

# econogram

Fall 2019



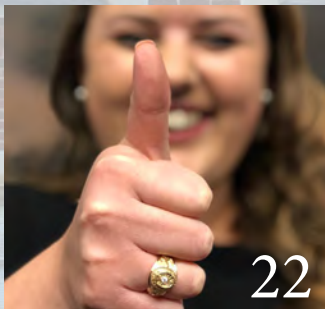
100 YEARS  
OF EXCELLENCE

# econogram



## FEATURES

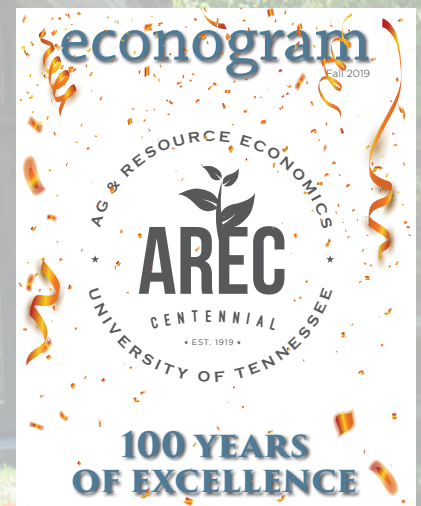
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**ON THE COVER:**  
AREC celebrates its centennial.

## ECONOGRAM COMMITTEE

**Becky Bowling**  
**Tina M. Johnson**







## Note from the Department Head

It is my privilege to serve as interim head of the Department of Agricultural and Resource Economics in the coming year. Delton Gerloff's leadership left us with an impressive legacy and great shoes to fill. It has been rewarding to celebrate our department's first 100 years. As we move into our second hundred years as a department, we have much to be proud of and encouraged by. Our undergraduate enrollments are on the rise, we are welcoming new faculty into our department, and our faculty and staff continue to serve the educational, outreach, and research needs of the citizens of Tennessee and those well beyond our borders.

As you turn the pages of the *Econogram*, I hope you are as impressed by its contents as I am. They truly highlight the accomplishments of an amazing set of faculty, staff, and students. From the classroom door to the farm gate, to main street Tennessee, to the halls of Washington, DC, and even beyond our nation's borders, our department's impacts are evidenced. Several faculty and staff are receiving prestigious awards, and our alumni continue to receive accolades as well.

The continuing support of our alumni and friends is a critical part of our success in the next century. We hope you will join us in heralding in the next 100 years.

A handwritten signature in cursive script that reads "Kimberly L. Jensen".

*Kim Jensen has served as a professor and agricultural economist in the department since 1986. She earned her PhD in agricultural economics from Oklahoma State University; a master's in agribusiness from Arizona State University; and a bachelor's in bioagricultural science from Arizona State University. Among her many accomplishments, she received the Lifetime Achievement Award from the Southern Agricultural Economics Association. She has graciously agreed to serve as interim department head until the position is filled.*

# DEPARTMENT HEAD

## DELTON GERLOFF RETIRES

In July of this year, department head Delton Gerloff retired, concluding twenty-six years of service to AREC and the Institute. He had worked at three different land-grant universities prior to joining the AREC faculty in 1998, each expanding his field of expertise. The UT job was “exactly what I was looking for,” he said, and he hit the ground running.

His position as an Extension specialist enabled him to interact with farm families and Extension agents, teaching principles of management and marketing. Among the most satisfying elements of his job was when farmers used our educational materials to make better-informed decisions. “I recall going to a county educational workshop where I, along with other specialists, presented our latest applied research to the farm families in attendance. After the session, one farm couple approached me and said, ‘The reason we are here today is that last year we took the advice presented here and were able to put \$10,000 extra in our pockets,’” he recalls. “Hopefully, there were many others who had similar experiences. That is why, for me, Extension was and is so important—it has the ability to put relevant information in the hands of those producing food and fiber for us—and allows them to make better-informed and, hopefully, more profitable decisions.”



In 2008, Delton was selected as department head, where he contributed to building a strong program that included dynamic curriculum changes to meet student needs and prepare them for the latest workforce demands. As such, the department has experienced steady enrollment growth, and innovative experiential programs are booming.

“We have a very collegial and supportive department. Faculty and staff work together to support each other. This working environment helps engender productivity and results in more of a ‘we’ outcome as opposed to ‘me.’”

Among his many accomplishments, Delton was named interim dean of Extension in 2016, serving on many committees to advance the Institute. Other examples of his accomplishments include receiving the Distinguished Service Award from the National Association of County Agricultural Agents and the Premier Forecaster Award from the American Agricultural Economic Association.

Congratulations on your retirement! 🎉

***The world is not interested  
in the storms you  
encountered but whether  
you brought in the ship.***

*Delton is pictured, right, receiving a special retirement gift from the department. The above quotation is etched on the gift, a reminder of his leadership to the department. This same quotation was included beneath his email signature for the majority of his departmental tenure.*







## **Post-retirement Plans**

While Delton has plans to spend more time with family and hobbies, such as gardening and genealogy, he also has visionary plans:

**“My quest is to be a catalyst in the teaching of personal finance in high schools. I have witnessed our high school graduates coming out of school being basically illiterate in personal finance. The result is having way too many young adults in financial situations that put them in severe financial stress for years.”**

# Agricultural Economics Majors Enjoy Second-highest Employment Rate

## ***Projected Job Demand Outpacing Available Graduates***



*Studies indicate that growth in the agricultural job market is currently outpacing available graduates. While four agricultural majors ranked in the top fifteen majors for lowest unemployment, agricultural economics majors had the second-lowest unemployment rate for all US college majors.*

**A**ccording to *USA Today*, agricultural economics majors had the second-lowest unemployment rate for all US college majors.

As college students approach graduation, they eagerly hope to find jobs in their chosen fields of study. Achieving that goal depends on many variables such as the prevailing economy and job market. However, selecting a major that is in high demand certainly bolsters the odds of

finding that job, and agricultural majors find themselves graduating in a field with notable strength in employment and compensation. In fact, a USDA-funded [study](#) indicates that growth in the agricultural job market is currently outpacing available graduates.

The study projects 57,900 agricultural jobs will open annually in the US between 2015 and 2020, but only 35,400 students will graduate annually



with agricultural-related degrees during this time period. A recent [article](#) by *USA Today* confirms the projections, ranking four agricultural majors in the top fifteen majors with the lowest unemployment; of these four agricultural majors, agricultural economics has the lowest unemployment rate of all. Further, the USDA study predicts that almost half of these agricultural jobs will be in agribusiness management, suggesting that the bulk of student shortage might be in this field.

“Students in our department can take courses on finance, policy, farm management, real estate appraisal, commodity markets, international trade, and management,” said Chris Boyer, associate professor of agricultural economics at the University of Tennessee Institute of Agriculture. “The skillset learned from our curriculum is then directly applied to real-world agriculture and food business issues,” said Boyer.

“The diverse set of coursework provides a broad base which accounts for the increasingly wide variety of jobs our students are landing each year,” said Jon Walton, undergraduate coordinator for

UTIA agricultural economics. “Students are finding employment with lending and banks; sales in animal pharmaceuticals, crop seeds, and machinery; data analytics; animal processing; government agencies; and nonagricultural related jobs. These employers include Farm Credit Mid-America, Zoetis, Tennessee Farmers’ Cooperative, USDA, Tennessee Department of Agriculture, Tennessee Farm Bureau, UT Extension, Tyson, Pilgrim’s, and others,” added Walton.

Boyer indicated that while these are exciting times for students studying agricultural economics, this is not a new trendy degree but one that is time tested. “The Department of Agricultural and Resource Economics at the University of Tennessee was established 100 years ago and has a long history of training future leaders of agriculture with an even brighter future ahead.”

Students interested in studying agriculture, including agricultural economics and resource development, are encouraged to contact the [UT Herbert College of Agriculture](#) about admissions. 🌾



*John Campbell, above right, is pictured receiving the Hall of Fame Award from the National Association of County Agents president, Richard Fechter.*

## Retired UT Extension Specialist Inducted into National Hall of Fame

*John Campbell Recognized by National Association of County Agricultural Agents*

In September, the National Association of County Agricultural Agents inducted retired UT Extension specialist John Campbell into the National Hall of Fame.

Campbell’s thirty-five-year career began as a 4-H agent, with the last twenty-seven years spent as an area farm management specialist with UT Extension. During that time, Campbell assisted farm families with more than 1,200 farm financial management plans and decisions.

Among his many accomplishments, he also led a team that developed management and marketing curriculum for Tennessee’s Master Goat Producer program.

Click [here](#) for full article.



# Happy 100th





# Anniversary





# 100 Years of Excellence

**T**he Department of Agricultural and Resource Economics (AREC) proudly celebrates its 100<sup>th</sup> anniversary! The department's rich history includes substantial research, teaching, and Extension programs in subject matter including natural resources, environmental economics, marketing, production, rural economic development, farm and financial management, rural sociology, and agricultural policy. In fact, a 2019 report ranked AREC in the top 25 percent of all agricultural economics departments in the world!

Real-world issues drive the research at AREC, from trade wars and its effects on farmers and the economy to bioenergy research that sustainably meets the nation's needs. "Our department operates on the premise that knowledge from multiple disciplines allows a research team to identify more relevant research questions and develop more effective solutions to the issues facing agriculture," said department head Delton Gerloff.

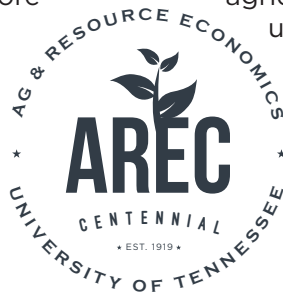
The department's Extension program also has a long history of excellence, with programs that have been and continue to be recognized regionally and nationally for their impacts.

"As a department," said Gerloff, "having access to brilliant minds and incredible resources to address tough research questions will improve the overall quality of our research, make our department more competitive for future research funding, and extend our results to producers, decision makers, and students."

Students benefit from this collection of award-winning faculty and programs and are often brought in to assist with current research. Also popular with students is AREC's Executive Seminar Series, where agricultural professionals and industry leaders are brought directly into the classroom, providing students with a motivational learning environment.

Demand for our graduates far exceeds the supply. *USA Today* reported that among 162 majors, agricultural economics had the lowest unemployment rate at 0.4 percent in 2018.

Our graduates find careers in places such as TDA, NASS, USDA, ORNL, US Army Corps of Engineers, even NASA, and careers as lawyers. Tomorrow's leaders are in our classrooms today. 🍁



## Centennial Tailgate

**October 26**

Join AREC alumni, faculty, staff, students, and friends on the Smokey Lawn annex to Circle Park at noon.

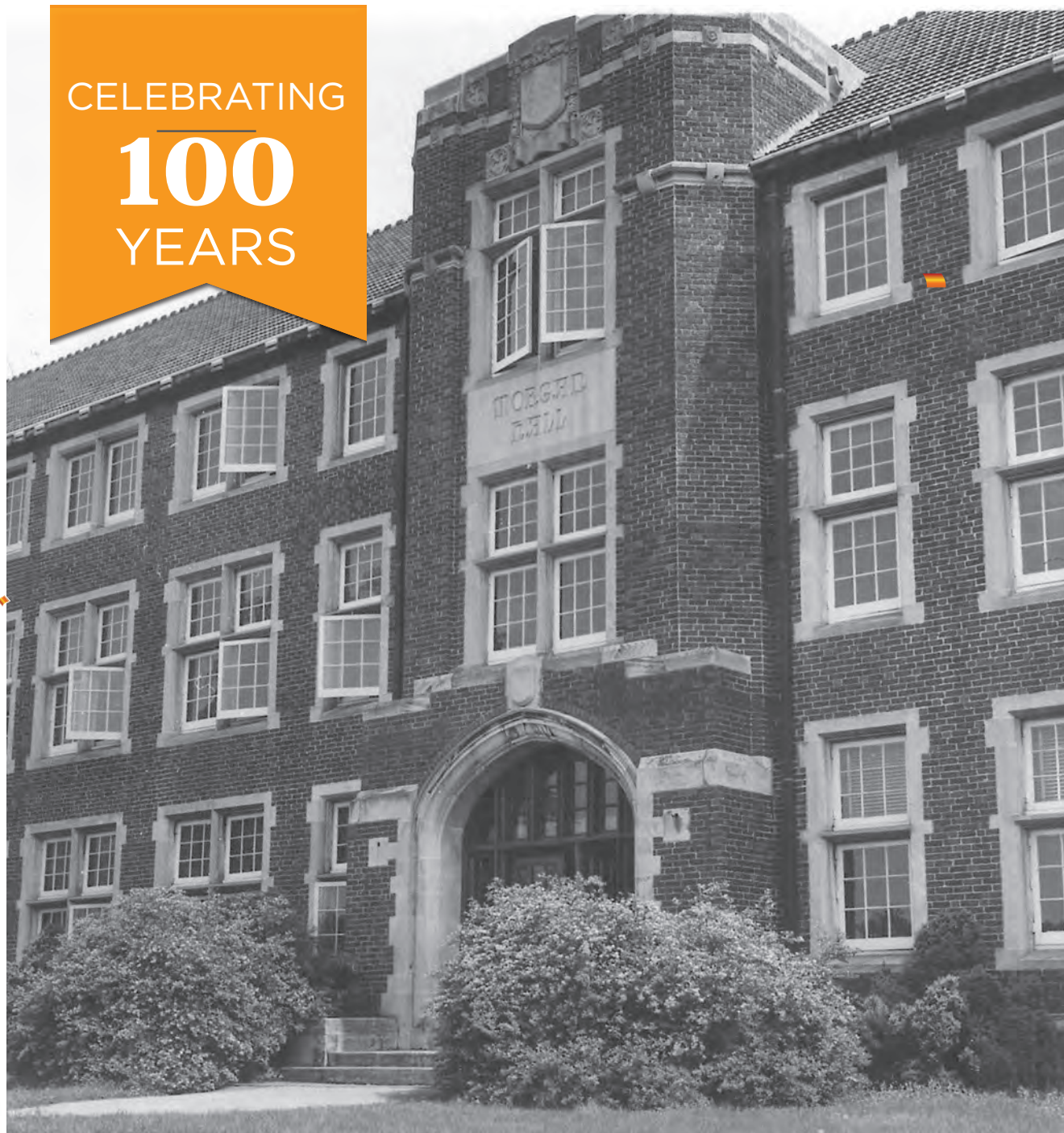
***Register to Attend:***

[together.tennessee.edu/arec100](https://together.tennessee.edu/arec100)

Registered guests will receive a barbecue meal, refreshments, and centennial swag. Guests who register will also be entered in a drawing for limited-edition prizes!



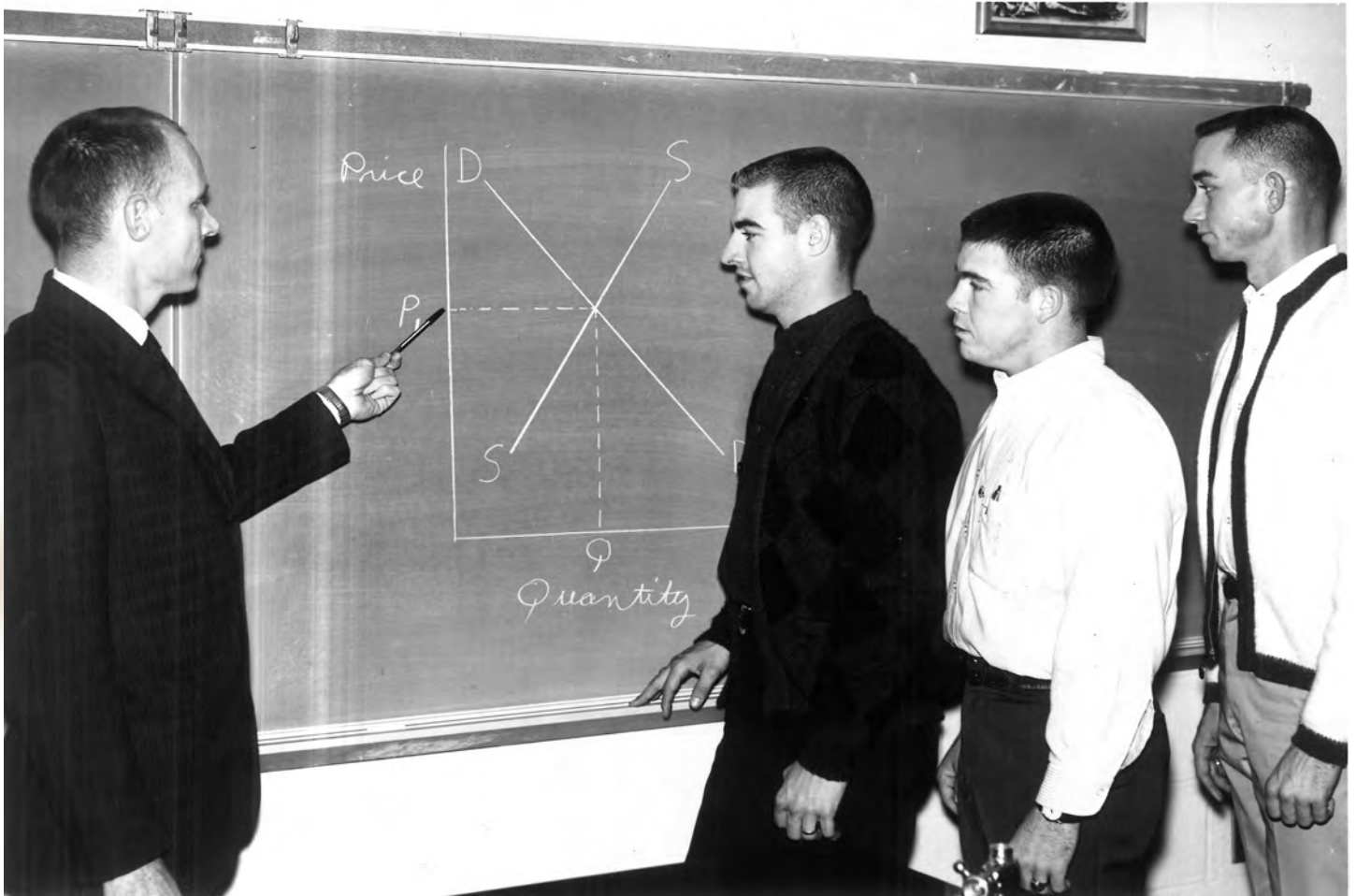
CELEBRATING  
**100**  
YEARS



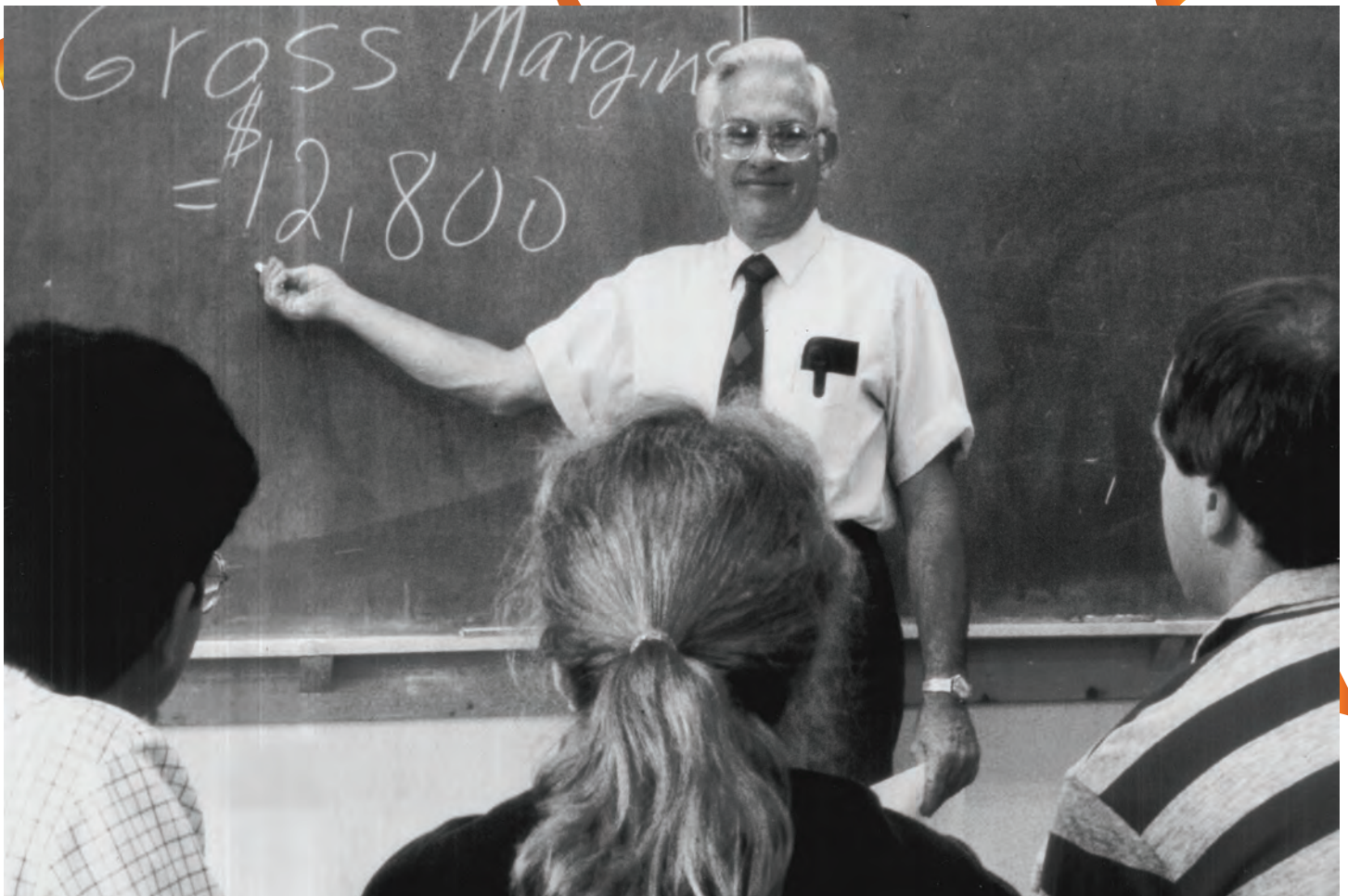
# Agricultural & Resource Economics

## 1919-2019









# Department of Agricultural Economics



1919, Department of Agricultural Economics (AREC) is formally established, coinciding with the construction of Morgan Hall.

1962, Doctoral program is initiated.



1986, the MANAGE program (farm financial management) is initiated.

2000, Agricultural Economics & Resource Development (Extension) and Agricultural Economics & Rural Sociology (Teaching/Research) merge, forming the Department of Agricultural Economics.

2001, Department of Agricultural Economics begins a new program and supports more...

1943, First female is awarded an MS degree in agricultural economics at UT.

2005, Greever Endowed Chair in Agribusiness Development is established.

1960, Federal income tax seminars are initiated.



1991, Blasingame Chair of Excellence in Agricultural Policy is established.

1926, Master's program in agricultural economics is approved.



1981, Milan No-Till Field Days begin. Faculty contribute to the teaching and research of no-till farming to Tennessee farmers.



2004, UT Switchgrass Demonstration Project is conducted. A series of long-term switchgrass experiment plots are established at the AgResearch and Education Center at Milan.





# Years al and Resource Economics



2007, The UT Biofuels Project  
ins. The department  
ducts research in  
duction practices, harvest  
storage techniques,  
ply chain logistics, and  
e.

2010, The  
department's name  
changes to the  
current Department  
of Agricultural and  
Resource Economics.



2016, AREC researchers release  
economic impact analysis of  
inland waterway disruptions  
on the transport of corn and  
soybeans. This research was  
cited by the *Wall Street Journal*  
and in testimony before  
the House Committee on  
Agriculture.



2019, AREC researchers are  
awarded nearly \$1 million to  
determine the key parameters  
for woody biomass feedstock  
logistics systems for the  
Southeast so potential  
commercialized biorefineries  
would be able to effectively  
operate with high-quality,  
year-round feedstock.

2018, AREC  
researchers  
receive an FAA  
grant to analyze  
the production  
of alternative jet  
fuels from biomass  
feedstock.

2009, Instituted  
MBA-MS with the  
Haslam College of  
Business.

2017, Instituted  
accelerated five-year  
BS-MS program.

2013, AREC is included  
in a Federal Aviation  
Administration (FAA) Center  
of Excellence for Alternative  
Jet Fuels and Environment  
(ASCENT), with special interest  
in feedstock supply chain  
analysis.



2018, Seong-Hoon Cho  
is chosen as a Fulbright  
Scholar and conducts  
research in forest carbon  
sequestration in South  
Korea.









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# BILL PARK RETIRES

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After nearly forty years of exemplary service, William (“Bill”) Park has retired. He began his career with the department in 1980, immediately following completion of his PhD program at Virginia Tech and devoted his entire career to serving the Department of Agricultural and Resource Economics and its students.

- *Chair of the UTK Teaching Council, 1999-2000.*
- *Chair of the UTK Appeals Committee, 2007-2013.*
- *UTK Committee for the Campus Environment for the past fifteen years, making the campus a “greener” place in terms of recycling, composting, energy efficiency, etc.*

He has served as the undergraduate director for the department and academic advisor to 300+ students, many of whom were among the top students in the College. “I can also remember celebrating with a handful of students who probably thought they would never graduate and feeling like I had at least a small part in their eventual success.” Among the most rewarding aspects of advising over the years was receiving an unexpected email, phone call, or visit from a former student wishing to share kind words about his role in their lives.

He has graciously agreed to teach for the 2019/2020 academic year.

Park has numerous postretirement plans that include travel, volunteer work, reading, fly fishing, and hiking. In fact, Park is about 200 miles short of completing all 800 miles of official trails in the Smokies—but then, he never halfway does anything. 🍁

Sometimes his role in their lives reached far into families—legacy families—that have trusted his instruction for multiple generations. Park recalls advising and teaching at least five such legacy families. “It has been a joy to reconnect with the parents in recent years and certainly gratifying to see their children choose to follow a similar path as a major in our department.”

Additional career highlights include:

- *Director of the UT Farm Credit Scholars Program* for the past five years. He worked with forty-three students who are among the “cream of the crop” in the Herbert College of Agriculture, taking them to places such as Washington, DC, New York City, and the Gettysburg Leadership Experience, each trip designed to enhance student professional development and to broaden their horizons. “It has been most enjoyable to partner with a number of wonderful folks at Farm Credit Mid-America to help prepare these students to be future leaders within Tennessee and beyond.”
- *Director of the undergraduate program and Lindsay Young Fellow for the Baker Center for Public Policy* for the past seven years, working with about seventy bright, highly motivated students in the Baker Scholars Program.



# Burt English Wins UTIA's Highest Honor— The Institute Professor Award



*Burt English, professor in the Department of Agricultural and Resource Economics, is the winner of the 2019 Institute Professor Award—the highest honor presented at the UTIA Annual Awards and Promotions Luncheon. Pictured, from left to right (front row): Bob DeNovo, associate dean of the College of Veterinary Medicine; Caula Beyl, dean of the Herbert College of Agriculture; Burt English; and Tim Cross, UT Institute of Agriculture senior vice president and senior vice chancellor. Also pictured in the back row, from left, are Michael Buschermohle, UT Extension interim assistant dean; and Hongwei Xin, dean of UT AgResearch. Photo by T. Salvador.*



**BURT ENGLISH IS THE WINNER OF THE 2019 INSTITUTE PROFESSOR AWARD—THE HIGHEST DESIGNATION FOR A UT INSTITUTE FACULTY MEMBER. ENGLISH HAS FORTY YEARS OF RESEARCH EXPERIENCE, WITH THE PAST THIRTY-THREE YEARS SPENT IN UTIA’S DEPARTMENT OF AGRICULTURAL AND RESOURCE ECONOMICS.**

His research spans the adoption of new technologies; the impact of agricultural policies on sustainability, producers, and consumers; and the feasibility and impacts of the emerging bioeconomy. He has conducted a multitude of studies on economic feasibility and the impact new technology will have on rural America.


Researching the bioeconomy, he has examined the potential impacts of renewable energy and biomass as a major feedstock to help meet our nation’s energy needs.

Recent examples of his timely research include grant work funded by the Federal Aviation Administration to analyze the technology and markets required to progress feedstock through supply chains to US biorefineries for the production of alternative jet fuels. He is also tasked with determining the key parameters for woody biomass feedstock logistics systems for the Southeast so potential commercialized biorefineries could effectively operate with high-quality, year-round feedstock.

“Burt English is recognized internationally for his excellent research and educational accomplishments over a long and illustrious career,” says UTIA Senior Vice President and Senior Vice Chancellor Tim Cross. “We’re proud of his achievements, and it’s a pleasure to name him Institute Professor.”

English is a founding member of AIM-AG (Agri-Industry Modeling & Analysis Group); PEAG (Production Economics Analysis Group; and BEAG (Bio-Based Energy Analysis Group) at the Institute.

He has served as the senior project researcher on over \$25 million in grant and contracts funding with \$18 million of that occurring in the past seven years. He is an author or coauthor of more than 450 publications and presentations, eighteen book chapters, and seven books.

He has received numerous awards during his tenure, such as the UTK Chancellor’s Award for Research; UTIA Research Team Award; Department of Energy’s Certificate of Appreciation; and the UT Chancellor’s Success in Multidisciplinary Research Award. 

## PROMOTIONS AND TENURE

**Lester “Les” A. Humpal - Promoted to Extension Area Specialist II**

**Stephen “Aaron” Smith - Promoted to Associate Professor with Tenure**

**Margarita M. Velandia - Promoted to Professor**

## Emmitt Rawls Receives NAMA's Outstanding Advisor Award



*The National Agri-Marketing Association (NAMA) presented Emmitt Rawls with its 2019 Outstanding Advisor Award in recognition for his work with the UT Knoxville NAMA agri-marketing team. This award was created and named for our own John B. Riley after his passing in 2013. Emmitt came out of retirement from his distinguished career in Extension in 2013 to advise undergraduate students as they prepared to represent UT in the national agri-marketing competition. During his time in this role, the team has consistently placed in the top ten of land-grant schools from across the US. He was nominated for this award as the result of a letter-writing campaign from a number of current and former students. The award was presented during the National Agri-Marketing Conference in Kansas City, Missouri, in April by UT Food and Agricultural Business major Ty Wolaver. Please join us in congratulating Emmitt on this well-deserved recognition.*



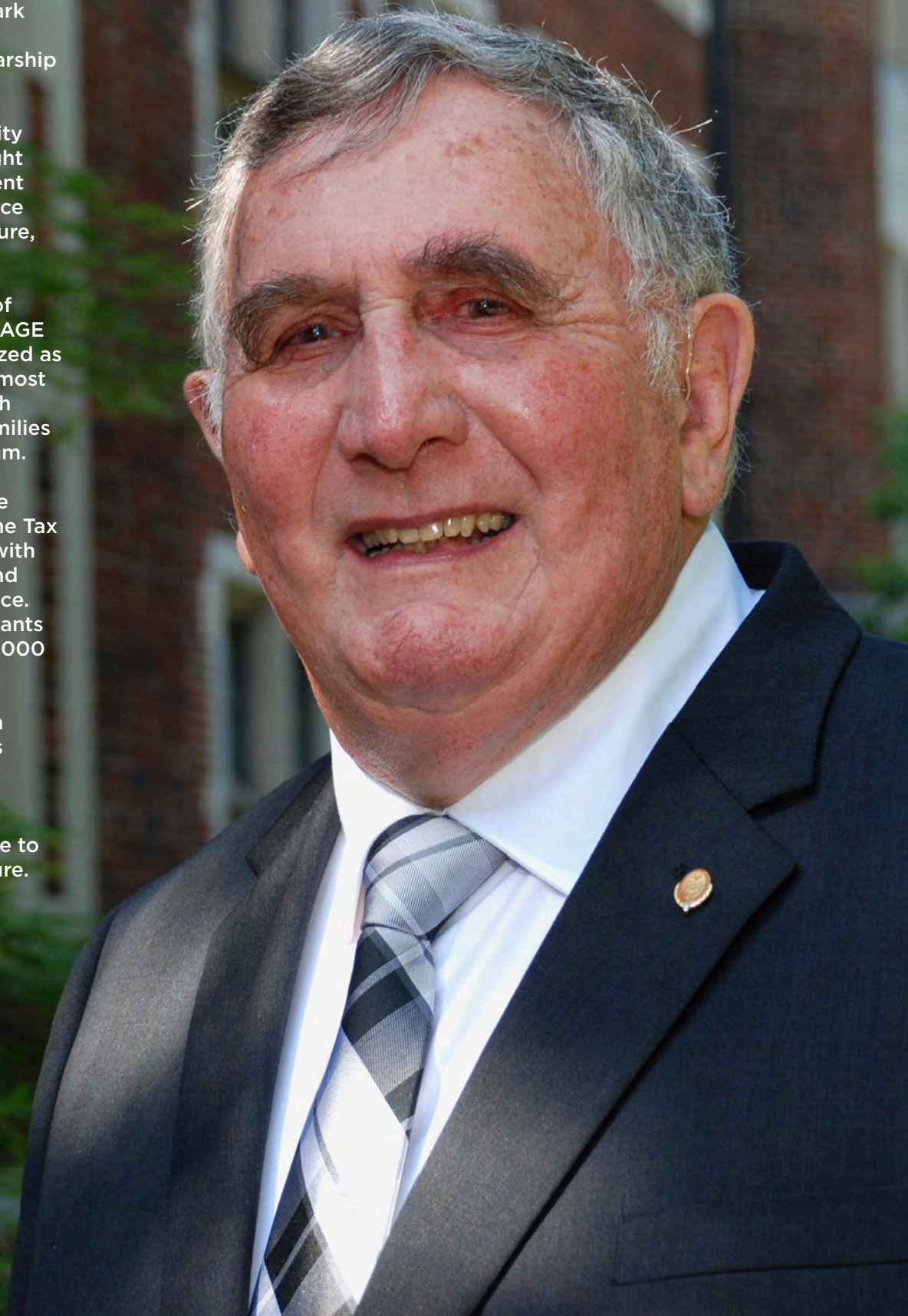
# CLARK GARLAND NAMED DISTINGUISHED ALUMNI AT TTU

Tennessee Technological University's Agricultural Foundation has named Clark Garland as Distinguished Alumni at its annual scholarship banquet in October.

Garland began his university career more than forty-eight years ago in the Department of Agricultural and Resource Economics. During his tenure, he provided exemplary leadership, including the design and development of the highly successful MANAGE program, which is recognized as among the strongest and most effective in the nation, with more than 19,000 farm families participating in the program.

He continues to coordinate Tennessee's Federal Income Tax Seminars, in cooperation with Tennessee Farm Bureau and the Internal Revenue Service. Last year, seminar participants completed more than 325,000 tax returns.

Garland's service has been recognized with numerous awards, most recently the distinguished National Association of County Agricultural Agents Service to American/World Agriculture.









# UNITED STATES DEPARTMENT OF AGRICULTURE OFFICE OF EXTERNAL AFFAIRS, RURAL DEVELOPMENT

## TAYLRE BEATY AREC BS '17

AREC graduate Taylre Beaty (BS '17), has taken a job as confidential assistant to the director of external affairs at the US Department of Agriculture in Washington DC. The Office of External Affairs for USDA Rural Development handles legislative and public affairs, as well as publications.

Beaty brings valuable experience to her new job that she received through a series of internships: national 4-H Council in 2014; CoBank, a funding bank for the Farm Credit system, as their government affairs intern in 2017; National Association of Wheat Growers, as a policy intern in 2018; and Congressman Kevin Brady's (TX) district office in 2018 and subsequent legislative internship in Brady's DC office.

While interning for Congressman Brady in the district office in Conroe, Texas, she assisted with events, district work periods when the congressman was in town, and assisted with casework. She then had the opportunity to intern for Congressman Brady in his DC office, where she served as a legislative intern and was later hired on as full-time legislative staff. "Because of my policy background in agriculture and rural infrastructure, I was able to take a more active role on some policy work that came through the office."

In her role as a legislative fellow in Congressman Brady's office, Beaty worked directly with rural development issues, primarily focused on rural broadband. "Congressman Brady serves as the ranking member and top Republican on the Ways and Means Committee, so infrastructure, workforce, and rural communities are important to him," she

says. These interests also line up well with Beaty's policy experience. "I have seen a lot of major policy discussion and negotiation during my time working for Mr. Brady, from tax reform to USMCA [United States-Mexico-Canada Agreement]. I loved every second of it and am so proud to have been a part of his staff."

While working as an intern with Congressman Brady, she graduated from Texas A&M University, earning a master's degree in agricultural economics. As many readers know, earning your Aggie Ring from Texas A&M is a significant event—one

that Beaty could not attend due to her internship in Washington. As such, the A&M Federal Relations Team arranged a special surprise ceremony in DC, where Congressman Brady personally presented her with the Aggie Ring.

Congratulations, Taylre! 🍀



*Congressman Kevin Brady presents Taylre with her Aggie Ring.*



*Unable to attend Texas A&M University's Aggie Ring ceremony, Taylre received a surprise ring presentation from her Washington supporters. Pictured, from left, are Congressman Kevin Brady (TX); AREC alum Taylre Beaty; Valerie Offutt, chief of staff for Texas A&M System Office of Federal Relations; and Michael Hardy, assistant vice president of Texas A&M University Government Relations.*

# Welcome New



Xuqi (Ricky) Chen joined the department in August, with an appointment of 90 percent research and 10 percent teaching.

Ricky's research focuses on a deeper understanding of consumer behavior and behavioral economics in solving issues related to health and nutrition, advocating healthier eating habits, and contributing to the successful marketing of food products. His research elucidates how people make purchases as individuals and as groups/organizations, enabling companies and stakeholders to engage in more effective marketing and predict future trends in different markets. This research provides consumers with pivotal information concerning the decisionmaking process of healthy food products, helping government agencies in evaluating food labeling programs and nutrition policies. In addition, he has expanded the reach of traditional agricultural economics research in online grocery shopping and e-commerce in big data environments to extend the knowledge of the food industry in a new era.

Ricky loves teaching and helping students. It was the instructing experience in Florida where his passion for teaching developed. He will teach AREC 350 in spring 2020 and AREC 524 Econometrics starting fall 2020.

Prior to joining the department, he earned a PhD in food and resource economics from the University of Florida, as well as a master's degree in the same major with a minor in statistics. He earned bachelor's degrees in economics and mathematics from Wuhan University in China.

In his spare time, Ricky enjoys watching college football, hiking, fishing, and diving.



# ew Faculty



*Jackie Yenerall*

Jackie Yenerall also joined the department this summer, holding an appointment of 90 percent research and 10 percent teaching.

Prior to joining the department, she worked with the Tennessee Department of Health for three years as the population health economist where she brought an economic perspective to public health. As part of this position, she worked on a wide variety of issues including opioid use, rural health, and tobacco legislation.

“In my position at UT, I’ll be building on my previous experiences in the real world to develop research that identifies the barriers people face when trying to improve their health so that we can develop effective programs and policies that help people live healthier, more prosperous lives,” Jackie said.

She earned a PhD in agricultural and applied economics from Virginia Tech, where she focused on food and health economics. Prior to earning her PhD, she spent two years working in food banks as an Americorps VISTA volunteer in Vermont and Philadelphia, Pennsylvania. She earned a master’s degree in agricultural, environmental, and applied economics and a bachelor’s degree in environmental and renewable resource economics, both from Pennsylvania State University.



# UTIA TEAM ASSISTING ICC IN GUATEMALA

**M**eeting the challenge of feeding, clothing, and fueling a global population projected to reach 9.8 billion by 2050 will require adapting agricultural systems to promote the conservation of natural resources, in particular the world's soil and water resources. These challenges are particularly acute in Guatemala where soil and water resources have undergone tremendous degradation and where agricultural production is already being significantly impacted by climate change. Much of this degradation is due to the terrain and soil properties of the region: agricultural production often occurs on steep, mountainous terrain, and the soils have low water-holding capacities. Farming this type of land without degrading natural resources presents many challenges.

The UTIA team will partner with the [Private Institute for Climate Change Research \(ICC\)](#) in Guatemala to work towards a common goal: to increase the productivity and resilience of the Guatemalan agricultural sector, while increasing the conservation of soil and water resources through the adaptation and adoption of conservation agriculture practices (i.e., minimum tillage, permanent soil cover with crop residues and live mulches, and crop rotation and intercropping).

Serving on the UTIA team are Chris Clark and Chris Boyer with the Department of Agricultural and Resource Economics and Forbes Walker and Shawn Hawkins with the Department of Biosystems Engineering and Soil Science.

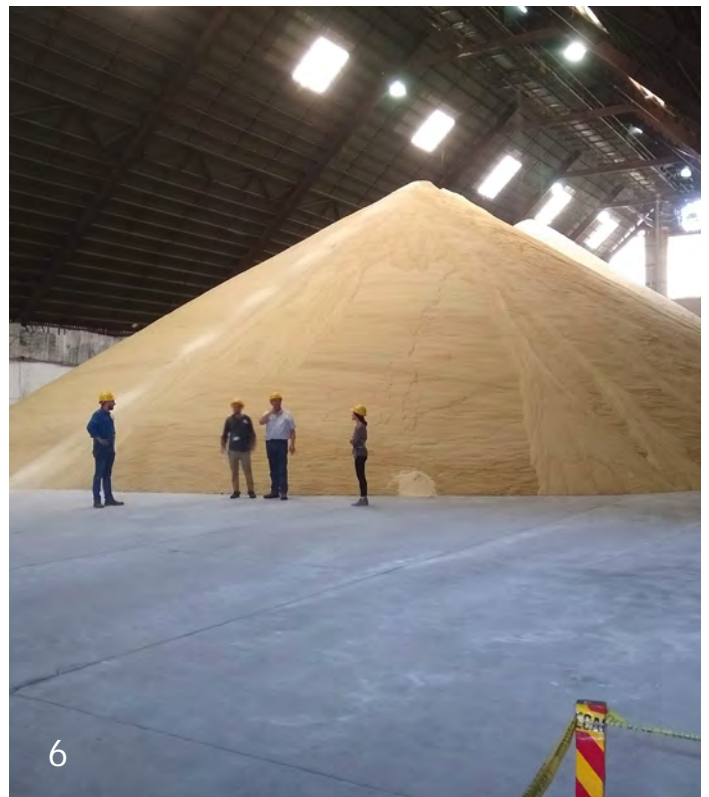
Work on the project is supported by a seed grant from UTIA's Smith Center for International Sustainable Agriculture. 🌱

*Fuego Volcano's nightly eruption. UTIA team members visited the village most affected by its eruption.*





1. Learning about alternative ventures to boost economic sustainability of small farms in the coastal plain.
2. Onion farms outside of Panajachel.
3. Aftermath of June 2018 Fuego eruption that destroyed nearby villages and killed a number of people.
4. Learning about planting sugar cane at Pantaleon, a large sugar company.
5. Touring an irrigation system on a large sugar farm.
6. Sugar ready for shipment.
7. Small village and former sugar cane estate that was destroyed in the civil war outside of La Fortuna, where a UT student has worked to promote the adoption of a community garden to boost nutritional outcomes. The fenced area is the garden, and the yellow building in the background is the community school.
8. Students at an elementary school in La Fortuna, where the UTIA team and staff at Clinica Ezell have converted a vacant lot into a community garden and learning campus for the students.







## MANAGE Program Coordinator Selected

Kevin Ferguson, area farm management specialist, has been selected to serve as coordinator of Extension's statewide [MANAGE](#) program. Ferguson has been with the program since its inception in 1986.

The program provides farm families and agribusinesses with assistance in developing recordkeeping systems, evaluating management and marketing decisions, and developing farm and business plans. Working alongside Extension agents, these specialists help farm families evaluate their individual situation and assist them in improving their quality of life. More than 19,000 farm families have greatly benefited from the program, which is recognized as among the strongest and most effective in the nation.



## Chuck Danehower Retires

After thirty-four years of service to Extension and the [MANAGE](#) program, Chuck Danehower has retired. Serving as an Extension area specialist—farm management since its inception, he has assisted agricultural producers in the Western Region with confidential, individualized farm and financial management. Forging relationships built on trust, farm families repeatedly turned to Chuck. In fact, he ran intensive farm and financial planning thirty-three times with one family, with others ranging from twenty-five to thirty times. “This is a testament

to the longevity and impact that the MANAGE program has had for Tennessee producers,” says Chuck. “It has produced statewide results that I am proud to have been a part of.

“The MANAGE program has endured, and the process we employ and support from each other and Agricultural Economics ensure its continued success.”

Congratulations on your retirement!



# Executive Seminar Series Continues Impressive Lineup



AREC alumna Julie Bowling, assistant general council for Tennessee Farmers Insurance Companies, speaking with students about agricultural law in the 2019 Executive Seminar Series (AREC 495).

In recent years, the Department of Agricultural and Resource Economics launched the executive seminar series, bringing a broad array of agricultural professionals and industry leaders directly into the classroom. The invited speakers provide a uniquely motivational learning environment, and the series continues to be popular among students.

Speakers for the 2019 series include:

- *Tim Cross*, senior vice president & senior vice chancellor, UTIA
- *Jim Herbert*, founder and former CEO of Neogen
- *Lynn Petr*, executive director of Shangri-La Therapeutic Academy of Riding (STAR)
- *Julie Bowling*, assistant general council, Tennessee Farmers Insurance Companies
- *Jeff Siegrist*, managing partner of Siegrist & Company
- *Donnie Smith*, former CEO of Tyson Foods and UT Board of Trustees member
- *Kelly Jones*, previous head of global research for Kraft Foods
- *Rick and Bonnie Malir*, founders and owners of City BBQ
- *Bill Johnson*, CEO of Farm Credit Mid-America
- *Magdy Hefnawy*, president of Ag-Tech International, Inc.
- *Andy Holt*, Tennessee state representative
- *Wade Smith*, vice president of OSI Group and *Robert Brown*, president and chief forecasting officer of Robert Brown, Inc.



Jeff Siegrist sharing his insights on the nation's forestry industry.



Jim Herbert, founder and former CEO of Neogen, speaking to class about food safety and consumerism.



## Two Departmental Alumni Selected to Represent Beef Cattle Producers at 2019 Young Cattlemen's Conference

Two departmental alumni, Caroline Holt (AREC MS '13) and Joe Lowe (AREC MS '13), were chosen to represent beef cattle producers in Washington, DC, at the 2019 Young Cattlemen's Conference. They were among sixty beef leaders from across the country to participate in ten days of intensive leadership training and a three-city tour that showcased all facets of the beef industry.

Participants embarked on a tour that included numerous stops in Colorado, where they also completed leadership development sessions, media training, and hands-on demonstrations. Tour stops in the Chicago area included Hillshire Farms, McDonald's global headquarters office, and a behind-the-scenes look at the manufacturing facilities of OSI, Inc., one of the nation's largest beef patty manufacturers.

The tour concluded with a stop in Washington, DC, where they learned how the National Cattlemen's Beef Association's (NCBA) policy work affects their operation and the industry, overall. From there, participants hit Capitol Hill where they visited with more than 200 congressional offices to advocate for industry policy priorities.

Caroline Holt is a graduate of UT with degrees in animal science and agricultural business, as well as a master's degree in agricultural economics. She was raised on a small commercial cow-calf operation outside of Chattanooga, Tennessee. She and her husband, Levi, recently started a veterinary practice that focuses on cattle reproduction. Caroline also helps with their family's Black Angus seedstock operation at Holt Farms. Her roles include managing records, analyzing data, marketing, and assisting with on-farm operations. She recently served as one of NCBA's marketing ambassadors for the Cattle Industry Convention.

Joe Lowe holds a bachelor's degree in economics from the University of Louisville and a master's degree in agricultural economics from UT. He is an eighth-generation beef producer in Smiths Grove, Kentucky. His family has been involved in backgrounding, finishing, and commercial cow-calf production over the years. Currently, he and his father manage the largest registered Angus herd in Kentucky. He is active with Kentucky Cattlemen's Association and serves as Region 2 vice president. 🇺🇸



# 2019 AREC Graduate Students



To learn how, check out our  
**GIVING  
PAGE!**

INTERESTED IN SUPPORTING  
FUTURE VOLS?

# UTIA Developing Ability-to-Pay Framework for Tennessee Communities

*Tool to Optimize Loan and Grant Administration for Water-Related Infrastructure Improvements*



Researchers at the University of Tennessee Institute of Agriculture have received a \$350,000 grant to develop the framework to determine the ability of communities to pay for infrastructure improvements that comply with federal and state water regulations. AREC faculty and staff supporting the project include Sreedhar Upendram, Burt English, Chris Clark, Kim Jensen, David Hughes, Jamey Menard, Brad Wilson, and Hannah Wright. Also involved is John Buchanan from BESS. Click [here](#) for full article.

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## Andrew Muhammad Appointed to Agricultural Policy Advisory Committee

*Muhammad to Advise Nation's Leaders on International Agricultural Trade Issues*

Andrew Muhammad, agricultural trade expert and Blasingame Chair of Excellence in Agricultural Policy at the University of Tennessee Institute of Agriculture, has been appointed to the Agricultural Policy Advisory Committee, where he will provide advice to Secretary of Agriculture Sonny Perdue and US Trade Representative Robert Lighthizer on international agricultural trade issues. Click [here](#) for full article.



# Seeking Sustainable Solutions for Nashville's Organic Wastes

*University of Tennessee Collaborates with Resource Capture on \$40,000 Grant*

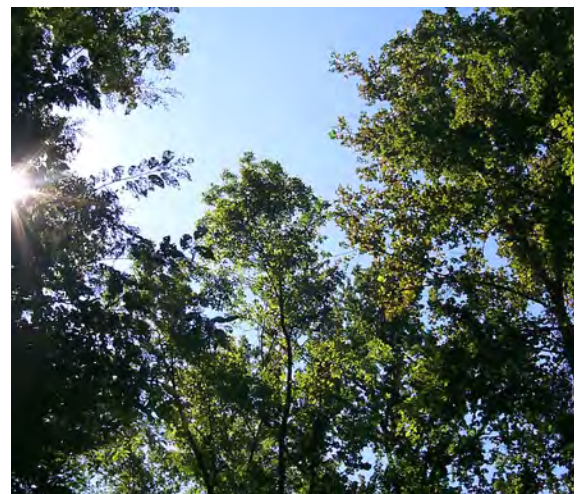


An interdisciplinary team of researchers from the University of Tennessee, Knoxville, and the University of Tennessee Institute of Agriculture has been awarded a \$40,000 grant from the University of Tennessee's [Institute for a Secure and Sustainable Environment](#) to collaborate with nonprofit [Resource Capture](#) on designing a more sustainable solution for the Nashville-Davidson County metro area's organic wastes and providing a valuable input for the area's farmers. Four of the researchers are from the Department of Agricultural and Resource Economics: Chris Clark, Burt English, Chad Hellwinckel, and Edward Yu. Click [here](#) for the full article.

## UTIA Awarded Nearly \$1 Million to Study Woody Biomass Feedstock Logistics

*Regional Biofuel Development Plan to Be Developed*

A team of researchers at the UT Institute of Agriculture has been awarded a USDA Agriculture and Food Research Initiative grant for nearly \$1 million to determine the key parameters for woody biomass feedstock logistics systems for the Southeast so potential commercialized biorefineries could effectively operate with high-quality, year-round feedstock. AREC faculty supporting the project include Edward Yu, Burt English, James Larson, and Carlos Trejo-Pech. Click [here](#) for full article.



# UT Researchers Target Scalable Model for Global Crop Supply Chain

*NSF-Funded Research Addresses Sustainable Food Systems for an Expanding Population*



Researchers from the University of Tennessee have received a \$500,000 grant from the [National Science Foundation](#) to tackle the greatest challenges to global food systems. The research specifically targets the US-China wheat and soybean supply chain due to their large trade volume and critical impact on the global sustainability of food, energy, and water.

**R**esearchers from the University of Tennessee have received a \$500,000 grant from the [National Science Foundation](#) to tackle the greatest challenges to global food systems. The research specifically targets the US-China wheat and soybean supply chain due to their large trade volume and critical impact on the global sustainability of food, energy, and water.

Researchers will examine better ways to develop optimal food systems from both an economic and resource-use perspective. Specific challenges include addressing the efficient use of natural resources; developing an efficient policy system that allows for the flow of food product across countries to achieve efficient use of resources; and providing adequate nutrition for a growing global population.

The project is led by Mingzhou Jin, professor and associate head of UT's Department of Industrial and Systems Engineering. Jin is also the director of the [Institute for a Secure and Sustainable Environment](#) at UT. Together with UT Institute of Agriculture Blasingame Chair of Excellence Professor Andrew Muhammad, Jin proposed a new methodology for modeling. That proposal, "Coupled Modeling for Sustainability of the Global Crop Supply Chain



with a Focus on China-US Interactions,” received funding from the NSF’s Innovations in Food, Energy, and Water Systems program. As project co-leader, Muhammad will examine the role that trade plays in making resource use more efficient and in providing safe and nutritious food.

“There’s only so much land and so much water,” says Muhammad. “As the world grows and you have to feed 20 billion people, what’s the best use of that land and water to achieve the goal of not just providing food but safe, nutritious food? No one country can truly supply its own food and achieve that lofty goal, so it has to import food and, in some instances, export the surplus food.”

The four-year study will encompass a nexus of food, energy, and water systems. “A lot of people think about food systems and how we can provide food but then the question is what is the link to energy systems and renewable and nonrenewable resources?” says Muhammad. An internationally known trade expert, Muhammad will study the trade modeling and trade policy components of the system including price signals and transportation issues—factors that contribute to selling products between the US and China—and determine how economics and policy play a role in the process.

According to the World Trade Organization, China and the US are the biggest players in the international agricultural product chain with \$73 billion and \$163 billion in exports and \$160 billion and \$149 billion in imports in 2015, respectively. Their crop systems are also highly coupled, consuming a large amount of energy and water.

Applying a systems approach to the total supply chain formed by China and the US, researchers will develop a framework that integrates climatic, economic, governmental, societal, and technological changes. The supply chain formed by China and the US will then be used to identify technical, societal, and policy solutions to improve the sustainability and resilience of the global crop supply chain.

US soybean producers who have operated under considerable uncertainty in recent years may also realize benefits from this research, as market efficiency provides improved pricing reliability that can eliminate some of the risk and volatility of production agricultural. ❖

## Real. Life. Solutions.™

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### In Memoriam: Jimmy Castellaw

Retired area specialist in farm management Jimmy “Jim” Castellaw passed away on April 20, 2019. Jim devoted forty years to UT Extension, serving countless farm families.

Jim received his master’s degree from UT and was a member of Alpha Gamma Rho fraternity, the Rotary Club in Somerville, and a volunteer for the American Red Cross. He is survived by his wife of almost twenty-seven years, Monique Graf Castellaw of Somerville, Tennessee.



*Transplanting rice in the Central Region of Nepal.*





# REGMI CONDUCTS CLIMATE CHANGE RESEARCH IN NEPAL

AREC graduate student Hari Regmi traveled to the Central Region of Nepal this summer, conducting surveys of rice producers to assess how climate change and variability have affected their production, as well as study the socioeconomic, financial, and institutional factors influencing adaptation strategies.

Nepal's economy is primarily based on agriculture. More than 65 percent of this cultivated land is reliant on rainfall from monsoons for irrigation.

The region's temperatures are on the rise, as well as a likely increase in variability in precipitation. Reports indicate that approximately 90 percent of

crop losses are attributed to weather-related events in Nepal.

Empirical estimation of the knowledge of farmers, their perceptions on extreme weather events, and factors influencing decision-making at the farm level have policy implications to design long-term, effective, and sustainable adaptation strategies for rice farmers in Nepal. Results from this study will be part of Regmi's master's thesis (degree program in natural resource economics) and will be published in a peer-reviewed journal.

Funding for this research was provided by the National Institute for Mathematical and Biological Synthesis ([NIMBioS](#)). These graduate awards, which are highly competitive, help graduate students enhance their research and education. ✖



AREC graduate student Hari Regmi conducted a total of 359 surveys of rice producers in the Central Region of Nepal this summer. The survey information will be used to assess how climate change and variability have affected their rice production.

# UT NAMA Chapter Makes It to Semifinals at National Competition



*UT's 2019 NAMA team made it to the semifinal round at the National Agri-Marketing Association student competition held in Kansas City, Missouri. Pictured on the front row, from left, are Ty Wolaver, Robert Rollins, Christina Greer, Hence Duncan, and Jeb Beasley. On the middle row, from left, are Emma Morgan, Colin Jennings, Emily Haskew, Jordan Peterson, and Shelby Mainord. Back row, from left, are Jonathan Trew, Ian Kane, Jessica Garner, and Sawyer Main.*

**M**embers of the UT Chapter of the National Agri-Marketing Association made it to the semifinal round at this year's national marketing competition held in April in Kansas City, Missouri. Continuing a history of success, the UT NAMA chapter has consistently placed in the top ten among land-grant universities. Twenty-nine student NAMA chapters participated in this year's marketing competition, a total of nearly 400 student members.

Students spent months conducting market research, writing the marketing plan, and developing a presentation. Teams submit a written plan summary prior to the marketing competition and then make a formal presentation of their marketing plan to a panel of judges at the competition. The panel consists of marketing and agribusiness professionals, providing students with practical experience they can use as they move forward in their careers.

Congratulations, team!





# 2019 Farm Credit Scholars



1. Farm Credit Scholars tour the mall in DC by scooter.
2. FC Scholars met with alumni who work on Capitol Hill and toured the Library of Congress, Senator Lamar Alexander's office, museums, monuments, and more.
3. FC scholars did a great job volunteering at Second Harvest Food Bank, packaging 840 pounds of pasta.



2019 Farm Credit Scholars in the Howard H. Baker, Jr. Center for Public Policy, from left, are Jacob Eicher, Food and Agricultural Business major from Sumner County; Ian Kane, FAB major from Sumner County; Sarah Cantrell, FAB major from Greene County; Kendall Martin, Natural Resource and Environmental Economics major from Marshall County; Shelby Mainord, FAB major from Putnam County; and Hence Duncan, FAB major from Franklin County.

# Agricultural & Resource Economics Undergraduate Degrees Awarded

## Bachelor of Science in Food & Agricultural Business

### Spring 2019

Thomas Adams  
Aylan George Baines  
Jacob Ellis Beasley  
Crockett Wilhite Davis  
Haley Miranda Harmon  
Charles Allen Harrison  
Jacob N. Harrison  
Keller H. Maples  
Emmaline Faith Merritt  
Robert Michael Rollins  
Alexis Cherise Stokes  
Brooke A. Swaggerty  
Ty Madison Wolaver  
Nate Michael Yates

### Summer 2019

Joseph David Koenig



## Bachelor of Science in Natural Resource & Environmental Economics

### Spring 2019

Kylie Elisabeth Logue





# Graduate Degrees Awarded

## Master of Science in Agricultural & Resource Economics

### Spring 2019

Kevin Ray Adkins  
Sarah Elizabeth Best  
Jared M. Bruhin  
Victoria Lynn Campbell  
Jade Desha Ellis  
McKenzie Lynn Thomas

### Summer 2019

Yongwang Ren  
Thomas Clinton Stier  
Ming Jou Tsai

*Congratulations,  
AREC graduates!*



# Ag Day 2019



## AREC Participates in Annual 4-H Academic Conference

UTIA welcomed approximately 160 middle school students for this year's 4-H Academic Conference, where participants had the opportunity to attend educational sessions, participate in service projects, and enjoy a variety of field trips.

AREC faculty and staff enjoyed working with the Consumer Education and Economics project group. We hope to see these talented 4-H students in our classrooms in the coming years.



*Students attending this year's 4-H Academic Conference are pictured above visiting Gentry Mercantile in Maryville, Tennessee.*

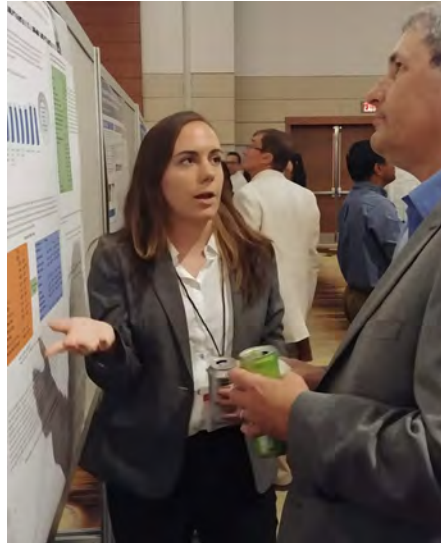
## AREC Faculty at Welcome Luau

AREC faculty members Karen DeLong and Jon Walton had a great time visiting with incoming freshmen at the Welcome Luau, part of Herbert College of Agriculture's Welcome Week 2019.





# AREC Represents at Agricultural & Applied Economics Association



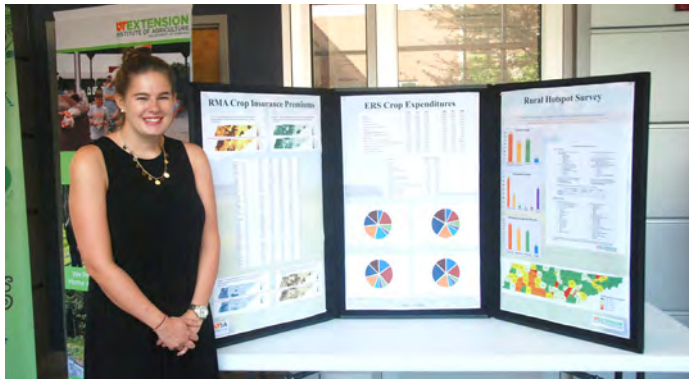
AREC faculty member Karen DeLong was selected to chair AAEE's Experimental Economics Section. She is pictured above presenting at AAEE's annual conference, which was held in Atlanta, Georgia, in July.

## 2019 Blount County Farm Tour



AREC faculty members Karen DeLong and Emmitt Rawls presenting at the 2019 Blount County Farm Tour.

## AREC Hosts ANR Extension Intern Mary Lynn Marks



ANR Extension intern Mary Lynn Marks hails from Hendersonville, North Carolina, and she is majoring in Food & Ag Business. She is pictured above at the Extension Intern Showcase at the end of her summer internship.

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with story ideas or career  
updates for consideration  
in future editions of the  
Econogram. We'd love to  
hear from you!



## UTIA's 2019 Awards and Promotions

W.F. and Golda Moss Outstanding Teacher Award: **Bill Park**

Glyn and Lynda Newton Creative and Critical Thinking Award: **Andrew Muhammad**

Friend of the Herbert College of Agriculture: **David Bilderback**

### Student Awards

Chancellor's Citation for Extraordinary Academic Achievement: **Nathan Murray**

#### Food and Agricultural Business Major

Outstanding Freshman: **James Hatcher**

Outstanding Sophomore: **Christina Greer**

Outstanding Junior: **Mary Lynn Marks**

Outstanding Senior: **Charles Harrison**

#### Natural Resource and Environmental Economics

Outstanding Freshman: **Jessica Shrader**

Outstanding Sophomore: **Kaylee Walper**

Outstanding Junior: **Kathleen Slice**

Outstanding Senior: **Kylie Logue**

*Congratulations to all of our award winners!*

### Years of Service Recognition

The following AREC personnel were recognized for their years of service:

#### 20 years of service

Brad Wilson, Computer Programmer/GIS Analyst

Jamey Menard, Research Leader

Tina Johnson, Information Specialist

#### 10 years of service

Edward Yu, Associate Professor



*Tori Campbell, Outstanding Graduate Student*



*Jeb Beasley, Outstanding Undergraduate Student*



# Departmental Picnics



*Let's connect*

AGRICULTURAL &  
RESOURCE ECONOMICS  
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