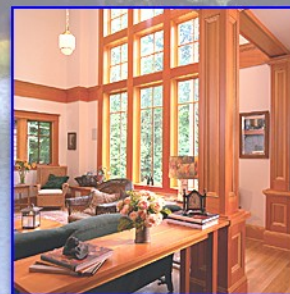
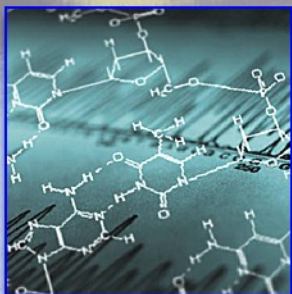


AGFACS LINK

Fall 2010

*Transforming
the
Agricultural
Environment
and
Changing
Lives*



Tennessee State University
School of Agriculture and Consumer Sciences

Dean's Page



Flood Devastates Research and Extension Farms



The School of Agriculture and Consumer Sciences suffered catastrophic losses to its Cheatham County and Main Campus Research and Extension Centers during the May floods. The manager of the Cheatham County facility, Chris Robbins and his family

had to be rescued by boat; flood waters completely covered 20 foot tall structures at the farm. At the main campus facility, Dr. Richard Browning was caught in rapidly rising flood waters while trying to rescue animals. Overburdened emergency personnel could not respond to Dr. Browning's plight. TSU President Dr. Melvin Johnson utilized his white-water rescue training to save Dr. Browning.

Monetary damages to buildings and equipment are in the hundreds of



thousands of dollars; the research programs of students and faculty suffered major setbacks. Altogether, the goat project lost 134 animals, including 92 does and 29 kids, more than a third of their entire stock. "It set us back," says Dr. Browning. The F1 crossbreeding project, which took the hardest hit, made up the bulk of a graduate student's thesis work. Browning hopes to help him salvage the work. "We'll just have to draw a line of demarcation right through [our research] at the flood, and do some assessment with what we already have in the books," says Browning.



"There were pretty extensive losses," states Dr. Chandra Reddy, Dean, "the university is working with the state insurance program to recoup some of the losses, but "some things are not replaceable". Between the two sites, the flood affected the research of over 15 scientists, he adds.

Students Receive National Scholarships

Mr. Toney Tillman, Jr. and Mr. Christopher Conner, students in the School of Agriculture and Consumer Sciences received \$1000 scholarships from the National Organization of Professional Black Natural Resources Conservation Service Employees. The awards were announced at the NOPBNRCSE Annual Conference held in Kansas City, Missouri during March 15-19, 2010. Mr. Tillman is a freshman with a 3.8 GPA and majoring in Plant and Soil Science and Mr. Conner is a sophomore with a 3.5 GPA and majoring in Agriculture Business.

The NOPBNRCSE Scholarship Program provides ten (10) college scholarships each year to deserving students who are pursuing a bachelor's degree in Agricultural Sciences or related fields and who are currently enrolled or planning to attend an 1890 land-grant college and/or university. Floyd Hooker, USDA Agricultural Liaison Officer submit-



ted the scholarship applications on behalf of the Tennessee Chapter of NOPBNRCSE. Hooker also assists the students with securing summer employment with USDA.

Both of the scholarship winners have NRCS roots. Christopher is the son of retired NRCS Soil Scientist, Clarence Conner and Toney is related to James Tillman, State Conservationist for Georgia. Toney has accepted a Soil Conservationist Trainee position under the 2010 Summer Internship Program with the USDA - Natural Resources Conservation Service in California.

The purpose of the scholarship program is to strengthen the long-term partnership between the Organization, USDA and the 1890 institutions and to increase the number of students studying agriculture, natural resource sciences and other related disciplines.

Enrollment Growing by Leaps and Bounds

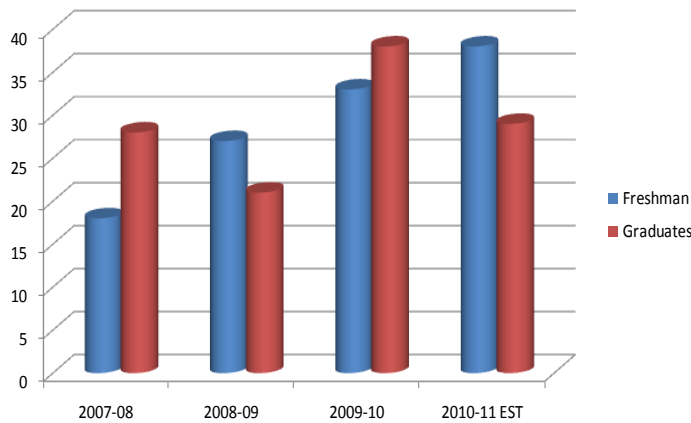
The School of Agriculture and Consumer Sciences is experiencing significant growth in student enrollment and graduation. We have doubled and even quadrupled our enrolment in many areas. Why? Our enrollment data tell us something that many of us already know- that agriculture is a growing, relevant and employable discipline to pursue as a profession. The School of Agriculture and Consumer Sciences has the expertise, the facilities and the passion to produce the next generation of agriculture and consumer science professionals.

According to a recent study by Purdue University and the U.S. Department of Agriculture, 15% of new jobs in the United States will be in the agriculture field and employment opportunities for college

graduates in agriculture are looking promising. The study states that more than 50,000 jobs in agriculture will be added in the United State each year, for the next five years. Growth is expected in veterinary medicine, food science, crop management consulting, plant science, biological engineering, specialty crop production, forest restoration, precision agriculture, climate change analysis, distance education and natural resources conservation.

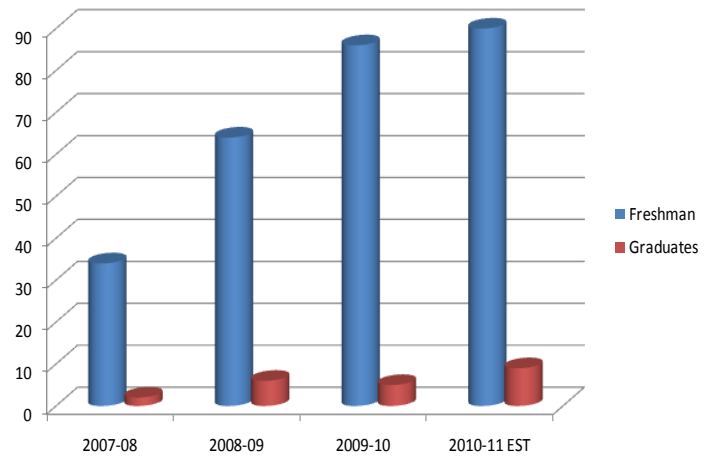
Experts state that we are getting into a generational change of people that have worked for a long time in the industry and they will be retiring or moving out of the industry. There is opportunity that's going to continue with providing food for a world population that continues to grow.

Department of Family and Consumer Sciences
BS Degree in Family and Consumer Sciences
Freshman and Graduates



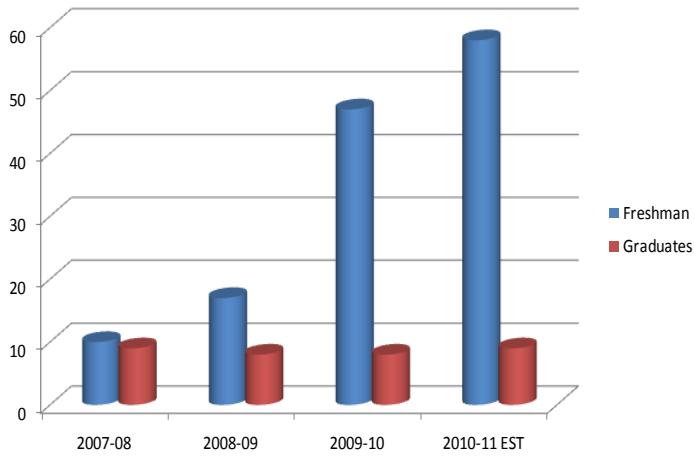
	2007-08	2008-09	2009-10	2010-11 (Estimated)
Freshman Enrollment	18	27	33	38
Number of Graduates	28	21	38	29

Department of Family and Consumer Sciences
BS Degree in Early Childhood Education
Freshman and Graduates



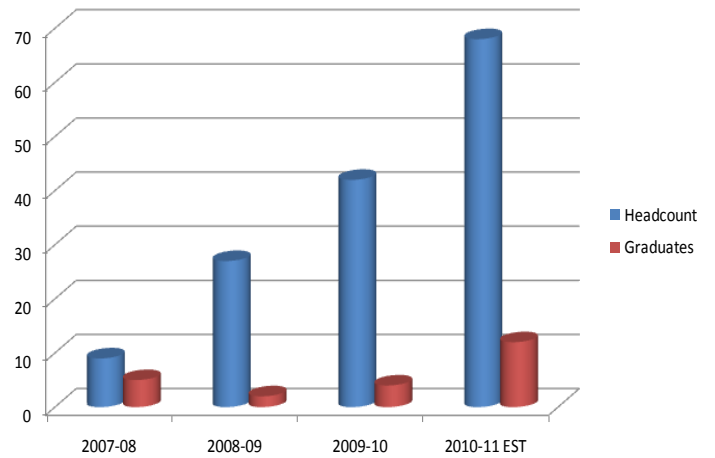
	2007-08	2008-09	2009-10	2010-11 (Estimated)
Freshman Enrollment	34	64	86	90
Number of Graduates	2	6	5	9

**Bachelor of Science Program
Department of Agricultural Sciences
Freshman and Graduates**



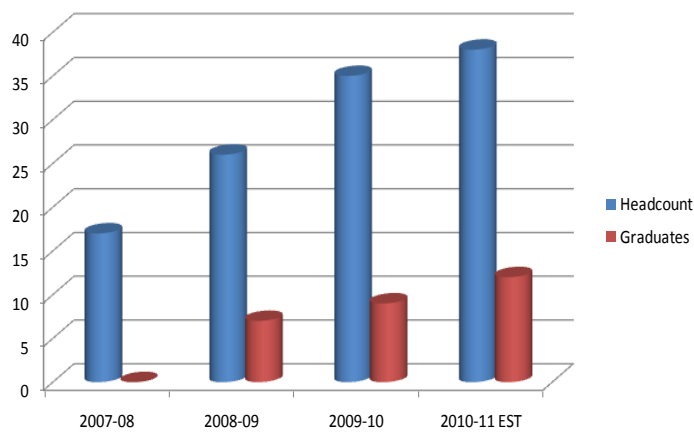
	2007-08	2008-09	2009-10	2010-11 (Estimated)
Freshman Enrollment	10	17	47	58
Number of Graduates	9	8	8	9

**Graduate Program
Department of Agricultural Sciences
Headcount and Graduates**



	2007-08	2008-09	2009-10	2010-11 (Estimated)
Graduate Headcount	9	27	42	68
Graduate Graduation	5	2	4	12

**Graduate Certificate in
Geospatial Information Systems
Department of Agriculture Sciences
Headcount and Graduates**



	2007-08	2008-09	2009-10	2010-11 (Estimated)
Headcount	17	26	35	38
Number of Graduates	0	7	9	12

James Tyus Wins Award: Chosen to Serve on National Board

James Tyus, a graduate student in animal science working with Dr. Samuel Nahashon, was awarded the prestigious *Certificate of Excellence (1st place in Breeding and Genetics)* by the Poultry Science Association for his presentation “Comparative Genomics: The Guinea Fowl Satiety Center” at the 2010 Annual Meeting of the Federation of Animal Science Societies. As a result, he has been invited to submit a manuscript to *Poultry Science*; in addition his picture and biography will be published in the December issue of the journal.

In a separate matter, Mr Tyus has also been appointed to the Board of Directors of the Poultry Science Association for a term of two years. He is responsible for representing the interests of the nearly 400 student members of the 3,000 member Poultry

Science Association. Mr Tyus is one of 13 Board members and is the first member from an 1890 university to serve on this Board.



High School Students Intern with Scientists

This summer, high school students from across the state had the opportunity to experience life as a TSU research scientist. A total of 16 students from high schools across the state (Big Picture High School- Nashville, Fayette-Ware High School - Somerville, Kenwood High School-Clarksville, East Literature High School - Nashville, Brighton High School - Covington, Douglas High School - Memphis, Hunters Lane High School - Nashville, Germantown High School - Germantown, and Cane Ridge High School - Antioch) spent the summer on the TSU main campus to participate in research activities carried out by our faculty members. An additional five students from Warren County High School spent one month working with faculty members at the TSU Nursery Research Center in McMinnville, TN. Students and faculty were pleased with the program. “It has been a lot of fun, and I learned a lot,” stated Abby Barlow, an intern with Dr. Samuel Ochieng, “the research is fascinat-



ing, and I learned a lot about TSU”. Dr. Ochieng said “The students were very good – they were enthusiastic and were able to work right along with us in the lab and the field.” The School of Agriculture and Consumer Sciences provided assistantships to the high school students, who are either rising seniors or recent high school graduates with a major in Agricultural Sciences, Consumer Sciences, and Food Sciences. During their internships, each student completed a research project. Some of the research results will be used in the students’ classes this school year, some will be presented at the 2010 Tennessee Future Farmers of America Meeting, and some will be presented at the annual TSU Research Symposium.

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Students Participate in National Conference

Tennessee State University students recently participated in the Research Poster Contest during the 2010 Minorities in Agriculture, Natural Resources and Related Sciences (MANRRS) Conference held on March 24-27, 2010 in Orlando, Florida. The poster entitled “Assessment of water quality in two creeks of the Collins River Sub-Watershed dominated by nursery crop production” was presented by (left to right) Christian Ransom, Nicholas Williams and Steven Morris. The students are working with Dr. Sam O. Dennis, Research Associate Professor. Mr. Will Nesby, Recruiter and Mr. Floyd Hooker, USDA Liaison chaperoned 13 students to the conference.



SACS Selected as Peace Corps Partner

Tennessee State University and the School of Agriculture and Consumer Sciences has been selected to become a partner school in the Peace Corps Master's International program. Master's International produces Peace Corps Volunteers with additional education and skills to serve overseas. After completing initial course work and receiving a Peace Corps placement, students travel to their respective sites and begin training. While overseas, the student's primary responsibility is the project and community to which they have been assigned; their academic requirement grows out of their Volunteer

work. The benefits of the Master's International Program can be countless, comprehensive and can last a lifetime. Students in this program have an unparalleled opportunity to live and work overseas while completing a Master's Degree in their field of interest. By completing this program, our students have the advantage of having applied theory to practice, while working overseas. They will return with a changed world view and the skills and education to continue to make a difference in the world in which we live.

TSU Helps Curb Elder Abuse

Tennessee State University Cooperative Extension Program and Lauderdale County Commission on Aging sponsored a World Elder Abuse Awareness Day event on Tuesday June 15, 2010 at Tennessee Technology Center in Ripley, TN. Over 50 residents of the community attended the event to learn from a panel of experts about how to recognize and prevent elder abuse. Representatives from various federal, state and local agencies were present to provide additional information to the attendees. Nearly 9,500 reports of adult abuse, neglect and/or financial exploitation were reported last year to the Tennessee Department of Human Services' Adult Protective Services (APS) unit. The number of reports has grown 23 percent in just five years.



SACS Hosts Second Annual Ag Week

The School of Agriculture and Consumer Sciences held its Annual Food, Agriculture and Consumer Sciences Week April 5-9, 2010, on Tennessee State University's Main Campus, using the theme "*Transforming the Agricultural Environment and Changing Lives.*"



Activities for the week included tours of the school's laboratories, presentations by faculty, a student

cookout, an awards luncheon, and a series of informational sessions for students, faculty and staff.

Dr. Chandra Reddy, Dean of the School of Agriculture and Consumer Sciences, and Director of Land-Grant Programs, commented on the successful week of events "This week has been remarkable, with so many outstanding programs and enthusiastic participation of our students, staff, faculty, colleagues and students from other areas of the University and our partners from the local schools, the USDA, and Purdue University." The first day of Ag Week focused on recruiting and sharing information about the School's programs with local high-school stu-



dents. On Tuesday, USDA experts presented to our current students the professional opportunities with the Natural Resource Conservation Service. On Wednesday, colleagues from Purdue University participated in presentations and discussions



designed to build new, synergistic relationships between the School of Agriculture and Consumer Sciences and Purdue University. The relationship and collaborations with Purdue will enhance the research, teaching and extension capabilities of both

institutions, and provide TSU with a partner to pursue new grants and programs not attainable on our own. The public was invited to a timely discussion on Thursday concerning childhood obesity and to presentations from outstanding scholars from Meharry Medical College and Mississippi State University. The week culminated with recognitions of

the accomplishments of our top students, faculty and staff, who, based upon evaluations from colleagues, have truly excelled in their respective fields. The honorees included:

Christopher Conner - Outstanding Undergraduate Student Agricultural Sciences

Ashley Danielle Dale - Outstanding Undergraduate Student Family and Consumer Sciences

Amber Clayborne - Outstanding Undergraduate Student School of Agriculture and Consumer Sciences

James Tyus - Outstanding Graduate Student School of Agriculture and Consumer Sciences

Cassandra Williams - Outstanding Administrative Staff Member

Dr. Surendra Singh - Outstanding Teacher

Dr. Jason Oliver - Outstanding Researcher

Christel Brooke Kidd - Outstanding Extension Agent

SACS students compete in Research Symposium

The 32nd Annual University Wide Research Symposium was held on the TSU campus March 15 - March 19, 2010. Under the theme of “Building Bridges to Discovery by Creating a Culture of Inquiry”, graduate and undergraduate students from the School of Agriculture and Consumer Sciences presented award-winning papers based upon their research. Congratulations to our winners!

Graduate Oral Presentations:

Tuesday Morning Session

Caleb Kersey 1st Place, “Characterization of A Tn5 Mutant of The Soft Rot Bacterium *Pectobacterium carotovorum*” Advisor: Dr. Korsi Dumenyo

Lakesha Glover 2nd Place, “Evaluation of Optimum Calcium And Phosphorus Requirement of The Pearl Grey Guinea Fowl” Advisor: Dr. Samuel Nahashon

Thea Boatswain 3rd Place, “Influence of Diet Induced Obesity on Avian Cardiomyopathy” Advisor: Dr. Samuel Nahashon

Tuesday Afternoon Session

Paul Agyemang 3rd Place, “Initial Characterization of Plant Metabolites Inducing Virulence In Soft Rot Pathogen, *Pectobacterium* Spp.” Advisor: Dr. Charles K. Dumenyo

Graduate Poster Presentations:

Agriculture and Consumer Sciences

Stephen Lewis 1st Place “Could Potassium Ion Provide the Needed Abiotic Resistance in Plant Production?” Advisor: Dr. Dharma Pitchay

Stephen Lewis 2nd Place “Impact Of Nitrogen and Phosphorus Concentrations on Container Grown Crape Myrtle” Advisor: Dr. Dharma Pitchay

Niharika Ojha 3rd Place “Spatial Analysis of Switch Grass Yield Productivity in United States” Advisor: Dr. Surendra Singh

Biological Sciences

Carl Darris 3rd Place “Utilizing Recombinant IGY in the Development of a Surface Plasmon Resonance Biosensor for *Salmonella typhimurium*” Advisors: Dr. Samuel Nahashon and Dr. Fur-Chi Chen

Undergraduate Poster Presentations:

Health, Education and Social Sciences

Alex Frederick 1st Place “Examination Into the Microbiological Safety of Irrigation Water Used By A Local Small Farmer” Advisors: Dr. Sandria Godwin, Dr. Fur-Chi Chen and R. Stone

Amber Clayborne 3rd Place “Food Safety Knowledge And Practices Among Pregnant Women” Advisors: Drs. Sandria Godwin and Margaret Machara



Small Farm Expo Honors Outstanding Farmers

The Tennessee State University School of Agriculture and Consumer Sciences recently named Chris Rinehart, Scarlett Mulligan and Stephen Rinehart the Overall Tennessee Small Farmers of the Year at its Sixth Annual Small Farm Expo and Tennessee Small Farmer Recognition Program.

The Rhineharts and Mulligan are owners of Riverview Mounds Century Farm which is located along the Cumberland River near Clarksville, TN. The farm has been in the family for over 175 years and is home to two authentic Mississippian Era Mounds that overlook the river. Winners in the Alternative Enterprises Category, the Rhineharts and Mulligan opened their farm for agritourism in the Fall of 2008. In addition to Mound Tours they offer seasonal activities such as hayrides, pumpkins, farm animals and a nine acre corn maze. Other farmers recognized at the event include Alvin and Shirley Harris of Shelby County who won in the area of Best Management Practices (Category of less than \$50,000 annual gross income), and Carl



and Michelle Hoefler of Anderson County (Category of \$50,000 to \$250,000 annual gross income) who also won in the area of Best Management Practices.

Sponsored by the School of Agriculture and Consumer Sciences, this year's Small Farm Expo and Small Farmer Recognition Program

took place at the TSU Otis Floyd Nursery Research Center in McMinnville, Tenn. The event has traditionally been held at the Agricultural Research and Education Center in Cheatham County, but was moved due to flood damage at the facility.

Approximately 200 people traveled to the alternate site in McMinnville to witness the presentation of awards and attend educational sessions on organic crop production, plant diseases and insects, new forages, marketing small farm products, new hydrangeas, grafting and budding, as well as grants and other funding for small farm operations. Attendees had the opportunity to visit various agricultural agency exhibits and participate in laboratory tours. A special after-lunch session highlighted correct pesticide storage techniques and a demonstration of the new greenhouse plastic recycling program at the Nursery Research Center. "This was a great event", said Dr. Nick Gawel Superintendent of the Nursery Research Center, "our attendees had very informative educational opportunities, and the award recipients are great examples of successful farming in Tennessee".

SACS Graduate Reception

Dean Reddy and the faculty and staff of the School of Agriculture and Consumer Sciences hosted the School of Agriculture and Consumer Sciences Reception for its graduates on Friday, May 8, 2010, in the Farrell-Westbrook Research and Extension Complex. The following graduates were presented by Agricultural Sciences Department Head Dr. Constantine L. Fenderson, and Family and Consumer Science Department Head Dr. Gearldean Johnson:

Agricultural Sciences

Randall Bigham, B.S., Animal Science/Pre-Veterinary Medicine

Brittany Carter, B.S., Pre-Veterinary Medicine

Dawnn Dixon-Lewis, B.S. Pre-Veterinary Medicine

Lance Stuckey, B.S. Agribusiness

Erika Boyland, M.S. Agribusiness

Steven Nowlin, M.S. Agribusiness

Emily Rotich, M.S., Animal Science

Thyneice Taylor, PhD Biological Science/Agricultural Biotechnology



Family and Consumer Sciences

Zareefa Abdul-Adl (Child Development)

Tamira Rumph (Fashion Merchandising)

Charisse Adams (Child Development)

Ida Thomas (Child Development)

Donna Alexander (Child Development)

Michelle Wade (Early Childhood)

Crystal Baker (Fashion Merchandising)

Antoinette Walker (Child Development)

Kelly Burdell (Child Development)

Shayna Wright (Child Development)

Ashley Dale (Design)

Sharita Fanning (Child Development)

Kiana Frazier (Child Development)

Lakishia Harris (Child Development)

Vanessa Joda (Child Development)

Kara Johnson (Child Development)

Rashante Lee (Fashion Merchandising)

Traci Miller (Child Development)

Charlene Northington (Fashion Merchandising)



Each student was presented with a School of Agriculture and Consumer Sciences gift bag. The graduates were urged to assist the School in its recruiting efforts by replacing themselves with the best and brightest students that they can find. Each graduate also completed an information card to assist the School Alumni Organization in keeping the new alumni informed of School activities. Following the presentations, a reception was held for the graduates and their families and friends.

High School Intern Wins Award at State FFA Convention

Mr. Alex Pack, a Warren County High School student who interned at the Otis L. Floyd Nursery Research Center in the summer of 2009 presented research results generated during his internship at the 2010 Tennessee FFA convention in Gatlinburg, TN. Mr. Pack won First Place in his division and will now go on to compete at the National FFA convention in to be held in Indianapolis, IN in October. Alex performed his internship under the guidance of Dr. Donna Fare, a USDA/ARS scientist at the NRC; the title of Alex's research presentation was "Irrigation timing and emitter selection affects irrigation efficiency and plant growth". We all wish Alex the best at Nationals!



NEED Grant – Energy Education Grant

This year through a partnership with Murfreesboro City Schools ESP program, 4-H conducted National Energy Education Development programs at John Pittard Elementary and Scales Elementary School in Murfreesboro. The programs are funded by a grant from the Tennessee Department of Economic and Community Development, Office of Energy Policy. The purpose of the program is to increase youth knowledge of our energy and energy conservation. Some of the lessons conducted were wind power, windmills, endothermic/exothermic reactions, light reflection, and the visible spectrum. Rutherford County 4-H reached over 400 youth through this educational program.



Students at John Pittard Elementary.

4-H Junior High Team places second in the State Dairy

A four member 4-H team from Claiborne County recently traveled to Nashville, TN to participate in the State Dairy Quiz Bowl. Team members Blaine Coffey, Megan Crawford, Travis Martin, and Bryan Loop were determined to do well in the contest. The team placed first in a preliminary qualifying test to advance to the first round of the bowl, which they won to qualify them for the championship round. Facing a group from Bedford County, the Claiborne team kept the competition close; coming down to a 5 point lead by Bedford at the last question. Bedford answered the last question correctly giving them the Champion plaque and Claiborne the Reserve Champion plaque. It was a well battled quiz bowl and we would like to congratulate our 4-H members for their accomplishments.



New Faculty in the SACS

The School of Agriculture and Consumer Sciences is proud to announce the addition of a number of new research and extension faculty. Our new faculty contribute expertise in timely areas to our academic, research and extension programs.

Dr. Guorong Zhang
Research Assistant Professor
Plant Breeding and Genetics
Farrell-Westbrook 202N
(615) 963-5824
gzhang@tnstate.edu

I received my PhD degree in Plant Breeding & Genetics at North Dakota State University in 2007, MS degree in Genetics at Zhejiang University in 2001, and BS degree in Agronomy at Zhejiang Agricultural University in 1994. I was once a barley breeder in China and have worked on barley breeding for about nine years. I did my post-doctoral training in both soybean and sweet cherry breeding programs at Michigan State University from 2007 to 2010. I am experienced at both traditional plant breeding and molecular marker technology. My major research interest in Tennessee State University is to develop bioenergy crop varieties.

Dr. Jason P. de Koff
Extension Assistant Professor
Bioenergy Crops
Farrell-Westbrook 202K
(615) 963-4929
jdekoff@tnstate.edu

I was born in Charlottesville, VA and raised in upstate NY in a small farming town of around 5,000 people. I received my B.S. degree in chemistry in 2000 from Ithaca College in Ithaca, NY. I then moved west and attended graduate school in California where I received my M.S. in soil and water sciences in 2004 from UC Riverside. I ventured back east to get my doctorate in agronomy from Purdue University in West Lafayette, IN in 2008. My dissertation focused on the reuse of waste materials (foundry sands, composts) as soil amendments. For the next two years I worked as a post-doctoral research associate for the USDA-ARS in Fayetteville, AR. My research was focused on the use of organic fertilizers for forage production and their environmental effects on soil and water quality. As a new faculty member at TSU, my extension and research interests are focused on the development of sustainable bioenergy crop production systems.

Dr. Junming Wang
Research Assistant Professor
Remote Sensing and Spatial Analysis
Farrell-Westbrook 202 G
(615) 963-1386
jwang2@tnstate.edu

I am a new Research Assistant Professor in Remote Sensing and Spatial Analysis in the Department of Agricultural Sciences, Tennessee State University. I graduated from the University of Connecticut where I earned my PhD (Natural Resources Management and Engineering: Micrometeorology) and MS (Computer Sciences) degrees. Prior to joining TSU, I worked for New Mexico State University as a post-doctoral associate and then as an Assistant Professor. My research areas include Remote Sensing, Agricultural Meteorology, Plant Growth, Irrigation and Fertilization, Gene Flow, and Air Quality.

New Faculty in the SACS

Dr. John Ricketts

Extension Associate Professor

Agricultural and Extension Education

Lawson Hall 205B

(615) 963-7620

jricket1@tnstate.edu

I came to TSU from the University of Georgia where I coordinated the Agricultural Education program for seven years. My primary area of scholarship is student achievement. Specifically, my research centers around the achievement variables of critical thinking, leadership development, and academic success. I earned a PhD with majors in Agricultural Education/Leadership from the University of Florida. My Animal Science (B.S.) and Vocational-Technical Education (MVTE) degrees from MTSU prepared me for my first educational positions as a high school agriculture instructor/football coach at Lebanon and Gallatin High Schools here in the Middle Tennessee area. My new position at TSU has returned me and my family [Jennifer (wife), Jamey (5), and Jackson (2)] to our beef cattle farm in Mt. Juliet, TN.

Dr. Olive Li

Research Assistant Professor

Food Process Engineering

Farrell Westbrook 202 H

(615) 963-5616

oli@tnstate.edu

My passion for food science & technology started with my B. Eng. degree obtained in China in 1990. With another Master's degree in Biochemical Engineering, I immigrated to Canada in 2001. I then studied and obtained my M.A.Sc. and Ph.D. degrees in Food Engineering at University of Toronto. With 20 years experience in teaching and research I have acquired expertise in food chemistry, biochemistry, nutrition, food processing, and biochemical engineering. This multidisciplinary background allows me to interact with professionals in a broad variety of related fields, including agricultural science, human nutrition, pharmacology, and as an integral part of engineering – economics.

Dr. Solomon Haile

Extension Assistant Professor

Agroforestry/ GIS / Carbon sequestration

Farrell-Westbrook 214C

(615) 963-5445

shaile@tnstate.edu

I am originally from Eritrea. My role in SACS is as an Extension Assistant Professor in Forestry and Agroforestry, holding BSc from Alemaya University, Ethiopia; an MSc from Wageningen University, The Netherland and a PhD from University of Florida. My extension and applied research focus includes environmental services of trees inside and outside forest lands, carbon sequestration, bioenergy and application of Geospatial information. I completed my post doctoral research at the Soil and Water Science, University of Florida where I studied biogeochemical interface between plant communities, with emphasis on environmental services of trees. My PhD study was on soil carbon sequestration in tree-based pasture agroforestry systems in Florida. Prior to my PhD study, I was a teaching faculty in the Department of Plant Science, University of Asmara, Eritrea for five years. My research works have been published in some of the world's leading peer-reviewed research journals, including Global Change in Biology, Journal of Environmental Quality, and Scientia Agricola.

Educational Opportunities

Design

The Design Program at Tennessee State University prepares students for careers in interior design, textile design and fashion industries. This is a creative, as well as a technical field, with tremendous opportunities for growth in all areas. A broad curriculum provides a foundation for students to gain insight into how the principles and elements of design can be manipulated to create a functional and aesthetically pleasing interior space or a garment that will compliment the client's best features. Students may focus on a particular area of design, with their coursework culminating in an internship in their chosen field. Interior design firms, retail chains, specialty stores, and manufacturers have all selected graduates from our program. As a designer you may even be employed in a design division of a corporation or institution or open your own design studio.

Designers work in a variety of areas analyzing a client's needs and goals. As a professional, the designer integrates these findings with knowledge of design acquired through coursework and internship experience. The designer formulates designs that are appropriate, functional, aesthetic and creative and presents design recommendations through appropriate presentation media. Both interior and fashion designers possess a thorough knowledge of textiles and textile properties and have skills in manual and computer drawing applications.



Plant and Soil Science

We offer a major in Agricultural Sciences with a concentration in plant and soil science and specializations in agronomy and horticulture. The concentration in plant and soil science provides excellence in learning, research, and engagement in the production of food, fiber, turfgrass, and ornamentals, and stewardship in the use of the soil, water, and other environmental resources. Students in this concentration/specializations can minor in a number of areas and take advantage of excellent opportunities in research and internships. Since the faculty to student ratio is low, students receive outstanding advisement on coursework and career planning.

The Department of Agricultural Sciences is fortunate to have outstanding facilities, including well-equipped teaching, research, and computer laboratories, high-tech twenty-first century classrooms, state-of-the-art greenhouses and plant growth chambers, library holdings, pleasant areas for students to study and socialize, and three farms with more than 300 acres for research and hands-on experiences. We are also fortunate to be strongly allied with state and federal agencies, private industry, and other educational institutions that enhance our teaching, research, and job placement capabilities.



Please call the following numbers for more information about our academic programs:

Department of Agricultural Sciences - 615.963.5435

Department of Family and Consumer Sciences - 615.963.5617

School of Agriculture and Consumer Sciences - 615.963.7561

Employee Anniversaries

Congratulations to the employees from the School of Agriculture and Consumer Sciences who were recognized at the 18th Annual Awards Celebration Luncheon held this spring. They were:

35 Years

Allie Gooch
William Hayslett

30 years

Sarabjit Bhatti
Barbara Watkins
Eddie Williams

25 Years

Carter Catlin

20 Years

Roy Avery

15 Years

Finis Stribling

10 years

Anonya Akuley Amenyenu
Ahmad Aziz
Dixie Crawford
Sherry Crudup
Jayne Howse
Karla Kean
Rabie Neal

5 Years

Nakesha Brown
Cortney Holloway
Dave Neal
Samuel Ochieng

Retirees

Emmanuel Nnodu
Carol Wade

Faculty Updates

Dr. Fisseha Tegegne has been named a member of the Advisory Committee for a newly established National Center for Targeted Studies in the South, housed at the Southern Rural Development Center.

Dr. Fisseha Tegegne received the Distinguished Professional Contribution Award from the Southern Agricultural Economics Association.

Dr. Fur Chi Chen was appointed by Agriculture Secretary Tom Vilsack to the National Advisory Committee on Meat and Poultry Inspection for 2010-2012.

Dr. Nick Gawel was named Committee Chair of the Year by the Tennessee Nursery and Landscape Association for his work in assisting the Association organize and host the Annual Tennessee Green Industry Field Day.

Alumni Update

Vanessa Joda, a Child Development graduate has been hired as the Lead Teacher for Early Head Start

Antoinette Walker, a Cum Laude Child Development graduate has been hired as a Family Service Specialist for Early Head Start

Cedria Hawke a 2008 graduate reports that she received a Masters degree in Child Development and Family Studies on June 11 from Ohio University.

Charmin Bates, 2009 Family and Consumer Sciences, is an Assistant Buyer for Macy's, Inc. New York, NY.

New Grants

Faculty in the School of Agriculture and Consumer Sciences have been the recipients of a number of new grants to support the research, education and extension activities of the School.

Alternatives to Conventional Pesticide in Disease and Pest Management in Nursery Production System. Mmbaga, M. T.; Oliver, J. B. \$199,997

Development of Biological based IPM for Powdery Mildew in Flowering Dogwood. Mmbaga, M. T.; Ochieng, S.; Sauve, R. J. \$299,981

Bringing Sustainable Environmental Consumer Practices to the Community and the Classroom. Ballard de Ruiz, A. S.; Machara, M. E. \$149,774

Proteomic Analysis of Campylobacter Surface Antigens for Developing an Innovative Fingerprinting Scheme. Chen, F.; Zhou, S.; Nahashon, S. \$299,998

Building Capacity in Graduate Agricultural and Extension Education: Curriculum and Instructional Delivery. Singh, S. P.; Comer, S.; Pitchay, D.; Hinsey, J.; Ekanem, E. \$149,301

Characterization of Novel Hydrolytic Enzymes for Improving Conversion Efficiency of Lignocellulosic Biomass. Zhou, S.; Sauve, R. J.; Vercruyse, K.; Johnson, T.; Lee, C. \$299,999

A Molecular Model for Tolerance to Toxic Metal Ions in Plants. Sauve, R. J.; Zhou, S.; Stewart, J.; Thannhauser, T.; Mueller, L. \$299,992

Developing and Evaluating Sustainable Production of Eastern Gamagrass as Complementary Bioenergy. Dzantor, E. K.; Tyler, D. D.; Tegegne, F.; Hui, D.; Clardy, A. \$423,287

Building Capacity of Youth - Active and Media Savvy. Oates, V. J.; Ekanem, E.; Fleming, R. \$563,992

Water Smart: Watershed Academy for County Agents in Tennessee. Dennis, S. O.; Byl, T. \$188,000

Characterization of Root Proteomes for Drought and Salt Tolerance in Wild Tomato Species. Zhou, S. P.; Sauve, R. J.; Thannhauser, T. \$124,552

Development of New Methods and Treatments to Certify Field-Grown Nursery Plants Against Imported Fire Ants. Oliver, J.B.; Ochieng, S. \$29,972

Identification of Factors Predisposing Woody Ornamentals to Ambrosia Beetle Attack. Oliver, J.B.; Ochieng, S.; Ranger, C.M. \$40,000

New Extension Publications

Oliver, J.B., S. Ochieng, M. Halcomb, and N. Youssef. 2010. Imported fire ant control in production nurseries with baits. Tennessee State University School of Agriculture and Consumer Sciences Department of Agricultural Sciences and The University of Tennessee Institute of Agriculture Extension. Publication No. TSU-10-0034(A)-3-61065.

Vail, K., and J. Oliver. 2010. Managing fire ants in and around Tennessee's schools. University of Tennessee Institute of Agriculture Extension and Tennessee State University School of Agriculture and Consumer Sciences Department of Agricultural Sciences. PB1788.

Refereed Publications

Amenyenu, A., F. Tegegne, S.P. Singh, and E. Ekanem. "Knowledge of the 2005 Dietary Guidelines and Food Consumption Habit of African Americans in Tennessee," *Journal of Food Distribution Research*, Volume XLI, Number 1, March 2010.

Aziz, A. Naseer 2010. Isolation and DNA-Marker Based Fingerprinting of Individual Pollen Grains. Methods in Molecular Biology series volume on Genotyping Protocols (editor: Tracey A. Bodo Slotta). Springer, New York, NY. (Accepted).

Browning, R., Jr. and M. L. Leite-Browning. 2009. Reproductive, growth, and fitness traits among Boer, Kiko, and Spanish meat goats semi-intensively managed in the southeastern United States. *Tropical and Subtropical Agroecosystems*. 11:109-113.

Mmbaga, Margaret T., Li, Yonghao; and Sauve R, 2010. First Report of *Myrothecium roridum* in *hydrangea macrophylla* in the USA. *Plant Disease Journal*. 94: Accepted.

Nahashon, S. N., S. E. Aggrey, N. A. Adefope, A. Amenyenu and D. Wright. 2010. Gomperts-Laird model prediction of optimum utilization of crude protein and metabolizable energy by French guinea fowl broilers. *Poultry Science* 89:52-57.

Oliver, J.B., D.C. Fare, N.N. Youssef, S.S. Scholl, M.E. Reding, C.M. Ranger, J.J. Moyseenko, and M.A. Halcomb. 2010. Evaluation of a single application of neonicotinoid and multi-application contact insecticides for flatheaded borer management in field grown red maple cultivars. *J. Environ. Hort.* In Press.

Reding, M., J. Oliver, P. Schultz, and C. Ranger. 2010. Monitoring ambrosia beetles in ornamental nurseries in Ohio, Tennessee, and Virginia: Influence of trap height. *J. Environ. Hort.* 28: 85-90.



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Vol. 3, Issue 1 (Fall 2010)

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