

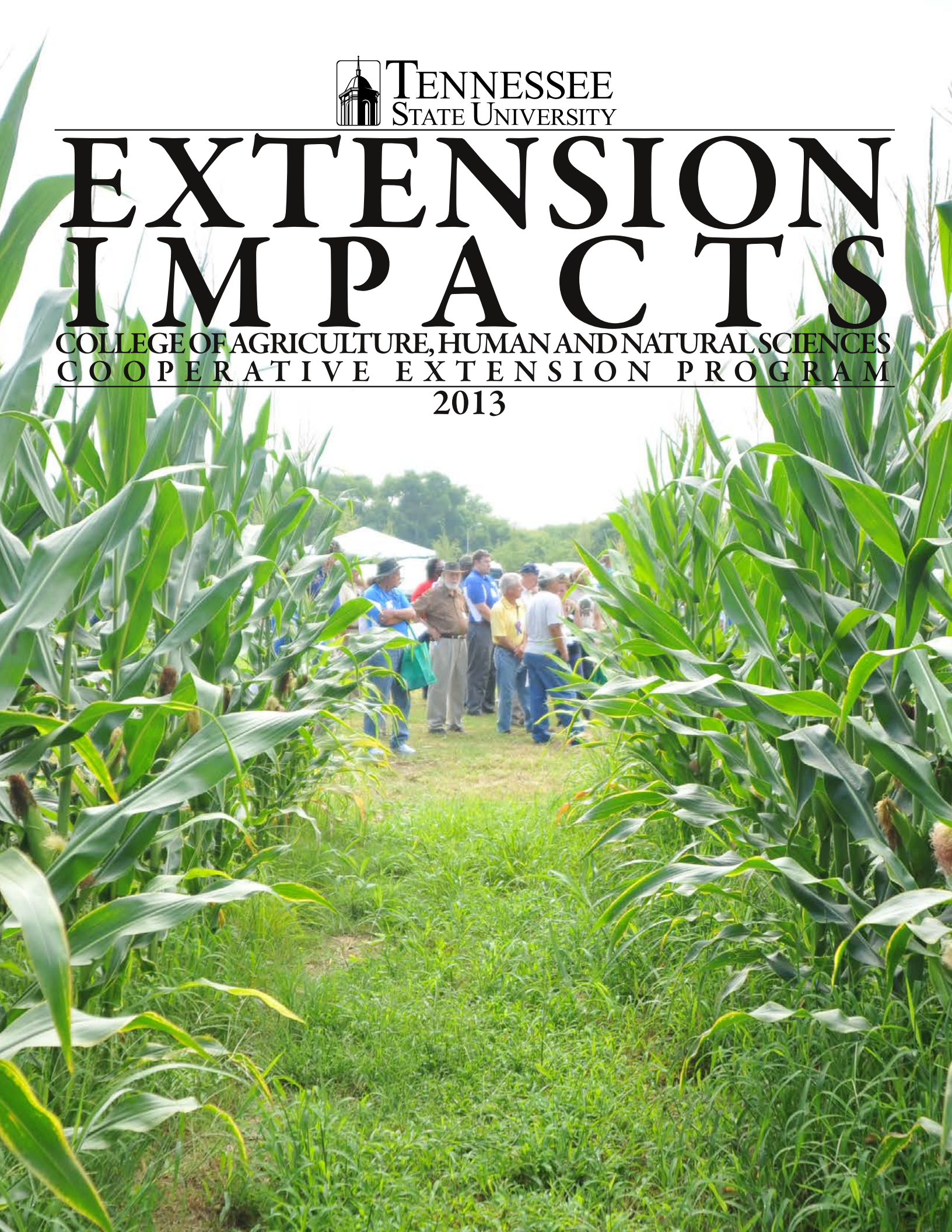


TENNESSEE
STATE UNIVERSITY

EXTENSION IMPACTS

COLLEGE OF AGRICULTURE, HUMAN AND NATURAL SCIENCES
COOPERATIVE EXTENSION PROGRAM

2013





Steven Kennedy, Grija Vijayan, Dharma Pitchay and Garrett Morris (pictured from left to right) tend to hydroponically-grown coffee plants in one of the Main Campus greenhouses.

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A Message from the Dean



Dear Alumni and Friends:

I am pleased to present our inaugural Extension Impacts publication; this issue introduces our people and their passion for educating the public on such current topics as sustainable food production and the environment, renewable energy, human health and nutrition, and youth, family, and community development. Tennessee State University's extension program is rapidly growing and improving as we strive to fill its positions with outstanding people and continue to integrate it with our research and academic endeavors.

In 2008, Tennessee State University brought its extension, research, and academic programs together, and in 2009 extension specialists moved into the academic departments, taking on joint appointments. Also, the three Agricultural Research stations were repurposed to focus on both research and education and renamed as the Centers of Agricultural Research and Education; we also added a new Center for Prevention Research that studies current topics such as childhood obesity, eating for healthy living, and disparities in healthcare.

Most faculty members with extension appointments currently teach or conduct research in addition to their extension responsibilities. To assist these extension faculty and coordinate our program activities, we have also recently appointed three program leaders—Dr. Fitzroy Bullock, Dr. Thomas Broyles, and Ms. Leslie Speller-Henderson—representing each of the three major areas of our county interventions: Agricultural and Natural Resources, 4-H Programs and Youth Development, and Family and Consumer Sciences, respectively. Also, Dr. Tyrone Miller was appointed to lead the Extension reporting and assessment effort.

The County operations of the College's Extension program continue to grow at a rapid pace—up from 13 counties in 2008 to 42 now—and we hope to have a presence in all 95 counties in the near future. This publication includes a sampling of the education efforts by our dedicated extension agents. Tennessee State University's extension programs, particularly at the county level, operate in close coordination with the University of Tennessee's extension programs and county governments.

Following a comprehensive market study of extension agent compensation, we increased our extension agent pay scale in January 2013 to bring it in line with our sister state land-grant institution, the University of Tennessee. This increase in agent salary is a tremendous benefit in our continued efforts to recruit and retain the very best extension agents from across the state and country.

These agents, along with our campus specialists and administrators, create and implement extension programs that are having a major impact in improving the wellbeing of Tennesseans. To encourage innovation in agribusiness, we annually recognize outstanding small farms and farmers in the state. This past year we also hosted the National Small Farm Conference in Memphis, Tenn., that was attended by more than 700 people. We have also been improving our collaborative activities with Tennessee's Agricultural and Education Departments, Farm Bureau, Farm Credit, FFA, and other related services and organizations to ensure the relevance and success of our extension efforts.

I hope that you enjoy this maiden issue of our Extension Impacts. Please send us your comments so that we can continue our constant efforts to improve.

Sincerely,

A handwritten signature in black ink, appearing to read 'Chandra Reddy'.

Chandra Reddy, Ph.D.
Dean and Director of Research/Administrator of Extension

Welcome from the Associate Dean for Extension



Dear Extension Supporters:

The Dean and I are honored to present this annual report on the Tennessee State University Cooperative Extension Program and offer a few glimpses of our high impact educational programs that display our educational outreach, community engagement, and engagement scholarship.

The mission of the TSU Cooperative Extension program is to educate and provide information that is research based, practical and useful to the people of Tennessee to help improve their economic and social conditions. Our agents, specialists, and the approximately 1,500 volunteers who have served over the past year, have been working incredibly hard to accomplish this mission. Between August 2012 and July 2013, we made more than 280,000 direct contacts with community members for a total estimated economic impact of more than \$28 million.

TSU has 52 Extension Agents in 42 counties of Tennessee who provide educational programs to the community through educational curriculum developed by TSU professors and Extension Specialists. These professors are experts in their subject matter and are available to the public to provide educational programs and technical information. On the following pages, you'll find our Extension professors listed along with their areas of expertise and contact information.

These educational programs are organized into three major program areas—Agriculture and Natural Resources, Family and Consumer Sciences, and 4-H and Youth Development—and are available to individuals, families, communities and businesses through various methods of direct contact such as individual or group meetings, field demonstrations, and site visits to farms, homes, businesses and community centers in order to achieve the maximum social and economic impact.

I want to thank you for your support of the TSU Cooperative Extension program. Please let us know how we can serve you better.

Sincerely,

Latif Lighari, Ph.D.
Associate Dean for Extension

TSU Cooperative Extension Program



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TSU Extension County

Western Region

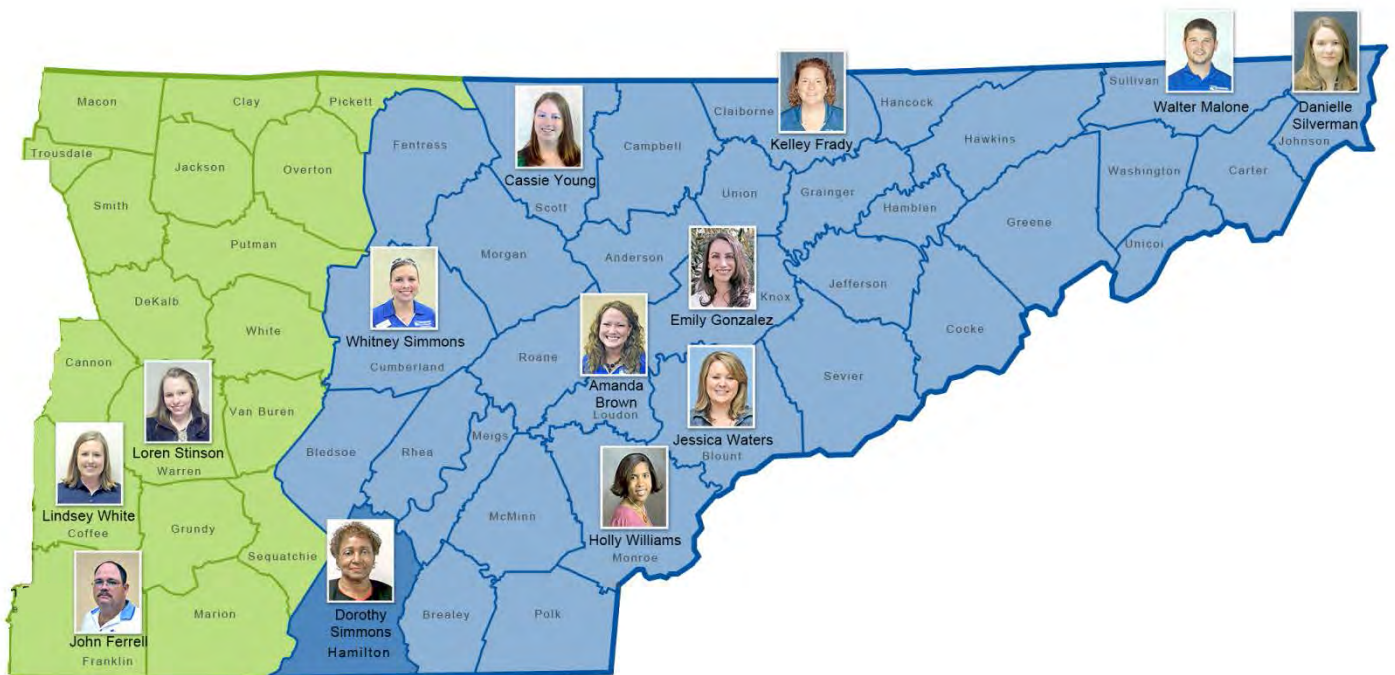
Central



Locations and Staff

Region


Eastern Region



TSU Extension: Transforming Tennessee

Land-grant universities are charged with the tri-fold mission of teaching, performing research, and engaging with the community. The Cooperative Extension Program, which functions through the College of Agriculture, Human and Natural Sciences, is responsible for the community engagement component of this mission. A major outreach arm of Tennessee State University (TSU), the Cooperative Extension Program is funded by three major sources: the federal government (through the United States Department of Agriculture (USDA) and its National Institute of Food and Agriculture (NIFA)), the state government (through the Tennessee Board of Regents (TBR) and TSU), and the local county governments where TSU Extension Agents are located.

Extension programs are planned, implemented and reported by TSU Extension professors, known as Extension Specialists (18), whose offices are on the TSU campus and the TSU County Extension Agents (52), whose offices are in 42 Tennessee counties. Through these programs, TSU Extension provides research-based, useful and practical information to the people of Tennessee. This information, delivered via non-formal education in out-of-school settings, can help improve the economic and social conditions of Tennesseans, and are available to individuals, families, communities, and businesses.

In 2012, TSU Extension agents, program assistants, and specialists helped 280,616 individuals. Through outreach programs in nutrition, health, and family and consumer sciences, TSU Extension served 39,365 individuals and families; outreach programs in 4-H and youth development saw valuable service from 1,675 volunteers who helped to have a direct impact on 31,853 youth in 19 counties; agricultural faculty and extension staff made approximately 80,958 contacts and provided valuable educational information that led to direct economic benefit across the state. 

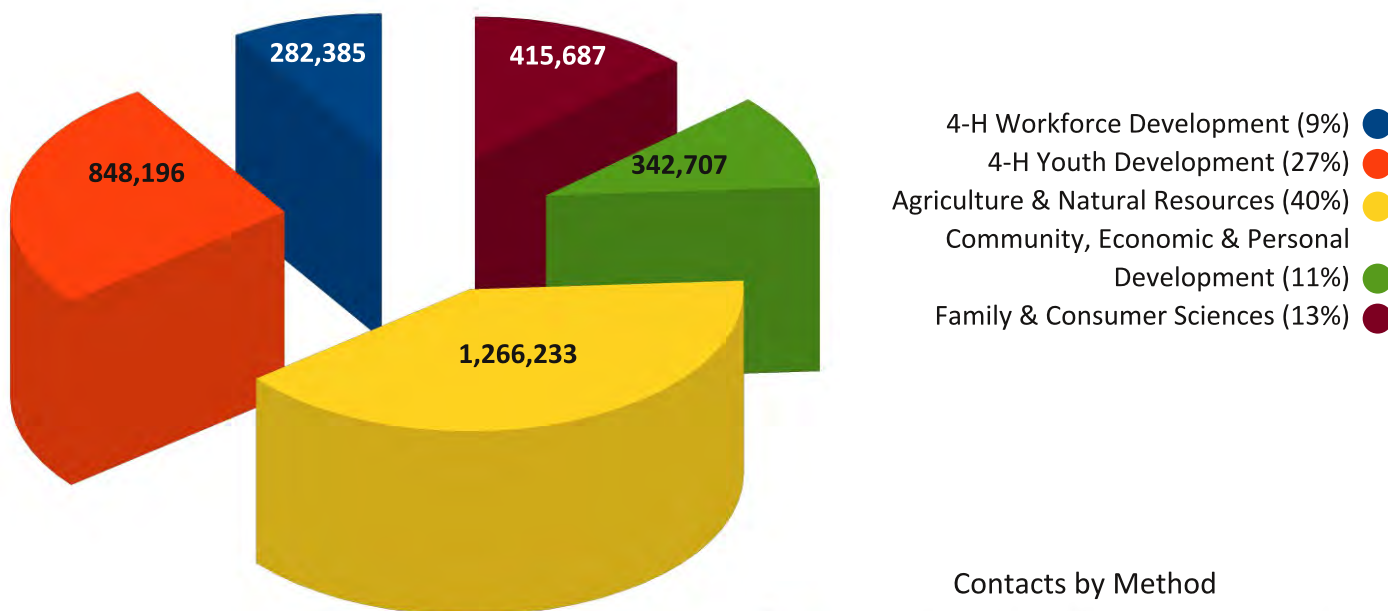
TSU's "Academic Boot Camp," led by Dr. Tyrone Miller, is held each summer.



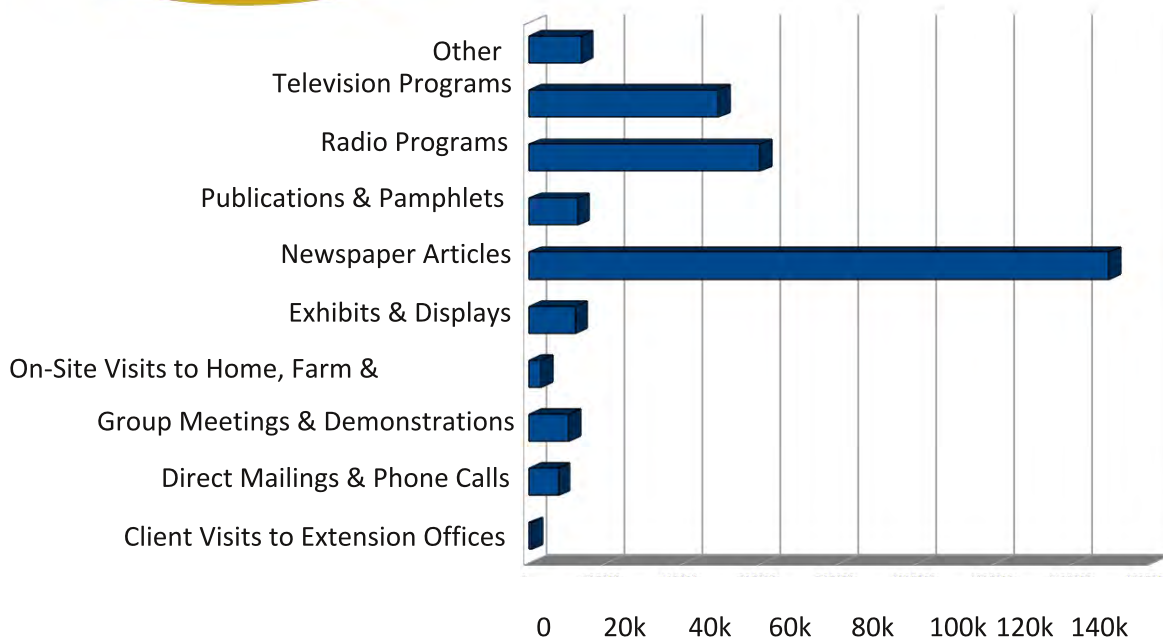
By the numbers...

TSU Extension Agents and Professors strive to bring helpful skills, information and resources to the people of Tennessee through various forms of direct and indirect contact and multiple program areas.

Contacts by Program Area



Contacts by Method



Totalling...

3,158,808 indirect contacts &
80,616 direct contacts
in 2012



Dr. Glenda Baskin Glover became the first full-time female president of TSU on January 2, 2013.


TSU welcomes President Dr. Glenda Baskin Glover

Saying "I am glad to be home," Dr. Glenda Baskin Glover was named the 8th president of Tennessee State University on January 1, 2013. "I am truly honored and excited about returning to my alma mater, Tennessee State University, in this monumental leadership role," Glover said.

Formerly the dean of the College of Business at Jackson State University in Jackson, Miss., Glover became the first full-time female president of TSU on January 2, 2013. She replaced Dr. Portia Holmes Shields who, as interim president for the previous two years, was the first female to ever lead the University.

A 1974 graduate of Tennessee State University and a native of Memphis, Tenn., Dr. Glover earned her Bachelor of Science degree in mathematics, an MBA from Clark Atlanta University, a J.D. from Georgetown University Law Center, and a doctorate from George Washington University in business economics and policy. Before becoming a dean at Jackson State University, Dr. Glover worked as a certified public accountant, attorney, and professor, chairing the accounting department at Howard University and working as an accountant with Arthur Anderson & Co., in Washington, D.C. She is one of only two African American women in the nation with the distinction of holding a Ph.D., a J.D., and a CPA in combination.

At Jackson State, Dr. Glover obtained the university's first endowed chair, led a successful \$5 million fundraising initiative, spearheaded the implementation of online learning programs, developed a cost-reduction plan, and implemented internal fiscal accountability measures.

In April, Dr. Glover published a report of her first 100 days in office, focused specifically on activities pertaining to the following five goals: Student Success and Customer Service; Fund Raising and Partnerships; Diversity and Inclusion; Shared Governance; and Business and Community Outreach. The report is available to view online at www.tnstate.edu/president/onehundred.aspx [Courtesy of TSU News Service]. 

TSU announces key administrative appointments as part of reorganization

After nation-wide searches to fill key positions, and as part of her reorganization effort, the President of Tennessee State University, Dr. Glenda Baskin Glover, announced several new appointments at the University in May, including Vice President for Academic Affairs Dr. Mark Hardy and Associate Vice President of Academic Affairs Dr. Alisa Mosley.

Dr. Hardy served as Provost and Vice President for Academic Affairs and Professor of Biology at Jackson State University. He also served as Dean of the College of Computer Science, Engineering and Technology at JSU. Dr. Mosley previously served as Executive Director for Academic Quality, Director for the Center for University Scholars, as well as Associate Professor of Management at Jackson State University.

The announcement was the result of works done by seven search committees appointed by Dr. Glover earlier this year to recommend candidates to fill key positions in the management of Tennessee State University.

"Each search committee performed its responsibilities in a highly productive, open, and efficient manner," Dr. Glover said in congratulating the committee members [Courtesy of TSU News Service]. 

*Cultivating Success for Tennessee's
Farmers and Producers*





TSU and UT Extension Specialists provide a hands-on demonstration of fruit-tree pruning at the Agricultural Research and Education Center in Ashland City.

By addressing issues such as urban and rural forestry, the importance of goats and small ruminants, pest management, horticulture, environmental concerns, organics and the challenges unique to small and limited resource farms, TSU Extension works to educate and assist Tennessee's farmers, ranchers, growers and producers.

TSU Small Farm Expo provides practical, research based information to Tennessee's producers

Dr. Roy Bullock, Extension Professor and Agriculture Program Leader &
Chris Robbins, Extension Agent and Farm Manager

Since 2003, TSU has hosted the annual Tennessee Small Farm Expo and Small Farmer of the Year Awards to promote the awareness of Tennessee agriculture and agricultural products, provide useful, research-based information to producers, and recognize those small farmers and ranchers who exemplify success against the odds. Intended to serve all agricultural producers, the Expo focuses primarily on those classified as "small farmers"—who make up a large portion of the farmers in Tennessee.

The event brings public awareness to the contributions of agriculture to the overall well-being and prosperity of Tennesseans, providing educational

information to farmers and potential farmers on marketing methods and new/alternative agricultural products, and selects and recognizes exemplary efforts of small farmers. Awards recognize excellence among Tennessee's small farmers across six categories: Best Management Practices (\$50,000 or less gross income), Best Management Practices (\$50,000 - \$250,000 gross income), Alternative Enterprises (\$50,000 or less gross income), Alternative Enterprises (\$50,000 - \$250,000 gross income), Innovative Marketing (\$50,000 or less gross income), and Innovative Marketing (\$50,000 - \$250,000 gross income), and are based on public nominations.

In addition to the awards, the event often features educational tours and informational presentations on the ongoing research undertaken at TSU's Agricultural Research and Education Center. Attendees can expect information on topics such as bio-fuel production, small fruits and vegetables, greenhouse gas emissions, meat goat research, and hands-on demonstrations of expert techniques.

The 2013 Small Farm Expo, held on Thurs. July 18th, was one of the most successful events yet, as it featured extremely high levels of participation and attendance from small farmers and ranchers, legislators, TSU employees and alumni, and many others who were in-

terested in learning about the most up-to-date farming, gardening, and ranching techniques.

During the awards reception which followed lunch, Dr. Chandra Reddy, Dean of the College of Agriculture, Human and Natural Sciences and the Administrator of Extension stressed the importance of small farmers. "Despite the changes to the agriculture industry over the years, small farmers are as important as ever," he said. "The Small Farm Expo is our opportunity to provide information and recognize innovators."

Marvin Lusk (middle) and wife Henrietta Kellum Lusk (immediate right) accept the award for the 2013 Small Farmer of the Year in the category of Alternative Enterprises. Also pictured, from left to right, are Dr. Tim Cross, University of Tennessee Dean of Extension; Matt Feno, District Conservationist with the United States Dept. of Agriculture, Natural Resources Conservation Service; Harold M. Love, Jr., Tennessee State Representative, District 58; and Dr. Chandra Reddy, Dean and Director of Research/Administrator of Extension for TSU's College of Agriculture, Human and Natural Sciences.



Dr. Latif Lighari, TSU's Associate Dean for Extension also stressed this importance, noting that 95% of all farms in the State of Tennessee are considered small, and that "TSU is proud to be a part of such an important system."

Also in attendance, Tennessee's Commissioner of Agriculture, Mr. Julius Johnson commented that Tennessee's reputation as a small farm state "gives [it] a bright future," and that opportunities exist for small farmers to be successful here.

Small farmers who received awards at the 2013 Small Farm Expo included Ray and Elizabeth Clifton and Marvin Lusk, who took home awards for Alternative Enterprises, Leamon Bratton, who snagged the Best Management Practices award, and Chad and Marty Koop, who were recognized for Innovative Marketing and as the 2013 Small Farmers of the Year.

The event was about a lot more than celebration, though, as a full schedule of presentations and demonstrations kept attendees busy throughout the day as they gathered as much information as possible.

The day began as participants loaded into trolleys to tour the various research plots on the grounds of the Main Campus Agricultural Research and




Dr. Latif Lighari (left) chats with Tennessee's Commissioner of Agriculture Mr. Julius Johnson.

Extension Center. Wilson County Extension Agent Justin Stefanski served as tour guide, and answered various questions from passengers along the way. Stops on the tour included Dr. Richard Browning's Meat Goat Breeding and Genetics, Dr. Jason de Koff's Native Warm Season Grass and Sunflower production, Dr. Arvazena Clardy's Specialty Vegetable Variety Crop Trials, Dr. Emmanuel Dzantor's Switchgrass and Gamagrass Variety Trials, Dr. Dharma Pitchay's Organic Vegetable Production, and Dr. Sam Dennis' work on Reducing Greenhouse Gas Emission in Field Cropping Systems.

After the conclusion of the tours, participants were able to choose among

various demonstrations, including Mr. Chris Robbins' Plasticulture and Drip Irrigation Variety Trials, Clifton Seeds' Mr. Wayne Edison's Vegetable Variety Trial, Mr. Michael Shirley and Mr. Tanner Herring with Artificial Insemination in Meat Goats, Drs. Tyrone Miller and Samuel Nahashon with Backyard Poultry Production, Mr. John Ferrell with Beekeeping Techniques, and Dr. Jason de Koff and Mr. Robbins with Mobile Bio-fuel Production.

For more information on the TSU Annual Small Farm Expo, contact Chris Robbins at crobbins@tnstate.edu. 



Mr. Chris Robbins (far left) demonstrates Plasticulture and Drip Irrigation Variety Trials to eager attendees.



Dean Chandra Reddy (left) is interviewed by Fox 17's Meagan O'Halloran on the benefits of TSU's Research and Extension programs.

TSU and UT Cooperative Extension host 6th National Small Farm Conference in Memphis

Dr. Roy Bullock,

Extension Professor and Cooperative Extension Program Leader in Agricultural and Environmental Sciences

The TSU/UT Cooperative Extension Program and the United States Department of Agriculture (USDA) hosted the 6th National Small Farm Conference at the Cook Convention Center in Memphis from September 18-20, 2012.

The conference, which was themed "Promoting the Successes of Small Farmers and Ranchers," brought farmers, ranchers, policy-makers, academics and other stakeholders together for a three-day event to celebrate notable achievements in small farming and the latest innovations in small farm research and technology. This particular mix of participants provided all the components necessary to collaborate in working toward solutions to the unique challenges

faced by small farmers and ranchers in Tennessee and across the United States.


In addition to bringing together these groups of people, the conference featured many educational opportunities, including: educational tours of the Ames Plantation, Agri-center International, Crown Winery, the Harris Organic Farm, Jones Orchard, and BioDimensions; short courses moderated by specialists from around the nation covering useful topics such as integrating the latest technologies into small farm marketing, whole farm management practices, and grant writing secrets for success; and

*Dean Chandra Reddy
addresses the crowd
at the
6th National Small
Farm Conference.*



countless oral presentations, poster presentations, success stories and exhibits from participants.

With over 800 people in attendance and a constant exchange of information through presentations, conversations and demonstrations, conference organizer Dr. Roy Bullock considered the conference a rousing success. Events like the National Small Farm Conference can go a long way toward building a thriving, prosperous future for farms and ranches.

To access the 6th National Small Farm Conference Proceedings, please visit <http://bit.ly/1a5LLM2>. 

*Dr. Roy Bullock (middle) poses with
conference participants.*



Educating small and limited resource farmers on alternative horticultural crops and international vegetables

Dr. Arvazena Clardy, Extension Assistant Professor/4-H SET and NRCS Outreach Coordinator & Sherry Crudup, Research Assistant


With mega-farms and corporations producing many of today's more popular cash crops, small and limited resource producers, forest landowners, and ranchers need an edge to remain competitive. By producing alternative crops and international vegetables, these small farmers can fill a niche while supplementing their income, and gain ground against the competition. In order to do so, however, they need to know the alternative practices necessary to efficiently produce these alternative crops. That's where TSU's Dr. Arvazena Clardy and Sherry Crudup come in with the Small Farm Outreach and Assistance Program.

As part of an ongoing effort to address alternative crop selection, this project has grown 25 different varieties of herbs, 12 different varieties of peppers, and Christmas Cactuses, analyzing the use of slow-release fertilizers and their productivity along the way. Additionally, this project is working on discovering alternative ways for these small and limited resource producers to market their produce through a number of innovative sales methods that might be able to give them a leg up on the competition.



For the past two years, this program has sponsored the Agricultural Outreach and Assistance Conference to prepare and present educational workshops that assist farmers in the production of these alternative and international crops. This assistance provides farmers and producers with the knowledge ne-

cessary to add profit to their enterprise through "offseason" crops without the need to increase the number of employees. All told, this program has provided training, education and information regarding how to produce these alternative crops and the benefits of doing so, as well as best practices for business development and management to approximately 330 participants.

For more information regarding the production of alternative horticultural crops and international vegetables, or the Agricultural Outreach and Assistance Conference, contact Dr. Arvazena Clardy at aclardy@tnstate.edu. 



Approximately 330 people attended this year's Agricultural Outreach and Assistance Conference in Murfreesboro.

The Mobile Biodiesel Production Platform is a state-of-the-art piece of equipment that allows Dr. Jason de Koff and team to take biodiesel production demonstrations on the road.



Bringing valuable research and information on bioenergy crops to farmers

Dr. Jason de Koff, Extension Assistant Professor

As Americans continue to feel the pain of high prices at the gas pump and on their monthly utility bills, TSU Extension Assistant Professor Jason de Koff continues his work to alleviate the problem by focusing on improving bioenergy production. According to Dr. de Koff, energy prices will continue to increase and remain volatile until the U.S. becomes more energy independent—an independence that can be achieved with the help of bioenergy crops.

To promote this agricultural bioenergy production and future energy independence, it is necessary to provide producers with the kind of cutting-edge, science-based information that helps to efficiently produce the best bioenergy crops. Through a project titled “Enhancing Sustainable Production of Bioenergy Crops,” Dr. de Koff has been providing that information to these crop producers to aid in the production of ethanol and biodiesel. Additionally, this pro-

ject provides farmers with management and harvesting techniques that will help maximize their success.

To date, Dr. de Koff has published five fact sheets on bioenergy-related topics and presented information to stakeholders at 10 meetings, resulting in over 250 contacts since the project’s inception two years ago. Of those participants surveyed, 86% (37 of 43) identified an increase in knowledge of bioenergy crop production after the respective presentations.

Dr. de Koff (center, speaking) and Chris Robbins (far right, in cap and sunglasses) demonstrate the process of turning canola seed into biodiesel at the 2013 Small Farm Expo on the Main Campus AREC.



Due to biofuels' importance to the U.S. energy portfolio and their potential to reduce dependence on foreign fuel sources while improving both the social and economic well-being of domestic rural communities and the overall quality of the environment, many of Tennessee's counties and farmers have a vested interest in acquiring more information pertaining to the production of energy crops which can be used in the creation of biodiesel.

In an effort to further aid in the education of stakeholders in the production of bioenergy crops, Dr. de Koff and TSU partners Dr. Prabodh Illukpitiya, Dr. John Ricketts, Mr. Alvin Wade, and Mr. Christopher Robbins are currently preparing a new capacity building project utilizing a Mobile Biodiesel Pro-


duction Platform (MBPP) through a USDA-funding.

To assist in achieving that goal, this TSU team built the MBPP and is in the process of creating five annual biodiesel production workshops that will increase farmer knowledge. While demonstrating the steps in the production process, these workshops will also focus heavily on the agronomic and economic sides of oilseed production and federal and state incentives that may be available for producers.

For more information about this project, bioenergy crops, or the mobile biodiesel



Stakeholders discuss biofuels with Dr. de Koff.

processing unit, contact Dr. Jason de Koff at jdekoff@tn-state.edu or follow on Twitter @TSUBioenergy. 

TSU Cooperative Extension provides the means to deliver GIS technologies to local decision makers

Dr. Solomon Haile, Extension Assistant Professor

Making decisions based on a spatial perspective is basic to human thinking. Recent years have seen a rapid growth in interest in the addition of a spatial perspective to agricultural and forestry extension and research projects. This growth has been partly driven by the increasing availability of georeferenced data and the tools to analyze and visualize them via geospatial information systems (GIS) and spatial analysis.


The term "geospatial information science" has emerged as something of an umbrella in this arena, implying the use of GIS and other spatial tools for understanding the fundamental principles and issues of this newly recognized spatial perspective.

Dr. Solomon Haile is currently leading a project and developing a new Cooperative Extension program at Tennessee State University emphasizing education and technology transfer of geospatial information systems (GIS) and related technologies to clients throughout the State of Tennessee. The project aims to jump-start the adoption and use of geospatial information science in extension services among the current cohort of young agricultural extension professionals and to build the infrastructure for GIS outreach and training workshop series.

A comprehensive mobile GIS Learning Lab that includes a lightweight and durable classroom set with fast computing capability, that will provide a high quality visual cartographic display is in

place and ready to use in this project. The program will provide standardized training and is specifically tailored toward environmental, agricultural and local government applications of GIS.

The Applied GIS workshop will be offered four times over two years and will primarily target extension agents, specialists and researchers at the College of Agriculture, Human and Natural Sciences, and institutional members of the wider campus of Tennessee State University.

For more information about GIS or the mobile GIS Learning Lab, contact Dr. Solomon Haile at shaile@tnstate.edu. 

"Dr. Solomon Haile is currently leading a project and developing a new Cooperative Extension program at TSU emphasizing education and technology transfer of GIS and related technologies to clients throughout the [. . .] Tennessee."

TSU Virtual Coffee Shop brings Extension education to the internet via free webinars

Dr. Solomon Haile, Extension Assistant Professor &
Dr. Latif Lighari, Associate Dean of Extension

The "Virtual Coffee Shop" program offered by TSU and the Co-operative Extension program is an innovative new way to offer educational outreach that keeps limited-resource farmers, 4-H members, Extension agents, and members of the community up-to-date on topics in all of the extension program areas. The relatively newly established program offers a series of three new webinars on the second Wednesday of every month beginning at 9 a.m. and continuing to 1:50 p.m.

In addition to the live webcasts, archived sessions are available to explore at on demand, with topics ranging from building natural playgrounds to eating right on a daily basis to small-scale biodiesel production.

The program uses a live, virtual classroom environment known as Wimba with features including audio, video, application



Dr. Haile (middle) was on hand to receive the second place award at the 6th National Small Farm Conference in Memphis.




sharing, content display, and MP4 capabilities.

Virtual Coffee Shop provides research-based extension education to shareholders and community members, and, importantly, is always free of charge. In the 2011-12 academic year, Virtual Coffee Shop delivered over 45 webinars which evenly covered topics in each of the USDA priority knowledge areas.

By providing this education online, the program has already saved Extension specialists, agents, stakeholders, and the community at large hundreds of thousands of dollars in travel costs and reduced

the carbon footprint by dramatically cutting down on physical travel. Planned future use of the program includes virtual meetings, training sessions and collaborations at the state, national and international levels.

Noting both its past and current success and its potential for future impact, the USDA selected a poster outlining the Virtual Coffee Shop program for second place overall at the 6th National Small Farm Conference in Memphis.

For more information on the TSU Virtual Coffee Shop webinar series, contact Dr. Solomon Haile at shaile@tnstate.edu. 

Urban crop production for socially disadvantaged growers at home and abroad

Dr. Dharma Pitchay, Extension Assistant Professor

Everyone deserves the chance to grow their own fresh, delicious, healthy produce, but this simple pleasure that we often take for granted can prove challenging for those who live in an urban setting. For this reason, a team including TSU Extension Assistant Professor Dharma Pitchay, TSU Research Assistant Steven Kennedy, and University of Memphis professor Joseph Loeb set out to plan and implement a horticultural project for socially disadvantaged growers in an urban area of Memphis. In this setting, where land is limited, the hydroponics crop production system offers a space-saving alternative.

The group trained growers, trainers, school teachers and students on the theoretical aspect of cultural practices involved in hydroponics, emphasizing the challenges involved in the system, over the course of three training sessions. A total of 20 trainers and growers attended each session on a hydroponic system of lettuce and squash, while the implementation of the project was closely monitored

through email, telephone conversation and site visits. Participants in the program sold squash flowers to high end markets at \$0.60 per flower to generate a weekly income of \$70 to \$80.


After the first three weeks of planting, growers were able to produce healthy squash plants. Living in an urban environment certainly poses challenges to would-be growers and producers, but with a little training in hydroponics, sprawling land becomes a luxury rather than a necessity. Plans are in place to continue the project this coming season and build upon this newly established economic opportunity.

In addition to the program in Memphis, Dr. Pitchay currently leads a project that includes partners Dr. Surendra Singh and Mr. Sammy Comer of TSU, as well as collaborators from the University of Georgia, Cambodia's Royal University of Agriculture, Thailand's Kasetsart University, AVRDC- East and Southeast Asia, and Asian Institute of Technology, and Vietnam's Field Crops Re-

search Institute and Fruit and Vegetable Research Institute to assist and promote a sustainable urban and peri-urban garden cropping enterprise system for women growers in Southeast Asia.

This project educated women in Siem Reap, Cambodia; Bangkok, Thailand; and Hanoi, Vietnam on market-oriented and sustainable urban gardening practices including urban gardening technology, the production process, pre- and post-harvest handling practices, and entrepreneurial and marketing information.

Expected to stimulate the economy and create employment opportunities for socially disadvantaged women in urban areas of these countries where current practices are inefficient and heavily dependent upon chemicals, this project will improve the overall quality of life for participating communities by emphasizing non-chemical means of pest and disease control as well as methods to maximize efficiency and minimize loss. The entire supply chain, from the planning, preparation and planting on down to packaging, transportation and retail sale, will be carried out by women, who have relatively few opportunities to thrive economically in the area.

For more information about urban crop production for socially disadvantaged growers, or about either of the mentioned programs, contact Dr. Dharma Pitchay at dpitchay@tnstate.edu 

Dr. Dharma Pitchay (second from right) with a group of urban growers in Memphis



TSU Master Meat Goat Producer Program assists small ruminant producers of all experience levels

Dr. An Peischel, Extension Assistant Professor

Tennessee State University (TSU) and the University of Tennessee (UT) recognized that goat production was increasing on small rural farms. To address the growing need for up-to-date information, Tennessee State University and the Cooperative Extension Program established the Master Meat Goat Producer (MMGPP) program, led by TSU Extension Professor Dr. An Peischel, which to date has reached over 1,300 Tennessee small ruminant (goat and sheep) producing families (Tennessee Department of Agriculture, 2013).

Attendees have ranged from individuals “thinking” about getting into the goat business to those who have been in the business for many years. In addition to assisting those producers in or thinking about getting into the goat business, the program is also helpful for the growing number of multi-specie utilization (beef cattle, sheep, goats and horses) operations.

This program has stimulated innovative ideas, created producer networking, broadened production management skills and encouraged a working relationship within academic and industry communities, along with government agencies and private corporations and businesses.

The annual Tennessee Browning Academy is a totally hands-on and lecture-based three day session for invasive and noxious weed abatement,




The TSU Master Meat Goat Producer program has reached over 1,300 small ruminant producing families in Tennessee.

land enhancement, stream bank and riparian area restoration, agroforestry and silvopasture, genetics, breeding, reproduction, drought management, the use of livestock guardian dogs and multi-specie utilization along with detailed business management concepts. Vegetation management with the utilization of small ruminants is an alternative source of income and a creative/innovative business opportunity.

Each year a two-day Small Ruminant College is offered and the topics change based upon producer and consumer input. Topics have in-

cluded artificial insemination, business and economics, forage-based management, dairy goat production, hair sheep management and multi-species diversified production.

In addition to leading the MMGPP, Dr. Peischel also participates as a speaker at many regional, statewide, national and international conferences (ranging from tropical to high desert climates).

For more information regarding the MMGPP, contact Dr. An Peischel at apeischel@tnstate.edu. 

TSU Agricultural and Extension Education provides rigorous STEM training for high school educators

Dr. John C. Ricketts, Extension Associate Professor

Agricultural and Extension Education at TSU conducts professional development outreach and extension throughout the year. Each summer, TSU Agricultural and Extension Education (@TSU_AgEd) hosts educators for at least one 80-hour institute referred to as the Curriculum for Agricultural Science Education (CASE). CASE benefits teachers, students and the industry of agriculture by enhancing agricultural education programs to develop and produce well-educated and highly-skilled graduates.

CASE, though, is much more than just curriculum. In fact, CASE is a system of instructional support for classroom teachers. CASE integrates teacher professional development,

peer-mentoring, and external support systems to assist classroom teachers in all aspects of sound teaching practice. CASE provides students a rigorous balance of science, mathematics, and English language, all situated within agricultural subject matter. Student motivation toward learning agriculture subject matter is enhanced with relevant learning connections by using practical instructional approaches. Student learning in the classroom will be facilitated by the use of inquiry-based activities, projects, and problems.

The CASE four-dimensional approach to teacher support includes curriculum, professional development, assessment, and certifications. Each area contributes to the validity of a CASE program by ensuring that

teachers are properly equipped and trained and student learning is clearly accountable.

Professional Development

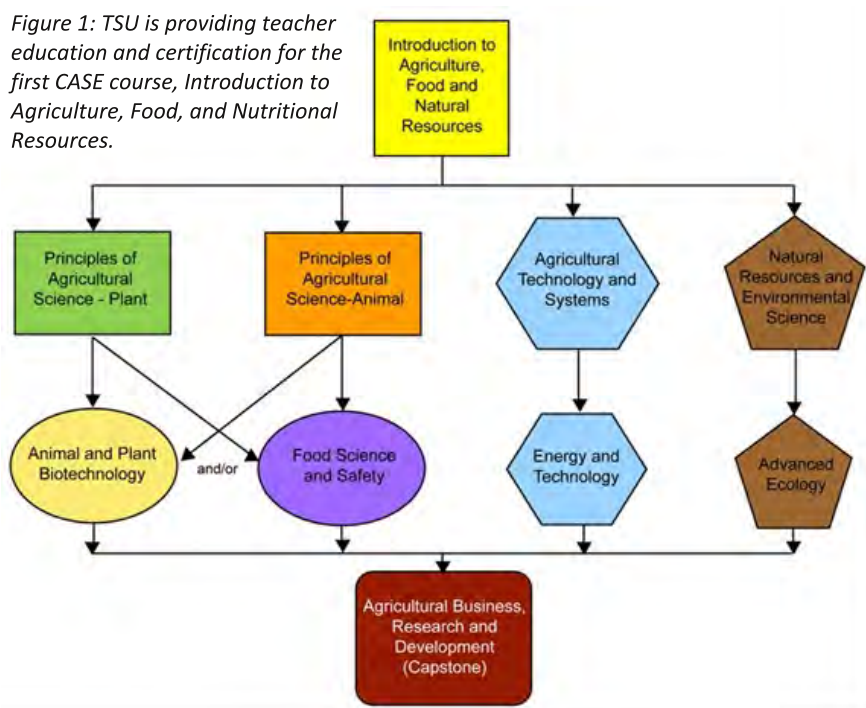
The strength of CASE is in the intense and thorough professional development provided to all those who choose to adopt the curriculum. To obtain the CASE curriculum, teachers are required to attend an 80-hour CASE Institute. This professional development workshop equips teachers to use the curriculum to its fullest potential by preparing them to lead students through a series of meaningful, sequential activities, problems and projects set within agricultural subject matter.

CASE provides superior teacher preparation, which creates a better student experience, resulting in more students who successfully complete agriculture programs prepared for success in college and careers in the STEM fields.

Curriculum

CASE provides a complete curriculum in each of its courses. This includes lessons that build on each previous lesson coupled with an inquiry-based lesson delivery style, leading students to a higher understanding of big-picture STEM concepts. At CASE Institutes, teachers become familiar not only with the curriculum itself, but with delivering lessons using inquiry-based instruction, student-directed learning, and

Figure 1: TSU is providing teacher education and certification for the first CASE course, *Introduction to Agriculture, Food, and Nutritional Resources*.



activities, projects and problems (APP). TSU is providing teacher education and certification for the first CASE course, Introduction to Agriculture, Food, and Natural Resources (Figure 1).

Assessment

CASE has developed end-of-course assessments that will enable programs to uniformly validate skills and concepts learned through the CASE program of study. Each includes a variety of question types that appeal to auditory, visual and kinesthetic learners. The variety of testing methods used in the assessments means all types of learners will be able to show their understanding of


the high-level STEM concepts CASE delivers. These assessments are not only a way for teachers to check overall student comprehension, but also a way to collect powerful data that can be used to show the effectiveness of instruction in an agriculture program using CASE.

Certification

Educators who complete the 80-hour Institute at TSU gain certification in specific courses. In addition, the teachers' agriscience program is certified, and students who successfully complete the course earn certification as well. This form of quality assurance for the program can lead to college credit at TSU as well, specifically, AG-

SC 5050 Curriculum for Agricultural Science Education.

TSU is one of only 17 Affiliate Institutions providing the training for educators across the country, and TSU's Dr. John Ricketts is one of only 9 Affiliate Professors in the US. If you would like to see the training in action, drop by Lawson Hall and/or Farrell Westbrook just about any time of the day in the month of June.

For more information about the TSU AFNR CASE call Dr. J.C. Ricketts at (615) 963-7620. The TSU CASE website can be found at <http://bit.ly/TFbiUS> and more information about the overall program can be accessed on the web at <http://www.case4learning.org/>. 

Each summer, TSU Agricultural and Extension Education hosts high school educators for at least one 80-hour institute referred to as the Curriculum for Agricultural Science Education (CASE).





Alvin Wade (left) with 2012 Small Farmer of the Year Leamon

2012 Tennessee Small Farmer of the Year beefs up erodible soils through exemplary management


Alvin Wade, Extension Associate Professor

Leamon Bratton is a local farmer and owner/operator of Bratton Farms in Montgomery County, whose main enterprise is beef cattle. Because a good portion of Bratton's property is located on highly erodible soils, he's had to take action with a number of exemplary grassland management practices to get the most from both his land and his livestock. With the help of Extension Associate Professor Alvin Wade, Bratton has implemented rotational grazing where cattle are regularly moved to fresh

paddocks at precise times, helping prevent overgrazing and optimizing growth. This rotational grazing doubles as an exceptional erosion and runoff control method, and offers a productive alternative for marginal, erosion-prone or flood-prone cropland.

Additionally, Bratton has recently re-seeded some of his fields with a fescue-orchard, grass-clover blend, which has roots that help hold soil in place. He has also built check dams on gulleys for stabilization and sediment control, and installed geotextile fabric and rip-rap rock

on steep slopes, which are additional measures that help manage erosion. Bratton was honored with the "Small Farmer of the Year Award" at the 2012 Small Farm Expo for these exemplary efforts.

For information on more management practices that help discourage grassy weed growth in pastures, like fertilizing according to soil test recommendations, providing adequate nutrients during periods of active growth, and mowing before weeds flower and seed, contact Alvin Wade at awade@tnstate.edu. 

Community garden training program provides education and hands-on experience to residents of Nashville's Edgehill community

Mary Wakefield, Davidson County Extension Agent

Community gardening is an important agricultural and food security enhancing activity around the world. Eating fruits and vegetables everyday can help reduce the risk of heart disease, high blood pressure, Type II diabetes, and certain cancers. Community gardens in an urban environment can provide access to fresh produce that may otherwise be unavailable to low-income and limited resource families and individuals and contribute to social and economic development as well as the dietary and health improvement of a community.

Extension Agent Mary B. Wakefield conducts one such program in an urban environment in MetroNashville-Davidson County,

Ms. Mary Wakefield



where she provides education and training to the residents of the Edgehill community.

The objectives of the community gardening program are to train low income and limited resource people living in an urban environment to grow and maintain a community vegetable garden while simultaneously teaching ways to improve their diet through improved nutrition and physical activity.

The community gardening training program provides educational information and experiential training on how to plan a garden, plant crops, prepare and test soil, manage disease, insects and weeds, irrigate, safely use gardening tools, and harvest, prepare and preserve produce. Health issues related to obesity are addressed through instruction in nutrition and physical activity from community gardening.


The Edgehill community gardening training is carried out at the Edgehill Branch of the Metro Nashville Library and at the Edgehill community garden site. The community gardening training program begins in February of each year and ends with the fall harvest.

The Edgehill gardeners grow different types of fruits and

Community gardens provide residents of urban neighborhoods with access to fresh produce that may not otherwise be available.



vegetables including cabbage, cantaloupes, carrots, cucumbers, broccoli, eggplants, greens, green beans, lettuce, onions, okra, peppers, potatoes, radishes, squash, tomatoes, and watermelons. Through the program the Edgehill community residents have increased their knowledge and skills of growing a vegetable garden, received information on the nutritional benefits of eating vegetables, and viewed demonstrations on different ways to include vegetables in their diet. Some of the gardeners used the food preservation techniques of freezing and canning to extend their vegetables beyond the garden growing season.

For more information, contact Mary Wakefield at mwakefield@tnstate.edu. 



The Elk Valley Beekeepers Association had an estimated economic impact of more than \$50,000 across an eight county area in 2012.

Elk Valley Beekeepers Association makes economic impact in Middle Tennessee

John W. Ferrell, Franklin County Extension Agent

Beekeeping education has been a strong program focus in Franklin County and across the nation due to the need for pollination. According to the Tenn. Dept. of Agriculture (TDA), as of 1990, there were 130 registered beekeepers in Franklin County; by 1997, thanks in part to Extension Agent John Ferrell, that number had dropped to five.


This loss of beekeepers was due to the mite spread of the late 80's and early 90's. With the help of 12 volunteers and interested beekeepers from four counties, the Elk Valley

Beekeepers Association was formed in March of 2001. This organization has grown from 15 members across four counties in 2001 to over 140 members across eight counties in 2012.

They have received over \$20,000 dollars of TDA grant money for hive inspections since 2001. These grant funds have enabled the Association to conduct Master Beekeeper Hobbyist level courses in 2002 and 2009 and 12 beginner beekeeping courses with over 300 new beekeepers trained since 2001. The Association has conducted monthly educational meetings

and annual field days and exhibits to promote beekeeping and the importance of honeybee pollination to over 500 youth annually.

The economic effect of this organization on an eight county area in lower Middle Tennessee is hard to measure, but evaluations indicate an impact of more than \$50,000 in 2012.

For more information on beekeeping or the Elk Valley Beekeepers Association, contact John Ferrell at jferrell@tnstate.edu. 

Extension plays major role in success of commercial horticulture in Lawrence County

Wendel Smith, Lawrence County Extension Agent

Over the past several years, commercial horticulture in Lawrence County has grown exponentially. The Plowboy Produce Auction is one of the best examples of this exemplary growth, recently reaching new heights with an annual gross near a million dollars. This auction and other horticultural enterprises in Lawrence County have benefited from a partnership with Extension Agent Wendel Smith.

The Plowboy Produce Auction provides an outlet for more than 150 Amish families and many other growers who live in Lawrence and surrounding

counties to reach a large market and sell their produce.

The specific needs of the Amish population in Lawrence County are met through special selection of program venues and modification of delivery methods that conform to their religious beliefs. As an example, Private applicator certification sessions are structured using print displays and pre- and post-test methods instead of videos or power point presentations. Grower meetings, including variety selection, disease/insect identification, and pesticide updates are presented in a similar manner. Scouting in the field is also provided, but with the




Mr. Wendel Smith

goal of educating the grower in a manner that facilitates his or her ability to self-diagnose his or her particular problems on the farm.

Organization of the Farmers Market has progressed as another outlet for local growers. Open six days a week, the local market has many new vendors, including home-grown produce as well as pastured-pork, eggs, and grass fed beef.

Extension has taken a major role in the expansion of small-farm agriculture in the county, and the reputation of Lawrence County as a source for top-quality produce continues to grow.

For more information about the Plowboy Produce Auction, commercial horticulture, or other Extension programs in Lawrence County, contact Wendel Smith at wsmith7@tnstate.edu. 

The Plowboy Produce Auction in Lawrence County has increased in popularity and productivity recently, reaching an annual gross of nearly \$1 million.



TSU Nursery Extension: a critical link between groundbreaking research and Tennessee's nursery industry

Adam Blalock, Extension Area Specialist, Nursery Crops

Wholesale nursery production is a dynamic and important component to Tennessee communities and agriculture. In McMinnville, Tenn., at the Otis L. Floyd Nursery Research Center (NRC), studies are being conducted to improve nursery production practices in an effort to increase the efficiency, safety, and, ultimately, the profit of this vital industry.

Nursery extension is the critical link between new information gathered from the research performed at the NRC and on campus and the growers whose livelihood depends on productivity. As the research uncovers new information, it is forwarded to the nurseries by way of site visits, newspaper articles and other publications,


pamphlets, expos and conferences, and word of mouth. Nursery extension is a two-way street for communication, as the nurseries provide feedback on the research and information regarding current issues or recurring problems they may be facing.

One of the most prominent of those problems is invasive pests. A new pest or problem may simply go unrecognized or spread quickly out of control, which can be potentially hazardous for an individual nursery or the entire industry. Educating growers about these new pests before they can wreak immeasurable havoc is a major component of nursery extension work. Usually these issues are as simple as answering the questions "What is it and how do I control it?" but other times the pest can be more complic-

ated. Either way, nursery extension is equipped to answer these questions and respond in a timely and effective manner to the needs of the industry.

Another concern growers face in nursery production is weed control and herbicide selection. Weeds may be the single largest economic drain in a nursery, so choosing the right chemical at the right time for the right weed is very important. Programs like the soon-to-begin herbicide trial measure and observe the effects of different herbicides on varying ornamental plants, weeds, and growing practices. The results of these observations and studies are very helpful to growers when selecting a new herbicide.

In addition to distributing information to nursery growers, TSU's nursery extension program hosts or participates in numerous educational events. These educational events are a great way for growers or anyone else interested to learn about the nursery industry and ways to maintain an environmentally-friendly approach while improving production and minimizing costs. Specifically, on June 4th at the TNLA Green Industries Field Day, the audience indicated that they saved an average of \$300 to \$500 by attending the event.

For more information about TSU's nursery extension services, please contact Adam Blalock at ablaloc1@tn-state.edu. 

Mr. Adam Blalock checks for leaf spot on "Munchkin," one of the new Oakleaf Hydrangea cultivars developed at the TSU Nursery Research Center in McMinnville.



Rutherford County Farmers Market offers produce and educational opportunities

Anthony Tuggle, Rutherford County Extension Director

Rutherford County's Farmers Market provides producers with a venue to sell fresh fruit and vegetables, poultry, meats, eggs, and canned and baked goods. The seasonal setup is a "producers only" market requiring that the producer be involved in all phases of growing or making the items sold.

In conjunction with Middle Tennessee State University (MTSU), the Rutherford County Farmers Market and TSU/UT Cooperative Extension, led by Rutherford County Extension Director Anthony Tuggle, received an \$85,000 grant that was used to create the capability to accept EBT, debit and credit cards at the market. In 2012, sales from these cards generated

\$29,598. Gross sales for the year were \$283,583.

In addition to cards, the Rutherford County Farmers Market also accepts Women, Infants and Children (WIC) vouchers in the months of July and August. Families are given \$5 to \$10 vouchers to purchase from the market.


Unlike a typical farmers market, the offering in Rutherford County provides more than just fresh produce. Educational opportunities that range from cooking classes to demonstrations on establishing rain gardens are offered and led by Master Gardeners and Extension Personnel.

The market runs from the second Friday in May through the end of October, and is open on Tuesdays



The Rutherford County Farmers Market in Murfreesboro serves an average of about 46,000 customers per year.

and Fridays from 7am – 12 noon. The Rutherford County Farmers Market is located in the Lane Agri-Park Community Center at 315 John R. Rice Blvd. in Murfreesboro.

For more information about the Rutherford County Farmers Market, please contact Anthony Tuggle at atuggle@tnstate.edu. 

Shelby County Small Farm and Urban Gardening Program

Jo Anne Waterman, Shelby County Extension Agent

In Shelby County, the Small Farm and Urban Garden Program, led by Extension Agent Jo Anne Waterman with support from Program Assistant Grace Perry, seeks to educate, inform, and teach local growers about the best growing techniques that will increase efficiency and the sustainability of what they grow. This program also helps producers market their produce by helping them partner with some local farmers markets.


Over the course of the past year, Ms. Waterman and Ms. Perry have hosted several workshops and trainings, with assistance from Tennessee State

University Extension specialists who facilitated and provided up-to-date information.

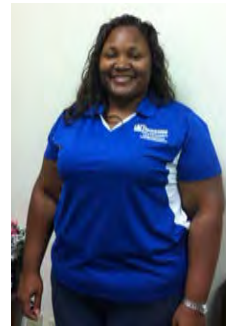
Workshop and training topics included: "How to Start Seedlings Organically"; "Good Agricultural and Handling Practices"; "Soil Preparation and Production"; "Growing, Caring For and Maintaining Herbs"; "USDA Tunnel/Hoop House Overview"; "FSA Loan Overview"; and "How to Start and Build a Compost."

Each week, Ms. Waterman and Ms. Perry make several visits to local community gardens and small farms to help assist with production needs and

concerns. The voiced needs of the farmers and gardeners then become drivers for the content that is presented in the educational programs which benefit all of Shelby County's citizens.

For more information on the Small Farm and Urban Gardening Program, or on Extension activities in Shelby County, please contact Jo Anne Waterman at jwaterm1@tnstate.edu. 

Ms. Jo Anne Waterman



Williamson County Extension programs teach gardening practices to maximize success, see record enrollment

Amy Dismukes, Williamson County Extension Agent

Gardening, once considered among our nation's most popular pastimes, is making a comeback, yielding fresh fruits and vegetables for the dinner table, a cleaner environment, and aesthetically pleasing landscapes. The interest in backyard fruit and vegetable gardens has exploded this season, resulting in a very busy and exciting time. Williamson County Extension and Extension Agent Amy Dismukes, help gardeners learn more about new plants, native plants, current and approaching insect and plant disease issues and environmental stewardship.

Extension-trained Master Gardener volunteers are instrumental in these efforts, sharing their knowledge of plant selection, cultural practices and pest management with fellow gardeners, school students and others. This year, with over 200 Association members, the Williamson County Master Gardeners are volunteering a record number of hours and are cur-

Ms. Amy Dismukes




rently participating in fifteen specialized garden and/or educational projects with the hopes of accepting several additional special interest projects in the near future.

Among their many current projects, the Williamson County Master Gardeners will also host a Fall Garden Tour this year, in which several of the members will showcase their personal gardens and garden projects.

So far this year, Williamson County Extension has already had a tremendous turn out for many of the Master Gardener and 4-H programs with such events as the Ag Fun Fair, which benefitted over 1,300 children, and the Junior Master Gardener Camp, which included over 60 child participants and 30 adult volunteers.

The Williamson County Master Gardener Association monthly meetings have had record attendance as well, which is no surprise considering the wealth of excellent program content that has been made available this year including sessions such as the International Folk Festival & Dancers and a Hypertufa workshop.

The 2014 Williamson County Master Gardener Program will include speakers on topics including Organic Gardening and Landscaping, Beneficial and many more. Of the 100 graduating Master Gardeners over sixty joined the Association this year alone.

For more information, contact Amy Dismukes at adismuk1@tn-state.edu. 

TSU Extension promotes environmental stewardship in Wilson County

Justin Stefanski, Wilson County Extension Agent

In Wilson County, innovative programs, led by Extension Agent Justin Stefanski, have introduced new techniques that promote environmental stewardship. These programs, which not only benefit the environment but increase the efficiency and effectiveness of those who practice them, have been widely implemented by homeowners and commercial growers across Wilson County.


Multiple demonstration gardens allow Mr. Stefanski and Wilson County Extension to incorporate and model sustainable practices such as gravity drip irrigation, urban raised-bed garden construction techniques and pollinator friendly pest management. These demonstration areas have been the site of hands-on training courses that have been attended by over 750 program participants over the past three years.

In 2013, Mr. Stefanski organized and implemented a complete renova-

tion of the Wilson County Extension Office landscaping. The renovated landscape utilizes plantings that are disease and insect resistance and drought tolerant. Many of the plants that have been incorporated are rare or endangered species native to Tennessee. The new landscaping has already proven to be a valuable educational resource and serves to promote the use of Tennessee's valuable native plants species.

Additionally, Mr. Stefanski serves as advisor for the Wilson County Master Gardener Association, and has helped to grow membership to nearly 150 members, elevating the Wilson County chapter to one of Tennessee's most active Associations. Members routinely volunteer their time to support projects throughout the community by sharing their passion and knowledge of gardening. In 2012, members provided over 7,000 hours of service to the residents of Wilson County.

Recently, Mr. Stefanski helped to organize a volunteer initiative that provided support to one of Wilson County's historic treasures, Picket Chapel. Originally built in the early 1800's, Picket Chapel was one of the first brick buildings in Wilson County. After the Civil War, the chapel was given to newly freed slaves and was home to an African American Methodist congregation until the 1970's. These grounds have been beautified and restored through the addition of new landscaping and hours of hard work by the Wilson County Master Gardeners Association. Picket Chapel is slated to become the future home of the Roy G. Bailey African American Museum and, thanks in part to the efforts of TSU Extension in Wilson County, is prepared for a beautiful transition.

For more information about Wilson County Extension activities, please contact Justin Stefanski at jstefans@tstate.edu. 


Mr. Justin Stefanski



"Demonstration [gardens] have been the site of hands-on training courses that have been attended by over 750 participants over the past three years."

*Strengthening Tennessee's Families
and Communities*





By providing training and education in areas like nutrition, child development, healthy living, urban forestry, and community development, TSU Extension is helping improve the lives of Tennessee's citizens, both young and old.

The TSU Youth Empowerment Program summer session engaged 23 African American youth ages 14-17 in an intensive 5-week hands-on nutrition, gardening, and physical activity training regimen that followed USDA guidelines for healthy and affordable snacks and lunches.

TSU Nutrition Education: building a healthy future

Leslie Speller-Henderson, Extension Assistant Professor

Tennessee, like most other states, has an obesity problem. From adults (27.8 percent of whom are obese) to children (20 percent), the problem is both widespread and growing. While the obesity epidemic is no doubt a very complex problem that lacks a simple solution, taking small steps now may lead to its eventual alleviation.

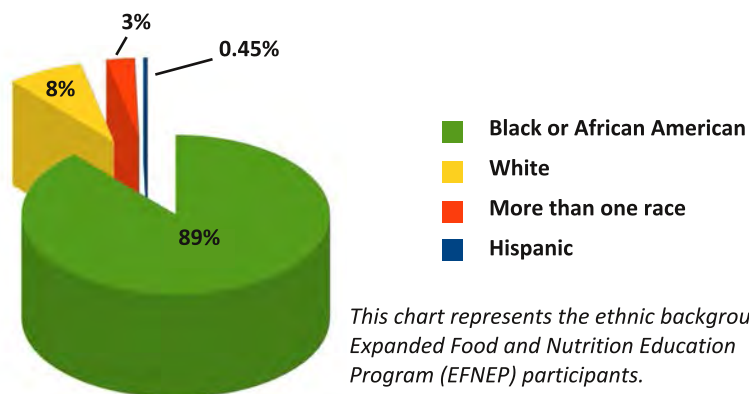
TSU's Nutrition Education Programs including the Supplemental Nutrition Assistance Program Education (SNAP-Ed) and the Expanded Food and Nutrition Education Program (EFNEP) actively engage and educate Tennessee families on the steps necessary to improve their current and future health. This intervention is necessary because "disparities in health status indicators and risk factors for diet-related disease are evident in many segments of

the population based on gender, age, race and ethnicity, and income."¹ Therefore, SNAP-Ed and EFNEP, which serve individuals and families with limited financial resources who may be subject to health disparities relative to the general population, are vital programs that address the national public health

goals of "Promot[ing] health and reduc[ing] chronic disease associated with diet and weight,"² and "Reduc[ing] foodborne illnesses,"³ by seeking to decrease the health disparities typically associated with individuals who have fewer economic resources.

Led by Leslie Speller-Henderson (Extension Specialist in Nutrition Education and Food Safety) and Deborah Goddard (Coordinator, TSU Nutrition Education Programs), these programs seek to reach audiences in a variety of locations to ensure that the message is received by as many people as possible. Agents and program assistants deliver lessons from evidence-based curricula to parents of young children, school-aged youth, adults and seniors covering topics such as healthy food preparation, nutrition, food safety and food budgeting while also allowing participants the chance to exercise through hands-on

TSU EFNEP Youth



This chart represents the ethnic background of Expanded Food and Nutrition Education Program (EFNEP) participants.

"Nutrition Education Program participants learn to develop healthy eating habits, plan nutritious meals, choose healthy foods, stretch their food dollars, practice safe food handling, and prepare healthy recipes."

1. U.S. Department of Health and Human Services, Office of Disease Prevention and Health Promotion, Healthy People 2010, (Washington, DC), 19-5.
2. U.S. Dept. of Health and Human Services. Healthy People 2010, 19-3.
3. U.S. Dept. of Health and Human Services, Healthy People 2010, 10-3.

physical activities. TSU Nutrition Education Program participants learn to develop healthy eating habits, plan nutritious meals, choose healthy foods, stretch their food dollars, practice safe food handling, and prepare healthy recipes.


In federal year (FY) 2012, SNAP-Ed reached over 9,000 direct contacts through over 70 nutrition education lessons. Over 40,000 indirect contacts were reached using healthy choice themed exhibits, community health fairs, strategically located publications, and television programs. The SNAP-Ed programming focus is in Davidson and Shelby Counties.

Meanwhile, the EFNEP series of classes were taught in Hamilton County and EFNEP youth program assistants used evidence-based curriculum with the Dyer County USDA Summer Feeding Program to reach

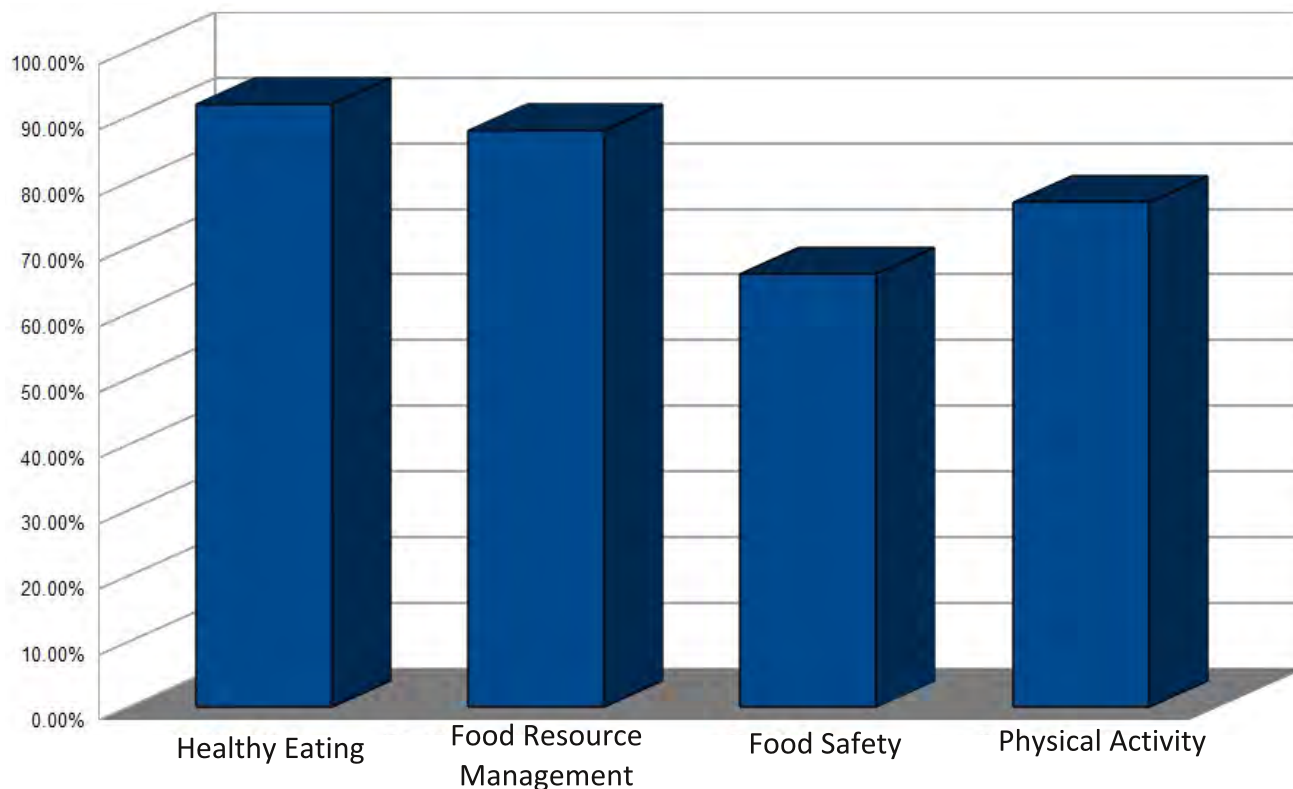
Ms. Leslie Speller-Henderson (right) pictured with fellow TSU Nutrition Education contributors (from left) Ms. Rita Fleming, Ms. Tamera Adjei, and Dr. Veronica Oates



1,106 youth at twelve locations. The majority of EFNEP adult participants reported improvement in behaviors related to healthy eating (92%), food resource management (88%), food safety (66%) and physical activity (77%).

For more information on TSU's EFNEP, SNAP-Ed, or other Nutrition Education programs, contact Leslie Speller-Henderson at lspeller@tnstate.edu. 

Adult Reported Improvement in Behavior through EFNEP





The DERT can help minimize the impact of disasters such as the historic flood of 2010, pictured here on the TSU campus.

Providing resources for disaster preparation and response


Dr. Sandria Godwin, Professor and Director, Didactic Program in Dietetics & Finis Stribling, Extension Farm Area Specialist

During the severe drought of the summer of 2012, TSU Associate Dean for Extension Dr. Latif Lighari called a meeting to form a disaster response team to answer the challenge of quickly appropriating necessary resources and information to those impacted by the drought.

Dr. Sandria Godwin, who had prior experience in emergency preparedness, and Finis Stribling, a University representative to the Extension Disaster Education Network (EDEN), were selected as co-chairs of what became known as the Disaster Education Resource Team (DERT). While the team was initially formed to re-

spond to a specific event, it has since evolved to provide resources for preparing for and responding to many issues, including water conservation, surviving extreme heat/cold, and preparing for power outages.

In addition to expanding its areas of covered issues, the DERT has also expanded its outreach methods to include fact sheets, presentations and articles posted on its website, a YouTube video and public service announcement, off campus exhibits, a county-wide workshop and seminars in local communities. Recently, the team sponsored an American Red Cross event on campus and has begun working with the Tennessee Early Childhood Training Alliance.

To access educational materials, visit the webpage at: <http://bit.ly/NHALJe> 

DERT members La'Darius C. Madison, Finis Stribling, Rita Fleming and Richard Stone (from left to right) engage in public outreach.



Emergency preparedness: keeping babies safe

Rita Fleming, Extension Assistant Professor

Infants, because they rely on help from others, are particularly vulnerable to the risk factors associated with emergencies. These vulnerabilities are amplified when caretakers lack knowledge, access to services, and support networks.


Although broad awareness about the need to plan and prepare for emergencies has increased in recent years, the unique needs of vulnerable populations—namely infants (0-12 months)—remains an area of weakness. To help address that need, TSU Extension Assistant Professor Rita Fleming spearheaded a program meant to provide greater access to emergency preparedness tools, increase specific knowledge about emergency preparedness with regard to infants, and offer additional informational resources to

help develop these plans to caretakers of infants.

To distribute this information, Ms. Fleming and her team created preparedness kits specifically geared toward the needs of infants, held community emergency preparedness trainings for 250 caretakers, and developed a fact sheet detailing steps to create a low-cost “survival kit” for caretakers to use during times of emergency.

"Infants . . . are particularly vulnerable to the risk factors associated with emergencies."

The program resulted in an increase in the number of care providers who are empowered to provide better care through an access to the tools and knowledge necessary to deal with an emergency situation.

For more information on emergency preparedness, contact Rita Fleming at rfleming2@tnstate.edu. 

Rita Fleming (standing) distributes informational materials at the Outreach and Assistance Conference.



Nashville Children Eating Well for Health and the TSU Youth Empowerment Program summer camp teach healthy lifestyles

Dr. Janice Emerson, Associate and Acting Director, Center for Prevention Research

Nashville Children Eating Well (CHEW) for Health is a multi-institutional collaboration between TSU's Center for Prevention Research (CPR) in the College of Agriculture, Human and Natural Sciences (CAHNS), Meharry Medical College, and Vanderbilt University that is designed to address childhood obesity prevention through research, extension, and education. All project activities focus on the USDA's federal Women, Infants, and Children (WIC) supplemental nutrition program. The target population is low-income WIC

participant families with children ages 2-4, with a particular focus on African American and Hispanic families, and the WIC-authorized grocers that serve this population. One of the extension components of the project is to provide nutrition education and outreach to residents in the Nashville/Davidson County area.

Outreach activities include healthy food sampling targeting WIC participants and other consumers to improve dietary practices. Eighteen local WIC-approved stores have partnered with the CHEW project and each store is eligible to receive two

healthy food samplings per year. To date, CPR staff, TSU Extension staff, and CPR students have conducted 22 food samplings in the 18 participating stores in order to expose the local community to healthier food options.

The first round of two-hour samplings included fresh fruit, low-fat yogurt, and a whole grain cereal to create a scrumptious and healthy yogurt parfait. The second round of samplings under way is featuring a fruit smoothie using one frozen banana, one cup of fruit (any fresh or frozen with no added sugar), $\frac{3}{4}$ cup plain yogurt (or a non-dairy substitute), $\frac{3}{4}$ cup of pineapple juice and one cup of ice. On average, 25 samples were passed out at each store (about 550 total) and the great majority of comments regarding the samples were positive.

Those involved with the CHEW program hope to have the second round of healthy food samplings completed by the end of 2013.

Another outreach activity is being performed by project-trained "community health promoters" (CHPs), including five Hispanics and five African Americans. They are creating opportunities to speak with community members that they meet by briefly (10-20 minutes) encouraging them to do one of the following: 1) Eat more fruits; 2) Eat more veggies; 3) Eat low-fat dairy; 4) Eat whole grains; 5) Maximize WIC vouchers; 6) Practice breastfeeding; and 7) Practice food safety. In

The Nashville Children Eating Well for Health program is designed to address childhood obesity prevention through research, extension, and education.





The Tennessee State University Youth Empowerment Program 2012 Summer Camp helped participants learn to prepare and consume healthy snacks and lunches, read food labels, and improve their overall health.


addition to spending time, they also leave USDA nutritional tip sheets with the contact to enhance what was discussed. As of August 1, 2013 CHPs had contacted just under 400 community members and have encouraged better nutritional habits.

Another important project that taught youth to live healthy lifestyles was the Tennessee State University Youth Empowerment Program 2012 summer camp, conducted by Dr. Janice Emerson, Associate Director, CPR in the CAHNS. This program engaged 23 African American (AA) youth ages 14-17 in an intensive 5-week hands-on nutrition, gardening, and physical activity training regimen that followed USDA guidelines for healthy yet affordable snacks and lunches.

Two TSU undergraduate students were trained as peer educators and facilitated the interactive nutrition education sessions. Pre- and three months post-program surveys of dietary knowledge and behavior were conducted and height and weight measurements were taken on the first day of camp and at three months post-program. Chi-square tests determined if significant differences existed between those measurements taken prior to the program and those taken three months afterward. Statistically significant improvements included: consuming more fresh, frozen or dried fruits for snacks; consuming more whole grain cereal for snacks; using lower fat salad dressing; reading food labels; and percentage categorized as obese (26.7% pre to 20.0% post).

Investigators on the project added the writing and performing of a healthy-eating rap video to further engage and motivate the students, which was uploaded to YouTube and had nearly 5,500 views as of August 1, 2013. The video is titled “Nutrition Mission: Teens Empowered” and can be found at: <http://youtu.be/BfIucNRFuYk>.

This small pilot study suggests that larger programs using intensive but short-term exposure to healthy food choices could have lasting benefits.

For more information regarding either the CHEW or YEP programs, please contact Dr. Janice Emerson at jemerson@tnstate.edu or visit the CPR website at www.tnstate.edu/prevention-research. 

Community Resource and Economic Development State Action Agenda set to provide multi-disciplinary support to communities across Tennessee

Dr. George Smith, Extension Assistant Professor

Dr. George R Smith has a Ph.D. in Environmental Design and Rural Development combined with degrees in Landscape Architecture and Community and Regional Planning. He has been an Assistant Professor of Extension at Tennessee State University since January, 2010.

Prior to his appointment at TSU he was employed as a Senior Landscape Architect and Project Manager with HDR Engineering, based in Phoenix Arizona. A major component of his HDR workload involved community planning, community engagement, and environmental design.

Dr. Smith has extensive experience in professional practice as a Landscape Architect, Environmental Designer, and Community Planner gained in Canada and the United States. He has conducted re-

search, published and given numerous peer-reviewed presentations at professional conferences here and in Canada on sustainable design, phytoremediation, and community collaboration in planning and design. His recent work with natural playgrounds builds on this extensive background and his experience with community and stakeholder groups in community design.

Currently, Dr. Smith is devoting his efforts to developing a State Action Agenda program through Cooperative Extension Services at Tennessee State University that will focus on providing multi-disciplinary support services to small and medium sized communities across the State of Tennessee.


The Community Resource and Economic Development (CRED) State Action Agenda was approved in early



Dr. George R. Smith

2013. The approved agenda has the mandate of providing technical and contextual support services to rural and urbanizing Tennessee communities. These community-based services are especially necessary at a time when communities are taking a double hit as populations and demand for community services increase while revenues are cut back. The CRED provides expert-based support in the areas of community planning, urban design, environmental remediation, small business development, leadership development, and emergency preparedness.

The CRED Plan of Work for 2013-2014 includes establishing a network of community-level contacts and engaging them in a dialogue on community strengths, needs, and future goals as a basis for providing support services.

Dr. Smith can be contacted at 615-963-1233 or gsmith6@tnstate.edu. 

"The CRED State Action Agenda provides expert-based support in the areas of community planning, urban design, environmental remediation, small business development, and emergency preparedness."

TSU's Nutrition Education Programs improve the likelihood that Tennesseans will make healthy choices

Deborah Goddard, Nutrition Education Programs Coordinator

Ms. Deborah Goddard, TSU's Nutrition Education Programs Coordinator, works primarily with two programs: the Expanded Food and Nutrition Education Program (EFNEP), and the Supplemental Nutrition Assistance Program Education (SNAP-Ed).

EFNEP works with low-income families who have children, particularly families with young children, and youth. These families receive a series of lessons, at no cost to them, on how to choose and prepare healthy foods. Some of the lessons include selecting and preparing nutritious foods, managing

food resources wisely, handling foods safely, and the importance of physical activity. Programs are in place at multiple locations including Hadley Park Community Center with young parents, and Monroe Harding Children's Home with young men.

SNAP-Ed plays a vital role in helping to improve nutrition in low-income individuals of all ages, and is the largest program in the domestic hunger safety net. Almost half the children participating in SNAP are under the age of 18, while about 80% of the adults are over the age of 60. One of the SNAP-Ed programs that TSU works with is the Bethlehem Center Meals on Wheels for Seniors Program.




Ms. Debbie Goddard

Both the EFNEP and SNAP-Ed programs follow USDA Dietary Guidelines for Americans and the MyPlate programming as the basis for nutrition education.



Both programs use the Dietary Guidelines for Americans 2010 and the USDA MyPlate as the basis for their nutrition education. The goal is not only to improve the likelihood that persons eligible for SNAP benefits will make healthy food choices within a limited budget and choose physically active lifestyles, but also to place an emphasis on obesity prevention in addition to nutrition education.

For more information on either of these Nutrition Education Programs, contact Deborah Goddard at dgoddard@tnstate.edu. 

Urban Forestry Extension Program will educate and assist in the management and care of trees in urban areas

Dr. De'Etra Young, Extension Assistant Professor

Since the 1950s, cities have transitioned as society has shifted from a largely agricultural focus to a primarily manufacturing and technology-based economy, which has resulted in rapid urban development. This increase in population has resulted in the intermingling of homes and communities with forests and agriculture land.

As growing cities are making more room for trees, Tennessee State University's Urban Forestry Extension Program seeks to assist natural resource and environmental professionals, policy makers, and society-at-large in the management and care of trees in urban areas.

Trees are valuable assets that have aesthetic value, improve air and water quality, reduce noise pollution, and provide habitats for beneficial wildlife. In addition to the environmental benefits, trees also provide a variety of economic benefits. Urban trees increase residential and business property values and enhance community pride while increasing recreational opportunities.

TSU's Urban Forestry Extension program's goal is to improve Tennessee's urban environments through the creation of outreach material that seeks to better understand the urban forests and urbanization. The Urban Forestry Extension Program can provide the following services: presentations and

exhibits on the benefits and value of urban trees; assistance to communities for the organizing of tree boards, tree management plans and ordinances, and community tree plantings; demonstrations of the proper techniques for tree care and maintenance; and research on green infrastructures, urbanization, stormwater quality, and hydrological modeling.

For more information contact Dr. De'Etra Young at dyoung23@tnstate.edu.

For more information contact Dr. De'Etra Young at dyoung23@tnstate.edu.



Dr. De'Etra Young

Davidson County SNAP-Ed encourages healthy food choices

Ebone' Colclough, Davidson County Extension Agent

The goal of the Supplemental Nutrition Assistance Program Education (SNAP-Ed) is to improve the likelihood that persons eligible for SNAP benefits will make healthy food choices within a limited budget and choose physically active lifestyles consistent with the current Dietary Guidelines for Americans and MyPlate. This is achieved by providing an array of educational programs in food safety, meal planning, budgeting, cooking skills, and healthy food choices and consumption. By focusing on these skills, the Davidson County SNAP-Ed program and Ex-

tension Agent Ebone' Colclough, focus on helping eligible persons to prepare healthy, low-cost meals and snacks for their families. In addition to meal planning, the Davidson County SNAP-Ed program assists participants in developing spending and savings plans and get the most food for their dollar, and offers ways of incorporating physical activity.

The Davidson County SNAP-Ed Program serves approximately 100 participants of all ages on a weekly basis at schools, churches, senior citizen centers, libraries, community centers, and various community organizations. The program

information and training is typically well-received.

"The nutrition program has impacted my life by showing me how to eat healthy, how to budget, and how to cook healthier meals," one recent participant at the 1st Response Center noted. "This class has been very helpful to my family and me."

For more information on the SNAP-Ed program in Davidson County, contact Ebone' Colclough at ecolclough@tnstate.edu.



Ms. Ebone' Colclough

Dyer County Extension provides healthy summer meals to children, partners with other county agencies to win the State Rural Development Recognition Award

William Taylor, Dyer County Extension Agent

During the school year, children receive high quality, nutritious meals every weekday as part of their standard school lunch. Unfortunately, during the summer months, these kinds of nutritious meals can be hard to come by, as preparation can be costly and time consuming for already busy parents.


In Dyer County, Extension Agent William Taylor leads a program called the TSU Special Summer Nutrition Education Program that works to correct this discrepancy.

This program provides children with the type of high quality meals that are typically associated with school lunches during the summer months, serving over 25,000 lunches and 9,000 breakfasts in 2012. In addition to the obvious benefits of providing nutritious food to children, this program also provided nutrition classes taught by TSU program assistants, and benefitted the Dyer County economy by creating 61 jobs.

Mr. Taylor also works across other various programs to

provide the highest possible level of positive impact for his county, making a total of 35,611 contacts in Dyer County over the past year. Some of his other programs include the Master Gardener Program, which saw 12 people complete at 14-week Master Gardener course during Spring 2013 and logged over 1,800 volunteer service hours; the Community Resource Development Awards and Scholarship Banquet, which was attended by 285 people and awarded \$7,000 in scholarships; and the Dyer County College and Career Day, which provided 75 students and parents to gain knowledge on college entrance exams and available careers.

Additionally, Dyer County Extension was among a coalition of county agencies recognized by the State Rural Development Committee for their work in economic and community development. The award was presented to Dyer County Mayor Mr. Richard Hill by TSU Associate Dean for Extension Dr. Latif Lighari at a ceremony in January.

For more information about the Special Summer Nutrition Education Program, Dyer County Community Resource and Economic Development Programs, or the Dyer County Master Gardener Program, please contact Mr. William Taylor at wtaylor@tnstate.edu. 

Dyer County Mayor Mr. Richard Hill (middle, left) receives the 2012 State Rural Development Recognition Award from TSU Associate Dean for Extension Dr. Latif Lighari (middle, right). Also pictured are TSU Extension Agent Mr. William Taylor (second from right) and representatives from other county agencies who partnered together to earn the award, which is given to only one community per year.



Job Wise workforce preparation program teaches vital skills for securing employment

Dorothy Simmons, Hamilton County Extension Agent

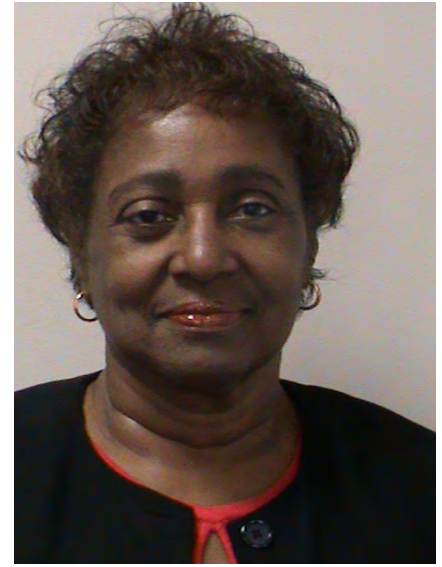
The Job Wise workforce preparation program, led by Hamilton County Extension Agent Dorothy Simmons, targets adults who are out of school and in need of additional job preparation skills in order to secure reliable employment.

The program is implemented at the Piney Woods Family Resource Center and covers pre-job skills such as: communication, social and job etiquette, appropriate dress, job searching, application and interview skills through the use of videos, games, role playing, handouts, writing, ice breakers, energizers, and public speaking. The meetings are held during ten sessions and conducted in fun ways to teach these important job readiness skills.


In 2012, the Job Wise workforce preparation program consisted of 18 limited-resource participants, 10 of whom completed the program with resumes. This success was honored by a celebration that featured speeches from participants about the value of the program in helping them be prepared to secure jobs. In addition to the ten participants who completed resumes, three were able to secure a job by the end of the program.

Programs like this have enormous potential for economic impact in communities. If all ten participants who completed the program secure a full-time job paying at least the minimum wage (7.25/hr. in Tennessee), it would equal over \$12,577.00 per week in total earnings, which would benefit the economies in Hamilton County and the state

Ms. Dorothy Simmons



while also leading to self-sufficiency and personal income gratification.

For more information about this program, please contact Dorothy E. Simmons at (423) 855-6113 or by email at dsimmons@tnstate.edu. 

"If all ten participants who completed the program secure a full-time job paying at least the minimum wage (\$7.25/hour in Tenn.), it would equal over \$12,577.00 per week in total earnings."



Mrs. Janice Hartman demonstrates safe, healthy food preparation.

Hamilton County SNAP-Ed provides cooking demonstrations and education

Janice Hartman, Hamilton County Extension Agent


In Hamilton County, Extension Agent Janice Hartman has been busy spreading the word about Supplemental Nutrition Assistance Program Education (SNAP-Ed) since coming on board in February.

Mrs. Hartman presents topics including general nutrition, food safety, eating healthy on a budget and the importance getting/staying active to a variety of audiences. Participants have ranged in age from four years to over 65.

Her audiences consist of youth in summer recreation programs, adults with chronic health issues, and adults working in senior citizen centers.

One on-going program is a nutrition and cooking class, conducted with clients of Memorial Hospital's Westside Clinic in the College Hills Courts. The group meets on the first Wednesday of each month. An educational lesson combined with a cooking demonstration keeps participants involved.

A community partner, the Chattanooga Mobile Market, has provided supplies for the cooking demonstrations and is available immediately following the classes for the College Hills residents to shop for fresh produce and other grocery items.

For more information on the SNAP-Ed program in Hamilton County, contact Janice Hartman at jhartma1@tnstate.edu. 

Spreading awareness and preventative information on elder abuse in Lauderdale County

Rachel Howell, Lauderdale County Extension Agent

TSU Extension Agent Rachel Howell leads many programs in the communities of Lauderdale County, including leading nutrition workshops and after- and in-school 4-H clubs, but one event that she is extremely proud of is the annual World Elder Abuse Awareness Day program that she started five years ago.


This year, the program was held on Tuesday, June 4th with the goal of spreading awareness and preventative information out to the public regarding what can sometimes be a too-often overlooked problem: elder abuse.

Passing along this information empowers elders, their family members and their care takers to know both how to detect signs of abuse, and what to do if abuse is detected.

Elder abuse can take many forms. Typically, abuse of elders will manifest in one of the following types: physical abuse, sexual abuse, neglect, exploitation, emotional abuse, abandonment and self-neglect. The World Elder Abuse Awareness Day convention tries to provide specific warning signs and treatment and prevention methods that apply to each.



The program consists of a keynote speaker, an elder abuse panel featuring presentations from experts and other relevant sources, and information booths. Participants on the panel include geriatric nurse practitioners, TSU's state specialist, social workers, attorneys specializing in disabilities, and representatives of local banks, Adult Protective Services, the Ombudsman Program, and the Commission on Aging. Participation has grown steadily since the events inception, from 50 attendees the first couple of years to more than a hundred most recently.

For more information about the World Elder Abuse Awareness Day program or other Extension programs in Lauderdale County, contact Rachel Howell at rparker12@tnstate.edu. 

Ms. Rachel Howell standing outside the TSU/UT Extension offices in Lauderdale County.



Montgomery County Healthy Homes Initiative teaches alternative methods that make cleaning up a snap

Tamera Adjei, Montgomery County Extension Agent

Montgomery County Extension Agent Tamera Adjei utilizes the overall Family and Consumer Sciences framework to empower families to move toward self-sufficiency by taking charge of their health and finances in order to live well. Charged with the task of identifying and implementing programs pertaining to Sustainable Tennessee, she started a Healthy Homes Initiative in partnership with the Clarksville Housing Authority and the Expanded Food and Nutrition Education Program.

The Healthy Homes Initiative (HHI) identifies and teaches families who need assistance with cleaning and


maintaining a healthy home. The HHI program takes a holistic approach to cleaning, including organization and efficient cleaning techniques. Ultimately, this program empowers participants to take charge of the clutter, while avoiding feeling defeated and overwhelmed.

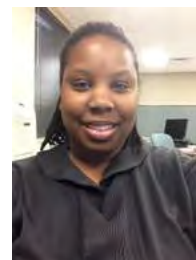
"People, especially parents of young children, are looking for real solutions on how to create and maintain a healthy environment," Ms. Adjei said. "That is what the HHI program sets out to do."

Noticeable impacts of the HHI program include bringing families closer together as parents learn how to delegate household chores, which strengthens parenting skills and gives

children a sense of accomplishment.

Ms. Adjei finds the simple achievements participants make in their lives to be the most rewarding aspect of her work in the county, and she is inspired to help people reach their goals, holding a firm belief that even a small step can create a big change.

For more information on FCS programming in Montgomery County, please contact Tamera Adjei at tbanks7@tnstate.edu. 



Ms. Tamera Adjei

Shelby County SNAP-Ed empowers audiences to make healthier food and lifestyle choices

Natalie Owens, Shelby County Extension Agent &
Ebony Lott, Shelby County Extension Program Assistant

The Supplemental Nutrition Assistance Program Education (SNAP-Ed) in Shelby County educates, encourages and empowers limited-resource audiences to make healthier food and lifestyle choices.


One of the main factors that contributes to obesity and unhealthy living among the limited-resource demographic is simple economics. SNAP participants have an average of only \$1.50 per person to spend on each meal, and less nutritious foods

often seem cheaper than healthier choices at the grocery store.

Shelby County Extension Agent Natalie Owens and Program Assistant Ebony Lott aim to show families that healthier options are accessible on a tight budget by providing nutrition education and food demonstrations.

Some of the important education programs they provide cover meal planning, budget planning/shopping, food safety, and cooking skills. All educational materials and topics have been developed

using the 2010 Dietary Guidelines for Americans as well as USDA's MyPlate initiative. On a weekly basis, Ms. Owens and Ms. Lott reach over 200 seniors, adults and youth through direct education in partnerships with various community agencies.


For more information on the SNAP-Ed program, contact Natalie Owens at nowens2@tnstate.edu. 



Ms. Natalie Owens

*Empowering Tennessee's
Future Leaders*





*Through 4-H, Workforce
Development, and Leadership
Development programs, TSU
Extension strives to prepare
today's young people for healthy
and productive futures.*

Students participating in "Academic Boot Camp" activities.

4-H and Youth Development



Thomas W. Broyles, Ph.D.
Cooperative Extension State
Program Leader, 4-H/Youth
Development



Tennessee 4-H Members, Volunteers, Stakeholders and Extension Supporters:

Greetings. My name is Thomas Broyles and I am the new State Program Leader for 4-H/Youth Development at Tennessee State University. Since starting in February 2013, I have witnessed the hard work and dedication our youth have “To Make The Best Better.” Tennessee State University and the University of Tennessee have developed a collaborative model to ensure the youth of Tennessee are successful in their endeavors.

This is an exciting time to be working with Tennessee State University. Currently, we have twenty-five agents and program assistants across the state with 4-H appointments who are working hard to meet the needs of the youth. In the coming months, we hope to add nine more county agents to reach an even broader audience. I am very proud of each agent and programming assistant for the hard work and dedication they have put toward developing the youth of Tennessee.

In 2012, over 39,000 youth were reached in schools and over 2,100 club programs. These numbers are great, but we're not satisfied. We will continue to strive to reach as many youth as possible. None of what we've already done or what we hope to do in the future would be possible without the hard work and dedication of the agents, program assistants and over 2,500 volunteers. Volunteers play an instrumental role in our programs, and I just wanted to take a minute and say thank you.

We've put together this section of the publication in an effort to show some of the work being done with youth both on campus and in the counties. Please take a few moments and read through the exciting programs that are taking place. In the months to come, we will work as a team to keep reaching more youth and develop more programs to prepare them for the future.

Investing in our future by developing leaders today

Dr. John Hall, Extension Assistant Professor

Leadership: How do you define it? Why is it important? What impact can it have on your life? These may be questions you have pondered or heard others ask. People are captivated by the idea of leadership and they are looking to become more effective leaders¹. Whether or not we realize it, leadership or lack of leadership in a situation has a very significant impact on that situation's outcome.

The bottom line? Leadership is a highly sought after and valued commodity². As individuals, businesses, organizations, and communities, we are more likely to be successful if we invest in developing leaders.

Dr. John Hall



"TSU is developing leaders in a wide range of settings through both formal and non-formal programs."


Tennessee State University is developing leaders in a wide range of settings through both formal and non-formal programs. Programs are tailored for youth and adults who aspire to grow as leaders. Youth programs through 4-H and Future Farmers of America (FFA) provide a context for youth to gain valuable leadership skills to help them as they enter colleges and careers. College courses and programs at TSU give students the opportunity to gain knowledge of leadership theory and context for practical application.

Currently, an adult leadership program for state, local, and community leaders in production agriculture and related fields is in development. This program will provide a unique experience for participants to gain essential leadership skills while providing relevant knowledge that can be

applied in a wide range of agricultural fields.

TSU knows the value of effective leaders and is making an investment to increase the number of leadership programs and opportunities for youth and adults across Tennessee. This summer, Dr. John Hall was hired to enhance and create leadership programs at TSU.

Do you want to grow and develop as a leader? Tennessee State University has opportunities to help you grow and develop. Leaders are made, not born. Tennessee State University is working to help unlock that potential.

For more information regarding Agricultural Leadership programs at TSU, please contact Dr. John Hall at jhall33@tn-state.edu, or follow on Twitter @TSU_AgLead. 

1. Peter G. Northouse, *Leadership Theory and Practice*, 4th ed. (Thousand Oaks, CA: Sage Publications, 2007).

2. Northouse, *Leadership Theory and Practice*.

ASPIRE Youth & Adult Leadership Program, other Extension programs make significant impact

Dr. Tyrone Miller, Extension Assistant Professor

Effective leadership is critical to develop and sustain healthy communities. This leadership helps to create important networks, establish communication and provide the community with an overall sense of direction. Research shows that establishing leadership programs in communities can have remarkable financial benefits that extend far beyond those who formally participate in the program. In fact, every dollar invested in a community leadership program nets a return of nearly three dollars to the community as a whole.

The out-migration of youth in urban and limited resource rural communities has resulted in a lack of traditional leaders who are available to fill these crucial community roles and, although leadership development programs can create new



Dr. Tyrone Miller (standing) leads activities during 4-H National Youth Science Day.

leaders, many youth from these communities—particularly minority youth—often have little to no access to these innovative programs. To address the issue of bringing access to leadership development programs to the youth and areas that need it

most, TSU Extension's Dr. Tyrone Miller led a project that used a multi-faceted approach including various forms of contact and education.

"Every dollar invested in a community leadership program nets a return of nearly three dollars to the community as a whole."

Dr. Miller smiles during Academic Boot Camp.




In 2012, agents in 20 counties reported 33,292 contacts through school clubs, after-school care programs, workshops, and summer day camps. Instruction provided by these programs focused on developing leadership, public-speaking skills, responsible citizenship and healthy self-esteem while encouraging positive risk-taking, goal achievement, and ethical decision making.

In addition to the ASPIRE Youth & Adult Leadership Program, Dr. Miller has achieved numerous impacts across the Extension program areas.

In 4-H and Youth Development, 875 youth now work to achieve their goals, while 863 can select and organize a topic for a speech or talk. 780 youth are now better able to understand and follow directions as a result of these programs, 373 better understand their parents' concerns about money, and 243 can analyze the results of a scientific investigation.

In Family and Consumer Sciences, 280 participants of "Walk Across Tennessee" walked a total of 59,658 miles while 1,133 participants in the "Tennessee Shapes Up" program learned to eat more whole grains and 443 participants decreased consumption of high-sugar foods.

Agriculture and Natural Resources programs resulted in 1,227 consumers learning about plant selection and proper planting, 303 homeowners improving lawn management practices, and 329 citizens increasing their awareness of economic, social and environmental issues.

For more information on any of these program, contact Dr. Tyrone Miller at tmiller11@tnstate.edu. 



Activities like the annual Academic Boot Camp help young people to develop the skills necessary to become quality leaders.



Blount County 4-HUG members gather around two of their square foot gardens outside the Blount County Extension office.

Blount County 4-H Urban Gardeners get productive in limited space, donate harvest to food ministry

Jessica Waters, Blount County Extension Agent

The recent rise in popularity of local food, a desire to give back to the community, and the established need for youth to eat healthier and exercise more led to a brainstorming session among the Blount County 4-H Youth in which an idea was born. That idea became the 4-H Urban Gardeners (4-HUG) of Blount County.

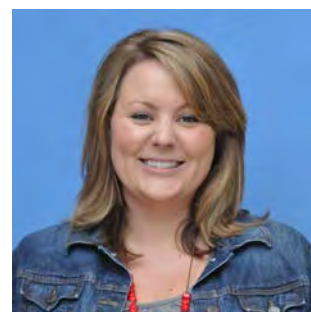
The group based their strategy in a method known as “square foot gardening.” In this method, a typical garden box is 4'x4' and divided into 1 foot squares.

Blount County 4-H's original square foot garden was planted in the

fall of 2012 by 4-H member Davis Parker, who had worked with Extension staff to inspire the idea.


Following Parker's success, 4-H member interest in the project spread rapidly and in March of 2013 the 4-HUG group was born. The group now meets weekly to plan and tend to the garden. The 4-H members have devised a watering schedule and trade off in order to share the responsibility. Located at the Blount County Extension Office, these gardens are easily accessible to everyone involved.

Produce harvested from the three gardens is divided, with half donated to the food ministry and



Ms. Jessica Waters

half split among the 4-H members. They discuss and try new recipes, and are planning a salsa canning workshop as soon as the tomato harvest is ready. Still in its early stages, this project is already a hands-down success.

For questions or comments please contact 4-H Agent Jessica Waters at jwaters2@tnstate.edu. 



Participants in the highly competitive Youth Leadership Cheatham County program take many educational tours, including visits to agricultural and industrial sites, emergency services locations, state and local government offices, and Adventureworks in King Springs

Youth Leadership Cheatham County builds a strong foundation for the future

Sierra Ham, Cheatham County Extension Agent


Participation by senior high 4-H members typically declines. However, in Cheatham County, juniors and seniors in high school are competing to participate in Youth Leadership Cheatham County, a program led by Extension Agent Sierra Ham and community volunteers, which helps counteract this attrition and keep interest high by providing valuable life experiences that propel these young adults toward productive futures.

2013 marks the 7th year for Youth Leadership Cheatham County and there are currently over 120 graduates of the program. The application process to participate in YLCC is highly competitive, and applicants must include three letters of recommendation from teachers or community leaders.

The 2013-2014 class began on August 10, 2013 with a day at Adventureworks in Kingston Springs. This opening session took participants through both high and low ropes courses and brought the group together as a team. Additional tours include: local tourism, agriculture, industrial and emergency services, county services, and state and local government offices.

One of the highlights of the past year was a field trip to downtown Nashville for a day full of activities at the state Capitol on Tuesday, Feb. 12th. The group left from Ashland City at 8 a.m. and began with a tour of the Capitol building upon arrival in Nashville. Afterward, they met with State Representative Mary Littleton and State Senator Jim Summerville for a glimpse into the life of a state congressperson. Participants also engaged in a mock de-

bate over several current topics, and had the opportunity to tour the Supreme Court. The outing ended with lunch at The Palm restaurant, where students got a chance to practice their best manners while enjoying some of Nashville's best food.

For more information on the Youth Leadership Program in Cheatham County, contact Sierra Ham at 615-792-4420 or sknaus@tnstate.edu 

Ms. Sierra Ham



Claiborne County Extension totals 10,680 contacts in 2012

Kelley Frady, Claiborne County Extension Agent

The Claiborne County Extension program, with the help of Extension Agent Kelley Frady, made 10,680 total contacts in 2012 between several different programs.


Focusing on agriculture, fruit and vegetable crops, and 4-H Youth Development, Claiborne County programs teach a variety of useful skills and provide valuable practical information that helps both youth and adults.

Agricultural programs held in Claiborne County over the past

year include the Junior Master Gardener program, which had 20 graduates in the fall of 2012, and the Adult Educational Sessions held at Lincoln Memorial University and Henderson Settlement, which had 20-30 participants.

On the 4-H side, Ms. Frady works closely with in-school clubs, the honor club, and various judging teams. Claiborne County 4-H has between 70-80 in-school clubs consisting of 1,700 members. This past year, the Dairy Quiz Bowl teams placed third in the state contest, and nine new

honor club members were added to the membership list. These programs are helped in part by the Tennessee Farm Bureau's Agriculture in the Classroom Grant, which Ms. Frady received in 2011.

For more information regarding the any of the Extension programs in Claiborne County, please contact Kelley Frady at kfrady@tnstate.edu. 



Ms. Kelley Frady

Cumberland County youth participate in Agriculture Career Day

Whitney Simmons, Cumberland County Extension Agent

Cumberland County High School Students, along with Cumberland County 4-H Honor Club members had the opportunity to attend the second annual Agriculture Career Day, hosted by The Cumberland County Fair Board. Over 400 Cumberland County High School students were in attendance to visit booths representing a variety of careers and opportunities associated with the field of Agriculture.


Taking advantage of the opportunity to make an impression on students, Tennessee State University was one of the more informative and enthusiastic organizations who set up a booth.

As a direct result, at least one Cumberland County High School student—a 4-H Honor Club member—will be attending TSU and serving as a work aid on campus. Highlighting many of the qualities that make TSU a desirable destination, this student chose to attend because of its friendly and helpful people, the Agriculture Program, which offers a concentration in Agriculture and Extension Education, the excellent scholarship opportunities, and its ideal location away from home while still being close enough for weekend visits.

The Cumberland County Agriculture Career Day had a wide-reaching impact on participating

students, many of whom are undecided about their futures after high school, unaware of their opportunities, and unsure

about their ability to afford a higher education. This event provided advice, guidance, and education that will help them make informed decisions and be better prepared for life after graduation.

For more information on the Cumberland County 4-H Program, contact Whitney Simmons at wsimmon2@tnstate.edu. 



Ms. Whitney Simmons

Coffee County youth grow skills, confidence, teamwork through community gardening

Lindsey White, Coffee County Extension Agent


Coffee County youth have gained valuable skills through numerous 4-H and school activities offered to them by Extension Agent Lindsey White through the Coffee County Extension office.

One on-going program in particular helps get youth out of the classroom and experience a different style of learning. In coordination with the City of Manchester Recreation Department, the four sixth grade science classes at Coffee County Middle School participate in year-long activities with the community garden. Through this collaboration, students learn how to plant seeds and transplant vegetable plants, build hoop houses, manage for weeds, select vegetables to harvest and use proper gardening techniques.

Another aspect of the community garden is encouraging appropriate nutrition by eating more fruits and vegetables. Beans, potatoes, pumpkins and other fall crops are planted and harvested out of three hoop houses with

raised beds during the fall growing season. When the students come back from winter break, they begin starting their seeds indoors and utilize a grow lab in their classroom. The vegetable plants are transplanted in the spring to the hoop houses, and other seeds are sown directly in the raised beds. The spring vegetable crop consists of lettuce, spinach, carrots, radishes, broccoli, and cauliflower, which provide healthy elements in the students' school lunches.

Approximately 300 sixth graders in Coffee County participate in the community garden growing vegetables. These students develop skills including decision making, critical thinking, patience, responsibility and teamwork. The sixth graders have the opportunity to learn by doing through the community garden program.

For more information, please contact Lindsey White at lwhite14@tstate.edu. 

The four sixth grade classes at Coffee County Middle School participate in year-long activities with the community garden in cooperation with the City of Manchester Recreation Department.



Davidson County 4-H Program hosts "Reality Check" money management simulation at McKissack Middle School

Janice Hayslett, Davidson County Extension Agent

As part of the McKissack Middle School Mentoring Program for 8th graders, TSU 4-H Extension Agent Janice Hayslett conducted a "Reality Check" simulation with the help of volunteers from the academic world, business community, and various TSU organizations.

The activity was meant to simulate the level of fiscal responsibility that is associated with adulthood, and teach students the importance of managing money and providing financially for themselves and their families.

Prior to the simulation, students received an orientation covering basic financial responsibility and what to expect during their time paying the bills of a typical adult. Students were given a "Knowledge is Power" sheet outlining important life choices such as higher education and choosing a career based on aptitude, interest and other factors. The orientation concluded with students envisioning themselves as 25-year-old household providers and learning how to write a check and balance their account.

The simulation itself began with each student drawing a "Pull Your Life" card that listed a career, education level, monthly salary, and familial situation. After the students learned their situations, the realities of economic responsibility began to set in with each student calculating




The "Reality Check" money management simulation is meant to teach students the importance of financial responsibility.

his or her own taxation amount. After taxes were taken out of their monthly salary, the students were asked to visit various booths representing expenses typical of a working adult like housing, food, utilities, insurance and, sometimes, costly unforeseen events while learning to make sound financial decisions.

It was apparent that students learned from the experience and, despite the harsh realities of financial responsibility, appreciated the simulation by having fun and learning. Commenting on what they learned from the experience, students said "I learned what parents have to go through for us; thank you

for getting me prepared," "My parents are on a budget and I can't always have what I want," and "Now I see what my mother has to go through."

All in all, approximately 100 students utilized life skills such as reading, math and critical thinking during the simulation while also building character and camaraderie.

For more information on the "Reality Check" money management simulation, the McKissack Middle School Mentoring program, or any other 4-H programs in Davidson County, contact Janice Hayslett at jhayslett@tnstate.edu. 

Dyer County Extension benefits farmers, home and business owners, 4-H youth and the community

Mary Beth Neal, Dyer County Extension Agent

Adults and youth alike benefit from TSU's Extension Services in Dyer County led by Extension Agent Mary Beth Neal. Since joining the team in February, Ms. Neal has been able to assist farmers, homeowners, business owners, and 4-H youth.


Agriculture is a \$61.1 million dollar industry in Dyer County, and farmers depend on Extension to give them up-to-date and accurate information. Ms. Neal has contributed to this industry by helping with numerous test plots involving corn, cotton, soybeans, and wheat.

Much like the agricultural industry, home and business owners and the community at large also depend on Extension for valuable

information. Recently, mole and vole damage was identified at the Dyer County High School football stadium. Extension provided assistance and the important framework for a plan that was implemented to stop the infestation. These measures will prevent further destruction of turf and will save the school thousands of dollars in additional maintenance.

Additionally, 4-H youth are very active in the Dyer County Junior Livestock Association (DCJLA). There are 94 DCJLA members who show market swine, lambs, goats, and steers. By showing livestock, youth gain important critical thinking and decision making skills which provide a valuable base for future success.

Dyer County also has 20 youth who are involved in the 4-H Poultry Project. This project fosters responsibility and provides youth with an opportunity to help provide for their families through egg production. Also, Dyer County 4-H offers team programs such as livestock and horse judging. These judging teams build lifelong friendships and give youth a chance to travel outside their home county.

If you are interested in knowing more about Dyer County Extension and 4-H, or any of the programs mentioned here, please contact Mary Beth Neal at mneal9@tnstate.edu. 

Ms. Mary Beth Neal (right) leads the 4-H Youth in Dyer County who are active in the Dyer County Junior Livestock Association.



Agriculture is a \$61.1 million industry in Dyer County, and farmers depend on Extension to provide accurate and up-to-date information.



Giles County 4-H participants "learn by doing" through various activities

Darby Payne, Giles County Extension Agent

Growing up is an adventure in exploration. The youth of Giles County, through 4-H programs led by Extension Agent Darby Payne, get the chance to explore their world while also building important life skills along the way.

The programs offered in Giles County vary from Shooting Sports to Line and Design to Videography. Other programs include On My Own, Stop Bullying, Cookie Mining and "Just in Case." The variety of programs and activities help the Giles County Extension Service reach a broader, more diversified audience. Each of these programs is specifically designed to allow 4-H participants to learn valuable skills through hands-on activities.

Over the course of the last year, 20 youth in the shooting sports program have learned to be respons-

ible citizens when they handle their firearms, make ethical decisions, be great leaders and supportive teammates, and handle firearms safely.


Another 12 youth learned about technology and communications through the videography programs. These participants work with Martin Methodist College on the Heroes Project. They will be videoing and conducting interviews with people at the Senior Citizens Center about "unsung" heroes of Giles County.

During the past year, 22,864 youth were met and involved in 4-H. 192 of the youth surveyed said that they could complete projects they were proud of. 132 could deal with their nervousness when giving a speech or talk. 63 youth reported that their 4-H experiences have helped them to gain self-confidence to try new things.



Ms. Darby Payne

All of the participating youths are learning new things and going on new adventures. These youth are the future of America, and through 4-H and programs like it, they learn how to be the leaders of tomorrow.

For more information on the Giles County 4-H program, contact Darby Payne at dpayne8@tnstate.edu. 

Over the past year, 20 youth participating in the Giles County Shooting Sports Program have learned to handle firearms responsibly.



4-H participants learn valuable skills through hands-on activities.



Johnson County 4-H: making a difference in the mountains of East Tennessee

Danielle Silverman, Johnson County Extension Agent

As the largest youth-serving organization in the county, Johnson County 4-H is looking forward to the future. Johnson County 4-H participants gain confidence and learn responsibility with hands-on learning through projects in the classroom, service learning activities, after school baking classes and animal science events, including the chick chain and horse science programs.

In the 2012-2013 academic year, Johnson County 4-H participants completed 1,598 classroom projects, which included public speaking lessons, giving demonstrations, creating posters and recyclable ornaments, and exploring possible future careers. Each monthly project meets state education standards and focuses on workforce preparation.

Additionally, Johnson County 4-H students can participate in a variety of afterschool programs. Among the most popular is a baking class where students learn how to read recipes, correctly identify and measure ingredients, and execute a variety of baking techniques. Another popular program is the 4-H horse clinic, which is held each fall in conjunction with the annual horse show. The horse clinic is designed to give limited resource students hands-on access to horses. With community volunteers managing each station participants learn the importance of horse safety, grooming, and how to saddle, lead and show a horse.


Johnson County 4-H members are also given the opportunity to participate in the traditional 4-H Chick Chain project. Each spring, students sign up to receive baby chicks which they raise throughout the summer. In late August, 4-H hosts a poultry show and sale where students show off their best pullets seeking the top honor of poultry champion. Upon completion of the show, the pullets are auctioned off and the money is



Biscuit making at the Appalachian Fair in Gray, Tenn.

reinvested in the following year's project. This year 42 students are learning responsibility and accountability through the chick chain project.

Other program highlights of the past year include 1,363 hours of service that has benefitted 386 local residents, the Junior 4-H Camp in Greeneville, Tenn., which 47 students attended, and a volunteer-led horse judging team that came in 2nd place at the regional contest, winning a chance to participate in the state competition in Shelbyville.

For more information on the Johnson County 4-H program, contact Danielle Silverman by email at dsilverm@tnstate.edu. 



2012 4-H Poultry Champion Madison Roark shows off her trophy and her prize-winning pullet.

Knox County Master Gardeners and Youth Gardening Programs: *a winning combination*

Emily Gonzalez, Knox County Extension Agent

- *Knox County Master Gardeners reported 5,402 hours of volunteer time in 2012.*
- *The value of Master Gardener Volunteer time in 2012 in Knox County was estimated at \$117,710.*
- *Master Gardeners in Knox County donated more than 335 hours of volunteer time in 2012 to support Youth Gardening activities.*
- *More than 300 youth in Knox County participated in hands-on gardening activities.*


2012 was a good year for Master Gardeners (MGs) and Youth Gardening in Knox County. From a full class of 30 new MGs, 28 were certified, leading to a total of about 75 active MGs for the year who contributed 5,402 volunteer hours to the county—a record number. These volunteer hours were valued at more than \$117,710 of investment back into the community.

In 2012 MGs played an integral role in volunteering at the University of Tennessee Gardens and the Knox County Extension Office, and in assisting Agent Emily Gonzalez with her Youth Gardening program.

With the help of Master Gardeners Ms. Gonzalez led eight school garden clubs and a week-long Garden Explorer Day Camp, exposing a total of more than 300 children in Knox County to gardening. Results from this day camp were so positive that the the

amount of contact hours has been doubled for 2013.

Funders like the Tennessee Farm Bureau and the Whole Kids Foundation made it possible for Knox County Master Gardeners and Emily Gonzalez to secure \$6750 in new extramural funding for Youth Gardening activities through Knox County Extension. So far 2013 is shaping up to be a great year as well. With even more Master Gardener interns added for 2013, an even better performance is expected.

For more information on Youth Gardening and Master Gardener programs in Knox County contact Emily Gonzalez at egonzale@tstate.edu. 

Ms. Emily Gonzalez demonstrates how to prepare a healthy meal using ingredients from the garden.

Ms. Emily Gonzalez



Ms. Gonzalez (right) with Master Gardener Linda Denton (second row, second from right) enjoy the harvest celebration with the kids.



Lawrence County 4-H helps young scientists grow

Tracy Hagan, Lawrence County Extension Agent

The Lawrence County 4-H Program brings hands on science programming to young people through a variety of methods. In accordance with the 4-H National Headquarters mandate that developing young people into scientists is of foremost importance, Lawrence County 4-H participants, under the guidance of TSU Extension Agent Ms. Tracy Hagan, are encouraged to learn about science through hands-on activities that demonstrate just how fun and interesting science can be.


Sixth graders are provided with science programming in the form of classroom clubs. Members of these clubs write speeches about science-related jobs, use materials and lessons provided by the National Department of Energy to learn about forms of energy and natural laws, use balloons, rulers, bouncy balls, marbles and pipe insulator to do experiments, ask and answer questions, and make discoveries about kinetic energy. In all, Ms. Hagan introduced over 400 youth to science through fun activities last year.

Another exciting event that Lawrence County 4-H members get to participate in is the Lawrence County 4-H Science Fair, which engages youth from four schools and five grades (4th through 8th) in a county-wide competition. 27 participants advanced from school science fairs to the highest level of competition. This platform allows young people

to show off their best understanding, logic and reasoning to the judges by diving deeper into scientific inquiry and developing presentation and public speaking skills. A sponsorship from local business 3-D Pro Parts provided winners with unique trophies created by a 3-D printer.

Other members attended a hands-on Science Day Camp titled "Playing with Polymers." Five young female participants learned the structure of an atom and how atoms bond by creating models of simple molecules and a polymer-type structure out of mini-cupcakes. They also performed several other experiments that exposed them to non-newtonian fluids and other polymers.

In all, Lawrence County 4-H participants have expanded their understanding of science and related fields while developing the knowledge and skills that could be useful in future STEM-related careers.

For more information on the Lawrence County 4-H program or any of the activities mentioned here, contact Tracy Hagan at thagan@tnstate.edu. 

A participant examines some displays at the Lawrence County 4-H Science Fair.



Participants in the "Playing with Polymers" hands-on Science Day Camp learned the structure of atoms and atom bonds by creating models out of mini cupcakes.

Ms. Tracy Hagan



Loudon County 4-H offers a wealth of learning opportunities to participating youth

Amanda Brooks Brown, Loudon County Extension Agent

In Loudon County, Extension Agent Amanda Brooks Brown leads a group of 2,474 youth involved in 4-H, holding meetings in each of the county's 11 school systems.


Activities in which these 4-H clubs were involved in over the past year include Farm Day, which demonstrated the value of local agriculture to 488 4th graders; communication skills development, which benefitted 996 5th and 6th graders and 432 7th graders; the On My Own program, which taught financial management and other workforce preparation skills to 418 8th graders; the 4-H Roundup, which included eight state project finalists from Loudon County, three of whom received scholarships; and various animal science projects, in which 62 4-H participants exhibited more than 400 animals.

In order to offer such a wide variety of skills-building activities, Loudon County 4-H established several local funding partnerships. Funding partners include: the Farm



Loudon County Farm Day calls on the participation of volunteers like those pictured above to demonstrate the importance of local agriculture to 4-H participants.

Bureau, Sweetwater Valley Farm, Farm Bureau Women, Valley Farmers Cooperative, Loudon County Livestock Association, Habitat for Humanity, and the Farm Bureau Young Farmers and Ranchers.

For more information about Loudon County 4-H or any of the activities mentioned here, please contact Amanda Brooks Brown at abrook7@tnstate.edu. 



A livestock judging team coached by Ms. Brooks Brown advanced to the American Royal national competition in Kansas City, Missouri.



Ms. Amanda Brooks Brown

"Activities in which [Loudon County's] 4-H clubs were involved in over the past year include Farm Day [and] communication skills development."

Madison County teens explore civic engagement, nation's capital through 4-H

Kane Reeves, Madison County Extension Agent

Madison County 4-H members had the chance to learn about government processes in the vibrant, living classroom that is the nation's capital as part of Citizenship Washington Focus (CWF), an intensive 4-H civic engagement program for high-school youth held at the National 4-H Youth Conference Center in Chevy Chase, Md.

The 15 participating youth sat in the gallery of the House of Representatives and heard congressmen and congresswomen debate issues they have only heard about on television. The group also visited the Library of Congress, the Lincoln Memorial, the FDR Memorial, the Korean War Memorial, Arlington National Cemetery, Mt. Vernon, Monticello,

and many other monuments and memorials that pay homage to the people who dedicated their lives to creating a nation unlike any other.

"I learned so much about the United States of America," said Devonte Bradley, Madison County 4-H member. "I will be able to share my experience through stories and photos that I was able to take during my CWF trip."


This educational trip was made possible by contributions from the Madison County Commission, Tennessee Farm Bureau, Madison County Agriculture Leadership Association, and Tennessee State University Cooperative Extension Service.

Experiences such as CWF provide students with a lasting impression of our nation and prepare them to be active in their com-



Mr. Kane Reeves

munities. Participants in the Madison County 4-H program gain experiences in civic engagement beginning in the 4th grade.

For more information about Citizenship Washington Focus or the civic engagement efforts of the Madison County 4-H program, contact Kane T. Reeves at kreeves@tnstate.edu. 

The Citizenship Washington Focus Conference, held in Chevy Chase, Md., gave participating 4-H members a chance to visit the Washington Monument.



Madison County 4-H members had the opportunity to visit with U.S. Senator from Tenn. Lamar Alexander during a trip to Washington D.C.



Moore County 4-H proves that good things can come in small packages

Lorie Burtts, Moore County Extension Agent

It has been said that good things come in small packages. In Moore County, situated in the rolling hills of south central Tennessee with just over 6,300 residents spread across 130 sq. miles, Extension Agent Lorie Burtts thinks that saying definitely holds true.

4-H has a very long tradition in Moore County and is still privileged to go into the classroom from 4th through 8th grade on a monthly basis. There are 440 youth actively involved in 4-H and over 40 adult volunteers that contribute their time and resources to 4-H programs. Since joining TSU as a Moore County Cooperative Extension Agent in March, Ms. Burtts has led or been an integral part of many events, including: practices, farm visits and competitions related to Horse Judging; practices, farm visits, field days and


competitions related to Livestock Judging; instructing and judging programs in the classroom; orientation, dispensing chicks, making follow-up farm visits, and other activities related to the Chick Chain project; meeting with the Tennessee Association of Extension 4-H Workers (TAE4-HW); hosting the County Farm Day for First Graders; serving as a judge in the Area Project Fair; leading the Trap Team and working toward an Archery Team in the county; coordinating Camp Woodlee, a fifty-eight year weekend camp tradition; coordinating Camp York junior camp in Crossville; organizing and participating in county, regional and state-level horse shows; and organizing state and regional Beef Expos.

Of the 4,200 plus contacts that Ms. Burtts has made since March, she is perhaps most proud of the Horse Project youth.



Ms. Lorie Burtts

Moore County 4-H has an ongoing partnership with the Moore County Horseman's Association where each 4-H member who participates in a 4-H horse show earns money toward their own scholarship. \$100 is awarded at the County, Regional, State and Southern Region 4-H Horse Shows. If a 4-H member begins showing in the fourth grade he or she has the potential to earn over \$2,700 in scholarship money from the Horseman's Association by the time he or she graduates. This is an excellent example of how the Moore County community supports the hard work and dedication of the 4-H program.

For more information on the Moore County Horseman's Association scholarship program or any other Extension programs in Moore County, please contact Lorie Burtts at lburtts@tnstate.edu. 

Since March, Extension Agent Lorie Burtts has made over 4,200 contacts.



The Chick Chain project is among the many programs offered by Moore County 4-H.





Ms. Holly Williams (left) and the Monroe County 4-H Honor Club members donated six crates to the local animal shelter.

Monroe County 4-Hers learn public speaking skills, give back to the community

Holly Williams, Monroe County Extension Agent

More Monroe County 4-H participants are enrolled in 4-H Public Speaking than any other 4-H program. There are over 1,400 participants in the local contest with over 180 invited to the county contest.

Of the 4th-12th grade winners at the county contest, Monroe County placed four at the SEC Celebration Day with one first place finish, and two participants in the 9th-12th grade division moved on to the state level.


The LifeSkills judging team included three participants, the Consumer Decision Making judging team included three participants, and the Dairy Products judging team included four participants. The Consumer Decision Making judging team placed in

the top four at the regional contest and advanced on to the state contest. One team member placed second in the individual competition at the state contest. The Dairy Products judging team won the state contest with two team members tying for second high individual.

Other activities in Monroe County 4-H include 26 active members in Honor Club who participate in 6 service projects with 3 trained officers; 28 active military youth with three military youth now involved in Honor Club; a celebration of June Dairy Month, including a total of 12 public events reaching over 300 people; participation in various activities at the Tennessee Valley Fair; 5 youth attended 4-H State Congress; 6 youth attended 4-H Round-Up; 72

participants for Junior 4-H Camp; 6 participants for Junior Heritage Skills Camp; partnered with Boys & Girls Club to implement Teen Maze with 400 participants.

In addition to building valuable life skills and knowledge, the Monroe County 4-H participants find time to give back to the community. The Monroe County 4-H Honor Club filled a need at the animal shelter for crates used to transport animals to different states where the pets have a better chance of being adopted. Honor Club members collected donations to provide six crates to the shelter.

For more information on any of the Monroe County 4-H or Extension activities, please contact Holly Williams at hwillia1@tnstate.edu. 

Community gardening and outdoor fun for urban youth

Karla Kean, Montgomery County Extension Agent

Since 2008, the Brandon Hills Community Garden Project has been providing the youth of an urban community in Clarksville with a chance to explore activities typically associated with a more rural environment. The project works to foster the development of personal responsibility and environmental stewardship, while the garden itself has transformed two previously empty lots into green living spaces, creating positive environmental, economic and social impacts on a low-income neighborhood.

Montgomery County Extension Agents Karla Kean and Tamera Adjei, along with members of UT faculty Doretha Minor and Schelese Ogburn, Clarksville community leaders,




Ms. Karla Kean (second from right) helps participants prepare salsa from their produce.

and members of the city government worked together on the project, and this extensive collaboration bore fruit by enriching the lives of the roughly 25 underserved youth, aged 9 - 16 years, who were involved with the program during the spring and summer of 2012.

In addition to providing an opportunity to learn gardening, canning and food processing techniques, the program also provided hands-on activities, special guests and field trips that taught the young people about the global food system, distribution of local food, and the connection to the local community.

The program's field trips included ventures to the Patterson Place Farm and the RiverView Mounds Farm for hayrides, a petting zoo, natural play areas and a chance to see historic burial mounds. For many participants, this was their first time to ever visit a farm or creek.

In total, the group harvested approximately 537 pounds of fresh produce for an economic impact of about \$1,073.00. The group processed a total of 59 pints of salsa and 27 quarts of bread & butter and dill pickles.

For more information on the Brandon Hills Community Garden, contact Karla Kean at kkean1@tnstate.edu. 



Obion County 4-H programs strive to "make the best better"

Justin Hargrove, Obion County Extension Agent

4-H clubs across the country strive to "make the best better" year after year, and the club led by Extension Agent Justin Hargrove in Obion County is no different.


In two months at the helm, Mr. Hargrove has had the opportunity to examine various programs and educational opportunities for youth and adults alike that are only available through Extension.

The Obion County youth have already been involved through participating in the Obion County Livestock Judging Team, which took 3rd place at the State Contest and will be competing at the American Royal in Kansas City, Mo. in October. Additionally, future plans include involvement with the Obion County Junior Livestock Association (OCJL), a booming youth development program for youths interested in raising, caring for, and showing beef cattle, hogs, and sheep of various breeds. Each year, the OCJL hosts

a livestock show at the Obion County Fair that gives participating youths a chance to win scholarships. This year's livestock show was held on Tuesday, Aug. 16th, and feature 109 Obion County 4-H members as competitors. Additionally, 38 Junior 4-H participants attended Camp Ridley in Columbia, TN this summer and had a great week.

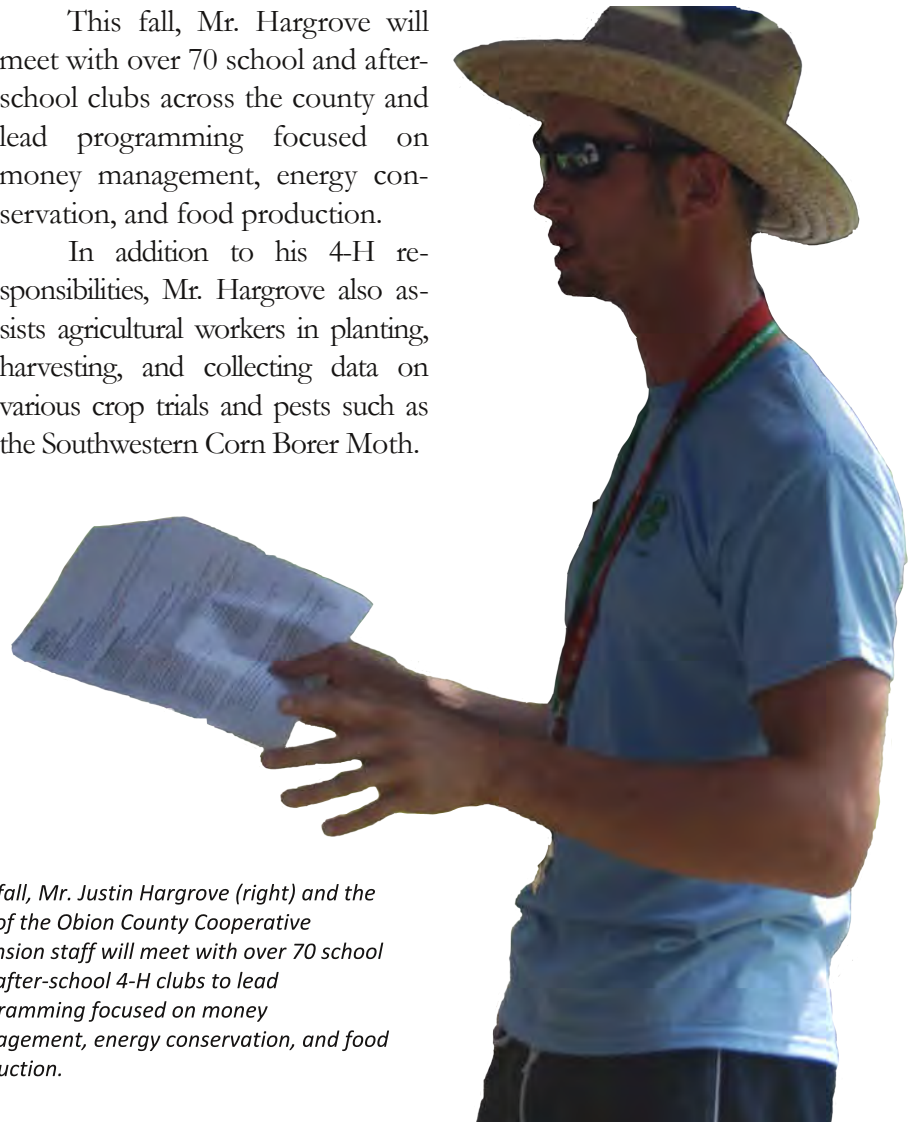
This fall, Mr. Hargrove will meet with over 70 school and after-school clubs across the county and lead programming focused on money management, energy conservation, and food production.

In addition to his 4-H responsibilities, Mr. Hargrove also assists agricultural workers in planting, harvesting, and collecting data on various crop trials and pests such as the Southwestern Corn Borer Moth.

For more information on Obion County 4-H, the OCJL, or any of the other Extension programs available in Obion County, please contact Justin Hargrove at jhargro2@tnstate.edu. 



This fall, Mr. Justin Hargrove (right) and the rest of the Obion County Cooperative Extension staff will meet with over 70 school and after-school 4-H clubs to lead programming focused on money management, energy conservation, and food production.



Rutherford County youth gain valuable life skills and experience through 4-H

Michael Shirley, Rutherford County Extension Agent

The youth of Rutherford County have gained some valuable life skills and experiences through opportunities with the Rutherford County 4-H Program led by Extension Agent Michael Shirley.

Through activities such as the Rutherford County Goat Club, a monthly 4-H Livestock Club, Workforce Preparation and Communication - Public Speaking lessons, after-school gym days that offer an opportunity to learn shooting sports, and a media day outing, Rutherford County 4-H participants have gained real-world abilities that will help them become productive adults later on.


Over the course of the past year, a total of 80 youth in Rutherford County have learned



Tanner Herring (left) with Dr. An Peischel and Mr. Michael Shirley at the 2nd Annual Agricultural Outreach & Assistance Conference.

how to set and achieve goals. An additional 12 youth have learned to use technology such as on-screen multimedia presentations to help them express their ideas through visual communication, and 80 learned to organize and deliver an effective speech.

One of the most impressive recent accomplishments of the group was a presentation on Artificial Insemination in Goats at the 2013 Agricultural Outreach and Assistance Conference by Rutherford Co. 4-H Goat Club member Tanner Herring. This presentation, given alongside trained academics and professionals, delivered information learned through 4-H experience and from Goat Club mentor, TSU Extension Assistant Professor Dr. An Peischel. Encouraged by his success at the Outreach and Assistance Conference, Herring again paired up with Mr. Shirley to present at the 2013 Small Farm Expo in July at the TSU Main Campus AREC.

For more information on the Rutherford County 4-H Program, contact Michael Shirley at mshirley@tnstate.edu. 



Mr. Shirley demonstrates how to use audio recording equipment.

Rutherford County 4-H builds critical thinking skills through STEAM-based programs


Walter Dirl, Rutherford County Extension Agent

Rutherford County 4-H offers youth a balanced variety of in-school, after-school, and project groups to the more than 3,000 youth served in Rutherford County. 4-H in Rutherford County, under the stewardship of Mr. Walter Dirl, focuses on, among other things, the program areas of STEAM (Science, Technology, Engineering, Agriculture, and Mathematics), the 4-H Horse Project, Outdoor Meat Cookery, and the 4-H Shooting Sports Program.

One of the largest programs is the Rutherford County 4-H Horse Program, which includes 115 participants who take the opportunity to learn about showing, judging, feeding and caring for horses as well as barn and pasture management, safety, and many other topics related to the 200 plus horses enrolled. Clinics, demonstrations and guest speakers provide a wealth of information. In addition to learning opportunities, activities include horse shows, judging contests, cookouts and fun days.

Rutherford County 4-H prides itself on a competing at the county, region, state, and multi-state levels. Developing participants' critical thinking skills

through the use of STEAM-based programs will prove to be beneficial to Rutherford County 4-H members in both the immediate and long-term future. The use of STEAM-based programming gives in-school and after-school youth an essential refresher and an introduction to many of the skills which are assessed through standardized testing. Students learn key skills and a working knowledge in the areas of leadership, communication, and developing life-skills.

For more information regarding any of the Extension or 4-H programs offered in Rutherford County, please contact Walter Dirl at wdirl@tn-state.edu. 



Mr. Walter Dirl

"Developing participants' critical thinking skills through the use of STEAM-based programs will prove to be beneficial to Rutherford County 4-H members in both the immediate and long-term future."

Scott County 4-H provides wealth of opportunities for young people to grow and learn

Cassie Young, Scott County Extension Agent

Through UT/TSU Extension, the Scott County 4-H Program, led by TSU Extension Agent Cassie Young, has flourished over the past year. The program serves 1,189 students monthly by offering numerous opportunities.

Youth of Scott County, Tenn. have participated in biscuit and cornbread baking contests and demonstrated their baking skills at the Tennessee Valley Fair. Students have also created art posters promoting 4-H, entered into photo contests, and even designed and built piggy banks as part of a financial management lesson. Additionally, over 200 students participated in the 4-H Public Speaking Contest. Another popular 4-H project is the Chick Chain. Students receive chicks at no cost and raise them. They then enter 3 of their chickens (now full grown layers) into the

Scott County Fair for judging and to be sold at auction.

To make sure contest participants have the chance to show off what they've learned and created, Scott County 4-H hosts an annual Achievement Night.

Scott County youth participate in 4-H Camp each year and love helping out in the community when an opportunity arises. For example, Christmas shoeboxes were donated to the Women's Shelter, Michael's Mission, and the Children's Center, all over Scott County. The older youth in Scott County have embraced leadership roles and help teach the younger students about drugs, alcohol, and tobacco. Scott County 4-H also received a HealthRocks! grant and has been doing programming focusing on Healthy Lifestyles.


Additionally, Scott County 4-H works collaboratively with Tennessee Wildlife Resources Agency



Ms. Cassie Young

and the National Wild Turkey Federation to bring the resources needed to Scott County in order to teach responsible and safe gun handling.

Currently, Ms. Young is working with the Scott County 4-H program to expand its volunteer base in the 4-H Shooting Sports.

For more information about Scott County 4-H or any of the activities mentioned here, contact Cassie Young at cwhaley1@tn-state.edu. 

Scott County youth enjoy the annual 4-H Camp.



Participants in the Chick Chain project raise and sell chickens.



Young environmentalist takes advantage of FFA opportunities

Grace Perry, Shelby County Program Assistant

Environmentalist Nia James started her efforts to save the earth at the tender age of 4. She learned in preschool during Earth Day about the importance of recycling and protecting the ozone layer.

Today, Ms. James is a sixteen year old Junior at Houston High School in Memphis where she majors in Agricultural Sciences. She has grown by leaps and bounds in her knowledge and ability to practice healthy eating and living.

Beginning in 2012, she began composting and gardening and continues to learn by assisting Mary Norman, a founder of the Rosie Etta

Spencer Family Foundation, in planting, harvesting vegetables, weeding, and shelling peas. Ms. James also attended the TSU Small Farm Expo in Nashville along with 40 other students from Memphis to learn better techniques for harvesting healthy food.

Her interest in composting and gardening took flight when she began attending Houston High School and joined the Future Farmers of America (FFA). She initiated creating a compost and presented it to her FFA organization. During the 2013 FFA Banquet of Houston High School, she received numerous awards and was elected Vice Presid-


ent for the Houston High School chapter of FFA for the 2013 and 2014 school year.

Her hard work and effort seems to have paid off. Ms.



Ms. Nia James

James' Procomposting project titled "How Dirty is Your Dirt" will be displayed at the state competition.

For more information on Ms. James' project or other Extension activities that are ongoing in Shelby County, contact Gracy Perry at gperry1@tnstate.edu. 

4-H provides learning opportunities for Sullivan County youth

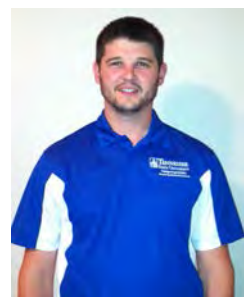
Walter Malone, Sullivan County Extension Agent

From preparing their next speech, to caring for their beef project animal, Sullivan County youth have gained knowledge and positive life experiences through participation in the 4-H Youth Development Program led by Extension Agent Walter Malone.

Through their 4-H involvement during the past year, 125 youth indicated they are now better able to understand and follow directions. Additionally, 92 youth reported that their 4-H experiences have helped them gain the self-confidence to try new things.


Notable programming accomplishments have included recognition as "Outstanding 4-H Beef Program" by the Tennessee Cattlemen's Association in January 2013 and community support of a recent service project entitled "Bags to Benches." The service project has benefited a local city park by collecting and recycling plastic bags. From October 2012-April 2013 4-H members collected over 500 pounds of plastic that was recycled through the project into composite building materials. The park received new benches and the community kept the plastic from entering local landfills. Through the beef cattle project

youth learned responsibility, how to achieve goals and teamwork while raising beef cattle for both breeding and meat. These



Mr. Walter Malone

are two examples of how youth have been positively affected through 4-H participation in Sullivan County.

For more information on the Sullivan County 4-H Program, contact Walter Malone at wmalone@tn-state.edu or phone (423) 279-2723. 

4-H provides Warren County youth with real-world experiences and skills

Loren Stinson, Warren County Extension Agent

Practical, real-world experiences and skills can be difficult to obtain for youth living in rural communities. However, since Extension Agent Loren Stinson has joined the TSU Cooperative Extension staff, she has been working with youth in Warren County to provide these kind of skills and experiences which can make a big difference later on. Over the past summer, Warren County youth has been involved in several activities that will enable them to succeed in this fast paced world.

Warren County 4-H members have had the opportunity to be involved in such programs as livestock judging, where they take day trips to farms and evaluate animals, the Chopping Block Fiesta, a cooking school for 4th—6th graders, and most recently, the Inaugural Beef Bonanza Clinical.

The Beef Bonanza Clinical featured 10 youth, seven of whom were new to the Beef Project, who participated in a judging clinical, a feeds lesson that will prepare them for the Regional and State Beef Skill-a-Thon in Murfreesboro, a fitting clinic, and a showing clinic. Over this two day event, youth gained confidence in their projects by working with their animals and enjoying their time in 4-H.


While the Beef Bonanza Clinical focused on preparing 4-H participants to compete with their livestock in the field, another event,



Participants in the Inaugural Warren County Beef Bonanza Clinical pose for a photo.

the 2013 Chopping Block Fiesta, taught skills that are more useful inside the home. Held twice in June and reaching a total of 50 youth who learned how to slice and dice their way through 15 different Mexican style recipes. These tasty recipes included Mexican Cornbread, Alambres, and Tostadas de Pollo.

In the coming months, Warren County youth will participate in Consumer Decision-Making, Like Skills, and Livestock contests where they will continue to develop confidence and useful skills.

For more information on the Beef Bonanza Clinical, the Chopping Block Fiesta, or any other Warren County 4-H Program, please contact Loren Stinson at lstinso1@tnstate.edu or by phone at (931) 473-8484. 



4-H participants Marynia Harris (left) and Kaylin Barrett (right) assist each other with measurements as part of the Chopping Block Fiesta.

Ms. Loren Stinson



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From left to right: Tennessee Commissioner of Agriculture Mr. Julius Johnson; Tennessee Board of Regents Chancellor Mr. John Morgan; Dean and Director of Research/Administrator of Extension of TSU's College of Agriculture, Human and Natural Sciences Dr. Chandra Reddy; TSU President Dr. Glenda Glover; and TSU Associate Vice President of Facilities Mr. Ron Brooks break ground on the construction of four new facilities at the Main Campus Agricultural Research and Education Center.



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