout the state. These displays have been used at the Maine Winter Energy Expo, Lengthening Out Fair, Earth Connections, numerous county and state fair venues, UMaine Board of Trustees, UMaine President's Development Council, UMaine Board of Visitors, Maine County Commissioners Conference, Maine Volunteerism Conference.

Staff also participated in a special Keep ME Warm Kit distribution in partnership with the state of Maine office of Energy Resources and Efficiency Maine. A DVD was made and video uploaded to the UMaine Extension Energy web site that included Do It Yourself Energy Saving Tips.

Kits were intended to be installed by volunteers into the home of a low income participant. After the heating season an evaluation was mailed to Keep ME Warm Kit recipients. It was found that 25% of the kits were installed by volunteers, 11% of volunteers and the resident and 38% were installed by the resident. 21% of those returning the survey did not have the kit installed.

The various items in the kit were more popular than others. Below is a ranking of which items were actually installed from the kits. Also, 39 people installed over $20,000 worth of other purchased items or

$516 per person responding to this question. 28 people reported saving a total

Items Installed from Keep ME Warm Kit	
57%	Clear Plastic with Lathe for Windows or Banking
54%	Compact Florescent Bulb
52%	Foam Weather-stripping for Door
48%	Light Switch and Outlet Gaskets
48%	Low-Flow Showerhead
46%	Water Pipe Foam Insulation
44%	Spray Foam for Cracks and Gaps
40%	Rope Caulking
36%	Faucet Aerators
27%	Smoke Detector

of 4,500 gallons of oil or an average of 161 gallons per person responding. Other activities that kit recipients did to reduce energy costs included 67% set back their thermostat when they were away or at night, 63% use drapes and shades at night to conserve heat, 59% replaced or cleaned their furnace filter, 47% tuned up their heating system and 16% conducted an energy audit. This program will be offered in fall of 2009 with volunteers measuring for interior storm windows and offering residents an opportunity to select only those items needed for weatherizing their homes.

During the past year Efficiency Maine staff with the Maine Public Utilities Commission were consulted about energy topics and kept informed about progress with this initiative. As a result a new Memorandum of Understanding is being developed and funded by the American Recovery and Reinvestment Act of 2009 ARRA to continue this effort in 2009 and 2010.

SESSION 1F
How Diversity and Equity Became Law: Gaining a Seat at the Table in the 2008 Farm Bill

THE 2008 FARM BILL: THE QUEST FOR DIVERSITY & EQUITY

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For the longest time small farm producers and ranchers, especially minority farmers and ranchers, have sought and aspired to find a sympathetic ear and aspired to obtain some degree of equity in the Farm Bill debates over the years. The 2008 Farm Bill did finally give these “socially disadvantaged farmers and ranchers” a small degree of satisfaction and demonstrated what persistence and commitment in injecting themselves into these previously unattainable processes could accomplish.
At the beginning of 2006, a group was identified and began the work of what would become known as the “Diversity Team.”

This group was made up of African-American, Latino, Asian, Tribal members, and other similarly situated farmers and ranchers. This “diversity team” resulted after funding sources that have traditionally funded the advocacy efforts of

organizations involved in agriculture and trade policy failed to produce the inclusion of these historically excluded minority groups. Thus, the funding sources, mostly the Kellogg Foundation and Oxfam, provided a small amount of funds for the "diversity initiative." While the amount was less than adequate, the resources did permit the opportunity for these groups to engage each other in formulating a strategy that would eventually provide a in which issues that were common to these stakeholders were brought to the attention of the appropriate Congressional committees and policymakers at the U.S. Department of Agriculture for their consideration and inclusion in the Farm Bill debate.

The Diversity Team cast a wide net to engage as broad a group of stakeholders as possible, not only rural community-based organizations, but also reached out to environmental groups, land-grant colleges and universities (historically black colleges and universities) and Hispanic Serving Institutions. These entities were briefly engaged, but chose to go their own way and didn't coordinate their issues and concerns with the Diversity Team, which at times caused some friction and misunderstandings with policymakers.

The Diversity Team itself had its own internal problems to contend with.

First, while most of team knew each other, most of us had worked on our own respective concerns and did not, to this point, had to synthesize our diverse group issues and concerns.

Second, there was an issue of trust that had to be worked through in order to be effective in meeting our goals and objectives.

Third, there were ethnic makeup, cultural, subject areas, and regional and geographic concerns that we had to learn from each other to ensure that we arrived at a consensus before deciding on a particular position.

In addition to dealing with the above referenced matters, we had to bring our own constituencies up to date and communicate our recommendations before we could reach a consensus within the Diversity Team.

Further complicating matters were the isolation and communication difficulties, both technical and cultural, within our respective groups. Rural communities have limited broadband access and cell phone service is some areas are non-existent.

Communication on the Diversity Team consensus recommendations, to be effective, had to be communicated from our respective constituencies to their elected representatives and policymakers. Thus, telephone calls and visits to elected representatives' district offices and to Capitol Hill had to be made to ensure that the 2008 Farm Bill recommendations were considered seriously. These expenditures taxed our organizations budgets as funds for the Diversity Team were depleted. However, the Diversity Team's dogged determination and sacrifices didn't deter us from our goal of seeing the 2008 Farm Bill include our constituencies' concerns incorporated. By all accounts, the Diversity Team's efforts paid off at the end and we were successful. Even after the Congress had several false starts and our gains modest we are proud of our work, which you can see comprehensively outlined in the booklet we prepared, **"A Seat at the Table,"** available from the Rural Coalition. Let me mention a few items:

- Mandatory $15 million dollars per year for the Section 2501

- Receipt for service for all applicants at USDA offices
- $8 billion for specialty crops, with a proviso for the states to 'proactively' ensure access to these funds for socially disadvantaged producers
- Contract authority for USDA with community-based organizations

Thank you for the opportunity to give you my perspective on our efforts in the 2008 Farm Bill.

USDA Rural Farmer Owned Cooperative Fresh Vegetable Purchasing Pilot (Cooperative Fresh Pilot)

Quinton N. Robinson

Date: June 8, 2009

Issue Overview

In Fiscal Year 2008, the USDA Food and Nutrition Service (FNS) purchased $473,156,103 dollars in fresh or processed fruits and vegetables that were distributed to schools and various sites within the supplemental commodity distribution system. Small-farmer-owned cooperative located in rural communities performed less than 1 percent of FNS fruit and vegetable contract specifications.

Note: This proposal does not concern geographical preferences in the same manner that geographical preferences have been raised in the recent debate over whether school districts can create geographical preferences when purchasing foods using federal dollars comingled with state dollars.

The lack of USDA contracting success with rural farmer owned cooperatives is due to factors such as the lack of adequate (a) federal contracting expertise, (b) fruit and vegetable processing infrastructure, (c) access to capital, and (d) stringent contract specifications. This lack of "contract readiness" among farmer-owned cooperatives can be directly linked to lack of jobs and economic opportunity in rural America.

Cooperative Fresh Pilot requires an explanation of the various funding methods used to fund federal feeding projects.

Traditionally, USDA's Office of Small and Disadvantaged Business Utilization (OSDBU) conducts outreach sessions to various small businesses performing information technology, construction, and other services through contracts with USDA. As a result, small business IT firms conduct over $2.5 billion each year in small business contracts with USDA agencies. Since we are USDA, our outreach zeal to farmers and ranchers actively engaged in production agriculture should be as vigorous. What's happening here marks a…

Policy Response:

A Rural Small Farmer Owned Cooperative Fresh Vegetable Purchasing Pilot (CFP) could improve the viability and profitability of various rural farming communities now facing severe economic conditions. The USDA Cooperative Fresh Pilot (CFP) advances current OSDBU small business outreach activities designed to incrementally integrate small farmer owned cooperatives into USDA's small business commodity contracting programs. The CFP initiative, if implemented to full capacity, could garner not less than $1 million in contracting opportunities for rural America and farmer owned cooperatives that grow and process nutritious fruits and vegetables that should be increasingly used on schools and food pantries. The CFP initiative is a necessary addition to the continued pace of economic recovery in rural America.

Challenges to CFP:

- The CFP encourages FNS to undertake $1 million in purchases of nutritious

fresh and processed commodities not necessarily requested by the end user: Schools or commodity distribution centers.
- Time constraints and seasonal availability of select products.
- Production and food processing or manufacturing constraints.
- Capacity limitations of Rural Farmer Owned Cooperatives. **[#####]**

Goal:
Develop contracting policies designed to purchase $1 million in packaged watermelon and cantaloupe from Rural Farmer Owned Cooperative during the months of August and September. This product can be delivered to the school lunch program.

Objectives:
- Encourage the USDA Food and Nutrition Service (FNS) to order processed and packaged watermelon and cantaloupe to be strategically delivered from Mid-August to Mid-September 2009**. [Modifications in Methods of FNS Purchasing].**
- Develop a restrictive fresh and processed vegetable contracting plan. **[Strategic use of Existing**
- **USDA Small Business Contracting Authorities]. (a) Sweet Potato set-Aside, Increased Beef Set-Aside.**
- Assist rural farmer owned cooperatives federal contracting preparedness.
- **[Immediate implementation of Small Business outreach plan targeted to Small Farmer Owned Cooperatives within 10 regions of the US]. The title of this training program is "Farmer-Owned Cooperatives: contract ready."**
- Coordinate HAACP and food safety education, training and outreach among farmer cooperatives and land grant institutions.

Strategies and Tactics
Objective (1): On or before June 19, 2009, schedule a meeting with USDA FNS in order to educate and inform FNS on the impact and potential of CFP.
Objective (2): On or before June 19, 2009, draft a contracting plan to be shared with FNS, and AMS, using the restrictive contracting authorities within the Hub Zone, Service Disabled Veteran Owned Small Business, and 8(a) rules and regulations.
Objective (3): On or before June 19, 2009, draft and disseminate a federal contracting outreach plan targeted to farmer owned cooperatives.
Objective (4): On or before June 19, 2009, draft letters to land grant institutions inviting their participation in the CFP initiative.

OSDBU is confident that the CFP initiative can be fully implemented by mid-August through mid-September in select areas of the United States. The data collected from the CFP initiative can be used to promote other products grown and processed by rural farmer owned cooperatives.
I respectfully solicit your support and advice and counsel on this economic stimulus program.

SESSION 2A
Niche Marketing for Dairy, Meat, and Vegetables

Profit through Value-Added Products: Get More from Your Milk: Increasing Profit through Value-Added Products

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Angel Gloy, Cornell University
Jeffrey Hyde, Penn State University
Brian Kelly, Penn State Extension
Kerry Kaylegian, Penn State University

Owners of dairy farm businesses are exploring or starting value-added dairy product enterprises as a way to increase profitability and/or provide an opportunity for the next generation to return to the farm business. However, the decision to enter into value-added dairy production is sometimes not well researched or planned. Faculty and extension educators from Penn State and Cornell have been seeing increased interest from dairy farmers, particularly those with smaller herds, in processing value-added dairy products, such as cheese, yogurt, and ice cream. A small team from these two universities received a Risk Management Education grant in 2007 to develop an introductory booklet on value-added dairy opportunities for northeast dairy farmers. This publication addresses the issues that dairy farmers need to explore before making the decision to start a value-added dairy enterprise. Readers are guided through the important issues of choosing a value-added product, marketing, understanding the resources needed and available for a new venture, and assessing the profitability of different options. This publication is available both in hard copy and online.

The publication has been utilized in a four different ways.

- When county extension educators receive calls inquiring about processing value-added dairy products, the publication has been mailed to the callers.
- The publication served as the basis for a series of four webinars on value-added dairy opportunities. This webinar series was held in spring 2008.
- The publication was included in the package of materials given to attendees of a 2-day workshop for farmstead and artisan dairy processors. This workshop is discussed below.
- When meeting with individual or groups of dairy farmers, the publication served as a guide for discussing issues related to starting value-added enterprises.

A 2-day workshop was held in late February 2009 that utilized the publication as its foundation. Participants ranged from dairy farmers who already have a value-added enterprise to individuals interested in value-added dairy product processing and not currently operating a dairy farm. Workshop sessions included good manufacturing practices (GMP), marketing, milk microbiology, and the processing of cheese, ice cream, and yogurt products. The first day's agenda focused on GMPs and milk microbiology while the second day focused on the processing of different value-added dairy products and marketing. The 2-day registration fee was $175. For 1 day the fee was $100. Discounts on registration were given to those families/businesses that had more than one person attend; 18 individuals attended the workshop over the course of the 2 days, with 9 attending both days.

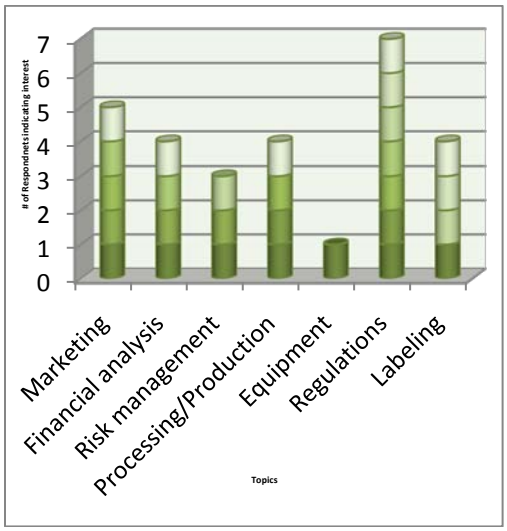
Surveys to evaluate attendees' plans after participating in the workshop as well as the usefulness of the publication and workshop were mailed in late March 2009. Eight surveys were returned. Five of the eight respondents were not processing a value-

added product at the time of the survey. All respondents reported that the workshop met the needs they came with to the class. These needs included raw milk handling, processing, bottling, learning the cheese making process, and networking with others in the industry.

At the time the post-workshop survey was mailed, four respondents reported that they planned on making changes to their operation as a result of attending. Five respondents said that they still planned on starting a value-added dairy enterprise. Of the three remaining, one had decided to no longer pursue value-added dairy and two did not answer this particular question. Most respondents felt that the workshop assisted them in knowledge or awareness of marketing issues.

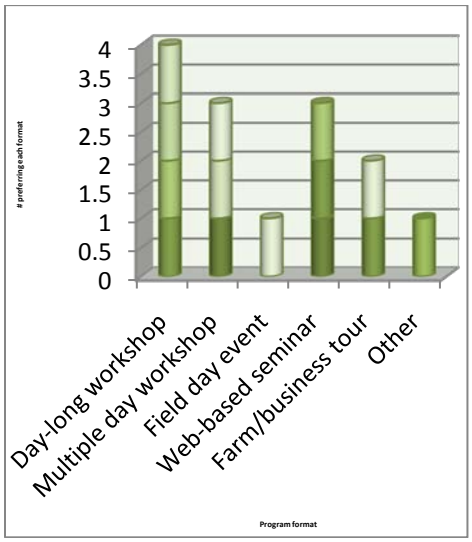
Chart 1 below illustrates topics that the survey respondents indicated interest in learning more about. These responses will guide the team as we develop future workshops. The next value-added dairy workshop is tentatively planned for spring 2010.

Chart 1. Interest in Topics for Future Value-Added Dairy Educational Programming



We also asked survey participants what format they prefer for future programs on value-added dairy. Chart 2 illustrates those responses. The responses to this question reinforced what we have known concerning the type of educational format preferred by farmers. That is, a majority prefer the traditional day-long extension program. What is interesting is that, among these survey respondents, there is equal interest for a Web-based seminar, a webinar, as for a multiple day program. Also, field day events didn't garner the interest that would be expected. Past experience has shown that field day events typically draw larger crowds than even 1-day workshops.

Chart 2. Interest in Program Formats by Survey Respondents



Our experiences have shown that interest in value-added dairy processing is growing leading to increased opportunities for extension programming in the area. More and more dairy farmers appear to view dairy product processing as a form of risk management through diversification. The ability to control their own marketing and sales is another appeal, particularly during times of low milk prices. While participation in Web-based learning was low just a couple years ago interest is on

the rise. However, traditional day-long workshops are still preferred. Finally, while there is interest in learning about the processing of value-added dairy products from extension programs, more interest lies with learning about marketing and regulations.

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Grass-Roots Marketing: the Wisconsin Grass-Fed Beef Cooperative

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Background

Pasture is a low-cost, environmentally sound source of forage for beef and dairy production. The majority of Wisconsin's more than 14,000 beef farms use pasture to supply some of their forage needs. Among Wisconsin's 13,000 dairy farmers, more than 25 percent use managed grazing (MIG) to produce most of their forage needs and almost half utilize pasture for at least some of their forage needs (Taylor and Foltz 2006). Recognizing the value and potential of pasture-based agriculture, the Wisconsin Department of Agriculture, Trade, and Consumer Protection (DATCP) established a new program in 2006 to support these farmers.

The Agricultural Development Division of DATCP, where the program is housed, exists to support agricultural business and market development. With the resources and expertise within this division, we're in a position to foster growth of markets for grass-based meat and dairy products. In this paper, I'll talk about work we've done with grass-fed beef. The next paper will focus on the dairy side.

As part of a needs assessment in 2006, I conducted eight listening sessions with the grazing community around the state. With growing interest in grass-fed products among consumers, many Wisconsin graziers expressed interest in obtaining a premium price for their meat and milk, but acknowledged a lack of time, knowledge, and aptitude to capture that premium through direct-marketing. While there are a few examples of successful direct-marketing enterprises, the vast majority of farmers don't have the capacity to direct-market their products.

To fill this need, the Wisconsin Grass-Fed Beef Cooperative (WGBC) was conceived. The cooperative provides members a means of pooling resources, enabling them to hire the marketing and sales expertise they need. It allows them to collectively produce enough beef to access larger wholesale markets. Starting in March 2007, Livestock Specialist Jeff Swenson and I have worked with these producers to make their idea a reality. Our focus as advisors has been to help them access the tools and resources they need to establish their business and to facilitate their development of the skills and knowledge they need to run it.

Do-it-yourself business development

We introduced the group to two different approaches to business development. The model that is most often recommended by cooperative development professionals involves a formal feasibility study, an equity drive, and assembly of a 'dream team' of people with the right kinds of skills to move the project forward. It visualizes a mature, large scale business and requires a commitment on the part of members to

that vision. The process involves a large investment and associated greater financial risk.

The alternative model is a step-wise approach with more of a do-it-yourself focus, characterized by starting small, minimizing initial investment and risk, and gradually building the business as sales increase. It allows for the flexibility of altering course in response to market developments and opportunities. The end-point is not as clearly visualized, but it maintains the capacity to respond to more options as the business grows. This is the approach that the cooperative ultimately took.

Changing mindsets

Embracing the cooperative model. Farmers are small business people used to making independent decisions. Although agriculture has a long history with cooperatives, working together cooperatively doesn't always come easily. The long-distance nature of this group, spread throughout the state, makes the necessary communication even more of a challenge. While some members have gained experience participating in boards of directors in their communities, establishing good communication and decisionmaking practices for the cooperative has been an on-going focus. We work with them to build the leadership skills they need and facilitate their decision-making. We sit in on their board meetings, primarily observing. A few well-timed words from an 'observer' at the right time can help develop and reinforce open and consensus-based decisionmaking patterns.

Marketer versus Producer Mindset. One of our first goals was to help the producers refocus their mindset from production-centered to market-centered. While most coop members will not need to make this transition, it is essential that a few in leadership positions understand the market from the viewpoint of the consumer so they can successfully guide the business in the marketplace.

An example of this dichotomy was the coop's discussions regarding a production protocol. It is natural for producers to view a production protocol as an affirmation or a criticism of their production system. But the production protocol is really a key marketing tool whose purpose is to send a clear message to consumers about the consistency and integrity of the product. We had many lively discussions on the details of the protocol before we realized that we'd never reach a consensus until the producers could see things with a marketer's eye. We moved the group into some market research that ultimately helped them see the importance of focusing on what consumers are looking for and allowed them to fine tune the protocol to reflect consumer preferences.

Wisconsin Grass-Fed Beef Cooperative Timeline

Spring 2007	First organizational meetings
Fall 2007	Select business development strategy Preliminary protocol development Pre-feasibility study
Winter/Spring 2008	Market research, identify market niche Buy Local grant application
Summer 2008	Finalize protocol Articles of Incorporation, By-Laws Membership drive Received Buy Local grant (~$28,000)
Fall 2008	Brand development, logo development Hire sales and production managers
Winter 2008-09	Identify animals ready to slaughter Establish relationships with processors Identify customers
January 2009	Sell first beef

Identifying a market niche

The successful establishment of a business hinges on identifying and connecting with the customers that desire your product.

This involves ensuring that the features of your product provide the benefits that the customers seek. Several founding members of the cooperative already had successful direct-market grass-fed beef businesses. In their experience, the benefits sought by many of their customers are: 1) the environmental, animal welfare, and human health benefits of pasture based systems (Clancy 2006); and 2) the "buy local" theme—knowing how food is raised and supporting local farmers.

The grass-fed market is so new that it is not documented in the mainstream consumer research materials usually used to assess viability of new products. And in reality, the coop's main markets (food coops and restaurants) are not well represented in consumer research, and so may not provide very helpful information anyway. The questions the coop needed to answer were: "Is there a big enough market for these products in our region?" "Will there be a sustained demand?" and "Is this a fad or a long-term trend?"

We used the following evidence to assess the viability of this market:

1) There are several large direct market grass-fed beef producers in the area, two successful regional/national grass-fed beef companies, attention from the mainstream media (Burros 2006, Roosevelt 2006), several restaurants, and specialty markets that carry or highlight local and grass-fed products in the region.
2) Consumer surveys. For example, Connor (2007) found that more than 60 percent of respondents rated as very important in their purchasing decisions the issues of environmental stewardship, avoidance of antibiotics and artificial hormones, and animal welfare. Other surveys report positive responses to buying from local farmers (Stock 2002, Pirog 2004). To our knowledge, the issue of 'healthy fats' in grass-fed meat has not been addressed in consumer surveys.
3) Similar market niches—organic and natural meat markets. These are better-established markets that we have consumer data for. We know the size of these markets and the demographics of the consumers. We also know something about the 'local' buyer, but not as much.

With this indirect evidence of a potential market, we worked with a University of Wisconsin graduate student to conduct a pre-feasibility study. This is a "quick and dirty" review of readily available data to assess the potential volume of sales. Using demographic information from the U.S. Census and published consumer survey information, we were able to assemble data on the size of organic/natural and local markets, and the populations of consumers in the region who fall into those demographics. They include older, affluent, and well-educated consumers who tend to prefer higher-quality cuts (Mintel International Group Ltd. 2006). The Ohio Department of Agriculture found a similar demographic trend in a survey that found that attraction to beef labeled 'Ohio Born and Raised' was greater for those younger than 65 and for those with household incomes in the $90,000 to $110,000 range (Stock 2002). The pre-feasibility study found that there are 607,228 households in Wisconsin that fit these criteria and there are 460,048 households that fall within these parameters in the Chicago, Minneapolis, and Milwaukee metropolitan areas. This suggested that there was a large potential market for a grass-fed beef product.

Market research and feasibility studies

It is recommended that start-up businesses hire experts to conduct market research and a formal, in-depth feasibility study, with

the assumption that someone with knowledge of the market and consumer demographics will be better able to assess the feasibility of a marketing idea. The downside of this approach is that it may result in the business owner starting the enterprise without the depth of knowledge of his or her market that may be needed and remaining dependent on outside expertise to run the business. Especially in a business focused on local foods, the value of farmers conducting their own market research is clear. We brought in DATCP's business planning consultant to help guide the farmers in conducting market research in their own communities.

Process—from general to specific. We had the group develop a description of their typical buyer using the existing data on similar markets. Characteristics included higher than average education and income, well-informed, health-conscious and active, concerned about animal welfare and the environment, and wants local products. Then, we generated a list of possible retail outlets where these buyers are likely to shop, such as white tablecloth restaurants, upscale meat markets, and food coops. Finally, group members identified actual restaurants and markets in their local communities that fit this profile, in addition to possible retail outlets they were aware of in the Milwaukee, Chicago, and Minneapolis metropolitan areas.

Next, we established an interview procedure for members to use with potential buyers of their product. We developed an interview form for them to use that allowed them to provide consistent description of the product and gather the same information from each interviewee. They talked with potential buyers and looked at the meat case in their local grocery store in a whole new way. This process gave the members a lesson in thinking like a marketer and allowed them to bridge the gap between production to meat buyer and consumer. It transformed the animals that they sell into meat on the table. It also gave the coop a list of potential buyers when it came time to begin selling beef.

Learnings. Through this process, coop members came to several conclusions. First, there was definitely interest in both grass-fed and local meat among the retailers they had identified and the cooperative business structure in itself was a plus for some buyers. Second, it convinced them that they needed to adopt a protocol that reached for the broadest niche—they combined aspects of natural (no antibiotics, growth hormones, or animal-based feeds), organic (they prohibit use of Genetically Modified Organisms (GMO)s, herbicides and pesticides), and grass-fed (they are 100 percent forage-fed, allowing no grain feeding). They agreed to the protocol because they had done their market research and selected a niche that they knew had good potential. The protocol they ended up selecting was a decision point for many participants. Several were unable or unwilling to meet the protocol and discontinued working with the group at that point. Those who remained were more committed to the coop, having done that market research.

Developing a Brand Image

Brand name and logo development are considered a key to success among marketing professionals, but is often neglected among entrepreneurs. The brand name and logo the coop adopted says several important things about the cooperative. The coop chose to separate the name of the product from the

name of the coop because of the flexibility it provided them to establish a second product line in the future if desired, or to drop the brand if it were to fail, without modifying the underlying structure of the cooperative or affecting its image among producers and consumers.

With funds from a Wisconsin Buy Local grant, the coop worked with a brand development expert to generate logo ideas that incorporated their vision for the coop and to test those ideas with a focus group. Having a coop member trained in graphic arts provided a huge benefit in this process— it not only saved money, but having an artist who really understands the coop, the production system, and the product benefits they are trying to convey allowed them to develop a logo that is superior to their competition.

The coop debated at length about whether to identify itself with Wisconsin. For some, this was seen as potentially limiting future growth, both in sales outside the region and in membership outside the state. For others, it was seen as an opportunity to establish a unique identity for the group's beef. Several niche beef companies utilize a western, cowboy image in their marketing. Even Minneapolis-based Thousand Hills Cattle Company uses this imagery with founder Todd Churchill's ever-present cowboy hat and boots and the use of the word cattle, rather than beef, in the name. The *Wisconsin Meadows* brand banks on two things: a sizeable market in Wisconsin that identifies with and supports local farmers, and a favorable view of Wisconsin outside the state that builds on the Dairy State images of cattle on lush green pastures.

People: numbers, personalities and skill sets

Participation in this project has evolved as the project has matured. We started with a mailing list of more than 150 producers who had expressed interest in working together to market their beef. The first meetings were attended by 20–40 farmers each. As time went on, we began seeing the same core group at each meeting, while others came and went as they satisfied their curiosity. This core group became our steering committee that created the legal structure for the cooperative. These were folks who had the energy and "stamina" to see the project through and stick with it through many long meetings. Several of them now serve on the cooperative's board of directors.

Rather than going outside this core group to find expertise, we worked with the knowledge base they brought with them and helped them develop or access the expertise they were lacking. The particular skills that they brought to the coop has influenced the character of the cooperative and will make it uniquely their own. Beef producers are a diverse group with a large majority having off-farm jobs. These non-farming skills have contributed substantially to the successes the coop has had to date. From graphic arts to hospital administration, the skills they bring are readily transferable to this business. Two members of the steering committee and board have owned and managed off-farm businesses and the coop's two sales staff are members who have sales experience with national corporations. Our role in facilitating their efforts has been to guide them in applying their knowledge to a sound business planning process.

The coop sold their first beef in January 2009. Seven months later, they're processing 10 head per month and selling fresh beef under the *Wisconsin Meadows* brand name in a dozen restaurants and food coops in southern Wisconsin. Their prospects for continued growth are good.

Some of the coop's successes and challenges follow.

Successes

1) Finding buyers has not been a problem. Starting with the initial buyer lists they generated for their market research, nearly every potential buyer that the coop has approached has been interested and has become a customer.
2) Generally, buyers have been very happy with the product. The group hired a skilled cattleman as their production manager who inspects and approves each animal for shipment, enabling the coop to deliver fairly consistent quality meat in spite of a variety of breeds and management systems.
3) By working with two processors that offer different benefits, the coop has optimized processing costs for the wide variety of custom cuts they offer.
4) Having sales staff with extensive background in sales and logistics (and also happen to be beef producers) has gotten the coop off to a great start with a very professional, but authentic, member sales team.

Challenges

1) Cash flow. The coop's financial projections show profitability and positive cash flow at a level of 12-15 steers slaughtered per month. They're not there yet and have had trouble paying their bills as they grow to a sustainable level.
2) Logistics. Working with 40 producers across the state, two processors, and buyers scattered across southern Wisconsin presents a logistical challenge. They are still working out the kinks.
3) Coordinating production and demand. Cattle are raised in cycles with most calving occurring in spring, or to a lesser extent in fall. This doesn't necessarily coincide with demand for the product. This is a problem that is shared throughout the beef industry, however, and the coop's size makes them better able to provide a consistent supply throughout the year. Premiums may be offered in the future to encourage members to produce animals for light times in the production cycle.
4) Carcass utilization. High value cuts make up less than 20 percent of a carcass and finding outlets for lower value cuts can sometimes be a challenge. Carrying inventory is costly. The majority of the coop's meat is delivered fresh and demand for frozen product is much lower. With a balance of white tablecloth restaurants that want the high end cuts and food cooperatives that can move roasts and burger, the coop has done well with utilization so far. They recently began working with a large Community Supported Agriculture (CSA) that prefers providing frozen meat to its customers and this should further improve inventory management.

Future

The coop's ultimate goal is to establish *Wisconsin Meadows* as a successful brand in the Upper Midwest and market most of members' meat that way. They're also interested in capturing the networking value of the cooperative and using it to provide educational resources to members, facilitate other cooperative efforts (e.g., group purchasing of inputs, buying and selling of breeding stock). They hope to develop a secondary brand to allow the marketing of member animals that don't meet the grass-fed protocol and to facilitate partnerships that allow some members to specialize in finishing or cow-calf production. It's too early to tell whether the business will ultimately become sustainable, but we feel that we've given coop members a strong foundation to build on and helped them develop and apply the

knowledge base and business management skills they need to make sound decisions for their membership.

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Beginning From Scratch – Working with Residential/Lifestyle Farmers

Diane Mayerfeld, University of Wisconsin Extension and Center for Integrated Agricultural Systems and Adam Hady, UW Extension.

The U.S. Department of Agriculture divides small farms into five types:

- **Farming Occupation with High Sales** – Operators report farming as their major occupation, with sales between $100,000 and $249,999.
- **Farming Occupation with Low Sales** – Operators report farming as their major occupation, with sales less than $100,000.
- **Residential / Lifestyle** – Operators report major non-farming occupations.
- **Retirement** – Operators are retired.
- **Limited Resource** – Sales under $100,000 with low household income for the 2 years counted. *Such farms are not counted under the other four categories.*

Whom do you work with most? Which are you most comfortable working with?

Generally, extension educators and agency staff are most comfortable working with the first two categories, the Farming Occupation farms. There are some good reasons for this preference—these farmers generate more sales and usually produce more food and manage more land per person than farmers in the other three categories. So, per hour of his or her time, an educator will likely have more impact on a community's economic activity, food production, and land management by working with Farming Occupation farms (or with large farms); these days, demonstrating impact is an important part of educators' jobs.

But look at the numbers.
However, it is also important to work with the other three categories of small farms. In recent years the USDA has rightly focused on redressing the historic neglect of Limited Resource farms. But Residential/Lifestyle and Retirement farms remain relatively neglected by USDA and state and local farm support infrastructures. Though they do not produce as much economic impact as other categories, *Residential/Lifestyle and Retirement farms together account for more than half the farmers in the United States today, and they are the fastest growing category of farms.* Clearly, this farming sector is worthy of agency and educator attention.

Who are Residential/Lifestyle and Retirement farmers?
The USDA description appears clear-cut—they are people who farm but whose primary income is from another occupation, a pension, or social security. This economic definition is part of the picture, but for most educators Lifestyle farms have another important aspect: they are either farms where the farmer does not have much or any agricultural experience, or they are farms that are different from the majority of agriculture in the area.

Are they the future? In numbers, but also in preserving knowledge of agriculture, and in starting new farms. False permanence in these categories.

Farms can and do move between categories. While many Lifestyle farms remain secondary enterprises, others become successful Farming Occupation farms and significant contributors to the local economy.

<u>Challenges</u>

- Because of their different backgrounds and enterprises, Lifestyle farmers have different information needs than traditional clients. This challenge is complicated by the fact that their information needs differ even within their group.
- Many have very limited practical agricultural knowledge, both in terms of production and marketing; their questions may seem trivial or basic compared to those from "farming occupation" farmers or large commercial farmers.
- They can pick up some very unconventional ideas from the Internet or from books, and they don't have the knowledge base to distinguish between potentially promising ideas and unworkable ones.
- Their economic goals can be quite different from those of Farming Occupation farmers – many are less interested in maximizing gross sales or even net income, as long as the farm does not lose money.
- Because their enterprises are completely new they do not have any economic records of their own upon which they can base their business planning.
- Because of other jobs they may not be able to attend meetings during regular working hours.
- Many don't understand rural communities; they don't know land management laws and customs or how to interact with their neighbors and community. Agriculture educators tend to be more comfortable providing technical assistance than teaching social skills.

<u>Rewards</u>

- Many Lifestyle farmers are open to new ideas and advice from educators.
- Lifestyle farms can be innovators, introducing new crops or techniques that are adopted later by others. For example, Lifestyle farms have been

important in getting wine-production, local foods, and value-added farm enterprises started in the upper Midwest.
- Many are willing or eager to do research (usually this is good, but it can lead to some misinformation, when coupled with their lack of experience and practical knowledge – see challenges above).
- They are usually very appreciative of help from extension.
- Some bring strong business, communication, or other skills to their enterprises.
- Most want to "do things right," especially in the realm of environmental stewardship, even if it costs more money.
- In some areas, especially near cities, they help build community by supplying goods and services valued by non-farm residents, such as local foods and agri-tourism destinations.

And some other challenges…

- Because these farmers tend to have low status in rural politics and communities, helping them usually does not build much political support for extension.
- Because their sales are usually very low, working with them does not result in high economic impact numbers for educators to report.

Outreach strategies

- Take advantage of the resources that have already been developed for these groups, including the "Living on the Land" curriculum and alternative enterprise resources, such as those at the Missouri Alternatives Center and the new Begin Farming Ohio Web site.
- Partner with nonprofit organizations that work with alternative agriculture; some have developed programming for exactly this audience.
- Rural living days often draw many people, but they are a lot of work to put together.
- Find ways of offering information outside standard working hours, through the Internet and through evening or weekend meetings.

I mainly want to talk about Networking point:

- Because Lifestyle farmers come from many different backgrounds and bring different types of expertise, they may be able to help each other—if you can help them find each other to establish a network.
- Networks can be virtual communities, but also geographic and social component. Home-brewing network very strong support.
- Incorporate rural leadership development into small farm programming.

Working with Lifestyle/Residential farmers offers new challenges for agricultural educators in the field. These farmers are a growing sector of agriculture and rural land management, and they need support from educators and agencies to farm in a way that benefits both them and their communities. Educators can apply a number of strategies to working with this group, but they also need recognition from local, state, and federal leaders in agriculture that serving this group of farmers is of value.

Case Histories of Grass-fed Dairy Market Development in the Upper Midwest

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Introduction

Consumer interest in grass-fed dairy products may provide an opportunity for a value-added market for pasture-based farmers. Wisconsin has been a leader in adoption of management intensive grazing (MIG) for 20 years. Over 25 percent of the state's 13,000 dairy farmers use MIG as a primary source of forage (Taylor and Foltz 2006). As markets for grass-fed foods develop, entrepreneurial farmers in the upper Midwest are working to capture a premium for grass-fed milk, cheese, and butter brands. To help foster growth of this new market, we have compiled case histories of grass-fed dairy marketing ventures and are conducting research to explore the unique qualities of grass-fed milk for use in specialty dairy products. A complete summary of the case histories is available (Paine 2008, Paine 2009).

Grass-fed meat and milk products have garnered attention because they contain higher concentrations of so-called 'healthy fats,' including Omega 3 fatty acids and conjugated linoleic acids (CLA) (Pariza 1997, Clancy 2006). Other perceived benefits of purchasing grass-fed products include supporting small- and mid-sized family farms, as well as promotion of a production system that protects the environment and provides for humane treatment of food animals (Connor 2007, Pirog 2004).

A significant and, as yet, poorly understood feature of grass-fed milk is that the pasture diet appears to contribute to differences in flavor, texture, and color compared to conventional milk and these characteristics influence the quality and flavor of dairy products made with it (Martin et.al. 2005, Couvreur et.al. 2006). This feature may be the key to a premium market for grass-fed dairy products.

The Grass, the Cow, and the Milk She Makes. The flavor and culinary characteristics of grass-fed milk are not well defined, but the notion that what a cow eats influences the flavor and culinary qualities of milk is used successfully in European cheese-making (Martin et.al. 2005). In 2005, University of Wisconsin Food Scientist Scott Rankin conducted a preliminary study comparing cheddar cheese from pastured cows and cows fed a conventional total mixed ration diet. Cheese from milk of pastured cows was creamier and had a natural yellow color, presumably from beta-carotene in the fresh grass. It was rated higher than conventional cheese by a consumer taste panel (Rankin 2006). Based on that study, we recently launched a comprehensive 3-year study to investigate the chemical, physical, and culinary differences between grass-fed and conventional milk. Our team of forage and dairy scientists, chefs, dairy processors, and farmers hope to generate information that will provide guidance on the best uses of this unique milk. Data collection is on-going, with results available in late 2010 or 2011.

Overview of Case Histories

In the meantime, we can learn about marketing and logistics for future grass-fed dairy products by studying existing marketing efforts. For most of the 12 ventures I documented for this project, their ultimate fate in the marketplace is not yet known, but the early successes and challenges of these fledgling companies can provide helpful guidance to others interested in entering the market.

Small startup companies face enormous hurdles in gaining a foothold in the global food economy. Success seems more likely when entrepreneurs start small and local, targeting consumers who appreciate unique, artisan products and the farmers who create them. Small scale dairy processing is costly, and a specialty product

that commands a higher price has a better chance of success. Rick Schneiders, CEO of observation, "The food business is no longer about fast, convenient, and cheap. It's about memory, romance, and trust." To be successful new products must have a good flavor AND a good story.

The case studies I conducted fall into three different business structures (Table 1). One is a farmstead processing model involving a single farm's milk. The second is a farmer-initiated cooperative model where several farmers work together to pool their milk and partner or contract with existing processors to have products made. The third group involves existing dairy processing companies that have sought to enter the market by developing a line of specialty grass-fed products in addition to their other brands.

Table 1. Wisconsin and Minnesota grass-fed dairy companies and their products. The complete case histories are available in Paine (2008).

Company	Products	Year started	# of farms	Status
Farmstead processors				
Cedar Summit Farm	Glass-Bottled Milk, Cream, Butter, Ice Cream	2001	1	Well established
Otter Creek Farm	Cheese	2007	1	Expanding
Saxon Homestead Farm	Cheese	2007	1	Expanding
Uplands Cheese	Cheese	2001	1	Well established
Grazier co-operatives				
Edelweiss Graziers Coop	Cheese	2006	5	Expanding
Paradise Prairie Graziers	Ice Cream	2006	4	Never got started
PastureLand Coop	Butter, Cheese	1998	4	Expanding
Still Meadows	Cheese	2000	2	Out of business
WI Dairy Graziers Coop	Cheese, Cheese Spread	2001	5	Out of business
Existing businesses				
Alto Dairy Coop	Cheese	2007	2	Brand discontinued
Grass Point Farms	Milk, Cheese, Butter	2005	10 to 12	Growing

Farmstead Processors Feature Successful Strategies

By definition, a farmstead processor makes products only with milk from one farm. The farmer is often responsible for making, marketing, and distributing the product. Two farmstead companies exemplify some of the features that appear to contribute to success in this market.

Uplands Cheese. Mike Gingrich and his partner Dan Patenaude started Uplands Cheese near Highland, WI, in 1999. They were farmers looking for a means to add value to their milk. While Dan has focused on managing pastures and cows, Mike has taken on cheese-making and marketing. Prior to starting, Mike extensively researched products that would enhance

what he considered the unique qualities of his milk with the goal of creating a cheese that would command a substantial premium. He calculated that they'd need $18 to $20 per pound to be profitable. He studied European cheese making before settling on a recipe. He makes a single type of cheese and only during the summer season when the cattle are pastured, sometimes stopping cheese-making if pastures get too dry. Mike's "Pleasant Ridge Reserve" cheese won "Grand Champion" at the American Cheese Society Convention in 2001—his first entry. It sells for around $20 per pound.

Cedar Summit Creamery. Dave and Florence Minar started Cedar Summit Creamery outside of Minneapolis, MN, in 2001. They purchased a 'turn-key' processing facility and installed it in a new building on their farm along with a retail store. Like Gingrich and Patenaude, their goals were to add value to their dairy farm enterprise. The processing plant was a major investment, but they selected equipment capable of producing a number of different products. This gave them the flexibility to test the market and determine which products would be successful. Early in the development of their business, they tried milk in returnable glass bottles and in cartons, cream, ice cream, yogurt, sour cream, soft cheeses, and dips. Sales were through the retail store, farmers markets, local stores, and food coops. For awhile, they ran a home delivery service, but they found it unprofitable. Dave and Florence built the business slowly, focusing on local markets and making incremental changes as the business grew. They started out using 25-30 percent of their milk. Last year, their business had grown enough to finally utilize all of their milk. They've narrowed their product line to those that sell well and are most profitable. Family members are the primary employees and Dave and Florence do all of the marketing.

Scaling Up: How Can We Make Farmer Cooperatives Work?

The farmer cooperatives I studied represent a possible next step in building small-scale supply chains or value chains (partnership based supply chains) with the goal of providing access to premium markets for grass-fed dairies. A model based on regional clusters of grass-based dairy farms and small, diversified processing plants could be a good option for rewarding grass-based dairy farmers for environmental stewardship while providing economic development opportunities for local communities (Paine 2008).

Farmer-run cooperative businesses must overcome some inherent challenges, and several ventures have not survived. Even the larger, established companies I studied struggled with brand establishment. Alto Dairy discontinued their grass-fed cheddar after one year, due to a change in company ownership and poor sales. Grass Point Farms has had disappointing sales of their cheeses, milk, and butter in spite of having existing relationships with national distributors and grocery chains. Both these companies failed to connect with the consumers who are most likely to become loyal buyers of grass-fed products. They introduced grass-fed versions of everyday-use products for which consumers may not be willing to pay a premium. Marketing these products nationally has severed the link with the local farmers and their story, which seems to be a key to success of these products.

PastureLands Cooperative. The oldest cooperative in my survey, PastureLands, was formed by four Minnesota dairy families in 1998. They have focused on partnering with like-minded processors to develop high quality grass-fed products. Their initial product line was determined by the capacity of processors with whom they partnered. PastureLands have done very

well with their butter, winning blue ribbons in the American Cheese Society's national competitions. Their cheeses—Gouda, cheddar, and baby Swiss—have not met their sales goals and they're currently working with a cheese maker to develop some unique cheeses that highlight the qualities of their 100 percent grass-fed milk. Their experience captures some of the challenges that these small startup cooperatives face.

Challenges Faced by Multi-Farm Projects

Harnessing Variability. Variation in quality and flavor has been virtually eliminated from American dairy products by feeding confined cattle a prescribed diet and by pooling large volumes of milk from many farms. Pooling milk from just a few farms is likely to lead to product variability. To simplify milk handling, the PastureLands group started out shipping milk from one of their member farms for each batch of product made. This practice resulted in an unacceptable level of variability among batches of product from the different farms. Clearly, consistency is important for a product to succeed in the marketplace, but, for grass-fed products, it may need to be balanced by the value of unique qualities of grass-fed milk. Several companies make their product only during the pasture season because the product flavor and texture changes dramatically when the cattle are switched to stored feeds in the winter.

Milk Handling and Pooling. The farmers involved in these groups have been challenged by distances between their farms and the processors they're working with, as well as by the lack of capacity to segregate their milk at some of the facilities. Participating farms must be in close proximity and must be near the processing plant to reduce transportation costs. As with most new products, sales of these new grass-fed dairy products started out slowly. Most companies started making small batches, utilizing only a portion of their milk. Continued income from milk sales into the commodity market has provided needed cash flow for fledgling businesses. With few exceptions, standard contracts require the farmer to commit all of their milk production. Fortunately, a few of the smaller established processors have been willing to work with these startup companies and have agreed to purchase only a portion of their milk.

Processing. Even in a state with over 200 dairy processing plants, access to processing facilities can be a major obstacle to establishing a successful artisan dairy company. Only one of the processing projects surveyed owned existing processing facilities (Alto Dairy). Two groups purchased (Edelweiss Graziers Cooperative) or built (Cedar Summit Farm) their own processing facility, six hired a processor or cheese-maker to make their product, and one (Uplands) leased facilities to make his own product. The decision to invest in facilities versus contracting to have product made must be tied to the character of the product and the marketing messages associated with it. Mike Gingrich learned to make cheese in order to ensure that his unique recipe would be made the right way. The PastureLands group has struggled to get a consistent product using contracted production, and has been limited in their product choices by the capacity of the processors they're working with. However, owning facilities brings with it a financial burden. Edelweiss Graziers Cooperative purchased and refurbished an existing cheese factory in partnership with a cheese-maker. Because sales of their own new brand have been limited, they also produce a line of conventional cheeses with some of their own milk and purchased milk.

Product Selection. Experiences of new grass-fed dairy companies in this survey

suggest that daily-use products such as fluid milk, cheddar cheese, or cottage cheese, probably provide limited opportunities to add value with grass-fed. Fluid milk is especially problematic, due to its short shelf-life. To date, only one company has succeeded with fluid milk. Cedar Summit was one of the first farmstead processors to sell milk in returnable glass bottles and they're selling into a high-income market. They are doing well, but it is more likely that specialty products that highlight and enhance the qualities of grass-fed milk will be successful in the marketplace. Gruyere-style cheese, like Uplands Cheese makes, is an example. PastureLands' prize-winning butter, made only in summer to capture the bright yellow color and softer texture from pastured milk, is another example. Premium ice cream might be a good choice as well. The creamy texture associated with grass-fed products would be beneficial in ice cream. This is a product that is purchased as a treat (allowing greater potential for a premium—e.g., Haagen-Dazs).

Keys to Success

Despite these challenges, small scale grass-based dairy ventures have potential in a market that increasingly seeks out unique, place-based products. The products must bring together the right combination of product, story, and logistics. Projects in this study that fared well share the traits that Rick Schneiders identified: a unique, good-tasting product (a positive, memorable eating experience); a compelling story of the place the food comes from and the people who made it (the "romance"); and a consistently high quality product made via a transparent, knowable production system (the "trust").

1. Invest substantial time in marketing. The most successful businesses share a strong commitment to marketing their own products. For the local, niche markets where these products start out, the farmers' story may be second only to flavor in importance. Most hired marketers have many clients and little actual knowledge about farming. Any unique story or product value is often lost. Mike Gingrich of Uplands Cheese was deliberate about doing all of his own marketing. When the company grew enough that they needed to hire staff, they hired a cheese maker so that Mike could continue to focus on marketing.

2. Marketing messages that have worked well include local food, unique flavors, support for family farms, and environmental responsibility. Basing marketing primarily on health claims has not been as successful as other marketing messages. The key is probably a combination of messages that fit with the story behind the product.

3. Select premium products with unique characteristics and recognize that flavor is king. Uplands Cheese developed a flavorful, grass-fed cheese based on a European recipe. Cedar Summit markets its products as certified organic and 100 percent grass-fed to an urban audience that will pay more for these qualities. PastureLand's prizewinning, bright yellow summer butter is another example of a premium product.

4. Test the market and grow slowly, delaying investments in processing facilities. Uplands Cheese waited to invest in on-farm processing facilities until they knew they had a reliable, high-paying market. Owning dairy processing infrastructure ties up too much capital for a small business—test the market before making a huge investment.

5. Have a profitable backup market for milk not used in the artisan operation. You should negotiate with commercial processors to allow for small scale startup while continuing milk sales—it's critical to maintaining cash flow in the early stages of the business. Some of the companies highlighted here have become certified organic in order to capture a higher value for their surplus milk. This strategic decision allowed them to maintain their income while creating artisan products and building markets.

6. Realize your limitations. Most people can't be good at everything. Allocating the many tasks—running the farm, making the products, marketing, and distributing products among family, co-op members, or outside businesses is tricky but plays a key role in future success. Two groups that disbanded (the Wisconsin Dairy Graziers Coop) or sold out (Still Meadows Cheese Company) were financially healthy. They quit because of heavy workloads.

Conclusions

Nationally, our food system has as much to gain from establishing regional, values-based processing and distribution capacity as it does from promoting a profitable, environmentally friendly system for dairy production. Investing in dairy processing infrastructure can deliver broad benefits to rural communities. Beyond providing environmental and aesthetic services, a grass-based dairy farm of 200 acres and 100 cows can generate a comfortable living for a family with minimal hired labor. At moderate milk prices ($15/cwt), such a dairy farm could generate a gross income of $225,000, far more on a land-area basis than most other farming enterprises (Kriegl and McNair 2005). Dairy farms also generate business for local agricultural service companies and help maintain economic viability of rural communities. Each dairy cow generates an estimated $15,000 in economic activity in the local community (Deller 2004). A local processing plant can provide jobs and tax revenues for rural communities.

From pasture to plate, grass-based dairy systems combine a suite of benefits for farmers, consumers, and the environment. A cooperative effort among public and private sectors can foster development of regional grass-fed dairy value chains that provide environmental, social, and economic benefits to rural communities.

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A Slow Start or Real Barriers: the Alternative Beef Market

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The national market for alternative beef, whether that be "natural," grass-finished or organic, is growing rapidly. However, this growth has been built on a very small base. Furthermore, there is very limited knowledge about the profitability of these market segments for the livestock producer. For instance, a recent report by the Organic Trade Association shows that in 2008 the organic "meat/fish/poultry" sector represented only 0.34 percent of total U.S. food sales in this category. This is particularly startling if one compares this to the "fruits/vegetable" food category where organic products represent 9.8 percent of total sales of fruits and vegetables in 2008.[2] Is this lack of market penetration in livestock because organic labels have only been used for livestock sales since 2002 or is it because of continuing barriers to market access unique to organic and alternative beef markets? Finally, are grass-fed and "natural" beef markets capturing a greater share of the beef market, and are these niches in direct competition to organic beef?

Two studies recently released by the National Center for Appropriate Technology (NCAT) address parts of these issues related to alternative beef markets.[3] One study is an in-depth analysis of the costs of production of an emerging organic grass-

[2] See Organic Trade Association, 2009 Organic Industry Survey.

[3] Schahczenski, J, 2009. Final Report: Natural Livestock Feasibility Study; Schahczenski, J. 2009. Building a Montana Organic Livestock Industry

finished beef marketing cooperative in Montana, and the other is a feasibility analysis for a possible start-up of a regional alternative beef market in Inyo and Mono Counties in California.

Profitability of Alternative Beef

The first study of the Montana Organic Producers Cooperative was based on work begun in the Midwest by Iowa State University (ISU), which attempted through modeling to examine the profitability of three systems of alternative beef: grass-finished, organic grain-finished, and organic grass-finished and compared to conventional (commodity) beef markets.[4] Our study focused on grass-finished organic market only since this was the defined niche of the Montana cooperative. Data was collected from the members of the cooperative; Table 1 provides the major results. Remembering that the ISU data is based on modeling and not real farm/ranch-level data, it is significant that at the given prices, Montana production seems to be profitable compared to Midwest producers, but still less profitable than the conventional market. However, the average profitability of the Montana cooperative was much higher in 2007, because their members received a higher carcass price of $2.31 per pound and, hence, had profitability on average of $87 per head. Thus, our study suggests a much higher profitability then the ISU study for organic grass-finished beef than conventional and Midwest organic grass-finished beef. ISU and other Midwest partners are replicating our study with real farm/ranch-level data to compare that with their modeling results.

[4] Acevedo et al. 2006. Organic, Natural and Grass-Fed Beef: Profitability and constraints to Production in the Midwestern U.S. Iowa State University.

Table 1 **Cost and Profitability Comparisons Per Head**

	Midwest ISU-OGF	MT NCAT OGF	Midwest ISU-CON
Variable Costs	$1,345.00	$1,382.00	$1,017.00
Fixed Costs	$ 2.88	$ 37.01	$ 18.94
Total Costs	$1,368.00	$1,419.00	$1,017.00
Expected Income			
Expected Carcass Weight	623	666	876
Expected Carcass price/lbs.	$ 2.18	$ 2.18	$ .26
Gross income	$1,358.00	$1,452.00	$1,103.00
Profit per Head	$ (10.00)	$ 33.00	$ 67.00
Price need to cover total costs	$ 2.20	$ 2.33	$ 1.18
Notes: Iowa State Unversity- ISU Organic Grass-finished- OGF National Center for Appropriate Technology- NCAT Conventional - CON			

Barriers: Labeling, Processing, and Willingness to Pay

The second NCAT studied the feasibility of an alternative beef market in the eastern Sierras of California. The topics of labeling, infrastructure need (processing), and regional market assessments were assessed.

Labeling

Label claims create a significant confusion for both consumers and the potential producers in niche beef markets. Private entities are free to create any label claim they wish, and can ask the USDA for authorization of a label claim. However, such label claims require ample documentation of the truth of the claim before it is granted. Use of such a claim also

opens the user to possible litigation if a competitor wishes to contest the truthfulness of the claim. Also, private parties can have their claims authenticated by an unbiased third-party under a USDA program called process-verified. This USDA-sanctioned label is not often used by alternative marketers of livestock because of expense and complex paperwork demands for application.5 Finally, trade associations may create either trademarks or label claims that they can attach to the product for those who are members of their association. A good example of this approach to product differentiation is a label created by the American Grassfed Association (AGA). Learn more about the label at www.americangrassfed.org. This association trademark is for the express use of those who are members of the AGA. It is a third-party verified trademark. Although this is a trade association trademark, any private entity could create a similar individual trademark. Since these labeling issues are very confusing, they have in themselves created a barrier to the creation of stable alternative beef markets. Producers are very confused about which new market will best serve their interests, consumers find it difficult to understand how best to exercise their "consumer vote," and even differing parts of USDA seem to not coordinate their own efforts about label claims.

Infrastructure Needs: Processing

Access to federally inspected livestock processing in many regions of the country is likely the greatest single barrier to the development of regional and alternative beef markets. In the NCAT study in the remote eastern Sierras, this was a significant barrier to an alternative beef market development. Despite having close to 30,000 head of cattle produced in area, the nearest livestock processing facilities were about 5 hours away. Processing alternatives that were considered in the study were a typical stationary slaughtering facility with "cut-and-wrap" capacity, stand-alone mobile processing, and a combination mobile and cut-and-wrap facility. Tables 2 and 3 provide information from two studies that were relevant to the ranchers in the eastern Sierras.

Table 2. Mobile slaughter unit costs

Item	Nevada	Wyoming
Trailer	$190,000	$150,000
Supplies	$5,000	$25,313
Semi-tractor	$45,000	$20,000
Commissioning	$6,500	$6,000
Sales tax	$10,325	$7,000
Total	**$256,825**	**$208,313**

Table 3. Fixed cut-and-wrap facility costs

	Nevada	Wyoming*
Building expense	$1,333,369	$299,550
Furniture fixtures	$36,360	
Facility equipment	$136,100	
Totals	**1,505,829**	**$299,550**
Capacity (pounds/meat/year)	2,169,600	950,000
Cost per pounds processed	$0.69	$0.32

* The Wyoming study did not break down costs.

Thus, these two studies, which are based on estimates, range from $1.76 million for a facility with a capacity of about 2 million pounds of meat processed per year and $508,000 for a facility that has about a million pounds of meat processed per year. Estimates of the cost of a fixed facility (slaughtering and cut-and-wrap in one location) at these capacity levels are not readily available because new plants of this

[5] For further information on the process-verified label claim process, visit http://archive.gipsa.usda.gov/programsfgis/inspwgh/pvp/pvp.htm.

size capacity are rarely built. One 2001 estimate of a 5 million pound-per-year plant was approximately $3-4 million. Some new information for medium-scale fixed slaughtering facilities is available from the Niche Meat Processor Assistance Network at: http://www.extension.org/pages/Plant_Design_and_Construction. The bottom line is that building a new livestock processing facility amounts to a significant capital investment.

Willingness to Pay

A final barrier to the establishment of an alternative beef market is breaking into the current commodity beef market or finding alternative markets not occupied by the commodity beef market. In the NCAT study, a beef market analysis of the eastern Sierras was undertaken. The primary tool for this analysis was a mail survey of any retailer in the area that sold beef products (lamb was included but was found to not be a major retail item). Though the number of surveys returned was small (28 out of 282 mailed), we did find that there was interest in purchasing "grass-fed" local beef products. The following Table 4 provides the major results:

Table 4. Willingness to pay

Type of meat	Number of people who prefer the type	Maximum price per pound	Conventional price per pound	Average % of price rise accepted*
New York Strip				
Grass fed, local	15	$8.98		
Conventional	3	$8.17		
			$8	12%
Ground beef				
Grass fed, local	14	$4.13		
Conventional	6	$2.92		
			$3	27%
Leg of lamb				
Grass fed, local	12	$5.67		
Conventional	3	$3.42		
			$5	12%

* Percent price accepted if respondent choose grass-fed, local meat

Though the results suggest a willingness to pay for the product on the part of retailers, a more difficult question is whether this additional margin warrants the infrastructure investment and the cost ranchers would incur in changing to grass-fed beef production. This research could not fully answer this vital question, but work in nearby Nevada suggests that retail beef products would have to be priced at a 30 percent margin over conventional beef products for a processing facility to be viable. Only hamburger seems to approach that margin in NCAT's study.

Summary

These studies suggest that alternative beef markets are growing, and can be profitable, but will require new investment in processing to succeed. The lack of clarity in labeling keeps consumers and produces confused. These are rapidly growing new markets, but are markets that outside the standard commodity beef system.

High Tunnels for Season Extension of Specialty Vegetable Production on Small Farms

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Introduction:

Small family farms in the agricultural sector of the United States are in decline. Because family farms are a strong base of rural economies, it is important for them to be more permanent and sustainable. Unfortunately, family farms are extremely vulnerable to the adverse effects of current trends in business and agriculture. For instance, tobacco has declined in importance in North Carolina and now ranks third in generating income behind swine and poultry production (NASS Census, 2002). The decline is expected to

continue with the buyout program of small tobacco farms; as a consequence, small farmers will definitely be adversely affected—many have gone out of business. For the survival and viability of those who still farm, there is a need for alternate and more stable income-generating enterprises. Small farmers cannot compete with large commercial farmers in the production of traditional field crops such as tobacco, corn, and soybean. There is a growing demand for high value specialty fruits and vegetables that may provide an avenue for limited resource farmers to compete for a niche market.

The use of high tunnel vegetable production can increase the capacity to produce vegetables and small fruit on a more continuous basis. High tunnels are unheated, plastic covered structures that provide an intermediate level of environmental protection and control compared to open field conditions and heated greenhouses (Hightunnels.org, 2008). A high tunnel is an alternative to a fully-heated greenhouse that requires high energy input and can be very costly to operate. Unlike greenhouses, these structures have no supplemental heat or automated ventilation. They also can be taken down or moved to a new location thereby avoiding pest and disease build up as well as nutrient depletion. With generally smaller upfront cost in high tunnel construction and establishment, the return on investment can often be obtained over a short period. High tunnels with two layers of plastic were observed to modify microclimate in several ways:

- Frost free periods were extended by about six weeks
- Average annual minimum temperature increased by 8-9º C
- Daily mean temperature increased by 2.6º C, with a stronger warming effect at lower temperatures
- The USDA plant hardiness zone rating increases from 6b to 8a (Bomford et al., 2007)

High tunnel technology was introduced to small farmers to help them become more sustainable and to continue in production agriculture, thereby contributing to the economy of North Carolina and the United States.

Objectives:

1. To extend the vegetable production season on small farms in North Carolina.
2. To conduct a Farm Productivity and Environmental Quality Improvement Workshop.

Materials and Methods:

Two high tunnels were constructed on a small farm in Montgomery County, NC. The AFRI project provided some materials for construction of the high tunnels, planting material and irrigation supplies. The dimensions were 6.1m (20') wide, 15.24m (50') long, and 2.75m (9') high. The soil in the tunnels was Autryville sand with a saturated conductivity of 5.0cm/hr; it was acidic, deficient in nitrogen and potassium, and very high in phosphorus. Three tons/acre lime was applied and disked in prior to planting. Nitrogen and potassium were applied by disking in at 50 and 100 lbs/acre, respectively, prior to planting.

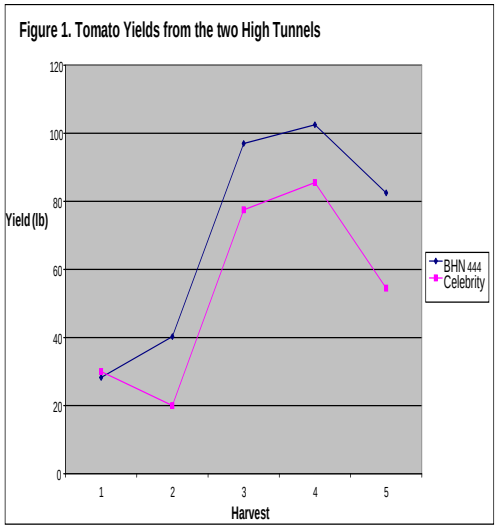
The tunnels were planted with two varieties of tomatoes, BHN 444 and Celebrity, in late spring. Irrigation was provided by an International Development Enterprise (IDE) drip system, which is regarded as a low-cost irrigation unit. After the field was saturated for planting, irrigation was applied at about 1.02cm (0.4") per day to satisfy the evapotranspiration rate of the tomato varieties selected. Nitrogen and potassium were applied during the growing season at

the rate of 150lbs each/acre through fertigation.

Results and Discussion:
The growth of tomato varieties BHN 444 and Celebrity was satisfactory. Harvesting and marketing began on June 30, 2009. The production gradually increased and it was highest on August 1, 2009 (Figure 1). The tomato yield from BHN 444 was higher than Celebrity. There was some disease problem with the Celebrity variety. A number of factors could have contributed to this, including temperature and humidity.

The farmer marketed the tomatoes at farmer's markets and other marketing outlets. The high tunnels have the potential to be very useful for season extension of specialty crops to improve the farm income. There will be more opportunities to observe this during the winter. Farmers with limited land can produce specialty crops in high tunnels and improve their quality of life.

A farm productivity and environmental improvement workshop was conducted in March 2009. Thirty-two small farmers across North Carolina participated in the workshop. The workshop provided information on organic production practices, specialty crops, mushrooms, high value crops, water and nutrient management, biofuel, swine production, and animal waste management. Farm business plans and recordkeeping, farm cooperatives, the new farm bill, and other USDA programs were discussed. Three small farmers were selected for organic certification training during the March 2009 workshop. We are continuing our efforts to identify more small farmers interested in organic production and certification. The certification training workshops are in progress.

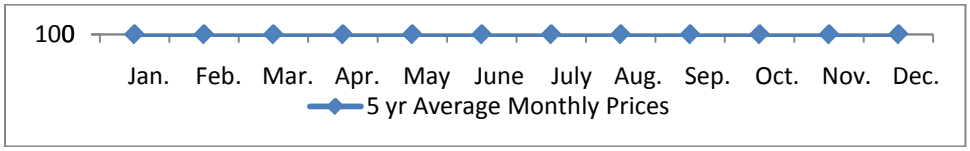


Economic Impact
Several research studies suggest that high tunnels can increase profitability by

- extending the production season to provide an out-of-season product for a premium price;
- increasing the quality, yield, and shelf life of the product;
- minimizing the use of pesticides; and
- ensuring a continuous flow of product when the outside environment is not favorable for field production (Karl Foord, 2004).

Historical data on price of tomato at point-of-first-sale shows that prices of tomato can increase by over 100 percent in the off seasons of November–January, as compared to prices in July/August (see Figure 2).

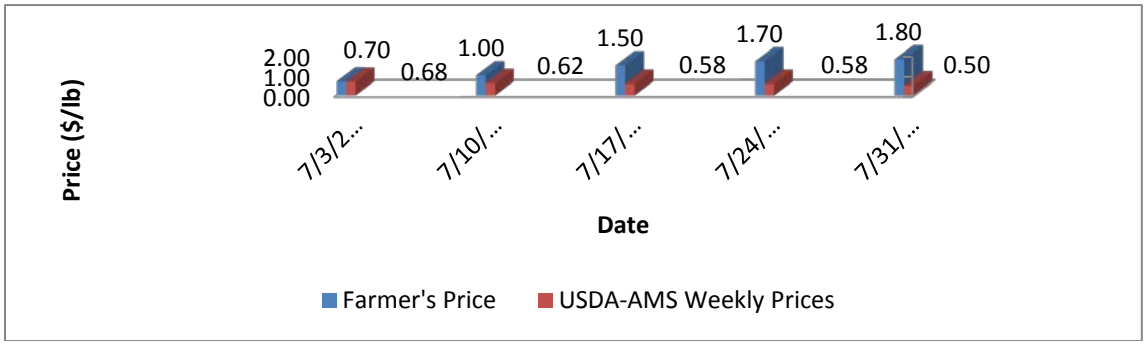
Figure 2. 2004 – 2008 Average Monthly Prices of Tomatoes (Cents/lb)



Source: USDA, Economic Research Services

Tomato harvesting begun in late June and production of marketable fruit is expected to continue until September. Data collection is still in process. However, within a period of 5 weeks the farmer has marketed 1,206 lbs. of tomatoes at prices ranging from 70 cents/lb to a premium price of $1.80/lb. Although this harvesting is within the growing season of tomato, the farmer is still able to get a relatively higher price for his produce due to its quality and uniformity. Figure 3 shows average weekly price obtained by the farmer and the Agricultural Marketing Service's (AMS) recorded price for North Carolina-produced tomatoes. A real case in point to support this fact is that on July 18, 2009, the farmer was able to sell all of his 36 lbs. of ripe tomatoes at $1.80/lb at a Greensboro Farmers Market, while others in the same market were selling tomatoes at $1.50/lb. Projection from data collected so far indicates that high tunnel production is more likely to give higher gross sales and higher income per unit of area than field-grown tomatoes.

Figure 3. Selling Price of Tomatoes ($/lb)



Source AMS

Acknowledgements
An AFRI grant from NIFA supported the high tunnel demonstration and farmer training.

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Exploring Marketing Opportunities for Ethnic Vegetable Producers in Urban Centers

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For beginning and immigrant farmers in Delaware and the Mid-Atlantic region, marketing ethnic and specialty produce to retail outlets in urban centers can be a successful and profitable venture. However, producers may be unfamiliar with some of the risks associated with the marketing of ethnic crops in urban centers of the Mid-Atlantic States. They may possess the capacity to produce ethnic crops in the sub region; they may have limited knowledge that is required to sell their produce. With proper planning, good research, and an effective selling strategy, producers will be able to ask the right questions to find the right answers. These answers will help the producer develop a series of steps needed to sell his produce to these markets and realize economic returns on his investment.

Where does the producer start? The producer begins with the development of a business plan. The business plan is used to define the organization of the business. Among other things, the business plan determines the agricultural output to be produced, the financial justification to conduct business, and the human resource capability of the business. A SWOT (strengths, weaknesses, opportunities, and threats) analysis further refines the farms capability to thrive as a business. In summary, the business plan will assess the producer's viability and feasibility of producing crops for market.

The marketing plan is an essential part of the business plan. The marketing plan will identify and address product, price, place, and promotion to deliver produce from operation to market. Through market research and analysis, the producer will identify his competitors, his customer base, and his customers' needs. The producer will then develop a marketing strategy. The marketing strategy will help him to decide the product to be marketed, his consumers, when, and how the products will be sold. The final step in the marketing strategy is the selling of vegetable product at these markets.

Selling occurs when the producer and buyer develop a relationship to conduct business. In this relationship, the producer sells himself, his company, and his product. So, where can the producer go to identify potential buyers? Retail outlets that purchase ethnic vegetables include restaurant, independent grocery stores and vendors, and specialty food stores. Information on these businesses is found through market assessment. Information sources include local, state, and federal agencies, extension professionals, other farmers, and not for profit organizations that assist farmers. Information can also be gathered through magazines, newspapers, Internet, and the food sections of local newspapers and food festivals.

What does the producer need to know to begin implementing a selling strategy? How does the producer make a connection with potential buyers of his products? He should have good communication with the buyer or customer.

Make contact with the seller. Cold Call – With good research you can pinpoint the right customer to call. Making personal visits and bringing samples to customers is another way of making contact. The customer has to know what you produce.

Follow-up visits or phone calls are important to make that initial connection to consumers.

Buyers may be interested in receiving additional information.

- Does the producer have a business license?
- What quantity can producers supply, for how long, and at what price?
- In the case of spinach, can producers deliver produce as stalks or as leaves?
- Is other produce available in your product mix?

Timeliness of visit is very important. Discussion of business opportunities should be held during the off period of the business. For example, it may be better to visit a chef from the hours of 2–4 p.m. when they are not preparing lunch or dinner. For grocery stores, it may be best to visit the buyer on Wednesday when store traffic is slow, rather than on Friday when store traffic is high.

How does the producer maintain good relationship with his customers? The producer does this by delivering the product at the right time, place, and in the right quantity. The producer should show the buyer that he will deliver the produce that he says he will deliver. If the producer cannot deliver the goods, he should inform the buyer early enough for him to seek the produce from another source. The producer should seek to create a regular delivery schedule unless the buyer prefers a more irregular schedule. Consistency of produce is important, as well. The retailer is expecting to receive high quality produce for every delivery. In this way, the producer is developing a culture that is based on trust and integrity. Only when trust is built between buyer sellers will the seller be able to increase his sales and increase his price. This creates a platform to increase income and increase profits for producers.

Success in selling is enhanced through the fostering of regular communication between seller and buyer. With regular communication, the producer is able to evaluate the effectiveness of his selling strategy. It helps the producer address obstacles that can impede the marketing transactions. In addition, this feedback will position the farm business to increase sales to the same buyer, increase the product mix to the same buyer, and expand market opportunities to other buyers. For example, if the customer is taking regular orders, ask him if there is anything else you can assist him with. This will show the customer that you are interested in the success of his business.

What should the producer expect from buyers?

It is necessary to expect professionalism and fairness from you buyers. For your business to thrive, timeliness of payments and timeliness of orders should be expected from your buyer. It will facilitate the smooth flow of operation and ensure that high quality products reach the retailer in a timely manner. The producer should expect a fair price for his products and his time. The producer should be open to feedback from the buyers of his product. If a customer no longer buys your produce or has reduced his orders, ask him why.

The end product of marketing goes beyond selling your products to your present buyers. Marketing also involves constant evaluation of marketing strategies, and the operations capacity to deliver more products to more customers. Thus the producer should be able to answer the following questions: What are our products? What are our strengths? And what are our customer needs? This will help the producer set realistic targets and make sound business decisions. This will allow the producer to formulate a plan to

implement and control his marketing strategy.

Market research should be ongoing as well. Market research will illuminate the ongoing changes that are taking place in the market. The researcher should identify changes in the regular pattern of buying, competitors influence on the markets, as well as price. This research will help producers answer the following questions: What are the opportunities to sell other products to existing customers? Can customers purchase larger quantities more frequently? What else do they need? Are there opportunities to sell to more new customers?

In conclusion, knowing the trends and habits of the market, conducting ongoing business analysis and implementing a sales strategy that focuses on the needs consumers, sold at competitive price will increase the chances of new and beginning farmers developing a successful and thriving business.

SESSION 2B
Sustainable Farming Course Series (PartII)

Farmers, Start Your Engines; Bringing Southern Ohio Farms to Life through the New and Small Farm College

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Background

Southern Ohio is a unique location in terms of its rural-urban interface. Large urban areas quickly transition to rural/agricultural settings. Improved infrastructure and technology has allowed individual property owners to relocate from urban to rural areas. A growing number of clientele have little personal background with agriculture or natural resources to assist them with decisions related to their property. These landowners want to attain greater understanding of production practices, economics of land use choices, assessment of personal and natural resources, marketing alternatives, and the identification of sources of assistance. Small farms are presented with many challenges and circumstances that will affect their potential productivity and profitability. There is a need for specific programs and policies formulated for small farmers to help increase their profitability. Ohio State University (OSU) Extension identified a need for comprehensive farm ownership and management programming based on diverse information requests from new and small farm owners. This situation led to the development of the Southern Ohio New and Small Farm College.

Educational Objectives

Historically, clientele involved in traditional production agriculture enterprises have been a key focus group for extension educational programs. New and small farm owners have been identified as an important clientele base with increasing educational demands. The extension professionals involved in this effort wanted to provide an in-depth educational program

covering new technologies for new and small farm owners.

Program planning identified the following three primary educational objectives for the Southern Ohio New and Small Farm College.

1) To improve the economic development of small family-owned farms in southern Ohio.
2) To help small farm landowners and farmers diversify their opportunities into successful new enterprises and new markets.
3) To improve agricultural literacy among small farm landowners who have not been actively involved in agricultural production.

Strategic locations for the programs were identified due to their unique rural-urban interface. Demographic and post-program survey information is utilized to help formulate future educational programming to more effectively address clientele needs.

Methodology

To accomplish the stated objectives, extension personnel developed the Southern Ohio New and Small Farm College. This program was comprised of 8 weekly programs consisting of 20 classroom hours. In addition, a 1-day tour of various small farms demonstrates successful agricultural enterprises. Extension specialists and educators, industry representatives, and governmental agency officials serve as resource persons. Primary topics covered included Getting Started in the Planning Process, Sources of Assistance, Agricultural Legal Issues, Inventory of Natural Resources, Financial and Production Recordkeeping, Crops and Horticulture, Animal Production, and Marketing. A $150 registration fee was charged to the first person from an operation and $50 for each additional person from that operation.

Participant Demographics

Some 357 individuals representing 295 farms from 35 Ohio counties and 1 Indiana county have participated in the Southern Ohio New and Small Farm College. The following demographic information was collected from these participants:

- Average farm size was 74.93 acres with a range of 0 to 1,700.
- Average length of property ownership was 8.88 years.
- When asked if they had a plan for using their land, 49.6 percent stated that they did not have a plan.

Participants were surveyed to determine their motivation for farm ownership. The top five ranking reasons were:

1. Lifestyle
2. Retirement
3. Earn a living
4. Investment
5. Inherited the property

- 60 percent of the participants are male, 40 percent of the participants are female.
- 74.8 percent of the respondents stated that they had obtained some form of post-secondary education.
- 81.4 percent of the respondents own a computer and utilize the Internet for personal and/or business purposes.
- 68 percent of the respondents stated that they had not previously attended an extension educational program.

Evaluation

The Southern Ohio New and Small Farm College received very positive reviews from the participants. Since 2005, the program has received an overall rating of 9.03 on a 10-point scale (10 = excellent, 1 = poor). Some 73 percent of the respondents developed or changed the plan for use of their property or farm since the start of the Southern Ohio New and Small Farm College. Sessions rated the most useful by the

participants included animal production, legal issues, horticultural crops, marketing alternatives, and recordkeeping. Direct mail was identified by respondents as the most preferred delivery system for receiving extension educational information.

Conclusion

The Southern Ohio New and Small Farm College was very successful in providing participants with cutting-edge information and a wide range of topics relating to small farm production and management. The concept of using regional locations was successful in drawing clientele from a wide geographic area. The positive response to the initial college has resulted in the scheduling of additional statewide sessions. Direct mail and meetings remain popular for delivery of information but the increased availability of the Internet makes it a viable option.

Growing Farms: Successful Whole Farm Management

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Melissa Matthewson, Oregon State University Extension
Melissa Fery, Oregon State University Extension
Garry Stephenson, Oregon State University Small Farms Program
Kristin Pool, Oregon State University Extension Service

Growing Farms: Successful Whole Farm Management is a workshop series designed to provide beginning farmers with the tools and knowledge necessary to succeed in a farm business. It is an educational program that focuses on the linkages between the biological, financial and human dimensions of the farm. With many regions developing beginning farmer education, the Oregon State University (OSU) Small Farms Program set out to create a unique educational program that combines biological and financial risk management specific to the diverse regions of Oregon. With funding from the Risk Management Agency, the OSU Small Farm Program created and implemented Growing Farms: Successful Whole Farm Management in the spring of 2009. In 2010 the course will be support for a second year by the Risk Management Agency.

Program Description

Growing Farms includes eight workshops, covering six broad topical areas. The six topic areas evenly integrate specialty crop and livestock production and farm business management. The workshops paired Extension faculty and other agricultural professionals with experienced farmer instructors.

Specific workshop topics included:

Dream It: Strategic Planning. Defining personal values, assessing farm resources, grants and financing options.

Do It: Farm Operations. Two sessions addressing production options, labor management, farm safety, equipment, water rights and the importance of renewable energy.

Grow It: Production. Two sessions focused on farming methods that improve soil quality, maintain optimal fertility, and manage pests ecologically.

Manage It: Farm Finances. Business structure, record keeping, cash flow, access to credit and tax liability.

Sell It: Marketing Strategies. Wholesale and direct marketing strategies. Organic certification options.

Keeping It: Managing Liability. Risk management tools such as farm and crop insurance options and agricultural entrepreneurship.

Participants receive a Resource Binder divided into the six topic area above. The resources include educational materials along with information on grant opportunities and organizations existing to aid farmers. Participants also receive a Farm Plan Binder including some worksheets and an outline of a farm plan. This is designed to encourage participants to produce a farm plan.

2009 Program Implementation
In the spring of 2009, Growing Farms: Successful Whole Farm Management was delivered in four distinct regions of Oregon: the north and south Willamette Valley, south Oregon and central Oregon. In each region a local Small Farms Program Extension Agent formatted the course to fit the particular needs of their participants and to address the specific conditions to diverse regions in Oregon.

The target audience involved small acreage farmers who were in their first five years of farming, those who were intending to start a farm and those considering major changes to their farms. A total of 110 farmers participated in the workshop series in 2009.

In each region the course emphasized networking within the local small farm community. Local organizations with programs relevant to small farmers were encouraged to present to the group.

Participants were also given time to mingle amongst themselves and with presenters over dinner. This networking opportunity was noted as one of the highlights of the course. As a result of this series, participants have formed strong networks with other beginning small acreage farmers, experienced farmer instructors, and agricultural and business professionals. The cohorts found great use in peer education and have established email listservs to provide continued discussion and assistance.

Full day field trips to exemplary farms in the region were added to the programming. These events gave participants a hands-on opportunity to compare production strategies of various experienced farmers.

2009 Program Results
Growing Farms stresses the importance of planning the production, business, and human aspects of the farm. Preliminary impacts on participants farm planning are impressive. For example, with only 20 percent of participants starting the workshop series with some level of written plan, at the end of the course:

- 80% created mission statements and/or written goals
- 54% created production plans
- 49% created new or improved business plans
- 46% created marketing plans

The evaluation revealed that prior to the workshop, 43% were not sure of the importance of creating goals and a mission for their farm and family; compared to after the workshop, where 100% had a good or great deal of understanding. When asked to list important skills and knowledge gained from the Growing Farms course, participants responded with financial planning, risk management strategies, marketing techniques and assessing physical resources.

The initial evaluations showed that participants gained better access to science-based information and plan to use this information to improve their small farm businesses. Participants recorded the greatest gain in knowledge about taxes,

insurance, marketing, resource assessment, and planning.

Participants rated the workshop series at 4.4 (scale of 1-5 with 5 excellent). Their comments highlight other qualities of the workshop series:

- "Listening to the farmers talk makes me realize that we really can follow what we really love doing and make a living farming
- "The class has brought some sense of reality to what it takes to get a small farm up and running to be successful."
- "This workshop provided a well-rounded approach to covering the main aspects involved in farm management."

With the completion of Growing Farms: Successful Whole Farm Management, a 6-month follow-up survey is being conducted on a random 25% of the participants. The survey was created to learn if the participants are:

1. Starting a new business, expanding or diversifying their farm as a result of the Growing Farms course;
2. Using new marketing channels for their products;
3. Networking with other participants or farmers;
4. Improving the management of soil, pests, and labor;
5. Using course information in their overall farming operation or plans to develop a farm.

Information from this survey will be used to improve the effectiveness of future workshops provided through Growing Farms: Successful Whole Farm Management.

New Farm Ventures—Working with Natural Systems

John M. Thurgood, Cornell Cooperative Extension of Delaware County

Beginning farmers are a diverse set of people with a rainbow of entrepreneurial ideas, knowledge and skills. From corporate marketing executives to next generation farmers, they all come to the table of their new farm business with a different palette from which to work. For some, the only animal that they have ever cared for is a pet cat or dog. From that entry point, considering a herd of 100 sheep or 25 beef cows is a quantum leap requiring much more than just scaling up the knowledge of raising a pet. From the cropping standpoint, a beginner who has only raised a few plants in pots outside his/her apartment might now consider raising an acre of flowers or 10 acres of organic produce. While the knowledge gained from raising a few plants is certainly helpful, it doesn't equate to management on a larger scale. Overlooking this lack of knowledge when designing a beginning farmer course can set the participant up for a very disappointing start.

Many small farm courses ask participants to conduct a resource inventory that includes the factors of production: land, animals, machinery, and human capital. Participants are often taught how to read soil maps to determine the type of crops best suited to their land and what to expect in crop yields. At the same time, many courses neglect to inform the beginning farmer of the essence of agriculture: working with nature to collect solar energy. This energy is captured by crops for direct human consumption, for animal feed, or as an energy feedstock (bio-fuels). Letting these producers know they are in the solar energy business allows them to understand the essence of what they are setting out to do. Now it can be related to these farmers that proper management of their natural resources is critical if they are

to effectively collect this solar energy. Once this is understood, they are able to learn how their actions on the land affect ecosystem health and the subsequent effect on crop yields and profitability. They can learn how to be sustainable farmers, managing their resources to be environmentally sensitive and socially responsible, as well as profitable.

Farmers participating in "Working with Nature for Profit, the Environment and Your Community (WWN)", a 1-day unit of the intensive New Farm Ventures Course, were introduced to the concepts of sustainability, bio-diversity, succession, and watershed management. Watershed management was particularly important because most participants would be farming in the New York City Watershed Catskill/Delaware Region, which serves as the major water source area for the city. The reference used as a basis for the course was the "Holistic Management Handbook," Island Press, 2006, and "The Essence of Holistic Management" from the "In Practice" Newsletter, Holistic Management International, May/June 2004.

The WWN unit began with participants discussing the elements of sustainability, relating to each other what they would consider to be success in their new farm business. Their responses were categorized in each of the three elements of sustainability. With this established, the participants were ready to explore how their actions on the land related to sustainability, beginning with their effect on ecosystem processes and the services they provide farmers and society.

This part of the session was introduced with a brief presentation on the ecosystem processes of the hydrologic cycle, nutrient cycle, community dynamics, and energy flow. Simplified definitions are as follows:

- **Hydrologic cycle** is the process of water moving from the atmosphere to the earth, movement on the earth, and then back to the atmosphere.
- **Nutrient cycle** is the movement of nutrients from the soil to living organisms then back to the soil.
- **Community dynamics** is population and relationships of living organisms in the soil, water, and air.
- **Energy flow** is the movement of energy from the sun to plants, animals, or bare ground and water, then back into the atmosphere in the form of released heat.

Participants explored the effects of their actions on the ecosystem processes and how to manage the land to nurture those processes. During this discussion they learned that ecosystem processes provide healthy water, crops, and cattle, if the land is managed properly. The importance of soil health to the effective function of the ecosystem processes was discussed using the source "Cornell Soil Health Assessment Training Manual," Cornell University, College of Agriculture and Life Sciences, 2007.

A "case farm" with degraded resources was provided for the participants to study. The case farm presented was nothing more than an image of sheep on a pasture showing the negative effects of not resting plants in a grazing system. The landscape is riddled with signs of soil erosion, bare soil, and weak plants. Participants were asked to work in groups to describe how each of the ecosystem processes was working and to report back to the full group; they were specifically asked to NOT discuss solutions at this point. Interestingly, about half the participants didn't realize that the natural resources were degraded. With some coaching, the participants had a strong grasp on the function of ecosystem processes. It is easy for a novice to

understand that in the case of bare ground, there are no plants that can collect solar energy. It is a little harder for them to understand the effects of bare ground on the mineral cycle, community dynamics, and the hydrologic cycle. During the discussion of community dynamics, the benefits of bio-diversity and the concept of succession were addressed.

At this point the participants were allowed to move into the problem-solving mode. They explored the root cause of the problem—not resting the plants in the pasture—which was caused by the farmer, not the animals. Participants were asked to work in groups to develop a plan of action to improve the pasture sward. It wasn't the intent for the participants to develop a comprehensive planned grazing system, but to explore how the system could be developed to allow the plants to rest and recuperate between grazings.

Farmers also learned how to manage their land for multiple returns. Managing for wildlife was also addressed with hay mowing patterns to allow wildlife escape and harvesting schedules to support a population of grassland birds. The publication "Hayfield Management and Grassland Bird Conservation," Cornell University Cooperative Extension, January 2006, was the basis of this presentation.

Finally, participants learned the implications of farming in the New York City Watershed and the need to maintain a healthy water supply for the 9 million residents that reside in and around NYC. They learned the benefits of participating in the Watershed Agricultural Council's whole farm planning program and USDA conservation programs, including the Conservation Reserve Enhancement Program. The USDA publication "Riparian Forest Buffer, Conservation Practice Worksheet," January 1998, was the primary source for this presentation.

Professionals who are developing beginning farmer courses should not assume that participants grasp the fact that working with nature to collect solar energy is the foundation of all of agriculture. It is essential to allow new farmers to explore the ecosystem processes and how actions on the land affect these processes. Preparing the new generation of farmers to start with environmental sensitivity in mind will not only allow them to avoid the environmental challenges that have plagued agriculture in the past, it will set them on a path of long-term sustainability.

University of Minnesota Extension Educators Create Small Farm Team to

Address Needs of New Audience

Betsy Wieland, University of Minnesota Extension
Nathan Winter, University of Minnesota Extension

Small Farm Conference 2009 Oral Presentation

Small acreage ownership in Minnesota is increasing rapidly and can dramatically impact local community economics and the landscape. Extension Educators throughout the state have been receiving questions from these land owners, many of whom have little experience with Extension programming, about land management issues ranging from tree care to poultry management and agricultural enterprise opportunities. To engage this new audience, Extension Educators formed the Small Farm Team to assess educational needs, determine currently available resources, and bridge information gaps. The team consists of 17 Extension Educators from a variety of duties including county based educators, food safety, pesticide and community vitality specialists. The team's first project was an eight-week pilot

workshop series on small farm management in 2008. The workshop, which was based on curriculum developed by Extension Educators in the western U.S., discussed land management issues like water quality, soils, and pasture management. Thirty small acreage owners regularly attended the three hour Monday evening sessions. In 2009 this core series ran again with 40 participants and a three-week pilot series on Livestock was also offered. The team also organized "Living on the Land: An Expo for Rural Landowners".

Sessions in four different tracks provided information on topics like "Soils 101" and "Sheep Shearing." Evaluations from the workshop participants and the 400 expo attendees were overwhelmingly positive. Lastly, a webpage was developed as a resource for the audience: www.extension.umn.edu/smallfarms. This website contains a self-registration option for an email listserv, which grows daily, where the team can share information regarding upcoming events and relevant information. One major conclusion from the team's work thus far is that the increase in small farms affects a vast array of people, companies and organizations. Governmental organizations, farming organizations, banks, hunters, environmental groups, curious citizens, beginning farmers, and hobby farmers were all active participants in the events. The Small Farm Team's workshops, expo and website helped bring them together to learn and be successful.

Small Farmer Agricultural Leadership Institute

Dawn Mellion- Patin, Southern University Ag Center, Baton Rouge, LA

Currently, there are approximately 35 other agricultural leadership classes being conducted in the United States. The Small Farmer Agricultural Leadership Institute at the Southern University Ag Center is modeled after these national programs. However, the participants are the most notable difference between this institute and all of the other classes. After a very careful and deliberate review of the photo albums of the other agricultural leadership programs offered by universities, farm foundations and other organizations, it was observed that African-Americans, Hispanic, and American Indian participation was extremely limited and, in most cases, non-existent.

This institute targets small, limited-resource, socially-disadvantaged, and minority agricultural producers who have traditionally been excluded from mainstream agricultural instruction, activities, and experiences. In fact, larger and wealthier agricultural producers are taking advantage of, and feel comfortable in the more established leadership programs while limited-resource and socially disadvantaged or minority producers are not.

A majority of the larger land-grant universities have agricultural based leadership programs in place, including Master Farmer, Master Gardener, or Master Cattleman programs, to assist its clientele in becoming better leaders, managers, and businesspersons. These universities, along with companies and foundations like Philip Morris, USA, and the Kellogg Foundation, have all taken the lead and provided this type of experience for large agricultural producers. These programs have been very successful and participation has increased. This fact alone raises the question, "Who is providing this type of experience for small, minority, socially disadvantaged, and limited resource producers who typically do not participate in the programs and services offered by the major universities?" This project, in its very broad scope and design

has become one of the key answers to this question.

As a comprehensive 2-year course, the Small Farmer Agricultural Leadership Institute promotes small and family farm sustainability through enhanced business management skills and leadership development. This goal is achieved by helping farmers become better leaders while augmenting their business and farm management skills. The institute specifically:

- teaches how the role that small farmers play fits into our global economy;
- increases leadership, decision-making and analytical skills;
- improves a farmer's ability to manage and operate a farm business;
- teaches the public policy process and prepares individuals to participate in the decision-making process;
- improves participants' ability to manage a farm business in a competitive global economy;
- develops and enhances the business management and marketing skills of limited resource farmers
- improves group communication, while increasing confidence in working with people; and
- establishes a basis for lifelong learning and development by stimulating a desire for independent study and learning.

Training sites vary and have included the University of Arkansas at Pine Bluff, South Carolina State University, Tuskegee University, Prairie View A&M University, Florida A&M University, North Carolina A&T State University, Alcorn State University, Virginia State University, and Southern University and A&M College. During each session, three unique and distinct skill sets are covered: leadership development, production or management practices, and an agricultural experience that includes a tour to a farm or an agricultural business.

The first class of the leadership institute, which consisted of 22 farmers from 10 states, held its graduation ceremony on the historic patio of the Jamie S. Whiten Building in Washington, DC, in March of 2007. The Honorable Mike Johannes, former Secretary of Agriculture, was the keynote speaker. The second class of 26 farmers from 13 states graduated in March of 2009, in Washington DC. The Honorable Tom Vilsack, Secretary of Agriculture, was the keynote speaker. Applications are being accepted for Class III.

The success of this project has been overwhelming and the graduates of the institute are making changes in the small farm communities where they live as well as regionally. Listed below are some of the accomplishments/contributions that have been made to date:

Appointments to Regional Advisory Boards

- Southern Region Risk Management Education Advisory Board
- Southern Sustainable Agriculture Research and Education (SSARE)

Appointments to State and Local Advisory Boards and Taskforces

- Florida Sustainable Agriculture Research and Education
- Council of Agriculture, Research, Education, and Teaching representative at Alcorn State University
- Florida Small Farms Planning committee
- University of Florida Extension Advisory Board
- Member of Prairie View A&M University Extension Advisory Board
- Kentucky State University Small Farm Conference planning committee task force for Hamilton County (Florida) Growth and Development Commission

- West Baton Rouge Parish (Louisiana) USDA/Natural Resources Conservation Service (NRCS) Board

Conferences, Meetings and Other Speaking Engagements

- Invited to participate in USDA Partners meeting as a community-based organization representative
- Served as a panelist at Women in Agriculture Conference
- Served as keynote speaker at North Carolina A&T State University Small Farm Week Program
- Served as Panelist at NRCS Grazing Workshop

Small Farmers of the Year

- 2006 Small Farmers of the Year by Langston University
- North Carolina 2008 Small Farmer of the Year by North Carolina A&T State University
- 2006 Carolina Farm Stewardship Association Small Farmer of the Year
- 2009 South Carolina State Association of Cooperatives
- 2009 Small Farmer of the Year by Minority Landowner Magazine

Serving Others

- Model farm for farmers in Oklahoma
- Model farm in South Carolina where the farm serves as a site for Clemson University College of Agriculture student internships
- Assist with identifying minority producers for training programs leading to organic certification
- Distributor of organic seeds for small scale producers
- One of the key players in starting the Blue Grass Farmers' Market
- Spearheaded and chaired the first Saving Rural America conference outside Jackson, MS, an outreach activity attended by in excess of 350 people, both in 2008 and 2009, with plans currently in process for the 2010 conference
- Farm was featured in an educational training video produced by SARE

As a result of believing in lifelong learning, three of the graduates decided to re-enroll in degree-granting programs. One completed bachelor's degree studies and two pursued and completed graduate degrees: an M.S. in plant and soil sciences and a MBA in marketing. Two others are currently pursuing bachelor's degrees.
The success of this institute is due to the hard work and commitment of the members from the 1890 Land-Grant University community and USDA who serve on the leadership team. They are:
Marion Simon of Kentucky State University, Nelson Daniels of Prairie View A&M University; Michelle Eley and Ray McKinnie of North Carolina A&T State University; Henry English of University of Arkansas at Pine Bluff; Gregory Reed of Alcorn State University; Edoe Agbodgan of South Carolina State University; Tasha Hargrove of Tuskegee University; Angela McKenzie Jakes of Florida A&M University; Christie Monroe and Candace Semien of the Southern University Ag Center; Orlando Phelps of the Agricultural Marketing Service; Larry Russell and Frank Taylor, farmers and past participants from Mississippi; and L. Washington Lyons of the 1890 Association of Extension Administrators.

After review of the short term list of accomplishments, you will see that the Small Farmer Agricultural Leadership Institute has and continues to develop leaders for the very vast agricultural community. These participants are taking what they have learned and are putting those skills to use. They have truly become leaders and a strong voice for a traditionally voiceless people.

For more information about the Small Farmer Agricultural Leadership Institute visit our website at: www.aginstitute.suagcenter.com or contact Dawn Mellion Patin, agricultural specialist and project director, at 225-771-2242 or Dawn_Mellion@suagcenter.com.

A Successful Tool for Teaching Small-Acreage Owners Sustainable Farming Practices

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As Western states subdivide larger parcels and ranches, the need for sustainable land management increasingly rests with a new group of owners with little experience in stewarding land. The multi-phase, multi-state Living on the Land: Stewardship for Small Acreages (LOL) curriculum addresses the need to reach, teach and assist a growing population of western landholders moving onto small-acreage properties in managing their natural resources and developing sustainable systems.

LOL is a complete package for educating small-acreage owners using research-based information on key natural resource issues (goal setting, soil, water, wildfire, plants and animals) as well as information on sustainable small-acreage enterprises and systems. The curriculum crosses disciplines and brings together information needed to address a multitude of community concerns. Rather than focusing only on water quality issues, LOL also integrates economic and social issues as they relate to natural resource protection, quality of life and sustainability.

Curriculum Development

Funded by a Professional Development Grant from the Western Sustainable Agriculture Research and Education (WSARE) program, a team of educators from eight western states launched the first version of the LOL curriculum in 2001. The first edition included modules on basic resource issues, including property inventory and goal setting, soils, water, plants and animals.

In 2006, upon receiving additional grant funds from WSARE and in response to the success of the 2001 version, the curriculum was expanded to include new material requested by users. Modules on wildfire threat reduction, small-acreage enterprises and the whole-farm approach were added, while other lessons were updated and reorganized. Trainings on the use of the new version were held in 2008 in Bozeman, MT and Albuquerque, NM to teach 60 educators from Extension, NRCS, Conservation Districts and other agencies and organizations to use the curriculum. The curriculum is available on CD and the Web at no charge: (http://www.unce.unr.edu/publications/files/nr/2008/cm0807.asp).

While the focus is on developing intensive training programs for small-acreage owners to help them become better land stewards, the materials can be used in many ways, from single presentations to topical sessions. An Instructor's Guide is included to assist in all elements of program development, delivery and evaluation. More than 2400 copies of the curriculum have now been distributed to 42 states and five foreign countries, and programs have been launched in many western states. The broad applicability of the curriculum allowed Minnesota to launch a LOL program in 2008, and Illinois is developing a program this year.

Living on the Land: Stewardship for Small Acreages (2008 version)

Table of Contents

http://www.unce.unr.edu/publications/files/nr/2008/cm0807.a

Evaluation

- Following curriculum launch and trainings, an evaluation conducted in 2002 revealed the following:
- For most respondents, water quality issues top the list of motivators for programming, followed by nutrient management and water quantity.
- Eighty-three percent of respondents felt it is very important to educate small acreage owners in their area.

The most common audience with which the materials are used is that of small acreage owners who own 1-20 acres of land (71.4%). Conservatively, respondents used the materials to teach in excess of 1100 students during the first year since completion. Hundreds of improved practices had been implemented by students. The longest-running known program, headquartered in Idaho and operating since 2002, provides a wealth of evaluation information. They collect information on pre- and post-knowledge, preparedness and understanding (Table 1), self-ratings of knowledge gain, ratings of instructors and curricula, and feedback on best management practices (BMPs) that have been implemented or are planned for implementation. In 2008, the top four BMPs implemented were site-appropriate fertilization, weed and pest control, wellhead protection and septic care. Water management was also a top BMP in 2007.

Table 1. Idaho Evaluation Results, 2007 – 2008

	2007		2008	
Short-term Impact: Knowledge, Preparedness and Understanding	Before LOL	After LOL	Before LOL	After LOL
My knowledge about land stewardship and resource management	2.48	3.93*	2.22	3.89*
My preparedness to adopt best management practices	2.32	4.05*	1.94	4.06*
My understanding about how many choices have affected land use, lifestyle and the environment in my community and county	2.47	4.05*	2.67	4.22*
My ability to effectively find and access resources to support my small-acreage systems	2.15	4.13*	2.06	4.44*
Short-term Impact: Skills Development				
Collect, submit and analyze soil. Water and forages samples	1.68	4.02*	1.76	4.33*
Plan, enterprise budget and implement animal or crop system(s)	2.00	3.80*	1.94	4.06*
Network with small-acreage community	1.88	3.63*	1.78	4.00
1=None, 2=Little	3=Some, 4=A good deal	5=A great deal,; *P<0.001;	N=44 (2007) and 18 (2008	

Alumni of the Idaho LOL program reported selecting appropriate forages, improving pasture and livestock management methods, improving domestic and livestock water quality, establishing market or CSA gardens, and establishing fencing and irrigation systems. Three years of exit testing and focus group data suggest LOL presents useful information on all aspects of land and resource management applicable to owners of small acreages 1-50 acres in size; addresses and solves critical stewardship problems; brings together the resources of universities, Extension, and local experts; and comprises "the best single resource for learning what is involved in managing a small acreage."

Keys to Program Success

In an era when we are urged to use distance learning technologies and other efficiencies of scale, the Living on the Land program is something of a reversal, in that it works directly with a relatively small number of people in an intense, hands-on fashion. Years of experience with the program have revealed the following elements that contribute to success:

1. Emphasize community and neighborhood in the program. Remind small-acreage owners why they moved to their neighborhood, and their original goals and hopes. Set the stage for accepting responsibility for their own properties and their impacts on neighbors and community. Some program participants find the experience a needed social outlet that better integrates them into their neighborhoods and communities.

2. Determine your students' learning styles and use effective, active teaching methods that target multiple intelligences. Too often, educators focus on the use of PowerPoint presentations. While such presentations are provided with the

curriculum, we also provide activities, worksheets, and other tools to break up the monotony of PowerPoints.

3. Provide resources and guidance. Many small-acreage owners don't know where to get information and help. Include technical resource providers such as NRCS in your presentations. Ask them to participate as trainers. Provide lists of local resources and Web resources to your participants. Have them practice gathering information and sharing it with their fellow students.

4. Be flexible. Each group will have its own interests and special needs. Some classes may be full of horse lovers; others may have more small farmers. Be ready and willing to adapt the content to the needs of your students. Some programs will offer two different tracks at the same time, for instance: one for those with livestock, and one for those with enterprises.

5. Be persistent. No one learns everything the first time around. Be ready to repeat and reinforce both information and a sense of community. The potential for a high turnover of small-acreage property owners means continued outreach activities will always be needed.

Contact the authors for more information about the curriculum or program development, or to obtain a free copy.

SESSION 2C
Using Special Projects and an Institute to Building Community Support

Building the Small Farms Institute (SFI) From the Ground Up Focus: Small Farms and Ranches, CSA, Underserved Farmers, Minority Farmers

Mark E. Uchanski
John Mexal
Greg Mullins
Jeff Graham,
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Agriculture has played an important cultural, economic, and environmental role in the survival of the people across the United States, and much of our domestic agriculture is conducted on "small" farms and ranches. According to the USDA's Economic Research Service in 2003, 91 percent of all farms and ranches in the United States are considered small-scale operations, but they produce more than one quarter of our food and fiber and represent 70 percent of the total farm and ranchland. This same trend holds true in New Mexico where 16,000 of the 17,500 total farms are considered small, according to the USDA National Commission on Small Farms, which defines the term as an operation with annual receipts less than $250,000, and on which day-to-day labor and management are provided by the farm family that owns or leases the productive assets. Based on the 2002 agricultural census, 45 percent of New Mexico farms are less than 50 acres and 23 percent are less than 10 acres. In addition, 70 percent of New Mexico farms gross less than $10,000 per year, which places them at the lower end of "small farms."

New Mexico and the United States have added 300,000 new farms since 2002, and many of these farms are smaller, lower

income operations that are experiencing changes in the demographics of their owners, including a 30 percent increase in women and a 10 percent increase in Hispanic farmers. This is important because the USDA Cooperative State Research, Education, and Extension Service (now, the National Institute of Food and Agriculture) recently conducted "an important, national-level investigation [that] shows small-scale Hispanic farmers and ranchers in the United States have special needs for information about government programs, agricultural production, marketing and finances." In addition, New Mexico's farmer base includes 19 Indian Pueblos, two Apache Nations, and the Navajo Nation who struggle with retaining their farming and ranching traditions. New Mexico State University (NMSU) and its constituents have been working for 3 years towards the creation of a Small Farm Institute (SFI) that has the goal of bridging research, education, outreach, and extension leading to sustainable, small farm systems in New Mexico. We will do this by partnering with the Alcalde Sustainable Agriculture Research Center and the Los Lunas Experiment Station to create a research corridor along the Rio Grande valley, which will team with each of the experiment stations to initiate research in sustainable agriculture appropriate for their service areas. The Rio Grande Valley corridor and other areas in the state are experiencing increased urbanization that competes for land and water resources thus reducing available farmland.

The SFI has several goals, including creating sustainable agriculture systems for New Mexico, improving the economic viability of small farms, increasing the availability of locally grown, healthy foodstuffs for the citizens of New Mexico, and providing an educational avenue to develop and train the next generation of New Mexico small farmers. The SFI will also assist in improving niche market profitability for small farms and ranches in New Mexico by targeting the needs of specialty crops, value-added integration, and organic production. This will include the establishment of a Sustainable Agriculture Research-Education Center, the establishment of an SFI Student-Involved Garden, and the development of an undergraduate degree program in sustainable agriculture at NMSU.

The SFI will not only impact New Mexico, but also the nation, due to the outreach capabilities of NMSU and the model that NMSU can provide. NMSU is also a Hispanic-Serving Institution. As stated above, the SFI will address food security concerns, educate beginning farmers, provide marketing programs to promote small farms and their products, and educate our youth in the knowledge and appreciation of agriculture as well as nutritional issues facing their generation. The SFI would assist family farms and their business. Issues facing New Mexico and more readily our nation, include those stated above, but also include urban encroachment on agricultural lands in peri-urban areas; concern about "carbon footprint" of food productions systems; and will address the increasing number of Hispanics and women beginning small farming practices. Additionally, Native Americans who have been traditionally undercounted in the national census will benefit from our collaboration with the 1994 land-grant institutions in New Mexico. Our nation as a whole will benefit from research conducted at the SFI, which will strive to serve as a model for communities statewide and nationally.

Over the past 3 years, on- and-off campus initiatives have resulted in $169,000 in one-time funding, the establishment of a SFI advisory committee, the hiring of a full time SFI coordinator, the reallocation of existing

faculty positions, the purchase of a tractor, and the donation of a greenhouse.

However, this progress has not been without barriers. Major barriers for the SFI have been acquisition of land and recurring funding. During these difficult economic times, in our nation, development of the SFI program has been more difficult. The creation of a new statewide project is an ongoing project. We hope this process, and the lessons learned along the way, can serve as a model for similar programs across the United States.

Improving Economic Returns and Long-Run Sustainability in a Rapidly Growing Peri-Urban, Multicultural, Small-Scale, Traditional Farming Community

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Small-scale, peri-urban[6] agriculture throughout the United States is highly valued by local populations, and contributes to nutrition, cultural preservation, lifestyle opportunities, economic returns, environmental quality, and social stability. Small-scale agricultural systems also contribute to U.S. food security by serving as essential, although small, elements of national food supply portfolio diversification. However, many small-scale agricultural producers find it difficult to preserve their operations given the economic constraints associated with small-scale agriculture coupled with urban encroachment. Increasing land and water values due to urbanization often induces struggling small farm households to sell their land for development. In addition, impermanence syndrome creates a disincentive for small-scale agricultural operations to invest, diversify, and make improvements to infrastructure (Heimlich and Anderson 1987); including that related to irrigation water conveyance and application. These small-scale agricultural households are usually dependent upon non-farm income sources, and/or have relatively low household incomes. Few small-scale operations are able to achieve livable household incomes solely from their food and fiber commodity outputs. In order to sustain a vibrant, healthy agricultural system and associated benefits, it is critical that small-scale producers find the means to improve operational efficiency through integrated best management of all their resources. This includes adoption of value-adding enterprises and marketing activities both on-farm and in the community, improvements in management and use of the natural resource base, and enhancement of the broad range of values

[1]According to PUECH (available online at: http://www.scope-uk.ac.uk/projects/PUECHsumOct01.html), peri-urban defines "…the transition or interaction zone, where urban and rural activities are juxtaposed, and landscape features are subject to rapid modifications, induced by anthropogenic activity. These critical areas of land cover change, leading to transformations in the hydrological, ecological, geomorphological and socio-economic systems, are often neglected by both rural and urban administrations. As cities develop, much of their growth is located in such areas." In this proposal, we use the term peri-urban to refer to the fact that, in terms of water supply, planning and policy making for the study area are occurring at the interface between urban and rural domains. This study thus views the rural and urban features as coexistent within the cities and beyond their limits. In terms of agricultural production, and in an attempt to connect the food production of urban and rural communities, we do not choose urban over rural but rather create a connection that highlights the value of both environments.

resulting from small-scale agricultural production.

The U.S. Census of Agriculture last enumerated approximately 2 million farms in the United States. However, the dual structure of U.S. agriculture is currently such that approximately 15 percent of farming operations generate approximately 90 percent of the value of all agricultural output. The other ~85 percent of farms is responsible for around 10 percent of output. The majority of agricultural production value in New Mexico is concentrated on an even smaller proportion of total farms than the national situation. The multi-functionality concept strongly recognizes the socio-cultural role of traditional agricultural activities, and New Mexico probably has the strongest multicultural tradition (e.g., Anglo, Hispanic, Native American) of all the 50 states, with respect to valuing the socio-cultural 'outputs', role, and contributions of crop and livestock production. Indeed, while the vast majority of farms in New Mexico have a relatively insignificant impact on the local, regional, and national food supplies, their non-food functions (particularly their socio-cultural and ecosystem values) are huge[7]. Landscape amenity values in bucolic agricultural settings (and these settings' relative scarcity in the larger desert environment) are reflected in current high land values in New Mexico's peri-urban irrigated agricultural communities throughout the Rio Grande Basin.

[7] The New Mexico Acequia Association's "El Agua Es La Vida" declaration provides an example of the state's traditional agriculturalists' attitudes toward water, land, and agriculture (available online at: http://www.lasacequias.org/programs/el-agua-es-la-vida/.) Acequias are communally-owned water conveyance channels or ditches, some of which date to ancient Native American cultures. There are approximately 1,000 acequias currently operating in New Mexico.

One community in New Mexico that is at the forefront of attempting to preserve both the food and non-food (e.g., socio-cultural and ecosystem) functions of their local agricultural system is the South Valley, located in the Middle Rio Grande Basin, south of the Albuquerque metro area. In the past few years the citizens of the South Valley community area have organized to address the threats they believe confront them as an agriculturally based community in the peri-urban shadow of the city of Albuquerque (Gonzales 1997; Wang 2007). As expressed in their vision of agriculture in the region, the citizens of the South Valley believe that agriculture is not a temporary land use activity but unique in that it has both tangible and intangible values (e.g., food and non-food functions). They believe that agriculture not only serves as a source of income, it also provides the region with environmental benefits such as open space, oasis-like microclimate effects, wildlife habitat (including for locally important threatened and endangered species) (Wang 2007). These people believe that small-scale irrigated agriculture is an essential component of their culture and heritage, is the foundation of their identity as land-based people, results in health benefits, and is something to which they have an ancestral connection.

Like many other arid-region communities, traditional agricultural water users in New Mexico's South Valley are under pressure to increase their water use efficiency and reduce their total water consumption, and thus release water to other industries and users (including the environment). The region's agriculture involves a many centuries-old complex integration of fruit, vegetable, forage, cattle, horse, and poultry enterprises. This integrated agricultural system is the product of thousands of years of Native American heritage, Spanish and Mexican influences over the last several hundred years, and relatively recent Anglo

settlement and agricultural activity (Friends of Albuquerque 2006). Many of these small farms are believed to be home to rare, ancient cultivars that represent little-known, poorly documented plant genetic resources.

This project will evaluate and quantify the parameters which affect the hydrologic, agronomic, environmental, economic, and socio-cultural impacts of the complex, threatened South Valley agricultural community. The South Valley is characterized by peri-urban, small-scale agriculture, is located in a rapidly growing southwestern U.S. metropolitan area that is experiencing increasing competition for scarce water and land resources. The forces for change, competition for natural resources (and related regulatory and policy shifts), and the economic and population transitions occurring in the South Valley also are currently underway in hundreds of communities throughout the United States, thus, the methodologies and results of this project will have impacts beyond the study region.

Presently there is no accounting of crop water use, farm management practices, irrigation efficiency, and hydrologic impacts of agriculture in the Middle Rio Grande Basin, part of which comprises the South Valley. In addition there is no comprehensive information available regarding the economic and environmental impacts of small-scale agricultural production and agricultural water use in this region. No data have been developed for this region on relationships between crop mixes, water application, water management practices, surface and ground water interactions, groundwater contamination by zoonotic pathogens or nutrients. Furthermore, no comprehensive study of agricultural structure, agricultural incomes, agricultural households and their attitudes, motivations and objectives, and these households' use of and relationship to natural resources (e.g., land and water) have been conducted in the region.

The study area for this project has experienced intense and rapid urbanization and population growth in recent years. The growth and urbanization process is a two-edged sword. Farms are sold for development, but urban residents have the potential to provide buyers for locally-produced farm products. Furthermore, new residents often move into areas like the South Valley due to the agricultural environment. However, the presence and pressure of urban growth threatens the existence of peri-urban agriculture, agriculture's use of natural resources, and quality of the life factors arising from the agricultural setting.

The objectives of this proposal are two-fold. We will identify and quantify scientific parameters which affect productivity in peri-urban, small-scale, multicultural, traditional agriculture; and use this information to develop technologies and guidelines which will enhance the profitability and sustainability of small-scale farms. This project will use participatory action research methods (Alvarez and Emery 2000; Coghlan 1994) to engage local farmers in the process of planning for, identifying, and validating best management practices, as well as document the rationale, behavior, attitudes and motivations of farm households in the South Valley of New Mexico's Middle Rio Grande Basin. Research from this proposal will help to strengthen and sustain small farms in New Mexico by providing technical support for diversifying production, improving efficient input use, capturing a greater proportion of post-farm values, while enhancing and protecting the cultural, social, environmental and other values which arise from small-scale, traditional agriculture. A multi-disciplinary team of

research scientists and Cooperative Extension professionals will work together to develop a program of basic and applied research and extension programs that will address the constraints facing sustainable farming in the South Valley.

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Supporting Small Farm Viability through Improved Local Markets and Livestock Processing Opportunities

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Introduction

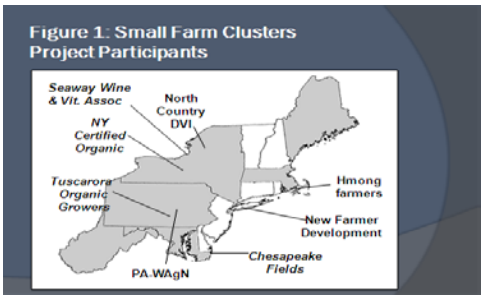
Recent research indicates that agri-food supply chains are evolving from transaction-based networks to alliance-based networks. This shift has evoked great interest in social network analysis as a means to understand and document agri-food networks. At the core of these supply chains are social networks among farmers, farmers' organizations, agribusinesses, and research and education institutions. These networks are associated with the formation of agricultural clusters and can provide numerous economic and social benefits to participants, such as increased farm productivity, profitability, access to markets, and regional agricultural viability. In the economics literature, clusters are geographic concentrations of firms or businesses that compete with each other in similar markets, cooperate to enhance technical skills and market access, share common inputs (such as labor with specific skills), and include many components of the value chain. Clusters arise as a result of agglomeration economies that take advantage of natural or other local resources. Geographic proximity decreases transactions costs and increases the likelihood that managers know about each others' businesses, have developed at least

preliminary relationships to facilitate exchange, and are collectively able to identify and pursue collaborative opportunities.

Hypotheses and Data

As part of an ongoing research and extension project, we examine how social ties within agricultural clusters promote cluster formation and how such ties serve as a foundation of support to its members. We characterize social relationships that support cluster development as networks and have formulated the following research questions and working hypotheses:

- RQ1: How do network characteristics influence cluster impacts at multiple scales?
  - Hypothesis1-a: Higher density of networks will lead to greater benefits to the individual participant.
  - Hypothesis 1-b: Decentralized networks lead to more benefits because they allow for more information to flow into the network and to be more widely distributed.
- RQ2: How does an individual's position within the network affect his or her perceived benefits associated with participation in the cluster?
  - Hypothesis 2: More centrally-placed individuals will derive more benefits from participation. In the network analysis, we examine in detail the impact of network relationships on outcomes of cluster participation, including innovation, productivity, and knowledge creation. Data are drawn from surveys of cluster members across eight groups within the Northeast United States (figure 1; here we report results only for four clusters).



Responses from survey questions about participants' social exchanges and connections within clusters are used to create network maps and compute statistics to analyze characteristics of the entire network as well as individual participants. Findings from this project advance current research on how social network ties foster agricultural cluster formation and provide educational resources to cluster members and communities interested in promoting cluster development. More specifically, we collected data that permit an evaluation of cluster effectiveness, an evaluation and characterization of cluster leadership as well as participation levels of the individual within the cluster, cluster dynamics over time, and network participation of the individual with other members of the cluster. In addition, farmers were queried about their perceived benefits associated with cluster participation for their farm business and personally and for the wider region or community. They were also asked whether their expectations were met, about changes in knowledge and farm practices, and about their basic demographic characteristics.

For the farmers only, name generators were used to elicit various social and economic 'transactions.' These included the questions, "Who do you rely on for advice?" "Who do you rely on for social support?" "Who do you buy from, share, or sell farm products to?" "Who helps you think creatively about your farm?" and "Who

provides leadership for the cluster?" Respondents were provided with a roster of cluster participants' names and had the option to add names. Data were collected only on the presence or absence of relations (i.e., they were not scaled or weighted according to intensity or frequency).

Perceived Benefits

Perceived impacts on profitability vary by cluster: 46 percent of Seaway Wine and Vitaculture Association (SWVA); 74 percent of Chesapeake Fields (CF); 92 percent of New York Certified Organic (NYCO); and 97 percent of Tuscarora Organic Growers (TOG) participants agreed that participating in the cluster makes their farm business more profitable. We created multi-item summated rating scales of personal benefits and community benefits.

Farmer-level benefits include the following items. Participation in the cluster

- provides me somewhere to turn when I need help or support;
- gives me access to cutting edge ideas and information;
- gives me a comfortable place to share my ideas and ask questions;
- makes me a more innovative farmer;
- gives me a greater sense of control over markets;
- improves my ability to protect the natural resources on and off my farm; and
- makes me more aware of agricultural policies and their impact on my farm (Reliability: std alpha = .898).

Community and regional benefits include

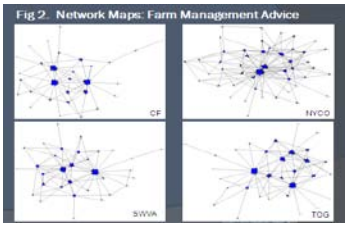
- strengthening community support;
- improving communication and understanding within industry;
- improving the profitability of farming;
- increasing innovation in agriculture;
- sustaining jobs and livelihoods;
- strengthening institutional support;
- improving local or state policies;
- increasing consumer demand;
- increasing marketing options; and
- improving stewardship of natural resources and increasing the number of agriculturally-related businesses (reliability: std alpha = .877).

All items were measured using 5-point Likert scales, from strongly disagree to strongly agree. Means for these two scales for each cluster are reported in Table 1.

Network Characteristics and Perceived Benefits

Figure 2 shows the network maps for four of our clusters (CF, NYCO, SWVA, and TOG) for one specific question: "Who do you to go to for advice on farm management issues?" In the CF network, three almost evenly-valued actors emerge; in NYCO, one dominant individual emerges, followed closely by another. In all four of these networks, there are primary and secondary layers of influential actors.

Table 1 summarizes the networks more formally, using common network statistics and measures. For example, the density of relations among members ranges from 6.8 percent for NYCO to 8.9 percent for TOG. This captures how many connections there are within the network out of the total that could potentially be formed (i.e., if everyone were connected to everyone else, this measure would be 100 percent). The centralization measures range from a low of 13.2 percent for NYCO to 41.4 percent for SWVA (on out- and in-degrees, respectively). This measure captures how centralized a network is, by indicating the degree to which one or a few individuals have most of the sending (out)



and receiving (in) ties. Higher percentages indicate fewer individuals with more ties and, hence, more influence. The in-degree centralization measures are higher than the out-centralization for all clusters except for TOG. Last, the betweeness centralization ranges from 9.4 percent in NYCO to 21.9 percent in TOG. This measure captures the extent to which an actor inserts him or herself between two or more other individuals, thereby controlling the information that flows between them. Higher values indicate fewer individuals lying on the paths of more dyads, indicating greater degree of power within the network.

Table 1: Selected Network Results

	CF	TOG	SWVA	NYCO
Density	7.7%	8.9%	8.6%	6.8%
Out-degree centralization	31.3%	37.5%	24.5%	13.2%
In-degree centralization	38.4%	34.1%	41.1%	18.7%
Betweenness centralization	14.3%	21.9%	11.9%	9.4%
Personal benefits mean score	23.2	24.6	25.1	27.7
Community benefits mean score	40.3	38.4	38.7	44.9

The correlations between the network measures and the benefits mean scores are generally negative in that a higher number of ties or density is associated with lower reported benefits. For the degree centralization, the network with few people with most of ties also reported lower reported benefits. In terms of the betweenness centralization, the network with few people between other relationships likewise reported lower benefits, as measured here. In other words, higher density and centralization of the network were related to lower perceived personal and community benefits. Perhaps not surprisingly, the individual farmer's perception of the benefits arising from cluster participation varies by cluster and depends significantly on the focus or goal of the collaboration in the cluster. It also varies according to the individual respondent's perception of the effectiveness of the cluster process and the extent of participation by the respondent in the cluster. For example, such participation may range from passive attendance at meetings and reading of newsletters to more active leadership roles within the cluster. Clearly, the potential for reverse causation arises here, in that greater participation leads to greater perceived benefits and greater perceived benefits lead to more participation. We will sort this out in future regression analyses.

Our social network analysis confirms that the number of sending ties (or relationships with others) that a farmer has affects his or her perception of increased personal and business benefits associated with being in the cluster. This is explained by the fact that more sending ties translates into a larger number of people to turn to, but it may also indicate a greater willingness to reach out to others.

Remarkably, in the clusters we surveyed here, the role of 'advice brokers' is relatively small; the reason for this may be that the sizes of these clusters are small enough to allow for direct contact and relationships among individuals, therefore reducing the need for brokers. In this context, one of the remaining questions is, "What is the role of this particular cluster network in relation to other networks that farmers use to obtain farming information?"

Finally, our surveys also have identified a significant leadership challenge, including leadership transitions and succession planning. Most clusters started because of the efforts of organizational champions; this is evidenced by the remaining influence of a small number of people in each cluster. However, for long-term survival, these

champions will need to transition leadership within a structure where personal benefits are gained from a diffuse, decentralized set of relations. Identifying and training this next generation of leaders will challenge the organizational development and leadership skills of participants, and open an opportunity for education and technical assistance.

Reconnecting the Middle: Building the Organizational and Physical Infrastructure for a Local and Regional Food System

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The intent of the Local Food Systems Coordination Project is to take a comprehensive approach to building the capacity of local food systems by linking the food production and processing of the region to community development, economic opportunity, and environmental sustainability. In order to accomplish this broad intent, coordination must occur among producer/distribution/retail concerns; education for producers must be developed and disseminated on both season extension and environmental sustainability; and consumer awareness of the availability and benefits of locally grown food must be enhanced. These long-term projects require specific tasks and measurement along the way, so the utilization of a comprehensive logic model will track all of these components with specific action items tied to measurable impact outcomes.

The University of Illinois (U of I) Extension Knox County Unit has developed a logic model approach to local food systems that is comprehensive in nature, and best designed to be implemented on a regional basis. U of I Extension has both the multiple disciplines required to accomplish this program and the presence throughout the region to coordinate activities. In addition, U of I Extension has a long history of working within the food production aspect of food systems and can easily extend the outreach in food systems literacy to include economic development in consumerism, production, processing, distribution, and retail businesses.

The approach for the coordination project stems from the five measurable outcomes taken from the Knox County local food systems logic model. The logic model also provides the framework for the planning of the coordination efforts. This project is viewed as a long-term investment of time and resources and spans a 5–10 year period. The development of partnerships between extension teams, counties, university departments, producer groups, retailers, and stakeholders are essential to the development of a local food system. To be able to coordinate these interest groups effectively, resources and a central coordinating body of individuals are needed to prevent a piecemeal approach to the development of a local food system.

The project also includes the utilization of existing tools such as MarketMaker(c), the U of I St. Charles Research Facility resources, and established programs within U of I Extension, such as the Small Farms Program. Beyond utilization of existing resources, the project design includes the development of new educational opportunities such as workshops, seminars, and miscellaneous education opportunities to provide relevant information to educate and assist communities towards a

successful and sustainable local food system.

Outputs from these efforts include the development of a Local Pride local food marketing campaign, of which local retailers use specially designed "product tags" to signify that a product in their store is a local product. In addition, a series of workshops focusing on home food preservation has been developed and received enthusiastically from clientele. The latest efforts regarding programming involve the development of a local food production "incubator," in which U of I Extension, local county government, and USDA's Farm Service Agency partner to provide a learning laboratory for those interested in becoming local food producers. This project is in its development stage.

Lastly, valuable lessons have been learned from this undertaking and include the following:

- Multiple stakeholders must be brought together to develop such an effort. The more perspective that is provided, the more likely success will ensue.
- A considerable amount of time must be devoted to the development of a consensus definition of "local." In addition, the rationale for the definition should be readily understood by all partners.
- A local food initiative must have positive outcomes for all Demographics, including limited resource audiences. The effort cannot focus solely on economic development outcomes.

Is There Support for Value-Added Agriculture in Alabama? Evidence from Statewide Surveys

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INTRODUCTION

As agricultural producers find it more difficult to make ends meet with diminishing profit margins, more emphasis is being placed on adding value to farm products. In so doing, farmers can capture a greater part of the downstream value dominated by processing and marketing sectors (Coltrain, Barton and Boland, 2000; Cowan, 2002). This emerging shift from commodity agriculture to product agriculture, that is, from quantity to quality, is likely to have important effects in many rural areas in Alabama, especially where large-scale, industrial agriculture remains a significant part of the state's economy, but, potentially, where smaller-scale production also predominates (Barkema and Drabenstott, 1996). For agriculture value-added initiatives to succeed, however, there must be a cluster of active leaders from a diverse cross-section of the agriculture community, who are knowledgeable about value-added initiatives and a broad range of community issues (Green 2002), and leaders from non-agriculture sectors who are knowledgeable about agriculture value-added and supportive of its needs. To determine whether this cluster of local leaders exists in Alabama, this study examines local economic development leaders' knowledge of agriculture value-added initiatives, their involvement, and willingness to attract and support these initiatives.

Defining Economic Development Leaders

Before discussing the sample and data collection methods, we offer a working definition of economic development leaders. First, in the literature, the term "economic development" refers to an expansion of the economic base through efficient allocation and use of available resources (Woods, Frye and Ralstin, 1999). Such efficiency allocation of resources that leads to the expansion of the economic base requires leadership at all levels, and individuals who provide such leadership are what we broadly categorize as economic development leaders. For a conceptual definition of economic development leaders, we follow Loveridge's taxonomy, which includes at least three different dimensions to classifying the local economic developer (see Loveridge, 2000, for a detailed discussion). Briefly, in his first dimension, Loveridge contends that the organization for which an individual works influences what the individual does and why they do what they do. The second and third dimensions have to do with characteristics of the economic developer's service region. Is the region already well developed or undeveloped? Is the region growing, stagnant, or declining? (Loveridge, 2000). To this end, our conceptual definition of local economic development leaders follows Loveridge's first dimension, which includes city mayors, representatives of economic development boards, planning commissions, utilities and chambers of commerce, directors and staff members from local economic development associations, and other individuals involved in economic growth in the state.

Sample and Data Collection

Data on factors that influence local economic development leaders' participation and support for agriculture value-added initiatives in Alabama were collected using a Web-based questionnaire. The questionnaire was developed on the Internet at Survey Monkey Inc., a private corporation based in Portland, OR, that specializes in high-end Internet surveys. A non-probability (convenient) sample was used, in which responses were sought from 367 local economic development leaders in Alabama that have easily accessible email addresses and Web sites. A reliable list of email addresses was drawn from the Economic Development Association of Alabama (EDAA, 2008)—a network of Alabama economic development professionals with over 500 members, including Alabama city mayors, economic development boards, planning commissions, chambers of commerce representatives, directors and staff members from local economic development associations, and other individuals involved in economic growth in the state. Prior to data collection, a pretest of the survey instrument was conducted on a small sample in order to evaluate the questionnaire items, focusing on the clarity of the questions and the ease with which questions could be answered using the Internet.

Data were collected in fall 2008 for a period of 3 weeks. The questionnaire was distributed through email with (1) a message of greetings, (2) an introductory massage and procedures for answering the questions, (3) a note assuring confidentiality, (4) a "thank you" note on the anticipated responses, and (5) a hyperlink to the Web-based questionnaire. Out of the 376 email addresses collected from EDAA, 41 were returned as bad addresses. A total of 335 were sent successfully the first time. Respondents were removed each week from the mailing list and weekly follow-up reminders were sent to those that did not respond by the end of each week. Of the 376 local economic development leaders contacted, 154 answered the survey, for a 41 percent response rate.

Survey Responses

To enhance the discussion, local leaders' responses to the question whether they are involved in bringing agricultural value-added enterprises to their regions are cross-tabulated with their responses to the rest of the questions in the survey. Thus, the discussion highlights the actual responses for each question and cross tabulation results of each question with the key question: "Have you been involved in bringing agricultural value-added enterprises to your region in the past two years?"

First, more than half of the local economic development leaders (52 percent) who answered the questionnaire were from metropolitan counties, particularly Jefferson, Montgomery, and Madison Counties. The proportion (48 percent) of local economic development leaders residing in non-metropolitan counties were over represented by Covington, Pike, and Elmore Counties. Cross-tabulation analysis of local leaders' involvement in bringing value-added agricultural enterprises and county type (metro versus non-metro) reveals that 24 out of 74 local leaders who are from non-metropolitan counties were involved in bringing agricultural value-added enterprises to their region in the past 2 years as opposed to 13 out of 80 local leaders from metropolitan counties. The observation that local economic development leaders from non-metropolitan counties are more involved in bringing value-added enterprises to their regions than leaders from metropolitan counties is encouraging, especially if value-added initiatives are to be considered as a tool for rural development in Alabama.

As for gender, the data shows that the majority of the respondents (82 percent) were male, with female accounting for only 12 percent of the sample. Cross-tabulation of gender with the variable measuring involvement in bringing value-added enterprises in the region reveals that 11 out of 28 respondents who are female have participated in attracting value-added enterprises, while 26 out of 126 respondents who are male have participated in bringing value-added enterprises to their regions. As a proportion, female local economic development leaders are more involved in bringing value-added enterprises to their regions than their male counterparts.

The average age of the respondent was 50 years, with responses ranging from 28–86 years of age. Specifically, 4 percent of the respondents were under the age of 30, and 38 percent were 31–49 years old, while 58 percent of the respondents were above the age of 50. Cross-tabulation of age with the variable measuring involvement in bringing value-added enterprises in the region reveals that 1 out of 7 respondents who were below the age of 30 had participated in attracting value-added enterprises, while 16 out of 63 respondents aged 30–50 and 20 out of 84 respondents who were above 50 years, respectively, were involved in bringing value-added enterprises to their regions. Thus, from this sample, it appears that involvement with value-added initiatives increases with age, which also might be a reflection of experience gained from long years of service.

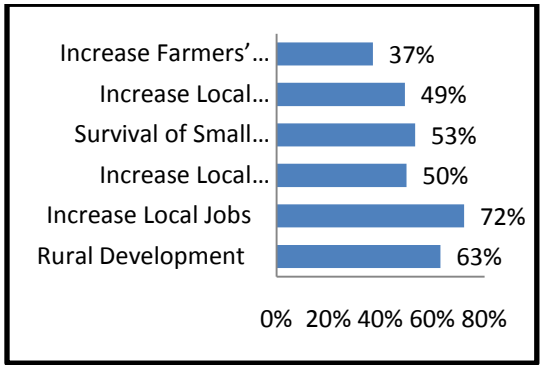
The levels of education attained by local leaders who responded to the survey reveals that 9 percent of the respondents had trade or technical training but no college degree, 56 percent were college graduates (bachelor's degree), while 35 percent had graduate degrees (master's degree or other). Cross-tabulation of levels of education with the variable measuring involvement in bringing value-added enterprises in the region reveals that all 15 respondents who did not have a college degree had not participated in attracting value-added enterprises, while 30 out of 87

respondents with a college degree and 7 out of 52 respondents with graduate degrees, respectively, participated in bringing value-added enterprises to their regions.

When asked if they were familiar with any value-added agricultural enterprise in their regions, 55 percent of the respondents were familiar with these enterprises. Cross-tabulation results for this variable reveals that 37 out of 84 who were familiar with value-added enterprises in their regions also participated in attracting these enterprises. When asked if they considered value-added agricultural enterprises to be an important part of their community's economic future, the majority of the respondents (74 percent) answered yes. Cross tabulation of the community economic future with the variable measuring involvement in bringing value-added enterprises in the region reveals that 37 out of 113 respondents who considered value-added agricultural enterprises to be important for the economic future of their regions were involved in bringing value added enterprises to their regions.

The last question asked respondents to indicate the key concerns that influence their decision to support value-added initiatives (Figure 1). The majority of the respondents (72 percent) indicated the potential to increase local jobs, followed by rural development opportunities (63 percent), survival of small farms (53 percent) increasing local incomes (50 percent), increasing local business (49 percent), and lastly, increasing farmers' profit margin (37 percent).

Figure 1: Factors that Influence Alabama Local Leaders' Interest in Value-Added Agriculture



Note: the percentages do not add up to 100 because respondents had the option to choose more than one concern.
Cross-tabulation of respondents' concerns with the variable measuring involvement in bringing value-added enterprises in the region reveals that 31 out of 111 respondents who were concerned about increasing local jobs participated in attracting value-added enterprises as opposed to 27 out of 97, 22 out of 82, 29 out of 77, 16 out of 76, and 20 out of 57 who were concerned about rural development, survival of small farms, increase in local incomes, increase in local businesses, and increase in farmers' profits, respectively.

Key Observations

- The observation that local economic development leaders from non-metropolitan counties are more involved in bringing value-added enterprises to their regions than leaders from metropolitan counties is encouraging, especially if value-added initiatives are to be considered as a tool for rural development in Alabama.
- As a proportion, female local economic development leaders are more involved in bringing value-added enterprises to their regions than their male counterparts.

- It appears that involvement with value-added initiatives increases with age, which also might be a reflection of experience gained from long years of service.

Conclusion

The objective of this paper was to examine local economic development leaders' involvement with agriculture value-added initiatives and their willingness to attract and support these initiatives. The analysis was based on a Web-based questionnaire that was sent to 367 local leaders, of whom 154 responded. The profile of the local leaders who responded revealed that the average respondent surveyed was male, 50 years old, has a college degree, and represented a metropolitan region. In terms of the key concerns that influence their support for value-added initiatives, bringing more jobs to the local areas was dominant followed by rural development. Notably, the majority of local leaders were concerned about the upkeep of the area as a whole instead of individual farmers benefiting from these value-adding initiatives. Cross-tabulation results of the variable measuring local leaders' involvement in attracting value-added initiatives with other key questions revealed that female leaders with a college education who are 50 years or older participated more in bringing value-added enterprises to their regions than their counterparts.

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SESSION 2D
Community Food: Where the Farm Meets the Market

"Are We Organic Yet?" NOP Compliance for Noncertified Organic Growers

George Kuepper, Kerr Center for Sustainable Agriculture

Prior to joining the Kerr Center for Sustainable Agriculture, I spent close to 11

years working for the National Center for Appropriate Technology, which operates the ATTRA (National Sustainable Agriculture Information Service) Project. For much of that time, I was responsible for developing educational materials about organic compliance, certification, and regulation. Most of this was done with funding provided by the National Organic Program.

In 2005, several of us were in Little Rock, AR, doing a special training of the University of Arkansas Extension educators. I began a routine presentation on organic regulation as it applies to certified farmers. Things went fairly well up to the point where my presentation was "hijacked" by educators who wanted to focus on another group of organic farmers—those who are not certified. Non-certified organic growers, it seems, had become a controversial issue at many of the farmer's markets in the state. I subsequently learned that the problem was not confined to Arkansas, and not just to farmer's markets.

The circumstances are these: The National Organic Standard (i.e., USDA's organic regulation) requires that all farms selling their produce as organic to be certified by an accredited agent. However, §205.101(a) provides an exemption for anyone selling less than $5,000 of organic product annually. Many small market growers—particularly market gardeners—take appropriate advantage of this exemption. They call themselves and their wares "organic," but forego the costs and process of certification.

These growers—non-certified organic growers—are still expected to comply with all the relevant regulations. The organic standard requires certain practices and it also prohibits many conventional agricultural inputs, particularly synthetic pesticides, standard chemical fertilizers, sewage sludge, and genetically engineered crops. However, because they are not subject to the same review and inspection process undergone by certified growers, exempt growers do not get the same level of guidance that ensure that they're really compliant...that they're really "organic." This situation puts consumers at risk of buying misrepresented goods. No matter your opinion of the quality of organic food, if a buyer is willing to pay more for products grown to a particular standard, they should not be defrauded.

It's also an issue for other growers. Those who do comply with the regulations, especially those that undertake certification, become irate when forced to compete with growers who misrepresent themselves, whether through ignorance or greed.

Solutions to this problem don't promise to be simple. It is unlikely that there will be any changes in the National Organic Standard. The less-than-$5,000 exemption is not merely part of the regulation, but is required by §6505(d) of the Organic Food Production Act of 1990—the legislation that originally mandated creation of the National Organic Standard.

At Kerr Center, we've tried to contribute to the solution by developing an assessment tool for exempt growers that we've entitled Small Scale Organics: A Guidebook for the Non-certified Organic Grower. What we've tried to do with this tool is strip away those portions of the organic regulations that do not apply to the small exempt grower. We've then re-organized and simplified what remains. We've tried to get to the big issues, particularly those that concern the buyers of organic food.

Salient features of the Small Scale Organics tool include the following:

1. Background on Organic Legislation and Regulation. This includes details on

how to recognize a fully certified organic operation.

2. Production Requirements. There are several things certified and exempt organic growers must address to ensure compliance with the national standard, as well as meet the expectations of their customers. We broke this down into seven main topics:
    a. Land or Site Requirements. This is mainly about the requirement that a production site be free of prohibited inputs for the three preceding years.
    b. Growing Practices. Organic growing is centered on building a healthy, fertile soil, and supporting biodiversity. This is accomplished using strategies and practices modeled from natural systems. Unfortunately, the popular focus on excluding synthetic pesticides and fertilizers in organic growing often disregards these fundamental principles. As a result, there is less emphasis on the basic practices that allow organic growers to produce excellent food without conventional inputs. This section outlines those basic growing practices.
    c. Fertilizers and Soil Amendments. Lists of prohibited fertilizers are provided. Several products incorrectly believed to be organically acceptable are highlighted. There are instructions on how to read a fertilizer label and recognize allowed products.
    d. Manure and Compost. Limitations on the use of manure and manure-based compost are related mostly to food safety. We explain this and go on to discuss the status of commercial bagged manure products and compost tea.
    e. Pest Control Agents. Lists of prohibited pesticides—including their chemical and trade names—are provided. There are a number of natural pesticides that have been ruled too toxic for organic use. These are discussed as well. There are instructions on how to read and interpret a pesticide label, and recognize allowed products.
    f. Seeds and Planting Stock. Basically, fungicide- or insecticide-treated seeds are prohibited, as are genetically-engineered varieties.
    g. Preventing Contamination. We address issues of spray drift, contaminated containers, treated wood, and related matters.

1. Marketing Issues. Exempt growers may use the word organic, but they may not display the USDA organic seal.
2. Special Products. This includes transplants grown for sale, wild harvested foods, sprouts, etc. There are some things growers must know if they plan to market these as organic.
3. Paperwork. Paperwork is sometimes considered the bane of certified organic production. Many growers cite it as the reason they choose not to be certified. There are, basically, two stages of paperwork facing the organic grower. First is the Organic System Plan (OSP)—the written plan that explains what the grower will do to comply with the National Organic Standard. (Certified growers complete an OSP as part of the application process.) The second stage involves the records required to document that the grower's OSP is being followed. Exempt growers are also supposed to have a written OSP and to keep certain records. However, they need not be near as extensive as those required for certified production. Small Scale Organics features both a blank OSP document and update forms stripped of extraneous details information requirements. Check boxes

are used as much as possible. The record keeping forms are also minimalist. There are really only a few things that exempt growers really need to track.

We tried to design *Small Scale Organics* for broad use.

- We see it as usable by small growers, themselves, as a self-assessment tool.
- Extension educators can use it as an educational tool.
- Market managers and produce buyers can use it by requiring sellers to complete and sign the OSP document. It is structured as a declaration and could be modified further into a legal affidavit, if desired. This does not preclude fraud, of course, but most of us are reluctant to sign our names to statements that are not true.

Copies of Small Scale Organics are available on the Kerr Center Web site at: http://www.kerrcenter.com/publications/small-scale-organics.pdf. Print copies are available by writing or calling the Kerr Center.

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Farmers' Markets' Contributions to Sustainable Food and Farming Systems: Lessons from Michigan

David S. Conner, Michigan State University
Susan B. Smalley,Michigan State University

Overview

This presentation discusses our "Top 10" points about farmers markets' benefits, trends, evaluation tools, customer perspectives, and ways to encourage greater patronage, based on our Michigan research.

1. **Farmers markets bring many potential benefits to farmers and their communities**
   - Most farms in Michigan and the United States had negative net income in 2007. Selling directly to consumers through farmers markets (FM), receiving 100 percent of the consumers' food dollars and capitalizing on growing demand for locally grown foods can enhance profitability for small farms.
   - FMs serve as important business incubators and often bring customers to downtown areas where they patronize other local businesses.
   - FMs placed in "food deserts" can and do improve public access to healthy foods, thereby bringing public health benefits.

2. **Farmers markets are an increasingly important part of Michigan's food and agricultural system and more groups and communities are working to foster them.**
   - The number of Michigan farmers markets increased from 90 markets in 2001 to 150 in 2005, and again to 250 in 2009.
   - The statewide, membership-based Michigan Farmers Market Association (MIFMA) was founded in 2005 to advance FMs and create a thriving marketplace for local food and farm products.
   - In 2006, the Michigan Food Policy Council included in its report to Governor Jennifer Granholm a recommendation to improve access to fresh and healthy foods through direct markets, guided in part by research on opportunities and

obstacles to greater participation in farmers markets.

3. **Rapid Market Assessments have helped many markets understand their customers**
   - Few farmers markets in Michigan collect information about customer numbers, market sales, and customer preferences.
   - Michigan State University (MSU) and MIFMA have undertaken Rapid Market Assessments, a market survey tool that provides information about market sales and patron perspectives, to increase understanding of the state's FMs and to help individual markets.
   - Extended market hours do not necessarily increase customers or sales.
   - Sales are greatly influenced by product assortment and community demographics.
   - FM shoppers tend to be extremely loyal.
   - FM shoppers value fresh foods and supporting local farmers.

4. **Using hoop houses (aka, high tunnels or passive solar greenhouses) for season extension can provide fresh products earlier and later in the season, enabling markets to operate over longer time periods.**
   - Farmers throughout Michigan are harvesting and selling fresh produce year 'round by using hoop houses and other season extension techniques.
   - MSU research suggests that with good management, hoop houses can be used profitably even by novice farmers.
   - Outreach efforts have trained almost 2,000 current and prospective farmers in the construction and use of hoop houses.

5. **Focus groups with people from groups commonly under-represented among FM patrons (lower-income people, younger adults, people of color) found that perceived lack of high quality produce, convenience, and welcoming atmosphere are key *obstacles to increased patronage.***
   - *Inadequate supply of fresh, high quality produce (e.g., for late arrivals) discourages repeat visits.*
   - Many felt FMs have poor signage and do not adequately advertise the market.
   - Latinos often feel disrespected and mistrusted at FMs.

6. **A 2008 representative statewide telephone survey of Michigan residents found high current FM patronage and identified drivers of market attendance and expenditure.**
   - More than half reported attending a FM in the past year.
   - The average respondent reported visiting a farmers' market four times in the previous month and reportedly spent $81 during their most recent visit (although we suspect these numbers, especially spending, are greatly inflated).
   - Food quality, avoiding food borne illness, and ability to support local farmers were the most important factors determining the decision to shop at an FM.
   - Other factors that were found to be significant in affecting market attendance and/or expenditure include good value and a welcoming atmosphere. Those placing a high value on convenience had lower participation and expenditures.

7. **Michigan residents support extending the season and range of products available at FMs. In research conducted at three Michigan FMs in 2007, we found that:**
   - 69 percent of shoppers indicated willingness to attend FMs in January–February, while 91 percent would be willing to attend in November–December.
   - 91 percent stated they would pay a premium for "locally grown" on most produce items they buy.
   - Customers would shop at farmers market all year 'round, barring hazardous driving conditions, if fresh local produce were available.

8. **Improve marketing practices to increase FM patronage.**
   - Use multiple communication channels to let people know markets' location and hours.
   - Media and communication channels need to match the targeted market segments and may include email lists, yard signs, Web sites, fliers, and non-English radio stations.
   - Clear labeling policies help customers find locally grown products; statewide promotion efforts like Select Michigan can be enhanced and expanded.
   - Provide and promote multiple payment options: cash, credit, debit, electronic benefit transfer (EBT), Farmers Market Nutrition Program (FMNP) coupons.

9. **Increase the number and diversity of farmer-vendors.**
   - In many Michigan FMs, too few vendors are seen as a major constraint.
   - Recruit vendors who resemble the population in diverse neighborhoods to create a more welcoming atmosphere and greater market variety.
   - Beginning farmer and rancher programs are needed.
   - Certified organic produce and farmers markets are mutually beneficial.

10. **Roles for agricultural professionals:**
    - Provide training and technical assistance for vendors and managers in marketing, food safety and handling, business planning, conducting research, accepting EBT and credit/debit card payments.
    - Develop new farmers with management, production and marketing skills appropriate for FMs.
    - Facilitate community groups to establish and enhance markets, including sponsorship by and coordination with civic organizations to draw customers to downtown areas.
    - Partner with or start a state FM association.

For more information
www.mottgroup.msu.edu
www.farmersmarkets.msu.edu
www.msuorganicfarm.org

It's the Realtionship! Building Relationships in Community Food Systems

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Introduction:

The production and marketing of "local" foods has reached a critical mass in the last few years. More and more people are searching out food that is tasty, healthy, and that supports their local communities. Farmers have worked hard to build these markets, and more and more farmers are taking advantages of the opportunities they provide. Selling into the alternative food system – one that produces differentiated foods that are healthy for people and the environment, fair to workers and farmers, and safe for everyone – is one of the only options left for farmers who are looking to maintain independent, smaller scale farms. Consider the opportunities laid out in Table 2. There are a number of strengths of alternative food systems for these farmers, if they choose to position themselves where those strengths are rather than participating in the dominant global food system. The latter does a good job of providing a great deal of cheap food – some like Michael Pollan would argue it is unhealthy food – for the mainstream market. However, it relies on the ability to raise capital cheaply and effectively, and on a simple vision that is based only on the bottom line. Because of its very nature, it becomes exclusionary to smaller scale farmers who cannot achieve the scale necessary to participate in global supply chains.

Alternative food systems provide opportunities for local farmers because more localized, smaller operations can respond to changes in demand quickly, they can provide differentiated types of food more easily (labels like humane, natural, family-farm raised etc.), and they are making strides in providing food that is good to environment, farmers, workers and communities. But the most important strength is that farmers participating in these new food systems connect to consumers through personalized relationships. Those personalized, sustainable relationships are the authentic relationships that eaters are searching for, and are the strongest bond an operation can have with any customer. These are the sorts of relationships that large retailers can only hope for, often spending hundreds of thousands of dollars on developing brand loyalty, store experience, and customer identities simply to approach the types of authentic relationships that are created in farmers' markets and CSAs. The question is – how do we develop these relationships and expand them outside the direct-marketing relationship?

Table 1: Positions of Strength and Weakness for Alternative Food Systems		
	Dominant Global Food System	Alternative Food Systems (Healthy, Clean and Fair)
Mass produce food on a scale to feed the mainstream	Strength	Weakness
Easy and cheap access to capital	Strength	Weakness
Long-range vision	Strength	Potential Weakness
Flexibility and response speed	Weakness	Strength
Connect to consumers through personalized relationships	Weakness	Strength
Providing organic, natural, humane, cage-free food	Potential Weakness	Strength
Providing fair and sustainable food	Weakness	Strength

A Potential Model

The Kansas City Food Circle developed a new model of thinking about the food system in the early 1990s. Instead of a disconnected, long distance relationship between farmer and eater mediated only by large transnational processors, traders and supermarkets, the folks in Kansas City saw new relationships emerging, ones that were as direct as possible between farmers and eaters. It is important for farmers and others to understand why we use the term eater here. Eating makes this a physical relationship – eating is physiological because the kind of food you eat impacts how healthy you are. Eating is also a social relationship – it is done communally (most of the time anyway) with friends, family, business associates, and for entertaining. And eating is cultural – what we eat and how we eat is culturally defined by what is acceptable to eat and what is not acceptable. If eating is about all of that, then we must use the term eaters to indicate we are concentrating on all three aspects of the relationship. It absolutely cannot be reduced to the term "consumers" – that word implies an idea of getting as much as possible for as low of price as possible and leaves everything else out. Thus, making the relationship between those who grow the food (farmers) and those who eat it (eaters) as direct as possible was a truly radical way of thinking about things 15 years ago. This is an up-close-and-personal relationship – it truly is face-to-face farming and eating.

But as community food systems have matured, the ideas about who is involved in those direct relationships have changed. How do we get the same sorts of relationships as we eat out, buy food at the grocery store, or eat in the school cafeteria? The answer is that we have to involve the chefs, grocers, processors, and distributors who can maintain the integrity of relationships as we add more complexity. Because we have to know how to grow, harvest, store, distribute, sell, and cook that food in new ways, we need educators and nutritionists and numerous others. All of these folks become involved in a web of

relationships that is located in the local community and rooted in place. The number of relationships involved is complex and multi-layered, but at their heart, these relationships are based on integrity and trust. This type of food system is really all about the relationships between people, within their community and within their ecosystems.

What the Kansas City Food Circle model shows is that the authentic relationship that the direct farmer to eater relationship is all about can be expanded and layered. For instance, it is knowing who produced your food even if you eat in a school cafeteria; and beyond that to understand the value that farmer brings to the community in terms of diversity of businesses, the landscape that surrounds the community, the knowledge about food and food production that is held by the community. This is no longer about price and convenience – although those are still important. This is about citizenship, about pleasure (having fun), about achieving something together. In other words, these are the experiences of authentic relationships.

Implementing the Model

So we understand the model, but there are practical questions: 1) How do we build these relationships? 2) How do we maintain them? and most of all 3) How do we protect them in community food systems?

Building Relationships: The most important thing to remember is that building relationships takes time and proximity. Any relationship we have in our lives means we are in some sort of regular communication and dialogue, preferably with face-to-face contact. In the food system, this is easiest in CSAs or farmers' markets, which by their very nature require this kind of contact. Every week there is an opportunity for a conversation, an update on the farmer's life and the eater's life – a way to get to know a person. But farmers can develop these kinds of relationships in more complex value chains. Farmers can open their farms to scheduled or unscheduled visits from eaters, distributors, grocers and chefs. They can begin regular communication like newsletters, blogs or educational events. They can do in-store, in-restaurant or in-cafeteria visits. However, it often takes everyone in the value chain working together. For instance, grocers in the know understand the importance of this relationship to their customers. In Kansas City, Ball's Food Stores (operating under the banners Hen House and Price Chopper) requires farmer suppliers to participate in at least one farmers' event per summer. This gives a chance for shoppers to get to know the people whose products they are buying, shows shoppers that the grocer really is working with local farmers, and provides the time and proximity to develop the beginnings of a relationship between farmer and eater. Another example is the "Farmers' Table" series of meals a local restaurant, Bluebird Bistro, puts on every summer. Eaters can sign up for these events to enjoy good food and company – and best of all to meet the featured farmers and understand what's happening on the farm and in the community.

Maintaining Relationships: Once one has built the relationship, the important thing is not to let it die. It would be crazy to waste all that time that you have spent building the relationship just to let it lapse. Plus, these kinds of relationships give sustenance to both farmer and eater and remind each why they are participating in community food systems. It is important to continue checking in about the quality of products or the availability of new products. However, most important is continuing the communication that has already been started. One farmer in Mid-Missouri told me about his "five-minute friendships." This dairy farmer would ask a question of every customer during his

weekly delivery that would provide a connection, but also allow him to complete his route in a timely manner. He would ask customers "What was the best thing that happened to you this week?" or "What family member did you have the most fun with this week?" or "What's the most interesting thing you did this week?" Every week he had a question. Many times, the customers asked him the same thing in return, and he had his five minutes of dialogue that happened on a regular, weekly basis. Farmers selling through Good Natured Farms in Kansas City put small notes about what is happening on the farm this week in their egg cartons. Customers pay attention and call the store if the notes aren't there. This is more one-way communication, but it is one way to sustain a relationship.

Protecting Relationships: Farmers and eaters in the alternative food system have been so incredibly successful in building great relationships that the food industry is taking notice. Earlier this year, Frito Lay began highlighting five different farmers who produced potatoes for their firm in marketing campaigns. 8 For farmers and eaters in the alternative food system it is important to remember that our relationships are about trust, integrity and authenticity – not about branding and marketing. Farmers need to remember how to maintain relationships, showing eaters what is happening on their farm, with their family, in their community over time. To protect these relationships, it is important to continue to be the principled participants that started alternative food system to benefit farmers, workers, eaters, their communities and their environment. This is not about competing on price and convenience, unless those are already built into the business model. Building relationships of trust and integrity throughout the values-based value chain is crucial as we move these relationships up from direct marketing to more complex value chains. However, the important point is that being in dialogue, being in proximity and being in community is the advantage that community food systems provide and that no amount of marketing can provide.

[8] *New York Times*, May 12, 2009.

SESSION 2E
Marketing, Disaster Prep, Economics of Dairy Challenges and Potential for Small Farmers Producing and Marketing Specialty Crops and Livestock

Choosing the Right Marketing Channels for Small-Scale Vegetable Producers

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Growing demand for local foods is presenting new opportunities for small-scale agricultural producers, but understanding the relative costs and benefits of different local foods channels is important to maximize farm performance. Wholesale channels typically move larger quantities quickly, but usually at a lower price. Direct channels often have higher prices, but require more customer interaction. Farmers are faced with the decision of whether to move larger volumes of produce through wholesalers at relatively lower prices or seek higher prices in direct markets and run the risk of lower sales and unsold leftovers.

In addition, for many producers, lifestyle preferences weigh as much or more in decision-making than profitability.

This article summarizes the results of a case study involving four small-scale diversified fruit and vegetable producers in central New York. We compare the performance of alternative marketing channels:

- wholesale (restaurant, retail/grocery, and distributor)
- direct-
  - community supported agriculture (CSA)
  - farm stand (unstaffed)
  - u-pick (staffed)
  - farmers' market

Channel-specific marketing labor and travel costs and sales data were collected during a typical peak-season week. A channel ranking system is used to weigh the factors of labor requirements, gross sales, net returns, and risk and lifestyle preferences across channels to provide insight into the collection of marketing channels that best fits a firm's objectives and preferences.

Important Factors

Gross Sales: To compare the volumes of multiple products moved through each channel, gross sales were evaluated (i.e., price x quantity). Despite lower prices, high volume channels offer the benefit of increased efficiencies in harvest and reduced odds of spoiled or unsold product. Gross sales are reported in Table 1 (column 2) as a ratio relative to farmers' markets sales (the lowest sales channel). Wholesale had the largest sales, about 3.4 times as much as farmers' markets, even with the lowest prices. CSA was a distant second and offered the same or slightly higher prices as wholesale.

Net Returns: Net returns focus on the price-cost differential for each channel. Here, net returns are calculated as gross sales less labor and travel marketing costs (Table 1, column 3). Expressed as a percentage of gross sales, the CSA was shown to have the highest net return percentage (i.e., net returns per sales dollar), followed closely by the unstaffed farm stand. As expected, percentage net returns were lowest for the wholesale channel.

Labor Requirements: While our participating farmers perceived that wholesale channels were more labor intensive than direct, the data showed otherwise. Labor hours per sales dollar are reported in Table 1 (column 4) as a ratio relative to the CSA channel (the lowest labor intense channel). Labor requirements for the wholesale channels were about in the middle of all channels evaluated, while the farmers' market and staffed farm stand had the highest labor requirements – over three times as high as the CSA.

Risk/Lifestyle Preferences: The two main reasons mentioned for avoiding channels were lifestyle preferences and stress. Wholesale channels created stress because of product consistency requirements, higher volume requirements, and risks of buyer rejection. Direct channels were perceived as relatively low stress, but concerns over poor sales and customer turnout risks were mentioned for all except the CSA. The risk rankings for our surveyed farmers are shown in Table 1, column 5.

Identifying Your Marketing Channel Strategy

Choosing the appropriate marketing mix includes consideration of all (or more) of the factors discussed above, and the relative importance of each factor is farm-specific. To address this, we estimate final channel scores by assigning scaled rankings across channels for each factor and then averaging them across all factors. The rankings are from 1 to 5, where 1 can be thought of as the 'best' and 5 as the 'worst' channel for that factor. Since some factors may be more important than others, we also compute weighted final scores based on weights assigned by the farmer. The final results are shown in the last two

columns of Table 1. The lowest overall score is defined as the top performing channel; however, channels scoring low and close to each other provides some indication of preferred multi-channel strategies.

For our general case, the top performing channel was the CSA, including top rankings for net returns percent, risk, and labor requirements. Wholesale channels ranked in the middle. The farmers' market had the lowest overall ranking, although not the least profitable. That said, farmers' markets can still be a useful resource for farmers in terms of enhancing farm exposure and advertising for other channels utilized.

Changes in the rankings are evident when we assume differing weights across factors. In the example presented, more weight is placed on sales volume and less on perceived risks. In this case, wholesale improves its ranking, more readily suggesting a strategy that incorporates both CSA and wholesale channels. While the CSA appears to be the 'best' for these growers, optimizing sales of perishable crops requires the flexibility of combining different channels, and can be an effective way to have a ready market for all produce.

Table 1. Market Channel Evaluation and Ranking (4 case study farms).

	Gross Sales	Net Return	Labor	Risk	Final Score	
Market Channel	Index	Percent	Index	Index	Unweighted	Weighted
CSA	1.7	87	1.0	1	1.7	2.1
Farm Stand (unstaffed)	1.3	82	1.5	3	2.8	3.0
Wholesale	3.4	58	1.9	5	3.4	2.8
U-pick w/Farm Stand (staffed)	1.5	62	3.4	2	3.9	4.2
Farmers' Market	1.0	67	3.0	4	4.3	4.4
Factor Weights	0.40	0.25	0.25	0.10		

Note: Gross Sales Index represents gross sales relative to the farmers' market channel. Net Returns Percent represents gross sales less marketing costs, as a percent of gross sales. Labor Index represents labor hours per sales dollar and relative to CSA. Risk Index is based on farm responses, from 1 (least risky/stressful) to 5 (most risky/stressful). Final scores are averaged scaled rankings across factors, either unweighted or factor-weighted.

The simple tool illustrated here will be made available for interested producers and educators. Look soon for the AEM Extension Bulletin with all the details!

"Smart Marketing" is a marketing newsletter for extension publication in local newsletters and for placement in local media. It reviews elements critical to successful marketing in the food and agricultural industry.

ReadyAG: Disaster and Defense Preparedness for Production Agriculture
David Filson, Penn State Cooperative Extension

- Emergency Preparedness & Response Coordinator, and Partnership Expansion Leader
- State Program Leader for Emergency Readiness, and Rural Health and Safety EDEN, Chair

ReadyAG© Disaster and Defense Preparedness for Production Agriculture.

ReadyAg: Disaster and Defense Preparedness for Production Agriculture
ReadyAG© provides an educational tool for production agriculture to plan and prepare for disastrous events that have a significant impact on the sustainability of production agriculture for producers and the industry.

Production agriculture is faced with serious and sometimes disastrous events that can lead to the total loss of the farm or ranch. Farmers constantly face challenges from natural causes as well as accidental or intentional incidents that can result in significant disruptions to production.

Disaster and emergency defense planning guides are available for individuals, families, communities, faith-based groups, commercial businesses, schools and

universities; and even though there is significant interest across all sectors, no individualized planning support has been developed or adapted for production agriculture. Homeland Security Presidential Directive / HSPD-9, Defense of United States Agriculture and Food, established roles and responsibilities for federal and state agencies for the protection of the agriculture and food system in the U.S. Yet no support has been developed that focuses on production agriculture, the center and hub of our agriculture and food system.

Several Extension Disaster Education Network (EDEN) Points of Contacts (POCs) came together and have leveraged the expertise of additional Cooperative Extension professionals to develop **ReadyAG© Disaster and Defense Preparedness for Production Agriculture**

This **ReadyAG©** multi-state collaborative project utilized the expertise of Cooperative Extension professionals from multiple Land-Grant universities in the development of a set of disaster planning and continuity of operations modules for each of the major agriculture commodities. There are production similarities for agriculture, but because of the uniqueness in the production of different commodities, the project has developed a specific set of disaster preparedness modules for major commodity groups (dairy, fruits and vegetables, poultry, swine, cattle production, and agronomic crops).

Through various national networks such as EDEN, Cooperative Extension, Farm Bureau, FSA, NRCS, eXtension, and commodity associations, the material will be promoted and incorporated into educational programs for producers.

The ReadyAG© **Disaster and Defense Preparedness for Production Agriculture** workbook is designed to help the farm or ranch owner plan for and manage disasters that can occur on the farm or ranch, such as power outages, drought, flood, severe snow or ice storms, but also such catastrophic events as tornadoes, hurricanes, fires, disease outbreaks, and other events, such as acts of terrorism or a nuclear accident.

If a DISASTER hit a farm or ranch today, would it still be in business next month?

BEFORE disaster strikes, **ReadyAG©** can help producers:

- IDENTIFY vulnerable areas of production and management
- PRIORITIZE areas to strengthen
- Create and ACTION PLAN specific for a farm or ranch operation
- Develop an accurate INVENTORY of farm assets
- Identify and engage LOCAL CRITICAL SERVICES
- Find additional HELP

ReadyAG© is a simple, comprehensive workbook that directs producers through a process to take a critical look at their agricultural operation, guiding them to determine areas that need improvement, thus helping them to become better prepared for any event that could disrupt their operation.
ReadyAG© will help farmers and ranchers become better prepared for all disasters, so they can continue to be viable even in the face of disastrous events.

The **ReadyAG©** Disaster and Defense Preparedness for Production Agriculture workbook is made up of a series of disaster preparedness and general planning questions that will lead farmers and ranchers through the majority of functions of their agricultural operation.

These **ReadyAG©** workbook questions help farmers and ranchers to identify and

address many unique issues and risks associated with their operation, including:

- a GENERAL farm or ranch preparedness workbook, and
- a series of commodity specific workbooks:

✦ CATTLE ✦ CROPS ✦ DAIRY ✦ FRUITS AND VEGETABLES ✦ POULTRY ✦ SWINE ✦

The GENERAL workbook PLUS those commodity workbooks that are specific to farm or ranch operations were developed to be completed together by the producer.

General and commodity specific workbook questions are divided into four categories.

Facilities and Materials - includes questions about the structures, equipment, supplies, and other real property associated with the farm enterprise (buildings, roads, fields, orchards, animal areas, chemicals, vehicles, machinery, water, etc).

- **People** - includes questions about anyone who has access, provides some service, works, or otherwise moves onto and from the agricultural enterprise (employees, family members, service personnel, sales persons, delivery people, veterinarians, consultants, Extension educators, customers, the general public, invited and uninvited visitors).
- **Planning and Practice** - includes questions on the day-to-day activities, routine functions, and efforts that occur only at certain times such as harvest or shipment of animals to market (regular production practices, and normal biosecurity practices).
- **Review and Update** - includes questions concerning items that should be checked, reviewed, and updated regularly (insurance, inventories, training, contact lists, response plans, security equipment, etc).

By taking a critical look at each of the questions in these categories, farmers and ranchers can determine what should be done to help them become better prepared for any disastrous event that could disrupt their agricultural operation. The investment of time and resources to plan and prepare are significantly less than the cost of a disaster to those who are not prepared.

Production agriculture is faced with serious and sometimes disastrous events that can lead to the total loss of the farm or ranch. Complete financial failure could result from a disastrous event. The loss of marketable commodity, even for a short period of time, can disrupt the cash flow for a producer resulting in default or even bankruptcy. Production agriculture is constantly facing challenges from natural causes, such as drought, excessive moisture, flooding, hail, late and early frost, excessive heat or cold, and wind. Additionally, naturally occurring diseases and pests can inundate a producer to the point where the sustainability of the farm or ranch business is in jeopardy. Various rust, mildew, and blight diseases of cereals, corn, rice, and potatoes, Avian Influenza, B.S.E., E.N.D., Brucellosis, or a foreign animal disease such as Foot and Mouth disease could result in a devastating blow that forces a producer out of farming or ranching. Various risk management programs are available. These typically are insurance programs that provide some relief when disaster occurs, if criteria are met, and if the producer has purchased coverage before the event.

This project was developed as a collaborative effort between Cooperative Extension faculty and staff from multiple Land-Grant institutions with the following leadership for specific commodities:
Julie Smith, University of Vermont – Dairy
Ellen Abend, Cornell University – Fruit
Pam King, University of Maryland – Poultry

Ken Kephart, The Pennsylvania State University – Swine
Rick VanVranken, Rutgers, the State University of New Jersey – Vegetable
Derrell Peel and David Lalman, Oklahoma State University – Cattle Production; and
Emerson Nafziger, University of Illinois at Urbana-Champaign – Agronomic Crops

The **ReadyAG© Disaster and Defense Preparedness for Production Agriculture** project addresses the following key target areas:
Technical assistance. The worksheets and templates and resources developed and packaged for the project were led by nationally recognized staff and faculty from multiple Land-Grant institutions. Each commodity module was developed within a basic project outline in order to provide continuity and similarity across commodities and modules. Specific recommendations for agricultural producers of the major commodity products will enable producers to prepare for and enhance sustainability by walking them through worksheets and templates to provide site specific answers relative to operational inputs, logistics, marketing, labor, product outputs, supply chain issues, and allied and support industry issues.

Education. The project is a model for participatory teaching that is accomplished through educational intervention using fact sheets, worksheets, templates, support resources, and one-on-one and small group instruction. The project material will be distributed nationally through various educational and commodity groups including EDEN, Cooperative Extension, eXtension, FSA, NRCS, other Federal agencies, and various commodity organizations.

Collaboration. The project is a model of collaboration. The Key Persons served as the point of contact for their institution, and provided leadership assistance to direct the project. Faculty and staff expertise were identified from various Land-Grant institutions. Commodity groups and individual commodity producers were included in reviewing and piloting the material. The existing eXtension Community of Practice for Agrosecurity was invited to review the material prior to final release. Other agencies, such as FSA, NRCS, Farm Bureau, and commodity groups will be invited to promote, distribute, and support the project material.

Communication delivery. Through national distribution, through various networks, such as EDEN, Farm Bureau, Cooperative Extension regional program areas, and national commodity organizations (dairy, beef, poultry, swine, vegetables, fruits, corn, soybean and wheat), and other commodity groups, the material will have wide exposure. Most educational interaction will be during the planning and mitigation phase of disasters. All material will be web-based and housed collectively.

Dissemination of credible, science-based information. The credibility of the materials is ensured because of the research and Extension expertise within the Land-Grant system. The accessibility will be enhanced through national network coverage such as EDEN, eXtension, Cooperative Extension, other USDA agencies, and commodity groups.

ReadyAG© Disaster and Defense Preparedness for Production Agriculture was developed to assist farmers and ranchers become better prepared for any disaster.

Small Farm Ag-Emergency Planning

James Jarman, University of Missouri Extension

Small farmers and their families are likely to be particularly vulnerable during an agricultural emergency. In a farming community, there may be more people involved on small farms than on large farms. These small farmers often depend on their family and rural community for support and as an anchor for their philosophy on life. Also, they may be less flexible or tolerant to interference from forces outside the family and farming community. Losses can cause a greater impact on their emotions and finances. Losses can come from many directions, such as terrorism.

The most typical images of terrorism are the 9/11 destruction of the Twin Towers in New York City and the bombing of the Murrah Federal Building in Oklahoma City. However, acts of terrorism aren't limited to spectacular explosions in metropolitan areas; terrorists can strike in tranquil rural areas, too.

Agroterrorism's potential is highlighted by Tommy Thompson, former secretary of Health and Human Services, who said, "For the life of me, I cannot understand why the terrorists have not attacked our food supply because it is so easy to do."
Examples of agroterrorism using pesticides include: methomyl, a highly toxic organophosphate pesticide was used to contaminate restaurant food in 1999, and 107 people became sick; and Black Leaf 40, a banned nicotine insecticide that was used in to contaminate grocery store ground beef.

HSPD-9 (Homeland Security Presidential Directive #9) is the Defense of U.S. Agriculture and Food, January 30, 2004. It directed the National Response Plan to integrate emergency food/agricultural responses.

It created a National Veterinary Stockpile of medicines and supplies. They can be quickly moved to an agricultural emergency. HSPD-9 also established the National Animal Health Laboratory Network, the Post-Harvest Food Protection and Defense Center and the Center for Foreign Animal and Zoonotic Disease Research.

The cost of food we eat in the United States is a fraction of most other countries. Our percentage of annual income spent on food is 6.4 percent. This contrasts dramatically with China, India, and the Philippines, where they spend around half to feed themselves. A widespread foreign animal disease (FAD) or other similar emergency would significantly raise our cost of food.

Independent of the source of the agricultural emergency, who might the majority of U.S. citizens' blame? Farmers are a minority and could bear the impact of public opinion, right or wrong.

Biological materials pose a great threat to food and agriculture infrastructure. Eradication and recall/destruction of infected animals, plants, and contaminated products is the result. Animals may recover from infections but may become carriers. Animals will not be immunized for diseases since they may become carriers.
U.S. agricultural production would be seriously harmed by the reduced productivity to plants and animals or the impact on food sales from contaminations or diseases.

Can we prevent an accidental outbreak of foot-and-mouth disease (FMD)? The ways to guard us are import regulations, inspections, health certifications, education, border security and farm bio-security. Will

these protect us? Nearly 100 years of history says yes!

Some important parts of farm biosecurity are washing hands, disinfecting boots, trailers, tires, and equipment, properly disposing of garbage, locking gates, being alert for strangers, enforcing a 48-hour quarantine for foreign visitors and a quarantine of 2 weeks for new livestock, and being routinely observant. These guidelines may seem "rinky-dink" but are a farm's first line of defense.
Ag emergency keys for farm biosecurity are prevention, early detection, rapid reporting of issues, and working with local governments to insure rapid response. Are local officials involved? Do they need help? Farmers large and small have the expertise, so they should volunteer.

An example of successful agroterrorism using biological agents was the salmonella poisoning of salad bars in The Dalles, OR., by the Rajneesh cult in 1984; 751 people became ill and 45 were hospitalized.

Agents for agricultural biological weapons or agents for accidental or natural introduction include FMD, Highly Pathogenic Avian Influenza and exotic Newcastle disease.

FMD, is a highly contagious, airborne-spread virus. FMD can live in sausage for 2 months, bacon 6 months, dried milk for 2 years, and on a person for up to 36 hours. This is not a fatal disease in animals but causes serious production losses in our livestock industry.

Bobby Waugh ran a pig fattening unit in England. He was convicted of feeding untreated food waste from a foreign ship to his hogs causing a FMD disaster and not reporting the disease. The ship came from an FMD-infected country. Bobby still maintains his innocence. His photograph and story are easily downloaded from the Internet.

News video can last forever. Would anyone want to have their name and face associated with a FAD outbreak? Remembered like Bobby Waugh?

Then there was the FMD scare at the Holton Livestock Market in Kansas. As a precautionary action, a veterinarian reported mouth lesions potentially consistent with FMD. It was not a highly suspect case. Rumors of nine infected cows spread quickly in the media. The estimated market impact was $50 million dollars. The causal agent turned out to be thorns in hay.

If a farm is positive for FMD, the first reaction is for emergency responders to close nearby roads and stop local movement of all susceptible livestock.
The next response would be to set up a quarantine restricted zone of 1.5 miles around the farm(s). An additional 6.2 mile radius would complete the quarantined area.

Farmers and families within the quarantined area would be severely affected for about a year. FMD in the United Kingdom (UK) put 175,000 farmers out of work and there were numerous suicides. Many UK farmers lost herds and genetics traceable back hundreds of years.

Goals of successful outbreak response for FAD are bio-security to prevent exposure and spread.

At this time the strategy is to depopulate all susceptible animals within quarantine zones. Wildlife may be an exception. United Kingdom protocols are being applied. In the UK, deer and other wildlife were not a problem, but this might not be the case in the United States.

Plan A: Stamp It Out! There is no Plan B. All quarantined animals will be euthanized.

Animal rights groups will be a concern. They highlighted the dilemma in the UK during the FMD and bovine spongiform encephalopathy "mad cow" outbreaks. Even people who understand livestock issues may find it hard to accept the quarantine depopulation order to "kill them all."
Euthanasia methods vary in their efficiency. As an example, firearms are readily available, are not labor intensive or very expensive to use, but require a high degree of expertise and safety.

Small family farm personnel or family should absolutely not participate in euthanasia or do so only as a last resort. Government contract personnel should be the first choice. The physiological impact of losing animals your herd is great enough without the added burden of killing them yourself.

Mortality management involves carcass disposal. Different locales may work better for different disposal methods. The small farm may be the location for disposal. Transporting dead, infected animals may create more problems.

If the media asks questions, how should you respond? Don't make up anything. The information should be factual and spoken in a calm voice. Remember news video and audio lasts forever! Contact the local public information official on what to say.

Four phases of emergency management:
1) Preparedness = Activities to improve readiness and develop or expand capabilities. Anything done before the emergency will be beneficial.
2) Mitigation = Activities to eliminate or reduce long-term risks to life, property, and the environment. Be especially aware of mental health and family issues.
3) Response: Actions done immediately, during, or after to save lives, minimize injuries, lessen property and environmental damage and enhance recovery.
4) Recovery: Short-term—to return vital systems to minimum operating standards; long term—to return people and places to pre-disaster conditions, if possible.

Farmers may need to assistance to subsist for as long as the agricultural emergencies last. Farms, farm families, agricultural and other local businesses should consider subsistence plans. FMD is the prime example since a quarantine will likely last 1 year.

Next comes the response and recovery phase. At first, farmers need to plan how they will begin and what they will do. They need to think about the time involved and will consider whether farming will still be the activity after the emergency. The response phase should include activities to improve or speed recovery. Continue to work toward life goals.

If support is needed, farmers and their families should not be afraid or hesitate to ask for help.

Some important issues include:
- Can anyone declare victory at the end of an emergency?
- Emergencies can create unusual associations for mutual benefit
- Everyone needs to work together so everyone wins
- There may will not be an easy way out of an agricultural emergency

Be aware of community agriculture emergency planning. Take part in the planning process. Be willing to volunteer.

Think, plan, and get ready for the situations that might occur if an emergency involves your small farm, neighbors, and community.

The Economics Competitiveness of Dairy Systems Across the USA

Tom Kriegl, University of Wisconsin Extension, Center for Dairy Profitability University of Wisconsin-Extension, Madison, Wisconsin

See http://cdp.wisc.edu

Methods

Summarized data was supplied by the accounting firms of Moore, Stephens, Wurth, Frazer, and Torbet, LLP; and Genske, Mulder and Company, LLP; Cornell University; the University of Florida; the University of Maine; the University of Maryland; Michigan State University; the University of Minnesota; the University of Vermont; and the University of Wisconsin Center for Dairy Profitability, where the comparisons were made.

Several measures should be examined when analyzing financial performance and economic competitiveness because no single measure tells the whole story. However one usually is limited to just a few measures to explain the results. The primary measure used to illustrate in this report is net farm income from operations (NFIFO) as a percentage of farm revenue based on accrued adjusted income and expenses. A similar measure is used in the non-agricultural business world.
The use of this measure is driven mainly by large variations in the milk price received and in the pounds of milk sold per cow by the many systems and states in the comparison.

In comparing the financial performance of dairy systems across an area as large and diverse as the United States, it is very possible that unique climatic or other conditions can cause the financial performance of any place in any year to be abnormal. A good way to minimize the impact of such unique influences is to compare several years of data. To make the comparison of this large amount of data more manageable, multiple year simple averages were calculated for all systems. Some of the averaging was done by the source of the data and some was done by the author of this report.

Farm financial data collection and analysis (even from reliable sources) is far from uniform across the country. When such data is obtained from many different sources, some differences will remain. One of the differences is that data from different sources may have different time periods.

All of the data presented in the 11-year period in the table has also been compared in the same period with the shorter period data to verify that no change in the observations and conclusions would occur if the comparisons were shown in the same but much shorter period for all.

Large confinement systems rely much more on hired labor than the other three systems. This explains part, but not all, of the difference in their NFIFO/$ revenue. To get a better sense of the impact of the cost of paid labor on the relative performance, the data is presented in the Page 4 table as NFIFO/$ revenue and ranked by what NFIFO/$ revenue would be if all labor was unpaid. Although this ranking for a few dairy systems changes noticeably between the two measures, most dairy systems retain a very similar ranking from one to other measure.

This comparison (partly illustrated by the table on Page 4) reveals at least nine major observations:

1. It is unlikely that any dairy system in any state will always be the low cost or most economically competitive

producer under all circumstances. The ability to stay in business can also be influenced by factors not readily identified as economic. Some of that can be observed in 2009.

2. This economic dairy data indicates that the economies of scale (lowest cost of production per unit) occur at a much smaller size than people expect (somewhere less than 100 cows per farm).
3. There were large consistent differences in NFIFO/$ revenue between many states and systems.
4. Graziers have typically attained more NFIFO/$ revenue than other dairy systems in their states.
5. Wisconsin dairy systems have often attained more NFIFO/$ revenue than similar dairy systems in other states.
6. Small dairy systems have typically attained more NFIFO/$ revenue than large dairy systems in the same state.
7. The largest farms tend to generate more dollars of total NFIFO per farm and per owner compared to the smallest farms.
8. The ranking of financial performance by state is very different from the official USDA cost of production estimate ranking which relies very heavily on opportunity cost.
9. NFIFO per owner has probably driven expansion more than NFIFO per unit. Family-size farms (the size that can be operated mainly by family labor) are fairly similar across states in terms of the total NFIFO they generate. However, the size of family-size farms can be quite different from state-to-state. For example, Wisconsin grazing farms have about half as many cows as Michigan grazing farms and nearly double the margin of NFIFO/$ revenue in the table. This somewhat challenges the assumption that farm size increases are motivated by economies of scale (increased size increases margins). In fact, the data suggests the opposite. The data suggests that in parts of the United States where profit margins are lower, people who want to make a living from dairy farming operate larger farms because the larger size offsets lower margins to achieve a desired amount of NFIFO from their career choice. Wisconsin graziers could be as large as Michigan graziers and likely generate much more total NFIFO, but may not do so because they can generate as much total NFIFO with smaller herds, less work, less stress, etc. The amount of non-farm income was not available from most data sources.

There are some public policy implications from the above observations

Some government policies encourage increased dairy farm size and are often justified at least partly because larger farms are presumed to have economies of scale (lower cost of production). However, this actual farm financial data suggests that the larger farms may not be more economically efficient than smaller farms. Future public policy decisions should consider this information along with environmental and social factors associated with each system.

Further Discussion--- Economies of Scale

The term “economies of scale” has a much more specific meaning to economists than it does to non-economists. The theory of economies of scale says that as a business gets larger, it can spread its fixed costs over more production units and reduce the total cost of production per unit as the production of units’ increases. The theory also says that at some size, cost per unit no longer declines and in fact can increase if further “growth” occurs.

The perception of economics of scale of large confinement farms probably came from the misunderstanding of the concept of economies of scale. If one built a facility

for 1,000 dairy cows but populated it with only 100 cows, the resulting fixed and total costs would be extremely high. These fixed and total costs would be reduced with each increment of 100 cows added up to the capacity of the dairy facility. While costs decline as more and more of the facility's capacity is used, this is not economy of scale. If the properly designed 1,000 cow facility operated at full capacity has lower costs than the properly designed smaller facility operated at full capacity, then this would demonstrate economies of scale. So far, the data suggests that economies of scale peaks somewhere less than 100 cows when comparing different farm sizes within several states.

New Zealand is considered to be the world's low cost dairy producer. If New Zealand could produce all of the dairy products the world could consume and barring excessive transportation costs and government intervention, they could put all other dairy producers out of business. However, they lack the productive capacity to supply the whole world. Therefore higher cost producers can compete outside of New Zealand.

While achieving economies of scale or being the low cost producer is a tremendous economic advantage, it isn't the only economic advantage that a business may have

Non-economists often call these other economic advantages economies of scale. An example of one of these economic advantages is that large Wisconsin confinement farms have received significant milk volume premiums, which enhance the income side of the equation for them even if it hasn't made their costs lower. Another economic advantage enjoyed by larger farms is that a lender is more reluctant to foreclose on a large operation than on a small farm assuming the financial performance of the two farms in the example is similar.

With most dairy farms in the United States operating below the cost of production in 2009, large dairy farms seem to be experiencing a different economic disadvantage—the greater willingness of the owner/operator of a small farm to reduce their "wages" more than employees may be willing to accept.

Dairy System	Approximate Herd Size	# of Years in Average	Time Period	NFIFO as a % of Revenue	NFIFO as % of Revenue if all labor is unpaid
Wisconsin Graziers	45-65	11	1997-2007	26.52%	30.31%
Ontario Graziers	45-55	5	2000-2004	22.56%	28.20%
Wisconsin Graziers	45-65	6	2000-2005	23.11%	26.82%
Wisconsin Confinement (all size ave.)	92-145	11	1997-2007	14.60%	26.68%
Wisconsin Confinement	< 50	11	1997-2007	18.60%	26.50%
Wisconsin Confinement	101-140	11	1997-2007	16.00%	26.32%
Wisconsin Organic	45	9	1999-2007	21.78%	26.24%
Wisconsin Confinement	50-75	11	1997-2007	17.34%	26.18%
Wisconsin Confinement	76-100	11	1997-2007	16.69%	26.12%
Wisconsin Confinement	151-250	11	1997-2007	14.83%	25.87%
New York Graziers	80-100	11	1997-2007	17.15%	25.33%
New York Confinement	190-358	11	1997-2007	11.29%	25.12%
Michigan Graziers	99-118	6	2000-2005	14.30%	24.90%
Wisconsin Confinement >250 Cows	457-603	11	1997-2007	10.94%	24.33%
Maryland Graziers	100	5	2001-20058	21.72%	23.49%
Maine/Vermont Organic	48-63	4	2004-2007	14.96%	22.96%
Florida/Georgia SE USA (DBAP)	808-1399	11	1997-2007	6.49%	21.20%
California All (G)	1100-1700	10	1998-2007	11.88%	20.39%
New Mexico (G)	1400-2250	11	1997-2007	10.61%	20.28%
California, Southern (M)	1,300	11	1997-2007	9.62%	20.24%
Washington (G)	1250-2000	11	1997-2007	11.35%	20.09%
California, San Joaquin Valley (M)	2,300	11	1997-2007	11.29%	19.93%
Idaho (G)	1200-1900	11	1997-2007	8.27%	18.34%
Maryland Confinement	108	5	2001-2005	12.89%	16.90%
Central Texas (G)	900-1300	11	1997-2007	7.30%	15.16%
Arizona (G)	1500-2300	11	1997-2007	5.30%	12.60%

The Economics of Grazing, Organic, and Confinement Dairy Farms

Tom Kriegl[9], University of Wisconsin Extension, Center for Dairy Profitability

Price premiums that are substantial at times has caused existing and new dairy producers to consider being organic. Dairy producers want to know three things about the economic impact of choosing their system:

1. What are the potential rewards once the goal is achieved?
2. How long will it take to attain the goal?
3. What will it cost to attain the goal?

It is often said "when switching from conventional to organic, things will get worse before they will get better." It would help people make the decision whether or not to switch to organic if data measured the financial challenge of the transition and estimated how long it might take to make-up for that challenge. Consequently, analyzing the economic performance of organic farms is fairly complex. To better understand and fairly compare the financial performance of organic farms, the stages of progression of switching to organic production should be recognized.

These stages or categories of organic production are:

A. **Pre-organic-** The period of operation of a farm before it attempted to become organic. Since anyone not attempting to become organic could be called pre-organic, it may not be as important to gather data from that period as it is to gather data from farms at some other "organic stage."
B. **Transitional organic-** The period of operation of a farm from the time it began to adopt organic practices until achieving organic certification. This is expected to be the least profitable stage

C. **Certified organic-** The period of operation of a farm from the time it achieved organic certification until receiving organic milk price premiums.
D. **Certified market organic-** The period of operation of a farm during which it receives organic milk price premiums.

Few farms have supplied financial data from years prior to the point at which they provide data. At times farms may slip into and out of the above stages or categories, especially between certified organic and certified market organic. Some certified organic producers only obtain organic premiums for part of the year. Some of that data didn't fit any category. Initially there was an attempt to collect organic dairy data from the states involved in the Great Lakes Grazing Network (GLGN), Dairy Grazing Farms Financial Project. However, data from states outside of Wisconsin was far less available than in Wisconsin.

Data from organic dairy farms are scarce.
Actual farm financial data from organic dairy farms is still scarce but increasing. Much of the Wisconsin organic data was collected by the Fox Valley and Lakeshore Farm Management Assns, and Wisconsin Farm and Business Management Inc. Because of the scarcity of the organic data in any single year, this analysis and comparison of Wisconsin certified market organic financial performance with other systems focuses on a seven year average for each group. None of the summarized groups are random. Some Wisconsin organic herds graze only as much as required to remain certified organic, and they are not categorized as management intensive rotational graziers (MIRG) in this analysis. Similarly, some of the graziers in the Wisconsin grazing summary were certified market organic producers. Organic graziers and non-organic graziers were also summarized together as graziers and separately. Since organic graziers' performance was similar to non-organic graziers, the results from the together version were used in this analysis. It would have been ideal to have enough data to make meaningful comparisons of grazing and non-grazing organic herds. A greater emphasis on grazing from organic certification standards may soon eliminate non-grazing organic dairy farms.

Comparing Financial Performance of Some Wisconsin Organic, Grazing and Confinement Dairy Farms from 1999 to 2007
Since many non-organic farmers are asking how the financial performance of organic farming compares with non organic systems, a nine year simple average cost of production summary was compiled for Wisconsin organic, grazing and confinement herds.

Several measures should be examined when analyzing financial performance and economic competitiveness because no single measure tells the whole story. However one usually is limited to just a few measures to explain the results. The primary measure used to illustrate in this report is net farm income from operations (NFIFO) as a percent of farm income or revenue based on accrual adjusted income and expenses. A similar measure is used in the non-agricultural business world.

The use this measure is driven mainly by two factors. The organic milk price was usually much higher than the milk price received by confinement and grazing herds. The pounds of milk sold per cow by confinement herds was 30% and 40% more per cow sold by grazing and organic herds respectively.

Table 1 shows the range in observations size, herd size, NFIFO/$ income and nine-year simple average NFIFO/$ income for organic, grazing, small confinement and the average Wisconsin confinement group.

Table 1	Farm # Range	Ave. Herd Size Range	NFIFO/$ Income	Range
Graziers	21-43	61-68	25.52%	19.23-31.86%
Organic	6-17	48-64	20.91%	13.53-26.26%
Small Confinement	217-157	62-63	18.27%	7.76%-24.93
All Confinement	581-660	96-133	14.26%	6.99-18.21%

General Summary of Observations of The Economics of Organic Dairy Farms.

1. By most measures organic was always the high total and allocated cost producers usually followed by large confinement, then small confinement with graziers being the lowest cost producers in most measures most years.

2. Still, organic had 2nd highest 9 year simple average NFIFO/$ income and highest 9 year simple average NFIFO/Cow. Graziers had the highest 9 year simple average NFIFO/$ income & 2nd highest 9 year simple average NFIFO/Cow, followed by small & then large confinement.

3. Organic price premiums ranged from $2.70 to $9.84/hundredweight (CWT) vs. non-organic. The largest margin occurred in 2006 (could be larger in 2009). The average organic herd needed a price premium of about $5.00/CWT sold to offset their higher cost of production.

4. Less experienced organic dairy farms than those sharing financial data may not perform as well.

5. Data is scarce from any organic group especially from transitional organic.

6. Organic has been most competitive when the non-organic price is low.

7. Grazing probably “helped” the economic performance of the organic system more than vice versa.

8. If already practicing organic – go for the reward.
9. If far from organic practices, the 3-5 year transition can be challenging.

10. Organic dairy farms in transition appeared to be competitive with non-organic dairy farms in an older Quebec study.

11. In 2004, organic dairy farms in a New England study were not as competitive as:
- Non-organic New England dairy farms
- Any Wisconsin dairy system

12. From 2005 to 2007, organic dairy farms in a New England study were more competitive with other dairy systems due to increased price premiums but not with most Wisconsin farm systems.

13. 7 Vermont organic farms were competitive with New England not organic farms in a 1999 comparison.

14. Feed costs were much higher for New England farms – especially for those which are organic than most other

states. 2008 and 2009 data will likely show narrower margins for New England organic farms.

15. Minnesota organic dairy economic performance appears similar to Wisconsin from 2005 to 2007.

16. Use Caution comparing one dairy system from one state to other dairy systems in other states.

17. There are large consistent differences in NFIFO/$ income between many states and systems.

18. Graziers typically attain more NFIFO/$ income than other dairy systems in their states.

19. Wisconsin dairy systems typically attain more NFIFO/$ revenue than similar dairy systems in other states.

20. Small dairy systems typically attain more NFIFO/$ revenue than large dairy systems in the same state.

21. The largest farms tend to generate more dollars of total NFIFO per farm and per owner compared to the smallest farms.

22. This economic dairy data indicates that the economies of scale (lowest cost of production per unit) occur at a much smaller size than people expect (somewhere less than 100 cows per farm).

23. Large confinement systems rely much more on hired labor than the other three systems. This explains part but not all of the difference in their NFIFO/$ revenue.
24. The ranking of financial performance by state is very different from the official USDA cost of production estimate ranking which relies very heavily on opportunity cost.

25. Family size farms (the size that can be operated mainly by family labor) are fairly similar across states in terms of the total NFIFO they generate. However, the size of family size farms in this data is quite different from state-to-state.

Organic, graziers, and large confinement indicated more satisfied than small confinement and non intensive graziers in a University of Wisconsin study. http://www.cias.wisc.edu/wp-content/uploads/2008/07/qol707final.pdf

SESSION 2F
New Opportunities for Small-Scale Farmers and Ranchers—How New Set-Asides, Advance Payments, and Other Tools Can Improve Accessibility of USDA Programs for Producers

Small-Scale Technology Information Templates

Cheryl Simmons, USDA–Natural Resources Conservation Service
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Small-scale agriculture has long been a part of the American landscape. As economies of scale and technology have favored larger and larger scale operations, the Natural Resource Conservation Service (NRCS) wants to ensure that small farms and small-scale agriculture does not get lost in conservation delivery.

NRCS' Central National Technology Support Center (CNTSC) is working to build on work from the eastern region to provide conservation information sheets for small farms in the central area. Focusing on unique aspects of the central region, CNTSC is working to add information sheets, including farmstead windbreaks, silvopasture for hardwoods, and catastrophic animal mortality.

Small farm information sheet templates can help states to:

- Increase the awareness and understanding of natural resource systems by small-scale farmers.
- Speak and write in ways that result in a meaningful exchange of information between agency representatives and small-scale farmers.
- Improve relations. Small-scale farmers are often skeptical about working with government agencies.
- Know how small-scale farmers look at money. This information is important when planning and implementing conservation practices.
- Connect to NRCS information. The structure of NRCS and conservation partners can be confusing and can affect small-scale farmer participation in conservation activities.

In the initial review of the small-scale technology information sheets, the center looked at:

- What is applicable to the Central area?
- What is not applicable to the Central area?
- Ideas for other low-cost alternatives;
- New templates warranted for Central area; and where possible,
- Vetting templates with sustainable ag and small farm partners

For this discussion, small-scale information sheet templates include:

- Ag Chemical Handling Facility
- Alternative Pest Management (PM) Biological Pest Control
- Biological PM for Insects and Disease
- Biological PM Using Goats to Manage Vegetation
- Cover Crops
- Managing Manure Nutrients
- Rotations for Pest Management
- Rotations for Smart Farm Management
- Silvopasture (Producing Trees, Forage, and Livestock on the same acre - Pine)
- Small Woodlot Improvement

Specialists also recommend some general or systems approach information for small farms including:

- Stream Corridor Protection
- Water Quality Issues for the Small Farm
- Wildlife
- Cultural Resources

Input and feedback from small-scale farmers is essential to improve communication with small-scale information sheet templates.

SESSION 2G
Understanding the USDA Peer Review Process—Views from the Peer Review Process

Al Drain, retired, Director, USDA Office of Small Farms Coordination
Marion Simon, Kentucky State University

When reviewing grant proposals, it is important that the proposal addresses all parts of the Request for Assistance (RFA). To do this, I read the RFA at least three times, make notes, and keep it handy for reference while reviewing proposals. Then, the reviewer needs to have a perspective of the types of proposals that have been submitted for review. To do this, I briefly review all of the proposals before scoring or evaluating individual proposals. If the proposal RFA lists percentages in its evaluation, keep these in mind as the

proposal is reviewed and evaluated (e.g., methodology = 30 percent). If the RFA indicates the evaluation is pointed, then score each pointed section during the review (e.g., methodology = 15 points). When evaluating individual proposals, I rank them for their quality or score, both individually and compared to the quality of the other proposals.

To help the reviewers, proposal authors need to keep in mind the KISS method (Keep It Simple, Stupid). Use correct spelling and grammar. Avoid acronyms whenever possible, or explain them if they must be included. Keep in mind that many reviewers do not have detailed technical expertise on the subject matter. This requires research on their part to be able to properly review and evaluate the proposal, so help them. Give them information resources or, better, avoid terminology that is only used in the immediate discipline or technical field unless the RFA is very specific for that field. Break the proposal into easily followed sections. Address the proposal to what the funding source wants in their RFA, not "The Author's" wants. Remember, many of the proposals will be reviewed during off-work hours or late at night. The easier it is to read, the friendlier the proposal is to the reviewer.

To make the proposal complete and easy to follow, answer each section of the RFA. The reviewer will be addressing those sections during the review. Be reasonable in the Budget and Expectations of the Objectives. Clearly define the Objectives and Methodologies, and use collaborators to strengthen the team.

At the panel meeting, the panel member must be prepared with the reviews timely submitted before the panel meets. The panel member should be familiar with all of the proposals, other panel reviewer's evaluations, and particularly be familiar with the ad hoc reviewers' evaluations because they are often experts in the field, sub-discipline or system. The reviewer should follow the same written and oral review format for all proposals and be prepared to championing deserving proposals. The evaluation format should address all parts of the RFA and proposal. It should identify the strengths and weaknesses of the proposal and note needed improvements.

The panel members will discuss the proposals with priority given to the primary, secondary, tertiary, and reader reviewers, but all panel members are encouraged to participate fully. The reviewers will discuss the proposal, its Objectives, and note its strengths, weaknesses, potential improvements or limitations, and develop their Synthesis comments. The proposal is then placed on "The Wall" and given a ranking based on its individual merit and comparison to the other proposals. Generally, one of these ranking systems is used:
1st: Outstanding, High Priority, Medium Priority, Low Priority, Some Merit, or Do Not Fund; or 2nd: Must Fund, Should Fund, Could Fund, or Do Not Fund.
After all of the proposals are placed on "The Wall" and tentatively ranked, the panel as a whole re-ranks the proposals using side-by-side comparisons until they are in agreement.

Thursday, September 17, 2009
8:00 to 9:30 am

SESSION 3A
Enterprise Planning and Market Assessment Tools

Market Planning and Marketing What You Produce

Duncan Chembezi, Alabama A&M University
E'licia L. Chaverest, Alabama A&M University, Small Farms Research Center

INTRODUCTION

The expansion of sustainable agriculture requires the development of alternative production techniques and marketing strategies. Marketing is defined as the commercial functions involved in transferring goods from producer to consumer. Marketing is not just the final transaction of receiving a check. The acts of buying supplies, renting equipment, paying for labor, advertizing, processing, and selling are all part of a marketing plan. Marketing should begin as the first ideas for an enterprise start to bubble. Some say marketing is everything a business does, that it is the most important aspect of any business, and the only action that results in revenue. Agricultural marketing is where the producer, the processor, the distributor, and the consumer meet.

Even though a number of viable marketing channels and/or strategies exist, many small and limited resource farmers and ranchers have not been able to fully take advantage of these channels. The lack of participation in these markets by most small and limited resource producers are varied and have been studied extensively. Small and limited resource producers are often faced with more extensive obstacles than do the large producers. They generally have less education, and lack the resources to participate in alternative production or marketing methods. For instance, most small-scale producers in Alabama are frequently unable to access facilities that process livestock, thereby limiting their sales to traditional and often unprofitable markets. Overall, small and limited resource farmers and ranchers recognize the need to increase their competitive advantage in the market place, and have in some cases created alternatives to traditional ways of doing business. The expansion of community supported agriculture (CSA), farmer's markets, and niche efforts in specialty products is increasing annually. Institutional markets such as schools and hospitals and other direct markets can play a vital role in sustaining local agricultural producers and local economies.

Direct marketing refers to selling that is based on a personal, one-to-one relationship that ties farmers and consumers together. Many times this relationship is face-to-face, like at farmers' markets. Other times, the consumer and farmer may not actually meet, for example, Internet sales. However, overcoming barriers to these markets such as, production methods, insurance requirements, distribution channels, and quantities needed to supply an institution can seem daunting to individual producers, especially minority and limited resource producers. This paper draws heavily on the work and experience by the Small Farms Research Center working with small and socially disadvantaged producers in Alabama. It outlines and recaps the many marketing channels and/or strategies that small and limited resource producers could access and utilize. It further highlights the pros and cons of each of the marketing channels. The merits of selling a produce before it is produced is emphasized.
Duncan M. Chembezi is an associate professor of agricultural economics and policy in the Department of Agribusiness at Alabama A&M University (AAMU). He is also the director of AAMU's Small Farms Research Center within the School of

Agricultural and Environmental Sciences. E'licia L. Chaverest is the program manager and marketing specialist within the Small Farms Research Center. This paper was presented at the 5th National Small Farm Conference: Roadmap to Success for Small Farmers and Ranchers, Springfield, Illinois, September 15-17, 2009.

PLAN AHEAD AND DO YOUR HOME WORK

Small farms by nature are limited resource operations. Time, labor, scale, and capital are all typically in short supply on the small farm. Anyone of these, or all, can restrict the operation of a small farm. Planning ahead helps to avoid costly mistakes and the wasting of limited farm resources. Producers who take the time to develop and follow through with business and marketing plans have taken a giant step towards profitability.

Developing Agritourism as a Marketing Tool: The Big Picture

John Pike, University of Illinois Extension

Agritourism has become a hot topic for many small farmers and tourism professionals alike. There are a number of definitions for agritourism and fortunately, most are broad enough to include a number of businesses found in about any rural region. While agritourism has evolved as an unrecognized marketing tool for many entrepreneurs, recent changes in consumer travel habits have tourism professionals scrambling to meet the growing demand to incorporate education, history, nature and convenience into the shorter but more frequent trips that increasingly replace the traditional once a year, one or two week family vacation. This situation has created an opportunity for the members of the agriculture community involved in agritourism to partner with local and state tourism professionals to promote rural areas that have not been widely marketed before. These efforts of collaboration have proved to be very beneficial, however, the process of educating the farmers and tourism representatives about what agritourism means to each other has proven to be the most challenging aspect of the process in many cases. Farmers also do not always recognize the opportunities to cooperate, instead of compete with other nearby agritourism attractions/farms. This situation in not easily understood by traditional tourism professionals accustomed to working with hotels, restaurants, theaters and other complimentary attractions that realize they are all part of the larger tourism industry. There is a great deal of opportunity for local/regional agritourism operations to benefit from efforts of collaboration but education and understanding is the key.

Since Agriculture and Tourism have great economic significance about anywhere in the United States, a state agency is usually in place to provide leadership in various aspects of the two industries. However, with agritourism being a blend of these industries it is not always clear which agency, if any, has jurisdiction or a responsibility to play a leadership role. While there is usually some collaboration involved, it is common for primary "ownership" of agritourism to fall within either a Department of Agriculture or Tourism. In other cases, leadership may come from university Extension systems, Farm Bureau or a stand-alone agritourism association as is the present case in Illinois.

The Agriculture and Tourism Partners of Illinois (ATPI) originated as a collaborative effort of University of Illinois Extension, IL Department of Agriculture, IL Bureau of Tourism, IL Farm Bureau, IL Specialty Growers Association, USDA Rural Development, individual producers and a variety of other businesses, agencies and organizations to promote and coordinate agritourism development on a state-wide

level. The development of ATPI was sparked by university and agency leadership rather than being a primarily producer driven effort as is common with most associations of this type. One factor of explanation behind this unconventional development is that originating agencies, universities and organizations involved were all receiving a high number call from producers searching for information revolving around a number of small farm enterprises but with a central theme of developing and improving direct marketing strategies to attract customers to the farm. Another factor was that a large number of producers did not recognize the ties between this form of direct marketing and tourism.

While developing ATPI as an agritourism association seemed simple enough, it was clear that education and understanding would have to be facilitated at multiple levels, not just at the producer level to grow membership. As the a steering committee was formed and began to discuss opportunities to grow and promote agritourism it became clear that all members sitting at the table had a great deal of knowledge and information that could be utilized, however, there was not much overlap of understanding on any issue between representatives of Agriculture and those of Tourism. Steering Committee members having an agriculture background and experienced in working with producers did not fully understand the breadth of marketing expertise that tourism professionals brought to the table. On the other hand, tourism professionals did not fully understand the seasonal aspects of the farm based enterprises and the fact that a number of producers with orchards and pumpkin patches were attracting thousands of customers to the farm in a very short sales season without realizing that tourism was even remotely related to their business. This "organizational education" slowed ATPI development but the improved understandings that resulted have proved to be beneficial. ATPI has achieved success in giving agritourism an identity as well as serving as a conduit for educational and promotional funding. While state agencies are supportive and actively participate in ATPI events there is no dedicated funding stream within these agencies to support agritourism. In addition to membership fees, the association has been able to access several sources of grant funding that have been critical to this success. Illinois AgriFirst funding supported initial development and promotional activities and a Rural Business and Enterprise Grant (RBEG) from USDA Rural Development supported a major educational program and the development of a promotional website (www.agfun.com) to provide information about regional agritourism attractions to consumers. University of Illinois Extension has developed a complimentary website for producer related agritourism information (http://web.extension.uiuc.edu/agritourism/) and both sites are cross referenced to allow producers to navigate between the two sites. ATPI has also forged a collaborative effort with the Illinois Specialty Growers Association that incorporated agritourism and marketing tracts into what is now known as the Illinois Specialty Crop and Agritourism Conference that hosts 400+ producers each year.

Although ATPI has been able to achieve beneficial results for statewide agritourism, these successes have not come without challenges. Funding for any independent organization is increasingly challenging and it is difficult to maintain the needed level of activity on membership dues alone. It is also difficult to engage hundreds of members and potential members on a statewide basis without assistance and involvement from state agencies and Extension. In a state as large as Illinois, a

regional strategy to more effectively involve owners of agritourism operations on a more regular basis would be beneficial, however that strategy has not yet been identified. Leadership is also a critical challenge. While producer leadership would be preferred, the level of involvement necessary to support an independent statewide organization such as ATPI is not feasible for most. University and agency staff with statewide responsibility and producer involvement can keep the ball rolling but their duties change over time and staffing reductions make it increasingly difficult to devote significant time to external projects.

The outlook for future agritourism opportunities and growth seem to be positive although the producer must be creative in positioning their individual operation in the market and creating collaborative local and regional efforts. In order to achieve the most effective marketing strategies it will be critical for producers and agricultural resource providers to engage tourism professionals to maximize marketing effectiveness. Statewide activities to promote agritourism can provide great benefits to agritourism operators and the rural communities in which they are located. An independent association such as ATPI may be an option for bringing all involved parties to the table; however it is highly advised to thoroughly investigate possible collaborative relationships that can accomplish the goals at hand prior to developing an association of this type.

Harvesting the Bounty—Successful Micro Food Business

Nancy Flores, New Mexico State University

How do you make money with Grandma's recipe for cookies, salsa, BBQ sauce, cheese or jerky? Making the food product believe or not is the easy part. Many people dream of owning their own business and marketing a family recipe. How many times have you heard "you should sell this stuff"? Many of the huge food businesses such as Kraft, M&M's/Mars and Bueno Foods started as small family enterprises. There are always opportunities for new food products in today's marketplace. Many small food processors fail not because of the product but because they lack basic skills in business planning, financing and management.

So how do you make grandma's recipe into a commercial success? Success of a food business is gained by hard work, good business management, imagination and faith in your product. The first step is to consider how the product might compete in the market. What does your product offer to the consumer compared to other products already on the market? A mom-and-pop company is not enough of a hook to engage a consumer sufficiently to purchase a product, especially on a repeat basis. A food product must be wholesome, somewhat nutritious and offer a consumer an experience that will provide comfort or a change of pace, something exciting. Repeat purchases and proper product placement on grocery shelves become critical to grow the business.

The basic steps to introduce a food product in a retail market:

Safe process evaluation- assure that the food product and process are safe

Packaging and labeling- protect and promote the product with correct information for consumer

Facilities and equipment- safe and efficient production facilities

Permits and regulations- submitted paperwork to regulatory agencies

Food safety and security- systems to assure the safety of food in all stages of production

Feasibility study- Preliminary analysis to determine if the idea is viable

Working business plan- Helps lay the roadmap for a new business.
Liability protection- It is required by grocery stores and distribution companies ($3 million.)

DEVELOPING AND USING A BUSINESS PLAN

John Pike, University of Illinois Extension

What is a Business Plan? Defining a business plan can be difficult, as the definition might be different for every organization. The definition should be clear but flexible. Thus, a business plan, in its simplest form, will usually define where you want your business to be within a certain period of time (usually 5 years) and how you plan to get there. A business plan is a written document describing the nature of the business, the sales and marketing strategy, and the financial background, and containing a projected profit and loss statement. Most experts have referred to or defined a business plan as a road map that provides directions so a business can plan its future and helps it avoid bumps in the road. The time you spend making your business plan thorough and accurate, and keeping it up-to-date, is an investment that pays big dividends in the long term. A business plan is as important for starting a business as blueprints are for building your house. When starting a new business, writing a business plan is an important first step to getting started.

Uses of a Business Plan: Business plans are developed for many purposes. One company or business might be looking for funding from investors. Another business or company might be looking for a loan from a bank. Your business or company might just need to plan out the company's strategy to make sure it is successful. Whatever the case, every business or company needs a business plan.

1. **Setting Goals and Objectives**: The business plan for an early-stage business or company is, in any ways, a first attempt at strategic planning. An entrepreneur should use a business plan as a tool for setting the direction of a business over the next several years, and a plan should set the action steps and processes to guide the company through this period. Many entrepreneurs say that the pressures of the day-to-day management of a business leave them little time for planning, and this is unfortunate because, without it, an owner runs the risks of proceeding blindly through the rapidly changing business environment. Of course, writing a business plan is not a guarantee that problems will not arise. But, with a thoroughly thought-out plan, a business owner can better anticipate a crisis situation and deal with it up front. Further, a well-constructed plan can help avoid certain problems altogether. All in all, business planning is probably more important to the survival of a small and growing business than a larger, more mature one.

2. **Performance Benchmarks**: A business plan can also be used to develop and document milestones along your business's path to success. In the heat of daily operations, you may find that taking an objective look at the performance of your business is difficult. Often, the trees encountered daily obscure your view of the forest in which your business operates. A business plan can provide you and your

management team with an objective basis for determining if the business is on track to meet the goals and objectives you have set.

3. **Internal and External Communications**: Your business or company's story must be told and retold many times to prospective investors, potential and new employees, outside advisors, and potential customers. The most important part of the story is the part about the future, the part featured in a business plan. Your business plan should show how all the pieces of your business or company fit together to create a vibrant organization capable of meeting its goals and objectives. It must be able to communicate your business/company's distinctive competence to anyone who might have an interest.

MARKETING STRATEGIES

Marketing strategy is a method of focusing an organization's energies and resources on a course of action that can lead to increased sales and dominance of a targeted market niche. A marketing strategy combines product development, promotion, distribution, pricing, relationship management, and other elements; identifies the firm's marketing goals and explains how they will be achieved, ideally within a stated timeframe. Marketing strategy determines the choice of target market segments, positioning, marketing mix, and allocation of resources. It is most effective when it is an integral component of overall firm or business strategy, defining how the organization or business will successfully engage customers, prospects, and competitors in the market arena. As the customer constitutes the source of a company's revenue, marketing strategy is closely linked with sales. A key component of marketing strategy is to keep marketing in line with a business' overarching mission statement.

Let us look at the 4 P's of marketing as follows:

- **Product:** This needs to standout. Why should a customer buy the farm's product over someone else's product?
- **Price:** The sale of the product has to cover production costs, plus a little more if the farm is to be profitable.
- **Place:** Where the farm's product is marketed has much to do with how it is marketed. The marketing strategy has to be patterned to the style of the market. Successful marketing tactics used in a tailgate farmers market would not typically be successful in a gourmet produce market setting.
- **Promotion:** This is an important part of marketing that can mean the difference between success and failure of the marketing plan.

MARKETING SKILLS AND DIRECT MARKETING

- Presenting product: Packaging has much to do with marketing a product. Many ideas on packaging can be seen by just walking through and looking at the variations in packaging found in the local grocery store. This is one way to differentiate the farm's product from the competition.
- **Feasibility:** Packaging does add to product costs and is not necessary for all markets.
- **Fancy vs. Basic:** Packaging should reflect the market.
- **Identity:** Packaging provides an opportunity for small farm operators to put the farm name or logo on the product. This helps to establish an identity for the farm. Customers can then begin to look for the farm's products.
- **Communication:** Packaging can also include special recipes, information

tags, and other such items that can help to market the product.
- Painting or decorating the produce baskets can help to entice customers to buy your products.

Direct Marketing: When a farmer sells commodities in a traditional marketplace the main concerns are producing the crop, selling it for a good price, and then getting paid. In direct marketing farmers have these same concerns plus the added responsibility of marketing.

FARMERS MARKETS: This is the fastest growing form of direct marketing. Producers considering participating in a farmers market need to be fully aware of the time commitment required in this type of market. In addition to the long morning preparation for the market, there is the time spent working at the market in whatever weather conditions Mother Nature brings that day.

PICK YOUR OWN (PYO): PYO marketing has been very popular with the public for a long time. Some of the pros and cons of this market

ROADSIDE MARKETS: Roadside markets are one of the most identifiable forms of agricultural marketing. Roadside stands should look neat and clean with fresh, ripe produce. In a roadside operation, you are expecting people to make a quick judgment about your operation. You want them to stop and buy your product. However, if their initial reaction is that your operation is shabby, they may believe that you are a poor operator and produce a poor product.

COMMUNITY-SUPPORTED AGRICULTURE: CSAs are a new and fast-growing direct marketing venture. In this system, members purchase shares of the farm's harvest and also accept production risks. As the crop matures, it is harvested and divided up among the shareholders. Shareholders get a fresh supply of produce and support local agriculture. This is known as urban-rural linkage.

Shareholders have input into what is grown, and how it is grown. Fees are paid in advance. This guarantees the farmer a market for everything produced; the crop is sold before it is planted. The advanced payment creates working capital for the farm operation.

CSAs allow better off-season planning, since the farmer will know in advance what to grow, how much to plant, and how to grow it. CSAs help to spread out risks, since everyone from the farmer to the shareholders share in the good and bad times. Shareholders sign a contract acknowledging the risks to anticipated yields. CSAs do provide some cost reduction in labor costs, since the shareholders (customers) help with production/harvesting.

WHOLESALE MARKETING

Direct marketing is not for everyone. Wholesale marketing can be a satisfactory alternative to direct marketing for small farm operators.

Unlike some of the direct markets, wholesale marketing requires you to take your product to the retailer who will sell your product. Some retailers often will require your product to meet certain specifications including packaging.

ADVERTISING AND PROMOTION

The mission of advertising and promotion is to attract customers and for them to by the farm's products. Some helpful hints on developing a successful ad campaign include:

- **Identify business:** The first step is to identify what kind of business the farm is, who the customers will be, and what

will be provided. This can help to narrow down and focus the advertising.

- **Personality:** The small farm operator will need to develop an image for the campaign that fits their individual personality. The auto dealership ads on television are a great example of how each dealer reflects their personality. Business owners have been very effective in their own ads at marketing their company's products.
- **Promotional campaign:** The small farm operator will need to develop a promotional campaign that can be lived up to and fulfill the promotional ads.

Attractive, "catchy" signs can help to attract customers to your marketplace. Attractively displayed produce will draw customers to your stand at farmers markets. Unusual/uncommon items such as red raspberries and cut flowers will also attract customers to you, who will buy other items from you while they are there.

PRODUCT PRICING

Determining what to charge customers for a product is one of the most difficult aspects of marketing. Coming up with the right price is one of the most important parts of marketing. Incorrect pricing affects customer acceptance and business profitability. Some thoughts that could help to determine the right price include:

- **Break-even mark:** Small farmers need to know how much it costs them to produce a unit of their product. This provides them with the break-even cost of the product. The unit price should reflect an amount above the break-even mark. This additional income above costs will contribute to a profit for the farm business. The farm should be in business to make money.
- **Competition:** The prices charged by competitors for a comparable product is at the top of the list for price determination. Products need to be competitively priced if they are to be sold unless a difference in the product can be demonstrated.
- **Quality:** Very often customers associate price with quality. If the product price is high, it is assumed that the product is of high quality. Often premium quality can command a premium price. There is no substitute for quality. However, if a product is priced too low for sale, customers will sometimes make the assumption that it is priced low due to low quality.

CUSTOMER SERVICE

Customer service is almost never discussed in relation to farm-related businesses; however, good customer relations are as important in a small farm direct market as it is in a downtown supermarket. Here are a few guidelines on developing good customer relations:

- **Farm business:** The long-range success of a business will depend largely on how the owner of the farm and the employees treat customers. The farm's survival depends on retaining current customers and attracting new ones.
- **Customer service:** A sound customer service policy reduces loss of current customers, helps to gain new ones, and makes current ones happier.
- **Data:** Research shows that caring about customers can reduce the number of lost customers by two-thirds.

The basic building blocks of customer service include the following:

- Find out what the customer needs or wants
- Build a relationship with your customers
- Always help your customers
- Always keep the work areas neat and clean
- Recognize customers at once

- Tell customers what you can do, not what you can't do
- Angry customers should always be handled with
- The owner/operator should always set the example for customer relations
- All employees should be familiar with the customer service policy of the business
- Remember the customer is always right.

Some reasons why customers leave a business:

- 1 percent die
- 3 percent move away
- 5 percent shop where friends live
- 9 percent for competitive reasons
- 14 percent product dissatisfaction
- 68 percent indifferent attitude of staff
- 96 percent of unhappy customers will not complain for these reasons:
- Usually don't get any results
- Believe that you don't want to hear complaints
- For every complaint, 24 do not complain

Dissatisfied customers can ruin a business. Unhappy customers will relay their unhappiness to 9 or 10 of their friends. Usually, 12 percent tell more than 20 people about how unhappy they are about the business and 30 percent will stop buying from the business. Owner need to be thankful for complaining customers. They alert you to problems that have been overlooked.

- Most of these complaining customers can be turned loyal again.
- Actually, 95 percent of these customers will remain good customers if you act quickly to resolve the problem.
- Once the problem is resolved, these customers will tell 4 or 5 friends about their experience.
- It is estimated that it costs 5 times more to get a new customer than it costs to try to keep an existing customer.

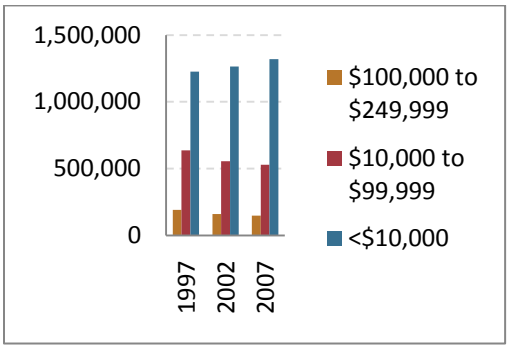
Some common ways customers are offended include the following:

- Failure to acknowledge their presence
- Not listening attentively
- Not knowing the merchandise
- Being verbally abusive
- Shoddy work
- Arguing with them
- Failure to keep your word
- Policies not enforced

What do Small Farms and Small Farm Operators Look Like? Results from the 2007 Census of Agriculture

Kevin Barnes, USDA-NASS
Virginia Harris, USDA-NASS

The 2007 Census of Agriculture shows an increase in the number of small farms in the United States. The U.S. Department of Agriculture (USDA) defines small farms as farms with $250,000 or less in sales of agricultural commodities. In 2007, there were 18,467 more small farms counted than in 2002. It is important to understand the attributes and characteristics of these farms and the role they play in the changing structure of the farm economy.



Growth trends

The number of small farms counted in the 2007 Census of Agriculture was 1,995,133, or 91 percent of all farms. Overall small

farms increased 1 percent from 2002 to 2007, but the increase was not seen in all sales classes. Farms with sales less than $10,000 increased while farms with sales of more than $10,000 decreased. U.S. farms with sales between $100,000 and $249,999 decreased by 7 percent.
Operators of farms with the value of agriculture commodities sold between $100,000 and $249,999 are younger on average than other farm operators and are more likely to be full time farmers.

Operators of farms with sales of less than $10,000 typically work off farm and have a higher percentage of women operators.

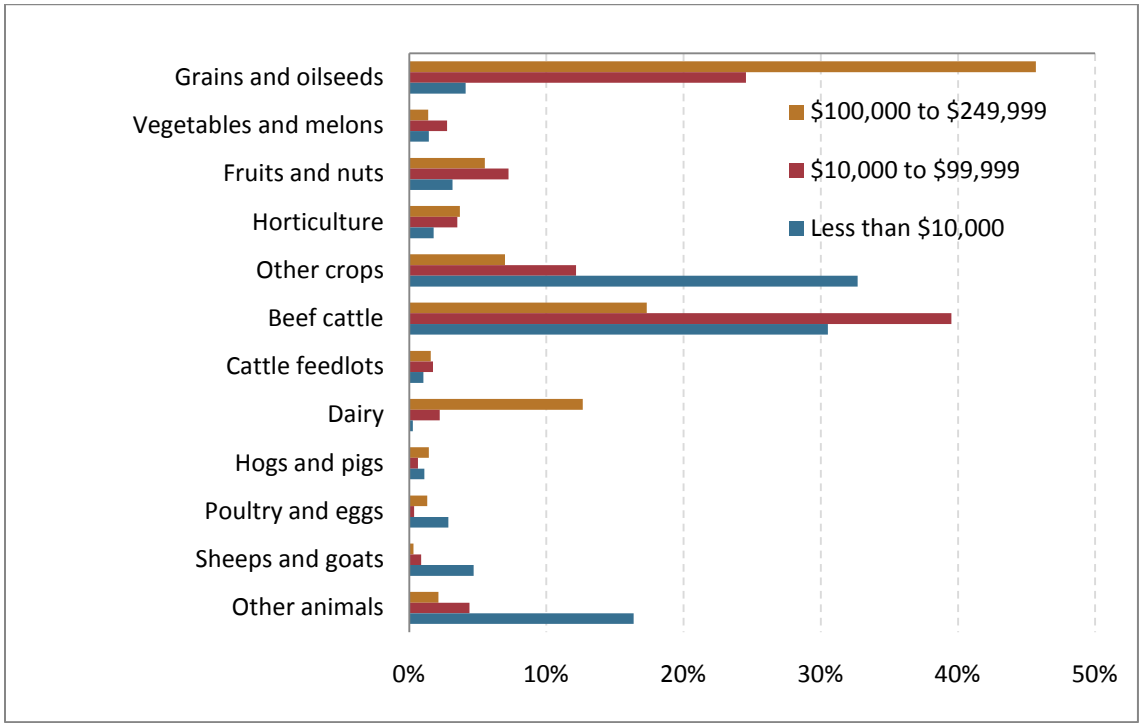
Operators	All farms	Sales $100,000 to $249,999	Sales $10,000 to $99,999	Sales < $10,000
Average age	57.1	55.1	57.9	57.6
% 65 and older	30	25	33	31
% Not white, not Hispanic	7	3	6	8
% Female	14	5	10	18
% who work off the farm	65	49	65	71
% on farm less than 5 years	10	5	8	13

How do they compare?
Small farms account for 91 percent of all farms in the United States and more than half of the land in farms. Most of small farms generate less than $10,000 in sales of agricultural commodities but account for the larger share of direct sales to consumers.

Operations (Percent of Total U.S.)	Sales $100,000 to $249,999	Sales $10,000 to $99,999	Sales < $10,000
All farms	7	24	60
Land in farms	16	22	18
Sales	8	6	1
Government payments	15	13	18
Value of land and buildings	12	20	24
Cropland harvested	16	14	4
Cattle inventory	13	22	9
Horse inventory	6	22	65
Hay	17	33	18
Organic sales	12	9	1
Direct to consumer sales	15	31	11

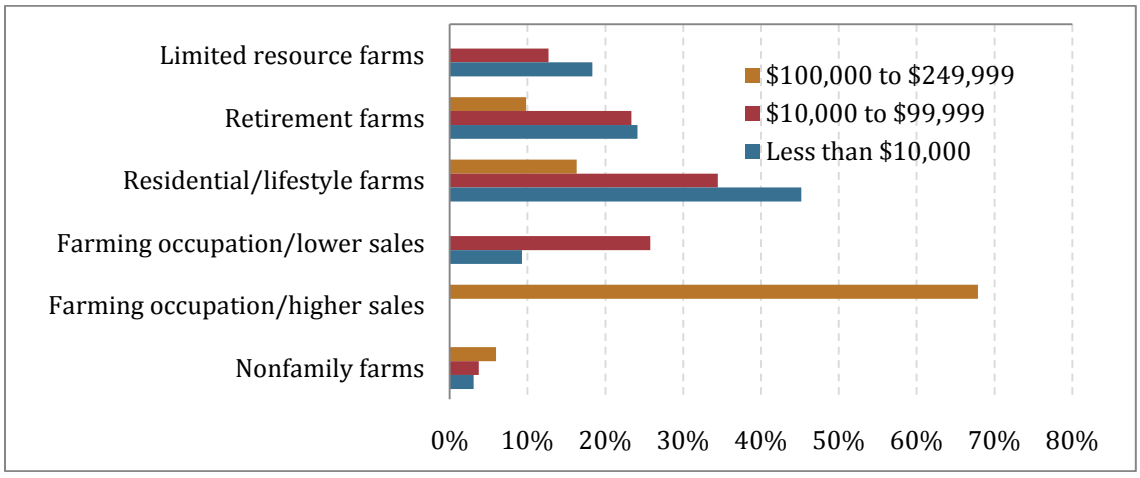
What is produced?
Almost 50 percent of the farms that sold between $100,000 and $249,999 of agricultural products in 2007 specialized in grain and oilseed production followed by cattle and milk production. The largest category of production for farms with sales between $10,000 and $99,999 was beef cattle and calves, followed by grains and oilseeds. More than half of farms that produced less than $10,000 were beef cattle or “other crop” farms. This category

includes hay farms and farms where no single crop comprised more than 50 percent of sales.



The majority of small farms generating less than $10,000 dollars in sales of agricultural products are residential/lifestyle farms, retirement farms, or limited resource farms.

Small farms where the operator's principal occupation is farming, typically generate gross sales between $100,000 – $250,000.



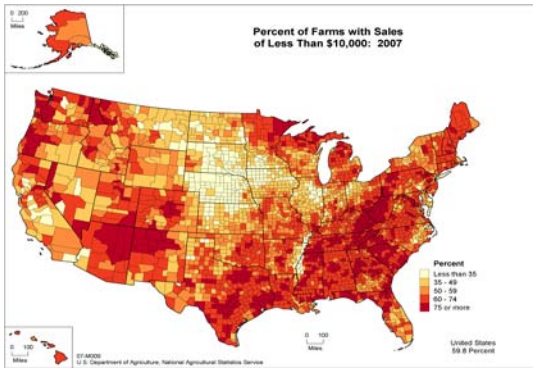
Economic Characteristics of Small Farms

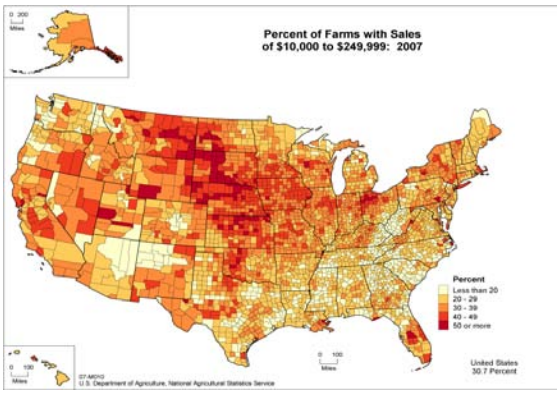
	All farms	Sales $100,000 to $249,999	Sales $10,000 to $99,999	Sales < $10,000
% land owned	62%	56%	68%	85%
% with internet access	57%	64%	56%	53%
Average size in acres	418 acres	1000 acres	386 acres	126 acres
Average government payments received	$9,523	$10,812	$4,428	$4,270
Average net income of operators	$29,117	$48,706	$6,811	$4,650
% operators reporting positive net income	47%	84%	68%	27%

Top 5 Sales Categories by Group in 2007

Rank of sales category	All farms	Sales $100,000 to $249,999	Sales $10,000 to $99,999	Sales < $10,000
1	Grains and oilseeds	Grains and oilseeds	Cattle	Cattle
2	Cattle	Cattle	Grains and oilseeds	Other crops
3	Poultry and eggs	Milk	Other crops	Grains and oilseeds
4	Milk	Fruits and nuts	Fruits and nuts	Horses
5	Fruits and nuts	Other crops	Milk	Fruits and nuts

Where is Small Farms Located?
Nationally, 91 percent of all farms fall under the USDA small farm definition, which are places that sell less than $250,000 in agricultural products annually. The percentage of small farms is highest in the South and New England. There are 14 states where 95 percent or more of all farms are small. West Virginia has the highest percentage of small farms. There are only five states where less than 80 percent of all farms are small- Delaware, Nebraska, North Dakota, South Dakota, and Iowa.





Food business entrepreneurs

Food business entrepreneurs sometimes have romantic notions and unrealistic expectations of running a food business. For example, a cheese processor installed Mexican tile on the walls in their facility because they liked the look but disregarded the regulations on clean ability. A gourmet cookie baker purchased packaging material in bulk for internet sales which were never realized. The baker was over-extended and started using lower quality ingredients which resulted in a drop off in local sales of their cookies. Lacking a proper business plan or not following a plan, processors may react to situations without considering long term results. All successful new businesses require careful planning and management. Because businesses that produce and sell food can have a direct effect on public health and safety, they face increased government and consumer scrutiny. Food businesses must comply with numerous government regulations, making their development, operation and success even more difficult. Individuals interested in starting a food-processing business must gain a general understanding of business management issues before beginning a food-processing business. Additional and more specific information should be gathered from qualified professionals. Furthermore, food processors are very creative types that can get overwhelmed with the demands of operating a business.

SESSION 3B
Engaging a Multicultural Farming Audience (Part I)

Bringing Non-English Speaking Minority Growers into the Fold

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Topic area: Track 3: On-Ramps That Work for Everyone (Meeting the Needs of Small, Beginning, Underserved, and Diverse Farmers and Ranchers)

Introduction

Communicating with non-English speaking small farmers covers more than language issues, it encompasses language as well as other salient aspects of culture. These issues are contained in the following self-described steps to working with underserved cultural groups:

1. Find a trusted point of contact within the targeted community
2. Gain the trust of the clientele in question
3. Strive to assess the needs of the community
4. Demonstrate a long-term commitment to the goals of the community of growers in need of services
5. Find a common language for communication, usually the predominant language of the group in need of help
6. Take risks in serving the community

Situation

The California Central Coast Regional Water Quality Control Board (CCRWQCB), in Administrative Region III, launched a watershed-based agricultural waiver program that requires farmers who irrigate and sell their products to drastically reduce or eliminate water discharges and significantly lower pollutants content in

water that leaves the property or percolates into underground water.

In addition, all growers were required to attend a 15-hour short course (3-hour programs over 5 weeks) that took participants through a series of presentations that covered surface water and underground water contamination, identification of major pollutants in the watershed, nutrient and pesticide management, and sediment management and control. One session was reserved for a site visit to illustrate and showcase water quality related issues and proposed solutions.

These regulatory requirements aim to decrease nutrient and pesticide movement from the farm to waterways and bodies. This simple declaration of intent on the part of the participating growers to reduce pollutants is neither simple nor easily achievable.

The risks stemming from non-compliance escalate from simple citation to heavily levied financial penalties. Compliance is technical and personal. Technically speaking, growers have to brush up on their knowledge of practices and choose those that optimize production, suitability, and environmental stewardship. They must show a personal commitment to achieve the goals of pollution abatement as would be demonstrated by the health of the local streams and water bodies and the bays. They must document their efforts in the form of a farm plan.

Specialists from University of California Cooperative Extension, the Natural Resources Conservation Service (NRCS), Regional Water Quality Control Board (RQCB) and other cooperating agencies conducted the short courses.

A region-wide effort was initiated to include all growers in the area. With funding from the CCRWQCB, an English-based water quality short course (known as Water Quality Short Course) and an accompanying manual were developed. Initially, only English-language classes were offered, but it soon became clear that the many Spanish-speaking growers needed to be added if any significant impact were to occur.

Once the courses were in full speed, it became apparent that the only major non-English speaking group left out was an ensemble of 80 immigrant ethnic Chinese growers located in Santa Clara County, who operate numerous small-scale farms and greenhouses that produce Asian vegetables and flowers.

The Small Farm Program was positioned to lead the collection of agencies to bring the growers in compliance by designing, enrolling, and delivering a water quality short course.

From technical needs to community needs. Following the most logical outreach principle we started by adapting the widely successful short course series. However, it immediately became clear that implementing it would require a different approach. The majority of the growers spoke Chinese only. Many have avoided interaction with regulators as much as possible. Many had limited technical training and information to successfully comply with the required regulations.

What started as technical pursuit soon meandered into a sociological undertaking that shifted from an information-based to community-based endeavor. It soon turned into a study in cultural contrast and professional endurance that surpassed the challenge of information transfer. In this case study we report on the work we

undertook to bring a group of ethnic Chinese growers into the fold of the farming community in a California coastal county.

Like most businesses, ethnic Chinese growers were opposed to what they saw as overbearing governmental intervention. Past unhappy experience with country-of-origin authorities intensified their anxiety.

The first step was to get the community of the growers to buy in into the concept. However, the threat of additional regulations and fines scared the growers into considering relocating to other regions or abandoning farming and seeking other lines of work. Our first task became then to convince the community leadership that this interaction with regulatory agencies does not have to be punitive if we emphasized the educational goals. We had to find a common language to present and understand the situation. We placed emphasis on the goals of the effort to fulfill community needs while contributing to overall good of the region.

We also highlighted the practical side of the course. All sessions would be hands-on exercises held on participating volunteers' properties. We also assured the community that no representatives of regulatory agencies would participate in the training. This was important for it emphasized the separation between education and regulation enforcement entities.

Program deliverables:

By following the six steps rule, as outlined above, we assembled a team of extension workers and organizations and were able to deliver a water quality program in Chinese. Short course sessions addressed the impact of farming practices on the health of the watershed. We explained how irrigation practices can affect water movement, both surface and underground flow. We also related water movement to fertilizer and pesticide management and their combined impact on local steams, estuaries, lakes, and the ocean. Aside from these general concepts, participants learned to evaluate existing greenhouse irrigation systems for irrigation distribution uniformity, fertilizer application uniformity, pest management practices, and roof runoff management. The highlights of the sessions were the participation of the attendees in collecting the data used for the calculations and comparisons among different sprinkler types for uniformity. The attendees were also introduced to the concepts of fertilizer injection time, travel time, and flush time, techniques to help them curb excess water and fertilizer use.

The language barrier posed a serious impediment to communicating technical information. In addition, it was challenging to teach best management practices, especially irrigation and fertilizer management, to people who have had little or no training in these areas. Our classes emphasized three qualities a grower must possess: Good overall management practices with emphasis on good pest management, good irrigation uniformity, and adequate knowledge of plant water/nutrient requirements.

By securing funds from the local water district, we were able to provide first volunteers with the incentive of complete analysis of their well water, soil, and plant tissue. In addition, a technical consultant evaluated pump efficiency and piping fitness in selected operations.

In addition to hands-on practices, we provided each trainee with kits to evaluate nitrate and pH levels in their operations.

Final word

This was the first water quality training conducted in Chinese. All ethnic growers in the affected area participated. Over 77 percent completed 12 hours or more of the required 15 hours. The majority of the

ethnic Chinese growers registered with the RWQCB for the waiver program. This experience brought this community closer and encouraged it to be more open to other opportunities for education and training. It also ended what few mainstream growers considered "exceptionalism," or preferential treatment, of marginalized groups. A more open dialogue has been established between this community of growers and the small farm program in the county.

As result, this community of growers and their leadership signed on for expanded educational activities that include several sessions of pest management, food safety, postharvest training, land open space use, and labor management.

Engaging a Multicultural Farming Audience: Singing the Songs of Home in a New Land

Gladys Gary Vaughn, Office of the Assistant Secretary for Civil Rights, U.S. Department of Agriculture
Larry Laverentz, Refugee Agricultural Partnership Program, Office of Refugee Resettlement, U.S. Department of Health and Human Services, Washington, D.C.

Introduction

The United States is one of many countries that provide refuge to individuals who have been persecuted, or who have a well-founded fear of persecution, due to their race, religion, nationality, membership in a particular social group, or political opinion; this includes approximately 65,000 refugees and 20,000 asylees annually, representing 50-60 countries of origin.

Refugee status is removed when a person becomes a U.S. citizen. Refugees are eligible for citizenship after 5 years in this country. Many refugees come from countries where agriculture is the cultural foundation. That is both the good news and the bad news: The good news is that most often these individuals desire to continue farming; the bad news is that because they come with rural agricultural backgrounds and have lived in refugee camps for a number of years, most often they have limited educational backgrounds—literacy and numeracy—thus limited exposure to social and technical advances.

The Partnership

In November of 2004, USDA and the Department of Health and Human Services (HHS) entered into a historic agreement. The purpose of this memorandum of understanding (MOU) was to coordinate policies and activities designed to improve economic conditions of refugees and other low-income individuals engaged in farming and rural entrepreneurship. The MOU created a vehicle for USDA's Office of the Assistant Secretary for Civil Rights and HHS' Administration for Children and Families to work collaboratively toward a common goal and for common purposes.

The Office of Outreach assumed the lead role for USDA. The Office of Refugee Resettlement and the Office of Community Services assumed the lead role for HHS. A work-plan—New Growth Partnerships—and an interagency working group guided the work of the MOU. USDA's representatives on the working group included at various times staff from the following agencies: Risk Management Agency (RMA), Agricultural Marketing Service (AMS), Food and Nutrition Service (FNS), Cooperative State Research, Education, and Extension Service (now the National Institute for Food and Agriculture [NIFA]), Rural Development, Economic Research Service, National Agricultural Statistical Service, Agricultural Research Service, Farm Service Agency (FSA), and the Office of Outreach; field staff from these agencies also participated.

Also critical to this effort were state offices for refugees, faith-based groups, foundations, refugee ethnic organizations, and other community-based organizations that have helped to build the farm and business capacity of refugees, facilitating resettlement and transition to a new home. Among these are: Catholic Charities, International Rescue Committee, W.K. Kellogg Foundation, Wallace Center at Winrock International, United Hmong Association, Mercy Corps Northwest, Coastal Enterprises, Fresno Economic Opportunities, Community Food Security Coalition, the Wholesome Wave Foundation, Minnesota Food Association, and the New Entry Sustainable Farming Project.

Over the almost 5-year period of the MOU, New Growth Partnerships has led to many innovations, including an HHS-funded 3-year grant program for individuals admitted as refugees or granted asylum in the United States. The Refugee Rural Initiative, as it was first called, has evolved into the Refugee Agricultural Partnership Project (RAPP). USDA has invested approximately $6.2 million in efforts to assist refugees, including USDA competitive grants awarded to organizations participating in RAPP. Agency colleagues, in RMA, AMS, and NIFA in particular, have helped facilitate refugee resettlement by helping to ensure access to their agency's resources.

The major groups served under the Refugee Agricultural Partnership Program in recent years are the following:

It is important to note that refugee producers are among the fastest growing segments of the small farm sector. For example, the 2007 Census of Agriculture identifies Fresno, CA, as the area that has the highest production of fresh fruits and vegetables. This producer population is represented by a significant number of Southeast Asian refugees or former refugees.

Much has been learned from this exciting, innovative, and inspirational project that helps transform lives and communities—both rural and urban. Project efforts continue to demonstrate that agriculture can help make a place called home in a new land—in fostering economic stability for families, increasing the availability of familiar food, promoting the consumption of fresh, locally grown fruits and vegetables, helping to reclaim land in urban areas for ecological regeneration and food production by establishing community gardens, and even reducing crime in selected sites where blighted areas are made productive.

The innovative strategies used in RAPP have also been instructive for USDA program and policy—e.g., micro-financing, individual development accounts, doubling the value of food coupons (Supplemental Nutrition Assistance Program (SNAP), Women, Infants and Children (WIC)), increasing the availability of electronic benefit transfer (EBT) machines at farmers markers so that small, immigrant and refugee farmers can participate in the benefits of WIC and SNAP, and using sustainable agriculture as a profitable and socially-responsible strategy for small and limited-resource farmers.

Lessons and Understandings

Following are several lessons and understandings that have emanated from RAPP, and which are used to help reframe and direct its efforts.

	ASIA
Somalia (Bantu) Burundi	Burma (Karen and Chin) Bhutan

Societal and Organizational Interest: There is a growing interest among people and organizations in this society regarding the impact of agriculture on nutrition, health, and the environment. This phenomenon enhances the opportunity for the small farmer to respond to market demand.

Holistic Approach: Success for the small farmer depends on the ability of local organizations to provide and connect support involving production, financing, accessing land, training/technical assistance, and marketing.

Complexity of Agriculture: Agriculture is more difficult and complex for refugees than originally envisioned in part because of language and cultural barriers. This impacts negatively on achieving short term measurable outcomes.

Training and Technical Assistance: Training and technical assistance must be tailored to the needs of each group and community due to cultural and language differences and the unique characteristics of that community in terms of its resources, markets, potential partnerships, etc.

Up Front Client Assessment: Because clients often do not realize the demands and complexities of farming or gardening, up front discussion should occur on client goals, capacity and expectations, and project requirements and demands.

A Way of Life: Refugees, like other farmers, engage in agriculture not solely or primarily because of income but because it offers a way of life that involves elements such as independent decision-making, outdoor environment, and self reliance.

Marketing: Farmers markets are the most common market outlet for refugee farmers; however, other outlets such as institutions and restaurants offer good profit potential but have greater requirements in terms of harvesting, transportation, cold storage, and consistency of quality and quantity, etc.

Cooperation Challenge: For the purpose of scaling-up or expanding to new markets, planning and obtaining cooperation among producers are often necessary because of economy of scale issues and preference of buyers or brokers not to work with multiple producers.

Demand for Fresh and Local: The broadening demand for "fresh and local" by institutions and others has created market opportunities for the small farmer.

Urban Growth: Development related to the expansion of cities or suburbs takes land out of production, raises the costs of production, and precludes capital investments on land.

Micro-Loans: The opportunity for farmers to scale up is limited by the non-availability of micro-lending programs for purchasing supplies and equipment.

Community Gardens: Multiple benefits that include better food and nutrition, supplemental income, adjustment to new communities, and relieving community tensions are derived from community gardens.

Food and Nutrition Service Programs: FNS Programs that include SNAP, WIC and Seniors Coupons are sometimes under-utilized at farmers markets and other outlets…access are complicated by language and culture and different state and/or local procedures.

Habitation: Refugees live predominantly in urban areas for reasons that include being part of ethnic enclaves and the greater availability of services; and if they are

engaged in farming, commute to land up to 25 miles from their residences.
Off-Farm Income: Like the majority of American-born farmers, most refugees have off-the-farm income for reasons that include medical insurance.

New Land Production: The first year of preparation and production of newly tilled land for gardening or farming can be likened to re-modeling an older home in that extra work is required to realize its potential benefit.

Meat Processing Plants: Some refugee groups have been drawn to smaller towns in order to be employed at meat processing plants—often there are inadequate institutional capacities in these towns, including specific refugee services.

Decisions on Dependency: Decisions on when and how to make refugees responsible for the tasks associated with farming, marketing, and other activities are difficult, and situation-specific.

Potential Impact: Programs of agriculture and that connect to food, nutrition and health can be a catalyst for change in a community.

Institutional Change: Working to promote institutional change is sometimes the most effective way to help refugees and other community members.

Organizational Mission: Project effectives can be limited by organizational mission and capacity.

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SESSION 3C
Understanding the Small Farm Audience, Needs Assessment, and Evaluation of Program Impacts

Challenges and Successes in Documenting Small Farm Program Impacts

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In today's economy, the major challenges to small farmers, in terms of demonstrating their success as well as documenting program impacts, will be based mostly on a few critical factors, not limited to access to capital, and effective management and reporting practices. Inadequacy in funding and the inability to gain access to credit or capital has been found to constitute a roadblock in successful program development. Poor management practices and inadequate performance management makes it difficult to collect, analyze, and document program impacts emanating from small farm accomplishments.

The need to report meaningful impacts has never been greater, particularly in these tough economic times where resources are shrinking. To become successful in securing badly needed resources, small producers have to demonstrate the efficiency and effectiveness of their farm operations.

Good outcomes supported by quantifiable impacts make it easier and attractive for funders to continue their support of a given program. This is comparable to going to a bank and asking for a loan. If you have assets and a good debt-to-asset ratio, you will have little or no challenges getting a loan. In this same analogy, if you get funded, and are not able to deliver in terms of documenting measurable impacts from project outcomes, it will be very difficult to get the same grantor, or any grantor, to fund your future projects. Some of the pitfalls to be avoided include poor management plan, lack of clear and measurable goals, selecting inappropriate impact indicators to track milestones and program accomplishments, and reluctance in building a strong partnership effort.

Gaining access to capital is a big challenge for small farmers. To increase small farmers' chance to be more successful in securing funds, it has become very important to showcase success stories to those who are listening and looking for a few good ones. Program success translates to additional program funding. Funding agencies have also begun looking for good monitoring and evaluation plans as part of the proposal.

Here are a couple of examples related to good impacts: 1) reporting an increase in farmer's net income or increased sales in quantifiable terms when you report the dollars gained; 20 farmers attending a workshop on catfish production, and out of this number, 8 have adopted this production. After a year of collective catfish farming (from 2006 to 2007), these farmers have enhanced their net farm income from $40,000 to $48,000 each. It is very important to accurately document impacts. 2) Approximately 200 farmers attended a workshop in value-added enterprises. As a program manager, if you can track the successes of these farmers to find out how many have adopted this enterprise, and making gains all the way to the bank, that becomes an impact. If you were expecting 100 farmers at a conference and 200 showed up, it is highly unlikely that you will report this as an impact. It is an output that you can categorize as accomplishment. It is the knowledge gained and how this gained knowledge is translated into quantity that makes this effort very successful.

Documenting small farm program impacts in quantifiable terms is not an easy task, but it is a remarkable opportunity to showcase program success and how good program development, management and performance monitoring makes it more attractive to secure additional funds.

The logic model illustrated below on small farms is one of several examples of evaluation methods whereby program accomplishments can be documented. It is very important to utilize the best evaluation method that will be less cumbersome in demonstrating accomplishments of a particular project under investigation. It is important to consult with an evaluation expert prior to project evaluation to ascertain that an appropriate evaluation tool is being utilized in evaluating a specific study. Using inappropriate evaluation tool to evaluate a study is certainly setting up a recipe for disaster. For a successful program evaluation, it is important to ensure that an appropriate evaluation tool is utilized for project work. In conclusion, if one is to end up with a successful program outcome, it is important to utilize the most appropriate tools designed to ensure that program outcomes can be measured successfully in quantifiable terms.

Small Farms: Increasing Marketing Skills and Farm Viability

Situation

Small producers face many challenges such as facing an agricultural economy where success is dependent on excelling in all areas of management. For many producers, marketing is the most challenging management area to address. Market planning and training programs will be developed that will be able to deliver nationally as a means of producing alternative enterprising , improving marketing skills and product profitability.

Inputs

Financial Resources
- Federal
- State
- Some provide funding that contributes to research, extension and education.
- 2003: $6.4 Million

Land Grant Systems and other Partners

Human Capital:
- Program Leaders
- Researchers
- Extension Specialists
- County Educators
- Community-Based Organizations Practitioners
- Technicians
- Para-professionals
- Stake Holders
- Volunteers

Activities

Basic Research

- Improved crop cultivars and on-farm improvements to improve production

Applied Research

- Create and analyze strategies for converting to organic production and related farming techniques that will act as backstopping and support for farmers.[1]
- Analyze production, management systems, and marketing channels utilized by small farms and develop strategies to enhance their viability [2]

Marketing

Small Farm Programs and other marketing enterprises provide funds to enhance and strengthen marketing activities

Protection

Develop best management practices and technologies to minimize the presence and effects of pests

Production

Develop and assess organic production technologies

Education[3]

- Educational programs help small farmers with marketing
- Develop a National Safe Tractor and Machinery Operation Certification Program for Youth
- Train Agricultural Professionals to provide risk management and crop insurance assistance

Extension[3]

- Marketing Conference for Limited Resource Farmers in California
- Agricultural Marketing Outreach Workshop

Outputs

Outcomes

Short

- Create marketing strategies for small farmers
- Diversify farming production by involving farms in organic food production
- Increase farmers' knowledge and skills regarding marketing their products
- Increase farmers' knowledge on increasing the viability and quality of their farms and products
- Increase the number of pest management practices and technologies

Medium

- Change the way small farmers managed their farms and marketed their products
- Increase the number of productive farming marketing strategies
- Increase the amount and diversity of farming products available to commercial retailers and consumers
- Decrease the population and effects of pests

Long-term

- Increased profitability for plant and animal products
- Increased production and labor efficiency
- Increased net value added by agriculture
- Increased farm management skills

Assumptions – 92% of all US farms are small farms (based on income requirements), these farms own 75% of the total productive assets in ag., and receive 41% of all ag. receipts. Without specific help, these small farms will not survive.

External Factors – Policy changes regarding large farms, large farm bias, general public's value for small farms, product pricing decisions, 1996 FAIR Act, increased use in farming technologies, low commodity prices, lack of capital to expand operations, high input costs, and inaccessibility to key market information

Source: CRIS Accession Numbers: 0188208[1], 0188704[2] ; http://www.csrees.usda.gov/nea/ag_systems/sri/smallfarms_sri_time.html, Retrieved on June 21, 2006[3]

Risk Management Training Needs of Small and Minority Farmers in Tennessee and Alabama

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INTRODUCTION

Small farmers have been facing a number of challenges including low product prices, high input costs, and growing competition. Agriculture in the United States is becoming concentrated with fewer large farms being dominant (Tegegne et al., 2004). Given this, it is critical that small farmers use different risk management strategies (Coble, 2000); diversification of farm operations represents one strategy. Small farms are those with annual gross sale of less than $250,000 (USDA, 1998). The Economic Research Service (ERS, 2002) classifies small farms into the following sub-groups:
(1) Limited Resource; Operator household income under $20,000; farm assets under $150,000; and gross sale under $100,000
(2) Retirement; Operator's principal occupation is retired
(3) Residential/Lifestyle; Operator's principal occupation is "other"
(4) Farming occupation/Lower sales; Operator's principal occupation is farming and farm sales are under $100,000
(5) Farming occupation/Higher sales; Operator's principal occupation is farming and with farm sales of $100,000 - $249,999

The following table shows farm size distribution and selected characteristics based on the 2007 Agricultural Census. It can be discerned that average farm size in both states are much lower than the average for the United States. The same holds true for the other Southern States where such farms are concentrated.

Farm Size Distribution and Selected Characteristics, 2007

	UNITED STATES	TENNESSEE	ALABAMA
Number of Farms	2,204,792	79,280	48,753
Average Farm Size (acres)	418	138	185
Average Sales per Farm ($)	138,427	34,222	93,127
Principle Occupation (%)			
Farming	45.08	38.91	39.83
Other	54.92	61.09	60.17
Average Farmer Age (years)	57.1	57.8	57.6
Farms by Value of Sales (%):			
Small (up to $4.9K)	46.12	58.91	54.03
Medium ($5K-$50K)	31.41	33.60	33.13

Large (Above $50K)	22.46	7.49	12.84
Farms by Land Area (%):			
1 to 9 acres	10.56	7.33	6.92
10 to 49 acres	28.13	37.08	33.26
50 to 179	29.96	37.32	36.53
180 to 499 acres	16.71	13.68	15.61
500 acres or more	14.64	4.59	7.68

Source: 2007 Census of Agriculture.

OBJECTIVE

Our objective is to assess risk management training needs of small limited resource farmers in Tennessee and Alabama using focus group meetings and mail surveys, respectively, and provide training for farmers using feedback received from them.

KEY FINDINGS

Farmers in both states indicated their concern about risk and the need for risk management training. However, the vast majority of the farmers are interested in training workshop focusing on marketing and value-added agriculture. The training delivery method preferred by farmers is in-depth training offered by experts. Most farmers chose weekdays over weekends for the training. The farmers also indicated that they need more information on assistance available from USDA agencies. Some training workshops have been conducted and more are planned.

DIVERSIFICATION AS A RISK MANAGEMENT TOOL: AN EXAMPLE

The use of pigeonpea as a niche crop for small farmers has some characteristics such as:
(1) high value nutritious, legume crop that can be produced both for human consumption and forage; (2) growing demand for the product in the world market; and (3) it has nitrogen fixing capability, can grow on marginal land and is heat tolerant. Research involving pigeonpea underway at Tennessee State University shows its potential as niche crop.

SUMMARY AND IMPLICATIONS

To manage risk small farmers have to be willing to explore production of alternative niche crops and work with researchers to establish their profitability. There is also need to recognize that to maintain a niche, quality and price competitiveness has to be maintained.

Small farmers should also develop communication networks and participate in such networks to enhance exchange of information on various issues, including adoption of alternative enterprises and marketing channels. Recordkeeping is critical for farm business planning and financial analysis.

ACKNOWLEDGEMENT

USDA-Cooperative State Research, Education, and Extension Service – 1890 Capacity Building Grant Program

Farmers who participated in the focus group meeting and mail survey

Graduate Research Assistants

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Starting From Scratch—Working with Residential/Lifestyle Farmers

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The U.S. Department of Agriculture divides small farms into five types:

- **Farming Occupation with High Sales –** Operators report farming as their major occupation, with sales between $100,000 and $249,999.
- **Farming Occupation with Low Sales –** Operators report farming as their major occupation, with sales less than $100,000.
- **Residential / Lifestyle** – Operators report major non-farming occupations.
- **Retirement –** Operators are retired.
- **Limited Resource –** Sales under $100,000 with low household income for the 2 years counted. Such farms are not counted under the other four categories.

Whom do you work with most? Which are you most comfortable working with? Generally, extension educators and agency staff are most comfortable working with the first two categories, the Farming Occupation farms. There are some good reasons for this preference—these farmers generate more sales and usually produce more food and manage more land per person than farmers in the other three categories. So, per hour of his or her time, an educator will likely have more impact on a community's economic activity, food production, and land management by working with Farming Occupation farms (or with large farms); these days, demonstrating impact is an important part of educators' jobs.

But look at the numbers.
However, it is also important to work with the other three categories of small farms. In recent years the USDA has rightly focused on redressing the historic neglect of Limited Resource farms. But Residential/Lifestyle and Retirement farms remain relatively neglected by USDA and state and local farm support infrastructures. Though they do not produce as much economic impact as other categories, *Residential/Lifestyle and Retirement farms together account for more than half the farmers in the United States today, and they are the fastest growing category of farms.* Clearly, this farming sector is worthy of agency and educator attention.

Who are Residential/Lifestyle and Retirement farmers?
The USDA description appears clear-cut—they are people who farm but whose

primary income is from another occupation, a pension, or social security. This economic definition is part of the picture, but for most educators Lifestyle farms have another important aspect: they are either farms where the farmer does not have much or any agricultural experience, or they are farms that are different from the majority of agriculture in the area.

Are they the future? In numbers, but also in preserving knowledge of agriculture and in starting new farms. False permanence in these categories.

Farms can and do move between categories. While many Lifestyle farms remain secondary enterprises, others become successful Farming Occupation farms and significant contributors to the local economy.

Challenges

- Because of their different backgrounds and enterprises, Lifestyle farmers have different information needs than traditional clients. This challenge is complicated by the fact that their information needs differ even within their group.
- Many have very limited practical agricultural knowledge, both in terms of production and marketing; their questions may seem trivial or basic compared to those from "farming occupation" farmers or large commercial farmers.
- They can pick up some very unconventional ideas from the Internet or from books, and they don't have the knowledge base to distinguish between potentially promising ideas and unworkable ones.
- Their economic goals can be quite different from those of Farming Occupation farmers – many are less interested in maximizing gross sales or even net income, as long as the farm does not lose money.
- Because their enterprises are completely new they do not have any economic records of their own upon which they can base their business planning.
- Because of other jobs they may not be able to attend meetings during regular working hours.
- Many don't understand rural communities; they don't know land management laws and customs or how to interact with their neighbors and community. Agriculture educators tend to be more comfortable providing technical assistance than teaching social skills.

Rewards

- Many Lifestyle farmers are open to new ideas and advice from educators.
- Lifestyle farms can be innovators, introducing new crops or techniques that are adopted later by others. For example, Lifestyle farms have been important in getting wine-production, local foods, and value-added farm enterprises started in the upper Midwest.
- Many are willing or eager to do research (usually this is good, but it can lead to some misinformation, when coupled with their lack of experience and practical knowledge – see challenges above).
- They are usually very appreciative of help from extension.
- Some bring strong business, communication, or other skills to their enterprises.
- Most want to "do things right," especially in the realm of environmental stewardship, even if it costs more money.
- In some areas, especially near cities, they help build community by supplying

goods and services valued by non-farm residents, such as local foods and agri-tourism destinations.

And some other challenges…

- Because these farmers tend to have low status in rural politics and communities, helping them usually does not build much political support for extension.
- Because their sales are usually very low, working with them does not result in high economic impact numbers for educators to report.

Outreach strategies

- Take advantage of the resources that have already been developed for these groups, including the "Living on the Land" curriculum and alternative enterprise resources, such as those at the Missouri Alternatives Center and the new Begin Farming Ohio Web site.
- Partner with nonprofit organizations that work with alternative agriculture; some have developed programming for exactly this audience.
- Rural living days often draw many people, but they are a lot of work to put together.
- Find ways of offering information outside standard working hours, through the Internet and through evening or weekend meetings.

I mainly want to talk about Networking point:

- Because Lifestyle farmers come from many different backgrounds and bring different types of expertise, they may be able to help each other—if you can help them find each other to establish a network.
- Networks can be virtual communities, but also geographic and social component. Home-brewing network very strong support
- Incorporate rural leadership development into small farm programming.

Working with Lifestyle/Residential farmers offers new challenges for agricultural educators in the field. These farmers are a growing sector of agriculture and rural land management, and they need support from educators and agencies to farm in a way that benefits both them and their communities. Educators can apply a number of strategies to working with this group, but they also need recognition from local, state, and federal leaders in agriculture that serving this group of farmers is of value.

SESSION 3D
Sustainable Livestock in a Small Farm System

Bedded Pack Management System: Case Study

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Animal manure management is a significant challenge for many small dairy farms. To be sustainable, animal manure systems must be environmentally sound, socially responsible, and economically profitable for the farmer. One manure management system in limited use for dairy cows is a bedded pack. A bedded pack management system (BPMS) is defined here as a covered barnyard and feeding area that holds a variety of dairy cattle, storing their manure through the accumulation of an unturned

bedding of dry material for later use as a

nutrient amendment.

The purpose of the case study was to determine whether a bedded pack management system is an effective alternative to the traditional suite of best management practices: manure storage, barnyard runoff management system, and improved feeding area/heavy use area protection. This case study evaluated the practical elements of BPMS design, the labor, management, and economic implications of a BPMS that was implemented on a farm participating in the Agricultural Program of the New York City Watershed Agricultural Council.

With its positive environmental benefits, it was believed that the BPMS might provide a larger economic return than a liquid manure system, due to a significantly lower capital cost (versus a liquid manure storage and transfer system, concrete barnyard, and feeding area), a reduction in farm labor, and enhanced cow comfort. This system, in conjunction with seasonal grazing, was expected to provide for economical feeding and management of dairy cattle. It was expected that odors associated with the bedded pack would be significantly less than with a liquid manure system.

The BPMS was implemented on the case farm to resolve significant environmental issues, specifically potential farmstead runoff of nutrients and pathogens due to the year-round outdoor housing and feeding of cattle, wet field conditions when manure was applied, and limited access to fields during winter.

BPMS Planning and Description

The facility was designed to house a 50-cow milking herd for 6 months, approximately mid-November to mid-May, depending on the weather. The farm's average weight per cow was 1,000 lbs. The facility was planned as a natural wood-sided structure with a steel-framed, fabric-covered roof structure. The facility was designed to allow the animals adequate feeding and resting space and to provide room for 100 percent of 6 months' manure and bedding storage. Manure was to stay in place where it landed on the pack. The farmer was to add layers of straw bedding as needed to allow the animals to stay clean and comfortable. Large round bale forage feeders were to be relocated when necessary to evenly distribute the manure and bedding around the structure

The size of the facility was based on information provided in the "Dairy Housing and Equipment Systems" Natural Resource, Agriculture, and Engineering Service (NRAES) 129, pg 334; Penn State Dairy Housing Plans (NRAES-85, pg 75); and University of Minnesota compost barn Web site. These sources indicated that the square footage of resting space per animal in a bedded pack facility should be 80-100 sq ft. The 50 ft x 100 ft facility was designed to provide space for 50 mature dairy cows.

Subsequent to the planning of this structure, NRAES published "Penn State Housing Plans for Milking and Special-Needs Cows" (NRAES-200, pg 42), which calls for providing a bedded pack area of 125-150 sq ft per animal, along with a feed alley.

Caution: Decreasing the square footage per animal increases the need to use bedding material. With the high cost of bedding material, producers may be inclined to under-bed their facility, which can result in sloppy bedding conditions and filthy cows.

Manure and Bedding Accumulation

Ten-foot high side walls were intended to provide for 6 feet of manure and bedding storage, with the additional height to accommodate ventilation windows. Manure accumulation in the 50-dairy cow facility over a 6-month period was estimated to be approximately 12,510 cu ft, based on "Livestock Waste Facilities Handbook, Midwest Plan Service-18, Table 2-1, pg 2.1. This computed to 2.5 ft of storage depth in a 5,000 sq ft facility. Since the level of the bedded pack continually rises with the addition of bedding material and manure, the waterers needed to rise along with the pack; the farmer would add wood cribbing as needed.

BPMS Labor, Management, and Economic Study

An assessment of the labor savings due to the bedded pack system were done by doing a pre- and post-assessment on the case farm and by comparing the case farm with a similar sized dairy with similar characteristics, but using a tie-stall daily manure spreading system. These two assessments showed no significant labor savings and economic benefits with the BPMS. Milk production was approximately 15,000 lbs per cow per year in the mixed herd until the second year on the pack when it jumped to 17,000 lbs per cow per year. While numerous factors could have resulted in this increase, it is believed that the cows performed better during the winter months while in the BPMS than when the cows were exposed to adverse weather conditions.

Straw as the bedding amendment was costly and was a significant expense to the dairy. The BPMS solved many environmental issues on the farm, but at a large annual bedding cost.

BPMS Bedding Usage and Pack Compost Analysis

The farmer added bedding to the pack every other day using a rear discharge manure spreader. By maneuvering the spreader, the farmer was able to bed the facility mechanically, without having to manually pitch the bedding. The cows remained in the barn during the bedding process and would move to the freshly bedded area with each pass of the spreader. The farmer was generally able to bed the facility with three passes. The farm used 20 tons of straw bedding prior to the BPMS to bed the cows during winter, 66 tons in Year 1 and 66 tons in Year 2. The farm used 892 pounds of bedding per animal unit (#/AU) prior to the BPMS, 2,970 #/AU in Year 1 and 3,415 #/AU in Year 2. Less bedding was used the year prior to BPMS implementation to a large degree because the cattle were not confined to the pack and manured much of the time off of the pack. The increased use of bedding in Year 2 may have been due to the fact that there were more cows on the pack, versus young stock.

The bulk density and carbon-to-nitrogen level of the material proved to be well suited for composting (On-Farm Composting Handbook, NRAES 54). The moisture level of 70 percent was higher than a more optimum level of 60 percent,

but this could be managed by turning the windrows.

BPMS Summary and Recommendations

The Bedded Pack Management System proved to be an excellent environment for the cattle and provided the intended environmental benefits. The bedding material held the cow manure in the facility and was an excellent composting material.

While there were no large labor saving advantages of the BPMS on the case farm, farms that have labor intensive tie-stall barns may experience more labor savings than the case farm.

The large amounts of bedding required by the BPMS indicate that limiting the use of the facility to half of the year during inclement months, then keeping animals on pasture, is necessary to make bedding costs manageable.

Reducing bedding cost is important if the BPMS is to be sustainable. Two strategies are to reduce the cost of bedding or to reduce the use of bedding material. Home-grown bedding material will reduce the transportation cost associated with purchased straw and, if produced economically, could reduce bedding costs. For farms that don't raise annual cereal crops, the harvest of mature hay, such as Reed Canarygrass, may be a viable option. Another alternative to reduce the net bedding cost would be to sell the composted bedding material.

Organic farms that place a higher value on compost, due to the relatively high cost of organic fertilizers and their increased emphasis on soil health, will be better able to justify the additional cost of bedding material. Research to quantify the economic benefits of adding compost to hayfields and pasture or to determine the positive environmental effects of applying compost versus liquid manure would be helpful in justifying the additional bedding expense of the BPMS. There is a trend of organic dairy farms to produce small grains to feed their cattle as a strategy to reduce purchased feed costs and to better cycle nutrients on the farm. In addition to providing nutrients for cattle, the small grains can also supply the bedding needs of the animals.

A strategy to reduce bedding usage would be to utilize the system as a continuous composting barn, rototilling the waste, and periodically removing some bedding material. The savings in bedding with a composting barn strategy would be offset by increased labor and machinery cost to stir the bedding. In many of the composting barn studies, the bedding material used was wood shavings. It is unclear whether processed straw can be effectively stirred.

Another option to reduce bedding costs would be to design the BPMS to include a concrete feed alley, thereby reducing the amount of manure deposited on the pack. The downside is that manure removed from the feed alley may need to be stored in a liquid manure storage. The capital expense of implementing a solid and liquid system might be economically prohibitive.

Housing two classes of animals in a BPMS leads to uneven elevations of the pack, as the bedding requirements of these animals are generally different. Over time, the difference in bedding usage creates a slope between the two housing areas that is, in effect, unusable space. This idle area requires a larger floor plan in the barn, increasing building costs.

The lack of a feed pad or bunk in the case farm example makes it more difficult to maximize dry matter intake of feed and forages. Farms with seasonal herds calving in the spring will not be as negatively

affected by a potentially lower dry matter intake of forages on the pack, since the cows will be in later stages of lactation when housed in the BPMS. Animals in later stages of lactation and in the dry period will also produce less manure that is in a more solid form, reducing the bedding requirement.

Farms with significant herd health issues that can be transferred between animals, especially through their manure, might not want to implement the BPMS since the animals are fed on the pack. Raising the round bale feeder above the pack, or using a feed alley will reduce this risk.
Finally, the bedded pack may eliminate, or significantly reduce, the hoof and leg problems associated with housing dairy cattle on concrete and other hard surfaces. Animal longevity and productivity would be expected to provide economic gains that were not quantified due to the limitations of this case study.

Summary
The Bedded Pack Management System can be significantly less in its initial investment than a traditional suite of BMPs. The whole farm planning team needs to evaluate specific farm characteristics and goals to determine if the BPMS is the most appropriate BMP for the farm.

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Grazing Education in Indiana with Purdue Extension Service

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Intensive grazing of animals has become more commonplace in Indiana. This process allows producers to get more production out of increasingly valuable land. This approach to utilizing the ground as efficiently as possible is being adapted by many small producers and a few larger ones. Grass-fed beef is also a niche market that has developed in our state. Grazing takes producer talents in several areas, including fertilization, watering systems, species management, livestock management and marketing. Research work and experience is needed to help these producers. Purdue Extension educators, working with the assistance of the Natural Resources Conservation Service (NRCS) grazing specialists conducted a program entitled “Grazing 102” for 40 producers. The program featured programming on two farms in Fulton County, university specialists, veterinarians, producer panels, and industry representatives in a 2-day workshop. Participants were on actual farms that practiced rotational grazing. The program was held September 5–6, 2008; it was the third such event held in Indiana in the past few years.

The program included the following topics:

- Why Rotate?
- Grazing Economics
- Matching Winter Livestock Needs with Forage Quality, Using Alternative Feeds
- Roots, Leaves, Sun, and Grazing
- Pasture Walk on Two Local Farms
- Water…You want how much? Where?
- Pluses and Minuses of Different Forages
- Pasture Fertility
- Fencing
- Health Issues Associated with Grazing Animals
- Animal Handling and behavior for graziers
- Forage Identification
- Producer Panel featuring beef, dairy and goat graziers

Of the producers responding on a survey at the conclusion of the program, 93 percent reported the program motivated them. Also, 60 percent said that over 80 percent of the information was usable. All the respondents stated that they intend to try some of the techniques discussed, including water handling improvements, extending the grazing season, improving fencing, improving their animal handling techniques, and practicing better herd health techniques.

Two people commented that it was "One of the best programs I had ever attended." Another stated, "The presenters were excellent, very sincere and helpful."

Of the respondents to a survey done 9 months after the workshop, 88 percent stated they have implemented changes based on information learned at the workshop. The other 12 percent plan to do so.

Several changes listed were: changed some species of forages and made fencing improvements. Most respondents plan to do further changes in forage species, watering systems, nutrient testing and soil sampling.

Eighty-eight percent of the survey respondents also agreed that implementing concepts from the workshop has improved my net income from grazing animals.
A few years ago, the Great Lakes Grazing Conference was an annual 2-day conference that promoted management-intensive grazing to farmers in the Great Lakes states. This conference moved from annually between Ohio, Michigan, and Indiana. For 2 years this conference was held in Shipshewana, IN, which is the heart of one of the largest Amish settlements in the country. The conference created a passion in the farmers of northern Indiana for management-intensive grazing and a core group of farmers and educational agency partners came together to create the Northern Indiana Grazing Conference held annually in Shipshewana on the first Friday in February. The 1-day conference features educational sessions highlighted by a panel of graziers. Commercial vendors are also incorporated in the conference.

Through the years, this conference has consistently had and attendance of over 500 people. This past February, the attendance exploded to over 800 during the daytime program, with approximately 200 new attendees coming to the evening program. Featured in this program were producers who spoke about their own operation including subjects such as organic, dairy, goats, calf, and poultry production. A unique part of this program was a youth panel on "Roles and Responsibilities on the family farm." Several government agencies were partners in these programs.

Managing Natural Animal Grazing Behavior for Improved Pasture Sustainability

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Managed grazing has long been celebrated for improved forage quality and quantity. Multiple species grazing has many potential benefits for rough, weedy, or brush covered pastures. If we examine the goals of managed grazing we would expect to:

- Increase yields of high quality forage; Maintain pasture stands for long periods of time;
- Meet a large portion of livestock nutritional needs from forage; and
- Reduce need for stored and purchased feed.

Meeting these goals requires an understanding of animal behavior and controlled animal feeding habits.
As we investigate species behaviors, horses have a preferred grazing height of 2-4 inches. Their upper and lower incisors permit closer grazing. Treading and hoof action may also damage forages. These factors contribute to overgrazing, poor pasture quality, and weed growth. Efficient grazing heights for sheep are 2-6 inches. This demonstrates the need for managing forage stubble residues to prevent overgrazing. Cattle on the other hand prefer a taller sward of 4-10 inches tall to increase their bite efficiency. Goats have a narrower muzzle than sheep and a split upper lip which adapts them for selecting plant parts. They are top-down grazers, preferring tall feeds and seed heads; they prefer browsing over grazing, and rough and steep land. Goats can be considered renovators and be useful to control certain weeds and unwanted vegetation. They can return a mature pasture to a vegetative, higher quality stage of production. Does this mean that cattle and goats will not overgraze? Certainly not! Managed grazing needs the watchful eye of the pasture manager and 3-4 inch minimum of pasture residue remaining when animals leave a paddock. Paddock size should be small enough for uniform grazing by the animals in the paddock within a given grazing interval.

Different forage preferences show sheep consuming many weeds or forbes, even when other high quality forages are available. Goats prefer brush or browse plants, including brambles, mulberry, honeysuckle, and multi-fora rose, for example. Cattle prefer more coarse, longer forage compared with sheep. Horses and cattle tend to have considerable ungrazed material near dung piles and urine spots. Sheep or goats will graze much of this material.

Mixed-species grazing can often improve pasture utilization, productivity, and control problem weeds and brush without the need for chemicals. This practice takes advantage of different grazing habits and species forage preferences. Reduced parasite loads can occur with mixed-species grazing or alternating species in a grazing program. Some predator control may be achieved from larger animals protecting the smaller ruminants. Economic returns can be greater from more pounds of livestock produced per acre. Generally in a good pasture system 6–8 goats consume as much as a cow or 5-6 sheep. Heavy brush-browse systems will support 9–11 goats, 6–7 sheep, or a cow. With mixed-species grazing 1 or 2 goats or sheep could be added per cow grazing to improve pasture utilization. This uses the different feeding habits to manage pasture and optimize animal production.

Impacts of multiple-species grazing include:

1. Positive Environmental Impact – By using proper vegetation management (rotational grazing) and well balanced

pressure on vegetation (weed and brush control), we can protect our natural resources, reduce soil erosion, improve water infiltration by maintaining ground cover, and forage root growth.

2. Livestock Productivity Impact – Feed quality and quantity improvement through proper forage management techniques.
3. Producer Economic Impact – More pounds of livestock produced per acre. Diversity of livestock sales throughout the year.
4.

Managing natural grazing behavior and comingling grazing species has numerous advantages to pasture sustainability. However, certain challenges or limitations exist that deserve consideration. Increased operation cost is a factor in the overall farm budget. Added costs for livestock, feed, fencing, and necessary housing and animal handling facilities may be needed. Nutrient requirements are different between animal species. Copper levels in cattle mineral can be toxic if fed to sheep. Additional labor may be needed for the operation. Increased knowledge and management skills are necessary for successful mixed-species operations.

Pasture Pork: Considerations for Small and Limited Resource Livestock Producers

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Introduction: According to the most recent US Agricultural Census (2007[9]), North Carolina ranks as the second-largest hog farming state in the country. The total value of swine production in 2006 was near $2 billion and accounted for 7,932 jobs (North Carolina Pork Council 2006[10]). The majority of the hog industry in the state is concentrated in the southeastern region of the state, particularly in Duplin, Sampson, Bladen, and Robeson counties. The hog industry in the state has grown on two fronts. Since 1980, increase in the total population of hogs was accompanied by contracting with large-scale vertical integrators (producers, packers, processors linked from farrowing to packing to the retail counter). The other increase has been sustainable production of a smaller number of hogs sold through alternative markets.

Pasture-based animal production systems offer a great opportunity for small scale producers. First, for a diverse, integrated farm, livestock can recycle nutrients used to grow the livestock feed, forages, legumes, and food crops typical of healthy, diversified cropping systems through manure, and hogs will readily eat weather-damaged crops, crop residues, alternative grains, and forages (Gegner, 2004[11]). Second, compared to other systems, these operations offer relatively low start up costs (no confinement houses, no lagoon, etc). Third, the systems are often tied to a specific premium market. Therefore, the Cooperative Extension Program (CEP) at North Carolina A&T State University (NC A&T SU) has one of its primary focuses an educational program targeted to socially

[9] USDA, National Agricultural Statistics Service. (2009). *2007 Census of Agriculture: United States*. http://www.agcensus.usda.gov/Publications/2007/Full_Report/usv1.pdf

[10] North Carolina Pork Council. (2006). *Economics and Marketing: Hog Production in North Carolina -2006.* http://www.ncpork.org/pages/economics/economics_and_marketing.jsp

[11] Gegner, Lance (2004). *Hog Production Alternatives.* http://attra.ncat.org/attra-pub/PDF/hog.pdf

disadvantaged farmers who operate free-range ("pasture-based") swine farms across the state. Given the array of environmental, business planning and marketing issues associated with raising pigs humanely on pasture, our current educational program has focused on the following: (1) promoting communication among producers and Extension and USDA agency staff about the environmental management of raising hogs on pasture; (2) developing farm business and management skills of producers and (3) strengthening collaboration among producers to market niche pork products. Establishing an educational program addressing these topics requires the cooperation and assistance of appropriate USDA agencies. This project has supported a partnership between NC A&T SU faculty, collaborating USDA agency partners and other institutions to help socially disadvantaged farmers maintain successful hog production systems.

Problem Statement: The livestock industry is under considerable scrutiny with regard to environmental stewardship. While lack of understanding and emotion by the general public may contribute to this scrutiny, animal production has the potential to negatively affect surface water and groundwater quality, soil quality and air quality. Identifying and implementing best management practices remains a challenge for many socially-disadvantaged hog producers. Too often, the impact of an individual operation on the environment varies with animal concentration, weather, terrain, soils, production and waste management strategies, and numerous other conditions. In order to tackle these issues, one of our goals was to develop a partnership with USDA-Natural Resource Conservation Service (NRCS) to identify and demonstrate the best management practices that protect soil, water, and air quality associated with pasture-based hog production, train socially disadvantaged swine producers on these practices, and promote participation in USDA programs to implement these practices. Several tasks were performed to meet this objective:

- Grower school sessions on conservation practices that farmers can implement to reduce potential damage to soil and water quality on farms and surrounding areas were offered.
- "Model farms" showcasing practices that protect environmental, soil, and food quality were developed for demonstration of best management practices appropriate for swine producers.
- Pasture walks at each demonstration site were planned to share best management practices information with farmers and agency partners.
- Farmers were engaged to increase participate in services and programs offered by USDA-NRCS.

Consumers increasingly express concern about how their food products are produced, processed, and regulated. Concerns about food safety, animal welfare, and environmental management have driven the demand for niche pork products. Unlike their larger contract farmers, a growing number of small-scale producers in our state are eager to meet this demand. For a time, a number of small-scale hog farmers received earnest profits from selling their product to a California-based company (Niman Ranch) until it ended operations in North Carolina. Under the company's program, farmers followed strict animal husbandry guidelines that include treating animals humanely (on pasture and deeply bedded pens), feeding them all-natural feeds, and allowing them to mature naturally without the use of growth homes or antibiotics. Raising livestock for a national marketing channel, like Niman Ranch, gave farmers a competitive advantage over corporate producers

because they provided a unique "natural" product that appealed to an upscale market. Although this market is no longer available, small-scale producers must think strategically about how they plan to market their natural pork product in local channels, but also national channels, when available. One approach of our educational program is helping socially disadvantaged famers realize the benefits of working collaboratively as a group to pull resources together, coordinate contacts, schedule hog sales, and establish the critical mass to meet this demand. This is critically important to small family farms because they have little access to markets and are not price-competitive with a system represented by a concentration of hogs being produced under contract for the wholesale pork market. And at the retail level, buyers must feel they will have a steady and consistent supply of product if they are to provide broader support for natural pork product. If these farmers continue to raise hogs, they must look for alternative production and marketing practices. Socially disadvantaged farmers are often less likely to succeed in this manner because of ingrained agricultural traditions, unwillingness to assume risk or to work as a group. Therefore, it becomes critical that other approaches to working with this population emerge to offer a sustainable alternative.

Methods: In order to focus on the environmental management challenges facing producers, the project funded three demonstration sites for the first year and added three sites during the second year. Two sites were in Granville County, and one site was in Franklin, Johnston, Sampson and Duplin counties. Each of these sites represents different production and marketing questions and different environmental challenges. All of them provided a context for producers, NRCS staff and CEP representatives to discuss aspects of improved outdoor hog production with producers and project team. Having the opportunity to observe the impact of animals at different stocking rates and management schemes within different contexts is essential as producers and regulators work toward a shared understanding of ways of addressing outdoor production issues. For socially disadvantaged farmers to avoid regulatory sanctions and sustain farming operations over the long-term, adopting environmentally sound best management practices (BMPs) is paramount. The farmers in each site would have to assess how their operation's environmental strengths and weaknesses

The project team (consisting of University Extension faculty, project consultants, NRCS staff and county Extension staff) made an initial visit to possible farm sites under consideration for the project. The team documented general farm observations, including the noticeable challenges the project could address, the unique aspects of the farm, and conversation issues. During this initial meeting, farmers shared their goals for the site and in turn, the team discussed the major aspects of the program and what would be accomplished at the demonstration site. Farm sites were selected after the initial meeting. A second meeting was held with farmers to discuss the recommended demonstration practices. With the farmer's consensus, an action plan was developed that outlined an approach to address some of environmental issues for the farm (e.g., maintaining proper vegetative cover, pasture rotation, overgrazing, managing waste) and also incorporated BMPs in compliance with the technical standards proposed by NRCS. Once the plan was drafted, the project team and farmers reviewed the plan, shared input, and agreed on how the plan would proceed. In conjunction with the farm plan, GPS and other mapping and benchmark information were used to

establish the demonstration farms. Site improvement materials were purchased for each site and a consultant was hired to initiate the project at the site. The project team visited demonstration farms quarterly to evaluate maintenance and functioning of the practices, and engage farmers in a dialogue about practical solutions to commonly manifested problems associated with hog production outdoors. Once the improvement were made, a pasture walk activity was held to engage local producers, Extension faculty, NRCS staff, and other stakeholders discussed environmental challenges famers face in outdoor hog production and showcased how the farmer has improved his operation through fencing alternatives, watering, forage species and managing ground cover and proper pasture rotation.

Along with environmental issues, producers also need help deciphering current marketing options. In this objective, an ad-hoc committee of producers was formed to examine organizing as a cooperative to efficiently supply and market their meat to respective buyers. The CEP at NC A&T SU and Heifer International provided ongoing technical assistance to the ad-hoc committee as they considered the idea of working together collectively as a cooperative. The USDA Rural Development Center's Cooperative Programs (CP) provided business planning assistance to CEP. With the farmers' and CEP's input, CP developed a draft survey questionnaire to survey producers at two summer meetings in the first year the project. The goal of the survey was to determine producer interest in the cooperative, knowledge and acceptance of cooperative principles and practices, and production and marketing information. Based on the survey responses, there was significant interest among producers in forming a cooperative. Respondents voiced their willingness to market most of their hogs through the proposed cooperative and invest capital in it. With this approval, the ad-hoc committee began drafting the legal documents in preparation for incorporation. They also attended a series of organizational planning workshops, hosted by CEP's grower school sessions in 2007. By the end of the first year of the project, a cooperative was established with 25 members. They immediately began meeting regularly to coordinate hog shipments for its members for respective buyers.

Outcomes:

Environmental Challenges: Outdoor swine production offers an excellent opportunity for small farmers to market a niche product. However, it is not without challenges, especially to the environment. For the OASDFR project, some of the challenges faced by the farmers for which the project team tried to address included:

- Modulation of stocking rates
- Rotation of pastures to avoid ground cover depletion and nutrient build-up
- Rotation of hogs with a plant crop that could be removed (sold from the farm) to help avoid excess nutrient build-up
- Removal of hogs from wooded areas that already had excess nutrient buildup
- Fencing animals out of wetlands area with drainage into streams, ponds and other waterways to preserve water quality

Small farmers usually have limited acreage with which to raise their animals, so educating farmers about the possible negative environmental impact of high stocking rates (number of animals per acre) and continuous housing (no rotation) was vital to this project.

Continuous "grazing" of hogs in a pasture/paddock results in the depletion of ground cover which allows for top soil loss and the movement of nutrients. Removing

animals from a pasture or paddock prior to ground cover depletion allows for forages and grass levels to be maintained (a 75% ground cover minimum for pasture swine is the NRCS recommendation developed partially through work with this project).

Nutrient build-up is a problem when animals are housed on limited acreage over many years. Animal-crop rotation allows for use of the nutrients the hogs deposited (as fecal matter, spilled feed, etc.) as fertilizer, saving in crop input costs. And, when the crop is removed from the farm (sold), nutrient build-up is delayed.

Several farmers we worked with for this project were housing animals in wooded lots. Wooded lots do not allow for cropping that could remove nutrients, so the nutrient build-up in these areas was dramatic. Educating farmers about alternative shade, shelter and cooling to help them remove animals from wooded areas or use the wooded areas sparingly to avoid build-up was an important part of meeting this environmental challenge.

Allowing animals into (or too near) wetland areas allows for possible contamination of rivers, ponds, lakes and streams as water moves through the natural system. Working with demonstration farmers, proper management of wetlands areas was exhibited to help avoid this problem.

Throughout the project, NRCS and other USDA programs were recommended to help producers meet the environmental challenges of pasture pork production.

Animal production challenges: Many of the small farmers the OASDFR project worked with were new to pasture pork production. Challenges for the project coordinators in helping farmers with animal production issues included educating producers about the importance of business skills such as record-keeping and helping them develop systems that worked for them, assisting farmers with creating cost-efficient but effective diets, discovering and applying for USDA programs that could help them, breeding and genetics and meat quality.

Marketing/business opportunities: There is an opportunity for producers of value-added and premium pork products to realize sustainable profits at local and national level; however, they must be willing to develop the necessary marketing skills. Forming a cooperative of small-scale hog producers has helped to some degree because it has made it easier for buyers to attain the quantity of hogs they need to meet their demand. The cooperative successfully negotiated a deal to sale the live animals to a national grocery chain (Whole Foods Market, Inc.) with the assistance of NC A&T SU CEP staff. In other aspects, the association has coordinated regular shipments of hogs to the slaughter plant; secured additional small markets for members who are unable to sell to Whole Foods; maintained close contact with these buyers to ensure needs are being met; increased earnings of individual members; held monthly business meetings; and enforced quality production standards at the farm level. In 2008, the cooperative has seen income of up to one million dollars through cooperative sales and they have been able to sell on average 70 hogs each week to different buyers. One of the merits of transporting jointly is evident: producers can pool their hogs to make full loads and thus decrease per-unit shipping costs. Future activities may include purchasing feed and other supplies on a joint basis to achieve cost savings, as well as hiring a part-time manager.

Marketing challenges: Buyer standards do not remain constant over time so the cooperative had to make adjustments to meet changing standards. In order to maintain high pork quality for its buyers, the cooperative has required its members

be Animal Welfare Approved, a recognition recently lauded by the World Society for the Protection of Animals as having the highest animal welfare standards of all third-party certifiers. National retail marketers, Whole Foods Market Inc. and Niman Ranch, Inc., have their own third party verified certification program. It remains a challenge to enforce certification programs because limited resource producers need clarity on the requirements and the cost of the certification is expensive for the farmer. The requirements are generally strict and many famers find the additional documentation cumbersome. Other challenges include: maintaining a sufficient volume of high-quality hogs for buyers throughout the year; coordinating the scheduling for members on a consistent basis, and helping farmers to capitalize on other marketing methods (CSAs, direct sales via the internet or at a farmers' market, etc.). In rural areas, there are few marketing and distribution channels for farmers to access.

Concluding Remarks: There continues to be considerable interest among socially disadvantaged producers, industry types and university faculty to establish best management practices for pastured-based animal production systems and meet the growing demand for pastured pork. Continued education about production and marketing options is needed. Establishing solutions requires attention and involvement from both private and public groups and individuals. For this successful project, communication was a critical component, allowing growers to have access to one-on-one technical assistance as they addressed some of the environmental (production) and marketing challenges in pastured-based hog production.

SESSION 3E

Farm Succession and Estate Planning with Personal Coaching for Participating Families

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Educational Objectives

The average age of farmers in the Pacific Northwest is 57+ years old and increasing. Many producers do not have farm succession plans; over 60% die without a will.2 For agriculture to remain viable in the area, farm families need succession planning education to determine the future of their farms. The objectives of this program were to help participants gain the knowledge and skills needed to improve

intergenerational communication, identify appropriate resource people, and create farm succession plans that provide for the best interests of all farming generations.

Program Activities

In response to previously-documented need,3,4 a team of Oregon State University (OSU) and Washington State University (WSU) Extension faculty conducted farm succession planning programs in eastern Washington and Oregon. The program received a $32,488 grant from the Western Center for Risk Management Education and USDA-NIFA, with Diana Roberts as Principle Investigator.

From 2006 to 2008, OSU and WSU Extension faculty held a series of three farm succession planning workshops at each of six locations across the region. Presenters came from OSU, WSU, Montana State University and the private sector; producers with farm succession planning experience contributed as well. Table 1 depicts workshop specifics.

Table 1. FSP Workshop Details

Workshop	Topics	Number of participating families
1	Realizing the need for a farm succession plan Communicating successfully with all family members involved Identifying appropriate professional input Understanding relevant state laws	150
2	Understanding estate laws and writing wills Conducting successful family meetings Overcoming challenges encountered in the process	148
3	Making good use of attorney time Specifying inheritance of treasured personal items Making provisions for the family and business in the event of a sudden death Discussing obstacles and getting motivated	104

To increase the likelihood that participants would complete a farm succession plan, those who committed to the process were provided with coaches at no charge for one year. The coaches mentored participants through the succession planning process. Coaches came from the WSU Farm Family Support Network and had professional backgrounds in banking, lending, agriculture production, supervision and/or management. These individuals were trained in a wide variety of skill areas including communication, stress management, conflict resolution, goal setting, family relations, etc.

A project web site was created to house program documents and related resources.

Teaching Methods

With a diverse array of workshop presenters came a wide variety of teaching methods and styles. The methods ranged from didactic, PowerPoint®-based presentations to informal question-and-answer sessions. For home use, each participating family received “Ties to the Land,” a succession planning workbook from the OSU Austin Family Business Center. Most presenters provided handouts to accompany and/or supplement their

presentations. Many resources were posted on the project web site at www.spokane-county.wsu.edu/smallfarms/Farm%20Succession/Farm_Succession.htm.

A unique aspect of this program was the use of coaches. They mentored farm families through the succession planning process by facilitating family meetings, providing resource materials, identifying helpful contact people, clarifying goals, making phone calls for support and encouraging participants to complete their plans.

Results

Participation at the three regional workshops greatly exceeded expectations with 40 to 60 participants at each of the six sites for each workshop (see Table 2 for specifics). To date, 10 farm families have completed farm succession plans and many other plans are in progress.

Table 2. Projected vs. Actual Numbers of FSP Participants

	Projected number of participating families	Actual number of participating families
Attendance	90	321 (357% above projected number)
Signed succession plan commitment form	45	86 (191% above projected number)
Completed farm succession plan	30	10 (33.3% of projected)

Regarding program participants:

- 378 individuals participated
- 150 (40%) were women
- 8% attended all three workshops
- 30% attended two workshops
- 43% were the senior farm generation
- 41% were the middle generation
- 16% were the youngest generation

Impact Statement

Despite the difficult topic, participants had strong praise for the educational value of the program. Eighty-six families committed to writing a farm succession plan and many of these completed or took decisive actions toward creating a plan (see Evaluation section).

Selected comments from participants include:

- We really learned a lot from the process and appreciate the program. Now we need to cowboy up and get it done.
- *Great eye-opening experience. The time got away but we have made progress towards our goal.*
- *The (workshop) I went to spurred me on to get our affairs in order. Our will is down to the signing this week or next.*
- *This brought up issues we had not considered and so was informative as well as being a catalyst for the starting of the process.*
- *Excellent program, the best! It was especially helpful in getting children interested in the estate planning process. "Ties to the Land" provided good information for getting the process started.*

- *Very professional and well done; the project greatly aided our succession planning.*
- *We think it was a very important project that educated many farm families.*
- *The workshops helped us four on getting goals set for "turning over" the ranch and we completed some of those goals. Thank you.*
- *…it was a great project. We didn't get done, but we did make progress and we are still working.*

The program, its results, suggestions for improvement and adaptation recommendations were shared with Extension peers via a poster presented at one national, one state and two regional professional development conferences; via presentations at five national and one regional conference; and via abstracts published in a national conference proceedings.

Evaluation

In addition to formative evaluations during the program year, a summative evaluation was conducted through a survey of participants and coaches. Ninety-three families and all coaches completed the survey, a 29% response rate of program participants.

Evaluation Survey Results

- 85% of respondents read the workbook
- 93% found the workbook very or somewhat useful
- 47% set goals and priorities for succession planning
- 74% discussed the workshops with family members who didn't attend
- 60% held a family meeting
- 54% consulted an attorney, CPA or financial planner
- 44% updated their wills
- 19% completed a farm succession plan
- 88% said coaching was very or somewhat useful

Respondents reported coaches kept them on task and provided motivation, moral support, unbiased information, encouragement and deadline reminders. However, obstacles such as time, transportation and family issues often interfered with coaching.

Participants' and coaches' suggestions for program improvement included:

- Coaches need more training on diverse issues facing families going through the process
- Coaches need regular feedback and specific strategies for success
- Participants need more direct contact with coaches
- Participants need resource materials adaptable to various agricultural enterprises
- Process should have a longer timeframe
- Create an Internet forum for discussion between the consultants and coaches
- Provide more structure for coaching, targets and goals
- Address family stumbling blocks early
- Introduce families to coaches at workshops
- Coaches should be knowledgeable about state-specific issues
- Reduce coaches' area of service
- Charge clients a refundable fee for coaching
- Given American farm family demographics, succession planning will remain a crucial aspect of sustainability for the foreseeable future.

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2. Dying without a Will in Montana: Who Receives your Property? MT198908 HR,

2003, by Marsha Goetting, Montana State University Extension.
3. Farm and Ranch Survival Kit project summary, 2006, by Susan Kerr and Brian Tuck.
4. E-mail survey, WSU Extension-Lincoln and Spokane Counties, 2005, by Diana Roberts.

Retirement and Estate Planning for Farm Families Web Site

Marion Simon, Kentucky State University;
Sharon DeVaney, Purdue University

As a part of several Cooperative Agreements with the Risk Management Agency/Federal Crop Insurance, Corp., Community Outreach and Assistance Program under Mr. William Buchanan, the Retirement and Estate Planning for Farm Families website was designed which is currently on-line at Purdue University. The website is http://www.ces.purdue.edu/farmriskmgt/.

When thinking about retirement, retiring individuals need to consider what they will to do with their time upon retirement, and discuss this with their families. Will the retiree need or consider part-time work either on or off the farm? Will the retiree be involved in hobbies, gardening, volunteer work, or helping other family members? Will retirement involve moving off the farm? If so, what are the housing options?

Retirement planning includes keeping good records for yourself, your family and your farm. It is generally expected that retirement will use 70% of the pre-retirement income. Individuals contemplating retirement need to consider possible reductions in income, possible changes in expenses as compared to their current budget, and see if they match. They need to be informed about Social Security, Medicare, and retirement benefits including IRAs, saving plans, and employer's pension plans. Farm families need to inventory and evaluate the value of their property, look at investment planning if the property is to be sold, and consider estate planning, particularly for property that will be left to heirs.

The Estate and Retirement Planning for Farm Families website, designed to help small farm families to understand financial planning in later life, has several components. First, it explains retirement and what a farm family's retirement plans should include. Included in these are short and long term options, retirement income and the benefits from off-farm employment, insurance planning, investment decisions, and estate planning. Secondly, it provides information on income and retirement, business retirement plans, and information on long-term care insurance. It helps families to evaluate second careers and provides resource links to additional information resources. The website has special sections devoted to issues related to African Americans, Native Americans and women.

Given that many families need to know their financial situation when planning for retirement and/or disposing of assets, the website includes checklists for retirement planning and financial management. It also provides a financial check-up to assist families to determine their current situation. The website provides information on life insurance, health insurance, and how to plan for retirement. The website also has sections on credit cards, identity theft, debit cards, and home equity loans to assist farm families in their financial decisions. The case study section has real situations that may help others in similar situations.

The Business End of Organic-Farm Financial Performance and Education in Minnesota

Meg Moynihan, Minnesota Department of Agriculture
Dale Nordquist,University of Minnesota Center for Farm Financial Management
Ron Dvergsten, Northland Community and Technical College
Doris Mold, Agricultural Consultant

Lots of assumptions and assertions—both positive and negative—are made about the profitability of organic farming but real-world, farm-level data about organic farm performance is scarce.

We recognized multiple audiences that would benefit from access to data about organic farm performance: organic producers, who want to assess their enterprise performance and benchmark against similar farms; conventional farmers, who can use the information as they consider whether to convert to organic; lenders who need data to evaluate loan requests; agencies, organizational leaders, and elected officials and their staff members who can use the information as they craft programs that address organic farmers' experiences and needs.

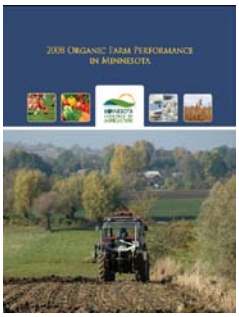
The Organic Farm Business Management Program was initiated with funding from the USDA Risk Management Agency's Research Partnerships Program in 2006 and its success is due to involvement by a wide array of partners.

Program Structure and Delivery

The Minnesota Department of Agriculture (MDA) administers the project. Participating farmers receive scholarships to defray the cost of tuition in local Farm Business Management (FBM) education programs offered throughout Minnesota by eight colleges within the Minnesota State Colleges and Universities (MnSCU) system and one Farm Business Management Association. The scholarships start at 80 percent for the first two semesters, decrease to 70 percent for the next two, then to 60 percent, and so on. Tuition for the '09/10 year averages $1,350, so the scholarships provide substantial savings to farmers while ensuring that they have some "skin in the game."

In Minnesota, FBM education uses analysis software (FINPACK, FINBIN, and RANKEM) published by the Center for Farm Financial Management at the University of Minnesota. The software was modified to accommodate organic farm characteristics. Instructors, many of whom had not previously worked with organic farmers, received professional development training regarding organic farming and farmers. Two farm membership organization projects partners, Sustainable Farming Association of Minnesota and Organic Crop Improvement Minnesota #1, conducted a great deal of the outreach and recruitment of organic farmers.

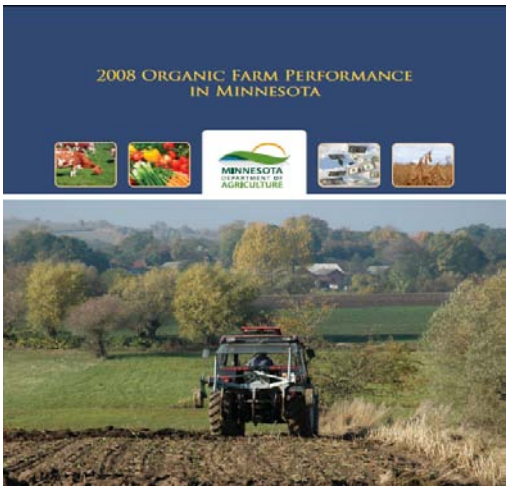
Participating farmers work one-on-one with a local FBM instructor to learn the principles of business management, how to keep and use quality records to make sound business decisions, and how to capture this information using on-farm recordkeeping systems and software. The farmers receive an individualized end-of-year analysis and their farm data is also stripped of all its identifying characteristics (so the producers remain absolutely anonymous) and incorporated into FINBIN, a database managed by the University of Minnesota Center for Farm Financial Management and available at



www.finbin.umn.edu, where detailed queries can be run.

For the past 3 years, the data has also been published in a printed report, underwritten by the Organic Farming Research Foundation (OFRF), which summarizes individual farm financial results and provides comparisons to previous years. The reports include whole-farm information, as well as costs and returns for individual enterprises (barley, corn, hay, soybeans, dairy, etc.). Print copies are distributed to all 650 organic farmers in Minnesota, all FBM instructors, and a wide array of other groups, including lender organizations, elected officials, extension educators, the Natural Resources Conservation Service (NRCS) and Farm Service Agency (FSA) staff, and University researchers.

2007 and 2008 reports



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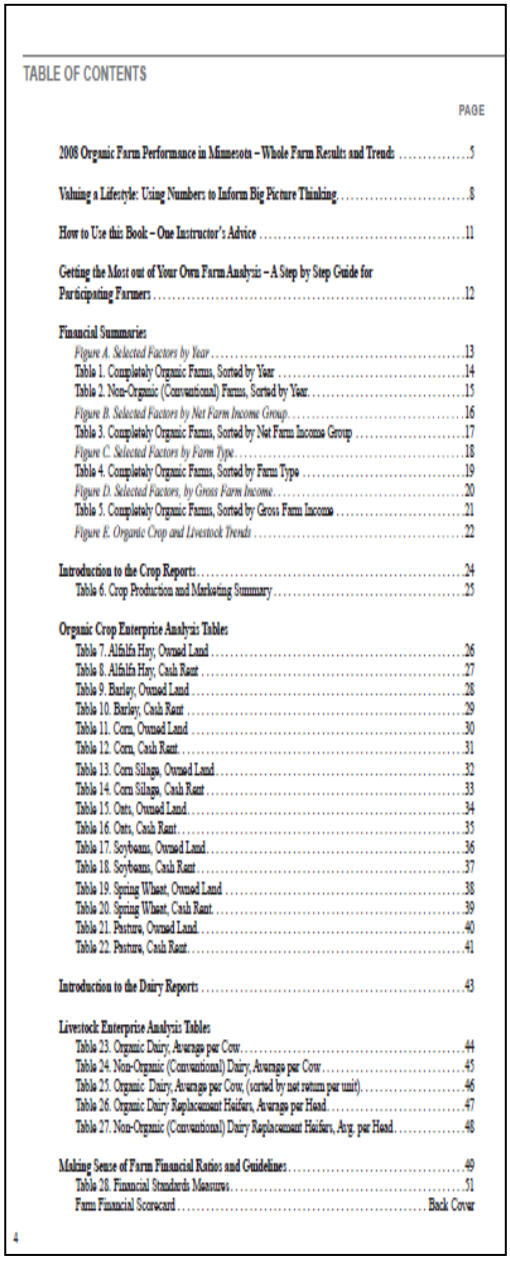

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The publications are also available on-line in PDF format at: www.mda.state.mn.us/food/organic/bizmgmt.htm - MDA, www.cffm.umn.edu – CFFM and www.mgt.org – MnSCU FBM

Participation has increased over the project's 4-year lifespan and continues strong. Growth has slowed, perhaps as the participant share of tuition has increased.

Year	Participating farmers
2005	67
2006	81
2008	84
2009	84

Evaluation

Farmers can and do use the information about overhead, net return, profitability, etc., to help them assess the performance of their own operations. In 2008, an outside contractor evaluated this project for the MDA, soliciting feedback from participating producers and instructors.

A producer response rate of 53.6 percent was achieved. Overall satisfaction with the program among producers was very high, with 80.4 percent of the respondents noting an above average or excellent overall experience. However, 13.7 percent of the respondents had left the program, citing cost and not seeing the value of the program as the main reasons for leaving and they generally did not rate their experience very highly.

Most producers indicated that the analysis, the assistance with recordkeeping/financial statements/taxes, and outside advice were the best things about the FBM program. What they liked least was the cost of the program, amount of time with instructor, and time/paperwork involved. For those who offered ideas on improvements, the most common areas were in improved analysis/database, instructors more informed with different farming models/organics/diversified farms, and several said they were satisfied with the way things are already.
Respondents also indicated that participating in the program made it easier to provide information to their lenders and the FSA, in particular. They also noted that the use of cash flows, cost of production, and knowledge of profitability influenced annual plans or investment decisions and this gave them confidence to move forward and/or negotiate with lenders.

An instructor response rate of 75 percent was achieved. Nearly 81 percent of the responding instructors said that their overall experience working with organic producers was above average or excellent. Many of the instructors felt that the FBM program had special value for organic producers primarily because of the benchmarking and analysis capabilities that it offered and the fact that producers could get themselves organized in a more business-like manner. They noted that after being involved in the FBM program, their organic students were more aware of finances and the weighing of investments and purchases, and that they were more business-like in their approach.

Outlook

To date, RMA has committed $364,328. The OFRF has provided $6,725, and the Minnesota Department of Agriculture has contributed more than $75,000 in scholarship funding to support for the program and extend it through 2010. In light of current state budget challenges, the future of the scholarships beyond that date is uncertain and will likely depend on securing additional outside funds. The program however will remain available to organic producers; each additional year of data and each additional farmer who participates makes it more valuable.

Transferring the Farm and Creating a Retirement "Paycheck" from Farm Income and Assets

Robin Brumfield, Rutgers University
Barbara O'Neill, Rutgers University
Stephen Komar, Rutgers University Extension
Robert Mickel, Rutgers University

Methods

We conducted two face-to-face focus groups to determine agricultural producers' perceptions about retirement, level of preparedness for retirement, and preferred methods for educational information delivery in two New Jersey counties. Participants represented the diversity of the farming community within the state (including full-time farmers, part-time farmers, land owners, renters, and new producers). We gave each participant a $50 gas card as an incentive to participate. The discussion focused on a series of 13 questions on a variety of topics related to retirement and estate planning topics, unique concerns of farm households, and educational delivery methods.

Findings

Several key findings emerged from the focus groups that served to inform development of an online retirement planning course for farm families:

- Most participants agreed that they would work a reduced time schedule or still maintain part of their farming operation in retirement.
- Although the majority of farmers surveyed did not plan to retire, most had positive retirement role models in their lives. A common theme among these role models was remaining active, both in the community and in daily activities.
- Lack of interest in farming among heirs was the most common response in situations where focus group participants reported uncertainty regarding their farming operation's future.
- A majority of focus group participants had some type of retirement investment account, such as IRAs. In some situations, they reported that their spouse was primarily responsible for any additional retirement savings (e.g., 401(k) plans from off-farm employment).
- Several participants noted that they avoided using tax-deferred savings plans designed for the self-employed (e.g., SEPs, SIMPLEs, and Keoghs) because of future income uncertainty, a desire to avoid administrative paperwork, and/or the legal requirement to fund employees' accounts if they make plan contributions for themselves.
- Many producers in the focus groups reported limited availability of financial planners with expertise in farm financial management. The unique cash flows and expenses associated with an agricultural operation require a level of expertise not common among area professionals.
- In several instances, landowners sold their development rights to generate positive cash flow. However, some expressed concerns about this decision due, in part, to restrictions associated with preservation and fluctuations in land value.
- The importance of a smooth and equitable transfer of the farm assets was of particular concern in families where some heirs intended to farm while others did not.
- Participants repeatedly stressed the importance of not postponing farm transfer and estate planning decisions until it is too late as advice for other farmers.
- Legal restrictions and regulatory impacts on development and

subsequent land values were a concern among a majority of landowners in the focus groups. Changes is local zoning ordinances, environmental regulations, "Right to Farm" litigation, and land taxes were among the concerns shared by both focus groups.

- We observed differences in preferred learning methods between the two focus groups. One group showed a strong preference for traditional extension programming, including sessions at agricultural meetings, workshop series, and small group discussions. The second focus group was more receptive to non-traditional educational methods and said they would be interested in participating in an Internet program on retirement.
- Both focus groups expressed a willingness to participate in extension retirement education programming, citing Cooperative Extension as a trusted, non-biased, information source.

Online Retirement Planning Course

Following the focus group study, a 10-module online retirement planning course for farmers was developed called Later Life Farming: Creating a Retirement "Paycheck" (http://laterlifefarming.rutgers.edu/). The title was selected to emphasize the fact that many older farmers plan to work past traditional retirement age, but also have a need to convert land and other farm assets into a liquid stream of income. The Web site includes a combination of original material and links to resources such as Who Will Get Grandpa's Farm? Communicating About Farm Transfer and the Retirement Estimator for Farm Families (DeVaney, 2004), both from Purdue University. Below are the titles and a brief description of each of the modules:

Module 1: Creating a Retirement "Paycheck"

Describes the concept of a retirement "paycheck" and discusses tools to estimate life expectancy, how retirement in the 21st century differs from that of previous generations, and unique retirement issues and challenges faced by farm families.

Module 2: Farming in Later Life

Discusses factors to consider when deciding whether to continue working in later life. Also explores the concept of "phased retirement," as it applies to farm families, and occupations that can make good use of a farmer's work experience and skill set.

Module 3: Where Am I Financially?

Includes an online financial quiz and worksheets to calculate net worth, develop a spending plan, and calculate the savings required to fund financial goals. There is also a link to the 20-page tabloid What Older Adults Need to Know About Money.

Module 4: How Much Do I Need to Save?

Includes tools to calculate retirement savings and links to online calculators and a research paper about how U.S. farmers plan for retirement.

Module 5: Sources of Retirement Income

Includes information about Social Security and tax-deferred investments and links to an online publication for late savers. Also discusses unique sources of income for farm families, an online tool for farmers to estimate their retirement savings need, and a discussion of savings plans for the self-employed versus IRAs.

Module 6: Investing and Investment

Diversification- Links to an investment course developed especially for farm families and a home study course for consumers. Also includes an online quiz to determine investment risk tolerance and an Excel spreadsheet to analyze portfolio asset

allocation (e.g., the division of assets among asset classes such as stocks, bonds, real estate, and cash equivalents such as money market funds).

Module 7: Making Your Money Last
Discusses strategies to reduce household expenses, health insurance, and long-term care. Also covered are the recommended sequence of steps for "tax efficient" asset withdrawals and Monte Carlo analyses that determine how long assets will last.

Module 8: Farm Transfer Decisions
Includes a link to Who Will Get Grandpa's Farm?, a Purdue University Web site that describes suggested communication methods for family discussions about farm transfers and succession. There is also a worksheet to analyze the pros and cons of various farm transfer strategies and a link to a publication with case studies about actual farm transfers.

Module 9: Regulation and Tax Issues
Addresses factors that reduce the retirement income of farm families including state regulations (e.g., building restrictions) that affect farm value and farmland preservation programs where operators are paid for the development rights to their farm. Also discusses federal and state estate taxes and federal income taxes as they apply to farm families.

Module 10: Getting Help
Describes factors to consider when selecting a professional financial advisor. In addition, it includes links for online resources about investing and personal finance and Purdue University's online retirement planning course, Planning for a Secure Retirement, and a description of eXtension, Cooperative Extension's 24-7 electronic information delivery system.

Implications
Following are five implications of this study for extension educators:

- Avoid overuse of the word "retirement" in marketing financial education programs to farm households. Instead, focus on their need to create regular cash flow and find meaningful pursuits in later life. Additionally, a unique challenge for farm households is how to create retirement cash flow when their primary asset, land, is illiquid and they have no plans to sell it.
- Explain to farmers that they don't have to fund retirement accounts for employees (e.g., SEPs) in "lean" years but, then, they can't fund their personal accounts either. Focus educational efforts on tax-deferred investments that farmers can fund solely for themselves (e.g., IRAs) since they seem to prefer them to savings plans that require employee contributions.
- Encourage farmers to have a family conversation about farm transfer and confront emotional issues, if any, "before it's too late." A helpful resource is Purdue University Extension's Web site Who Will Get Grandpa's Farm (http://www.ces.purdue.edu/farmtransfer/). Information about a Cooperative Extension farm transfer workshop can be found in Hachfeld et al. (2009).
- Encourage farmers to explore ways to phase into retirement to gain the flexibility and reduced workload that many desire. Specific strategies include: gradual transfer to the next generation, grooming a non-family member to take over the farm, downsizing the farm operation, seeking alternative employment other than farming, and selling equipment and/or livestock.
- While farmers value the unbiased perspective of Cooperative Extension,

partnering with attorneys and others who understand agriculture and business transfer issues is critical. In addition, multiple teaching methods are necessary to appeal to a variety of learning styles.

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DeVaney, S. A. (2004). A web site to help farmers decide if they can afford to retire. Journal of Extension [On-line], 42(1) Article 1TOT6. http://www.joe.org/Joe/2004february/tt6.shtml.

Hachfeld, G.A., Bau, D.B., Holcomb, C.R., Kurtz, J.N., Craig, J.W., & Olson, K.D. 2009. Farm transition and estate planning: Farmers' evaluations and behavioral changes due to attending workshops. Journal of Extension 47(2) Article 2FEA8. http://www.joe.org/joe/2009april/a8.php.

SESSION 3F
Improving USDA's Focus for Small, Beginning, and Socially Disadvantaged Farms

NIFA Opportunities and Services for Those Who Work with Small-Scale Producers

Patricia McAleer, USDA–NIFA

The focus of this presentation is to outline National Institute of Food and Agriculture (NIFA) opportunities and services for those who work with small-scale producers and to request advice from the attendees on current non-competitive programs. NIFA is a major grant-funding agency within USDA, responsible for approximately 2,000 new awards each year and with an active case load of approximately 8,000 existing awards. The total annual budget varies, but is well over $1 billion.

Most of the funds are awarded through a competitive, peer-review system and NIFA has earned a reputation for the fairness and quality of its award processing.

Over the past 10 years, following presidential and Congressional requirements, the agency has focused increasily on working with non-university and traditional land-grant partners, especially through its competitive awards. An increasing proportion of its funds are awarded competitively and with a greater focus on integrated projects. Finally, both internally and externally, NIFA focuses increasingly on achievements.

NIFA competitive funding opportunities: Several are relevant to small, beginning, and socially disadvantaged farmers and ranchers. Examples include:

- the Beginning Farmer and Rancher Competitive Grants program (approximately $17 million in FY 2009);
- 2501 – Outreach and Assistance to Socially Disadvantaged Farmers and Ranchers–this program is now the responsibility of the Office of Outreach and Advocacy;
- Community Foods Projects (approximately $5 million);
- Small Business Innovation Grants (approximately $20 million);
- Agricultural Prosperity for Small and mid-sized farms (approximately $4,800,000);
- Trade Adjustment Assistance;
- Agricultural Risk Management Education (about $4 million through four regional centers); and
- Sustainable Agriculture Research and Education, through four regional centers.

It is very important to talk to the individual program directors responsible for each of these programs when deciding if and how

to apply. This information is available on the Web site.

Non-funding services include:

- **Small Farm Program Highlights –** an e-newsletter that provides information from USDA, news and information from around the country, funding opportunities, and upcoming events. The newsletter is sent out monthly to small farm coordinators at land-grant universities and is increasingly available to CBOs and other groups. It provides a vehicle for those working with small-scale producers to share information. Contact Patricia McAleer with suggestions on improvement or to be included in the mailing lists.

- **Small Farm Digest –** A biannual newsletter that focuses on key issues for small farmers and ranchers. Recent topics include goats, bioenergy, women producers, farm transition, and farm financial management. The digest reaches hundreds of small-scale producers and groups working with them. Suggestions are welcome.

- **The Family Farm Forum –** A newsletter and webinar that focuses on key issues related to small and mid-sized family farms. The target audience is mainly land-grant and other groups that work with producers. Its purpose is to encourage sharing and collaboration, and to stimulate more high quality submissions to competitive grant programs. The forum takes place twice a year.

- **Family and Small Farm website**

Overview of the last two Censuses of Agriculture

It is very satisfying to see that the number of small-scale producers is growing. Drawing from USDA's National Agricultural Statistics Service (NASS) fact sheets comparing the last two Censuses, note the growth in the number of primary operators:

- Women – increased 24 percent and now make up 14 percent of all small producers
- Hispanics –increased 14 percent and make up 2.5 percent of all small producers
- African-Americans – increased 9 percent and make up 1.5 percent of all small producers
- American Indians – increased 116 percent and make up 1.6 percent of all small farmers (note: it's important to understand changes in reporting criteria between the two Censuses)
- Asians – increased 29 percent and make up 0.5 percent of all small farmers

While the number of smallest farms grew, the 'Agriculture of the Middle' group continues to decline.

Data from NASS and USDA's Economic Research Service offer more detailed information on the particular characteristics of these populations which could be very useful for those working with any of these groups.

Status of the Establishment of the Office of the Advocacy and Outreach

Greg Diephouse, Office of the Advocacy

Established of the Office of Advocacy and Outreach- The Food, conservation and Energy Act of 2008 (Farm Bill) mandated the establishment of the Office of Advocacy and Outreach (OAO) within the USDA.

Responsibilities of OAO-Improve access to programs of the USDA; improve the viability and profitability of small farms and ranches, beginning farmers and ranchers, and socially disadvantaged farmers and ranchers.

Programs for OAO-The Office is proposed to include programs and functional areas, including:

Programs: Small Farms and Beginning Farmers and Ranchers Program; Farm Worker Coordinator Program; Socially Disadvantaged Farmers Program; Higher Education Institutions Program; and others to be determined. The Office is proposed to include programs and functional areas, including:

Stakeholder Process to Establish Office (Achieving Support and Buy-In)-conducted three (3) collaborative work sessions- external and internal USDA stakeholders; internal USDA stakeholders; final workgroup to review proposed structure, and USDA mission areas were consulted. The stakeholders recommended the following: Office structure, outline of duties and functions of each component structure, required skills competencies and experience for all personnel who will work in the office, and grade level for the personnel.

Slide 1
Briefing for the
Office of Advocacy and Outreach
U.S. Department of Agriculture
Presented by:
Mr. Pearlie Reed and Dr. Alma Hobbs
Departmental Administration
August 18, 2009

Slide 2
Establishment of
the Office of Advocacy and Outreach (OAO)

- The Food, Conservation and Energy Act of 2008 (Farm Bill) mandated the establishment of the Office of Advocacy and Outreach within the USDA.

Slide 3
Responsibilities of OAO

- Improve access to programs of the USDA.
- Improve the viability and profitability of small farms and ranches, beginning farmers and ranchers, and socially disadvantaged farmers or ranchers.

Slide 4
Programs for OAO
The Office is proposed to include programs and functional areas, including:
Programs

- Small Farms and Beginning Farmers and Ranchers Program
- Farm Worker Coordinator Program
- Socially Disadvantaged Farmers Program
- Higher Education Institutions Program
- Others to be determined

Slide 5
Programs for OAO
The Office is proposed to include programs and functional areas, including:
Functional Areas

- Community Engagement
- Accountability

Slide 6
Stakeholder Process to Establish Office (Achieving Support and Buy-In)
Conducted three (3) collaborative work sessions –

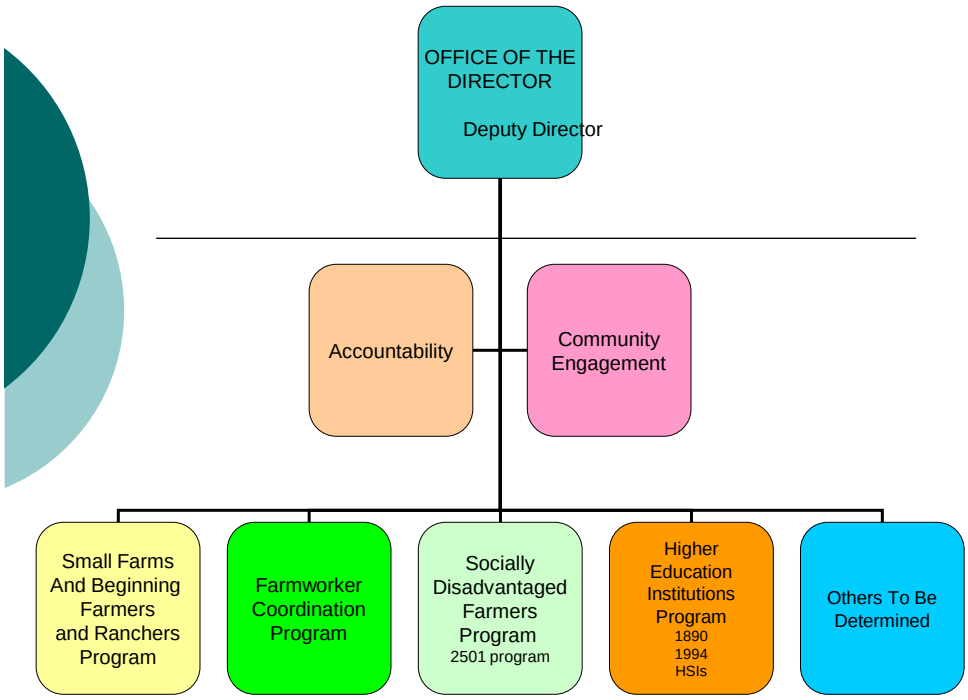
- External and internal USDA stakeholders
- Internal USDA stakeholders
- Final workgroup to review proposed structure, and
- USDA mission areas were consulted.

Slide 7
Stakeholder Process to Establish Office (Achieving Support and Buy-In)
The stakeholders recommended:

- Office structure

- Outline of duties and functions of each component structure
- Requisite skills competencies and experience for all personnel who will work in the office, and
- Grade levels for the personnel

Slide 8



Slide 9
Staffing Plan for OAO
The following positions are posted for staffing on October 1:

- The Director
- Small Farms and Beginning Farmers and Ranchers Program Director
- Farm worker Coordination Program Director
- Socially Disadvantaged Farmers Program Director

Slide 10
Budget
OAO Budget

President's Budget for FY10	$3 million
House	$3 million
Senate	O

Slide 11
Budget

- $3 million (New Positions)
- Socially Disadvantaged Farmers Program($15M 2008 Farm Bill)
- Visitor's Center/People's Garden, 1890, 1994, HSI (Existing are central charges)

Slide 12
The OAO Will Be Operational
October 1, 2009

Staffing Plan for OAO-The following positions are posted for staffing October 1: The director; Small Farms and Beginning Farmers and Ranchers Program Director; Farm Worker Coordination Program Director; Socially Disadvantaged Farmers Program Director.

Budget: OAO Budget-President's Budget for FY 10—A$3M; House--$3M; Senate $0; $3M (New Positions); Socially disadvantaged Farmers Program ($20M 2008 Farm Bill); Visitors' Center/People's Garden, 1890, 1994, HIS (Existing are central charges). The Office of Advocacy and Outreach will be operational on October 1, 2009.

Online Marketing, Legal Issues, and Urban Farming

MarketMaker and Retail Readiness

Tim Woods, University of Kentucky

Legal Issues for Direct Farm Marketers
Richard Schell, Wagner & Schell, LLP
This abstract summarizes the key topics covered in the presentation

1 Organic production
Organic/commodity tensions
Organic research grants
2 Food Safety
Greater Focus Because Of Bioterrroism & Traceability
Legislative Activity—Federal, State & Local
3 Meat Processing
State Inspections Of Interstate Meat And Poultry?
4 Labor & Immigration
E-Verify
I-9s
Enforcement
Refugees

5. Ag Tourism Trends
E Coli/ Premises Liability/Pennsylvania Law
Zoning
Insurance
6. Green
Carbon Cap & Trade
Green as a global trend in Ag
Third party verification of claims
Checklist of Issues in Risk Management & Compliance for Direct Marketers
7. Business Entity—How will I run this business: as a proprietorship? Corporation? Limited liability entity? or other kind of entity?
8. Employees—Will I have them or is it just me? If it's just me, what's Plan B if I can't do the work? If I hire others, do I know what I need to know to be a lawful employer?
9. Insurance—An ounce of insurance may be worth a ton of lawsuit. Am I insured? Should I be?
10. Liability, Liability, and Finally Liability—Do you know the potential business, financial, and legal downsides to starting a food business?
11. Markets—What will I have to do to navigate the terrain involved in selling wholesale? Retail? Directly to consumers?
12. Organic/Green Products & Claims—Am I willing to stay current to be certified organic? Is it a necessary element for my business?
13. Processing—How much processing do I need? Where will I obtain it? What do I need to be compliant?
14. Rules & Regulations—Federal, State, Local? Who regulates me? Washington DC? My State, or the County?
15. Taxes—Income? Sales? Is there a compliance plan in place?
16. Zoning/Appropriateness of business and licensing issues—Not every food business is a good fit for every locale.

Know before you open for business if you can operate your business in your location.

17. Web/Intellectual Property Issues—As marketers develop a branded and following issues like Web pages, copyrights and trademarks can become important.

This seminar and handout does not constitute legal advice. This seminar and handout does not form an attorney client relationship.

SESSION4 B
Engaging a Multicultural Farming Audience (Part II)

Effective Outreach for Wisconsin's Women and Hispanic Farmers: Using Community-Based Social Marketing for Research

Sharon Lezberg, University of Wisconsin, Madison, Environmental Resources Center
Astrid Newenhouse, University of Wisconsin, Madison, Environmental Resources Center
Julia Reyes-Hamann, Wisconsin Farm Center, Department of Agriculture, Trade and Consumer Protection

Project Description

Wisconsin's agricultural census data (1997-2007) shows a consistent increase in the number of female farm operators. The number of women principal operators increased by 58 percent over the 10 year period, from 7,353 in 2002 to 9,176 in 2007. Figures for Hispanic farmers in 2002 showed a marked increase from 1997 data (from 308 to 523, a 70 percent increase), but 2007 data show a significant decrease (245 principal operators, a 20 percent decrease from 1997 numbers). Since the entry of women and people of Hispanic background into farming will likely continue to increase and could represent a significant component of the next generation of Wisconsin's farmers, we focused our research on these two populations. Our goal is to inform University of Wisconsin Cooperative Extension and other agencies about how to better reach these farmers with appropriate educational materials and delivery formats.

For this presentation, we provide a brief overview of the study population. We then focus on a few select aspects of the study, including: path into farming, where farmers get information, what kinds of information farmers seek, the preferred method of information delivery, and use of government programs. This summary includes only a small subset of our data analysis.

Methodology

We employed community based social marketing (CBSM) approaches in our research. This methodology segments populations in order to develop a more complex understanding of reasons for particular behaviors within that population. Detailed study of the behaviors of the population(s) are conducted to understand the barriers to certain actions (in the case of our larger project, we were interested in environmental management and conservation practices); these studies are followed by campaigns to address barriers and facilitate sustainable behaviors.
We used a combination of mailed surveys, interviews, and focus groups. We are currently analyzing the data using SPSS, Excel (for survey data), and Atlas-T.I. (a qualitative data management program for interview data). Because the two focus populations differed, our methodologies have been adapted for each population, and are detailed in the sections below.

<u>Women Value-Added Survey, sample size and response rate:</u> Using the database of

the Wisconsin Agriculture Statistics Service (WASS) (a unit of the USDA Agricultural Census), we used a modified Dillman method to send a 6-page survey to all women farmers in Wisconsin who sold farm products by direct marketing. Women farmers were those who listed themselves on the 2007 Census of Agriculture as female and "principal operator" or "operator #2." Of the 601 surveys mailed, 385 people responded, 12 surveys were invalid, and 373 surveys were complete; a 62 percent response rate. Data was cleaned, checked, and entered into SPSS for analysis. Descriptive statistics and frequency tables were created for each survey question. For categorical data, Chi square was used to test significance at a p-value of 0.05. Cross tabulation was used to test whether women whose farms were small, medium, or large answered questions differently. Size categories were as follows: small = 0-29 acres, medium = 30-99 acres, and large = 100 acres and more.

Hispanic Survey and interviews, sample size and response rate: Finding a list of Hispanic farmers in Wisconsin is difficult, as many operate with little or no contact with agricultural agencies. We utilized the WASS database to send a short survey to farmers who had identified themselves as Hispanic in the USDA 2002 and 2007 Censuses of Agriculture. Using a modified Dillman method, we sent the survey to 215 farm operations, and received 120 return surveys, of which 104 were valid; a 55 percent response rate. Survey results were entered into Excel, and analyzed for basic frequencies. In addition to the surveys, our Hispanic farmer outreach worker conducted field research in select counties to attempt to identify clusters of Hispanic farmers. She consulted with representatives of the agricultural community and leaders of the Hispanic community, and also analyzed county land records to search for names of Hispanic land owners. The field worker interviewed 25 Hispanic farmers in person or by phone.

Results, Women Farmers

The largest percentage of survey respondents (direct market women-operated farms) are from the southern third of the state, although survey respondents were from each of Wisconsin's 72 counties. Over one-third of the farms are less than 29 acres, and farmers own from 0-1,600 acres. Women raise vegetables, eggs, meat, fruit, flowers, nursery crops, grains, and other crops. The most frequently mentioned products raised were vegetables (40 percent), poultry and eggs (35 percent), beef (31 percent), and tree fruit (30 percent). Dairy farms were not included in the direct market survey (we conducted a separate survey of women in the dairy farm sector).

Less than half (37 percent) of the women described their farm operation as conventional, and the remainder described their farms as non-certified organic (30 percent), certified organic (6 percent), sustainable (16 percent,) transitional organic (3 percent), biodynamic (1 percent), or other. Only a small percentage of the women participate in government programs, with the most (16 percent) enrolled in the Conservation Reserve Program (CRP) or Conservation Enhancement Program.

We asked questions about who women farmers consult for information and how important specific sources were (Table 1). When asked about people consulted in the past year, women farmers overwhelmingly listed other farmers (83 percent). They also consulted farm suppliers, equipment dealers, or producer coops (57 percent). University extension was mentioned by only 36 percent of the women, and Farm Service Agency (FSA) by 30 percent. Other sources were consulted less often, such as growers

associations, state department of agriculture, organic certifiers, bankers and private consultants. When separated out by farm size, women who operated farms of 100 acres or more consulted bankers, Natural Resources Conservation Service, FSA, and their county land conservation department more often than those who farmed on fewer acres, and women who operated farms less than 30 acres were less likely to consult these sources.

Presented with a list of possible information topics (Table 2), 53 percent of the women wanted information or training on government programs. This was the highest proportion of interest in a topic. Women farmers also wanted information on sustainable or organic farming practices (50 percent) and marketing (49 percent). When separated out by farm size, women who farm on 30-99 acres stated they wanted information on financial recordkeeping (44 percent). No other responses differed based on farm size.

The most important source of information women listed was “other growers or farmers” (65 percent of the respondents), followed by family members (47 percent), the Internet (41 percent), and conference or workshop (31 percent). Radio and TV were not valued sources of information. Women who operate farms 30 acres and above viewed farm suppliers, equipment dealers, producer coops, and farm magazines as more important sources of information than those operating smaller farms.

Since we plan to maximize the impact of distance learning opportunities, we asked women farmers if they would use specific types of Internet-based ways to receive farm-related information. Women were most interested in receiving information summary sheets on the internet (66 percent) and half of them would use training modules or attend an interactive online class. PowerPoint slideshows, video, or audio presentations would be welcomed by 41–47 percent of the women. At least 6 percent of the respondents wrote to describe having no Internet access or slow dial-up access.

Results, Hispanic Farmers

Hispanic farmers are involved in a wide range of enterprises, with the greatest numbers in beef cattle operations (33 percent), row crop production (25 percent), vegetables and melons (20 percent), dairy cattle (19 percent), and tree fruit production (19 percent). Many respondents (27 percent) specified ‘other’ enterprises (not included in the graph, due to small numbers of each), which include: hay production (x2), Christmas trees (x3), grapes (x2), CRP (x3), horses (x4), maple syrup, llamas and alpacas, custom heifers, honey bees, and bison.

Interviews with Hispanic farmers revealed that that there are several different paths into farming for this population. Most common for those we interviewed was marriage of a Hispanic woman to a man from a traditional farming family. These individuals then went on to work at the home farm or to establish their own farming operations. A second path into farming was to work for numerous years in other employment, and then to establish a farm operation (on purchased or rented land) as a life style choice. These individuals sometimes have limited agricultural background and they experience constraints in finding resources and information. A third path into farming for immigrants with academic background in agriculture was to find employment as agricultural consultants and to operate small farms on the side. Yet another path was for immigrants to identify a sponsor who would help them out with use of land for small scale vegetable production. Yet

another path is where individuals worked on dairy farms while raising steers for meat on the farm owners' property. The final path identified—one of particular interest in Wisconsin—is a case where a dairy farm herdsman became a partner in a large-scale, established dairy farm.

Hispanic farmers in our survey population tended to consult the same sources of information as did the women farmers, but often to a lesser degree. Details of information sources for both populations are shown in Tables 1 and 2 below. Of all sources of information listed, survey respondents reported that they tended to consult other growers or farmers (64 percent) for information more than other sources, followed by the FSA (41 percent). Survey respondents were also asked where they go for information. The sources that received the greatest number of responses included farm magazine or newspaper 70 percent) and the Internet (60 percent).

When asked about Internet use, Hispanic farmers indicated a preference for downloading of information summary sheets or full reports (43 percent). A limited number of survey participants indicated that they would utilize other online training modes, such as audio (24 percent) or video (28 percent) segments, online classes (28 percent), or PowerPoint presentations (30 percent).

Discussion

In order to supply relevant and timely information to diverse populations of farmers, and to assure the success of farmers of different backgrounds, and who operate farms of diverse scales and types, extension will need to target information and information delivery to the target population. The direct market sector is increasing in size and importance, and women farmers play an increasingly prevalent role in the sector, yet only 36 percent of women farm operators in the direct market sector report that they consult extension for information. Hispanic farmers are dispersed throughout the state, and are not concentrated in any one farm sector. Additionally, Hispanic farmers have not been well connected to government services and sources of assistance, and have less developed networks of social capital. We have found from our interviews with Hispanic and women farmers that farmers get information from a wide variety of sources, but farmer-to-farmer information exchange is the primary and most important source for most. Additionally, the internet is an increasingly important source of information, but difficult to navigate and sometimes overwhelming.

Extension can better serve these farmers by developing farmer-to-farmer information exchange networks, which are more relational than many of the traditional educational activities sponsored by extension. FSA and other government agencies can also target their outreach and programs to smaller scale farms. To reach minority farmers, extension and government agencies will have to be proactive in seeking out these farmers and developing one-on-one relationships in order to address the specific and unique needs of this population of farmers.

Table One: Sources of Information Consulted

Source Consulted for Farming Information	Yes, Women farmers*	Yes, Hispanic farmers*
Other growers or farmers	83%	64%
Farm supply, equipment dealers or producer coops	57%	49%
University of Wisconsin Cooperative Extension	36%	28%
United States Farm Service Agency (FSA)	30%	41%
Grower Association or Farmer Organization	26%	30%
Bankers, financial consultants, or private paid consultants	21%	31%
Your State Department of Agriculture	20%	20%
United States Land and Water Conservation Service	19%	24%
United States Natural Resources Conservation Service	12%	17%
Organic certifier	12%	NA

* The question was worded: "During the past year, did you consult with any of the following people or organizations when making decisions about your farm?" Percents are from the number of valid responses.

Table Two: Topics for which information or training is desired

Information Topic	Yes, Women farmers*	Yes, Hispanic farmers*
Government programs	53%	NA
Sustainable or organic farming practices	50%	37%
Marketing	49%	35%
Environmental improvement and conservation	43%	35%
Financial record keeping	38%	22%
Business planning	37%	NA
Animal husbandry	29%	27%
Crop production methods	28%	30%
Legal issues	NA	22%

* The question was worded: "Do you want any information or training on the following topics?" Percents are from the number of valid responses

Journey towards "Cultural" Competence

Juan Marinez, Michigan State Extension

LATINO FARMS ARE NO LONGER DISTRIBUTED ONLY REGIONALLY; THEY CAN BE FOUND THROUGHOUT THE NATION. THE GROWTH OF LATINO FARMERS PRESENTS NEW OPPORTUNITIES AS WELL AS CHALLENGES FOR USDA AGENCIES, NGO'S, AND FARM LEADERS BECAUSE THE LATINO FARMERS IN RURAL COMMUNITIES DO HAVE SEVERAL COMMON CHALLENGES:

1) SOCIAL, CULTURAL, CUSTOMS AND/OR LANGUAGE BARRIERS 2) MINIMAL AWARENESS OF USDA PROGRAMS 3) LIMITED MANAGEMENT SKILLS. IN SPITE OF THEIR GROWING NUMBER, LATINOS AND/OR IMMIGRANT PRODUCERS ARE

BEING BY PASSED OVER AND OR UNDER-SERVED BY THE INSTITUTIONS THAT WERE SET UP TO SERVE THEM. A REASON FOR THIS SITUATION IS THAT EDUCATORS, AGRICULTURAL PROFESSIONALS, AND FARM LEADERS FACE CULTURAL BARRIERS WHEN WORKING WITH LATINO FARMERS, WHO HAVE DIFFERENT VALUES, CUSTOMS, AND LANGUAGE. EVEN THOUGH USDA AGENCIES, NGO'S, EDUCATIONAL INSTITUTIONS HAVE THE DESIRE TO PROMOTE A SUSTAINABLE FOOD AND FARMING SYSTEMS AMONG LATINO FARMERS, THEY OFTEN LACK HUMAN RESOURCE SKILLS TO REACH THESE EMERGING FARMING GROUPS.

ASSUMPTION:
1. CULTURAL DIFFERENCES AFFECT - DIRECTLY AND INDIRECTLY- THE EFFECTIVENESS OF SUSTAINABLE FOOD AND FARMING OUTREACH PROGRAMS WITH IMMIGRANT OR LATINO FARMERS. 2. IF EDUCATORS UNDERSTOOD CULTURAL VALUES AND THE FARMING BACKGROUND OF LATINO FARMERS, THEY CAN DEVELOP PARTNERSHIP AND IMPROVE COMMUNICATION WITH THEM IN ORDER TO INCREASE FARM PRODUCTIVITY, VIABILITY AND AWARENESS IN US AGRICULTURAL COMMUNITIES. 3. KNOWING AND CONTINUING TO LEARN CULTURAL VALUES AND CUSTOMS OF LATINO FARMERS CAN HELP EDUCATORS UNDERSTAND THEIR ATTITUDES THEREFORE REDUCE STEREOTYPES.

PURPOSE: THE PURPOSE IS TO ENHANCING THE CAPACITY OF EDUCATORS AND FARM LEADERS TO WORK WITH SOCIALLY DISADVANTAGED LATINO FARMERS BY MEANS OF AN EDUCATIONAL MODEL THAT INTEGRATES AN EXPERIENTIAL LEARNING (EL) FOCUSED ON MEXICAN CULTURAL VALUES AND SUSTAINABLE FARMING SYSTEMS.

PARTICIPANTS: WHO WERE SELECTED EXPERIENCED AN IMMERSION DIRECTLY INTO THE CULTURE AND VALUES OF TRADITIONAL RURAL MEXICAN COMMUNITIES, FROM WHICH MANY OF OUR NEW US FARMERS DERIVE FROM. THE PROGRAM WAS OPEN TO ALL USDA STAFF, NGO'S AND FARMERS' WHO WERE WORKING WITH THIS EMERGING FARMING POPULATION. FOURTEEN PARTICIPANTS WERE SELECTED AND THEY WERE INVOLVED IN THE LEARNING EXPERIENCE IN MEXICO. FOR FULL DETAILS OF THE PROGRAM, EVALUATION, AND VIDEO OF THE PARTICIPANTS REACTION GO, TO OUR WEBSITE:
HTTP://SARE-EXCHANGE.INFO/

Project Overview

I. INTRODUCTION

LATINO FARMS ARE NO LONGER DISTRIBUTED ONLY REGIONALLY; THEY CAN BE FOUND THROUGHOUT THE NATION. THE GROWTH OF LATINO FARMERS PRESENTS NEW OPPORTUNITIES AS WELL AS CHALLENGES FOR UNITED STATE DEPARTMENT OF AGRICULTURE (USDA) AGENCIES, NON-GOVERNMENTAL ORGANIZATIONS (NGO'S), AND FARM LEADERS BECAUSE THE LATINO FARMERS IN RURAL COMMUNITIES DO HAVE SEVERAL COMMON CHALLENGES:

- SOCIAL, CULTURAL, CUSTOMS AND/OR LANGUAGE BARRIERS
- MINIMAL AWARENESS OF USDA PROGRAMS
- LIMITED MANAGEMENT SKILLS.

ADDITIONALLY, AS A POPULATION THEIR LEVEL OF FORMAL EDUCATION IS BELOW THE NATIONAL AVERAGE AND THEY ARE GENERALLY LESS LIKELY TO TAKE BUSINESS RISKS AND ADOPT NEW TECHNOLOGY. AS A RESULT THE IMMIGRANTS OR LATINO FARMERS ARE CONSIDERED AS "SOCIALLY DISADVANTAGED" AND/OR "LIMITED-RESOURCE" PRODUCERS.

IN SPITE OF THEIR GROWING NUMBER, LATINOS AND/OR IMMIGRANT PRODUCERS ARE BEING BYPASSED OR UNDER-SERVED BY THE INSTITUTIONS THAT WERE SET UP TO SERVE THEM. A REASON FOR THIS SITUATION IS THAT EDUCATORS, AGRICULTURAL PROFESSIONALS, AND FARM LEADERS FACE CULTURAL BARRIERS WHEN WORKING WITH LATINO FARMERS, WHO HAVE DIFFERENT VALUES, CUSTOMS, AND LANGUAGE. EVEN THOUGH USDA AGENCIES, NGO'S, EDUCATIONAL INSTITUTIONS HAVE THE DESIRE TO PROMOTE A SUSTAINABLE FOOD AND FARMING SYSTEMS AMONG LATINO FARMERS, THEY OFTEN LACK HUMAN RESOURCE SKILLS TO REACH THESE EMERGING FARMING GROUPS.

II. ASSUMPTIONS

1. CULTURAL DIFFERENCES AFFECT -DIRECTLY AND INDIRECTLY- THE EFFECTIVENESS OF SUSTAINABLE FOOD AND FARMING OUTREACH PROGRAMS WITH IMMIGRANT OR LATINO FARMERS.
2. IF EDUCATORS UNDERSTOOD CULTURAL VALUES AND THE FARMING BACKGROUND OF LATINO FARMERS, THEY CAN DEVELOP PARTNERSHIP AND IMPROVE COMMUNICATION WITH THEM IN ORDER TO INCREASE PRODUCTIVITY, VIABILITY AND GREATER ENVIRONMENT AWARENESS IN US AGRICULTURAL COMMUNITIES.
3. KNOWING AND CONTINUING TO LEARN CULTURAL VALUES AND CUSTOMS OF LATINO FARMERS CAN HELP EDUCATORS UNDERSTAND THEIR ATTITUDES AND REACTIONS AND THEREFORE REDUCE STEREOTYPES.

III. PURPOSE

THE PURPOSE OF THIS PROFESSIONAL DEVELOPMENT PROGRAM (PDP) IS TO ENHANCING THE CAPACITY OF EDUCATORS AND FARM LEADERS TO WORK WITH SOCIALLY DISADVANTAGED LATINO FARMERS BY MEANS OF AN EDUCATIONAL MODEL THAT INTEGRATES AN EXPERIENTIAL LEARNING CURRICULUM (ELC) THAT IS FOCUSED ON MEXICAN CULTURAL VALUES AND SUSTAINABLE FARMING SYSTEMS.

PARTICIPANTS WILL BE IMMERSED DIRECTLY INTO THE CULTURE AND VALUES OF TRADITIONAL RURAL MEXICAN COMMUNITIES, FROM WHICH MANY OF OUR NEW US FARMERS DERIVE. UNDER THIS LEARNING MODEL, EXTENSION EDUCATORS WILL INCREASE THEIR CONSCIOUSNESS OF THE BARRIERS FACED BY INDIVIDUALS WHO BELONG TO THIS DEMOGRAPHIC FARMING GROUP, IN AN ENVIRONMENT WHERE THE LANGUAGE, VALUES, AND TRADITIONS ARE DIFFERENT FROM YOUR OWN.

IV. PROGRAM OBJECTIVES

1. TO ENHANCE THE CAPACITY OF EDUCATORS AND FARM LEADERS TO WORK WITH SOCIALLY DISADVANTAGED LATINO FARMERS.
2. TO ASSIST EDUCATORS AND FARM LEADERS TO BECOME MORE CAPABLE IN CONDUCTING SUSTAINABLE FOOD AND FARMING OUTREACH PROGRAMS WITH SOCIALLY DISADVANTAGED LATINO FARMERS.
3. TO PROVIDE A UNIQUE REFLECTIVE LEARNING ENVIRONMENT FOR THE PARTICIPANTS THROUGH A EXPERIENTIAL LEARNING PROGRAM.

V. PARTNERS
THIS PROGRAM IS ORGANIZED BY MICHIGAN STATE UNIVERSITY AND LA UNIVERSIDAD AUTÓNOMA CHAPINGO.

MICHIGAN STATE UNIVERSITY (MSU) WAS ESTABLISHED IN 1855 AS THE FIRST PUBLIC LAND GRANT INSTITUTION IN THE UNITED STATES. TODAY, MSU HAS DEVELOPED INTO ONE OF THE LARGEST RESIDENTIAL UNIVERSITIES IN THE U.S. ENROLLING 45,520 STUDENTS (INCLUDING 35,821 UNDERGRADUATES).

UNIVERSIDAD AUTÓNOMA CHAPINGO (UACH) WAS FOUNDED AS THE NATIONAL SCHOOL OF AGRICULTURE ON FEBRUARY 22, 1854, IN MEXICO CITY. FOLLOWING THE MEXICAN REVOLUTION, IT WAS MOVED TO ITS PRESENT LOCATION, A HACIENDA IN THE MUNICIPALITY OF TEXCOCO, ABOUT AN HOUR NORTHEAST OF THE CITY. THE BASIC FUNCTIONS OF UACH ARE EDUCATION, RESEARCH AND OUTREACH IN AGRICULTURE, RURAL DEVELOPMENT AND NATURAL RESOURCES.

Building Capacity among Immigrant Farmers in a Community College Context

Claudia M. Prado-Meza, Iowa State University
Hannah Lewis, NCAT
Jan Flora, Iowa State University

Introduction

COMIDA, which means food in Spanish,[12] is an acronym for County Of Marshall Investing in Diversified Agriculture. COMIDA was created as a collaborative effort for building and strengthening the local food system in Marshall County, IA. This paper discusses a beginning farmer and local food systems program in Marshalltown, IA. Marshalltown Community College (MCC) has transitioned a 140-acre farm to organic production. Through its Entrepreneurial and Diversified Agriculture (EDA) program, the college offered a bilingual (Spanish and English) course on vegetable and livestock production, farm planning, and marketing to a group of Latino immigrants and other beginning farmers from January through March 2009. Ten graduates from this training course are renting plots to grow vegetables and fruits for sale in the summer. Through participant observation and periodic interviews with these participants, this paper will assess the effectiveness of the program in launching new immigrant farmers, discuss challenges, and recommended strategies for developing similar programs in communities in the Midwest with a growing Latino population.

The effectiveness of the program

The COMIDA effort started in 2008 and its main objective was to develop a local food system in Marshalltown. During the first stages of the design of the project, it was decided that it was crucial to invite to the Latino community to be part of COMIDA; mainly because of the growth of the Latino population in Marshalltown, a meatpacking town. According to the State Data Center (2007) in 1990, there were 291 Hispanics in Marshalltown, which had a total population

[12] We decided to use a name that would appeal both the Anglo and the Latino community.

of 25,178. Hispanics were just over 1 percent of the population. By 2000, the population of the city had increased modestly to 26,009 inhabitants, but there were 3,265 Latinos, which represented 12.6 percent of the population in Marshalltown. In 2007, the total population was estimated at 25,815 and we estimate the Latino population at around 5,00013—nearly 20 percent of the total.

After it was decided to invite the Latino community, we considered that the "Start your own diversified farm" class was the perfect opportunity to engage them in the creation of a local food system, mainly due to two factors: first, most Latinos are working in agribusiness companies, and second, even though many of these immigrants come from rural areas and have extensive agricultural knowledge from their countries of origin, they have seldom utilized their agricultural skills (Lewis, 2005). Also, the inability to access information on agricultural business, the lack of financial capital and land are among the many factors that inhibit immigrants from farming in Iowa. Therefore, the MCC's EDA program organized the 2-month continuing education course with the objective of providing the beginning farmers with agricultural business knowledge and crucial information for accessing resources in Iowa.

When promoting the class, we focused our outreach efforts in the Latino community because it was our first time doing cross-cultural outreach and it was also the first time that the Latino community would participate with such institutions as extension, North Central Regional Center for Rural Development, Leopold Center, and the Community College, among others, and they needed to trust in our work and efforts. Three main outlets were used to let the Latino community to know about the class—we posted flyers both in English and Spanish in all the food businesses. Also, we went to Hispanic Catholic Ministries and asked them for a space at the end of the Spanish mass to make a broader invitation. We held an informational meeting and potluck in December to address questions about the class and incubator plant rental and to gather input from prospective students on how the class would be organized. Just when the class was about to start we had only one family interested in participating. However, this family was particularly passionate about changing the current food system, thus, they started to invite family and friends, and that is how it was possible to have nine Latino students. Latino leadership was crucial for recruiting and maintaining interest among the students; in fact, the number kept increasing as the class continued, indicating that more Latinos will join the initiative as the information spreads.

The class was a bilingual (Spanish and English) continuing education course on vegetable and livestock production, farm planning, and marketing. It was offered in January through March 2009 in the Marshalltown Community College. Students came from diverse backgrounds, including individuals born in Sudan, Iowa, and Mexico, as well as the land manager of the Mesquaki Settlemet, which suggested that we were not wrong when focusing our outreach efforts in the Latino community, because we still have the participation of the Anglo community.

[13] The Census Bureau estimates Marshall County's Hispanic population at 5,455. No estimate was made for the city, but if Marshalltown continues to have 92.4 percent of the Latino population as it did in 2000, we extrapolate the city's Hispanics to number 5,040.

The new farmers held other jobs[14] that kept them very busy, so the class was offered from 2–5 p.m. on Sundays; therefore, it was decided that the classes would also served as family time, with activities planned for the children to introduce them to farming as well. Students took turns bringing ethnic food for snacks. A list of interpreters and translators was developed to bridge the language barrier during the course and the seed selection, and the handout materials were both in English and Spanish. Also, the Iowa Foundation for Microenterprise and Community Vitality (IFMCV) had a space during the class to let the students know about their potential financial source for the beginning farmers. Completing the course makes them eligible for a loan. For the teaching of the class we had farmers-presenters that were paired with professionals—Iowa State University (ISU) extension specialists, a private food business consultant, a Practical Farmers of Iowa staff person, and students from ISU's graduate program in sustainable agriculture. This combination of professionals and farmers helped us to show the students that there are people out there working already in the improvement of their farming practices. These farmers were convinced that the healthier the farming practices, the healthier our bodies and our environment—and that you can actually make a living of it, and they shared their practical knowledge with the students, making the class very accessible for the students.

The training was a success and 18 graduates (nine of them Latino) from this course received their certificates on March 8, 2009; as part of the graduation ceremony, the children performed a song that they had learned during the past weeks. From the class there are now a dozen beginning farmers who decided to rent plots from MCC to grow vegetables and fruits for sale this summer. This group includes the author, who chose to have a plot in order to learn how to farm through first-hand experience, and to engage in participant observation of the project.

The last day of classes a final evaluation asked for feedback to improve the class. Among the results that stood out was the student diversity; it was not only in language and place of birth, but also in age and education. Most of the Latino students were older than the Anglos, and while most of the Anglos had a college degree, the Latinos only had from 1–6 years of school[15]. These disparities made a big difference in the way that the class was taught. We started the class assuming that the material provided during class was simple and easy to understand; little did we know that for most of them to answer very simple questions would be a challenge, not because they did not know the answers, but because writing was a problem.

However, both Anglo and Latino students had some previous experience in farming and they shared their knowledge with their classmates, and only 1 of the 18 students felt that he/she did not have a lot to share with its classmates. To the question Do you think your knowledge was appreciated by your classmates and by the instructors?, all the students but one[16] said yes and they shared an example of how their knowledge was appreciated, for example:
a) Yes, There wasn't [sic] many technicians in the group so my input was well received.

[14] Most of them work at the meatpacking plant.

[15] One of them had a bachelor degree from Mexico.

[16] The same student that say no to whether s/he had knowledge to share

b) Yes, I have a lot of restaurant experience and enjoyed being able to share what we want/need from suppliers.

To the question What did you like most about the class? The answers were as diverse as the class; some of them said "everything," while others stated that the teachers were very clear in their classes. Most said what they liked most was the opportunity to get to know new people, and to learn new things about agriculture, organic farming, loans, insurance, and banks. Indeed, the class was designed to encourage social interaction and bonding. As noted, participants were encouraged to bring their children to class. While the children had a separate program, their activities were held in an adjacent room and kids and parents were free to wander back and forth as needed, and this did not seem to disrupt the lessons. In addition, food sharing was a devise for encouraging interaction. Each participant was responsible for bringing snacks to one or more classes. People prepared special dishes for the break to share with others.

All the participants in this class have been and will continue to be engaged as a community of co-learners through an ongoing series of social and educational activities. We are working with IFMCV on financial management and credit application technical assistance, with Marshall County Extension on production technical assistance, and with the Iowa Rivers RC&D on building marketing opportunities and strategies in Marshall County.

The challenges and lessons

At the beginning of the farming season the MCC farmers were not sure about how good it would be for them to form a cooperative to sell their products, mostly because they are used to farming for home consumption only. However, they have had meetings on their own and they decided to open a shared bank account, pool their produce, and take turns selling in the Des Moines Farmers' Market. Nevertheless, these decisions had to be put on hold, mainly due to unfavorable climatic and soil factors. The yield has been low, which has reduced the potential level of sales. Thus far, the produce has been sold in only the Des Moines Farmers' Market, and in very small quantities.

The soil and the water were the second major challenge—there was not close source of water to the plots and the soil did not have enough organic matter to have a good production. In addition, the cool summer and excess of rain led to a disease outbreak in the tomato plants, which it was one of the main crops. Much of the crop was lost. Nevertheless, when conducting in-depth interviews to the MCC farmers, all of them said that they do not regret the fact that they are participating in the project, that they have had learned a lot, and they would like to try again next year. They know some things that they need to do differently in order to have better results next year.

Language and communication is still a challenge that we are facing. Not all the MCC Latino farmers are bilingual, and our farm manager can speak just a little Spanish. However, with the new Latino leader, we are beginning to resolve the issue. Nevertheless they have to learn to trust each other more, and be patient about issues related to language. Another lesson was finding out that most of the Latino students have not a lot of years of education and are therefore less comfortable with writing than people with more education. As we improve the curriculum for the coming year, it will be important to keep this in mind and perhaps develop more interactive activities into lesson plans.

Recommended Approaches:

- Target bilingual outreach to the immigrant community (since they are less familiar with the language, cultural, and institutional context of the program), but advertise through the normal outreach channels and you are likely to get a mix of immigrants and non-immigrants.
- Develop all material and activities bilingually, but take care that the needs of non-English speakers are met. Offer to hold a Spanish-only meeting between regular classes in order to provide the opportunity to them to express themselves freely in their native language.
- Encourage social interaction through food sharing and scheduling unstructured free time or breaks in class sessions.
- Create a family-friendly environment with side programming for children.
- Create instructor teams by pairing a farmer with a professional in order to balance theory with practical advice
- End each class period with a group reflection session—go around the room and have each student comment on at least one thing s/he learned that day and one thing s/he would like to learn more about.

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Challenges and Successes of Minority Landowners

Victor L. Harris, Minority Landowner Magazine

I'm Victor Harris, publisher and editor of **Minority Landowner Magazine**. In my 20 year career working for state forestry agencies, both as an area forester with the Virginia Department of Forestry, and as section chief of administrative services for the North Carolina Division of Forest Resources, I've had the opportunity to work one on one with landowners, providing technical and financial assistance to help them manage their land. And I've been at the table determining the allocation of technical and financial resources, which directly impact land management.

When we launched **Minority Landowner** our goal was to connect minority farmers, ranchers and forest landowners to the people, places, programs and events that can help improve their land management operation, thus increasing the likelihood that they will be able to maintain ownership of their property. I've learned from listening to farmers, and to those who serve farmers all over the country, that there are some key issues that contribute to the challenges and successes of minority farmers and forest landowners. Three areas I'll explore in this presentation are:

1. Access to capital
2. Access to information and technology

3. Maintaining land ownership

Access to Capital

For both minority and non-minority farmers, access to capital can be a major limiting factor that directly impacts their opportunity for success. The single largest entity that impacts the financial well being of farmers across America is the US Department of Agriculture. Whether it's in the form of grants, loans, subsidies, direct payments, or insurance, USDA has a huge financial impact on farmers.

That being said, a farmer who goes out to his stream day after day and complains that the water is low, but never seeks to determine why it is low, will have the same, unchanging fate. You and I both know that it didn't get low in an instant. Something probably happened at the headwaters before the low water level became apparent at the farm.

The same can be said about the availability of capital, particularly as it relates to USDA. In this case, the headwaters are NASS- the National Agricultural Statistics Service. Maybe it's because we don't deal with it on a daily basis, that farmers don't understand how important the Agricultural Census really is. When it comes to funds flowing down into your NRCS office, your Farm Service Agency office and even you're Cooperative Extension Service, the Ag Census represents the headwaters.

A farmer's access to capital will be directly impacted by their participation in the Agricultural Census. Farmers can't wait until they show up for a cost share sign-up period and they're told funds were low, they're all gone now. You can't wait until you apply for a loan and they tell you funds were low, we have no more to lend. Just as something can occur at the headwaters resulting in low water levels down on the farm, something can occur at the headwaters of the Ag Census resulting in low funding levels for your favorite farm programs. And that something is your failure to participate in the Ag Census. Numbers drive funding. If farmers want to help ensure that their program funding levels aren't running low like water on the farm, they must be counted.

Through the pages of Minority Landowner, we've introduced farmers to other avenues to support their revenue stream. One of our major advertisers is Farm Credit. The Farm Credit System provides more than $150 billion in loans to over a half million borrowers across the country. We've increased awareness and knowledge of carbon sequestration and the potential financial opportunities of carbon credits. We've profiled landowners who have received hundreds of thousands of dollars by participating in conservation easements. And we've shown how the forest resource that has been unmanaged and untapped, can be a renewable source of revenue for farmers who practice comprehensive land management.

Yes, there are many challenges that face minority landowners when it comes to access to capital. There are also many financial opportunities, especially if farmers explore nontraditional sources.

Access to Information and Technology

For many minority farmers, the issue of trust is one they cannot overcome. To gain full advantage of technical and financial assistance available through state and federal agencies, and through community-based organizations, farmers have to be receptive to the resource professionals who offer to serve them. Sometimes a farmer has to share more than they feel comfortable sharing.

The information that is essential for farmers to improve the productivity, and

profitability, of their land management operation can be obtained through technology, and it can be obtained through personal interaction.

The challenge for many farmers is that they may be on a waiting list for that resource professional to pay them a personal visit to explain a newly available program. Whereas, the farmer who can jump onboard and navigate the information highway will have access to those same programs almost instantly.
Information is power. In today's world, information and power are more commonly gained through access to technology. Through the pages of Minority Landowner we have shown how information technology workshops gave minority farmers their first chance to operate a computer and access the Internet, gaining more power with new information.

There still exist resource professionals in the Natural Resources Conservation Service, Farm Service Agency, Risk Management Agency, state forestry agencies, and colleges and universities across the country. But as budgets are reduced and demands on staff continue to increase, personal interaction will not be so easily obtained.

The opportunity for success is there for those minority farmers who maximize the use of technology to stay abreast of changes in programs and services, and redirect their land management operation accordingly.

Maintaining Land Ownership
If you are an agency or organization that has as a part of your mission statement, the commitment to help minority landowners maintain ownership of their land, you have a lot of work to do. I fall into that category as well.

Of all the calls, emails and letters I receive, none are more disheartening than those of minority landowners who believe that they have experienced encroachment, trespassing, or outright theft. Whether it is a boundary line dispute with an adjoining landowner, or timber theft by a dishonest door to door timber buyer, landowners must be diligent in order to maintain ownership of their property. And sometimes, the threat comes from within. That is, within their own family.

I argue that the need for affordable legal advice that is available to minority landowners has increased, not decreased over the years. I argue that a workshop on wills and estate planning is ineffective if the landowner does not walk out with a document in hand. And I argue that for every landowner who seeks help, there is at least one who remains in the shadows because he or she is embarrassed to share their plight with others. And they just give up.

Through **Minority Landowner**, we have educated landowners on the need for estate planning. We've provided information on conservation easements as a way to receive income while also protecting the legacy of your land. We've shared examples of how timber theft can occur when a landowner sells timber without the guidance of a professional forester. Still, we all have more work to do if we are to resolve the issue of land loss. The larger question is how do we secure comprehensive and timely legal guidance for minority landowners? Ultimately, resolving that challenge is what will reverse the trend of land loss.

Not all the pages of Minority Landowner have a pleasant ending. But even in the challenges, hardships and sometimes failures of those we feature, there is a

lesson learned that can propel someone in a similar situation, beyond the same fate.

What follows is the cover of our 2009 Farmers of the Year issue. You'll find farmers from all over the country. They have stories of challenge and stories of success. The difference between a challenge and a success can be the intervention of one individual. Is there a farmer out there who can count on that individual being you?

SESSION 4C
Farmer-to-Farmer Networking and Online Formats for Knowledge Exchange

Making Connections: The Impacts of a Women's Agricultural Network in Southern Oregon

Maud Powell, OSU Small Farms Program
Melissa Matthewson, OSU Small Farms Program

The number of principal women operators in the United States and Oregon is on the rise, signaling a need to meet the needs of these small, diverse producers. Nationally, the number of women who own farms jumped almost 29 percent from 2002 to 2007. The League of Women Farmers is an established agricultural network in southwestern Oregon facilitated by Oregon State University (OSU) Extension and made up of over 75 women operators. The group was established in October 2007 to provide networking and educational opportunities to small women farmers. The group is an open membership group with all women farmers welcome to any event held by the League of Women Farmers. Meeting participation has ranged from 7 to 62. There are 75 women are on the mailing list. Participants in the group represent a range of production systems, age, and acreage. Most livestock production systems are represented, including meat goats, dairy goats, pigs, sheep, cattle, alpacas, and poultry. Most perennial fruit systems are also represented, including mixed berries, pears, apples, and figs. Annual vegetable crops as well as herbs are also represented by many of the women growers. We also have some hay growers involved. Most direct market their crops at farmers' markets, community supported agriculture (CSA), restaurants and wholesale. Some are conventional growers, some certified organic, and many in-between.

Principal activities include educational workshops, farm tours, discussions, and potlucks in which participants of the open group choose the activities and farms. The group has also offered educational opportunities to women that are traditionally activities conducted by male farm partners, including tractor training and carpentry. The group has provided an environment of support and solidarity in a profession that can leave many women farmers feeling isolated from their peers.

For the past 2 years, the group has met on a monthly basis, alternating between meeting at the local extension office for discussion groups, presentations, or film showings, and gathering at different women's farms for tours and potluck meals. Topics covered during the extension meetings have ranged from balancing family life with farming, ergonomically appropriate tools for women, and niche marketing. The group has toured 11 women-owned and operated farms since its inception.

During the summer of 2009, Melissa Matthewson offered a series of four on-farm field days focused on various aspects of organic production for women farmers, funded through a grant from the Organic Farming Research Foundation. In October 2009, Maud Powell will facilitate a 1-day

introductory course on carpentry for women farmers. Future activities include a 1-day women farmers' conference as well as the continued development of educational tours, field days, workshops, and potluck discussions. Another project will be to create a Web site for the League of Women Farmers as a way to continue developing educational activities and networking. An annual meeting in November of this year will help to guide the group in 2010.

- Jennifer Almquist, an OSU graduate student, conducted in-depth interviews with seven women active in the league. The women cited several reasons for the success of the program:
- Staff time devoted to organizing and facilitating the program by OSU staff was essential
- Women who compete in the marketplace were willing to share information
- Supportive, nurturing, fun environment encourage women to return
- Potluck meals

The interviewed women also discussed some of the challenges facing the league, including:

- the geographical distance between many of the farms can make attendance difficult;
- women have varying levels of knowledge and experience, and the discussions are not always relevant to all women; and
- the format of meetings can be too informal—the group may need to come up with a more distinct purpose for existing.

Beginning in 2010, members will pay annual dues of $60 to the league. The money collected will be used at the discretion of members. Membership dues are being implemented not only to generate revenue for additional classes and field trips, but also to help women self-select. As the group became popular in its first 2 years and received a great deal of local media coverage, many home gardeners were coming to the open meetings creating interesting challenges—one field day attracted 50+ women, including gardeners, and there were many complaints that this diluted the commercial-scale conversation. It was then decided by the group to collect fees as one way to self-select and encourage commercial women farmer participation.

The following bullets outline five impacts gleaned from field day evaluations and interviews conducted by Jennifer Almquist.

Top Five Impacts

1. <u>The creation of mentoring relationships between beginning and experienced farmers.</u>

One woman farmer commented on the value of the League of Women Farmers, "…(W)e were just starting our farm and we [wanted] information and networking. We had a ton of questions at that point…and we don't quite know what we're doing and wouldn't it be great to have other people that were either just starting or had some experience that we could ask some of these questions to…that was the draw."

2. <u>The group has built confidence and a sense of identity in the women farmers empowering them to feel that they are important to the small farm movement as innovative producers leaving behind the traditional identification as the "farmer's wife."</u>

One woman farmer who attended a field day specifically for women farmers commented, "Reaching out to women farmers was wonderful. If it is true that

most of the farmers in Oregon are older men and the state wants to encourage more young people to farm, then reaching out to women is a fantastic way to do this. I think that many women are intimidated by the more technical aspects of farming. Offering a class to women create[s] a collaborative and supportive learning and networking environment and the focus on organic certification brought women of varied ages and farm types who are ready for the next…I feel very supported as I move forward in the next steps with my farm and for me, this support helps me to ensure that our endeavor will be successful."

Another woman also commented on women farmer centered education in the interviews by Jennifer Almquist: "…I think that women being empowered to be such an active part of the farm community, you know the standard farm wife was probably, is probably a great tough woman, you know she's in making pies or she's out milking cows, that's the kind of standard we've all grown up with and I think that for women to feel that they are the innovators on farms along with the men, or sometimes even in front of the men I think is a real gift and then to share that information."

3. <u>Established solid camaraderie, support and community between women farmers.</u>

Some 13 out of 18 women commented on one field day evaluation that the field days introduced them to a new network and community of farmers they could draw on in the future. Unique to the Northwest, this group has helped women find important balances between family and farming life through conversation and sharing with other members of the group. In two events on family farming and farm finance, women farmers shared tips and support on how to balance family issues as well as how to build an economically viable business. Many of the farmers have gone on to establish cooperative relationships and many have found the necessary skills to build their business through new direct marketing opportunities.

One woman farmer commented on the support and community of the League of Women Farmers by saying, "You really need that support system because there have been times when I have gone there and [said], 'Oh, I feel like giving up,' and then I talk to [another member] and she said, 'Well, you know we didn't really turn a profit until this very last year and we've been at it for 7 years.' It…makes me realize that this takes time to build up a business and I think the people that are successful are the people that don't get discouraged, so I have to keep my enthusiasm up."

Another woman commented, "…Anytime I have a problem, or I'm not sure of something, I can always call one of the women and ask."

4. <u>Increased exposure to and information of niche & alternative enterprise/marketing opportunities in southern Oregon.</u>

One woman farmer who attended a field day focused on organic production commented, "Organic is the way of the future in southern Oregon. OSU can remain on the cutting edge with the small farms program by offering workshops like this series, which have been excellent. Bringing women up to speed on organic certification practices and philosophy speeds up this economy booster for southern Oregon because women are natural networkers. The resources provided were excellent and have benefited not just me but the development of our small farm."

5. Increased business development and sales

We held a panel on niche marketing for the League of Women Farmers, which included a grocery produce buyer, a chef, and a market manager. After the event, the chef mentioned to me that a new woman grower she had met at the meeting came by with salad greens that she bought on the spot, establishing a new business relationship between the chef and the farmer.

A Discussion of Pesticides, the Environment, and the IPM Concept for the Small Farmer

Robert Halman, University of Florida Extension Collier County

Pesticides: What are they to the small farm producer?

They are tools that assist in the "control" of pests in agricultural crops, gardens, lawns, flowers, trees, and shrubs. The term control is very important when discussing pests and their control: **Control versus elimination.**

Types of Pesticides: General use: Pesticides those are not likely to harm humans or the environment. Restricted use: this method may harm humans or the environment if used improperly. Another way to think about pesticides is to consider those that are chemical pesticides or are derived from a common source or production method. Other categories include biopesticides, antimicrobials, and pest control devices.

Know Your Pest and how best to control it!!

Chemical Pesticides

Organophosphate Pesticides - These pesticides affect the nervous system by disrupting the enzyme that regulates acetylcholine, a neurotransmitter. Most organophosphates are insecticides. They were developed during the early 19th century, but their effects on insects, which are similar to their effects on humans, were discovered in 1932. Some are very poisonous. However, they usually are not persistent in the environment.

Carbamates Pesticides affect the nervous system by disrupting an enzyme that regulates acetylcholine, a neurotransmitter. The enzyme effects are usually reversible. There are several subgroups within the carbamates.

Organochlorine Insecticides were commonly used in the past, but many have been removed from the market due to their health and environmental effects and their persistence (e.g. DDT and chlordane).

Pyrethroid Pesticides were developed as a synthetic version of the naturally occurring pesticide pyrethrin, which is found in chrysanthemums. They have been modified to increase their stability in the environment. Some synthetic pyrethroids are toxic to the nervous system.

Biopesticides

Biopesticides are certain types of pesticides derived from such natural materials as animals, plants, bacteria, and certain minerals. For example, canola oil and baking soda have pesticidal applications and are considered biopesticides. At the end of 2001, there were approximately 195 registered biopesticide active ingredients and 780 products. Biopesticides fall into three major classes:

(1) **Microbial pesticides** consist of a microorganism (e.g., a bacterium, fungus, virus or protozoan) as the active ingredient. Microbial pesticides can control many different kinds of pests, although each separate active ingredient is relatively specific for its target pest[s]. For example,

there are fungi that control certain weeds, and other fungi that kill specific insects.

(2) Plant-Incorporated-Protectants (PIPs) are pesticidal substances that plants produce from genetic material that has been added to the plant. For example, scientists can take the gene for the Bt pesticidal protein, and introduce the gene into the plant's own genetic material. Then the plant, instead of the Bt bacterium, manufactures the substance that destroys the pest. The protein and its genetic material, but not the plant itself, are regulated by EPA.

(3) **Biochemical** pesticides are naturally occurring substances that control pests by non-toxic mechanisms. Conventional pesticides, by contrast, are generally synthetic materials that directly kill or inactivate the pest.

Safety First: READ THE LABEL- "The label is the law."
The label on a pesticide package has important information and directions to pesticide safety and handling in order to avoid harm to human health and the environment. To knowingly utilize a pesticide "off label" to its directions on the label is a violation of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) and can result in enforcement actions to correct the violations.

Integrated Pest Management (IPM)
Pest management is a matter of timing- *Remember pest management should be your goal: not pest elimination!!* Pests have been around for centuries and one IPM technique will not be the way to eliminate them. A combination of preventative and cure, natural controls and chemical controls working together make up a successful pest management scheme.

IPM is an effective and environmentally sensitive approach to pest management and control. IPM incorporates several principles that include monitoring inspection of crop damages, identification of pests present, life cycles understanding of the prey-predator relationship and ultimately selection of the best bio-compatible control measure. This information is used to manage pest damage by the most economical means and with the least risk to people, property, and the environment.

IPM is not a single pest control method but, rather, a series of pest management evaluations, decisions and controls. In practicing IPM, growers follow this four-tiered approach:

1. **Set Action Thresholds:** Before taking any pest control action, an IPM program first develops an action threshold, a point at which pest populations or environmental conditions indicate that pest control action must be taken. Sighting a single pest does not always mean control is needed. Understanding the level at which a pest becomes an economic threat is critical to making pest control decisions.
2. **Monitor and Identify Pests:** Not all insects, weeds, and other living organisms require control. Many organisms are innocuous, and some are beneficial and help control pests. IPM programs work to monitor for pests and identify them accurately, so that appropriate control decisions can be made in conjunction with action thresholds. Successful monitoring and identification ensure that pesticides are used only when really needed and that the wrong kind of pesticide is never used.
3. **Prevention:** As a first line of defense, IPM programs prevent pests from becoming a threat. This may mean

rotating between different crops, selecting pest-resistant varieties, or planting pest-free rootstock. In most cases, these methods are effective in preventing pest problems, and they are more economical than chemical sprays. They also pose little to no risk to human health and the environment.

4. **Control:** Once monitoring, identification, and action thresholds indicate that pest control is necessary and preventive methods are no longer effective or available, the next step is to determine which control method maximizes effectiveness and minimizes risk.

Pesticides that are related because they address the same type of pests include:
Algicides -Control algae in lakes, canals, swimming pools, water tanks, and other sites.

Antifouling agents -Kill or repel organisms that attach to underwater surfaces, such as boat bottoms.

Antimicrobials -Kill microorganisms (such as bacteria and viruses).

Attractants -Attract pests (for example, to lure an insect or rodent to a trap). (However, food is not considered a pesticide when used as an attractant.)

Biopesticides -Biopesticides are certain types of pesticides derived from such natural materials as animals, plants, bacteria, and certain minerals.

Biocides -Kill microorganisms.

Disinfectants and sanitizers -Kill or inactivate disease-producing microorganisms on inanimate objects.

Fungicides -Kill fungi (including blights, mildews, molds, and rusts).

Fumigants -Produce gas or vapor intended to destroy pests in buildings or soil.

Herbicides -Kill weeds and other plants that grow where they are not wanted.

Insecticides -Kill insects and other arthropods.

Miticides (also called acaricides) -Kill mites that feed on plants and animals.

Microbial pesticides -Microorganisms that kill, inhibit, or out compete pests, including insects or other microorganisms.

Molluscicides -Kill snails and slugs.

Nematicides -Kill nematodes (microscopic, worm-like organisms that feed on plant roots).

Ovicides -Kill eggs of insects and mites.

Pheromones -Biochemicals used to disrupt the mating behavior of insects.

Repellents-Repel pests, including insects (such as mosquitoes) and birds.

Rodenticides -Control mice and other rodents.

The term pesticide also includes these substances:
Defoliants -Cause leaves or other foliage to drop from a plant, usually to facilitate harvest.

Desiccants-Promote drying of living tissues, such as unwanted plant tops.
Insect growth regulators-Disrupt the molting, maturity from pupal stage to adult, or other life processes of insects.
Plant growth regulators -Substances (excluding fertilizers or other plant nutrients) that alter the expected growth, flowering, or reproduction rate of plants.

Information contained in this document was adapted from the following sources: Environmental Protection Agency: http://www.epa.gov/pesticides/about/types.htm http://www.epa.gov/pesticides University of Florida IFAS Extension Fact Sheets, University of Maryland Pesticide Handbook

The National Poison Control Hotline was established to respond to emergency calls from concerned citizens about poison prevention. 1-800-222-1222 (emergency only) 202-362-3867 (for administrative and materials requests)

The National Pesticide Information Center (NPIC) provides objective, science-based information about a variety of pesticide-related subjects, including pesticide products, recognition and management of pesticide poisonings, toxicology, and environmental chemistry. 1-800-858-7378 email at npic@ace.orst.edu

Endangered Species Protection Program (Pesticides) (ESPP) - A toll-free information line is provided to aid people striving to protect endangered species from harm that may result from the use of some pesticides. 1-800-447-3813 email: opp-web-comments@epa.gov

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Bringing New Farmer Training into the Information Age: Online Courses, Webinars, Forums, and Web Videos

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New market opportunities, primarily driven by interest in organic and local food, have inspired a wave of new farmers. Most of them did not grow up on farms, and now seek training in all aspects of farm start-up and operation. These new farmers are diverse in age, background, and goals, but as a whole they tend to be much more technologically savvy than traditional farming audiences. In NY, we have adapted existing face-to-face courses for online delivery, and added some new web-based tools to provide training and support to this geographically scattered audience.

Face-to-face training—particularly for production topics—is still our first preference for building new farmers' skill levels. But for beginners already actively farming, urban residents dreaming of a farm and remote rural residents who live 2 to 3 hours from face-to-face trainings, we have learned that online learning opportunities are critical for providing access to high-quality support and information.

Background

Over 100 farmers and agriculture service providers at the 2006 NY Small Farms Summit named Beginning Farmer (BF) training and support as one of the top five priorities for small farms sustainability. The Cornell Small Farms Program responded by launching the NY Beginning Farmer Project. Working with ten county-based Cornell Cooperative Extension educators, we created materials and support for aspiring and start-up farmers in NY. Together, our team has produced:

- The award-winning Guide to Farming in NY: What Every Agricultural Entrepreneur Needs to Know, a compilation of fact sheets on federal programs, land access, marketing, business planning, legal, insurance, tax, and regulatory issues, housed online at the Cornell Small Farms Program website (http://www.smallfarms.cornell.edu)
- BF 101, an online farm pre-business planning course that consistently has a long waiting list
- The NY Beginning Farmers Resource Center at http://www.nybeginningfarmers.org, which includes FAQ's, a forum, self-paced lessons with integrated online worksheets, and the "Voices of Experience" video series
- Ten sponsored face-to-face regional trainings on planning new farm start-ups, at which experienced educators mentored other educators new to providing BF training.
- A strengthened Cooperative Extension support network with a designated BF contact in each NY county office. Any new farmer in NY can contact their local extension office for access to the materials and curriculum developed by the NY Beginning Farmer Project.
- Train-the-trainer webinars for extension and other educators on specific needs of BFs and the effective practices and resources available when working with this audience

Beginning Farmers Resource Center Website

Three years ago, feedback from new farmers made it clear to us that they already had access to an overwhelming amount of information. It was guidance on how to apply this information that they lacked. So we developed a website with publicly-accessible curricular content at www.nybeginningfarmers.org. This site was not designed to be a clearinghouse for all the information a new farmer needs to know, but rather to emphasize the planning process, answer some of the most common financial and business-oriented questions new farmers have, and connect these farmers with people who can help them directly.

The core content on the site consists of seven learning units, each with multiple chapters, guiding beginning farmers through goal-setting, market analysis, resource evaluation, choosing an enterprise, good stewardship practices, pricing and profitability, and tax and regulatory info. Both the topics and the progression they follow were chosen after examining multiple popular curricula for new farmers, such as the SARE book "Building a Sustainable Business: A Guide to Developing a Business Plan for Farms", "Farming Alternatives: A Guide to Evaluating the Feasibility of Farm-Based Enterprises" published by NRAES at Cornell, and the "Starting an Ag Business?: A Pre-Planning Guide" by Steve Richards, formerly of NY FarmNet. While each of these is a unique and valuable resource, we found that they tend to follow the general progression outlined above, so we developed our curriculum along the same lines, drawing directly from these resources and others with permission.
Together with our sister website at the Small Farms Program (www.smallfarms.cornell.edu), these two sites offer a hub of information where new and aspiring farmers can find answers to business management, regulatory, or production-oriented questions.

BF 101 Online Course and Webinars

While the website is a useful tool, we still believed that we needed to do more than offer static information to new farmers. With the open-source distance learning platform MOODLE, which is supported by

our Cooperative Extension IT department, we built a dynamic course that uses the Beginning Farmers Resource Center website content as its virtual "textbook." We have offered the course twice as a 9-week pre-business planning course (7 weeks to cover the 7 learning units on the BF website, plus a week at each end for orientation and conclusion). This was a long time commitment for the instructors, and the student attrition rates seemed high. Now we typically break the course into two 5-6-week sessions, with one covering goal-setting, physical resource assessment, and choosing an enterprise, and the second course covering marketing and profitability. We are in the process of expanding our course offerings to include production topics as well as more management topics.

To date, we've had two Cooperative Extension educators teach each course, with an overarching goal of connecting participants to each other, and to people in their local area who can give them the on-the-ground guidance they need. It is this interaction among participants and with instructors that is consistently highly rated in course feedback. The bulk of the information content is freely available from the Beginning Farmers Resource Center website, yet people are willing to pay $100-$200 (depending on course length) to participate, and we have had a long waiting list for each course.

One key to cultivating relationships and interaction has been the inclusion of weekly webinars during the courses. These present an opportunity to bring in guest speakers on topics of interest, particularly farmers (who are paid an honorarium for presenting during the webinar). Perhaps more importantly, since we always include a conference call line in the webinar, they offer a chance for participants to speak directly with each other. Participants' comfort level with technology is variable, and for those who have some difficulty navigating elements of the course online, a low-tech conference call can serve as a forum for usability questions as well as farm-related questions. Instructors typically build in at least 30 min. in a webinar for "office hours." Webinars and conference calls are always recorded and later posted in the course for those who were unable to attend.

What we have learned:

1. There will always be attrition in an online course, particularly when it is not building toward college credit, a certificate, or any other pinnacle of achievement (we do offer a "certificate of completion" for participants finishing the course, and borrower training credits with FSA, but this is not a motivation for most people). To limit attrition and compensate for it, we:

a. Admit more people into the course than we ideally want – i.e. 30 instead of 25, knowing that we will likely lose 5-10 people along the way
b. Shorten courses to 5-6 weeks and hold them only from mid-Oct. to late Nov. and Jan-Feb, avoiding all holidays
c. Offer interesting tidbits of information, challenges, or discussion topics several times a week to help keep participants checked in
d. Invite successful farmers to present in webinars, and hold lively Q&A sessions afterward

1. Online courses are ideally financially self-sustaining once developed and piloted. Our two instructors each tend to spend about 40 hours managing a 5-week course. We recommend structuring course fees accordingly, and offering a scholarship option if you are concerned about making the course financially inaccessible to some.

Videos

The most popular aspect of all the face-to-face trainings we've offered has been farmer presentations. We wanted to incorporate farmers' perspectives into our online course too. So we interviewed twelve farmers of diverse ages, backgrounds, farm types, and experience levels, and edited the content into a series of relatively short clips (3-18 minutes, with the average being less than 5 minutes) that aligned with the learning units on the BF Resource Center website. We embedded the clips there and in our YouTube channel (http://www.youtube.com/user/cornellsmallfarms), and dubbed them the "Voices of Experience."

Seven of the twelve finished clips cover the topics from the 7 BF Resource Center learning units (Goal-setting, Marketing, Evaluating Land, etc.). The remaining five clips introduce the featured farmers and cover popular topics like grants for farmers, lessons from experience, and financing start-up. The videos have been very popular with website users and course participants, and have added a valuable element of learned wisdom to our website and online course.

What we have learned:

1. Keep videos short – our longest videos are too long (18 min) and would be better broken into multiple clips.
2. Hire a professional if you can – professionals are expensive but quite worth it if your goal is high-quality educational video clips. We have a Flip camera that our program staff uses for capturing video of farm tours and workshops. But we are not professionals, and often spend too much time filming, editing, and otherwise messing around with video that in the end is of poor quality. Our Voices of Experience series was handled by a professional, and the end product is clearly better.
3. Post videos online in multiple formats – we embedded a Flash player in our website to make the best picture quality available. But we received complaints that not all users could view these, so we uploaded videos to YouTube, where picture quality is much lower but access is more universal, even from dial-up connections.

Where We're Headed

Based on the positive feedback we've received from farmers and educators, we've decided to vastly expand our video and online course offerings. We are using a "new farmer skills checklist" as the organizing framework for our courses, and will begin to design production-oriented courses as well as more advanced-level business management courses. Production courses will feature more video clips of exemplary farmers demonstrating very specific how-to techniques for raising berries, livestock, and veggies.

In addition to our online work with new farmers, we are building a network of organizations in the Northeast that serve this audience, with the goal of learning from each other and working together on larger issues affecting beginning farmers. We have begun recruiting new online course instructors from this network, and hope to have a new cadre trained and ready to instruct courses by Fall 2010. We are also going to coordinate with NOFA-NY to link our online courses to on-the-ground workshops, so that participants can meet each other face-to-face and get a hands-on experience once during the course. Ideally, we would like any new farmer in the Northeast to have access to the training and support they need to get on the path to long-term success.

Online courses and other internet-based tools are invaluable assets when serving the geographically scattered and technologically savvy new farmer audience. But as with any other training method, they can vary in quality. We are always looking for ways to improve our offerings for new farmers, and hope that by sharing what we have learned, we can help others do the same.

Developing and Implementing a Web-Based Instructional Model for Producers Operating on Limited Acreage

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Introduction

The face of agriculture in the United States is changing. The United States gained a total of 18,511 farms between 2002 and 2007 (National Agricultural Statistics Service (NASS), 2004 and NASS, 2009). A micro-level examination of the change in the number of farming operations across the United States between 2002 and 2007 finds that only those farms operating on limited acreage increased in numbers. On the other hand, categories of larger farms actually decreased in total over this time period. Specifically, the total number of operations producing on less than 180 acres increased by 19,861 total farms, while farms operating on 180 acres and greater lost a total of 1,350 total farms between 2002 and 2007 (-NASS, 2004 and NASS, 2009). Further examination suggests that farming operations producing on less than 180 acres accounts for nearly 67 percent of all farms across the United States. Thus, this group of limited acreage farming operations not only represents the only increase in the number of farms between 2002 and 2007, but also represents largest percentage of total farms across the United States.

Providing extension education to the group of producers operating on farms with less than 180 total acres has always been an important issue. However, a growing number of these operators lack practical agricultural production experience. Furthermore, this group typically receives substantial off-farm income suggesting the time to obtain traditional extension education is limited (Economic Research Service, 2007). Thus, the problem becomes one of how to disseminate agricultural production and profitability information to the largest group of agricultural producers in a way that fits into their schedule as well as their education level. Collaborative learning, and learners exchanging information and personal experience to obtain knowledge of a subject under the direction of a facilitator, has been effectively used in the classroom setting.

This type of learning allows for less knowledgeable members to learn from the explanations of more advanced peers. Simultaneously the more knowledgeable peers benefit from providing these explanations (Dillenbourg and Schneider, 1994). Furthermore, Gokhale (1995) found that collaborative learning is more beneficial when the purpose of instruction is to enhance critical-thinking and problem-solving skills. Given the obstacles discussed above facing limited acreage producers, the objective is to create a set of collaborative learning classes enabling information dissemination while adhering to time limitations.

Data and Methods

Adapting a collaborative learning style to agricultural operators who have off-farm employment required the use of an instrument that would provide learners

information in a way that met their time requirements. The advent of Internet classrooms provided such an instrument and was used. The online platform used to assimilate all developed materials was Moodle. This free software e-learning platform is designed to help educators create online courses with opportunities for learner interaction.

After choosing an online platform to use, multi-disciplinary extension programs that were most often requested by limited acreage producers were identified. This was accomplished through discussions with county extension agents as well as extension specialists. These discussions took place over a 6-month period both in person as well as via telephone conferencing.

A set of curriculum to be used in each of the online extension courses was then developed by extension specialists. The curriculum was adapted from existing material pertaining to each subject and was expressed in such a way that novice as well as experienced agricultural producers could grasp the concepts. These specialists also identified additional resources that would assist in learning and applying the information being covered in each class. All information was then assimilated into the e-learning platform.

The final phase of developing each extension online course was to create a discussion area for learners to exchange information and ideas pertaining to the specific module being covered. The exchange of ideas is directed by volunteer county extension agents with a large concentration of limited acreage producers as their clientele base. It is recognized that these volunteer agents need online classroom experience in being online learners themselves (Street et. al., 2007). Therefore, each volunteer agent gained experience through participating in an online training program. In this training program, volunteers were exposed to the collaborative learning environment where the facilitator's role is to guide discussion between students and answer specific questions rather than lecture.

Major Results and Implications

The three multi-disciplinary extension courses adapted to an online collaborative learning format were: the development of a resource inventory, an introduction to beef cattle management, and an introduction to pasture establishment and maintenance. Curriculum used in each of these courses includes a short generic publication explaining the concept of the class and providing the initial background information to the learner. A case study farming operation along with worksheets are also provided allowing learners to not only see an application of the information but also assist in applying it to their own operation. A narrated slide presentation summarizing the publication, case study application, and worksheets is the final set of curriculum developed for each of the courses. All curriculums are assimilated into the Moodle learning environment for the three separate courses.

Each of the three courses was offered to a focus group of clientele to evaluate the effectiveness of the online platform, the user friendliness of the online material, and the discussion area. In total, 13 classes were offered over a 12-month time period with an average attendance of 10 clientele in each course. The vast majority of the participants were from Texas (nearly 92 percent). However, clientele that expressed interest from other states were also allowed to enroll in the courses. The other states represented in the 12 month time period were: Florida, Kansas, New Hampshire, New York, Oklahoma, and Oregon.

Conclusion
Providing information to agricultural producers operating on limited acreage is greatly needed but has been met with the constraints of time limitations of both extension educators as well as clientele. As described, an online classroom setting provides the flexibility needed to accomplish the goals of providing the information while also adhering to the time constraints of both groups. Incorporating the collaborative learning environment via the internet is also unique to extension programming. With development complete and classes currently being offered, this set of courses can serve as a model for Extension programs nationwide.

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SESSION 4D
Ecosystem Approaches to Small Farm Production

Working with Nature: Ecological Knowledge You Can Use to Create a Better Functioning Farm

Rex B. Dufour, NCAT/ATTRA (National Center for Appropriate Technology)

Farmers need to prepare for the coming "perfect storm"—the combination of generally poor soil management, a rapidly changing market, and climate change. This discussion provides some practical approaches to dealing with these changes through ecological approaches.

Good soil management is the basis of plant health, nutritious food, and farm profitability. Most farmers have been "mining" their soils—not maintaining adequate organic matter, which is a critical component of soil health. This reduces the soil's ability to absorb rainfall, increases runoff, and undermines the soil's ability to store moisture and nutrients. Organic matter also drives the nitrogen cycle in the soils, and provides habitat for vesicular arbuscular mycorhizzae (VAM). VAM allow plants to access a much greater volume of soil, are important avenues for plants to access phosphorous, and may funnel water

and N to plants during drought periods (Drinkwater, et al. 2008).
At the same time, public concerns about healthy food, as well as the economic and regulatory landscape, are all-important factors in pulling and pushing American farmers toward "greener" agricultural practices:
Markets (i.e., the American public) are looking for greener products.
Regulation, which reflects the public mind set, will become stricter with respect to use of—and off-farm impacts of—pesticides and fertilizers.
Inputs (fuel, fertilizers, and pesticides), all of which are derived from fossil fuels, will likely increase in cost in the near future.

Climate change models predict that weather events, such as rainfall and drought, will become more severe in the future. So, farmers need to get their soil in better shape to respond to these events. Soil organic matter (SOM) can hold 30 times its weight in water. One percent organic matter in the top 3 inches of soil can hold 1.4" of water, the same amount that an entire foot of sandy loam soil with no organic matter can hold. While it is not practical to change the content of sand, silt, and clay in a soil, the amount of organic matter in soil can be significantly affected by management. By increasing SOM 1 percent in the top 3 inches of soil, you can increase the ability of the soil to hold an additional 1.4 of water!

By absorbing more rainfall, high organic matter soils not only recharge the ground water, but there is less runoff from a particular piece of land. This conserves soil and nutrients and reduces the likelihood of flooding downstream. High organic matter soils are also able to provide a harvestable crop when crops in neighboring fields growing on poorly managed, low organic matter soil, wither.

Organic matter is also a way to store N in the soil. Plants grown in soils with low levels of organic matter are overly reliant on external sources of N, and synthetic fertilizers, which are derived from fossil fuels, often provide a "nitrogen rush" to the plants. This creates other problems such as susceptibility to pests and disease, as well as lodging (plants falling over). A better approach is using manures or green manures, which provide N as well as other micronutrients and add to the biology of the soil.

Soils with high organic matter generally have a more complex and healthier soil food web, made up of many organisms, but which is based on a healthy microbial population. Microorganisms compete in the rhizosphere, an area immediately adjacent to the plant roots, rich in exudates from the plant. The exudates contain carbohydrates, organic acids, vitamins and many other substances essential for life. From 5 percent to 40 percent of the total dry matter production of organic carbon from photosynthesis may be released as exudates! (Shigo, A., undated).

All the organisms associated with the soil food web have their roles. However, arbuscular mycorrhizae (all endosymbionts) are the most important fungal symbiont in agroecosystems. Plant-mycorrhizal associations are the major mechanism of P uptake in over 80 percent of plant species (Drinkwater, et al. 2008). Farmers can encourage these fungi, and other food web organisms by avoiding either physical or chemical disturbance of the soil—keep tillage, synthetic pesticides, and fertilizers (especially ones like anhydrous ammonia) to a minimum.

Use of no-till, strip till, and roller crimper technologies not only reduces disturbance in the soil, but preserves the soil organic matter by reducing its exposure to

oxidation. No till also leaves plant residues on the soil surface, providing habitat for ground beetles and spiders. Ground beetles are important predators of insects and weed seeds. Spiders are one of the most important predators in agricultural ecosystems.

Ecological Approaches to Pest Management:

Bats: 12 species of bats are present in Illinois, all insectivores. They prey on a wide range of insects, including many species of moths—codling moth, diamond back moth, cutworm and armyworm adults, and many others. Farmers can obtain some free pest control by providing some habitat, in the form of bat boxes or modifications of a structure that provide niches that bats need for living space.

Perimeter Trap Crops: used to manage cucumber beetles in squash, pepper maggot in green bell peppers, and diamond back moth in cabbage. The idea is to plant variety of the crop (Hubbard squash planted around summer squash, collards around cabbage) that is either very attractive to a pest or very repellant to a pest (hot pepper around green bell peppers).

Habitat plantings: Provide beneficial insects and other organisms with nectar and pollen sources when and where they need them, as well as overwintering sites.

For gophers, which can be the bane of many farmers, providing habitat for predators, (e.g., owl boxes) is on approach. For orchardists, using of cover crops such as sour sweet clover (Melilotus indica) will not attract gophers due to the coumadin content of the plants. Farmers can also train domestic animals, such as cats and rat terriers, to prey on gophers.

It makes sense that if the soils are in good shape, the food produced from those soils will also be of good quality. Many recent studies have shown that produce from organically managed soils have higher Phenolic content (also known as antioxidants) than produce from conventionally managed soils.

Nutritional Comparisons, Organic vs. Conventional Fruits and Vegetables.

Article	Results
Mitchell, A.E., Hong, Y.J., Koh, E., Barrett, D.M, Bryant, D. E., Denison, R.F., S. Kaffka. 2007. Ten-Year Comparison of the Influences of Organic and Conventional Crop Management Practices on the Content of Flavonoids in Tomatoes. Journal of Agricultural and Food Chemistry. June.	This study found that the level of quercitin, the most common flavonoid in the human diet and the major flavonoid in tomatoes, increased 79 percent as a result of organic management, and kaempferol levels rose 97 percent.
Rist, L., Mueller, A., Barthel, C., Snijders, B., Jansen, M., Simoes-Wust, A.P., Huber, M., Kummeling, I., Mandach, U.v., Steinhart, H., and C. Thijs. 2007. Influence of organic diet on the amount of conjugated linoleic acids in breast milk. British Journal of Nutrition, 2007	This study found that mothers consuming mostly organic milk and meat products have about 50 percent higher levels of rumenic acid in their breast milk. This Conjugated Linoleic Acid is responsible for most of the health benefits of CLAs in milk and meat.
Asami, D.K., Hong, Y-J., Barrett, D.M., and A.E. Mitchell. Comparison of the Total Phenolic and Ascorbic Acid Content of Freeze-Dried and	Statistically higher levels of Total Phenolics were consistently found in organically and sustainably grown foods as compared to those produced by conventional

Air-Dried Marionberry, Strawberry, and Corn Grown Using Conventional, Organic, and Sustainable Agricultural Practices. Journal of Agricultural and Food Chemistry. 51 (5), 1237 -1241, 2003.	agricultural practices. Secondary phenolic metabolites play an important role in plant defense mechanisms, and increasing evidence indicates that many are important in human health.
Amodio, M., and A. Kader. 2007. A comparative study of composition and postharvest performance of organically and conventionally grown kiwifruits. Journal of the Science of Food and Agriculture. Volume 87 Issue 7, Pages 1228 – 1236.	This study showed that organically grown kiwifruit had significantly increased levels of polyphenols, the healthy compounds found in red wine and coloured berries. They also had a higher overall antioxidant activity, as well as higher levels of ascorbic acid (vitamin C) and important minerals compared with their conventionally grown counterparts.
Bügel, S. 2009. Uptake of minerals and flavonoïds from different production systems in humans. Journal of the Science of Food and Agriculture	The organic diets had a significantly higher content of quercetin, 4.9 g/10 MJ in the organic diet vs 2.6 g/10 MJ in the conventional diet. The urinary excretion of both quercetin and kaempherol was significantly higher in the period where subjects were fed the organic diet (27 mcg/24h and 5 mcg/24h, respectively) compared to the period where they were fed the conventional diet (19 mcg/24h and 2 ıg/24h, respectively). The intake and retention of the mineral Mg and the trace element Mo were significantly higher from the organic diet (403 mg/d and 89 mg/d for Mg; 266 ıg/d and 85 ıg/d for Mo) than from the conventional diet (366 mg/d and 55 mg/d for Mg; 183 ıg/d and 57 ıg/d for Mo).

The Take Home Messages:

1. Maintain or increase soil carbon through use of cover crops, green manures, manures, and compost.
2. Keep disturbance of the soil and ecosystem to a minimum. This includes either chemical—synthetic pesticides or fertilizers—or physical tillage of the soil and ecosystem to a minimum.
3. Understand your pests and your beneficials. Provide habitat for your beneficials, reduce habitat for the pests.

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Bügel, S. et al. 2009. Uptake of minerals and flavonoïds from different production systems in humans. Journal of the Science of Food and Agriculture

How Do Manure and Compost Influence Weeds on Your Farm?

Erin Taylor, Michigan State University
Karen Renner, Michigan State University

Manure is a very beneficial resource in crop production systems, yet many non-livestock farmers are hesitant to apply manure to their fields because they are worried about weeds. If a farmer spreads manure on his or her fields, will the potential for weed problems in these fields increase? The answer to this question lies in four different areas of the livestock system: a) the feed source, b) the type of animal, c) the weed species, and d) the manure handling *system.*

The Feed Source: *When feed is ground and pelletized, very few weed seeds survive. However, the few weeds seeds that do survive in the feed pellets may become the start of a new weed problem in the field. If weedy forages or grain are bought from another farm operation and fed to livestock, there is also the potential to introduce a new weed species to the farm fields where the manure is spread. What are 'new' weed species? Most farm fields in the north central region contain some weed seeds, so perhaps a few more seeds of common species, such as common lambs quarters, in feed would never be noticed in most fields. However, a few seeds of a new, uncommon weed species could be the start of a new weed problem. One way to reduce weed seed numbers in feed is ensiling. Very few seeds of most weed species, including redroot pigweed and common lamb's quarters, survive ensiling followed by rumen digestion.*

Figure 1. Dairy cattle being fed a mixture of corn and hay silage.

The Type of Animal: Chickens destroy 98% or more of the weed seeds in feed because of the grinding action of their gizzards. About 25% of the weed seeds fed to cattle and hogs were recovered intact in the manure, while 10 to 12% of the weed seeds were found intact in horse and sheep manure. Digestion in all livestock species destroys weed seeds, but there are weed seeds that survive the "trip" through most livestock and are present intact in the fresh manure.

Figure 2. The gizzard in chickens destroys 98%of weed seeds passing through.

The Weed Species: Weeds with softer seed coats do not survive digestion by livestock. Weed seeds with soft seed coats include foxtails and other grass species, sweet clover, and pepperweed. Weeds with small, hard seeds such as common lamb's quarters, pigweeds, and smartweeds pass easily through most animals and are excreted intact and ready to start future weed problems.

Figure 3. The size and seed coat thickness of weed species affect how a weed survives digestion.

The Manure Handling System: The composition of manure varies with the livestock type and age, the livestock feed, and the housing and bedding materials. In a survey of fresh manure from twenty New York dairy farms, there was an average of 40 weed seeds per pound of manure. If a farmer spread 20 tons/acre of this manure it would be equal to adding 40 weed seeds per square foot to his or her fields. Is this a

lot of weed seed? It depends on the field. If a field has less than 100 seeds per square foot this would be a lot of weed seed; if a field has 10,000 seeds per square foot this would be less than a 1% addition to the weed seed bank. Across the north central region of the United States, farm fields vary in the number of seeds in the weed seed bank. Remember that one velvetleaf plant seeding out in a corn or soybean field produces 800 or more seeds, so spreading 20 tons of dairy manure with velvetleaf seed will be less of a problem than a scattering of velvetleaf plants going to seed across the field.

One way to reduce weed seed numbers in manure is to store the manure prior to spreading. When manure is stored it reduces weed seed viability (seeds are no longer capable of germinating). When manure was stockpiled for three months, weed seed viability decreased by 60% or more. The warm temperatures and the ammonia gas and uric acid generated in the stack contribute to weed seed decay over time. Similarly, high temperatures in compost piles kills weed seeds. Seed of some weed species will be killed after 7 days at 130 F, whereas seed of some tougher weed species require 30 days at 145 F or more to be killed. Weed seeds will survive in any cool spots in the compost pile. This is why compost must be turned periodically to breakdown the organic materials and to expose weed seeds to high temperatures.

Figure 4. Finished dairy compost.

Manure and compost applications provide many benefits to the soil and to the crop. Managing weeds in manured and composted fields requires timely weed control tactics. Always monitor manured fields for new weed species, especially when livestock feed is brought in from out of the area. Good weed management by the farmer will prevent weeds from competing with the crop, and the crop will benefit from the additional nutrients and improved soil quality provided by the manure.

Michigan State University recently published a 132 page Extension bulletin titled “Integrated Weed Management: Fine Tuning the System” (E-3065). Ordering information is available in the publications section of the web site www.MSUweeds.com. One chapter of this bulletin is devoted to Manure and Compost in integrated weed management systems. Weed scientists and farmers from across the north central region of the U.S. contributed their expertise to this chapter and other chapters of the new IWM bulletin.

Soil Sampling to Direct Farm Management on Diverse Organic Farms

Doug Collins, Washington State University Small Farms Team
Craig Cogger, Washington State University
Marcy Ostrom, Washington State University Small Farms Program
Chris Benedict,Washington State University Extension

Soil samples provide useful information to farmers about the nutrient status, pH, exchange capacity, and organic matter content of their soils. To effectively direct application of soil amendments and fertilizers based on these data, soil samples should be taken from distinct management units. We have initiated an extension program to work with direct-market vegetable farms to delineate nutrient management units that reflect the relatively high spatial diversity of plants on their farms. The steps involved in this program are:

- delineate management units;
- soil sample;
- interpret results;
- plan for amendment application and crop planting; and
- monitor crop growth and record results.

Delineating management units

Before soil sampling can commence, the farm must be divided up into management units or nutrient management units. A management unit can be as narrow as the equipment used to apply amendments, such as a tractor width. The size of the management units should be determined by variability of inherent soil properties (e.g. texture, drainage, topography) and intensity of farm management. Delineating management units can be facilitated with a detailed map of each field within the farm.

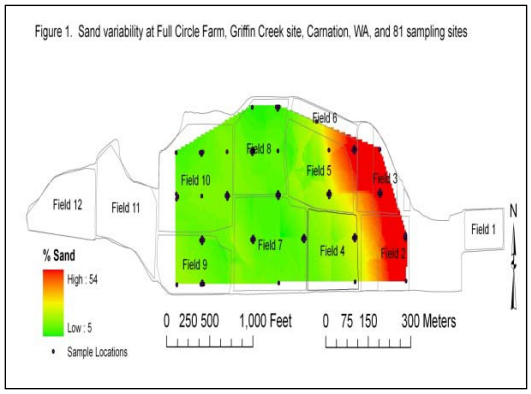
Soil management is most effective when it is integrated within the whole farm plan; decisions about quantities and types of amendments to apply will need to reflect the crop plan, monetary budget, and time budget. Therefore, special attention should be given to crop rotations and planting schedules. Frequently, several contiguous beds will be planted at the same time to the same crop, creating a logical boundary for a management unit. However, if a single bed is managed differently than adjacent beds, this would be a logical management unit.

In-field variability of edaphic properties can also guide management unit boundaries. In 2006 and 2007, we described whole farm and in-field soil variability across a portion of Full Circle Farm's Griffin Creek site, in Carnation, WA. We sampled 81 points across a 25-ha (62 acre) area to evaluate farm-scale variation of soil properties. We then examined field-scale distribution by sampling 42 points in each of two 0.09 ha (0.22 acre) fields with contrasting soil texture. Many soil chemical and physical properties were strongly auto correlated (i.e. places close to one another tend to have similar values). Soil properties, especially texture, also tended to change across the farm in predictable directions (i.e., from east to west sand content increased predictably, while in the north south direction there is more continuity) (Figure 1).

While we used intensive sampling and lab analysis to depict changes in edaphic properties, it is also possible to base management unit boundaries on visual observations of changes in elevation, soil color, and plant vigor. Soil texture changes can also be documented in the field with the hand texturization technique.

Field boundaries were then plotted with a global positioning system and used to construct a map of every farm bed with the geographical information system program ArcMap (ESRI, Inc.) for each of the 11 cultivated fields (field 4 is not cultivated) at Full Circle Farm's Griffin Creek site (844

beds, 75.5 acres cultivated), 8 fields at Oxbow Farm, and 6 at Local Roots Farm, all in western Washington, near the city of Carnation.



We are still working with the producers to delineate management units and refine soil sampling and nutrient management plans. A common observation is that a group of beds, which constitute a clear planting unit, often cross different landscape positions. Where soil properties change significantly, plant growth is noticeably different from one end of the bed to the other, and the grower is open to different amendment management within the bed, then the beds have been divided for soil sampling. The goal with taking the soil sample is to always minimize variability due to management and landscape position or soil type.

Soil sampling

Management units can be sampled in at least two different ways. One is to take a composite of approximately 20 random soil samples from the entire management unit and the other is to choose a specific location within the management unit and just sample that spot. The former is recommended if soil within the management unit is variable and the latter is sufficient if soils within the management unit are consistent (Staben et al., 2003). The benefit of a reference sample is that it is more likely that samples will be taken from the same area year to year.

Soil samples are taken in the fall, sent to a soil testing laboratory, and a basic soil nutrient analysis, plus NO3-N, is requested (organic matter, P, K, Mg, Ca, SO4-S, NO3-N). Micronutrients may also be added at additional cost. The fall testing schedule is required to gain information about how successful the nitrogen fertilizer program was for the preceding season. Fall NO3-N tests are also called a "report card nitrogen test." If too much nitrogen fertilizer or nitrogen-rich amendment was put down than excess NO3-N will be left in the soil. In western Washington, most of the rainfall occurs during the months of November to March, when plant growth and N uptake is greatly reduced. Nitrate readily leaches out of soil during the winter to the point that fall nitrate readings of 36 ppm in the top 12 inches of soil (or 131 lbs N/acre) are typically reduced to near 0 by spring. This represents a loss of money as well as a water quality hazard.

In Washington State there are several programs available to assist farmers in paying for soil sampling. Conservation districts offer to send in a specific number of soil samples for farmers each year (e.g., King Conservation District will pay for five soil samples and charges only $20 for additional samples, <http://www.kingcd.org/pro_far_soi.htm>). We also recently partnered with the USDA's Natural Resources Conservation Service to promote soil nutrient management and cover cropping through their Agricultural Water Enhancement Program (AWEP). Farmers can enroll in the AWEP program and receive $220/management unit for soil sampling and farm planning.

Interpreting results

Soil test reports will provide valuable information for the management unit from which they were taken. Depending on how many management units are delineated and how intensely one wants to sample each

year, it may take several years to get a soil test from each management unit. If there are more management units than a producer wishes to sample, then information from adjacent management units can be used in directing amendments on ground for which there is no specific data; essentially the management unit that was sampled acts as a reference area for the adjacent units.

In western Washington, soil test data often expose acid soils, low cation exchange capacity, excess NO3-N, and excess P (especially if the farms are located on old dairies). Importantly, the results are not generally consistent across a farm. Testing at Oxbow farm in 2008 revealed varying lime needs and varying NO3-N scores. Lime requirement varied from 2,000 to 10,000 lbs/acre while NO3-N varied from 7 to 51 parts per million, or 25 to 186 lbs N/acre in the top 12 inches of soil. The high NO3-N values in some management units indicated a need to carefully evaluate the fertilizer program and link fertilizer to crop needs.

Plan for amendment application and crop planting

Crop planting plans are often developed based on market needs. Crop rotation will help reduce buildup of disease organisms and producers should develop a crop rotation scheme that satisfies the needs of the business and alternates plant families from year to year. Soil management plans must fit together with both the cropping plan and the business plan.

Nitrogen is a difficult nutrient to manage because its availability is dynamic throughout the season. If organic sources are used then predicting N release depends on carbon to nitrogen ratio, degree of composting, method of application, soil type, and climate. The Organic Fertilizer Calculator, developed at Oregon State University and Washington State University, helps predict plant available nitrogen from organic amendments in the maritime northwest climate (Andrews and Foster, 2007).

Amendments should be matched to plant needs, which for vegetables can vary from <120 lb/acre to >200 lb/acre (Table 1, Gaskell et al., 2007). If plants with similar N requirements are planted in the same management unit, then fertilizers can more easily be matched to plant needs.

Table 1. Nitrogen requirement of vegetable crops based on seasonal nitrogen uptake. (from Gaskell et al., 2007).

Low: < 120 lb/ acre	Med: 120 – 200 lb/acre	High: >200 lb/acre
Baby greens	Carrot	Broccoli
Beans	Corn, sweet	Cabbage
Cucumbers	Garlic	Cauliflower
Radish	Lettuce	Celery
Spinach	Melons	Potato
Squashes	Onion	
	Peppers	
	Tomatoes	

While soil test data will not provide valuable in-season N data directly, the organic matter value on a soil test will give the producer some indication of N that will be mineralized through the season (Gaskell et al., 2007). Nitrogen to be applied per management unit can be calculated from equation 1:

Equation 1:
N to be applied = (plant N requirement) – (N mineralized from organic matter)

Monitor crop growth and record results

Perhaps the most powerful aspect of sampling distinct management units is the ability to revisit these units year after year and to tie crop yield and soil changes in these units to management decisions. If soil samples combine different management units, then the effect of management on soil fertility cannot be described. In terms of evaluating management practices, it is better to have good data on less ground than general data on more ground.

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SESSION4 E
Recordkeeping and Business Planning

A Record Keeping Tool to Help Farmers Increase Their Profits through Benchmark Analysis by Pulling Their Basic Financial Information Together

Robin Brumfield, Rutgers University

How do producers make money with shrinking margins, rising costs, and demanding customers? Which crops are making money and which ones are losing money? Or more optimistically, this has been a good year, and some growers may be making money on everything, but which crops make the most? Once producers know this, they can look at ways to increase sales of the profitable crops, or find ways to cut costs on the less profitable ones. They can decide to drop unprofitable crops, or consider new ones.

Profit for any business can be calculated by the simple formula: profit equals number of units sold times (sales price per unit minus total costs per unit). Amazingly, most producers know how many units of a specific crop they sell at a given price. They also know the profitability of their business from their income tax records at the end of the year. However, most growers produce many crops; thus, the third vital component of the profit equation, the cost of producing an individual unit, is often not known. Determining the profitability for each crop requires knowledge of its production costs. The process of assigning production costs to each crop and subsequently calculating the profit of each crop is called cost accounting.

To make cost accounting easier, I developed a simple cost accounting program distributed by Rutgers University

Cooperative Extension. The program enables producers to perform cost accounting and to determine the profitability of greenhouse crops. The newest version also calculates costs of crops produced outdoors as well as greenhouse crops. New features of the New Jersey Cost Accounting Program include calculating the percentages of each overhead cost, information from the balance sheet, and calculation of key ratios. In addition to analyzing your actual costs, producers can use the program as a planning tool to analyze the impact of increased energy costs and prices as well as changes in marketing mixes, or other changes they are considering in their business.

The program uses cost information producers already have. Much of the data needed is typically found on income statements and balance sheets and the rest is direct cost information for each crop. From these inputs, the program allocates as many costs as possible to individual crops. The remaining unallocated costs are assigned to each crop on a per square-foot-week basis.

The program generates information showing total costs and net returns per unit. It enables producers to easily determine the profitability of each crop. From this information, they can determine which crops are their winners and losers. This software also will help them make decisions on pricing, identifying and reducing unprofitable production costs, and increasing sales of profitable crops.

Overhead and Variable Costs

The costs incurred in the greenhouse business can be grouped into two categories: variable and overhead costs. Variable costs are costs that change with the level of production and can usually be allocated to a particular crop. Examples of variable costs are the costs of petunia seeds and bedding plant flats; both relate specifically to petunia production. They are part of the total costs per unit given in the profitability equation above. Overhead or fixed costs are those costs that are incurred regardless of the level of production and are common to all crops. These costs include depreciation of the greenhouse structure, equipment, and other facilities and costs, such as interest, repairs, insurance, taxes, and salaries of overhead personnel (e.g., the manager, sales people, growers, secretaries, bookkeepers, etc.). The total cost of production is the sum of variable and overhead costs.

Inputs. The first step in cost accounting is to enter all of the costs from the input statement. I used figures from a 2003 survey of Northeast greenhouse growers where the average size was 138,759 square feet with sales of $2.2 million and net returns of $211,152 or 9.5 percent (Table 1).

We need a little more information:

- What is the selling price of each crop?
- How many square-feet of space does each crop take on the bench?
- How many pots or flats of each crop do are produced?
- What percentage of each crop is sold?
- What are the production (variable) costs for each crop?

Even if producers don't know the answer to question number 5, they can still get a rough idea of production costs for each crop by entering the first four items. They can enter any variable costs that they have for a specific crop. The program will subtract the variable costs that are entered from the costs in the income statement. This will leave costs that can't be allocated. These unallocated costs will then be treated as overhead costs.

The figures in Tables 1 are actual results of surveys of Northeast growers, Table 2 is a hypothetical production schedule constructed to match the actual income from the 2003 surveys.
The program gives these results on a per crop, per unit, and per square foot basis

Results. We have calculated overhead costs, costs per crop, and costs per unit (flat or pot) (Table 3).

Differences in profit pictures exist between cost per square foot-week and cost per unit. Poinsettias have the largest sales per crop, but are actually the greenhouse crop with the lowest profit per square foot-week. Petunia flats are the most profitable crop per unit and per crop, but geraniums in 4-inch pots are the most profitable crop per square foot-week. Geraniums in 4-inch pots have a lower profit per pot, because they are sold at the lower price per unit than the marigold flats. However, geraniums in 4-inch pots are the most profitable crop per square foot-week because of more efficient use of space. Returns per square foot-week of bench space may be the most informative way of comparing profitability among crops because of differences in use of space.

Table 1. Income statement data from a survey of Northeast Greenhouse Growers in 2003 entered into the Rutgers Greenhouse Cost Accounting program.

	Values from Income Statement (Schedule F or C)			
	2003 Actual			
	$	% of Sales		
Sales	**$2,219,560**		**100**	
Directs costs				
Seeds, cuttings, or plants	$490,863		22.1	
Pots or containers	$140,984		6.4	
Marketing containers	$ 38,567		1.7	
Growing medium	$ 4,689		0.2	
Fertilizer and chemicals	$ 43,163		1.9	
Tags	$0		0.0	
Sales Commissions	$ 2,875		0.1	
Other	$ 37,468		1.7	
General wages	**$729,233**		**32.9**	
Overhead salaries (including benefits)	**$ 2,895**		**0.1**	
Utilities				
Heating fuel/Machinery Fuel	$ 77,566		3.5	
Electricity	$ 40,352		1.8	
Telephone	$ 5,894		0.3	
Water	$ 464		0.0	
Overhead				
Depreciation	$ 92,642		4.2	
Interest	$ 8,080		0.4	
Repairs	$ 43,829		2.0	
Taxes	$ 26,131		1.2	
Insurance	$ 37,546		1.7	
Advertising	$ 11,277		0.5	
Dues and subscriptions	$ 100		0.0	
Travel and entertainment	$ 7,431		0.3	
Office expense	$ 9,589		0.4	

Professional fees	$ 19,444		0.9
Truck expense and equipment rental	$ 46,954		2.1
Land rental	$ 2,112		0.1
Contributions	$ 0		0.0
Bad debts	$ 0		0.0
Miscellaneous	$ 87,956		4.1
Total expenses	**$2,008,104**	**90.5**	
Net Returns	**$ 211,152**		**9.5**
Greenhouse area (ft²)	138,759		
Greenhouse space used for production (%) (e.g., enter 75% as 75, 125% as 125)	82		
Weeks in operation (52 if a full year)	40		

Table 2. An example of input section 2, which includes information on specific crops, from the Greenhouse Cost Accounting program.

Input section (2)					
	Crops				
	Petunia	Marigold	Geranium	Geraniums	Poinsettias
Outdoor Cut Flowers (bunches)	flats	flats	flats	(4-inch pots)	(6-inch pots)
Number of units started	50,000	50,000	50,000	100,000	126,000
26,136					
Square feet per unit	1.64	1.64	1.64	0.11	1.00
1 acre					
Weeks to grow	8	6	13	6	15
15					
Percent sold	0.98	0.98	0.98	0.95	0.95
0.95					
Sales price	$ 7.93	$ 7.00	$ 11.73	$ 1.20	$ 5.00
$4.00					

Table 3. An example from the Greenhouse Cost Accounting program of output information per units and per crop using 2003 Northeast cost.

Crops						
	Petunia Flats	Marigold flats	Geranium flats	Geraniums (4-inch pots)	Poinsettias	Outdoor (6-inch pots)
Cut Flowers						
Sales	$388,570	$ 343,000	$574,770	$157,700		$653,562
$99,317						
Profit (loss) per crop	$ 69,844	$ 50,080	$ 54,026	$ 14,039	$ 64,424	$19,188
Profit (loss) per unit	$ 1.43	$ 1.02	$ 1.10	$ 0.15	$ 0.54	
$ 0.77						
Profit (loss) per sq. ft-wk	$ 0.11	$ 0.10	$ 0.05	$ 0.21		$ 0.03

With fluctuating fuel costs and competitive markets, managers need to pay close attention to the bottom line and how changes in costs impact it. The Greenhouse Cost Accounting program will allow managers to analyze how you business is doing. It will also allow them to do "what if" planning on paper instead of making bigger, real mistakes in the greenhouse. As shown in this hypothetical example, knowledge of the profitability of each crop can help make production and marketing decision to improve their businesses.

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AgPlan—Free Business Planning Help for Farmers and Rural Entrepreneurs Is Just a Click Away

Meg Moynihan, Minnesota Department of Agriculture
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Introduction

There is considerable interest in the agriculture industry in developing business plans. Educators, however, have struggled with determining how to deliver business plan training and assistance because developing a comprehensive and appropriate business plan requires weeks or months of work. Farmers, fishermen, and other agricultural and rural business owners struggle to develop business plans because, while they need ongoing encouragement and assistance, they need to develop the plan themselves.

With these needs in mind, the Center for Farm Financial Management (CFFM) at the University of Minnesota undertook a yearlong effort to develop an online agricultural business planning tool that would offer unique features to help educators effectively use the tool to assist agricultural producers, rural business owners, and fish harvesters.

Funds for the work were provided by Intensive Technical Assistance, a program that delivers in-depth training to farmers and fishermen adversely impacted by imports and who produce commodities certified as eligible for Trade Adjustment Assistance.

The Process

CFFM formed a national development team to develop the business planning tool. To ensure a broad range of experience and insight, the team included individuals from all regions of the United States who had experience working with all scales and varieties of farmers, ranchers, fish harvesters, and rural business owners:

- Richie Boyd, instructional technology project director, Montana State University
- Albert Essel, associate dean for extension, Delaware State University
- Glenn Haight, fisheries business specialist, Alaska Marine Advisory Program
- Ruth Hambleton, creator/extension director, Annie's Project, University of Illinois
- Danny Klinefelter, extension economist, and director, Executive Program for Agricultural Producers, Texas AgriLIFE Extension and Texas A &M University

- Jack LaValla, farm business management instructor, Riverland Technical College, Minnesota State Colleges and Universities
- Meg Moynihan, organic and diversification specialist, Minnesota Department of Agriculture*
- Steve Richards, director NY FarmNet, Cornell University and Farm Business Credit Consultant, Farm Credit of Western New York
- Trent Teegerstrom, associate specialist, Department of Ag and Resource Economics, University of Arizona.
- CFFM Extension Economist Kevin Klair led the effort for CFFM, with Associate Director Dale Nordquist. The software was developed by consultant Laurie Dickenson with support from Web Communications Coordinator Jeff Riesdorfer.

Over the course of a year, the development team met in person three times. In addition, team members interacted using a collaborative workspace at www.centraldesktop.com. The fruit of this work was the simple and powerful AgPlan.

The AgPlan Tool – www.agplan.umn.edu

Because AgPlan was designed to address the needs of multiple rural business types, it offers individualized templates and embedded resource material for four separate plan types:

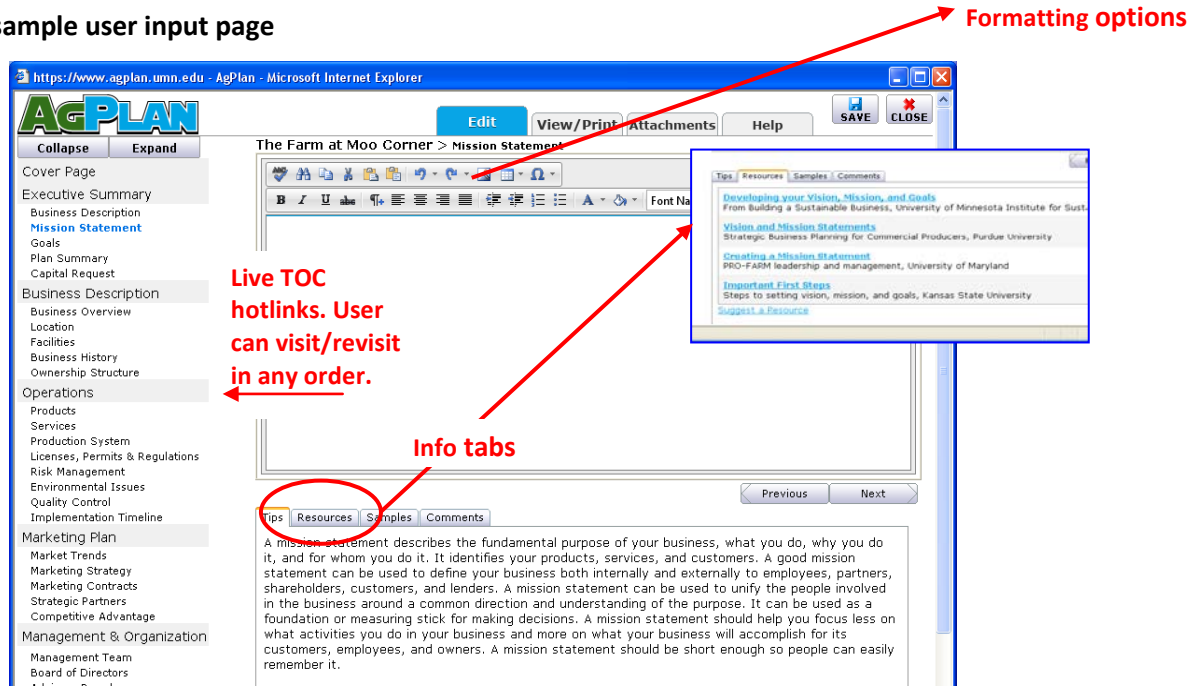
1. Traditional commodity agriculture
1. Value-added agriculture
2. Rural small business
3. Commercial fishing

Each type of plan includes a guided outline of topics, tips for users, sample business plans, and links to other resources.

1. A number of important and intentional features enhance the tool's utility and value to users.
2. The program is free.
3. The program is online and available to anyone with computer access 24 hours a day. Users can work through it at their own pace, in any order, as often as suits them, and can revise as necessary.
4. In addition to technical help (FAQs), the program contains user-oriented content assistance (including sample business plans, tips, and resources).
5. All data is protected by a user-generated password and stored on secure serves housed at the University of Minnesota. Employees may not access the data. In addition, various technologies (virus detection, firewalls, etc.) are employed to protect the data from unauthorized access. Along with university polices that require physical security of workplaces and records, CFFM policies prohibit sharing of personal information with other organizations or individuals.
6. Users can grant "review only" or "review and comment (input)" access to collaborators and advisors of their choice, providing a chance for guidance and input free of the constraints of time or location.
7. While the templates are comprehensive, users include only the information pertinent to their operation. The program automatically generates crisply formatted reports (with some user options).
8. AgPlan **in Action**

Four business plan template choices:

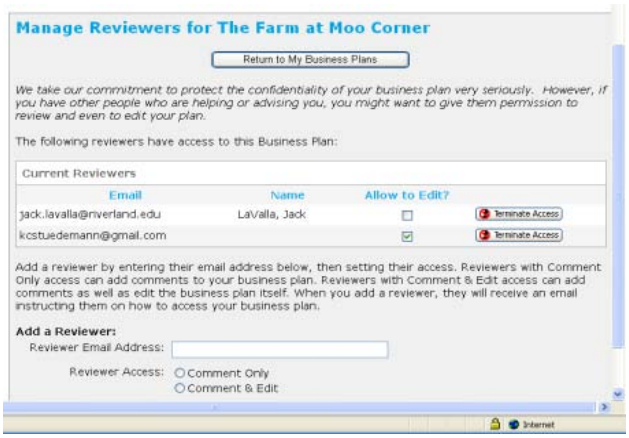
A sample user input page



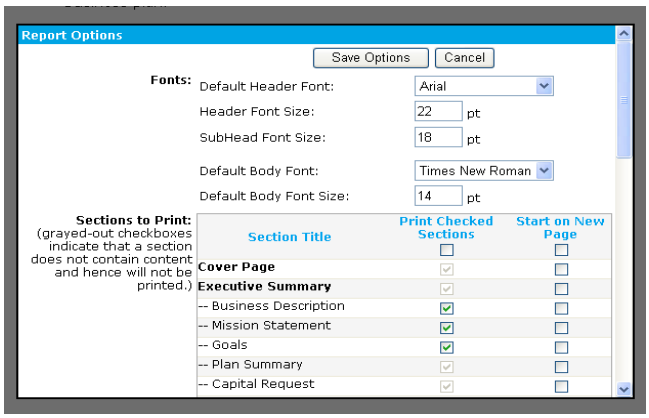
Reviewers

Business plan owners can grant (and revoke) plan access to advisors (e.g., their business partner, FBM instructor, extension educator, or banker). There are two levels of access:

- Comment only (read only)
- Review and comment (edit)



Professional quality document



The business plan owner can click and print (and/or save) a fully formatted business plant document in either Word or PDF. A limited number of layout options are offered, to enable individualization of the plan without overwhelming the user. To date, more than 1,000 business plans have been started on AgPlan.
www.agplan.umn.edu

Farm and Ranch Survival Kit Program

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Area Situation

The Mid-Columbia River area between Washington and Oregon is home to a rich variety of agricultural enterprises. Tree fruit, small grains, livestock, hay, grapes, timber, vegetables—all this and more is grown by the area's commercial producers. Small acreage owners are increasing in the region as well. For years, two Washington State and Oregon State University Extension educators have partnered to deliver relevant educational programs to Mid-Columbia agricultural producers, but one challenge recurred perennially: how to improve attendance at financial education workshops?

Due to fear of being perceived as struggling financially, lack of recognizing the crucial importance of financial management skills or other factors, producers rarely came to financial management programs. Free, high-quality programs at convenient times and locations failed to draw audiences. Nevertheless, these Extension educators realized many producers desperately needed financial education for farm enterprise survival.

Brainstorming this dilemma with a farm manager one day, the three developed the concept of the Farm and Ranch Survival Kit (FRSK), an educational series delivered to producers at home in a convenient and non-threatening format. The end results would be producers with increased knowledge of financial management and a resource notebook for future reference. The Western Center for Risk Management Education (WCRME) awarded the FRSK program $21,400 for 2005-2006 programming. This funding allowed a project coordinator to be hired so the additional workload did not overwhelm the Extension educators.

Educational Objectives

The program's main goal was to increase producers' knowledge base on key financial topics to promote informed decision making. Secondary goals included increasing producers' knowledge of Extension resources, increasing trust and contact with Extension educators, increasing networking among producers and motivating producers to take indicated management actions.

Program Activities

Program activities began in the spring of 2005 and concluded in the spring of 2006. Using databases from Assessors' offices in a five-county Mid-Columbia area, a direct mailing about the program was sent to agricultural, timber and open space acreage owners. The program was also advertised through newsletters and mass media.
Six educational installments were created using original and existing resource articles. In order of distribution, the subjects of the installments were business planning, financial planning, interpersonal relations, farm succession planning, tax and insurance planning and marketing. These five to eight-page publications were sent to all program participants and placed on the Farm & Ranch Survival Kit project Web site at http://extension.oregonstate.edu/wasco/smallfarms/RiskManagement.php for access by wider audiences.

Eleven workshops were conducted in conjunction with the FRSK program. Topics included:

- Ranching for profit
- Farm succession planning
- Livestock production
- Partial budgeting
- Analyzing agricultural investments
- Evaluating land lease agreements
- Crop profitability analysis

- Machinery costs
- Hay production
- Direct marketing
- Wine grape production, vineyard establishment and vineyard management

The FRSK program also helped distribute useful Austin Family Business Center resources including *Succession Survival Kit; Preparing...Just in Case; Passing on Strategic Smarts; Financial Smarts; and Planning for an Orderly Transition.*

Teaching Methods

Educational installments were created in a newsletter format for participants to read at their leisure and save for future reference. The workshops were taught by 25 instructors with a range of teaching styles; some demonstrated software; some gave traditional didactic presentations; others gave interactive presentations that engaged participants in discussion and problem solving. Educators used PowerPoint presentations, flip charts, overhead projectors, computer software and demonstrations to convey educational messages to their audiences. A Farm Financial Management workshop series introduced software programs to participants and included a Land Lease spreadsheet program, MachCost, FINANCE and the Crop Profitability Analysis computer program; the presenter demonstrated the software while participants worked simultaneously on computers. Workshop participants received free software.

Results

Official FRSK program enrollment was 165 people. Hundreds more participants attended program workshops and accessed materials online. Participation cross-publicized other programming and diversified Extension clientele in many counties. Because of this program, the educators became aware of the need for additional farm succession education. They subsequently partnered in a $32,488 bi-state WCRME-funded farm succession planning program in 2006-2008. Additional results are included in the Impact Statement and Evaluation sections.

Impact Statement

Here are selected quotes from program participants:

- "I feel like I went from knowing nothing to be able to make intelligent decisions."
- "We're holding family meetings to discuss goals and objectives for use of our family property. Also working with financial planner to look at long-term financial objectives."
- "We have prioritized what needs to be done first in setting up our farm. We are starting from scratch—as in bare land with no improvements."
- "Very good information. Real world stuff. Will have a value when used."
- "Useful and practical info. Seems transferable to various situations and enterprises. Very convenient program."

Additional Impacts

Louisiana State University AgCenter educators are using FRSK materials. The Washington State Farm Family Support Network has linked its Web site to the FRSK Web site. Wyoming's Department of Agriculture included FRSK installment #4 in their Estate Planning Handbook for the state's agricultural producers.

The FRSK Extension educators have engaged with their peers to share the results of this project through 8 peer reviewed oral and 5 peer reviewed poster presentations at state, regional, national and international conferences. FRSK Extension Educators have also received the NACAA Farm Management Search for Excellence Award for the FRSK project. The

FRSK project was also the feature story for the August 2007 Western Center for Risk Management Newsletter and FRSK Extension Educators were interviewed by the Successful Faming Radio Magazine which reaches 1.25 million listeners in 22 Midwestern states.

Evaluation

The FRSK program's evaluation instrument was sent to all enrolled program participants on April 3, 2006. Thirty-eight completed surveys were returned. Non-respondents were called and nine more surveys were completed by telephone interview for a total of 49 surveys returned. A complete summary of evaluation results is attached.

When asked "On a scale from 1 to 5 (1 being none and 5 being a great deal), how much useful knowledge did you gain as a result of your participation in this project?" the average response was 3.64. If we ignored data from two respondents who did not participate in any aspect of the program yet returned surveys giving the program a "1," the overall average would rise to 3.78.

Respondents reported a range of involvement with the program; some read every newsletter and attended many workshops; others only received the newsletters and had not read them. Many participants reported they had not only used information from the newsletters or workshops but had also shared this information with others. As shown below, many survey respondents reported they either had taken or planned to take crucial financial management actions.

What changes have you made as a result of your participation in this project?

- I (we)have started/completed a business plan (14 respondents)
- I (we) are holding regular family meetings (7)
- I have analyzed my financial situation with my lender (10)
- I have started/completed an estate or succession plan (16)
- I have reviewed my insurance policies to determine if I have appropriate coverage (17)
- I have started/completed a change in our business structure (7)
- I have started/completed a marketing plan for my farm or ranch (11)
- Other:
  - ❖ I have shared valuable information with my clientele in new topic areas.
  - ❖ Holding family meeting to discuss goal and objectives for use of our family property. Also working with financial planner to look at long-term financial objectives.

We have prioritized what needs to be done first in setting up our farm. We are starting from scratch—as in bare land with no improvements.

Farm Credit University: Ag Biz Planner for Young, Beginning, Small, and Minority Farmers

Gary Matteson, The Farm Credit Council
David Kohl, Virginia Tech, Professor Emeritus
Online Investment Education for Farm Families
Jason Johnson, Texas AgriLife Extension
Janie Hipp, USDA–RMA
Jane Schuchardt, USDA–NIFA
Ruth Hambleton, (Retired) University of Illinois
Bob Wells, Iowa State University Extension
Tim Eggers,Iowa State University Extension

Farmers and ranchers have numerous resources to enable them to become more skilled at managing critical decisions regarding their agricultural operations. However, few resources exist that provide

the same level of empowerment regarding the interrelated nature of family financial management decisions and farm/ranch business objectives. With the support of the Financial Industry Regulatory Authority (FINRA) Investor Education Foundation, an innovative team comprised of agricultural economists and family and consumer science experts collaborated to develop a curriculum that integrates these financial management issues. This newly available resource is titled "Investing for Farm Families." The overall project is guided by a team of 14 extension professionals from 10 states and the Cooperative State Research, Education, and Extension Service, USDA (http://collaborate.extension.org/wiki/OIE_Team) and is funded by the FINRA Investor Education Foundation (http://www.finrafoundation.org).

Unique Characteristics of Farm Families and their Relationship to Investment Issues

The most current information about farm households, from the 2007 Census of Agriculture, was released in February 2009. The 2007 Census counted 2,204,792 farms in the United States, a 4 percent increase (net increase of 75,810 farms) from 2002. Nearly 300,000 new farms began operation since the 2002 Census (U.S. Department of Agriculture, 2009a).

As it relates to investment decisions, a number of factors measured in the Ag. Census and other sources of farm household demographics are worth noting. Farmers tend to be asset-rich (due to land values) but their earnings vary considerably. Many farm households receive substantial off-farm income. Most U.S. farms are small, with 60 percent reporting less than $10,000 in sales of agricultural products. Of the 2.2 million farms nationwide, only 1 million show positive net cash income from the farm operation. The remaining 1.2 million farms depend on non-farm income to cover farm expenses. Almost 900,000 principal farm operators reported working off-farm more than 200 days a year. Additionally, the share of farmers working off-farm rose from 55 percent in 2002 to 65 percent in 2007 (U.S. Department of Agriculture, 2009b).

Farmers are a segment of the U.S. population of 10.6 million self-employed workers (U.S. Census Bureau, 2007) and, therefore, are responsible for planning and funding their own retirement. In previous studies, it was identified that self-employed workers reported participation in retirement savings and investment plans at only 15 percent of the rate of wage and salary workers (DeVaney, Sharpe, Kratzer, & Su, 1998).

Farm households have more wealth than the average U.S. household. This is not surprising because valuable capital assets such as farmland and equipment are generally necessary to operate a successful farm business. In 2006, less than 5 percent of all farm households, in contrast to 50 percent of all U.S. households, had wealth less than the U.S. median household level (Economic Research Service, 2007).
Farm households allocate their wealth among competing investments that include both farm business assets (e.g., land, machinery, and farm equipment) and off-farm financial assets such as stocks, bonds, and certificates of deposit. The portfolio of assets held by farm households is heavily weighted toward farm business assets, while the largest shares among asset portfolios of all U.S. households are primary residences, stocks, and mutual funds (Bucks, Kennickel, Mach, & Moore, 2009). One-quarter of non-farm assets are held in retirement savings accounts. Cash, checking, money market accounts, bonds, and certificates of deposit constitute less than one-fourth of non-farm assets, as do stocks and mutual funds. The remainder of farmers' non-farm assets is held in real estate and businesses aside from the farm,

off-farm real estate, and other assets. Only 40 percent of farm households participate in some type of tax-deferred retirement account, compared with 60 percent of all U.S. households (Mishra et al., 2005).

Audience Analysis for the Investing for Farm Families Curriculum

A national telephone survey was conducted to identify the financial attitudes, practices, and learning preferences of 300 farm/ranch households and two focus groups. This inquiry was also designed to identify personal and family financial management issues unique to farm families so that a curriculum could be designed to accommodate these considerations. Among the issues identified were land ownership and its role as a financial asset to both the agricultural business and family financial plans, the asset allocation implications of an agricultural business, and farm family retirement and estate planning issues.

Some findings from these interviews were:

- A significant minority of farm families do not have good personal investment plans in place, including retirement plans.
- Even those with good investment programs recognize a need for some further education on the basics of investing.
- Among farm families with Internet access, online experience levels are high enough to make eXtension self-learning programs a viable outreach venue.
- A large majority (88 percent) of farm households agreed that farmland was a better investment than other off-farm investments.
- Farm owner/operators express a willingness to use online investment education sponsored by the Cooperative Extension Service.
- Farm households see themselves as continuing to work in later life.

Pilot Testing and Resulting Educational Curriculum

Investing for Farm Families was pilot tested in early 2009 with participants in Annie's Project http://www.extension.iastate.edu/annie, an extension program designed to improve women's farm business skills. Based on their comments and suggestions, the curriculum was revised and will be launched nationwide as Investing for Farm Families (IFF) in late 2009 through Cooperative Extension's www.extension.org. Using Moodle courseware, IFF consists of an introduction and 8 lessons that contain 15 exercises (activities) that enable learners to evaluate their own financial situations and potential alternative management actions. This material is supported by a supplemental unit containing 11 introductory/background topics with a self-test of essential concepts following each topic. The progression of the IFF lessons and activities follow:

Investing for Farm Families Lessons:

Welcome and Introduction
First Things First: Organizing Your Financial Information
Investment Prerequisites: Laying the Groundwork
Debt Management and Credit Considerations for Farm Families
Finding Money to Invest
Determining Your Asset Allocation and Risk Tolerance
Evaluating Investment Products and Agriculture Oriented Alternatives
Evaluating Financial Service Providers and Information Sources
Investing for Retirement and Farm Succession Planning
Investing for Your Future Supplemental Content

Investing for Farm Families Activities:

1. Financial Emergency Preparedness Worksheets
2. Integrated Balance Sheet and Personal Net Worth Exercise
3. Estimated Expenses and Emergency Cash Reserves Worksheet
4. Insurance Evaluation and Goals Worksheet
5. Financial Goal Setting Worksheet
6. Obtain a Free Copy of Your Credit Report
7. Obtain a Uniform Commercial Code Lending Record
8. Investment Risk Tolerance Quiz
9. Asset Allocation Review Worksheets
10. Comparison Worksheet for Evaluating Savings Account Alternatives and Providers
11. Comparison Worksheet for Evaluating Brokerage Account Providers
12. Financial Advisor Questionnaire
13. Retirement Estimator for Farm Families
14. Individual Retirement Accounts and Plans Comparison Table
15. Sketching a Farm Asset and Management Transfer Plan

Every farmer and landowner faces unique circumstances when it comes to examining the interconnected nature of their farm and family finances and investments. IFF provides the education and information needed to help individuals assess their current management plan and target future activities that will advance their objectives. The resulting educational materials, decision aids, and resources have been assembled in a user-friendly curriculum available to anyone with Internet access through the national eXtension framework. This presentation showcases the Investing for Your Future for Farm Families curriculum and illustrates the usefulness of these resources for farm/ranch managers and families.

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SESSION 4F

Implementing Farm Policy: Preserving and Enhancing Diversity Initiatives in the Regulatory Process

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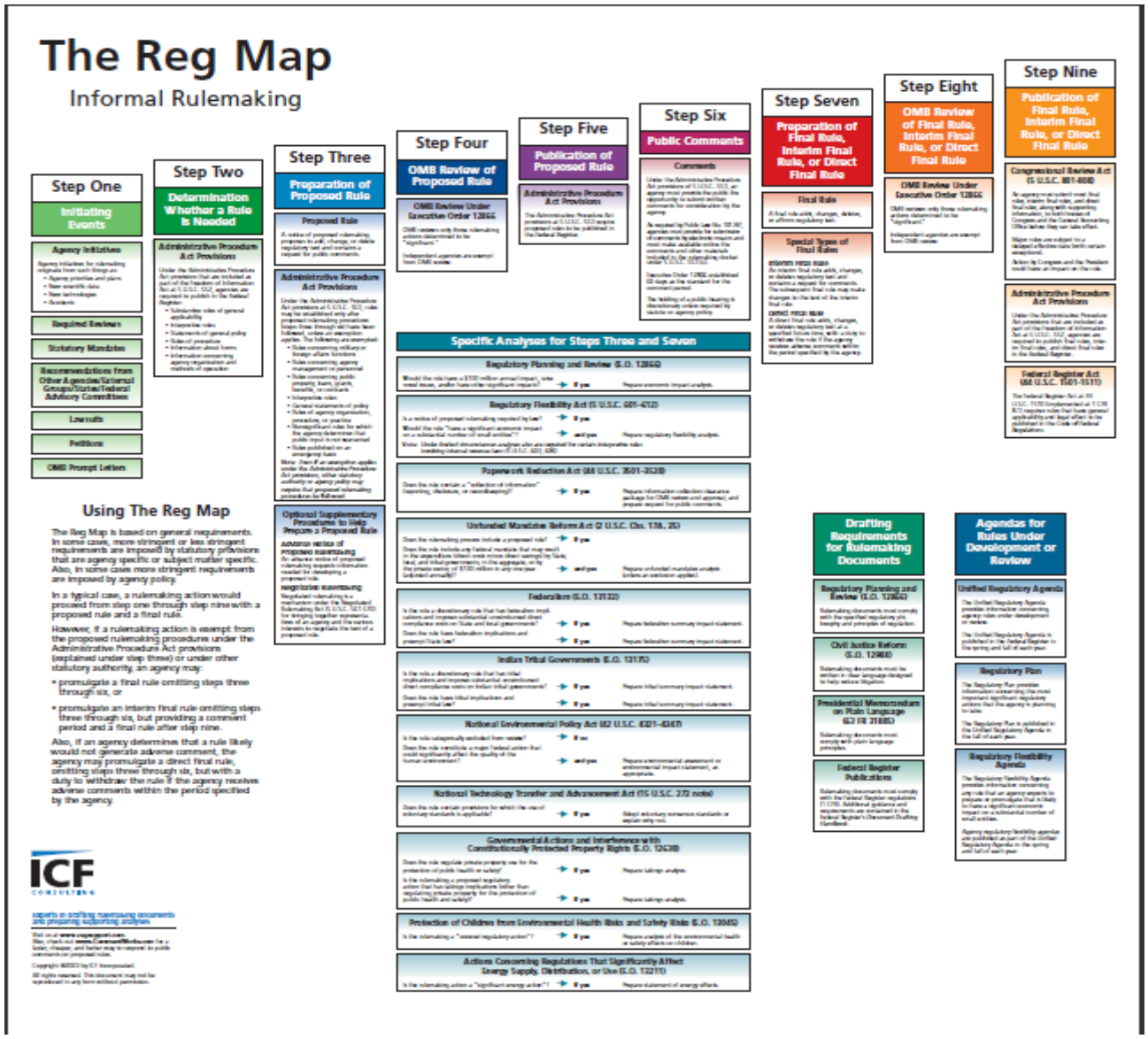
Lorette Picciano, Rural Coalition/Coalición Rural
Paula Garcia, New Mexico Acequia Association



SESSION 4G
Resources and Programs for Immigrant, Refugee, and Other Beginning Farmers and Ranchers

Larry Laverentz, Refugee Agricultural Partnership Program, Office of Refugee Resettlement, U.S. Department of Health and Human Services
Gladys Gary Vaughn, Office of the Assistant Secretary for Civil Rights, U.S. Department of Agriculture, Washington, DC

Introduction

The Refugee Agricultural Partnership Program (RAPP), through public and private partnerships, provides to refugee families agricultural and food related resources and technical information that is consistent with their agrarian backgrounds. Results include rural and urban farming projects that support increased incomes, access to quality and familiar foods, better physical and mental health, and enhanced integration into this society.

RAPP followed the 3-year Refugee Rural Initiative demonstration project. RAPP has nine local and one state grantee and a broad network of local, state and federal agencies that subscribe to the RAPP Listserv. A technical assistance provider, the Institute for Social and Economic Development (IESD), administers a Web site (http://www.ised.us) that has technical, project, and human interest information. Dan Krotz represents ISED as the technical assistance advisor. His email address is danielkrotz@gmail.com.

A memorandum of understanding between USDA and the Department of Health and Human Services (HHS) provides the basis for collaboration and program and technical support from USDA agencies.

Primary Objectives

The overarching objectives of RAPP are to

- facilitate the transition and integration of refugees into U.S. communities;
- serve as a precursor (pathway) for refugees becoming independent farmers; promote
- consumption of better food, and better nutrition and health practices;
- provide supplemental income; and
- enhance the financial stability of these new Americans.

Other Desired Outcomes

The unique social and logistical issues portend that projects of this type are hard work, with no guarantees of success. However, there are many rewards in providing USDA and HHS resources that lead to a refugee family achieving independence. Desired outcomes include:

- Develop community partnerships and coalitions that impact the refugee and larger community
- Broader vision for access to and availability of fresh food; encourage other members of the community to plant gardens
- Mutual understandings and reduced community tensions
- Development of new skills related to finance, business development and marketing
- Identify access and other issues in existing policy for selected USDA programs

Challenges

Many of the challenges refugees face are similar to those of other small and beginning farmers. For refugees, these challenges are exacerbated by language and cultural differences and their unfamiliarity with agriculture and the institutions in this country. While these are presented more fully by the authors under "Engaging a Multicultural Farming Audience," some of the challenges include:

- Applying an appropriate mix of older (e.g., field demonstrations, farmers markets, traditional farm loans) and new (e.g., micro-financing, individual development accounts) tools to problems faced by farmers and their families
- Accessing grant funds offered through competitive programs by emerging community-based and mutual assistance organizations to support innovation in programming and technical assistance for refugee farmers
- Addressing emerging issues borne of the economic downturn, including job loss, which can impact food security and access to affordable housing and lead to secondary migration
- Encouraging participation in cooperatives for increased economic support among refugees who are reluctant to join and commit to formal requirements
- Increasing literacy through printing and promoting healthy food recipes that use native foods, and distributing these materials at farmers markets
- Increasing participation in the U.S. Census of Agriculture among individuals who are fearful of government 'interference' into the lives via access to personal information
- Increasing access to strategies such as micro-financing programs to build financial, farm, and marketing capacity of the refugee farmer
- Ensuring equal access to food and nutrition programs, including school breakfast and lunch, Women, Infants, and Children (WIC) and Supplemental Nutrition Assistance Program (SNAP) vouchers, and feeding programs for seniors
- Ensuring freedom of speech—a voice—about agriculture and food policy issues for refugees without fear of retribution

USDA and HHS have worked together to ensure that representatives of organizations serving refugees are included in issues discussions about small farms, farmers markets, preparation of USDA's proposals for the 2008 Farm Bill, and in the annual partners meetings. This participation has provided increased visibility of refugees as part of the low-income community to be served by USDA, and helped broaden knowledge of the plight of refugees across USDA.

EDUCATIONAL TOURS

1. Beginning Farmer Tour—Farm Beginnings© and Beyond

Tour Host: **Terra Brockman,** Illinois Land Connection Two diverse vegetable farms and one food store (run by area farmers selling only foods raised within a 50-mile radius) are featured on this tour. All farmer hosts are involved in new farmer training, serving as presenters and mentors for Central Illinois Farm Beginnings©. On the bus trip, some beginning farmers will talk and share some of the barriers affecting farmers who direct-market their products. Stops will include:

1) Henry's Farm, Congerville, IL

You will hear from experienced farmer Henry Brockman and this year's Farm Beginnings© intern Kris Pirmann about their mentor-mentee relationship and about how Henry uses a 2-year fallow rotation, many cover crops, and intense diversification (650 varieties of vegetables), to build the soil, produce vegetables for local CSA and Farmers' Market customers, and bring in 6 figures from 10 acres.

2) Blue Schoolhouse Farm, Eureka, IL

Bill Davison left his job with The Nature Conservancy to become a new farmer. He presents on finances and record keeping at the Farm Beginnings© class, and uses a solar powered tractor and solar-powered weeding/transplanting cart made by his neighbor and landlord, Dave Kennell.

3) Heritage Farmers' Market, Pekin, IL
After many run-ins with health dept and zoning officials when trying to sell products off the farm, a group of small-scale farmers came together and opened a store that is now selling a wide variety of products, ranging from meats and eggs to fresh produce to vinegars, pastas, baked goods and fudge. All of the products are from less than 50 miles away. The group has just installed an inspected kitchen, and is serving 100% local food at their lunch counter, plus letting community members use the kitchen to produce value-added foods. Two of the Heritage Farmers present on marketing at the Farm Beginnings© class.

2. Bioenergy Tour—Small Farm Energy
Tour Host: **Gary Letterly,** Natural Resources Educator, University of Illinois Extension, Christian County
This tour will showcase elements of "From Field to Furnace", a project funded by the Dudley Smith Initiative at the University of Illinois. Stops will demonstrate how a small farm can produce biomass from perennial grasses as part of their sustainable energy plan, an operational biomass furnace demonstrating how it could supplement or replace existing home heating systems, and a small farm that diversified by manufacturing grass furnaces and pelletizing grass.

1) U of I—Dudley Smith Farm near Pana
How a small farmer can get into producing biomass from perennial grasses as part of their sustainable energy plan (plots, history, challenges to producing perennial grasses for biomass, harvesting of grass and rhizomes, planting, weed control options, etc.)

2) The U of I Extension office in Christian County
What a furnace set-up looks like, how it can be modified to complement/supplement/or replace an existing home-heat system. We'll see, furnace setup, fuel types used, problems challenges with ash, etc.

3) Big M Berry Patch, home of Big M Manufacturing, Taylorville
Melvin Repscher and his family run a small farm operation that has decided to diversify their operation versus renting more land for traditional row-crop production. They are not organic but they are "family farm practitioners" using a variety of novel approaches to stay on the land (grass furnace manufacturer and likely to have a grass pelletizer on-line).

3. Building Community Support Tour
Tour Host: **Deanna Glosser,** Slow Food Springfield
The tour focuses on strategies which enhances community support for locally produced foods. Participants will visit a farmer who raises produce and is marketing through farmers' markets and CSA programs, an urban farmers' market and a community garden sponsored by the Illinois Department of Agriculture at the Illinois State Fairgrounds, and a commercial food distributer selling local foods to restaurants and grocery stores.

1) Sysco of Central Illinois, Lincoln—Distributing Local Foods
The tour will first stop at Sysco of Central Illinois in Lincoln where we will learn about their new Buy Local Partnership which will utilize a traditional food distribution model to efficiently distribute local foods to area restaurants and grocery stores, thus expanding the availability of healthy, local foods to consumers.

2) Veenstra's Vegetables, Rochester—Community Supported Agriculture
The second stop on this tour will visit Veenstra's Vegetables, a local producer who raises a diverse selection of produce for the Decatur and Springfield markets and a Community Supported Agriculture (CSA) program in both cities. CSAs represent a mutual commitment between the farmer and the consumer. Learn about this CSA model for Central Illinois.

3) Illinois Department of Agriculture's (IDOA) Farmers Market & Community Garden, Springfield

The last stop on this tour will be to the IDOA 's evening farmers' market and community garden located at the Illinois State Fairgrounds. The Department envisioned hosting a market that would not only give local producers another venue to sell their products during peak seasons, but also to showcase Illinois agriculture. All market products must be produced, processed, packaged, and prepared in Illinois. The community garden offers residents a place to both garden and learn from experts.

4. Developing Sustainable Farming Systems Tour

Tour Host: **Shannon Allen,** Macon County Soil and Water Conservation District

This tour is going from the classroom to the farm field making two stops in Central Illinois. Participants on the tour will learn how a local Community College helps train future farmers on sustainable methods, and then see how a local farmer is putting some of those methods to work.

1) Richland Community College, Decatur, IL

During the past six years, through the combined effort and support of faculty, staff, students and community members the agriculture program at Richland has greatly expanded from a single instructor and a few students to a wide diversity of programs. These programs include agribusiness, biofuels, horticulture, floral design, landscape, turf, and greenhouse management. The program is known for its practical demonstration curriculum where students work with fellow classmates to plant, cultivate, and harvest a variety of agriculture and horticulture plant material. They learn to utilize a variety of tools and equipment, including tractors and tillers. The Land Lab at Richland is an outdoor classroom for demonstration and crop production. David McLaughlin, Assistant Professor and Agribusiness & Horticulture Program Director, will give us a tour of the site that includes two production greenhouses, perennial nursery, composting bins, All American Selections Display Garden for flowers and vegetables, a plot with corns of the world, farm plots with fruit trees, brambles and vegetables, a demonstration plot with Miscanthus (Miscanthus x giganteus) and sugar cane for biofuels, bee hives, two cold frame greenhouses, flower and perennial gardens, shade plant structure, student designed and constructed walks, waterfall, retaining walls, patio and outdoor kitchen.

2) Pairierth Farm, Atlanta, IL

Dave Bishop will give us a tour of his farm where he will share information about: grazing off the grid (solar fence and water system); managed intensive grazing; feeds and supplements for certified organic grazing; genetics and low-stress handling; multi-species grazing and how to find funding for these grazing systems. Dave will also discuss organic field crops: production and techniques and problems; transition issues, crop rotations and tillage systems and a quick look at the bottom line— Organic vs. Conventional.

5. Exploring Alternative Enterprises and Marketing Opportunities Tour

Tour Host: **Roger A. Larson,** County Extension Director, University of Illinois Extension, Peoria County.

This tour will focus on the "Cycle of Sustainability." The tour will begin with Living Earth Farm to discuss the issues and victories involved in alternative crop production and marketing. The second stop in the tour will visit Basils' Harvest, a growing success story. This stop will discuss the growth experienced over the past years; moving from solely crop production to retail to education. The third stop on this tour will visit June Restaurant, a new Peoria Heights eating establishment, which highlights the use of locally grown food in its menu.

1) Living Earth Farm: Anne Patterson, Producer, Marketer, and Organizer

This stop will focus on the production and marketing emphases of alternative enterprises. Living Earth Farm is "committed to a system of agriculture which strives for a balance with nature, using methods and materials which are low impact to the environment." You will see Anne's production and hear her "story" of perseverance through marketing and in organizing other producers to bring "local foods" to the Central Illinois area. www.livingearthfarm.com

2) Basil's Harvest: Erin Meyer, Producer, Marketer, Retailer, Chef, and Educator

The second stop on the tour will visit Basil's Harvest. Basil's Harvest was founded in 2007 by Erin Meyer, RD after a long pursuit of great food. With a palate that blossomed through travels in Europe, a passion for growing, harvesting, preparing and preserving the food that was produced on her farm, and working with local farmers and chefs, Erin is able to share her passion for healthy food tasting great through education and creating gourmet foods that others can enjoy. You will hear Erin's "story" of growth and her vision for the direction of Basil's Harvest. www.basilsharvest.com

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3) June Restaurant: Josh Adams, Chef, Partner

The third stop on the tour will be June Restaurant. Following is an excerpt from a recent press release, "Working with many of the regional Midwestern farms nearby (including one dedicating 80 acres to growing specifically for this 60-seat restaurant), Adams' menu will feature the best of the season in a contemporary, lively environment. Chef Adams' menu is ingredient-driven, and pays homage to the many farmers with which he has developed relationships. Thunder Valley, a certified organic farm located in Princeville, approximately 15 minutes from June, will be growing a large portion of the produce used at the restaurant over nearly half of their 200 acres of farmland. In season, approximately 80% of June's menu will be made using local products. You will hear Chef Adams' "story" and passion for his work and the promotion of "local foods." www.junerestaurant.com

6. Managing Business: Keeping the Farm and Ranch Tour

Tour Host: **Lindsay Record,** Illinois Stewardship Alliance

This tour will stop at two dairy farm operations in Central Illinois where these farmers have made bold business decisions to direct market their milk and dairy products to increase the economic viability of their farms. The first stop will view an on-farm cheese making operation utilizing a mobile unit to process cheese in a contained unit. The second stop will be at a brand new on-farm bottling plant producing milk for direct-market and wholesale.

1) Ropp Farms, Normal, IL—Home of Ropp Jersey Cheese

For 10+ years the Ropp Family had dreamed of starting an on-farm cheese processing facility and retail store. Formerly, production agriculture was a vital fabric to daily life. The Ropp Family would like to share their knowledge and farm heritage to not only educate the public but also promote agriculture as a vital industry to American life. At Ropp Farms they raise only registered Jersey cows. This tour stop will include a visit to their farm to learn firsthand how fine quality cheeses are made. We will visit their 600 square foot retail store featuring a cheese slicing room with viewing windows, self-serve product coolers and full-service retail counter.

2**) Kilgus Farmstead, Fairbury, IL**

The Kilgus Family has been milking cows for over 50 years and selling through cooperatives. In order to take advantage of new market opportunities and to increase economic viability the Kilgus Family will begin selling direct to consumers with the completion of their on-farm processing and

bottling facilities in spring 2009. Their milk is sold throughout Central Illinois by local retailers and a local distributor as well as at their on-farm store.

7. Walking Tour: Tour of Lincoln Sites and the 100th Commemoration of the 1908 Springfield Race Riot

Tour Host: **Garret Moffet,** Springfield Walks

We invite you to spend some time with us touring some of the City of Springfield's historic treasures. The tour will begin at the Old State Capitol. The tour appointment time is 12:30PM . The Capitol served as the seat of government from 1839 to 1876 where Abraham Lincoln, Stephen A Douglas, Ulysses S. Grant and others worked and served. The guided tour is about 30 minutes in length. It will include the Representatives Hall where Lincoln delivered his famous "House Divided" speech. Lincoln's Home, the Visitor Center and the refurbished Neighborhood are the next stop. At 1:50PM you will check in at the Visitors Center. Be sure to watch the new movie presented in the theatre about the Lincoln's time in Springfield. The Lincoln's Home and Neighborhood is a National Park Service Site. The tour of the home takes about 25 minutes, but you will be encouraged to "walk his neighborhood." By May of 1844, Abraham and Mary Lincoln needed more living space for their young family and decided to buy a home. They selected a Greek Revival-style cottage at the corner of Eighth and Jackson Streets and purchased it from the Reverend who had married the Lincolns. They paid $1,500 for the home and the family occupied the home (after enlarging it in 1846) for the next 17 years. At 3:15PM , the group will tour The Elijah Iles House. As one of the few original buildings left in Springfield, with direct connection to Abraham Lincoln, the Iles House has played a unique part in Springfield's history for over 170 years. Elijah Iles, a founder of Springfield, hired Lincoln as a surveyor and lawyer, but is best known as Lincoln's captain in the Black Hawk War. The Greek Revival Style House also contains the Farrell and Ann Gay's extensive IL Watch Collection. It's quite unique. This site's tour is 30 minutes in length. At 4:00 PM , you will have the opportunity to walk the route of one of Springfield's most disturbing historical events that prompted a great national civil rights victory. In 2008, Springfield commemorated the 100th anniversary of what has become known as "the Springfield Race Riot of 1908". The events of two sweltering days in August of 1908 shocked the nation and led to the formation of the NAACP. The entire story of the Springfield Race Riot of 1908 is told in a series of markers placed along the path of the destruction in downtown Springfield. Each of the sites and the docents or employees will be available to answer your questions. They are all knowledgeable and passionate in their historical information.

POSTER PRESENTATIONS

ARKANSAS

1 • Food Security and Food Safety Create New Opportunities for Small Producers

Calvin King, Arkansas Land and Farm Development Corporation

Food security and food safety opens new market opportunities for Limited Resource and Socially Disadvantaged produce growers. Capitalizing on these market opportunities can provide economic sustainability for small growers while simultaneously stimulating local economies through farmers markets and regional food supply market development. Fresh produce is more challenging to grow and much more challenging to market than row crops. However, Limited Resource and Socially Disadvantaged producers who can successfully grow and market fresh produce with reasonably safe and secure practices can generate considerably more revenue per acre than they can generate from row crops. More and more, fresh produce

buyers are demanding a safe product that consistently meets their specifications for quality, quantity, and timeliness. The increase in the number of food borne illnesses associated with produce has focused attention on the importance of minimizing microbial contamination during crop production, harvest, and postharvest handling of fresh fruits and vegetables. The use of appropriate Good Agricultural Practices (GAP) and Good Handling Practices (GHP) can help reduce risks of microbial contamination. Ensuring the safety of fresh fruits and vegetables requires a pro-active, systematic approach by everyone involved in growing, harvesting, packing, distributing, and preparing fresh produce. With GAP/GHP certifications, USDA grading certifications, PA CA protections and other USDA tools, producers will be able to assure production quality and participate in markets that have previously only been available to larger, more established, producers. Limited Resource and Socially Disadvantaged producers will need:

- Access to Credit;
- Technical Assistance;
- Production Credit; and
- Risk Management.

Conclusion—Limited Resource and Socially Disadvantaged producers have an excellent opportunity created by the strong drive for safe and secure foods. Capitalizing on this opportunity requires USDA certifications, revised production practices by growers, and new and expanded markets, among other things.

2 • Use of Brewers-grade Rice as Alternative Energy Feed to Corn or Milo for Finishing Pigs , Ondieki Gekara, University of Arkansas-Pine Bluff

An experiment was conducted at the University of Arkansas at Pine Bluff (UAPB) Farm in 2007 to study the performance of pigs finished on a brewers-grade rice based diet. Brewers-grade rice, which is cheaper than corn or milo and is abundant in Southeast Arkansas, replaced 100 percent corn or milo in the diet. In a replicated study, 40 growing pigs of Yorkshire x Duroc breeding (average body weight = 50 kg) were finished on either brewers-grade rice based feed (experimental diet) or corn/milo based conventional feed (control diet). Two 42-day trials were completed for this study. The brewers-grade rice based diet was mixed at UAPB Farm whereas conventional feed was purchased from the local animal feeds store. Pigs fed on the experimental diet gained faster (0.99 vs. 0.79 kg/d; $P < 0.001$) and had greater feed efficiency (i.e., kg gain/kg feed (0.33 vs. 0.26; $P<0.001$)) compared with pigs fed on the control diet. Based on current feed and feed ingredient prices, feed cost per kg gain was greater for pigs fed on the control diet compared with pigs fed on the experimental diet ($1.55 vs. 1.20; $P < 0.001$). These results show that brewers-grade rice can replace 100 percent of corn or milo in diets for finishing pigs without compromising animal performance. It is concluded that brewers-grade rice is a good alternative energy feed to corn or milo for finishing pigs. However, more studies are needed to determine the effect of replacing all corn or milo in finishing pig diets on pork quality (carcass yield and grade).

3 • Helping Growers Capture "Local" Retail Market Opportunities

Ronald Raney, University of Arkansas
Jennie Popp, University of Arkansas
Nathan Kemper, University of Arkansas

Locally and regionally produced food products are demanded by consumers across the United States at unprecedented levels. This demand is driven by consumers' desire to support local economies, reduce food miles, encourage sustainable agricultural practices, and have greater access to healthier and fresher produce. This demand has created new opportunities for growers to engage consumers and

newly interested retail buyers. A collection of resources to assist both growers and consumers in identifying "local foods" has emerged to meet this rising demand. One group of resources gaining popularity are electronic marketing networks that gather information from producers and potential customers and give farmers greater access to local and regional markets. Large retail chains are now exploring how electronic markets can be used to increase Poster Presentations Springfield, Illinois • **September 15–17, 2009 49** consumer market share by meeting customer demands for fresher, local grown foods. These new and emerging direct markets potentially offer benefits to producers by providing known and stable markets. However, before producers can realize the full potential of these new marketing avenues, several barriers must be overcome. Farmers must deal with the myriad of regulatory and contractual issues that should be addressed to successfully market directly to retail and wholesale outlets. The regional project focuses on Southern region specialty crop growers interested in direct marketing of their products. The project includes curriculum development and grower assessments. Preliminary analysis of surveys collected at the two regional grower workshops reveal: 1) producers responding to the survey were primarily engaged in vegetable, berry, and pumpkin production; 2) the two most commonly reported marketing channels used were farmer's markets and direct to grocery retailers; 3) 55% indicated they were interested in using an online, electronic direct marketing system; 4) producers identified limited product availability as the primary barrier to selling to large retailers.

CALIFORNIA

4 • Extension Outreach Methodologies to make your program more effective—What Works, What Doesn't

Richard H. Molinar, University of California Cooperative Extension

California is a very ethnically diverse farm state. There are a number of different outreach techniques utilized in California to make our extension efforts more productive including hiring ethnic staff; one-on-one farm visits; office consultations; group meetings; written materials; on-farm research; ethnic radio; audio and video; and offering gadgets/gizmos/attention getters. Some of these techniques work better with one ethnic group than another, and knowing the best technique(s) is vital to a high-impact, productive program. Other practices that can influence success or failure include consistency of programs over a period of time; gaining the trust of the elders or leaders of each ethnic group; respecting and participating in cultural events and customs; and developing partnerships with other agencies and community based organizations (CBOs). A classic example is the collection of "Pesticide Safety" booklets we have for Hmong, Lao, and Cambodian residents. The books are useful for those who read those languages; however, many first generation farmers have only a 4th grade education and many cannot read Hmong. Broadcasts on Hmong radio stations are much more useful.

FLORIDA

5 • Providing Socially Disadvantaged Farmers With Technical Training To Produce, Add Value & Market Alternative/Specialty Crops Cassel Gardner, Florida A&M University Gilbert Queeley, Florida A & M University Cooperative Extension

The Cooperative Extension Program at Florida A&M University is currently conducting outreach activities geared towards providing small-scale farmers with improved methods of production, value-addition, and marketing of selected alternative and traditional crops. Training activities include on-farm demonstrations

and post-harvest product transformation, which includes methods of value-addition. The objective is to enable participating farmers to improve their quality of life by adopting new and improved farming techniques that can increase the potential of making their farming operations profitable. The target population includes beginning small-scale farmers, established small-scale farmers, and youth agricultural entrepreneurs. Informational resources to be used during outreach activities include Web-based information; printed materials (fact sheets, production manuals, etc.); PowerPoint presentations; on-farm demonstrations; and field trips. Anticipated short- and long-term program impacts include changes in management and marketing practices that will result in increased returns; the establishment of niche markets by incorporating alternative enterprises into farm operations; increased engagement in distribution activities; development of agricultural businesses by youth entrepreneurs; and increased crop yields resulting in higher profits. The program has a 3-year duration and is expected to benefit beginning and established small-scale farmers in more than 11 Florida counties.

6 • Local Food Network Initiative
Nola Wilson, University of Florida, Marion County Extension Service

There is a strong demand from consumers to buy local foods from the local farmer; however, the demand is greater than the supply. In Florida, our farmers and our systems are set up for producing and marketing in the traditional ways. For example, vegetable producers are growing for the wholesale market and producers of livestock, including small ruminants, are selling off-the-hoof or at a livestock market. We need to introduce and encourage our existing limited-resource farmers to diversify their production; transition from farming for the wholesale market to farming for the direct market; and develop new marketing skills and value-added opportunities. The challenge is there is a lack of organized networks for the farmer to sell to. Furthermore, producers lack (or have limited knowledge about) the benefits of direct marketing, various marketing strategies, and how to farm for the direct market. The Extension Service objective is to educate limited-resource producers on how to produce and sell for the direct market, and to help build a foundation of marketing connections. Sometimes the cart is put before the horse so there needs to be an organized 50 5th National Small Farm Conference increase in supply to meet the demand before a successful “buy local” campaign can be implemented. Through this initiative we should see a decrease in the supply gap with farmers increasing profits. Currently, this initiative is in development; the poster shows current direct marketing systems that have been developed, pilot programs being implemented, and upcoming educational opportunities and collaborations that will yield benefits to both the farmer and consumer. The Evaluation of Three Feeding Regimens and Three Anthelmintics in a Meat Goat Production System: A Florida A&M University Research/Extension Project, Ray Mobley, Florida A&M University; Thomas Peterson, Florida A&M University Food safety starts at the farm gate. Proper management and feeding are important to the productivity and survivability of the farm as well as to the health and safety of the food supply. Nutrition and internal parasites are two factors that affect the growth of the meat goat industry in Florida. The project evaluated three common feeding strategies (a cracked corn feed, a 12 percent crude protein commercial feed, and a 16 percent crude protein commercial feed) and three anthelmintics for their effects on weight gain and economic efficiency, and any resistance among the herd, respectively. The results indicated that the 12 percent

crude protein commercial feed-feeding regimen was the most economical/sustainable, and had the lowest weight gain. In addition, results indicated that the Florida A&M University, Research Extension Center herd might be resistant to the Levamisole-type anthelmintic. In addition, one of the objectives was to apply the most efficient resources to maintain food safety. The aim is to attain healthier animals through proper nutrition, weight gain, and carcass quality, thereby maximizing safe food supply.

ILLINOIS

7 • Locally Grown: Building a Local Sustainable Food System

Brenda Elaine Derrick, University of Illinois Extension

Mike Roegge, University of Illinois Extension

Carrie Edgar, University of Illinois Extension

The Locally Grown Program is a comprehensive community effort to assist producers in west-central Illinois and northeast Missouri to market their products by providing information to consumers, restaurants, and retail outlets on the availability, nutritional aspects, economic, and environmental impacts of buying local. The program targets all levels of the local food system by creating learning opportunities for consumers and producers and increases availability of products, with results in a more sustainable food system. A Locally Grown advisory committee of area producers, extension staff, and other partners plan and coordinate the following activities:

• An annual Locally Grown/Locally Good Expo is held in early spring to introduce consumers to the locally grown food concept. Producers have booths to meet consumers and share information about their products and farming practices.

• The first annual Locally Grown Food Fest was held in August 2005 in Quincy, IL, to celebrate local food. Celebrating its 5th year in 2009, the festival includes a farmers market, cooking demos, kids' activities, educational booths, a chefs' contest, and a tomato and salsa contest.

• Locally Grown Kids is a six-session curriculum to educate elementary students on the origin of food, the importance of a local food economy, sustainable agriculture practices, and good nutrition.

• A local food policy council gathers information and provides recommendations on sustainable food planning and policy formulation. Two members of the council were instrumental in the development of a locally grown farmers market last year in Quincy, IL.

• The Tri-State Locally Grown Conference was held in November 2007. Iowa will continue the biennial event rotation in September 2009.

• Several series of Locally Grown dinners have been and are currently being held to showcase local farmers, the products they grow, and the culinary talents of area chefs.

• Additional efforts include producer workshops, bi-annual newsletters, Web sites, and much more.

8 • Observations on Production and Constraints of Sweet Potato (Ipomoea batatas) in Northern Illinois

James Theuri, University of Illinois Extension

Three sweet potato varieties (Georgia Jet, Beauregard, and White Yam) were planted in northern Illinois (Pembroke Township, Kankakee counties) in the summer of 2007. Sweet potato splits were planted 12" apart in rows set 36" apart on May 5 and harvested on October 5. The plot was previously a lawn, and soil is mostly sandy with some organic matter. It was severely deficient in potassium. Initially, most plants were damaged by deer (50 percent incidence), but an application of a repellent deterred them. Leaf-chewing beetles did some insignificant damage. Soil insects—corn wireworms, or 'click' beetles (Melanotus communis), damaged the

varieties: 2 percent on White Yams, 4 percent on Beauregard, and 15 percent on Georgia Jet. Scurf fungus (Monilochaetes infuscans) caused a superficial infection on tubers: 15 percent on Beauregard, 20 percent on White Yam, and 60 percent on Georgia Jet. Due to inclement weather (drought and heat), extensive cracking occurred on Georgia Jet and White Yam, but was negligible on Beauregard. Vine growth was least in White Yam, and extensive in Georgia Jet. White yam yielded 3.0 pounds per plant, Georgia Jet 12.1 pounds per plant, and eauregard 13.7 pounds per plant. Overall, Beauregard showed the greatest tolerance for the inclement weather and poor soil conditions and produced the most aesthetically appealing tubers compared to the other two varieties.

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9 • Producing and Marketing 2 Acres of Fresh Asparagus—What Was I Thinking?

Dean R Oswald, University of Illinois Extension

The author will relay thoughts and personal experiences related to planning, planting, harvesting and marketing 2 acres of fresh asparagus. The alternative enterprise was established to help provide for his two sons' college tuition. Objectives: Examine the asparagus enterprise from the planning process through planting, harvesting, and marketing. The following questions will be the focus:

1 What do I need to know before I start? The author will give guidance on field preparation, layout, and cost estimates. 2) How do I plant acres of asparagus? Culture and planting methods will be addressed. 3) What do I need to know about harvesting and storing a quality product? How temperature affects spear growth and quality, and a discussion of time, labor, and equipment needed. 4) How do I market asparagus? Experiences with on-farm marketing, farmers markets, and value-added will be briefly spoken to.

Conclusions: Producing and marketing fresh asparagus can add income to the small farm operation. Asparagus production is compatible with other vegetable and small fruit enterprises.

Labor availability and weather seem to be the largest constraints and may limit the size of the operation.

IDAHO

10 • Cultivating Success Small Farms Education: Engaging Idaho and Washington Farmers in the On-farm Teaching-learning Process

Cinda Williams, University of Idaho
Ariel Lynne Agenbroad, University of Idaho Extension, Canyon County

The Cultivating Success program is a collaboration of University of Idaho Extension, Washington State University Small Farms, and non-profit Rural Roots, that provides sustainable small farms education in Washington and Idaho. Since 2000, the program has increased knowledge, skills, and opportunities for producers and has strengthened consumer Understanding and support of sustainable local and regional farming systems. Cultivating Success offers a series of courses and on-farm education. Over 35 county extension offices, college campuses, and/or farms in Washington and Idaho have served as course sites. Over 2,645 students have participated, including 646 Latino and/or Hmong immigrant farmers. Experienced farmers participate in the program as collaborators, advisers, mentors, and instructors. Thirty-four experienced farmers have completed farmer-mentor training and 10 are certified to host an apprentice/provide mentorship on their farms. In 2007, program partners implemented a study to reassess the experiential education needs of Idaho and Washington farmers and to specifically determine topics most useful to small farmers; identify preferred scheduling and class/workshop formats; assess the level of interest of experienced farmers in leading

on-farm workshops or trainings; and identify barriers and incentives for participation. Survey data collected from 412 producers provided fresh, valuable information and identified new directions for programming. In 2008, program partners used results to develop and present eight different on-farm experiential learning opportunities which were documented and assessed through post workshop interviews of producers and on-line surveys of participants. Case studies that profile the benefits and challenges of each format have been completed. This poster will communicate significant, formative findings from the 2007 study and the resulting "lessons learned" from each of the on-farm experiential learning formats offered in 2008. Recommendations and advice will also be included for producers, extension, and non-profit educators who are engaged in teaching and facilitating new farmer and on-farm education.

INDIANA

11 • Getting Started in Dairy Goats

Steve Engleking, Purdue University Extension

Issue/Need: Small farmers are seeking diversification of enterprises that can fit the limited available resources. Extension offices often receive client inquiries into alternative enterprises.

One such enterprise concerned dairy goats and goat milk products. On the surface, this enterprise appears ideally suited to small acreage farms. What was done: Due to the number of requests for information, Steve Engleking, extension educator in LaGrange County, set up a "Getting Started in Dairy Goats Workshop," held on February 29, 2008, in LaGrange. The workshop, attended by 72 people, covered the following topics: Milking Equipment and Regulations; Nutrition of Dairy Goats; Dairy Goat Enterprise—Costs of Production; Farmstead Processing of Goat Milk Products; and a Farmer Panel. Attendees completed a survey/ evaluation form at the conclusion of the workshop to gather data and assess impact. Impact of program: Attendees who returned surveys at the workshop reported the following:

• 78 percent were more interested in a dairy goat enterprise for the following reasons:
• T o improve farm profitability—68 percent
• T o bring other family into the farming operation—27 percent
• T o diversify the farm—50 percent
• T o be able to quit an off-farm job—55 percent
• Specialty enterprises are appealing—55 percent

• 6 percent were less interested for the following reasons:
• T he start-up investment is too high—100 percent
• T here is too many regulations—50 percent
• Raising and milking dairy goats will be too costly—50 percent
• A dairy goat enterprise will be too time consuming—17 percent
• 5 participants planned to start milking goats, add to an existing dairy goat enterprise, and/or producing value-added goat milk products.

12 • Starting a Small Apple Orchard and Pruning Fruit Trees

Jim True, Purdue University

In September 2007, as a member of Purdue's Small Farms Team, I attended the Ohio Farm Science Review and gave a 50-minute presentation titled "Starting a Small Apple Orchard." This presentation was given in the Ohio Farm Science Review's small farms tent at the farm show; about 90 people attended. This presentation covered all aspects of important information to consider before starting an apple orchard. I was invited to speak again, in 2009, and this time my presentation was titled "Pruning Fruit Trees." This presentation focused on helping small producers learn the basic

techniques and principles of pruning fruit trees, and offered brief tips on producing blackberries and blueberries. I designed both of these presentations to complement each other and made them practical for small producers and homeowners with backyard orchards. When giving these programs, I take limbs from apple trees and prune them in front of the audience so they can see for themselves the principles I am discussing. This demonstration has been critical for those attending to understand how to make pruning cuts and shape trees by pruning. My dad had an apple orchard of 150 trees, so that background has been helpful. The number of attendee questions I receive when giving these presentations has led me to believe that there is a tremendous amount of interest in this topic and that it would be beneficial for educators to help producers. The comments I received from those attendees have been positive, with commenting, "This is something I can take home and use."

13 • Making Career Decisions Through Enterprising Ideas

Stephen J. Swain, Breaking New Ground/Indiana AgrAbility/National AgrAbilitiy Project

Extension and AgrAbility professionals interact daily with clients who have had disabling injuries or are affected by age-related conditions. The majority of these clients desire to remain in production agriculture but are faced with the potential of changing enterprises or methods of farming. How does the professional assist a client in this process? This session will present a framework for the professional to assist the client in a systematic approach to these decisions. Case studies will show how the process was used or not used—along with outcomes. There will also be presentations of assistive technology and alternative enterprises—and potential sources of funding for the assistive technology—that may help farmers and ranchers with disabilities continue farming, start an alternative enterprise, or live independently.

KENTUCKY

14 • The Kentucky CASHN Project

Marion Simon, Kentucky State University
Kenneth Andries, Kentucky State University
Louie Rivers, Jr., Kentucky State University
Shannon Degenhart, Texas A&M University

Kentucky State University (an 1890 land-grant institution) collaborated with the National Center for Foreign Animal and Zoonotic Disease Defense (FAZD), the University of Kentucky Cooperative Extension Service, and the Kentucky State Veterinarian to develop a County Animal Security and Health Network (CASHN) in Kentucky. The concept was to protect the U.S. agriculture and food infrastructure by connecting noncommercial, hobby, and small-scale livestock and fowl owners with veterinary information for early detection and rapid response. The CASHN Concept Non-commercial livestock and fowl owners have been identified by FAZD as a vital but difficult audience to reach for the protection of our agricultural infrastructure. Previous work with the FAZD Center indicated that feed retail managers are the most common conduit for communicating with this clientele about animal health and nutrition topics. During 2007 and 2008, the FAZD Center and collaborating 1890 and 1994 land-grant Cooperative Extension programs in six states created, and tested, the CASHN emergency education and communications network. The CASHN Project linked the FAZD Center, state veterinarians, and county extension personnel with local feed retailers. In the pilot study, the FAZD Center alerted the State Veterinarian of a test animal disease outbreak, who then alerted the 1890 or 1994 state extension personnel. The state staff then alerted 1890, 1994, and 1862 county extension educators in their state's pilot counties. County extension educators then informed their local feed retailers of

the alert. Should it have been a real alert, county educators would inform the feed retailers of educational programs that were needed. This poster will give the results of the CASHN Project in Kentucky.

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MAINE

15 • UMaine Extension Equine Program
Donna Coffin, University of Maine Cooperative Extension

The most recent Impact of Equine Industry in Maine estimated that Maine has a horse population of approximately 35,000. A 2000 survey of horse owners found that over 75 percent consider themselves hobby horse owners; the remaining 25 percent are involved in a business related to horses, including training, boarding, breeding, farrier, or veterinarian. Both segments have unique educational needs that were addressed by a variety of methods, including development of equine publications; establishment of an equine Web site; conducting basic horse owner clinics; conducting clinics on breeding and business management; pasture walks; and responses to individual requests. A survey was mailed or e-mailed to 298 people who attended one or more of the programs or received individual assistance for their horse-related issue. Eight-six surveys were returned (29 percent), of which 23 percent of respondents had read at least one Equine Facts publication and 19 percent had visited the Web site. In the past 5 years, breeders reported a 96 percent success rate with foaling and weaning live foals. Twelve surveys, or 32 percent of respondents, indicated that they have started or expanded their horse business in the past 5 years. Additionally, 8 or 21 percent have had an increase in income. As a result of participating in extension equine programs, 28 people (33 percent) vaccinate their animals; 22 people or (27 percent) rotate their horse pasture; 11 people (25 percent) improved the quality and marketability of their horses or horse business; and 11 people (25 percent) tracked farm financial information through timely recordkeeping. Comments included, “All of those clinics have been very educational. For instance, the business clinic opened up new information that helped with my business,” and, “My work is proactive rather than reactive. I feel more confident in my knowledge, as I am new to the equine world.”

MARYLAND

16 • Backyard Farming: The Urban Homesteader—
www.backyardfarming.blogspot.com
Marisa Johnson,
www.backyardfarming.blogspot.com
Dale M. Johnson, University of Maryland
Megan Knorpp,
backyardfarming.blogspot.com
Jennifer Hatch,
backyardfarming.blogspot.com
Michael Johnson,
www.backyardfarming.blogspot.com

More and more urban and suburban dwellers are parking their lawnmowers and converting their checkerboard lawns into veritable backyard farms. Not content to be called mere gardeners, these self-proclaimed farmers are serious about producing a cornucopia of fruits and vegetables and sometimes foray into meat and egg production. Some venture beyond personal Consumption and market their excess produce. A cohort of these backyard farmers from across the country is sharing experiences through a blog titled “Backyard Farming: The Urban Homesteader.” The blog brings dreamers and doers together to share the ideas, experiences, successes, and failures of backyard farming. A myriad of practical articles address such diverse subjects as garbage can potatoes and upside down tomatoes, homemade teas and edible flowers, nontoxic bug blasters and companion planting, Rhode Island layers and Cornish cross broilers, and community supported agriculture and

farmer's markets. Dialog between blog authors and readers answers questions and initiates new inquiries. Book reviews motivate readers to pick up books from Michael Pollan, Barbara Kingsolver, and other compelling authors. Recipes abound. For example, how do you turn those fresh eggs into pasta, or squash into frittata. Or how do you get a nutritious 20-minute breakfast out of the backyard farm instead of going to McDonalds. This blog resurrects the lost domestic skills of canning, freezing, pickling, and drying. Parents who want to involve their children in their backyard farms will find this blog a treasure trove of ideas. If a picture speaks a thousand words, then this blog is an encyclopedia. Captivating photographs accompany almost every article and are supplemented by links to interesting internet videos. Dig deep into this blog and you may even learn about the sex life of asparagus. All of this is free for the picking by going to www.backyardfarming.blogspot.com.

MICHIGAN

17 • Northern Michigan Small Farm Conference—Building A Strong Community Supported Agriculture System—Youth Sessions

Benjamin J Bartlett, Michigan State University Extension
Dee Miller, Michigan State University Extension
Waneta Cook, Cook Family Farm

The 10th year of the Northern Michigan Small Farm Conference featured its largest crowd ever in 2009. Approximately 117 of the 712 attendees were youth, ages 18 and under who were attending the first-ever youth sessions. These sessions focused on supporting the entrepreneurial spirit and passion of the next generation small farmers as well as providing hands-on tools for participants to take home and use. The youth session featured a keynote speaker, Daniel Salatin from Swoope, VA, who began his first farming enterprise at age 8. The youth also participated in three sessions featuring Daniel and local youth who have begun agricultural enterprises. The sessions, titled "Be Your Own Boss," featuring successful young farmers; "Let's Start Our Own Business," a hands-on price-determining experience; and "Everything You've Ever Wanted to Ask About…," a general Q&A with Daniel and other youth. Participant evaluations showed that all but one of respondents felt the keynote speaker was great. The evaluations were also very favorable with responses of great or good, from 100 percent on two of the individual sessions and a 78 percent good or great on the third session. Evaluation comments were very favorable to **54 5th National Small Farm Conference** continuing this track of youth-focused farming education and providing additional support for these beginning farmers. One comment summarized the youth's feelings best by stating, "I really liked the youth speakers and Daniel Salatin; they inspired me to follow my dreams."

18 • Integrated Weed Management: Fine Tuning the System

Erin Taylor, Michigan State University

Based on grower demand for information on integrated weed management, Michigan State University published a new 132-page, all color extension bulletin titled "Integrated Weed Management: Fine Tuning the System" (E-3065). This new publication compliments "Integrated Weed Management: One Year's Seeding…" (E-2931), released in February 2005. Similar to "One Year's Seeding…" this new guide does not provide detailed management plans. Each chapter looks at how different cultural and management practices affect weeds. Our goal was to go one step beyond compiling written information from researchers and extension personnel to also include input from experienced growers through featured crop rotations, profiles, and the on-farm trials. The chapters in "Fine Tuning" include complex crop rotations, cover crop systems, manure and compost,

flaming, grazing, and other biological controls, weed thresholds, on-farm weed management trials, and 14 new weed profiles.

19 • Weed Management Using Cover Crops in Integrated Systems

Erin Taylor, Michigan State University

In December of 2008, Michigan State University released a new extension bulletin E-3065, titled "Integrated Weed Management: Fine Tuning the System." One of the chapters revolves around cover crops and their usefulness at combating weeds in addition to their many other benefits. This session will discuss the ways in which cover crops can reduce weed populations, as well as new cover crop innovations that growers and researchers from around the Midwest have been using. These new ideas include the use of cover crop mixtures, unique seeding methods, and the use of a roller-crimper for cover crop control.

MISSOURI

20 • Assisting Small Farmers of Different Cultural Heritage in Missouri

Nadia Navarrete-Tindall, Lincoln University of Missouri

Casi Lock, University of Missouri

Lincoln University of Missouri, through its Native Plants Program and in partnership with the University of Missouri Extension, organized two workshops and a field day in 2008. These events increased awareness about opportunities for farmers of different cultures in Marshall, located in central Missouri. The Native Plants Program promotes the integration of conservation and agriculture into farms and urban gardens. The trainings were offered in Spanish and English. During the field day, participants were introduced to fall gardening, composting, and native plants to attract pollinators. Ethnic food was served during these events and some residents discussed the challenges that Hispanics face in rural Missouri. Hispanics are estimated to be 7.3 percent of Marshall's population. Grocery stores offer ethnic produce and other goods that could be grown in the urban gardens by the residents. Many Hispanics are originally from rural areas in their native countries and are familiar with farming practices. They could improve their way of life by growing different ethnic and specialty crops such as chipilin, jicama, cilantro, and alcapate. One of the goals of Lincoln University of Missouri Cooperative Extension (LUCE) is to encourage more Hispanics and other under-represented groups to farm in small towns and surrounding communities, and to improve communications with extension educators. In the workshops, representatives from several USDA agencies including the Farm Service Agency, National Resources Conservation Service, National Agriculture Statistics Service, and state agencies, including Missouri Department of Agriculture and Missouri Department of Conservation, discussed their programs with the attendees. LUCE will continue to assist underserved populations by continuing to offer educational events and by creating demonstration gardens in Marshall. A Horticulture/Native Plant specialist position will be filled in 2009 to further assist educators and their clienteles in Marshall and other surrounding Communities.

21 • Farm Size and Adoption of BMP's by AFO's

Laura McCann, University of Missouri

Haluk Gedikoglu, University of Wisconsin-LaCrosse

Voluntary adoption of appropriate manure management practices by animal feeding operations is necessary in order to reduce water quality problems associated with excess nutrients and pathogens. A randomized mail survey of 3,000 livestock farmers in Missouri and Iowa was conducted in the spring of 2006 to determine adoption rates of various practices and the factors affecting adoption. The effective response rate was 34 percent. Overall adoption rates were: Injection of

manure (19 percent); Grass filters near water sources (63 percent); Soil testing (every 3 years, 73 percent); Record keeping on manure applications (29 percent); Manure testing (every year, 22 percent); Calibrating manure spreaders (19 percent); and Maintaining 100 foot setbacks (61 percent). Results of probit analysis indicated that perceived profitability was the only factor that significantly (and positively) affected adoption of all practices. If the practice was not perceived to be complicated, farmers were more likely to adopt manure testing, calibration, injecting manure, grass filters, and soil testing. Farmers who disagreed that recordkeeping was time consuming were more likely to do it. Perceived improvement in water quality was positively related to only injecting manure and was somewhat negatively related to soil testing.
Springfield, **Illinois • September 15–17, 2009 55** Size issues were also important. Those with more animal units were more likely to adopt manure testing, soil testing, and recordkeeping. Compared to the base farm sales (crop and livestock) category of $100,000–$250,000, those with lower sales were less likely to adopt calibration, setbacks, injecting manure, grass filters, and soil testing. Those with more than $500,000 in sales were more likely to adopt all practices except soil testing and recordkeeping. Other factors that impacted adoption of some practices were age, education, type of manure, species, and off-farm income. The results indicate that additional educational efforts, or simplified practices, may be needed for smaller and part-time farmers.

22 • Factors Affecting Manure Transfers in the Midwest

Jessica Amidei-Allspach, University of Missouri Alumna
Laura McCann, University of Missouri

With livestock operations becoming larger and more specialized, and a requirement for phosphorus-based application, there is a need for farmers to transfer manure off their farms in order for manure to be applied at agronomic rates. A survey of livestock farmers in Iowa and Missouri was conducted in the spring of 2006. It was a random sample stratified by livestock type and farm sales. The major types of livestock were dairy cows, beef cattle on feed, beef cows, swine weighing 55 lbs or less, swine more than 55 lbs, broilers, and turkeys. This survey examined manure management practices in general and included questions regarding the sale and transfer of manure. For this analysis, farmers with pasture-only operations were excluded, which left 921 observations. Over 81 percent of turkey farmers and over 57 percent of broiler operations provide manure to other farmers. Farmers providing turkey manure are also the most likely to receive money for the manure, with 83 percent being paid for the manure versus 82 percent of the broiler operations. Turkey and broiler litter is also transported the furthest (13.7 and 14.8 miles on average, respectively). Turkey manure also sold for the highest price.
A probit regression analysis was conducted to determine the factors that affect whether or not a farmer provides animal manure to others. Younger farmers were significantly more likely to provide manure, but education level had no significant effect. The more wheat or pasture a farm had, the less likely they were to provide manure. The percent of land rented had no effect. Increases in livestock numbers for all types except beef and swine less than 55 pounds increased the likelihood of providing manure, as expected. Whether they used a commercial fertilizer on their manured fields had no relationship to whether they provided manure to others.

23 • What Factors Affect Whether Off-Farm Work Interferes with Farming Operations?

Ryan Koory, University of Missouri
Laura McCann, University of Missouri

It is hypothesized that off-farm work constrains when and to what extent farming operations are completed. A number of factors may affect to what extent this conflict between off-farm and on-farm exists, such as type of off-farm work, type of livestock, size of farm, etc. Furthermore, it may be that practices that affect the bottom line will have priority when there is a conflict, but that other operations, such as manure management, may be affected to a greater extent if there is a binding time constraint. These questions will be addressed using a dataset based on a 2006 survey of Missouri and Iowa livestock farmers. Two of the questions that were asked are, "Does your off-farm work interfere with the timing of your farming operations?" and "What periods and activities cause severe time crunch problems?" Farmers were able to pick from five options or add their own response under "other." The survey also included typical questions, such as age, education, gross farm sales, and off-farm income. In addition, specific questions about the type of off-farm income (full-time, part-time, seasonal), as well as type of livestock operation were asked. The poster would include summary information, such as which activities are more likely to be affected by time conflicts, a labor market theoretical model, as well as regression results indicating what factors affect whether off-farm work interferes with farm operations. The theoretical model has been developed but we have not yet begun the data analysis.

24 • Reaching out to Minority Small Farmers: Coping with Changing Times

Trisha Grim, Lincoln University of Missouri
Katie Nixon, Lincoln University of Missouri
Sanjun Gu, Lincoln University of Missouri
KB Paul, Lincoln University of Missouri

There have been some major shifts in demography, social, and economic domains in Missouri in recent years. The number of African-American farmers in the state has declined, while the numbers of both Hispanic and Asian farmers have increased considerably. Both St. Louis and Kansas City have had sizable African-American populations for decades, and because of the past inequity in opportunity, this segment of the population generally endured poverty and social injustice. At this juncture, however, while the younger generation of African-Americans has made a significant stride towards improving their quality of life, many of the elderly still live in the inner-city areas, where healthy food and services are often not available. The urban gardening component of our Small Farm Program targets these people whereby we guide them step-by-step through A to Z of vegetable production. This assures them of a daily supply of fresh vegetables during most of the summer months. The new waves of Hispanics and the Asian farmers purchase and/or lease lands closer to the larger cities, where there is a growing ethnic population. These farmers, in addition to growing the specialty vegetables that cater to the needs of some recent **56 5th National Small Farm Conference** immigrants, also produce vegetables popular with the general population. We bring these minority farmers closer to the consumers, make them aware of the prevailing laws and regulations, and provide information on the opportunities available to them. Because of these obvious reasons our new program is targeting the counties in close proximity to the state's two mega-cities. These changing trends and our program interventions will be discussed.

NEBRASKA

25 • Improved Calving on Pasture for Ranchers

Jason Gross, University of Nebraska-Lincoln Extension
Chris Henry, University of Nebraska Lincoln Extension

The new U.S. Environmental Protection Agency rules draw the line between

pasture-based operations and animal feeding operations based on vegetative cover and whether the confined is used more than 45 days in a 1-year period. Increased pressure from recent commodity prices have forced many livestock producers to “do more” with less pasture in respect to winter grazing and calving. Potential environmental consequences, erosion, vegetative health, and animal health issues may surface as a result of these changing conditions. The Livestock Producers Environmental Assistance Project with the University of Nebraska Lincoln Extension has developed a novel approach to these concerns. This new approach is demonstrated on two projects on working ranches in Nebraska. The systems consist of multiple paddocks that are serviced by a designed sacrificed feeding area. The runoff from this sacrifice feeding area is managed using a very small vegetative treatment system. The systems are designed to be flexible for the cattleman in times of blizzards, drought, or muddy conditions. Also this type of calving approach can incorporate the Sand hill Calving Program. The intent of the system is to provide a calving area or pasture that provides environmental stewardship, improves herd health, and increases the productivity and convenience for the rancher. This can be accomplished with a design that promotes good grazing practices, supplemental feeding practices, and manure management.

26 • Southeast Nebraska Diversfied Agriculture Tour Explores Alternative Enterprises

Gary Lesoing, University of Nebraska-Lincoln Extension
Jessica Jones, University of Nebraska-Lincoln Extension
Sarah Heidzig-Kraeger, University of Nebraska-Lincoln Extension
Vaughn Hammond, University of Nebraska-Lincoln Extension

For the past 3 years, University of Nebraska-Lincoln Extension has sponsored a Diversified Agriculture Tour in southeast Nebraska. These tours provide opportunities for participants to explore alternative enterprises first-hand in their own backyard. Each year, 10-20 agricultural educators, farmers, and entrepreneurs tour diversified agriculture operations in southeast Nebraska. The tours showcase what people are doing to develop new agricultural enterprises in southeast Nebraska. We have visited a pasture poultry and natural grass-fed beef operation that processes its own poultry on an on-farm facility and markets its products directly to the consumer, restaurants, and at farmers’ markets in the larger metropolitan cities of Lincoln and Omaha. Two vineyards and wineries have been developed and include events and activities to increase tourism from these larger cities and other parts of Nebraska. One farmer is producing walnuts and woody florals and selling these products through cooperatives. A young family operation is raising sheep sustainably, as well as pasture poultry, and recently added swine as an enterprise. They opened up a country store on their farm. An agricultural business in a small community is purchasing soybeans from farmers, processing them for feed, and is adding soybean oil to diesel and selling it to his customers as biodiesel. Other entrepreneurs have turned their land into a trophy deer hunting area with a lodge, drawing customers from the east coast. Still other farmers are converting some of their farmland to organic and marketing corn, soybeans, and alfalfa for significant premiums. These tours allow participants the chance to see how several farmers and agricultural businesses have thought outside the box and developed successful alternative enterprises. This tour has become an annual event held the first Friday in September after Labor Day.

27 • Sprinkler VTS—New Technology in Runoff Water Treatment
Jason Gross, University of Nebraska-Lincoln Extension
Chris Henry, University of Nebraska Lincoln Extension
Over the past few years there has been much interest in vegetative treatment systems (VTS) as a practical practice for treating beef open lot runoff water. The more traditional VTS of using gravity to separate solids and deliver the liquids to the vegetative treatment area (VTA) are not practical in many situations. Using a surface flood to distribute the runoff water across a VTA can be challenging when the soils have a high intake rate (sandy), low intake rate (clay), high water tables, or when no adequate land area down gradient of the feed lot for a VTA . The Livestock Producers Environmental Assistance Project from the University of Nebraska Lincoln (UNL) Extension has developed technology in applying beef open lot runoff water to a VTA through a pressured sprinkler system. This UNL—Extension project has designed and Constructed "Sprinkler VTS" systems on four small and medium animal feeding operations across Nebraska, the only known systems of their kind in the United States. The systems constructed are demonstrations to showcase the technology to other farmers, regulators, and NRCS personnel. Our presentation will explain the technology used to deliver the runoff water from the sediment basin to the VTA . We will describe the methods of pumping, filtering, and applying the runoff water. Also the presentation will cover the possible impacts of this type of technology. These systems can be used on more challenging feeding operations, can be lower cost

57 than a conventional system, negate the need for relocation of the operation, and are more effective than buffer and setback approaches.

NEW JERSEY

28 • Marketing Meat Goats to Non-Traditional Consumers
Stephen Komar, Rutgers University Extension
New Jersey processes and consumes over 36 percent of all meat goats slaughtered domestically; however, very few goats are raised in the state. In 2006, Rutgers Cooperative Extension faculty initiated an educational program to determine the suitability of raising meat goats in New Jersey. The program consisted of two components, including an educational series and an on-farm demonstration project. The educational programs were well–attended, with 163 local producers attending the 2-day sessions. In response to the high level of interest an on-farm trial was conducted in 2007 to quantify the potential for raising meat goats in New Jersey. Goat kids were imported from Texas and separated into two production groups. Goats were slaughtered on two separate dates and fabricated into traditional lamb cuts. A partial budgeting analysis was utilized to compare the different production systems. Differences were observed in average daily gain, production costs, and gross-returns with animals produced in a feed lot system performing better than animals maintained in the pasture-based system. Genetic variation among test animals may have contributed to performance variability. Consumer survey results suggest that quality is a determining factor when making purchasing decisions, with 71 percent of the consumers indicating a preference for USDA certification. Initial results suggest that meat goat production may be a viable option for New Jersey producers. More research is needed to determine optimum feeding program, breed selection, and optimum marketing strategies for New Jersey production.

NEW YORK

29 • Bedded Pack Management System Case Study—Poster Session

John M. Thurgood, Cornell Cooperative Extension of Delaware County
Challey M. Comer, Watershed Agricultural Council
Daniel J Flaherty, Watershed Agricultural Council
Mariane Kiraly, Cornell Cooperative Extension in Delaware County

Animal manure management is a significant challenge for many small dairy farms. One manure management system in limited use is a bedded pack. A bedded pack management system (BPM S) is defined here as a covered barnyard and feeding area that holds a variety of dairy cattle, storing their manure through the accumulation of an unturned bedding of dry material for later use as a nutrient amendment. A BPM S was designed and implemented on a small dairy farm as part of the NYC Watershed Agricultural Program. The system was implemented as an alternative to the traditional suite of best management practices: manure storage, barnyard runoff management system, and heavy use area protection for feeding. The BPM S was intended to house the farmer's dairy cattle only during the winter months; the herd was on pasture during summer and was outside in winter. The system was studied for 2 years post-implementation to determine the environmental and economic effects:

• The system proved to effectively contain, with little odor, all of the cattle manure and urine.
• The amount of labor pre- and post-implementation was relatively unchanged. The BPM S proved to be a comfortable environment for the cattle.
• Milk sales per cow increased by 2,000 pounds post-implementation at least partially due the BPM S.
• The amount of bedding needed proved to be a significant expense to the farmer.
• The bedded pack provided an excellent material for composting. Characteristics of farms most likely to find the BPMS beneficial are: farms currently out-Wintering cattle in harsh winter climates; spring freshening herds (less manure and bedding needed in winter); organic herds that place a high value on compost as a soil amendment; farms with outdated dairy facilities and that have a need for manure storage; and barnyard and feeding area conservation practices.

30 • Holistic Approach to Strengthening Organic Dairy Industry of New York

Fay Benson—Cornell Small Farm Program

When working to improve any portion of a value chain it is important to have all portions at the table when discussing barriers and solutions. The synergy that is created by looking at the value chain from diametrically opposed perspectives gives the solutions much more impact. This synergy can also be destructive if the tenets of Small Group Process aren't observed. The poster will illustrate these tenets and how they were used in facilitating the New York Organic Dairy Task Force. The New York Organic Dairy Task Force is made up of Organic Dairy Farmers, and Grain Farmers, Certifiers, Organic Milk Processors, State Market Officials, and Cornell Extension representatives. This diverse group makes up the industry in New York and they mostly have conflicting needs in the industry. Through knowledge of Small Group Process the facilitator Fay Benson has worked with the group to overcome barriers to the industry over the past four years. The poster will exemplify these components of Small Group Process:

• *Use of a Leadership Team:* Small Groups of greater than 10-12 a leadership team made up of a team that represents the **58 5th National Small Farm Conference** make up of the larger group helps with directing the larger group.
• *Group Maintenance Needs:* The term maintenance or maintenance synergy is the amount of energy and time that is required for the social needs (safety, comfort, familiarity), cohesion, and harmony that is

required for a group to do its work and complete its tasks.
• *Proper Degree of Task Difficulty:* A more subjective task will require the group to have a higher degree of communication and problem solving structure that will produce the group's desired outcomes.
• *Feedback:* The group needs to see its success this help with continued involvement of the members

31 • Schoharie Co-op Cannery

Peter Pehrson, cannery@schohariecannery.org

Schoharie Co-op Cannery is a new community endeavor in upstate New York, 40 miles west of Albany, which will serve large-scale local commercial fruit and vegetable farmers, as well as small-scale home gardeners. This effort supports area sustainable agriculture and helps ensure the future of small, family farms by providing infrastructure that results in shelf-stable food (in metal cans or glass jars) for consumption beyond the growing season.
• Increase access by under-served farmers to previously unreachable value-added markets
• Less reliance on anonymous, centralized industrial food sources, and the potential for toxic results such sources engender
• A distribution system for off-season goods that doesn't rely on roadside farm stands
• Promotion of multi-crop systems instead of mono-cultures, resulting in harvests over several seasons, instead of one
• Use of a larger percentage of crops previously considered "undesirable" when commercial consistency standards for appearance, size, or condition aren't met
• A self-exemplifying model of positive food policy at regional and area levels
• New jobs (50 full-time and part-time projected at the end of 3 years) As Schoharie farmer Bob Comis asserts, "The Schoharie Co-op Cannery is not a capricious marketing gimmick, it is not a bit of foodie culture fluff, it is not a scramble to capitalize on a socio-economically exclusive fad, it is a foundation stone, set firm upon the ground, exactly the type of foundation stone on which durable local-regional farm and food systems are built." (From ww.stonybrookfarm.wordpresss.com/2009/01/19.) For this presentation at the 5th National Small Farms Conference, our goals include:
• Sharing our ideas with others to gain critical insight and balance
• Understanding a variety of agricultural needs relating to canning
• Demonstrating that self-reliance is not only desirable at a community level, it is possible by examining the experiences of the cannery. To accomplish these conference goals, we will:
• Present a graphic organizational representation of timelines, milestones, goals, and results
• Convey the nature of successful community collaboration through testimonials and personal stories
• Educate and involve our conference audience through the use of hand-outs and brochures
• Gauge conference audience interest through a simple questionnaire with an option to remain in touch post-conference
• Highlight the conference on the cannery Web site (www.schohariecannery.org)

NORTH CAROLINA

32 • FRIENDS and CASHN Providing Emergency Preparedness Education Around Emerging Infectious Diseases: A Retrospective Analysis

Michelle Eley, North Carolina A&T State University

The readiness of producers for a major disease outbreak (foreign or domestic) has received growing national and state attention in recent years. With a global increase in emerging infectious diseases, it is imperative that relevant and responsive educational programming to address these issues be created for communities with persistent, real-world educational inequities. The FRIENDS (Forwarding

Reliable Information on Emerging and Novel Diseases) and CASHN (County Animal Security and Health Network) projects at North Carolina A&T State University were created to provide educational opportunities for extension staff and small-scale livestock producers to proactively work together to plan for animal health emergencies. "Both projects partnered with several federal, state, and county agencies to build awareness around animal and public health issues, generate information at a level the target audience can easily understand, and support activities which provide an environment to transfer information to the wider community."

33 • Organic vs. Conventional Strawberry Production Research

Keith Baldwin, North Carolina A&T State University

This study was conducted to determine the effect on strawberry yield of the substitution of organic nutrient and soil management practices for conventional production (CP)

 practices. The experiment was conducted in an Enon coarse loamy soil (mixed thermic Ultic Hapludalfs). In 2005, three treatments were established in a randomized complete block experiment. Treatment 1 (OP1) was an organic treatment utilizing green manure, compost, and feather meal as pre-plant nutrient sources. Treatment 2 (OP2) was an organic treatment utilizing green manure, compost, and poultry litter as a nutrient source. Treatment 3 (CP) was a conventional treatment utilizing green manure and conventional fertilizers as nutrient sources. 'Chandler' strawberry plugs were transplanted the first week of October. In 2006, main plots were split and two additional strawberry cultivars, 'Sweet Charlie' and 'Camarosa,' were transplanted along with Chandler as in 2005. In the spring of 2006, the CP treatment yield was 29.1 Mg ha-1, 5.1 Mg ha-1 higher than the average of both OP treatments. In 2007, the yield of the CP treatment of Chandler, Sweet Charlie, and Camarosa cultivars (18.4, 14.3, and 22.9 Mg ha-1, respectively) was not significantly different from the OP1 treatments for these same cultivars (21.9, 15.6, and 23.4 Mg ha-1, respectively). Nor was it different from the yield of these same cultivars under treatment OP2 (15.0, 11.3, and 18.7 Mg ha-1, respectively). The authors have concluded that significant yield differences did not occur because of residual N remaining in OP treatment plots after the 2006 season.

OHIO

34 • Ohio's Nutrient Management Workbook

Jon Rausch, Ohio State University
Amanda Meddles, Ohio State University
Robert Mullen, Ohio State University

Nutrient management is a means of allocating scarce resources. As petroleum-based inputs, like fertilizer, become more costly, the allocation process becomes more critical and the direct benefit from fine-tuning nutrient allocations become greater. The nutrient management workbook is a tool to help producers work through the nutrient budgeting process and, ultimately, more fully utilize manure nutrients generated on their farm. On a field basis, soil test information is summarized, if available. For fields without soil test data maintenance levels for each nutrient is assumed. The next step summarizes manure nutrients available from manure test analyses. If this information is not available, published values are provided for use in the workbook. Then, crop nutrient needs are identified based upon the yield goal of the producer. Macro nutrients supplied from mineral fertilizers and manure nutrients are subtracted from total nutrients needed by the growing crop. Ultimately, this mass balance approach will identify any surplus or deficit of nutrients for the growing crop.

The next section calculates spreadable acres available based upon specific field characteristics and recommended setbacks from environmentally sensitive areas within each field. Utilizing total area, the value of any excess nutrients can be calculated for each field based upon current market prices for commercial fertilizer. This should quantify an economic incentive to fine tune manure nutrient applications and minimize carry-over nutrients, or at least quantify the incentive necessary to utilize carry over nutrients in subsequent cropping years. Total nutrients generated from the animal operation are estimated and allocated on a field-by-field basis until manure nutrients are accounted for. An index of total phosphorous produced and average crop removal of P2O5 quantifies the number of acres required annually to recycle this nutrient resource. The workbook serves as a self-directed nutrient management planning tool developed by the producer directly and updated annually.

OREGON

35 • How to Keep Horses from Making a Mess of Your Watershed

Melissa Fery, Oregon State University Extension

Garry Stephenson, Oregon State University Small Farms Program

Poorly managed small acreage horse farms impact natural resources throughout the United States. They create a high risk of groundwater infiltration and runoff containing significant levels of bacteria and sediment from horse pastures, feeding and holding areas, manure storage areas, and paddocks. In Oregon, the Oregon State University Extension Service Small Farms Program has been a leader in raising the awareness of horse farm operators about potential water quality impacts from their farms, management practices that can be readily adopted to reduce water quality problems, and sources of technical and financial assistance. Handy, full-color publications for high and low rainfall regions and a full-day workshop curriculum titled “Horses and Mud” provide horse owners in-depth information about manure management, reducing and composting stall waste, mud management, and options for creating all-weather paddocks, pasture management, streamside buffers, filter strips, and natural ways to control mud, dust, and bugs. Use and impacts of these efforts are impressive. The two publications, “Managing Small-acreage Horse Farms for Green Pastures, Clean Water, and Healthy Horses” and “Managing Small-acreage Horse Farms in Central and Eastern Oregon,” consistently rank among the highest for sales and downloads. Longitudinal survey data collected from Horses and Mud participants nearly a year after the workshops show that participants readily adopted management practices as a result of the workshops. Over 90 percent of participants implemented at least one or more management practice on their property as a result of the workshop. Thirty-eight percent of the participants implemented four or more practices. Seventy-two percent of the participants still plan to implement practices. Of interest, 66 percent of the participants indicated that “protecting the environment” was one of their motivations to complete **60 5th National Small Farm Conference** management practices. The combination of well-targeted educational materials and motivated landowners is leading to better managed horse farms and improved water quality.

36 • Program for Small Acreage Stewardship Results in Implementation of Land Management Practices

Melissa Fery, Oregon State University Extension

Small-acreage landowners have a significant impact on water quality and other natural resources through their cumulative effect. Manure runoff and sedimentation from small livestock operations, infestations of invasive weed species, degradation of

riparian areas, and unreliable maintenance of private wells and septic systems are identified needs that require landowner awareness. The "Living on the Land, Stewardship for Small Acreages" workshop series developed by professionals and faculty from eight Western states, was adapted, locally, for small-acreage landowners in the Willamette River basin. Four workshops and one field tour covering relevant topics were offered in three watersheds, inviting neighbors to learn about management practices that improve land and water quality. Results from a questionnaire given 8 to 11 months after the workshops, show that 85 percent of the participants implemented at least one new management practice on their land as a result of the workshop series. Ninety-four percent of the participants still plan to implement one or more additional practices. Eighty-six percent of the participants told friends and neighbors about the practices they learned during the workshop series. Small-acreage landowners are eager to learn and implement management practices on their land. As more Oregonian landowners act as land managers, there is need for science-based information and technical assistance to encourage making wise land management decisions.

SOUTH DAKOTA

37 • Healthy Lands, Healthy Horses: Program Development for Small Acreage Owners in South Dakota

P.L. Nester, South Dakota State University
R. Salverson, South Dakota State University
A. Harty, M. Hubert, South Dakota State University
D. Jager, South Dakota State University
K.C. Olson, South Dakota State University
R.N. Gates, South Dakota State University
R.C. Bott; South Dakota State University

There has been a steady increase of small-acreage land owners within the Black Hills region of South Dakota. The number of small-acreages in South Dakota (1-49 acres) increased 27 percent from 2002 to 2007 (NASS, 2007). For many land owners in western South Dakota, horse ownership is the principal motivator for living on a small-acreage. In light of this, extension personnel in western South Dakota have begun to develop program opportunities in the Black Hills region geared towards horse producers, entitled "Healthy Lands, Healthy Horses: Skills for Small-Acreage Success." The initial goals of this program are to begin establishing a new small-acreage audience while providing support to land owners to help improve grazing and weed management, water quality, feed purchasing decisions, and equine health. Initially two locations, Sturgis and Custer, were selected to hold identical programs. Topics discussed during each program included maximizing grazing capacity while minimizing weed invasion; getting the best hay for your buck; and protecting water quality. Several advertising strategies were attempted to reach this new audience and the 40 resulting participants were surveyed to determine how they learned about the programs. The four forms of advertising that had the most impact for participation were direct mailings (38.5 percent), local horse event participation (23.1 percent), radio public service announcements (23.1 percent) and magazine ads (15.4 percent). Workshop participants were also surveyed for future topics of interest. Pasture management for horses ranked first (20.6 percent) and weed control and alternative energy were second (17.7 percent). Other popular topics included fencing strategies, waste disposal, and native plant landscaping. Participants suggested that workshops be held at local small-acreages for a more hands-on approach to education. Having information easily accessible online was also important to many participants. With these initial outcomes we hope to continue to expand the Healthy Lands, Healthy Horses program

by addressing these topics of interest among horse owners in the Black Hills and eventually reaching small-acreage owners throughout South Dakota.

TENNESSEE

38 • Monitoring Water Wells in Karst Terrain of Middle Tennessee with Down-Well Camera

Sam Dennis, Tennessee State University
Alvin Wade, Tennessee State University
Debbie Eskandarnia, Tennessee State University

Groundwater can be vulnerable to contamination, especially in karst terrain. This geological characteristic is prevalent in Middle Tennessee. The geology of Middle Tennessee is limestone rocks that tend to weather into terrains referred to as karst. Karst is characterized by sinkholes and disappearing streams and caves that could serve as conduits to contaminants because of their rapid groundwater flow, especially in recharge conditions such as storm events. Recent advances in down-well cameras using fiber optics to provide digital video images are now being used to gain a better understanding of water wells. One of the goals of this study was to use this technology to capture film footage of water wells in Middle Tennessee counties. The study is timely as farmers are opting to wells for their water demand, especially for irrigating their crops or pasture. In our study with the down-well camera, the data shows no evidence of leaks through the casing or casing joints in the monitored wells. However, visual evidence of extensive fractures and dissolution channels within the sedimentary rock aquifer were noted during the video inspections of the open bore-hole. Due to the extensive fracturing observed in the wells, it would be rational to assume that the potential for seeping contaminants exists. The video showed an abundance of particulate matter, which could be an indication of a biologically active ground water, or of other chemotropic matter dissolved from soil minerals, or both. Live fish were observed swimming in one of the wells monitored and a live spider in another well. Both wells contained live animals that demonstrate a hydrologic connection between surface and groundwater. Thus, it can be deduced that both wells could test positive for a variety of bacteria and chemicals, and as such, may not be safe for drinking water purposes without treatment.

UTAH

39 • Farmers' Market at the Utah Botanical Center

Shawn Olsen, Utah State University

The farmers' market at the Utah Botanical Center (UBC) is developing into an excellent resource to share the results of agricultural research and promote buying local fresh produce. The market, located at UBC, focuses on research and demonstration projects related to sustainable urban landscapes. Adjacent to UBC is the Kaysville Agricultural Experiment Station where research is conducted on fruits, organic vegetables, and water wise native plant production. The initial idea for the market developed as a way to share produce from the research plots with the public. In order to offer a wider variety of produce, local farmers were invited to the market. Today, the market is held once a week in the evening during the summer months and includes organic broccoli, peaches, apples, and berries from the research plots and sweet corn, tomatoes, melons, and other produce from local growers. Educational demonstrations and classes are a major focus at the market. At most markets, there is a demonstration on how to use produce that is in season. Master Gardener volunteers have a booth at the market to answer gardening questions. There is a children's activity booth sponsored by the Utah House, a sustainable building, and landscape demonstration building located at UBC. Each week, UBC features a different water-wise plant with a detailed

information sheet and plants for sale. The market is certified to accept food stamps to help make fresh local produce more available to low income residents. The market has been a popular attraction and has proven to be a successful and fun forum for exchanging ideas with the public. In 2008, there were 45 different vendors at the market and a total attendance of 5,601 people.

VIRGINIA

40 • Alternative Enterprises and Marketing Opportunities for Small Farms in Virginia

Fidelis E. Okpebholo, Virginia State University
Jewel Hairston, Virginia State University
Theresa J. Nartea, Virginia State University
Alvin Adkins, Virginia State University
Cliff Slade, Virginia State University
Cliff Somerville, Virginia State University
Derrick Cladd, Virginia State University

Tobacco is a major traditional crop produced by small farms in Virginia, and with the deteriorating market situation for tobacco products there is need for small farmers in Virginia to diversify or transition into the production of more stable and economically viable alternative enterprises. To address this need, the Cooperative Extension Program at Virginia State University has identified and provided research-based information and technical assistance on production of several viable alternative crops/livestock to these farmers. The alternative crops, introduced and currently produced in many small farms in Virginia, include berries, asparagus, seedless watermelon, ginseng, mushrooms, cut flowers, ornamental plants, egg plants, tomatoes, and lima beans. Alternative livestock identified and produced are meat goat and hair sheep. Virginia State University has also developed aquaculture, agritourism and certified organic production programs as alternative enterprises for small farms in the state. As a part of effective resource management in farm production system, many of these operations turn greenhouses that were previously used for tobacco transplants into transplant houses for alternative crops and old tobacco barns into housing for the small ruminant component of the production system. Additionally, Virginia State University provided information and technical assistance on adding value to farm products in order to enhance the income of small and limited resource farmers. The efforts from Virginia State University Cooperative Extension Program to identify, provide information and technical assistance on production and marketing of alternative enterprises have and continue to revive and strengthen the rural Virginia communities that relied on tobacco as their main source of income. Commercial activities have increased in these communities as a result of these alternative enterprises.

WASHINGTON

41 • Mobile Meat Slaughter Units: Rebuilding the Small-Scale Meat Industry

Chris Benedict, Washington State University Extension
Sarah Garitone, Pierce Conservation District
Mary Embleton, Cascade Harvest Coalition
Doug Collins, Washington State University Small Farms Team

Consolidation in the U.S. livestock industry over the past 20 years has dramatically reduced the number of available processing facilities. With the increasing interest in locally produced fruits and vegetables, consumer interest in local meat products has followed suit and demand has outstripped supply. Washington State regulations allow the slaughter and processing by WSDA -licensed facilities, but products are only allowed to be consumed by the owner. To access the increasing demand of consumers, Washington producers must have their meat slaughtered and processed at a USDA -licensed facility. **62 5th National Small Farm Conference** Currently, many

producers find themselves driving hours to reach the nearest facility, which increases costs and adds stress on both the producer and the animals. Washington State was the sight of the first USDA inspected mobile meat slaughter unit in the United States when, in 1998, producers from the Island Grown Farmers Cooperative sought an answer to their problems. Over the past year, the Puget Sound Meat Producers Cooperative formed to provide and strengthen the infrastructure necessary to support small-scale production. Recently, with additional help, the cooperative ordered a mobile slaughter unit. Currently Washington State houses almost half of the mobile units available nationwide. Because of regulations, small-scale meat producers need to rely on additional infrastructure to access consumers. Redevelopment of this infrastructure will vary by region, but the extent to which it is a success will depend on many factors.

Springfield, Illinois

• **September 15–17, 2009 63**

Exhibitors

Be sure to visit the exhibitors at the Prairie Capital Convention Center. Exhibits will be open:

Tuesday, September 15 4:00 PM to 8:00 PM
Wednesday, September 16 8:00 AM to 6:30 PM
Thursday, September 17 8:00 AM to 10:30 AM

USDA

Booth # 1

USDA Agricultural Marketing Service

http://www.ams.usda.gov/AMSOutreach

The USDA Agricultural Marketing Service administers programs that facilitate the efficient, fair marketing of U.S. agricultural products, including food, fiber, and specialty crops.

Orlando Phelps
13952 Denver West Parkway
Bldg. 53, Suite 350
Lakewood, CO 80401
720-497-2533,
orlando.phelps@ams.usda.gov

Booth # 2

USDA Agriculture Marketing Service, Livestock & Grain Market News

http://www.ams.usda.gov/

The primary function of the Livestock and Grain Market News Branch of the Livestock and Seed Program (LSP) is to compile and disseminate information that will aid producers, consumers, and distributors in the sale and purchase of livestock, meat, grain, and their related products nationally and internationally.

Kim Harmon
P. O. Box 19281
801 E. Sangamon Ave., State Fairgrounds
Springfield, IL 62794-9281
217-782-4925, kim.harmon@ams.usda.gov

Booth # 3

USDA Agricultural Marketing Service, Marketing Services Division

http://www.ams.usda.gov/wholesaleandfarmersmarkets

The mission of the Marketing Services Division is to improve food and agricultural product distribution.

James Barham
1400 Independence Ave., SW
Room 2646
Washington, DC 20250
202-690-4077,
james.barham@ams.usda.gov

Booth # 4

USDA Alternative Farming Systems & Rural Information Centers

http://afsic.nal.usda.gov and
http://ric.nal.usda.gov

The Alternative Farming Systems Information Center and the Rural Information Center support the agricultural community by quickly providing neutral, accurate, and subject-specific information.

William Thomas
USDA /NAL/AFSIC-RIC
10301 Baltimore Ave
Beltsville, MD 20705

301-504-5724,
william.thomas@ars.usda.gov
Booth # 5

USDA Animal and Plant Health Inspection Service
http://www.aphis.usda.gov/
USDA Animal and Plant Health Inspection Service provides leadership in ensuring the health and care of animals and plants.
Kenneth Johnson
4700 River Road, Unit 30
Riverdale, MD 20737
301-734-5470,
ken.e.johnson@aphis.usda.gov
Booth # 6

USDA Food Safety and Inspection Service
http://www.fsis.usda.gov
The Food Safety and Inspection Service (FSIS) is the public health agency in the USDA responsible for ensuring that the nation's commercial supply of meat, poultry, and egg products is safe, wholesome, and correctly labeled and packaged.
Sibyl Wright
Aerospace Center, 901 D Street, SW
Room 397
Washington, DC, DC 20024
301-350-1542, sibyl.wright@fsis.usda.gov
Booth # 7

USDA Natural Resource Conservation Service Illinois
http://www.il.nrcs.usda.gov
Helping people help the land.
Paige Buck
2118 W Park Court
Champaign, IL 61821
217-353-6606, paige.buck@il.usda.gov

64 5th National Small Farm Conference
Booth # 8

USDA Risk Management Agency, Springfield Regional Office
http://www.rma.usda.gov/
RMA promotes, supports and regulates sound risk management solutions to preserve and strengthen the economic stability of America's agricultural producers.
Miranda White
3500 Wabash Ave
Springfield, IL 62711
217-241-6600,
miranda.white@rma.usda.gov
Booth # 9

USDA Small Farm Program, Cooperative State Research Education & Extension Service
http://www.NIFA.usda.gov/familysmallfarms.cfm
NIFA advances knowledge for agriculture, the environment, human health, well being, and communities through national program leadership and federal assistance.
Denis Ebodaghe
800 9th Street, Room 4335 Waterfront Centre, SW
Washington, DC, DC 20024
202-401-4385, debodaghe@NIFA.usda.gov
Booth # 10

USDA Economic Research Service
http://www.ers.usda.gov
The Economic Research Service (ERS) provides economic research and information to inform public and private decision making on economic and policy issues related to agriculture, food, natural resources, and rural America.
Marilynn Graham
USDA -Economic Research Service
1800 M St. N.W. Rm. 3050
Washington, DC 20036
(202) 694-5058, mgraham@ers.usda.gov
Booth # 11

USDA Office of Small Farms Coordination
http://www.NIFA.usda.gov/familysmallfarms.cfm
The USDA Office of Small Farms Coordination facilitates the coordination of USDA 's activities related to small farms, beginning farmers and ranchers.
Rosannah Taylor
1400 Independence Ave. SW
Mail Stop 2027
Washington, DC 20250-2027
202-720-9354,
rosannah_taylor@nass.usda.gov
Booth # 12

USDA Rural Development
http://www.rurdev.usda.gov
We are committed to the future of rural communities.
Rhonda Brown
USDA Rural Development STOP 0720
1400 Independence Ave. SW
Washington, DC 20250
202-692-0298,
rhonda.brown@wdc.usda.gov
Booth # 13

USDA National Agricultural Statistics Service
http://www.nass.usda.gov
The National Agricultural Statistics Service provides timely, accurate, and useful statistics in service to U.S. agriculture.
Shelly Busse
1400 Independence Ave. SW
Room #5030
Washington, DC 20250
800-727-9540, shelly_busse@nass.usda.gov
ALABAMA
Booth # 14

Small Farms Research Center, Alabama A&M University
http://www.aamu.edu/smallfarmers/
Our mission is to provide outreach training and technical assistance to socially disadvantaged farmers and ranchers in Alabama who operate small farms or ranches, often with limited resources.
Duncan M. Chembezi
4900 Meridian Street
P.O. Box 700
Normal, AL 35762
256-372-4970,
duncan.chembezi@aamu.edu
ARKANSAS
Booth # 15

UAPB's Small Farm Program
The University of Arkansas at Pine Bluff was created in 1873 for the convenience and well-being of the poorer "classes". The UPB Small Farm Program provides direct assistance (production, marketing, economic) to small farms in Arkansas. Producers are also educated on USDA programs that may be used to improve their operations.
Henry English
1200 N. University Drive
Pine Bluff, AR 71601
870-575-7246, englishh@uapb.edu
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DISTRICT OF COLUMBIA
Booth # 16

ISED
http://www.ised.us
ISED helps organizations and individuals achieve their economic and social goals through training, technical assistance, and network facilitation.
Daniel Krotz
1401 K Street NW Suite 1201
Washington , DC 20005
870-423-1894, danielkrotz@gmail.com
Booth # 17

National Immigrant Farming Initiative—NIFI
http://www.immigrantfarming.org
NIFI's mission is to strengthen the capacity of immigrant, refugee farmers and farm workers in transition to farming successfully and to advance sustainable farming and food systems.
Mapy Alvarez
1012 14th St., NW Suite 1100
Washington, DC 20005
518-860-7972
mapyalvarez@immigrantfarming.org
FLORIDA
Booth # 18

Florida A&M University—CESTA
http://www.famu.edu/cesta
To serve the growing and diverse community of student, farmers and others, through science-based information and direct technical assistance.
Ray Mobley
1740 S. Martin Luther King, Jr. Blvd
215 Perry Paige Bldg., South Florida A&M University
Tallahassee, FL 32307
850-412-52xx, ray.mobley@famu.edu

IOWA
Booth # 19
Annie's Project National Outreach Center
http://www.extension.iastate.edu/annie
Annie's Project is an educational program dedicated to strengthening women's roles in the modern farm enterprise.
Bob Wells
212 N I Street
Oskaloosa, IA 52577
641-673-5841, wellsjb@iastate.edu
Booth # 20
Farmers' Markets Today
http://www.farmersmarketstoday.com
Farmers' Markets Today was developed as a business journal to provide information, ideas and inspiration to producers who direct market what products they grow, raise or add value to.
Mary Shepherd
120 W. 4th St.
Cedar Falls, IA 50613-2864
319-277-3599,
mshepherd@farmersmarketstoday.com
ILLINOIS
Booth # 21
AgrAbility Unlimited
http://www.agrabilityunlimited.org
Help for Farm families with disability.
James Williams
31 Brookshire Green
Bloomington, IL 61704
309-663-1185, jimwillms@earthlink.net
Booth # 22
Agriculture and Tourism Partners of Illinois (ATPI)
http://www.agfun.com
To encourage, foster, support and stimulate tourism development, especially Agritourism, in Illinois through support of existing businesses and development of new businesses.
Heather Wilkins
700 East Adams
Springfield, IL 62701
217-525-7980, atpi@agfun.com
Booth # 23
Farm Foundation
http://www.farmfoundation.org
Farm Foundation works as a catalyst for sound public policy by providing objective information to foster a deeper understanding of issues shaping the future of agriculture, food systems and rural regions. Farm Foundation does not lobby or advocate.
Mary Thompson
1301 W. 22nd St., Suite 615
Oak Brook, IL 60523
630-571-9393, mary@farmfoundation.org
66 5th National Small Farm Conference
Booth # 24
Food Industry MarketMaker
http://national.marketmaker.uiuc.edu/
MarketMaker is an interactive mapping system that gives farmers greater access to local and regional markets by linking them with processors, retailers, consumers and other food supply chain participants.
Richard Knipe
4550 Kennedy Drive
East Moline, IL 61244
309-792-2500, rknipe@illinois.edu
Booth # 25
Illinois Department of Agriculture
http://www.agr.state.il.us/
The Illinois Department of Agriculture is an advocate for Illinois' agricultural industry and provides the necessary regulatory functions to benefit consumers, agricultural industry, and our natural resources. The agency strives to promote agri-business in Illinois and throughout the world.
Mike Rahe
IDOA BLWR
P O Box 19281 State Fairgrounds
Springfield, IL 62794-9281
217-785-5594, mike.rahe@illinois.gov
Booth # 26
Illinois State Museum
http://www.museum.state.il.us
The Illinois State Museum promotes discovery, learning, and appreciation of Illinois' natural, cultural, and artistic heritage.
Robert Warren

Illinois State Museum RCC
1011 East Ash Street
Springfield, IL 62703
217-524-7903, warren@museum.state.il.us
Booth # 27

USDA Farm Service Agency Illinois
http://www.fsa.usda.gov
We provide leadership on food, agriculture, natural resources, and related issues based on sound public policy, the best available science, and efficient management.
Mary Kirby
3500 Wabash
Springfield, IL 62711
217-241-6600, mary.kirby@il.usda.gov
Booth # 28

The Land Connection
http://www.thelandconnection.org
The Land Connection works to establish successful farmers on healthy farmland, ensuring an abundance of delicious, local, and organic foods.
Kathy McGroarty-Torres
1227 Dodge Ave., Suite 200
Evanston, IL 60202
847-570-0701,
kathy@thelandconnection.org
Booth # 29

US EPA Strategic Agricultural Initiative
http://www.epa.gov/pesticides/grants/aginitiative.htm
The SAI works with growers, especially of specialty crops, and other stakeholders to reduce the use of high-hazard pesticides, promoting reduced-risk pest management strategies.
Seth Dibblee
U.S. EPA Region 5
77 W Jackson Blvd (LC-8J)
Chicago, IL 60604
312-886-5992, dibblee.seth@epa.gov
Booth # 30

Illinois Extension, Certified Livestock Manager Program
http://www.livestocktrail.uiuc.edu/manure/
Our mission is to provide educational outreach to small livestock facilities in Illinois about manure management, especially odor, composting, manure management plans, safety, manure & soil testing, land application BMP's and equipment, state and federal applicable environmental regulations, and mortality disposal options.
Randy Fonner
Rm 332k AESB
1304 W. Pennsylvania Ave
Urbana, IL 61801
217-333-2611, refonner@illinois.edu
Booth # 31

University of Illinois Extension Small Farm Program
http://web.extension.uiuc.edu/smallfarm/
Our mission is to provide education and information to small scale farmers and those who work with them.
Deborah Cavanaugh-Grant
P.O. Box 410
Greenview, IL 62642
217-968-5512, cvnghgrn@illinois.edu

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INDIANA
Booth # 32

National AgrAbility Project
http://www.agrability.org
The mission of AgrAbility is to enable a high quality lifestyle for farmers, ranchers, and other agricultural workers with disabilities, so they, their families, and their communities continue to succeed in rural America.
Stephen Swain
225 South University Street
ABE Building
West Lafayette, IN 47907
800-825-4264, swainsj@ecn.purdue.edu
Booth # 33

Purdue University- Small Farm Center
The Small Farm Center's mission is to help small-scale farmers compete and survive by offering practical, positive solutions that also will benefit their consumer clientele and the natural and renewable resources they use.

Jim True
800 S. Prince St
Room 35
Princeton, IN 47670
812-385-3491, jtrue@purdue.edu
KENTUCKY
Booth # 34
Kentucky State University Land Grant Program
http://www.kysu.edu/landgrant
The Kentucky State University Land Grant Program provides research and educational programming for limited-resource families.
Marion Simon
400 E. Main Street
Frankfort, KY 40601
502-597-6437, marion.simon@kysu.edu
LOUISIANA
Booth # 35
Southern University Agricultural Research and Extension Center
http://www.suagcenter.com
The mission of the Southern University Agricultural Research and Extension Center is to conduct basic and applied research, and disseminate information to the citizens of Louisiana in a manner that is useful in addressing their scientific, technological, social, economic and cultural needs.
Dawn Mellion-Patin
Southern University Ag Center
P.O. Box 10010
Baton Rouge, LA 70813
225-771-2242,
dawn_mellion@suagcenter.com
MARYLAND
Booth # 37
University of Maryland Eastern Shore, Small Farms Program
https://www.umes.edu/1890-mce/
The mission is to provide educational programs, training and outreach to promote and sustain farm ownership, land retention, and to improve the economic and social condition among limited-resource, socially disadvantaged farmers, and other underserved audiences.
Berran Rogers
University of Maryland Eastern Shore
2122 Richard A. Henson Center
Princess Anne, MD 21853
410-651-6693, blrogers@umes.edu
MICHIGAN
Booth # 38
C.S. Mott Group for Sustainable Food Systems at MSU
http://www.mottgroup.msu.edu
We engage communities in applied research and outreach that promote sustainable food systems to improve access to and availability of healthy, locally-produced food.
Susan Smalley
302A Natural Resources Building
East Lansing, MI 48824-1222
517-432-0049, smalley3@msu.edu
68 5th National Small Farm Conference
Booth # 39
Local Orbit
http://www.localorb.it
Local Orbit makes it easy for people to buy food directly from local farmers, food producers and independent retailers.
Erika Block
1318 Pomona
Ann Arbor, MI 48103
734-418-0680, erika@localorb.it
MINNESOTA
Booth # 40
National Tribal Development Association, FSA/American Indian Credit Outreach
http://www.nationaltribaldevelopment.com
We provide technical assistance, outreach and educational assistance to American Indian Farmers, Ranchers and Youth.
Lou Anne Kling
5142 260 Avenue
Granite Falls, MN 56241
320-564-4808,
louanne@indiancreditoutreach.com
MISSISSIPPI
Booth # 41
Alcorn State University Extension Program
http://www.asuextension.com/asuep

To improve the quality of life of limited resource audiences through education in a time of dynamic change.
Carolyn Banks
1000 ASU Drive #479
Alcorn State , MS 39096
601-877-6260, cbanks@alcorn.edu
MISSOURI
Booth # 42
MU Center for Agroforestry
http://www.centerforagroforestry.org
To initiate, coordinate and enhance agroforestry activities to meet the environmental, social and economic needs of the family farm within the state of Missouri, North America and the temperate zone worldwide.
Michael Gold
203 ABNR Bldg
Columbia, MO 65211
573-884-1448, goldm@missouri.edu
Booth # 43
eXtension (Goat Industry)
http://www.extension.org/goat
Goat Industry is an extension web site to meet the educational needs of goat producers, extension educators and consumers.
David Kiesling
Lincoln University of Missouri
820 Chestnut Street
302 Allen Hall
Jefferson City, MO 65101
573-681-5357, kieslingd@lincolnu.edu
MONTANA
Booth # 44
National Center for Appropriate Technology (NCAT)
http://www.ncat.org
Our mission is to help people by championing small-scale, local, and sustainable solutions to reduce poverty, promote healthy communities, and protect natural resources.
Hannah Lewis
3040 Continental Dr.
Butte, MT 59702
406-494-4572, hannahl@ncat.org
NORTH CAROLINA
Booth # 45
Comprehensive Livestock Environmental Assessment and Nutrient Management Plan Program (CLEANeast)—RTI International and North Carolina State University
http://livestock.rti.org/
The mission of the CLEANeast Program is to provide no-cost technical assistance to livestock and poultry producers in the form of environmental assessments and nutrient management plans.
Mark Rice
Campus Box 7625
North Carolina State University
Raleigh, NC 27695-7625
919-515-6794, mark_rice@ncsu.edu
Booth # 46
Operation Spring Plant, Inc.
http://www.operationspringplant.org
To provide environmentally safe, technical and financial assistance to minority and underserved small family farmers who need to engage in timely seasonal planting activities, and who need marketing outlets for their crops in order to sustain their farming operations.
Dorathy Barker
567 Rowland St.
Henderson, NC 27565
252-492-7301, osp35@aol.com
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NEW JERSEY
Booth # 47
Rutgers University Farm Management Program
http://aesop.rutgers.edu/~farmmgmt
To help farmers remain economically viable.
Robin Brumfield
55 Dudley Rd.
New Brunswick, NJ 08903-8520
732-932-9171,
brumfield@aesop.rutgers.edu
NEBRASKA
Booth # 48

National Risk Management Education Program
http://www.NCRME.org
The mission of the National Risk Management Education Program is to provide competitive, result-based grants for public, non-profit and private organizations that wish to provide education to improve the risk management skills for agricultural producers and their families.
Dave Goeller
303 B Filley Hall
Lincoln, NE 68583-0922
402-472-0661, dgoeller@unl.edu
Booth # 49

Nebraska Sustainable Agriculture Society
http://www.nebsusag.org
To promote agriculture and food systems that build healthy land, people, communities & quality of life, for present and future generations.
William Powers
1708 North 32 Street
Lincoln, NE 68503
402-525-7794, healthyfarms@gmail.com
NEW MEXICO
Booth # 50

Holistic Management International
http://www.holisticmanagement.org
HMI works to reverse the degradation of private and communal lands used for agriculture and conservation, restore its health and productivity, and help create sustainable and viable livelihoods for the people who depend on it.
Ann Adams
1010 Tijeras Ave. NW
Albuquerque, NM 87102
505-842-5252,
anna@holisticmanagement.org
Booth # 51

New Mexico State University Sustainable Agriculture Science Center
Our mission is to conduct research and develop sustainable agricultural practices for small-scale and traditional growers in north-central New Mexico.
Charles Martin
PO Box 159
Alcalde, NM 87511
505-852-4241, cmartin@nmsu.edu
NEW YORK
Booth # 52

Cornell Small Farms Program
http://www.smallfarms.cornell.edu
Our mission is to foster the sustainability of diverse, thriving small farms that contribute to food security, healthy rural communities, and the environment.
Violet Stone
135C Plant Science
Cornell University
Ithaca, NY 14853
607-255-9227, vws7@cornell.edu
OREGON
Booth # 53

Oregon State University Extension Small Farms Program
http://smallfarms.oregonstate.edu
We work to enhance the lives and livelihoods of both commercial small farms and ranches as well as, non-commercial small acreage landowners.
Garry Stephenson
109 Crop Science Building
Oregon State University
Corvallis, OR 97331
541-737-5833,
garry.stephenson@oregonstate.edu
PENNSYLVANIA
Booth # 54

ReadyAG, Cooperative Extension and the Extension Disaster Education Network
http://readyag.psu.edu
Our mission is to help farmers and ranchers become better prepared for all disasters, so they can continue to be viable even in the face of disastrous events.
David Filson
220 Special Services Bldg
The Pennsylvania State University
University Park, PA 16802
814-863-6424, dfilson@psu.edu
70 5th National Small Farm Conference
Booth # 55

Small Farm Central

http://smallfarmcentral.com
Websites, ecommerce, and data management for small farms to find new customers and strengthen existing relationships.
Simon Huntley
354 South Atlantic Ave.
Pittsburgh, PA 15224
412-567-3864,
simon@smallfarmcentral.com
VIRGINIA
Booth # 56
Virginia State University
http://www.vsu.edu
Virginia State University's mission is to promote and sustain academic programs that integrate instruction, research, and extension/public service in a design most responsive to the needs and endeavors of individuals, and communities within its scope of influence.
Fidelis Okpebholo
1 Hayden Drive
Petersburg, VA 23806
804-524-5662, fokpebholo@vsu.edu
WASHINGTON
Booth # 57
WSU Small Farms Program
http://www.smallfarms.wsu.edu
The WSU Small Farms Team works with communities to foster profitable family farms, land and water stewardship, and access to healthy food.
Marcia Ostrom
WSU Small Farms Program
1100 N. Western Ave.
Wenatchee, WA 98801
509-663-8181, mrostrom@wsu.edu
Booth #58
USDA RMA Civil Rights & Community Outreach
http://www.rma.usda.gov
The RMA Mission is to promote, support and regulate sound risk management solutions to preserve and strengthen the economic stability of America's agricultural producers.
William (Bill) Buchanan
1400 Independence Ave SW
Room 6702
Washington , DC 20250
202-690-3578,
William.Buchanan@rma.usda.gov
Booth #59
USDA Forest Service
http://www.fs.fed.us
The Forest Service mission Sustain the health, diversity, and productivity of the Nation's forests and grasslands to meet the needs of present and future generations.
Cheryl V. Bailey
1400 Independence Avenue SW, Stop Code 1123
Washington, DC 20250
Phone: 202-205-1379, cbailey@fs.fed.us
Booth #60
Illinois Stewardship Alliance
www.ilstewards.org
The Illinois Stewardship Alliance is a statewide organization promoting ecologically sustainable, economically viable, socially just local food systems through policy development, advocacy and education.
Lindsay Record
401 W. Jackson Parkway
Springfield, IL 62704
217-528-1563, Lindsay@ilstewards.org
Booth # 61
USDA Sustainable Agriculture Research and Education
(SARE) Program
http://www.sare.org
Grants and outreach to advance sustainable innovations to the whole of American agriculture.
Sean McGovern
10300 Baltimore Avenue
BARC West, Bldg. 046
Beltsville, MD 20705
614-306-6422, outreach@sare.org
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