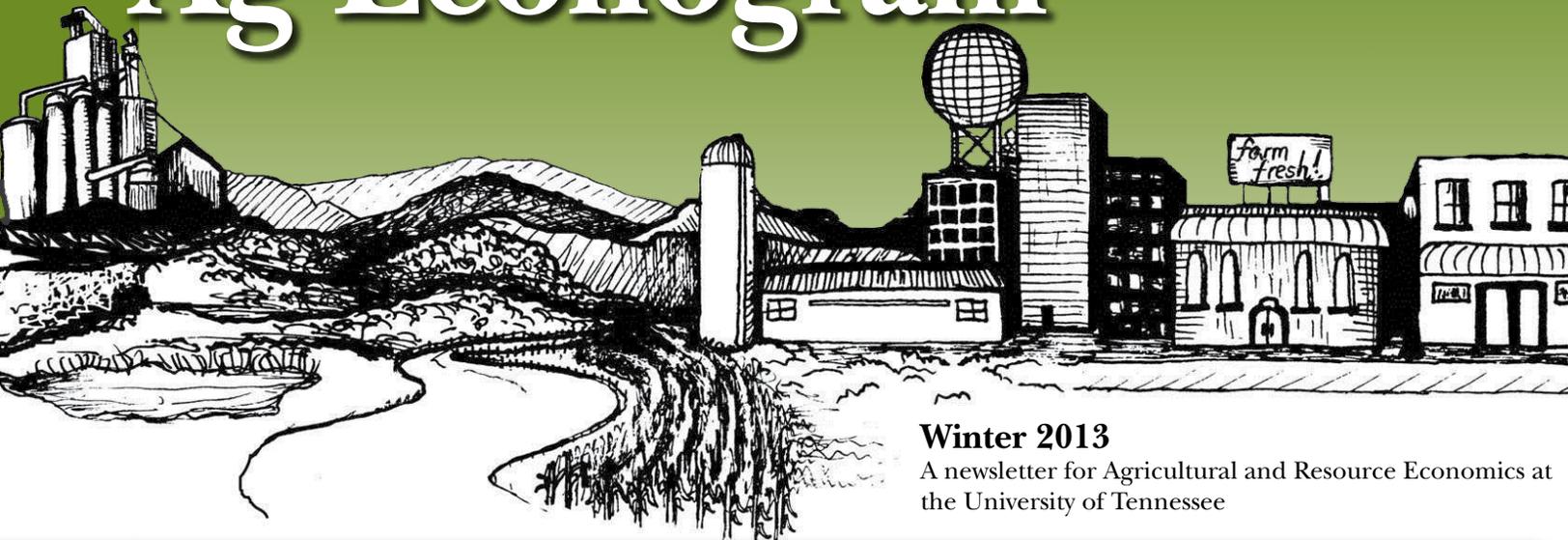


Ag Econogram



Winter 2013

A newsletter for Agricultural and Resource Economics at the University of Tennessee

From the Department Head's Desk

In 2012, we celebrated the 150th anniversary of the Morrill Act, which authorized the formation of land-grant universities. These universities developed agricultural research, teaching and Extension programs, which propelled the U.S. in unprecedented scientific discovery and education. These programs are just as necessary and viable today as they have ever been, and our department excels in the threefold mission of the land-grant system.



Our research includes discoveries in bioenergy, land and resource use, marketing, finance, production, and other topics. These discoveries aid scientists in determining profit maximizing and efficient resource use solutions for families and businesses, both inside and outside Tennessee.

Passing along research discoveries to our students is the department's top priority. Our undergraduate and graduate students continue to be successful in finding jobs at competitive salaries. That signals our relevance and rigor in the classroom and the dedication of our teaching faculty.

Our Extension component has a long history of helping Tennessee farm families make better informed financial decisions. This program's success is due to the work of Extension agents and state and area specialists.

The next 50 years will no doubt bring many changes and challenges for U.S. agriculture. The land-grant system and our department are committed to ensuring that the excellence of the past 150 years will continue.

Delton C. Gerloff

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*Agricultural &
Resource Economics*

THE UNIVERSITY of
TENNESSEE **UT**
INSTITUTE of
AGRICULTURE

Buckle Up!

To Dr. Harwood Schaffer, research assistant professor, “Buckle Up” doesn’t mean buckle your seat belt; it means buckle up your pants. Why the distinction? Because Schaffer has an impressive collection of more than 300 belt buckles.

He also is an ordained minister, and his experience in that position piqued his interest in buckles. In 1976, while working in a small parish in West Central Kansas, one of the major Wichita banks offered a special set of belt buckles. Schaffer ordered a set of five solid brass buckles.

A couple of years ago, he decided to see if the company that made the buckles, Heritage Mint, made any others. Schaffer found that the company, started in the mid-1970s, had gone out of business in 1985, so he found a way to purchase them in a secondary market. Schaffer consulted

eBay and discovered that Heritage made a number of different buckles, many of which were part of a series of states. Others were university or sports team buckles with team mascots featured. State buckles generally illustrate some location or major activity within the state. Most of the buckles were standard size, but the company also made half-size and limited-edition sterling silver buckles. Since most of the Heritage buckles were sold through banks, the bank name is engraved on the backs along with a serial number. Many of the silver buckles also have the name of the purchaser engraved on the back.

The boards on which the buckles are to be mounted also are collector’s

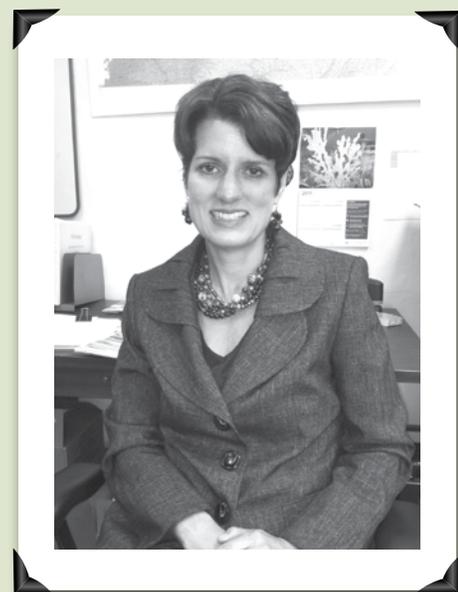


items and are made by Heritage. Schaffer has found the boards through eBay sellers. He decides which buckles are mounted on each board based on a common theme. Heritage manufactured the most buckles associated with Texas and Kansas, and he has not found any buckles associated with northeastern states yet. He only collects the Heritage Mint buckles.

Alumna Spotlight: Ginger Buchanan

Alumna Ginger Buchanan recalls that back in the early 1990s when she was a student in agricultural economics, the students in the program were closely knit and the professors were able to provide one-on-one guidance because of the small program size. As an undergraduate, Buchanan participated in many activities, including judging, 4-H and FFA, but she also had a love for all things numerical, such as calculus, accounting and statistics. She remembers how the challenges of farm management plans required by Dr. Keller would eventually help her in her future law business.

Buchanan graduated with a B.S. in agricultural economics in 1992 and then obtained a law degree from the University of Tennessee in 1995. After working with a law firm in Cleveland, Tenn., for a year, she decided to “hang out her own shingle” by starting her own law firm. Buchanan recounted how the accounting, financial and economic concepts she learned in the agricultural economics program helped her start her firm and also helped her work with clients in the areas of estate planning and estate administration. She also noted that participating in judging and public speaking helped her when making a case in the courtroom.



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Just as she did in college, Buchanan has taken on the challenge of serving in leadership positions, serving on the County Commission and also as a Circuit Court judge. In addition to staying busy with her law firm, Buchanan and her two daughters, ages 9 and 12, live on the family farm, which they converted from a dairy to beef cattle operation. While her

younger daughter loves sports and basketball, including the Lady Vols, her older daughter is interested in ballet and raising and showing cattle. Buchanan says they would love to introduce agritourism into the farm someday, perhaps with a corn maze and pumpkin patch. In looking back over her college experience and career, Buchanan offers students

the advice to enjoy their academic experience and to gain as much education as they can before they enter the world of work. She also advises students to make sure they pick a career path that will bring them as much happiness as financial wealth, stating, "At the end of the day, you need to find joy in what you have accomplished that day."

Farm Management Area Specialist Joins MANAGE



Andy Davis recently joined the MANAGE program as a farm management area specialist. He is headquartered in Clarksville, Tenn., and serves Montgomery, Benton, Cheatham, Dickson, Humphreys, Stewart, Sumner, Robertson, Houston and Henry counties.

Davis grew up on a 1,000-acre corn, wheat and soybean farm in Sparta, Tenn. His family also does some custom planting and combining. Davis received his B.S. degree from Tennessee Tech University and

finished his M.S. degree this past spring at the University of Tennessee.

Why did he want to become an area specialist? "It is a good opportunity; I get to stay with UT; I get to continue to work with the Agricultural Economics department; and, above all, I get to work with and help farm families," he states. David Bilderback, another area specialist, says that Davis has gotten off to a great start in the job. He knows how to listen to Extension agents and farm families.

Farm Management Specialist Garland's Achievements Span More Than 40 Years

After more than 40 years of service to the Extension program, Dr. Clark Garland has many stories to tell: stories of challenges faced but, more importantly, stories of achievements that helped bring a widely recognized program in farm management and finance to the people of Tennessee.

Garland is a native of Gainesboro, Tenn., which is located in Jackson County. He pursued his undergraduate education in agronomy at Tennessee Tech

University. While in school, he worked part-time with the Cookeville Production Credit Association. He decided to pursue graduate studies in agricultural economics and received his M.S. degree in 1967 and Ph.D. degree in 1971, both from the University of Tennessee. Since 1971, Garland has worked with University of Tennessee Extension.

His first Extension assignment was with a cooperative Tennessee Valley Authority Farm Management

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Demonstration Program. His signal career achievement is the design, development and leadership of the highly successful and nationally recognized MANAGE program. In 1986, 12 farm management area specialists were located across the state and worked directly with Extension agents and farm families to improve economic, social and environmental conditions. Today, six of those original specialists remain as part of a nine-person team, and more than 18,000 Tennessee farm families have participated in the intensive phase of this comprehensive financial management, family life and family finances educational program. Today, Garland has a postretirement appointment that is scheduled to end on June 30, 2013. He chairs the Tennessee Biofuels Initiative Farmer Education Team, is co-coordinator of state sustainable agriculture programs

and serves as coordinator of federal income tax seminars.

Another one of Garland's most rewarding programs was a regional program with Kentucky aimed at family dairies. The project demonstrated that working with other Extension personnel from another state could make a program not only more successful, but also build strong bonds with colleagues.

When asked what has been the most significant change he has seen in his professional career, Garland's response was the change in educational delivery technology. He pointed out, however, that delivery technology is only a tool, and it's important for the right people to work together on the most appropriate subject at the time. What advice would he give to a new

Extension appointee: "Get to know people, work as a team and help each other, be sensitive to what really needs to be done, and make sure you have activities that generate accomplishments."

Garland has received numerous local, state and national awards. They include the B. Ray Thompson Award, which is the highest award given by the Institute of Agriculture for exceptional program development and service to the state, the State Team Award of Excellence, the National Association of County Agricultural Agents Distinguished Service Award, and, most recently, the National Award for Excellence in Extension.

How does Garland measure progress: "By the performance of people you work with and influence."

New Graduate Students Join Department

| Student | Hometown |
|------------------------|----------------------|
| Joe Brandyberry | West Lafayette, Ind. |
| Kevin Cavasos | Pensacola, Fla. |
| Chad Covert | Knoxville, Tenn. |
| Alicia Kutz | Oviedo, Fla. |
| Zongyu Li | Yidu, China |
| Joe Lowe | Smiths Grove, Ky. |
| Jin Qian | Nantong, China |
| Timoteo Simone | Beira, Mozambique |
| Tan Watcharanaantapong | Bangkok, Thailand |
| Emily Wise | Knoxville, Tenn. |
| Sinjung Youn | Jeonju, South Korea |
| Chenli Zhang | Haining, China |
| Jun Zhang | Chengdu, China |



Welcome to our new graduate students this fall. All are in the master's program with the exception of Watcharanaantapong and Youn who have started the Ph.D. program in natural resources. Covert and Wise are enrolled in the dual MBA/M.S. program. Dr. Roland Roberts, director of graduate studies for the department, notes that the new students represent a very diverse group but that they have adjusted well to Knoxville and are working hard in both their classes and research.

Dr. Emmitt Rawls Enjoys Extended Career Helping Livestock Producers



He got his first taste of Extension work as an Extension agent trainee in Smithville, Va., in 1964. In July 1973, he became an Extension livestock specialist at the University of Tennessee. Today, Dr. Emmitt Rawls is completing his third postretirement appointment, still helping livestock producers throughout the state.

“One of my greatest pleasures,” said Rawls, “was working with Extension agents and area farm management specialists, many of whom were UT grads. I also enjoyed the opportunity to coordinate the Tennessee Beef Cattle Improvement Initiative. Through it, many production and marketing recommendations were demonstrated to beef producers.” Some of those demonstrations included showing that the weaning of calves and proper preparation for sale could be profitable, teaching stress-free weaning methods, and helping cattlemen manage price risk on their livestock. One of his proudest accomplishments was working with beef producers to develop video sales auctions. The first auction was held in August 1984 in Gatlinburg, Tenn.

What has been his biggest challenge as an Extension economist? Tradition — getting producers to try something new and different. In fact, his biggest

regret has been not being able to bring change to more producers.

When asked what advice he would give to a new Extension economist, Rawls said, “Associate with people who know a lot from experiences. Ask a few questions, and listen closely.”

Rawls frequently shows interest in students, both undergraduates and graduates. His concern for students came about when Extension, teaching and research became one unit. Because of that reorganization, he has been able to chair graduate committees and provide internship experiences to undergraduates.

Rawls is a native Virginian, and all of his academic degrees are from Virginia Tech. What’s in his future? “With seven grandchildren within 25 miles, I think I will be busy,” he said. He also will enjoy riding and caring for his horses, doing some church work, and working with veterans.

Ag Fraternity Brothers Take Care of Smokey Mascot at UT Events

Can you imagine 12 brothers fighting over a dog? But, not just any dog. To University of Tennessee fans, this special dog is the team mascot, Smokey. The 12 brothers, members of Alpha Gamma Rho fraternity, competed to become one of four junior or senior handlers of Smokey for the 2012-2013 season.

The story goes that in 1953, the university decided to select a dog as a

mascot. Dogs were lined up on the football field, and the winning dog was to be chosen by fan applause. The last dog in the contest was owned by the Rev. Bill Brooks. The baleful howl of Brooks’ bluetick hound (Smokey) won over the fans. When Brooks could no longer handle Smokey at games, one of the young men on the grounds crew agreed to help. He was a member of AGR and did such a good job that, from then

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Evan Betterton, Jonathan Harrison

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on, the care and handling of Smokey at UT events became the AGR brothers' responsibility.

This year, after three rounds of interviews, the 12 handler applicants were whittled down to four. Usually there are only two handlers, but, this year, a new Smokey was introduced at the Homecoming game, so more handlers are needed. Two of the handlers, Evan Betterton and Jonathan Harrison, are students in the department. Harrison said that Smokey IX was not too happy to see

this young whippersnapper of a pup invade his territory, but the two will work together until Smokey X officially takes over at the spring Orange and White game.

Both Betterton and Harrison say it is a great honor for them to work with Smokey and to represent the university. Betterton noted that Smokey is different from any other animal team mascot because Smokey connects with the fans. Harrison said that a normal 15-minute walk from the AGR house to the football

stadium takes two and a half hours when Smokey is in tow. People want to pet him and have their pictures taken with him, and Smokey accommodates those fans graciously. Game days are more than just showing up at the stadium. Smokey usually appears at three to five other events, so the schedule is tight, and the demand on his time is great.

With the guidance of students like Betterton and Harrison, Smokey will continue to be one of the many faces of UT.

2012 Summer Internships

The department had its largest group of undergraduates participating in internships this past summer. Students spend 10-12 weeks with their host organizations and are charged with gaining as much of a diversified experience as possible. Supervisors of students receiving academic credit for the internship are asked to develop a special project for the students. The project is to take place during much of the summer and should be of value to the organization. Projects this year ranged from developing lending opportunities with members of a nonprofit organization, to developing a newsletter and Facebook page, to developing a training program with two-year colleges for a major equipment manufacturer. In addition to a written report on their

internships, the students also make an oral presentation to the introductory departmental orientation class. Interns and their sponsoring organizations included the following:

| | | |
|--------------------------|--|--------------------|
| Ashley Allen | Farm Credit Services | Louisville, Ky. |
| Jonathan Allen | Natural Resource Conservation Service | Rock Springs, Wyo. |
| Jim Asbury | Case IH | Racine, Wis. |
| Chris Aytes | National Agricultural Statistics Service | Nashville, Tenn. |
| Peyton Graham | Farm Credit Services | Dresden, Tenn. |
| Jonathan Harrison | Farm Credit Services | Knoxville, Tenn. |
| Gavin Henry | Tennessee Farmer's Co-operative | Loudon, Tenn. |
| Jamie Morgan | Farm Credit Services | Knoxville, Tenn. |
| Lindsey Rochelle | Tractor Supply Company | Nashville, Tenn. |
| Michael Shepard | Tennessee Farmer's Co-operative | Fairview, Tenn. |
| Andrew Tucker | Tyson | Shelbyville, Tenn. |
| Cory Vineyard | Mississippi State University | Starkville, Miss. |

The department is always looking for new internship possibilities. Dr. John Riley coordinates the internship program.

Dr. Edward Yu Presents Research Results

Dr. Edward Yu will present research results on air quality impacts of feedstock transportation for cellulosic biofuel production in Tennessee to an international audience in January 2013. At the conference, hosted by the Transportation Research Board in Washington, D.C., around 10,000 participants will learn about the latest findings in transportation research. To have one's research selected for presentation during this conference is a significant honor.

Yu's research is part of the Sun Grant initiative, a national network of land-grant universities and federally funded laboratories working together to further establish a bio-based economy. There are only five regional lead institutions in the United States, and the University of Tennessee is the lead institution for the Southeastern region. Yu is one of several faculty in the Department of Agricultural and Resource Economics involved in the Sun Grant program.

Initially, Yu studied the economics of preprocessing procedures in handling biomass feedstocks, such as switchgrass. Preprocessing is conducted to densify the feedstock prior to processing into ethanol to reduce the costs of transportation, storage, labor, energy and other costs associated with handling the bulky round or rectangular bales. Two procedures were evaluated. The first was to pelletize the feedstock, which is a common process with wood and animal feed. Results showed that the overhead and energy costs of turning switchgrass into pellet form exceeded the costs of traditional storage and transportation of round and rectangular bales.

The second method continued to use round bales, but the switchgrass was harvested like silage and then baled and wrapped. Bales become mulch when compacted, so the density increases. This process was found to be more economical if density was consistent. The issue of moisture content is now the most uncertain part of this process. In both procedures, the chemical contents were evaluated for producing ethanol.

The second and current phase of the study, which attracted the attention of the Transportation Research Board, looks at the commercial biofuel industry's impact on the environment, specifically the impact of increased truck traffic emissions. In other words, what level of increased emissions is created in moving switchgrass from the field to the biorefinery? For this phase, Yu split the state into three regions, East, Middle and West Tennessee. Using a spatial-oriented mathematical programming model, known as BESTA, with minimal cost criteria, the location of a 50 million- and 75 million-gallon ethanol production facility was determined.

Yu then partnered with the Southeast Transportation Center to use the U.S. Environmental Protection Agency's Motor Vehicle Emissions Simulator Model to estimate emissions from hauling feedstock. This model accounts for various factors that may affect vehicle emissions (e.g., slope of road, vehicle speed, distance, temperature, type of vehicle, etc.). The model uses the output of feedstock hauling from the field to the biorefinery on the real road



network produced from BESTA to determine emissions for each particular delivery truck. The estimated emissions produced from hauling the great amount of feedstock are important for each location and have an impact on the future development of that site.

Yu and his Sun Grant colleagues expect more definitive results within the next three months.

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