GROWING A BETTER WORLD

A 19th century land-grant mission is vibrant today in the people and communities the Institute serves. pg. 14
At West Tennessee’s Jones Orchard, UT Extension specialists and agents team with a four-generation family of growers on production and find new opportunities to thrive.
A Word From Tim Cross

Greetings from the UTIA Senior Vice President and Senior Vice Chancellor

Every day that I walk through our campus or travel across our state, I am amazed at the enduring legacy of the land-grant university system. As one of more than fifty land-grant programs in agriculture and mechanical arts established in 1862 by the Morrill Act, the University of Tennessee has carried out its three-part mission of teaching, research, and engaging communities to meet localized needs for more than 150 years.

A key component of this mission is rooted in agriculture, which is why the University of Tennessee Institute of Agriculture, and its partnership with Tennessee’s 1890 land-grant university, Tennessee State University, is so critical to our state. The land-grant system was established to increase access to higher education; produce original agricultural research; and provide that research to farmers, producers, families, and homeowners through agricultural extension.

In this issue, we provide some of the history of the land-grant university system and highlight real-life examples of how this service informs our lives. We teach tomorrow’s agricultural leaders to be innovative. Brilliant minds strive to uncover the reasons behind many of our challenges and find solutions. Dedicated Extension agents reach out daily to their community members to provide data-driven information to those who seek better ways to manage a myriad of agricultural and life issues.

Next time you are in Knoxville, I invite you to visit campus to see these impacts in action. Whether it’s a stroll through the UT Gardens, grabbing a bite to eat, enjoying Ag Day, or even checking out the turf at Neyland Stadium, you will see the work of our faculty and staff.

Though bittersweet, this will be my last column for the magazine. Earlier this spring, I announced my retirement at the end of August. As I end this chapter in my professional life, it is rewarding to know that the work we engage in every day has such significant impacts on the lives of all Tennesseans, and we remain committed to the mandate of providing openness, accessibility, and service to all people.

It has been my honor to serve the Institute for the past twenty-seven years. I feel confident I am leaving it in great hands for many years to come and will look forward to reading about the progress in future issues of our magazine. Today the land-grant mission of providing Real Life. Solutions. to all is alive and well at the Institute.

All my best,

Tim L. Cross
UTIA Senior Vice President and Senior Vice Chancellor
The National Defense Authorization Act for Fiscal Year 2021 includes a provision to transfer approximately 900 acres occupied by the former Milan Army Ammunition Plant. The land is to be deeded to the University of Tennessee for the purpose of supporting agricultural and natural resources research.

While ownership of the land will be new, the UT AgResearch and Education Center at Milan has conducted research on much of the property for the past four decades.

“The US Army has been a wonderful landlord, and the arrangement has enabled us to do many things,” says center director Blake Brown.

The pending transfer ensures that research at Milan will continue to support advances in crop production, soil sustainability, and connected issues for the foreseeable future. Additional acreage included in the deed lies in rich forest bottomland, which may lead the Center to expand into studies of forestry and wildlife management.

FEDERAL PROPERTY TRANSFER EXPANDS MILAN LAND BASE

NINETEEN FIELD DAYS, MOST IN-PERSON, SHOWCASE UT AGRICULTURAL RESEARCH

The field days will take place at locations across the state, providing visitors a chance to see agricultural research in action, speak with university experts, and network with industry professionals. Topics covered this year by the UT AgResearch field days range from cattle and row crop production to maintenance of turf grasses, ornamental plants, fruit and vegetable crops, and forestry.

The complete UT AgResearch field day schedule began in March and will continue through October. Find the full list of events at tiny.utk.edu/2021fielddayschedule.

REGIONAL EFFORT BATTLES FARMER AND RANCHER STRESS

Despite living in idyllic settings, many farmers, ranchers, and rural community residents experience high levels of stress. In fact, according to a report from the Centers for Disease Control and Prevention, a full five years before the COVID-19 pandemic hit, rates of suicide in rural areas measured twice that of urban environments.

The US Department of Agriculture has funded four networks to help alleviate the problem. The three-year, $7.2 million southern region effort, funded by the National Institute of Food and Agriculture (NIFA), spans thirteen states and two US territories.

Led by associate professor Heather Sedges of UT Extension Family and Consumer Sciences, the network will include more than fifty partner organizations, from land-grant institutions to government agencies, commodity and lending groups, and nonprofit organizations.

Learn more at tiny.utk.edu/farmerratstress.

RECENT FACULTY AND STAFF HONORS

BURTON C. ENGLISH, professor in the Department of Agricultural and Resource Economics, received the 2021 Lifetime Achievement Award from the Southern Agricultural Economics Association. English is a pioneer in bioenergy research. His current focus is sustainable aviation fuel development in the Southeast, a potential game changer for rural farming communities.

KAREN DELONG, an associate professor in the Department of Agricultural and Resource Economics, was presented the Emerging Scholar Award by the Southern Agricultural Economics Association. Her often multidisciplinary and multi-institution research focuses on livestock economics, agricultural policy, international trade, and experimental economics. To date, she has secured $4.7 million in grant funding in support of her work.

VIRGINIA SYKES, assistant professor in the Department of Plant Sciences, was honored with the Inspiring Young Scientist Award from the Environmental Quality Section of the American Society of Agronomy. Sykes’s research brings together experts on diseases, insects, weeds, soils, economics, and crops to build more sustainable agricultural systems. Her current focus is on cover crops and their abilities to enhance corn and soybean production.

RACHEL PAINTER, Extension Master Gardener coordinator with UT-TSU Extension in Rutherford County, received the 2020 National Master Gardener Distinguished Early Career Award. In three years, Painter has helped more than double her county’s volunteer retention rate. She has pioneered new outreach during the COVID-19 pandemic and engaged Master Gardeners in media appearances to showcase volunteer opportunities and program impacts.

LORI DUNCAN, UT Extension row crop sustainability specialist in the Department of Biosystems Engineering and Soil Science, was recognized for outstanding leadership in supporting farmers in their pursuit of continuous improvement. Field to Market: the Alliance for Sustainable Agriculture named Duncan their 2020 Trusted Adviser of the Year. Duncan is valued as an adviser by cotton growers across Tennessee. Watch a video at tiny.utk.edu/LoriDuncan that highlights her efforts and her award.
UTIA DIRECTOR OF DIVERSITY, EQUITY, AND INCLUSION APPOINTED

Craig Pickett Jr. has begun work as the inaugural UTIA director of diversity, equity, and inclusion. Pickett comes to the position with experience in the Institute, having previously served as coordinator for student life and diversity for the Herbert College of Agriculture from 2013 to 2017. “As an Institute, demonstrating respect for all is a core part of our identity. It’s critical to our ability to advocate for the communities we serve statewide and to create an environment where all feel welcome,” says Tim Cros, UTIA senior vice president and senior vice chancellor.

As director, Pickett will connect with faculty, staff, and students across the areas of research, teaching, and Extension. He will provide strategy and oversight in developing and advancing diversity, equity, and inclusion within UTIA.

EASTERN GRASSLANDS

RESEARCH TO IMPROVE

Scientists with UTIA are launching a project to improve the productivity, resiliency, and overall health of eastern grasslands. Pat Keyser, a professor in the Department of Forestry, Wildlife and Fisheries who also directs the UTIA Center for Native Graslands Management (nativegrasses.utkb.tennessee.edu), and his colleagues are seeking to change the overall health of these ecosystems by studying novel grassland systems across the region. The team will implement large-scale field experiments at the East Tennessee AgResearch and Education Center in Knoxville; the University of Missouri’s Forage Systems Research Center in Linneus, Missouri; and the USDA Dale Bumpers Small Farms Research Center in Booneville, Arkansas. Each site will examine how plots of tall fescue compare to native warm-season grasses, such as big bluestem and indiangrass blends or eastern gamagrass.

UTIA CONTINUES LEADERSHIP TO ENHANCE REGIONAL DAIRY INCOME

The UT Center for Profitable Agriculture (CPA) and Department of Animal Science are collaborating with partners in Kentucky and North Carolina. Their goal is to enhance the success of regional dairy businesses in all three states. The effort, led by Liz Eckelkamp, UT Extension dairy specialist, and Hal Pepper, a CPA financial specialist, has been awarded a $6 million grant from USDA Agricultural Marketing Service.

New project will provide farmers with enterprise assessments, direct marketing workshops, business feasibility studies, and other services.

“The region’s dairy industry has really struggled in recent years, and the pandemic has led more consumers to look to local producers for food and dairy products,” Pepper says. “These producers want to better understand their costs so they will know whether developing creative products and fresh marketing ideas will improve their viability.”

NEW FACILITIES WILL ENHANCE RESEARCH, LEARNING, AND OUTREACH

UTIA capital projects span the state of Tennessee, bringing to life the facilities where Real. Life. Solutions. are created and disseminated.

In February, ground was officially broken at Lone Oaks Farm in rural West Tennessee for the construction of 4-H cabins and the farm’s long-anticipated STEM Center. Each will enhance the farm’s ability to provide 4-H youths with state-of-the-art learning opportunities.

In Knoxville, demolition began during the spring semester on Hollingsworth Auditorium and the Ellington Plant Sciences Building. The two structures will be replaced with a dynamic Energy and Environmental Science Research Building (EESRB) that is targeted to open in 2023. Nearby, construction continues on a Teaching and Learning Center for the UT College of Veterinary Medicine. Already completed is the Third Creek Building, which is housing employees and students while the EESRB is being constructed.

A UTIA capital projects website is helping to keep everyone current on the projects, including a livestream of work on the EESRB building. Find the site at utiacapitalprojects.tennessee.edu.

TENNESSEE MASTER ROW CROP

CERTIFICATION AVAILABLE

Cotton, corn, soybeans, wheat. These crops make up the bulk of row crop agriculture across Tennessee, and a new certification from UT Extension serves to meet the needs of row crop producers.

The Tennessee Master Row Crop certification program is an educational program designed to further improve the profitability and sustainability of today’s row crop farming operations. Topics addressed range from fundamental information to cutting-edge research. These include agronomics, integrated pest management, weed and disease management, precision agriculture, irrigation, grain drying and storage, marketing, sustainability, and more.

“This program will further expand our educational offerings in row crop production and make information more available and accessible to every corner of the state,” says Lori Duncan, UT Extension row crop sustainability specialist and coordinator of the Master Row Crop certification program.

CONSTRUCTION IS BUILDING CAPACITY

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The funding builds upon support awarded in 2019 to help Tennessee producers develop innovative dairy products.

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UTENNESSEE MASTER ROW CROP
Top Honors for Three UTIA Professionals

**MATT DEVEREAUX**  
2019 Excellence in Extension Award (NIFA) USDA, Cooperative Extension  
October 2019

Matthew Devereaux, a human development specialist with UT Extension Family and Consumer Sciences, has been honored with the National Excellence in Extension Award. Presented by USDA's National Institute of Food and Agriculture, Cooperative Extension, and the Association of Public and Land-grant Universities, the National Excellence in Extension Award is given annually to one Cooperative Extension professional who excels at programming, provides visionary leadership, and makes a positive impact on constituents served. Devereaux's research on child and adolescent development focuses on social and emotional development through the school year. His research has shown that students have greater gains in grades and standardized test scores when their curriculum incorporates significant social and emotional learning programs.

**SUSAN HAMILTON**  
American Public Gardens Association, selected as one of the two recipients of the 2020 APGA Award of Merit  
June 2020

Susan Hamilton, director emerita of the UT Gardens has received the American Public Gardens Association Award of Merit for 2020. The award recognizes an American Public Gardens Association member who has performed with distinction in the field of public horticulture and has excelled as a public garden professional. The award is a career capstone for Dr. Sue—as Hamilton is known to garden enthusiasts and professionals throughout Tennessee. In Hamilton’s honor, friends of the UT Gardens have established the Sue Hamilton Growth Endowment to support the ongoing needs of the UT Gardens, Knoxville. The endowment has already passed the $100,000 mark.

**TIM YOUNG**  
Fellow International Academy of Wood Science  
October 2019

Timothy Young, professor in the Center for Renewable Carbon under the Department of Forestry, Wildlife and Fisheries, has been named a Fellow by the International Academy of Wood Science. IAWS is a global, professional organization that works on all aspects of wood science advancement, technology, and research. IAWS Fellows are nominated based on their global contributions to wood science and research. This award carries international honor and is held in high regard by international forest products programs. Young was also named Outstanding Alumni of the Year by the University of Wisconsin in 2018.
FROM HAWAII TO COLORADO TO TENNESSEE

This Well-Traveled Dean Brings Diverse Expertise to UT Extension

Ashley Stokes, DVM, PhD, MBA, who most recently served as the associate vice president for engagement and deputy director of Colorado State University (CSU) Extension, began her new role as the leader of UT Extension in February. Stokes has a broad history of service to the national Cooperative Extension system. Her duties at CSU included serving as assistant and associate vice president of engagement of the university’s Office of Engagement, including CSU Extension and CSU Online.

Stokes holds a bachelor’s degree from the University of Alabama and DVM and PhD degrees from the Louisiana State University School of Veterinary Medicine, where she also served on the faculty in veterinary clinical sciences. She spent six years at the University of Hawai’i, where she was the sole veterinary Extension specialist serving both the state and several territories in the Western Pacific. There, Stokes conducted veterinary research and taught pre-veterinary and animal science courses. In 2018, she completed her MBA at Colorado State University with a focus on marketing and communications.

We had a chance to catch up with her to learn more about her background, and her plans as she transitions to Tennessee.

What excites you about being dean of UT Extension?

By far, I’m most excited about working with such incredible Extension professionals, university colleagues with tremendous expertise, and key partners and supporters as we tackle opportunities and challenges across Tennessee.

Your background is highly varied. What led you to Extension?

As a veterinarian and someone growing up with parents working in forestry, agriculture, and social work, I definitely see how my professional and personal background has driven my passion for the mission of Extension. It has also been really rewarding for my work to evolve over time from smaller scale issues, such as treating individual animals, to much larger challenges that involve complex collaborations and strategies. The wide range of approaches and partnerships required to span small- and large-scale issues are exactly the strengths of university-based Extension. It is incredible to be a part of this within the Institute, the UT Knoxville campus, and the UT System.

Diverse Expertise to UT Extension

Robert Williams returns home to the Department of Food Science

For Robert Williams, returning to the Department of Food Science is like a homecoming. With master’s and doctoral degrees from the department he will now lead, Williams is both an alumnus and a new administrator. He’s also a native Tennessean, originally from Morristown. Prior to joining UTIA, Williams served as a professor and leadership specialist intern with Mississippi State Cooperative Extension Service. Since then, Fox acquired more than thirty-five years of experience at the county, multi-county, district, and state levels in three different cooperative Extension systems—Mississippi, Nebraska, and Louisiana. Prior to joining UT Extension, she served as head of the Louisiana 4-H youth development program, serving more than 200,000 youth annually with award-winning, experiential programs.

JANET FOX ON BOARD AS ASSISTANT DEAN OF EXTENSION

Janet Fox, assistant dean of UT Extension Family and Consumer Sciences, began work at UTIA in February. Fox started her career as a middle school family and consumer science teacher, later becoming an Extension 4-H youth development agent, 4-H volunteer and leadership specialist intern with Mississippi State Cooperative Extension Service. Since then, Fox acquired more than thirty-five years of experience at the county, multi-county, district, and state levels in three different cooperative Extension systems—Mississippi, Nebraska, and Louisiana. Prior to joining UT Extension, she served as head of the Louisiana 4-H youth development program, serving more than 200,000 youth annually with award-winning, experiential programs.

You’ll be the first Extension dean for UT who is also a DVM. How does this fit into your new role?

As a veterinarian, I consider myself part of a multifaceted team that is critical for strong, healthy agricultural and community systems. As I began this new role at the University of Tennessee, that same type of strong teamwork and partnership-based approach remains central to what we do in Extension.

You are also breaking ground as the first female dean of UT Extension. What are your thoughts on women in leadership?

It is an honor to be the first woman to serve in the role of dean of Extension. I have tremendous respect for the deans and others in leadership roles who preceded and are around me today. I truly believe that as we continue to expand the diverse qualities, experiences, and backgrounds of our leadership, this contributes to a more robust organization. As a large animal veterinarian, there were times in my career when I was the first woman to call on a farm or ranch, yet my training and experience allowed for fantastic long-term partnerships for the health of their animals. I’ve noticed that sometimes people limit themselves due to assumed role conventions, so perhaps my career path can serve as an example for others to reimagine their future.

When you aren’t working, what do you enjoy doing?

Anything outside! I try to balance the passion I have for my work with time for fly fishing, triathlons (swimming, running, and cycling), bird watching, and playing a little music for relaxation. I also really love getting to meet people, learn about what they do, appreciate their traditions, discover what music they play, see what they do for fun, and try local foods. I can’t wait to hit the road to explore places and meet people across Tennessee! I’ve visited various parts of the state on trips with family, yet there is so much more to discover.

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That was the mandate of legislation signed into law in 1862, 1887, 1890, and 1914 that, collectively, formed our nation’s land-grant system of higher education. Land grants, consisting of acreage of public lands, were made available to encourage the establishment of colleges and universities that would offer programs in agriculture and machine arts. The mandate would be that through teaching, research, and outreach, the institutions would actively work to improve lives and strengthen our society. Today that mission continues at the University of Tennessee Institute of Agriculture.

It is clear in our commitment to provide Real. Life. Solutions. that enhance the well-being of our stakeholders and that of the state of Tennessee, and beyond. Join us in the pages that follow as we explore how the Institute delivers on those ambitious goals."
AN EXTENSION PARTNERSHIP SWEET AS PEACHES
Jones Orchard’s Generation-Spanning Ties to UTIA Exemplify the Land-Grant Mission in Action
by Jacob Nelson

IN THE WINTER OF 1975, an anxious, newly hired UT Extension specialist, David Lockwood, met legendary peach grower, Hubert Lee Jones, at his operation in northern Shelby County’s Millington, Tennessee. Welcome to the orchard with nurse-calming Southern kindness, conversation quickly turned to produce. Walking from tree to tree, Hubert Lee spoke as if thumbing through a family album, introducing Lockwood to a family farming history, then spanning five decades. A friendship was struck. Almost fifty years later, Lockwood is still assisting the Joneses, who are now employing the fourth generation of orchardists. The lasting relationship shows the enduring connection between UT and producers across the state, especially this family.

“Jones Orchard was one of the first visits I made as a specialist,” says Lockwood, who serves the needs of Tennessee fruit and nut crops growers. “It was sort of intimidating because Hubert Lee was very observant and asked difficult questions. A good grower has seen and solved most common problems; so, when they call Extension, you do not want to let them down. It was a real education, and I worked to gain his trust.”

Rapport between Extension and producers is often described as learn-learn. Hubert Lee kept a trial orchard, stayed current with industry and scientific development, and regularly collaborated with other growers. When called on by experienced producers, a specialist or agent might solve one problem, but also find a plethora of other solutions. This knowledge can then be distributed. After almost a century of operating, the Jones family has contributed a bounty of information improving orcharding through UT. It was early in Hubert Lee’s life when a bond with Extension was formed.

Hubert Lee was known to most as “Peach Orchard” Jones, a moniker befitting a lifelong steward of the crop. Born into a farming family in 1899, Hubert Lee was interested in horticulture as a young man, yet he thought he might, like Lockwood, be an Extension professional. During this time of transition from horses and mules to diesel-powered technology, UT offered full scholarships to potential agents in an effort to train producers in emerging practices.

Hubert Lee was extended the opportunity, graduating in 1921, and became the first in his family to attend university.

Hubert Lee worked for UT Extension in Lewis County until World War II, when a call to duty fatefully turned his career away from Extension. During the war, gun powder plants needed able-bodied workers, and American families required homegrown produce. Hubert Lee worked at a factory, and on what would grow from five acres to the 600-acre operation that now stretches a mile along Highway 51, he grew peaches as a subsidiary to supplement the demand for fresh fruit. Starting out, Hubert Lee did not forget his roots and was passed down. They have always done good, not just for themselves, but they truly care about the community. The Joneses are such friendly people and have a family-oriented business.”

Like his father, Lee is an alumnus of the UT System, graduating from UT Martin. While Lee has now retired, he still leads visitors around the orchard, narrating its story and continuing the legacy of caring for trees meticulously on an individual basis. Henry, Lee’s son and Hubert Lee’s grandson, speaks to this inherited staunchness. “You cannot keep Dad still. He always has to stay busy. If the sun is up, we are working, and he has gotten used to that sort of life.”

In the early years, Hubert Lee would jovially holler, “Bring your dishpan!” to his regular customers as he sold his peaches door-to-door. In the 1960s, with the addition of Hubert Lee’s son, Lee, and his wife, Juanita, the orchard became a viable endeavor. Now, Jones Orchard hosts an attractive website promoting shares of community-supported agriculture (CSAs), diversified pick-your-own fruit programs, two market locations, and multiple agritourism ventures.

Lee saw the importance of integrating Extension, too, and found opportunities to innovate, growing the operation. Field days, in association with UTIA, at Jones Orchard became a tradition and were initiations for specialists and agents. It was at one of these events in the 1990s where Booker T. Leigh was introduced to the Joneses’ brand of hospitality.

“When I first went, I saw the different generations, their wives and their children,” Leigh, an Extension agent in Shelby County says. “It started with the grandfather and was passed down. They have always done good, not just for themselves, but they truly care about the community. The Joneses are such friendly people and have a family-oriented business.”

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Three generations of the Jones family gathered together in the orchard.
TOP LEFT: UT Extension specialist David Lockwood with Shelby County Extension agents Chris Cooper, center, and Booker T. Leagh outside a Jones Orchard store.

BOTTOM LEFT: Plant disease can be crippling to orchard operations, but what Extension agent Booker T. Leagh learns from surveying a diseased peach, like this one, can inform other orchardists in Tennessee, and help the industry thrive. The relationship between agents and producers creates a learning environment for both parties.

FACING PAGE: A Jones Orchard sign guides visitors to a picking area.

Henry graduated from what is now the Hermit College of Agriculture. With his wife Dayna, Henry acts as the present custodian of Jones Orchard and speaks about hard work nonchalantly with the same West Tennessee accent as his grandfather. “We start before daylight in the summertime and work past dark.” Slow days in the colder months run eight hours. The demands of running a family farm is lost on Henry, though, and he prefers to get on with business. “It is funny how the economy works. When there is a demand, it will quickly be filled by a supply. As long as there is a demand, we will be here supplying peaches.”

Likewise, he adds, that as long as there is a supply of produce being grown, Extension will be a welcomed guest at Jones Orchard. “You want to help. You want to spread knowledge.”

Agents, too, are eager to continue visiting. “To me it is as exciting, or more, as when I started forty-seven years ago. I learn a lot more than the growers do when I am in the orchard. Every now and then, a problem will come up, and all of the sudden, knowledge gathered over the years will help solve it, and that is really the best feeling,” Lockwood says.

The future of Jones Orchard may rest on Henry’s children. “I am so glad about what the Joneses do, getting their children involved early. They may want to leave for a while, but they will realize what the farm meant to them,” Leigh says. While the youngest family members are involved, there is no pressure to stay, but this is the Joneses’ way of life, becoming ever more uncommon. “When my first child got his driver’s license, he pulled a sixteen-foot trailer that day. I do not think many kids do that these days,” Henry recalls laughing. Those are the sort of memories made at the orchard.

Henry continues with hope, “Our philosophy is more of the same. Orchardists think long term, and it takes a lot of planning, maybe years to introduce a new variety. The next generation will do things differently, but not too differently.” About his college-aged son, Henry says with a nod, “We are looking at UT. I do think there is a future orchardist among my children.”

And among Extension professionals, there is an upcoming and eager colleague working to create standing for himself, as Lockwood and Leigh have during their decades of service. In 2008, Extension agent Chris Cooper joined the Shelby County office and currently hosts The Family Plot, a television program with a substantial YouTube following broadcast by Memphis PBS affiliate, WKNO.

“Every now and then, a problem will come up, and all of the sudden, knowledge gathered over the years will help you solve it, and that is really the best feeling.”

With visits to Jones Orchard for The Family Plot, I wanted to help people understand what it takes to grow fruits. It helped to market the operation, too,” Cooper says. “Henry allowed me to tape several segments about issues helpful to other growers – pruning, spraying, canning. It highlights the relationship we have at Extension have with the Jones family.”

Henry emphasizes the importance of staying current with Extension best-practices. “With Chris’s fruit tree pruning techniques he told me about, my mind had to do a rapid readjustment. It was really good. I brought the guys over and said, ‘This is how the luminaries prune.’”

Juanita, Lee’s wife, still manages the Jones Orchard Country Kitchen. “Sometimes, Ms. Juanita brings biscuits and jam to our County Agriculture Committee meetings and that makes everyone very happy,” Cooper says.

Forging prospects for the orchard means keeping up to date on market trends. “People have come to appreciate local production, with its uniqueness and quality. The demand for products from nearby farms has increased,” Lockwood says. “Successful producers like the Joneses often add value to their operation by selling one fruit in many different forms. They have been able to grow a market. Everybody in Shelby County and many across West Tennessee know about Jones Orchard and appreciate getting excellent fruit from people they know. From what I hear from consumers, it means a lot. Good, safe, and reliable food sources are more important now than ever.”

“The Joneses have always cared about the fruit they were selling to the community,” Leigh says, “and made a good reputation. With COVID-19, too, people want to buy from someone they trust with few hands handling a product.” Cooper says, “It is true farm-to-table.” Even after producing 30,000 bushels last season, serving a lot of happy consumers and prospects, the amount falls short of meeting demand.

Henry trusts Extension to keep him informed as his family continues their seven year “I see Extension as a repository of information. They are our go-to people when we have a question.”

Sometimes a visit from an Extension agent is just good, old-fashioned fun. “Oh, it is always very professional. We have never gotten stuck in the mud and had to have the tractor pull us out.” Henry says straight-faced. “The friendship between Jones Orchard and Extension is familial.”

Hubert Lee’s epitaph reads simply, “He grew peaches.” But farmers such as the Joneses do so much more, especially for UT and its stakeholders. Real. Life. Solutions. are found in every field that feeds us, as producers overcome challenges and cultivate success.

Jones Orchard, Market, and Country Orchard is located fourteen miles northeast of Memphis, Tennessee. Fruit selections include peaches, plums, nectarines, strawberries, blackberries, blueberries, pears, apples, and pumpkins, along with an array of jams, jellies, and baked goods made by Juanita (Jones) herself. At the farm, year-round, family-friendly activities are offered, including fruit picking, a corn maze, and fresh-cut Christmas tree sales. Jones Orchard products can be found at a second market on Singleton Parkway and at various farmers markets in the Memphis area. Visit jonesorchard.com to learn more and follow the operation on Facebook and Instagram. As Lockwood says, “When you eat a peach from Jones Orchard, you can taste the sunshine.”

The Center for Profitable Agriculture (cpa.tennessee.edu), jointly operated by UT Extension and the Tennessee Farm Bureau Federation, partners with Tennessee producers to assist with value-added opportunities like those exemplified by the Jones Family and their orchard.
HOW CITIZEN SCIENTISTS ARE IMPACTING RESEARCH AT UTIA

From Regular Joe to Real. Life. Solutions.

by Beth Hall Davis

“Technical terms like research, scientific trial, and data collection are not part of the regular, everyday conversations of most Tennesseans. At UTIA, researchers and faculty in several departments aim to change that by involving the state’s residents in their efforts. Turning up brings three big positives. By taking part, people help to broaden the definition of a scientist. Their involvement encourages people to think more actively about science, and through their contributions, Tennesseans are helping to create larger, more robust data pools on which to base hypotheses and conclusions.”

In the Department of Plant Sciences, associate professor Natalie Bumgarner and assistant professor Virginia Sykes operate home garden variety trials with the help of assistant professor Virginia Sykes operate home garden variety trials with the help of assistant professor Virginia Sykes operate home garden variety trials with the help of residents who aren’t otherwise affiliated with the University become involved in research,” says Sykes. “They’re owning the data and realizing that yes, anyone can be part of scientific discovery.”

Citizen science programs like this one are the foundation of a mutually beneficial relationship between Tennessee residents and academic researchers. The observations of citizen scientists contribute to larger data sets that researchers can use in their work. With so much more information available, solutions to complex issues are more readily identified by both UTIA researchers and by residents who aren’t usually involved in the scientific process.

“Having unbiased facts to inform our crop recommendations helps farmers increase their profitability,” says Scott Stewart, director of the West Tennessee AgResearch and Education Center.

“In addition to trials conducted with a large face-to-face component, technology is playing a role in citizen engagement as well. Assistant professor Meg Staton of the Department of Entomology and Plant Pathology teamed with scientists at three other universities to develop a smart phone app called TreeSnap. Individuals across the country have added photos of trees they encounter and answered a few customized questions about each tree’s health. Their responses are then analyzed by researchers at more than a dozen universities, centers, and conservation societies who study specific aspects of tree health.”

Another data collection app, called eBird, is used by Andy Lantz, a UT Extension agent in Davidson County. Lantz leads a monthly bird watching club for youth and teens. “Each month we meet at a nature center in Nashville for a bird walk. The students identify birds using field guides and add their sightings and lists to eBird,” Lantz says.

“eBird is used worldwide to track avian metrics, including how migratory patterns have changed over time and how weather affects the number of species observed in an area. In Middle Tennessee,” Lantz says, “the data collected by 4-H youth and others shows how the timing of migrations is changing. Insects and leaves are appearing earlier and earlier, so the birds are working to catch up.” The citizen science birding curriculum Lantz developed has been recognized by the National Association of Extension 4-H Youth Development Professionals.

When researchers and the public work together at UTIA, their efforts amplify discovery and innovation across the state of Tennessee. Identifying ways to make our state and environment healthier and better-managed takes all of us. If you would like to become involved or support a citizen science project at UTIA, contact DeWayne Shoemaker, professor and head of the Department of Entomology and Plant Pathology. You can reach him at dewayneshoemaker@tennessee.edu or by calling the department at 865-974-7135.”
SUNDOWN MEANS SHOW TIME at the State Line Drive-In in Elizabethton, Tennessee, where you can park your vehicle, tune in the audio, and watch the movie. The week pictured here you could catch a double feature — Cloverfield and Supplementation Strategies for Cow/Calf Nutrition.

Wait a minute. Agriculture at a drive-in theater?

UT Extension Carter County agent Kathleen Wilson came up with this clever idea, and COVID-19 was the cause. She wanted to get information to cattle producers and worked with the owner of State Line Drive-In to put a Zoom presentation on the big screen. The drive-in hosted eight Master Beef Production showings, all at a place where people, and vehicles, could stay a safe distance apart.

“It gives a nostalgic feel because a lot of my producers remember going to the drive-in movie theater when they were younger,” Wilson says. “It keeps the Carter County family atmosphere going, and we’re going to talk everything Master Beef.”

Drive-in theaters have seen business increase during the pandemic. It’s a great place to be entertained and to spread information. “I still get to see my producers, which makes my heart happy. But I don’t have to be as close as we would be in a building,” says Wilson.
IN THE MOST CHAOTIC YEAR IN RECENT MEMORY, UT Extension still delivered in a big way in 2020. This past year—with COVID-19 gripping Tennessee and the entire world—the number of UT Extension interactions either virtually or by careful contact exceeded nine million. Agents and specialists reached that many people while the pandemic was going on all around us. If the number is not quite as many contacts as in a “normal” year, unquestionably it represents a remarkable effort.

“There’s no doubt the pandemic substantially reduced the number of face-to-face contacts we could have in 2020,” says Ashley Stokes, dean of UT Extension, “but our faculty and staff worked very hard to create alternative methods for delivery of programming—whether that was creative delivery of online programming or in-person sessions that followed strong safety protocols. Agents have been incredibly innovative, and, in doing so, reached our traditional audiences, as well as others outside our normal clientele.”

There are wonderful examples everywhere of this outreach.

The Wilson County Fair was canceled due to COVID-19. Usually it’s one of the biggest county fairs in the country, with half a million visitors in nine days. But in 2020, at least part of the fun still took place.

While there while no rides or exhibits, fairs are fundamentally about agriculture, and officials decided the 4-H Livestock competitions would still take place. And they did. Ever more than one thousand youth showed animals, with children and parents following CDC guidelines to ensure a safe event.

“This was to give 4-H youth the opportunity to show,” says Beth Cross, who retired recently as director of UT Extension in Wilson County. “We had 609 head of dairy goats, about 510 of sheep, more than 100 head of hogs, and our market lamb and community events were bigger than’s it been in several years.”

Other youth activity has also continued. In the age of COVID-19, one undertaking has been a game of Pictionary between states. Maury County, Tennessee, may be 1,200 miles from Arapahoe County, Colorado, yet online, they come together as one town. 4-H agent Karen Keenan helped organize the virtual exchange program for her 4-Hers in Tennessee and teens in Colorado. Each week they have an evening Zoom meeting where they play games and learn from each other.

“We wanted to give the youth an opportunity to see what 4-H is like in other parts of the country,” Keenan says of her group.

UT Extension also started a curriculum to help parents adjust to home-based virtual schooling for their children. Extension agents are sharing many programs virtually, including farm visits, family and consumer sciences instruction, and 4-H club meetings.

“What we’ve learned, in many instances, is that using online formats actually increased the audience and increased the reach of these programs,” says Tim Cross, senior vice president and senior vice chancellor for agriculture.

UT Extension Wilson County’s Shelly Barnes is part of a group of seventeen family and consumer sciences agents conducting Wellness Wednesdays. Come mid-week, they share information about parenting, money management, food safety, and good health through a campaign of social media, print, and radio. The subject matter is all a response to COVID-19.

“We were really concerned about our clients and making sure we were still connecting with them, making sure they knew, ‘Hey, we’re still here. We’re still working for you,'” Barnes says.

Family and consumer sciences agents Justin Thomas from Bradley County and Meagan Brown from Meigs County continued production of their award-winning podcast, Blue Ribbons and Boots, which discusses professional development opportunities for fellow Extension agents.

Jeff Via from Fayette County and Becky Muller from Tipton County created an online fact sheet and produced YouTube videos educating forage producers about the harmful weed knotweed fontal. Matt Horner and others at the Extension office in Williamson County held online culinary lessons for 4-Hers, and Nicole Marren in Overton County encouraged her 4-Hers to take part in a statewide pen pal program.

And how about Craps, Cattle and Charly? That's the video series produced by Charles Martinez, assistant professor in the Department of Agricultural and Resource Economics. Martinez worked with Extension livestock economist Andrew Griffith and crop economist Aaron Smith to host online informational sessions for cattle farmers.

Many of their focus has been related to COVID-19 and its bottom line dollar impact.

For a veterinary medical center that receives more than 500 calls a day in a normal year—a number that increased during the pandemic—finding a way to keep the phones answered was a top priority. Nan Lambrecht, manager of the Veterinary Medical Center’s Client Services, faced unchartered territory with the majority of her staff working from home. “Our phone system couldn’t be accessed remotely, the external access to our computerized medical records system used by our schedulers was clunky, and forty years of how we receive patients had to be redesigned because no clients were allowed in the building, and we were doing curbside pickup.”

While it was a logistical mountain to climb, Lambrecht says the many services that function behind the scenes to keep the hospital running smoothly worked together to effect monumental changes. Client services, the business office, and computer operators collaborated on these efforts. So did health information, maintenance, pharmacy, central supply, laundry, sterilization, and more. “There was so much ‘job’ to get done, and everyone came together so we could continue to meet the needs of our clients and their animals. People volunteered to work from home and to take on additional hours and additional responsibilities. This year has made us more agile and more robust. I guess you could say this has been the ultimate team-building exercise.”

Intensive Care Unit supervisor Leslie Weerarach is grateful to be part of a team whose members are there for each other. “We learned to critically think about things as we went—not just medically, but logistically and from the human side of things. People lifted each other up and kept an eye on each other. We needed one another more than ever.”

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**HELPING CO-PARENTS COMMUNICATE**

*by Beth Hall Davis*

A UT EXTENSION PARENTING PROGRAM celebrates twenty years of impacting Tennessee families this year. Parenting Apart: Effective Co-parenting is taught in most Tennessee counties and helps parents learn to work as a team with their co-parent.

Elizabeth Renfro, an agent with UT Extension Washington County, leads one of the largest Parenting Apart programs in the state, offering both evening and Saturday classes in addition to sessions scheduled during business hours. “I’m not here to tell people how to raise their kids, but I am here to help provide resources for co-parents navigating a new season in their lives,” says Renfro.

According to Renfro, the class helps many divorcing parents fully realize the negative impact a tense relationship with their co-parent can have on their children.

“When divorcing parents are struggling to communicate or get along, the entire impact a tenuous relationship with their divorcing parents fully realize the negative impact that equation, too,” continues Riddle. “A healthy relationship with strong communication between co-parents will lead to a healthy environment where children can grow and thrive. This curriculum has helped thousands of families across Tennessee establish healthier relationships. Ultimately, healthy kids and healthy parents mean healthier communities across the state.”

If you or someone you know is interested in participating in a Parenting Apart course, contact your county Extension office.

Visit utextension.tennessee.edu for more information.

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**SUSTAINABLE ALTERNATIVES TO CARBON FIBER.**

Faculty members Dayakar Perumadu and Uday Valiya of the UT Tickle College of Engineering and David Harper and Siqun Wang of UT AgResearch’s Center for Renewable Carbon are paving the way for sustainable woody biomass to replace petroleum-derived components in a range of industrial products. Also on board are researchers with Volkswagen, Prima Composites, and Mobius.

“This partnership brings together powerful technical groups to develop next generation green composites for automotive and other applications,” Perumadu says. “The UT science and most recent innovations result from multidisciplinary collaborations such as this.” A team breakthrough consisted of making the first carbon fibers from 100 percent lignin precursors and blended biopolymers.

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**OUTREACH TO BATTLE FARMER, RANCHER STRESS.**

Many farmers, ranchers, and rural residents are stressed. The US Department of Agriculture has established four networks to help alleviate the problem. Heather Sedges of UT Extension’s Family and Consumer Sciences leads the southern region, composed of thirteen states and two US territories.

Faculty in the UT College of Communication and Information are contributing by probing the root causes of stress experienced by Tennessee farmers and ranchers.

If you or someone you know is interested in participating in a Parenting Apart course, contact your county Extension office.

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**BETTER INTERNET ACCESS FOR RURAL RESIDENTS.**

Sreedhar Penumadu of the Department of Agricultural and Resources Economics and Isabella Baxter of the UT Libraries are establishing a mobile hotspot lending program for underserved and economically distressed communities. Another project is building a fleet of Internet-enabled drones that will engage, invest, and educate rural residents across sixty-eight Tennessee counties. “Malnutrition will also be translated into Spanish to increase the program’s reach,” says Riddle.

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**NEW KNOWLEDGE ABOUT ONE HEALTH.**

A concerted cross-campus, systemwide collaboration, the One Health Initiative (onenhealth.tennessee.edu) is tackling a sweeping range of issues at the intersection of human, animal, plant, and environmental health.

“The energy generated from the UT One Health collaboration is electrifying,” says initiative director Dab Miler. “The community’s efforts, by harnessing efforts across UT, are allowing us to tackle health issues impacting our state and beyond.”

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**BENCH SCIENCE WITH REVOLUTIONARY POTENTIAL.**

The UTIA Center for Agricultural Synthetic Biology, co-directed by Scott Langham of the Department of Food Science and Neal Stewart of the Department of Plant Sciences, has formed critical collaborations on two multidisciplinary projects.

In the quest to produce engineered plants to signal the presence of environmental contaminants, researchers are collaborating with the Department of Biosystems Engineering and Soil Science to develop engineered plants that will signal the presence of specific contaminants.

Sustainable research programs are also being advanced in the UT One Health Initiative (onenhealth.tennessee.edu) is tackling a sweeping range of issues at the intersection of human, animal, plant, and environmental health.

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**AUGMENTED REALITY SCIENCE IN TENNESSEE.**

When scientists with UTIA and UT Knoxville unite in research studies, the impacts are powerful. Projects currently underway include:

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**AGRICULTURAL INSIGHTS FOR THE GOVERNOR.**

The annual economic report to the governor of Tennessee (tiny.utk.edu/TN econ2021) drives upon the expertise of researchers at UT’s Boyd Center for Business and Economic Research and Department of Agricultural and Resource Economics.

UTIA’s contributions, led by Kim Jensen, analyze the health of Tennessee’s agri-food sector, spanning crop and livestock farming, international trade, value-added manufacturing and processing, and the rural economy. The impact of the COVID-19 pandemic on both the industry sector and the well-being of Tennessee households were included this year.

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**SPRING/SUMMER 2021.**

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**This curriculum has helped thousands of families across Tennessee establish healthier relationships. Ultimately, healthy kids and healthy parents means healthier communities across the state.**
JUSTIN MORRILL NEVER RECEIVED a formal college education. Instead, the Vermont native left school at age fifteen to become a storekeeper. The year was 1825 and Morrill dreamed of becoming a hard-working businessman, he achieved his goal at the age of thirty-eight, at which time he decided to pursue a political career. Yet despite his many successes in life, Morrill remained sensitive about his own lack of educational opportunities. As a member of Congress, he made it his mission to ensure that others would have the opportunity to attend college, a wish Existing universities at that time were considered elite and widely unavailable to agricultural and industrial laborers. In his greatest legislative achievement, Morrill proposed that states be able to sell up to 38,000 acres of public land with the intent of establishing colleges of agriculture, mechanical arts, and military tactics to serve this group, whom he considered the backbone of our society. His desire was that these students be exposed to a liberal arts education that would help them establish their professions, gain a deeper understanding of society, and help a young nation grow and prosper. This landmark legislation did not pass immediately, but was finally signed into law by President Abraham Lincoln in 1862. The Morrill Act, also known as the Land-Grant College Act of 1862, laid the foundation for universities such as the University of Tennessee in Knoxville to become some of the first in the nation to be established. In an effort to give the same opportunity to historically Black colleges and universities (HBCUs), a second Morrill Act was passed in 1890 to provide funds to these institutions and designate them as land grants. Tennessee State University, located in Nashville, was designated as a result of this legislation. In 1994, a third land-grant act conferred status to Native American tribal colleges and universities. A second key component of the land-grant system is the ability to provide valuable research opportunities to students and faculty. The Hatch Act of 1887 authorized the direct payment of federal funds to establish agricultural experiment stations in conjunction with land-grant universities. Known today at the University of Tennessee Institute of Agriculture as UT AgResearch and Education Centers, these parcels of land located across Tennessee give faculty and students living laboratories in which to conduct important agricultural research. Finishing the trifecta of the land-grant mission was the Smith-Lever Act passed in 1914, which created a Cooperative Extension service at each land-grant institution. Each year federal funds are appropriated for the purpose of disseminating the important research findings from the experiment stations to farmers and ranchers in an effort to improve people’s lives. With the importance of increasing food production throughout the Depression and two World Wars, Extension, supported by the United States Department of Agriculture (USDA), played a key role in helping farmers provide food. At the same time, home economists with Extension taught women to preserve food, provide nutrition, and take care of household needs. Today, Family and Consumer Sciences provides families with education in finance, nutrition, mental health, and so much more. The Morrill Act has proven to be one of the most significant pieces of legislation in the country’s history. A total of 112 land-grant universities across the country have been established due to this initiative. These universities, including the University of Tennessee and the Institute of Agriculture, have educated millions of students over the years, provided ground-breaking agricultural research findings, and extended practical knowledge to all citizens. OPENING DOORS, EQUALIZING ACCESS, AND ADVANCING SOCIETY Lofty Goals, Indeed, are at the Heart of the Nation’s Land-grant Mission by Lisa Stearns

From 1897 Annual Report: Agricultural Department, Plant House and Insectary, University of Tennessee.

From the 1907 Annual Report: View of the Experiment Station Farm from across the Tennessee River.

From 1932: Producers evaluate cattle at a UT agriculture property.
LAND-GRA NT COLLEGES

There are land-grant colleges and universities in every state and territory in the US, with two located in Tennessee. These institutions provide a broad range of academic programs and educational opportunities and are accessible to all those seeking higher education. In addition, valuable, data-driven information is disseminated to the public through Extension which is supported by the federal government.

MORRILL ACTS

Federal laws establishing land-grant universities to teach agriculture, military tactics, mechanical arts, as well as classical studies. Named for the sponsor of the original act, Vermont Congressman Justin Smith Morrill.

1862 – Signed into law by Lincoln.
1890 – Established historically Black colleges and universities (HBCUs).
1994 – Recognized Native American tribal colleges and universities.

HATCH ACT (1887)

• Federal grant funds established agricultural experiment stations.
• Research may be conducted on problems of local, state, regional, or national concern.
• The appropriation amount varies each year and must be matched by the state.
• Ten UT AgResearch and Education Centers across Tennessee.

SMITH-LEVER ACT (1914)

• Created Cooperative Extension to disseminate information gained from the research centers to help farmers, families, and communities.
• States must match federal funds.
• Ninety-five UT Extension offices in Tennessee.
• Joint UT-TSU Extension county offices.
• Extension also includes agricultural and natural resources, family and consumer sciences, and 4-H youth development.

TENNESSEE’S TWO LAND-GRANT COLLEGES ARE THE UNIVERSITY OF TENNESSEE AND TENNESSEE STATE UNIVERSITY

41% of Tennessee is farmland

NIFA LAND-GRA NT COLLEGES AND UNIVERSITIES

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When COVID-19 created barriers to global collaboration, the Smith Center for International Sustainable Agriculture broke them down. The Center created new ties with universities in Haiti and Mexico to bring Real. Life. Solutions. to their students and expand opportunities for future generations to secure higher paying jobs, pursue graduate studies, and serve as leaders of their communities.

Learn more about UTIA’s international ties at smithcenter.tennessee.edu.

GREAT COMBINATIONS

We asked experts about how UT-branded wines and cheeses go together.

by Jessica Black
WINE AND CHEESE GO TOGETHER as naturally as Smokey and Neyland Stadium on a football Saturday. But have you ever wondered why wine and cheese pair so well?

With the debut of UT-branded wine last fall and Herbert College of Agriculture’s continuing tradition of selling cheese, the time is perfect to explore the science behind the duo and get insider tips on how best to pair wines and cheeses.

The UT Institute of Agriculture partnered with the Tennessee Farm and Wine Growers Alliance to introduce a line of wines whose sales directly support the viticulture industry in the state of Tennessee through student internships at Tennessee vineyards, wineries, and other agritourism locations. The wines include a Volunteer Orange & White that is similar to a Pinot Grigio, a Smokey’s Red that is a medium-bodied red wine, and a Tailgate Sangria, which is comparable to a muscadine wine.

The tradition of cheese at the Institute traces back to the original UT Creamery that operated on campus for much of the last century. More recently, the Department of Food Science joined with East Tennessee’s Sweetwater Valley Farm to make and sell All Vol Cheese as a fundraiser for student programs. Students benefit from the alliance by learning hands-on production skills. The cheese team introduced its newest product, Power T Cheese, last fall, which features the iconic symbol in blocks of cheddar.

The science behind why wine and cheese pair so well is relatively sparse, according to assistant professor Curtis Luckett. Luckett, housed in the Department of Food Science, researches human food perception. A study that examined the pairing, conducted by French scientists, showed that one product in the pair tends to refresh the palate so the other is enjoyed more.

Properly paired, wine and cheese heighten the taste of each other in an effect called flavor enhancement. Wine and cheese are almost always selected for shared characteristics. Bold wines such as Malbecs or Syrahs hold up well with strong-flavored cheeses such as aged cheddar. These pairings ensure neither product is overshadowed. Additionally, many red wines contain high amounts of tannins that affect “mouthfeel.” The tannins can create a drying sensation in the mouth, but also help to dispel the oily feeling from consuming a rich food like cheese or steak.

So which UT wine pairs with which UT cheese? Terri Geiser has the answer. Geiser manages the UT Culinary Institute’s community cooking classes and wine events. In addition, she serves as a judge for the Wines of the South Competition, which has long been affiliated with the Department of Food Science. After evaluating each wine’s aromas, color, and flavor, Geiser recommends the following combinations.

**Smokey’s Red** offers a fruity flavor with a mild pepper finish. Geiser suggests serving this wine with **Checkerboard Mild Cheddar**.

A rare exception to the norm of selecting wines and cheeses on comparable characteristics, Geiser says, is how the sweet **Tailgate Sangria** pairs with **Torchbearer Jalapeno**. The two function so well, she notes, because generally spicy foods are often complemented by a sweet and fruity wine.

Geiser also likes **Checkerboard Mild Cheddar** paired with **Volunteer Orange & White**, which she adds is best served immediately after it is taken out of the refrigerator.
In Tennessee, raised beds serve as a great tool for both teaching and production consumer horticulture. And, we have many skilled Extension Master Gardeners who are raised-bed educators.

No matter how small the garden space, there are options. Here are some tasty microgreens ready for a summer field day presentation on growing microgreens with some tasting to follow.

Consumer horticulture provides so many opportunities to bring the science of vegetable physiology together with the practical aspects of growing. Refractometers are being demonstrated here to illustrate soluble solids assessment and fruit quality.

Grafting tomatoes can support production and disease resistance in the farm and garden alike. And grafting workshops are a great way to bring the science and practice to life.

I serve because I believe that healthy communities require engaged and educated rural, urban, and suburban consumers who see the value of plants in the backyard as well as the back acreage. And, I love being a part of an organization dedicated to providing that engagement and education for diverse stakeholders from farm families to consumers in cities, towns, and rural communities across Tennessee.

For me, coming to UTIA six years ago as an Extension specialist felt like finding the puzzle where all those unique pieces of my upbringing, work experience, passion, and education fit into place. I was raised as the seventh generation on a family beef cattle farm in West Virginia where agriculture was as much a way of life as a career path. After falling in love with horticulture as a teenager working in a local greenhouse, I completed an undergraduate degree in horticulture and started a master’s with the intention of heading back to the farm and figuring out a way to support myself in production agriculture. During my master’s though, I saw how applied research and Extension outreach could address challenges in agriculture and society and uniquely deliver benefits to people on and off the farm. That understanding gave me the passion and motivation to contribute with my data and my voice for a society where agriculture as a career and farming as a way of life is valued in both rural and urban areas.

After grad school and a few beneficial years in the greenhouse vegetable industry in the Midwest, the opportunity to come back to Extension and Appalachia drew me to UT and Knoxville. My role as consumer horticulture specialist means I collaborate with our excellent statewide Extension team and with residents along the wide waterfront of horticulture practiced non-commercially. The essence of consumer horticulture is that life is simply better with plants. So, I have the opportunity every day to research and teach how plants in our gardens, landscapes, and homes can support nutrition, health, and well-being for ourselves and the areas where we live and work. But the benefit of this consumer connection to plants, food, and the environment doesn’t end at the property line or the city limits. Knowledgeable and engaged consumers are essential in building an agricultural economy that provides a rewarding life and livelihood for our current and future farmers. My production background was actually perfect preparation because I see producers and consumers as two sides of the same coin. Understanding the realities of growing your own fruits and vegetables forever impacts how you value their production on a farm or in a greenhouse and how you see the person who grows and sells them.
Dan Wheeler stands out as one of Tennessee agriculture’s most impactful advocates. When animal emergencies occur, veterinarian Meggan Graves has found a way to assist animals, students, owners, and practitioners alike.

by Lauren Henry and Sandra Harbison

A new associate’s to bachelor’s degree program in agricultural leadership, education, and communications makes learning possible anywhere, anytime, and anywhere. This four-semester, online opportunity offers the next step for those seeking to accelerate a career in Extension, government, nonprofit, youth organizations, and more.

ALEC.TENNESSE.EDU/ONLINE-BACHELORS-DEGREE
Tennessee Department of Agriculture, Dan Wheeler. "In my opinion, before he came to the professional career.

Planting from production agriculture,” says Wheeler. “I think the background I had as a youth in production agriculture was very valuable in my career.”

His father’s farm butted against what is now Interstate 40 near the Crab Orchard property lines of any one farm.

Tennessee agriculture that far exceeds the value of both long- and short-term planning from production agriculture,” says Wheeler. "I think the background I had as a youth in production agriculture was very valuable in my career.”

During his time as commissioner, Wheeler oversaw the tobacco grower settlement trust, which provided more than $170 million in compensation to nearly 50,000 Tennessee farm families thanks to his legislative support and administrative oversight. The trust was a lifeline to farm-ers navigating a shift away from tobacco production.

In addition, during Wheeler’s time at the department, the Governor’s Council on Agriculture and Forestry brought together leaders from the full spectrum of agriculture in a comprehensive, one-year study focused on identifying the challenges and opportunities faced by Tennessee’s farmers. Wheeler helped solidly the Center’s funding partnership with Tennessee Farm Bureau and created the foundation for countless other collaborations and partnerships. That legacy is still impacting the industry well over a decade after he stepped down from his role as director.

Today, Wheeler is enjoying retirement in Columbia, Tennessee, with his wife Carol (education ’65). The couple has two sons, Jim (accounting ’89, law ’92) and David (agricultural economics and business ’92), and five grandchildren. Jim has a private law practice in Jonesborough that includes an emphasis in estate planning for farm families in the Washington County area. David is commercial director for FMC Corporation, a major manufacturer of crop protection products for US agriculture.

A FIREFIGHTER LOWERED MEGGAN GRAVES by the ankles into the bowels of an overturned horse trailer. Graves (DVM ’00) had been called to the accident on Interstate 40. Thirty horses were involved. Eight were dead, and two had to be euthanized. Then there was the horse still trapped in the debris and in need of sedation. Despite the horror of the scene and her two-handled descent, Graves says she had never felt safer at an accident.

“When a first responder is assisting you, how could you not feel safe?” she asks. “Usually, I’m looking out for my patient, my students, the owners, etc., but who’s looking out for me? Typically, no one. This time, I had a professional assigned to keep me safe.”

Graves is a clinical assistant professor with UTVM, teaches large animal emergency medicine, drawing directly from her own vivid experiences.

As a private practitioner following her graduation from UTVM, Graves pioneered an innovative business model for large animal practices based on emergency relief services. When her husband, Chris Graves (BS ’95, MS ’01), began teaching in the UT Department of Forestry, Wildlife and Fisheries, Graves joined UTCVM and initiated the model there.

Through it, area large animal clinics can transfer calls after hours, weekends, and holidays. Graves takes care of the emergencies. The clients are billed directly, and the primary care veterinarian provides the animal’s aftercare during business hours.

“When you are in private practice, especially if it’s a one-doctor clinic, you’re on call all the time,” Graves says. “If you take time off, you worry about who will take care of your clients if they suffer an emergency. When I see pictures of veterinarians on vacations on social media, I know I’ve given them the opportunity to do that with peace of mind and enhanced their quality of life. It makes my job great!”

To help veterinarians across the country learn about and possibly duplicate this business model, Graves published “Large Animal Emergency Relief Services—A model for University Engagement with Private Practitioners and Development of Practice Readiness for Veterinary Students,” in the Journal of Veterinary Medical Education.

Within a few months of instituting the model at the veterinary college, its large animal emergency caseload increased dramatically, expanding the veterinary students’ exposure to real-world medicine. Following in the footsteps of John Henton, one of her mentors, Graves embraces being a strong role model in all walks of her life, whether for veterinary students initially uncomfortable with large animals, interns or residents gaining confidence as young doctors, members of area 4-H and pony clubs, or the elementary and middle school cross-country teams she coaches. She fosters a sense of wonder as she leads dissections in high school anatomy and physiology classes. Graves embodies the land-grant mission of teaching, research, and outreach.

“"At that moment I realized I wanted to focus on large animal medicine and be there for people in their greatest time of need.”
A BIG FISH IN A BIG POND

By Lisa Stearns

Professional Bass Fishing’s First Superstar Receives An Honorary Doctorate in Natural Resources from the Herbert College of Agriculture

Bill Dance is a Tennessee icon. The professional fisherman, television personality, author, conservationist, teacher, and native Tennessean has become one of the greatest and most recognizable outdoor sports figures in the world. Through his iconic television show, Bill Dance Outdoors, he has shaped how people view and interact with the outdoors for generations. Now in the twilight of his career, the University of Tennessee’s Herbert College of Agriculture has awarded William G. “Bill” Dance an honorary doctorate in natural resources.

Dance grew up on Tennessee waters, first in his native Memphis and later in Lynchburg. Although he considered following in the family tradition of medicine and becoming a physician, Dance decided to see if he could make a living pursuing his greatest passion—fishing. Dance quickly gained notoriety and success during his time on the professional bass fishing tournament trail in the 1970s. His notable achievements include being a three-time B.A.S.S. Angler of the Year, eight-time Bassmaster Classic Qualifier, and winner of seven tournament, eight- top ten finishes.

Dance became one of the greatest bass fishermen in the world. Through his iconic television show, Bill Dance Outdoors, he has captivated millions of viewers. In 1968, he began producing and hosting the television show, Bill Dance Outdoors. It first aired in 1968 on a local Memphis television station, and Dance would edit episodes of the show himself in his family dining room. But it didn’t take long for the show to grow in popularity and demand. By 1980, Dance turned his full attention to the TV show and, at the age of thirty-nine, retired from professional fishing.

Today, Bill Dance Outdoors is one of the longest-running television shows in history with well over 2,000 episodes airing since 1968. It is the most popular nationally syndicated fishing show in the US and airs both on the Outdoor Channel and World Fishing Network.

Superstar Receives An Honorary Doctorate in Natural Resources

Accolades for his dedication to outdoor recreation, conservation, and economic development have come from across the globe. Notable awards include the Congressional National Water Safety Award; induction into the National Freshwater Hall of Fame; induction into the Professional Bass Fishing Hall of Fame; the President’s Award for the National Association of State Boating Law Administrators; induction into the International Game Fish Association Hall of Fame; and being honored by the Tennessee Sports Hall of Fame as both an inductee and winner of the Tennessee Male Professional Athlete of the Year award.

For forty years, Dance has donned his trademark orange and white cap, emblazoned with his trademark orange and white cap, for forty top ten finishes. A Television Star Is Born

Professionals in the bass fishing world began to realize that Dance’s wit, enthusiasm, personality, and knowledge of fishing could be a great asset in attracting others to the sport and helping them to succeed. That led Dance to start producing and hosting a television show called Bill Dance Outdoors. It first aired in 1968.

Although impossible to measure, there’s no question that Dance has influenced millions of people to better appreciate and enjoy our natural resources.

Doug Dickey, who was football coach at UT in the late 1960s, called me one day and said he was recruiting a player in Georgia who loved to fish, and was a big fan of mine,” Dance recalls. “He asked if I’d drop the kid a note and put in a good word for UT. I did, and a few days later I got a couple of UT caps in the mail from Dickey. I was wearing one of the caps a little later when I won a big tournament. I was photographed in the cap, so I wore it on my next TV show. Before I knew it, it had become part of my identity. I’ve been wearing a UT cap ever since.”

BILL DANCE

Aside from Dance’s personal charisma, a big reason for the show’s success is his skill as a teacher. Regardless of the episode, viewers of Bill Dance Outdoors are certain to come away with a better understanding of fishing, ecology, and outdoor recreation. Although impossible to measure, there’s no question that Dance has contributed to national magazines, books and has been a regular contributor to national magazines, books, and newspaper columns.

Four decades later, Dance continues to influence millions of people through his work and nurturing the appreciation and conservation of our natural resources.
For his graduate project in forestry, master’s student Walker Fowler collaborated with the Knoxville Police Department to plant dozens of young trees at Safety City. The trees will grow to provide widespread canopy cover over the community site where elementary schoolchildren learn about vehicular, pedestrian, bicycle, and fire safety.