

THE UNIVERSITY OF TENNESSEE INSTITUTE OF AGRICULTURE

LAND, LIFE & SCIENCE

SPRING/SUMMER 2019

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**GIFTS WITH
POWERFUL EFFECTS**
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**TOGETHER
WE GROW**

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UTIA INSTITUTE OF
AGRICULTURE
THE UNIVERSITY OF TENNESSEE

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LAND, LIFE & SCIENCE

SPRING/SUMMER 2019

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The UT Institute of Agriculture provides instruction, research, and public service through the Herbert College of Agriculture; the UT College of Veterinary Medicine; UT AgResearch, including its system of ten AgResearch and Education Centers; and UT Extension with its offices in every county in the state.





Greetings From Our Chancellor

A WORD FROM TIM CROSS

For so many of us, June is a month of beginnings. Our newest alumni—students who walked across the stage to receive their diplomas in May—are embarking upon a new era in their lives, full of adventures and growth. June weddings herald new lives together, and the arrival of summer brings growth all around us, from farm and fields and forests to the new endeavors we may plan for the months ahead.

This season is a reminder of the importance of growth, whether it is physical growth, personal and professional growth, or even growth as an organization. To borrow an analogy from agriculture, the growth of a single seed is fascinating, however, the power of what multiple seeds can produce is breathtaking.

This “multiplication factor” also applies to our funding. As a federal, state, and locally supported land-grant institution, we are blessed to have been fortified by public dollars since the University of Tennessee’s beginning. However, the cost of fulfilling our land-grant mission has increased even as the government resources critical to its success have become stagnant or declined. The result is that we more and more must rely upon our graduates, friends, and industry partners to sustain our mission to deliver the science on which so many depend. We have launched the Together We Grow campaign, with its goal to raise \$175 million, for three purposes. Funds from the campaign will enable us to continue to prepare the next generation of agricultural leaders. We will be able to generate solutions for issues in food, natural resources, and animals, ones that affect us individually and as a society. And, critically, the

support will advance our abilities to serve the citizens of Tennessee and those around the globe who rely upon us.

With your help, we can make this endeavor successful beyond even our loftiest goals. We hope you will join us in our efforts to continue to make impacts. In this issue are some amazing stories of ways the Institute and its people are transforming lives—stories that would not be possible without the support of private giving. Whether your passion is to strengthen the health of your community, develop Tennessee’s workforce, enrich our economy, enhance biodiversity and the environment, care for our animals, or feed and clothe a growing world, you can make an impact through giving in support of UTIA.

We will be hosting several regional events to share more about these efforts. Should you have questions, do not hesitate to contact the UTIA Office of Institutional Advancement at together.tennessee.edu to explore the impact of donor giving, utiaadvancement@tennessee.edu or 865-974-5779.

Only together, we can grow. Won’t you join us?


TIM L. CROSS
Chancellor

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[@UTIAChancellor](https://twitter.com/UTIAChancellor)

AROUND UTIA

Edited by Kirche Rogers



Hongwei Xin Joins UTIA as AgResearch Dean

UTIA is proud to welcome Hongwei Xin as the new dean for AgResearch. Xin (pronounced “Shin”) began his new role in April. At the conclusion of his first day, Xin emailed a greeting to Institute members. The note expressed his pleasure and honor to join the Institute and the people it serves, as well as his enthusiasm about getting to know everyone in the weeks ahead. The thoughtful message exemplifies Xin’s attentive, committed style of leadership.

Prior to joining UTIA, Xin held the appointment of assistant dean of research in Iowa State University’s College of

Agriculture and Life Sciences. He also was director of the Egg Industry Center, interim director of the Iowa Nutrient Research Center, and a Charles F. Curtiss Distinguished Professor in the Departments of Agricultural and Biosystems Engineering and Animal Science.

Xin believes in facilitating linkages between academics, research, and economic development; advancing international partnerships; and engaging private support for key research and teaching initiatives. His proven abilities in these areas will be invaluable to UTIA as we continue to

explore ways to enhance our public-private partnerships.

We also welcome Xin’s wife, Toni Wang. Wang brings research interests in the processing and value-added utilization of soybeans, corn, egg, and other agricultural products and byproducts to her appointment as professor in the Department of Food Science. A strong focus for her is the lipid components of these feed and food sources. Wang previously served as an endowed faculty fellow at Iowa State.



Ten Plants That Shaped Tennessee

What would you pick as the top ten plants that have impacted Tennessee? Last year more than 600 people were asked to nominate the plants they believe have shaped our state in both positive and negative ways. The resulting list includes cotton, corn, tobacco, dogwood, American chestnut, white oak, kudzu, beans, grasses, and ginseng. Natalie Bumgarner and Andy Pulte of the Department of Plant Sciences compiled the list and will use it to create a curriculum to educate growers and youth on the importance of the plant world and its biology and history.

“Every one of the plants on the list has shaped the lives of those who call this state home. Plants do make it possible for us to live here and on earth. Even the air we breathe is made possible because of plants,” says Pulte.

One in particular stood out for its psychological impact. “There are some that I think are even embedded in people’s psyches that we saw on the list and we

didn’t expect, maybe an invasive that we see across the hillside that people felt pretty strongly about,” says Bumgarner. If you haven’t guessed it already, she is referring to kudzu, that bane of the South.

The curriculum will focus on ecological, financial, and sociological factors of plants. “We want to have some materials that can be used by 4-H agents, that can be used by Tennessee Extension Master Gardener volunteers who work with youth, and [that can be used by] teachers to be able to go right into the classroom with this type of content,” explains Bumgarner.

Pulte adds, “You’re going to see more plants than any other organism in your entire life, and they have an impact on you. And we really want to bring to the forefront that impact that plants have on people. And the way that’s going to play out is through curriculum for elementary school kids.”

Peace Corps Study Program Underway

Herbert College of Agriculture students now can gain skills directly connected to serving in the Peace Corps. Through the new certification as a Peace Corps Prep Partner School, students may enter a program that will help them hone skills, providing a competitive edge as applicants for Peace Corps service. More than ninety-five colleges and universities across the country are Peace Corps partner schools.

The program enhances students’ undergraduate experience by preparing them for international development fieldwork. Peace Corps Prep students work with the program’s coordinator to map out how they will develop four core competencies—sector-specific technical skills, foreign language proficiency, intercultural competence, and professional savvy and leadership.

Adam Willcox, assistant professor in the Department of Forestry, Wildlife and Fisheries and Herbert’s coordinator of international experiences, serves as the UT Peace Corps Prep coordinator. He draws from his own experience in the Corps.

“My volunteer experience in Cameroon was the critical moment that changed my career direction and defines why I am in my position today. With UT now a Peace Corps Prep Partner School, I am looking forward to helping our Tennessee Volunteers prepare themselves to take their Vol-for-Life spirit to the world by serving our country abroad. These men and women will tackle critical global challenges using an impactful grassroots model of empowerment and change.”



Smith International Center Launched

The UTIA Smith Center for International Sustainable Agriculture was officially launched November 16, 2018, on the UTIA campus. Faculty, staff, and students gathered with VIPs for the occasion. Alumni Donnie and Terry Smith (1980), whose gift established the Center, were present. Also on hand were former Tennessee Commissioner for Agriculture Jai Templeton and Erica Barks-Ruggles, former US ambassador to Rwanda.

The Smith International Center's mission is to bring science-based, sustainable agricultural solutions to meet the challenge of nourishing the world's population while restoring the planet on which we depend.

Core to this mission is facilitating UTIA faculty and staff in developing partnerships with local organizations and institutions around the world. The Smith International Center has already secured funding for ongoing projects from private foundations and a range of federal agencies, including USAID and USDA. Its ongoing activities occur across the six regions on which it focuses: Central America and the Caribbean, East Africa, Southeast Asia, Central and Eastern Europe, China, and Brazil.

Tennessee Extension Master Gardeners Honor Service Families

When a military family loses a loved one in the line of duty, many people in the civilian world want to help. Tennessee Extension Master Gardeners are conducting a project across the state line at Fort Campbell, Kentucky, to aid our service families. They are enhancing the grounds of a building that houses SOS House, home to survivor outreach services. It's where people come for counseling or simply time to grieve or reflect on their loss. Master Gardeners hope the grounds will reflect the same caring atmosphere found inside the house.

A master gardening intern drew up the plans for the landscape and Master Gardeners have installed an expansive collection of more than 1,400 plants. Community donations made this project possible.

Alumnus Charlie Hatcher Appointed Commissioner of Agriculture

Charlie Hatcher, a 1984 graduate of the UT College of Veterinary Medicine, has been appointed commissioner of the Tennessee Department of Agriculture by Governor Bill Lee. Hatcher is no stranger to those in agriculture. He has served as the state veterinarian for the Tennessee Department of Agriculture since 2009. In addition to his role as a veterinarian, he is also a general managing partner of Hatcher Family Dairy in College Grove, Tennessee, which has become a successful agritourism venture, bottling and selling milk to customers in Middle Tennessee. Hatcher's daughter, Jennifer, was UTCVM's first legacy student, graduating with a DVM in 2005. She is also a past recipient of the UTIA Horizon Award, which honors young alumni for outstanding impacts.



Heather Wallace Honored as Emerging Innovator

Heather Sedges Wallace, a family life specialist with UT Extension, has been recognized as a leader among her peers. Wallace, an assistant professor in the Department of Family and Consumer Sciences, received one of two national 2018 Early Career Achievement awards from the Institute of Youth, Family and Community—a division of the USDA National Institute of Food and Agriculture (NIFA). Wallace was recognized as an emerging innovator in her field. Among her contributions are co-directing the UT Extension Center for Parenting, and creating the nation's first comprehensive, research-based curriculum to help people manage technology's daily influence.

Extension Connects Rural Communities to the Internet

Most of us take high-speed internet in stride, yet access can be elusive in some of Tennessee's more rural areas. That lack of access, in turn, holds risks of disadvantaging students, businesses, and even the quality of life for residents. Through a grant, UT Extension is targeting a solution for these disconnected communities.

While the Tennessee Department of Economic Development has launched a broadband initiative, the required infrastructure will likely take years before reliable and affordable internet is available to all rural residents. To provide a more immediate solution, UT Extension is collaborating with the public libraries of Bledsoe, Hancock, and Wayne Counties to

provide free, mobile hot spots to residents for a year. Library patrons in good standing may check out a mobile hot spot for two to three days, on a first-come first-served basis and will be asked to complete a short survey regarding their hot spot usage, experience, and willingness to pay for broadband internet. County Extension personnel will train library staff in the use of the mobile hot spots. This partnership program will be the first of its kind in these counties. Researchers will also evaluate whether providing reliable internet access improves lifestyle, educational attainment, wellness, and the business environment of these rural areas.

Indian Mound's Oak Named Historic Tree

A stately white oak on the UTIA campus has been included as a historic tree on the Tennessee Landmark, Historic, and Heritage Tree Registry, a list maintained by the Tennessee Urban Forestry Council. For more than a century, students, faculty, and staff have passed by the tree growing atop the "Indian Mound." Today the white oak (*Quercus alba* L.) measures nearly 44 inches in diameter.

The tree was nominated for inclusion on the registry by Scott E. Schlarbaum, a professor of forest genetics and longtime director of the UT Tree Improvement Program. The Indian mound on which it grows dates back to the late Woodland period (roughly 1,000 years ago) and has witnessed the emergence of modern Native American tribes, the formation of our nation and state, the conflict of the Civil War, and our history to the present, as well as far, far into the past. The tree itself has stood sentinel to UT's first agricultural research efforts and the establishment and growth of UTIA.

Schlarbaum recommended that the tree be named after Harcourt Morgan, a professor of zoology and entomology who served as director of the Tennessee Agricultural

Experiment Station beginning in 1905. Morgan, for whom the UTIA headquarters building Morgan Hall is named, eventually rose to the rank of UT president, a title he held from 1919 until 1934. He was named to serve on the original TVA board of directors by President Franklin D. Roosevelt, becoming chairman in 1938. Morgan's philosophy emphasized a harmonious relationship between humans and the environment, which he called a "Common Mooring." By encouraging farmers to practice crop rotation among other beneficial practices, and through his work on boll weevils and cattle ticks, Morgan had a large impact on the agricultural industry in Tennessee and across the Southern Region.

Researchers with the Tree Improvement Program have collected and planted acorns from the tree. The resulting seedlings will be incorporated into a genetic test planted this year on the Tennessee Valley Authority's Norris Reservation. The genetic test eventually will be thinned to form a seed orchard that supplies the East Tennessee State Nursery with acorns for reforestation and land restoration, specifically in eastern Tennessee.



Center for Synthetic Biology Established

A new center at UTIA aims to place the Institute at the forefront of biology that improves the sustainability of agricultural production and increases product diversity and human health. The Center for Agricultural Synthetic Biology, or CASB, launched last fall. The center is co-directed by professor Neal Stewart of the Department of Plant Sciences and holder of the endowed Racheff Chair of Excellence in Plant Molecular Genetics, and Scott Lenaghan, an assistant professor in the Department of Food Science. Lenaghan also holds an adjunct position in the Department of Mechanical, Aerospace, and Biomedical Engineering.

As described by Stewart, synthetic biology uses computational techniques to help scientists identify genes that result in beneficial traits. These characteristics then can be triggered so that plant and animal production is improved. The Center will use agricultural synthetic biology to make better crops, farm animals, and food microbes for health and sustainability. One example is the rewiring of soybean for improved oil in the seed and resistance to deer browsing.

Another goal is to innovate a new, revolutionary sensor platform that makes plants environmental sensors in the field. A \$7.5 million award from the US Defense Advanced Research Projects Agency will allow scientists to modify potato plants to detect and report potential threats such as nerve agents, radiation, and plant pathogens.

Stewart believes this is the first synthetic biology center in the world aimed specifically at improving agriculture. "CASB seeks to put Tennessee at the forefront of the intersection of agriculture and sustainability," adds Lenaghan.

UTCVM's Elizabeth Strand and Barry Rouse Recognized for Career Impacts

Elizabeth Strand is a clinical associate professor and founding director of Veterinary Social Work in the College of Veterinary Medicine. Strand received the 2019 Billy E. Hooper Award for Distinguished Service from the Association of American Veterinary Medical Colleges for exemplary contributions to veterinary medical education.

Strand founded Veterinary Social Work as a program in the United States and defined its focus, which is the human needs that exist in animal-related settings. She also assists veterinary teams to learn how to manage compassion fatigue and stress.

Barry Rouse is a distinguished professor and UTIA Institute professor in the Department of Biomedical and Diagnostic Services at UTCVM. Rouse has received the American Veterinary Medical Association's Lifetime Excellence in Research Award. When Rouse joined the UT faculty in 1977, there were fewer than ten viral immunologists in the world, and he became the first to work with the herpes simplex virus type 1 (HSV-1) model in mice. Rouse is world renowned for his immunopathology research discoveries involving HSV-1 and ocular disease.



Seventeen Field Days for Real. Life. Solutions.

Starting in the spring each year UTIA experts travel the state to present their research findings to farmers, gardeners, producers, and anyone interested in Tennessee agriculture. These field days and special events are held at the Institute's ten AgResearch and Education Centers. Participants have the opportunity to learn from scientists, Extension agents, and specialists about topics related to their interests and are also able to network with their peers.

This year the biennial Ag in the Foothills event held at the East Tennessee AgResearch and Education Center returns,

and for the first time since 2014, Woods and Wildlife will be held at the Forest Resources AgResearch and Education Center in Oak Ridge. Also in store are three equine-focused field days, one for each region of the state.

Other events include Summer Celebration, the Butterfly Festival at the Arboretum in Oak Ridge, the Fall Gardeners' Festival, and the Fruits of the Backyard field day. The season ends with the Beef Heifer Development School in October.

Visit tiny.utk.edu/2019fielddays to learn more about this year's field days. The field days are hosted by UT AgResearch

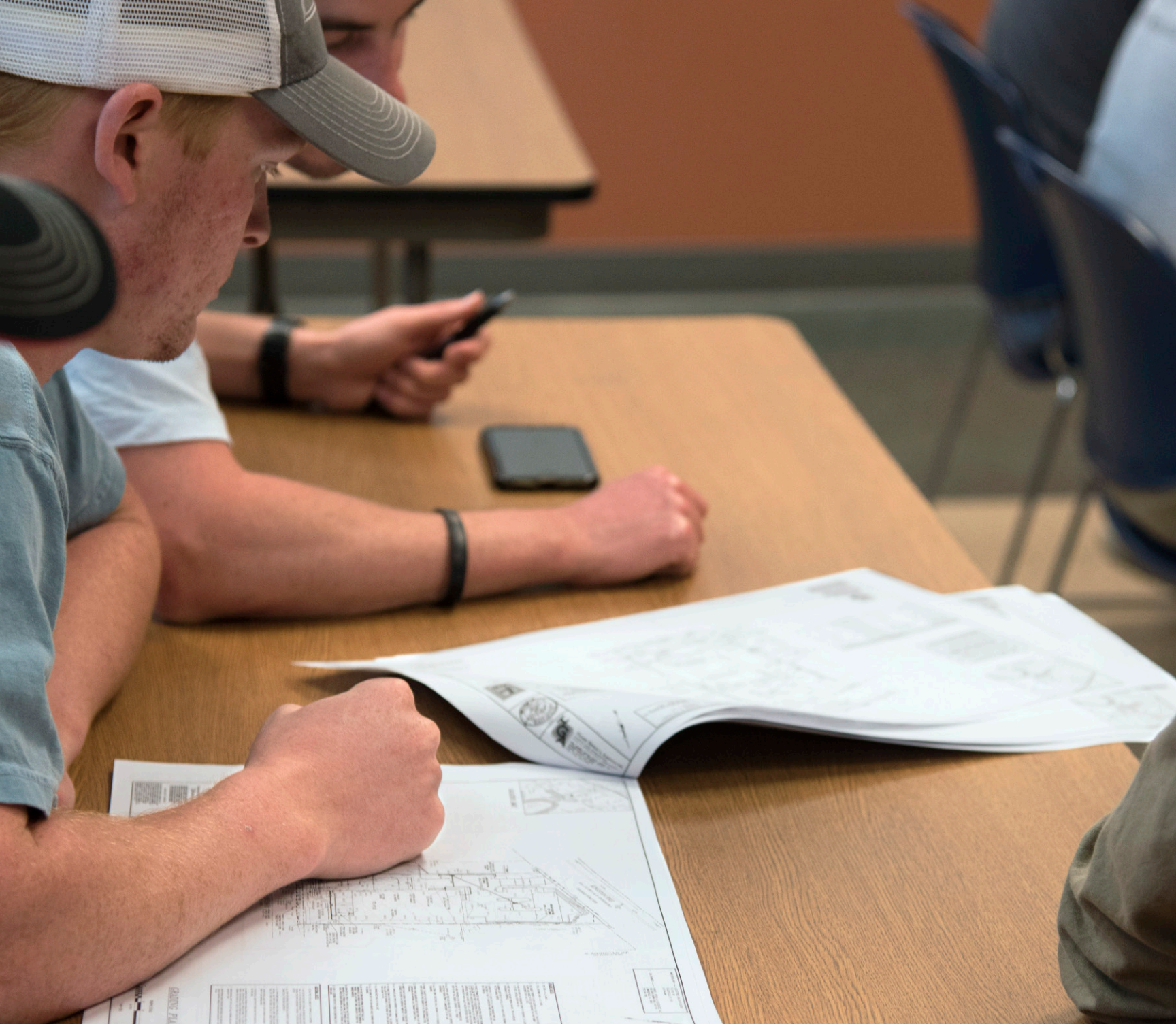
in cooperation with UT Extension and provide a vital connection among the communities served by UTIA and the Real. Life. Solutions. we provide.

TOGETHER WE GROW TOMORROW'S SCIENCE



Agriculture has the power to change the world. From food to health, the science that fuels the harvest also transforms animal care and human wellness. Through the new **UTIA Center for Agricultural Synthetic Biology**, we're developing advanced tools and technologies that will grow the productivity, efficiency, and sustainability of agriculture by taking on new and unsolved problems in plant, animal, and environmental health. Together, we're meeting the challenges of tomorrow today.

[AGSYNBIOCENTER.ORG](https://agsynbiocenter.org)



BUILDING A DREAM

HOW GENEROSITY LAID A FOUNDATION
FOR CONSTRUCTION SCIENCE

by Beth Hall Davis

Eight years ago, two dreamers brainstormed their thoughts on a napkin. Eric Drumm, professor and former head of the Department of Biosystems Engineering and Soil Science, and Tom Looney, a director with the Office of Institutional Advancement, asked the question, “Wouldn’t it be neat if UT had a construction science program?” A few months later, after the proposed construction science curriculum had been approved, Drumm and Looney gave a presentation about it at a luncheon of contractors, and Gordon Heins (bachelor of architecture ’76) literally ran to talk with them.

“This had been a dream of mine for twenty years,” says Heins, who is president of the building materials supplier, AG Heins Co. “I graduated from the school of architecture, but went to work for the family business. And over the years, I’ve seen a need for a new generation of construction-oriented young people in the business.”

Drumm, Heins, and Looney began spreading the word. Not long after, pledges from companies across the region began to arrive, giving start to what has become the fastest growing program at the UT Institute of Agriculture.

Construction science, says Drumm, is a blend of civil engineering, business, and people skills. “Our graduates will be managing major projects, combining people, materials, time, and financial planning.” While some have questioned the presence of a program like this on the University’s agricultural campus, Drumm contends that, “Generally, our campus attracts students who will be highly valued in the industry—people who want to accomplish great things and solve problems, regardless of the weather.”

“We have students who are trying to figure out how to have a profitable career while still getting their hands dirty or students whose parents own major contracting companies,” Charlie Parker, director of the program says, “And, we do not advertise. Word of mouth is responsible for all of our growth.”

Parker’s office is lined with supporting companies’ hard hats. Parker himself came on board four years ago to organize and lead the program, investing a solid two decades of experience in teaching construction at the collegiate level. Much of his time is spent meeting construction company executives and getting to know a company’s projects and culture. “It’s about relationships. We want our students to feel like they know the industry before they leave,” he emphasizes.

For an industry whose workforce is aging into retirement, four years at UT functions as job training, preparing graduates to hit the ground running. “From day one, they have the abilities and experience they need, all from their tenure as students and their exposure during internships. They’re just better prepared,” says Parker.

Construction science at UT is only eight years old, yet it already is a fierce competitor in the academic landscape. The statistics are overwhelming: the program has more internships than students. Graduates receive an average of seven job offers with many extended to them during their junior year. The job placement rate is nearly 100 percent, with graduates joining companies all over the country and world.

Third-generation UT graduate Lee Carter (bachelor of architecture ’79) supports the construction science program as a way of giving students the opportunity to be in the industry. “You can’t underestimate the value of a properly trained and educated workforce, and students graduating from UT enter the job with a leg up.” Carter Group, of which he is a principal, hired a previous UT intern and plans to talk with another soon. “It is simply a better fit for preparing students for commercial or industrial contracting.”

Change is on the horizon for the construction science program. Come fall of 2019, the program will no longer be a concentration under the environmental and soil science degree but will be part of a new degree program, named construction science and agricultural systems. Drumm says, “This elevates the profile of the

program immensely. It’s a big step, and we’re going to keep dreaming. Endowed faculty positions, maybe a building someday, more scholarships.” Parker adds, “Right now we are working to pursue accreditation with the American Council on Construction Education.”

Another goal is to increase diversity. “Construction science is comprised of a rapidly growing student body including an increasing number of women and minorities. Modern firms value graduates of diverse backgrounds,” says Julie Carrier, professor and head of the Department of Biosystems Engineering and Soil Science.

Ultimately, construction science’s program is a story of generosity. “Construction science exists at UT because of donors, pure and simple,” says Looney. “Construction companies provided the seed money, and they continue to support it today with multiyear commitments that range from \$10,000 to \$100,000.”

For Ethan Greer (BS construction science ’16), the opportunities he had as a student carried a responsibility to give back with a small gift upon graduation. “I knew the program was funded largely by outside donors. These donors not only give to support construction science, but also, they create opportunities for students to succeed. Some even open their job sites for students to visit, creating experiential learning spaces. Their commitment is a driving factor for the program, and I wanted to be part of that. UT helped me pursue my career goals, and I want to be part of moving it forward.”

To support construction science in the UT Department of Biosystems Engineering and Soil Science, visit together.tennessee.edu/constructionscience. ■

GIFTS WITH POWERFUL EFFECTS

THE IMPACTS OF CONTRIBUTIONS TO OUR UNITS

by Ginger Rowsey

PREPARING HERBERT COLLEGE OF AGRICULTURE GRADUATES TO LEAP INTO THEIR CAREERS

Jaime Guarrera's summer at the Middle Tennessee AgResearch and Education Center was valuable for learning, certainly. As a senior in animal science, the firsthand experience in dairy management and production helped her confirm she chose the right field for her interests and gives her a strong competitive edge when she launches into her career—each invaluable to her future. Her immersive learning was possible thanks to support from the Bob and Barbara McKinley Student Enrichment Endowment.

This endowment and others like it provide a stipend to undergraduates in the Herbert College of Agriculture so they are able to obtain direct experiences in their chosen fields, whether the subject is horticulture or agricultural finance. The Farm Credit Scholars, the Herbert Scholars program, and individual scholarships in our academic departments enable students to pursue opportunities for growth that might otherwise be unattainable. Employers make it clear they want graduates with direct experience who are well prepared to hit the ground running. Experiential learning makes both possible.

SUPPORTING HANDS-ON LEARNING IN THE COLLEGE OF VETERINARY MEDICINE

At the UT College of Veterinary Medicine, a hands-on learning need is to give students the ability to train using simulation models. Private donations have made it possible to provide veterinary students with sim models to use throughout their four years of study. The models enable students to practice clinical procedure skills and hone their technical dexterity in a safe, risk-free, and nonstressful environment. The experiences heighten students' confidence and competency before they begin their clinical year.

The goal to build a fully equipped Simulation Lab is an ambitious undertaking. Private gifts are needed to support staff to operate the lab, purchase additional realistic technologically advanced simulation models, replace consumable parts of simulation models, and cover other operational costs of the lab. Endowed funds would be especially helpful to provide a long-term source of funds for the lab. Two VOLstarter campaigns sought the support of the community to kick-start the project.

The Nashville Academy of Veterinary Medicine recently made a gift of \$100,000 for the purchase of models for the sim lab. UT alumni and longtime supporters John and Ann Tickle have made gifts for creating the teaching and learning center where the sim lab will be located.

CHANGING OUR WORLD THROUGH AGRESEARCH

A growing challenge for the US and countries around the world is to find solutions to environmental and ecological crises caused by invasive species. In the early 2000s, the forest ecosystem of the Great Smoky Mountains National Park was threatened by the hemlock woolly adelgid. With help from Friends of the Smokies and the Aslan Foundation, researchers with the UT Department of Entomology and Plant Pathology developed the Lindsay Young Beneficial Insects Laboratory. Here scientists raise predatory beetles that can suppress hemlock woolly adelgid populations on a large scale. Since biological control efforts began, more than half a million beneficial beetles have been released and credited for helping save our hemlock trees.

The Lindsay Young Beneficial Insects Laboratory is just one example of how philanthropic funders can impact research efforts. With public funding for science research becoming more competitive, private gifts can help researchers overcome funding obstacles in their quest for solutions. That's true whether the initiative is combating serious threats to the Smokies or making discoveries that help advance the veterinary profession and training tomorrow's veterinarians.

BOOSTING UT EXTENSION'S REACH AND POWER

UT Extension has the distinction of being the only UT entity present in every single county in the state. The services Extension offices provide their community members span youth education and family and consumer education to home horticulture, workforce training, and, of course, agriculture. Farmers recognize the value of Extension in Tennessee, as it is one of the few states left to have county-level support in each and every county. This impact led to Commodities for Communities, a program that allows Tennessee farm operators and landowners to make a direct transfer of an agricultural commodity—such as grain, corn, or

“I know \$1,000 or \$2,000 per semester can make a difference in whether a local kid goes to college or not, and we would like to help, as best we can to support someone in that position.”

- Cheryl (69, '75) and Wayne Hutton (68 '75)
Established a scholarship for first generation college students at Herbert College of Agriculture



Private gifts can help researchers overcome funding obstacles in their quest for solutions.



“We would encourage others to support UTIA because each of the four units work to improve the lives of the community.”

- Tracy (85) and Tug (86) Lambros
Supporters of the UT College of Veterinary Medicine

soybeans—to the UT Foundation. Money raised from the sale of that commodity gift is designated to a UT program of the donor’s choice. Farmers are using this donation opportunity to financially support Extension programming at the county level. Their investments assist the UT Extension programs that serve them locally.

IMPACTS YOU CAN HAVE

When alumni and friends give to an individual UT Institute of Agriculture unit, whether the Herbert College of Agriculture, College of Veterinary Medicine, UT AgResearch, or UT Extension,

they may choose to direct their gift to a program that matches their passion or they may leave their gift unrestricted in purpose or use. Unrestricted gifts made to a unit are directed to opportunities where they advance initiatives selected for the powerful impacts they promise or, indeed, are already having. Whatever the form, gifts that advance UTIA units make impacts possible that otherwise might not be achievable. Impacts that happen only because Together We Grow. ■





TOGETHER WE GROW

by Lauren Vath

“In my youth, I learned how
to plow behind a mule.
Now I use GPS to farm with
and am involved with genetic
engineering. Progress happens.
Our gifts will decide if the
progress is good or great.”

- Warren Gill ('73, '75)

Supports 4-H livestock and horse programming at UTIA

At age fifteen, Julieann Vose began working to supplement her small family's finances. During summers she would work full time, and then, during the school year, she would juggle her schedule the best she could to continue her education. That saw Julieann through high school and community college.

Next she completed her undergraduate education at a four-year college, where she double majored in biology and animal science. The dream Julieann wanted was to be a veterinarian, but the high expenses of veterinary study argued otherwise. It just did not seem possible. But her colleagues and friends urged her to not give up. They believed Julieann had a future as a veterinarian and that somehow there had to be a way it could be achieved.

When Lee Ann Ingram was little, she would bring stray dogs home and tell her mother they just happened to follow her. Even then, her heart was wired for second chances, for dreams deferred. Today, she and her husband call a farm full of animals in Franklin, Tennessee, home, and together, the couple looks for ways to make others' lives better. One way they do it is through giving to the UT Foundation.

Instances like the one connecting the Ingrams with Julieann is when the magic occurs in university philanthropy. It's the perfect moment when the passions of a donor find an exceptional opportunity that changes lives. Indeed it did so for Julieann. In August 2016, she stepped onto the campus of the UT College of Veterinary Medicine as the first recipient of the Ingram Family Scholarship. "It's more than a dream," Julieann, a member of the class of 2020, says. "I didn't think I would ever even be in veterinary school."

While the Ingram Family Scholarship is one of many philanthropic efforts for the couple, for UTCVM and the recipients, it is extraordinary. The fund, the largest in the College, awards \$20,000 for the student's first year of study and increases by \$2,000 annually, so by the fourth year the student receives \$26,000. That funding makes a profound difference to students because it enables them to graduate without overwhelming tuition debt.

Julieann was the first.

"With this scholarship, I will be able to focus my efforts toward my veterinary school education and becoming a competitive candidate for residency," says Julieann. "I want to thank the Ingram Family for accepting me into their family, and I would also like to tell anyone to never give up trying to become the person you want to be."

"An Ingram scholar is an all-around person," says Lee Ann Ingram. "Not just grades but a heart and an inspiration to others. Maybe one day they will pay it forward to others because it was paid forward to them." Hear more of the Ingrams' story in a video at together.tennessee.edu/IngramScholarship.

When alumni and friends make gifts to the UT Institute of Agriculture, lives change. Scholarships lift students up. A substantial gift can launch a program. Yet, contributions that support UTIA's core have equal power. Whether a donation is small or large, in the metaphor of plants, a single gift adds nutrients to programs already planted at the Institute. A gift strengthens them, so they thrive and

bear abundant fruit. Considering university philanthropy in terms of plants is fitting because it is together that we truly grow.

In last fall's issue of *Land, Life and Science* we celebrated fifty years of UTIA, and we announced the official launch of our ten-year fundraising campaign, Together We Grow. We celebrated the Institute's successes and growth to the present. Now, we look strongly to the future. We anticipate the next 50, 100, and 200 years.

Already we have scientists and specialists dedicated to growing our state and world food supply, strengthening families, advancing discoveries, and caring for animals large and small. Their achievements have grown from seeds planted by many. It has taken the support of a state which understands its needs and the vision of alumni, friends, and stakeholders who saw how an investment in our students, research, and outreach grows and flourishes into harvests that serve many.

Together We Grow is more than a campaign. It is the heart of the Institute, embodied in UTIA's promise to advance Real. Life. Solutions., and it is the only way we will prepare for the needs and opportunities of tomorrow. This campaign will provide support that enables us to advance food, fiber, and energy systems; enhance biodiversity and environmental quality; enrich our economy; develop our workforce; and strengthen our health.

In the pages that follow and in stories throughout this magazine, we invite you to learn how seeds planted here through gifts of support from people just like you have established deep roots and are flourishing in ways that better our world.

GROWING THE NEXT GENERATION

Scholarships at the UT College of Veterinary Medicine and the Herbert College of Agriculture impact students' lives every day. At the Herbert College of Agriculture, the Herbert Scholars program provides financial assistance for five to eight of the College's undergraduates to engage in experiential learning opportunities during summer. Robert Sears ('19), an environmental and soil science major, used his scholarship for a summer internship at Neogen Corporation. His experience solidified his career plans to keep our food safe from pathogens.

"I'm extremely thankful to donors, especially Jim and Judi Herbert, who allow students like me to have these experiences and really broaden their horizons," Robert says.

John Calvin Bryant ('20), a food science major, is among the UT Farm Credit Scholars. The program couples financial support with internship and enrichment opportunities for a select group of students at the Herbert College of Agriculture.

"Scholarships have really allowed me to focus on my academics and not on the financial burden that is associated with attending college," says John.

And scholarships don't just send students to college. For the past two summers, a child has had the opportunity to attend camp at a Tennessee 4-H Center, thanks to an unlikely donor.



“I will never be in a position to have a college named after me or to provide a multi-thousand dollar scholarship every year for somebody, but for an amount of money that, frankly, I would never notice coming out of my check, a kid can go to camp at no cost to themselves or their parents. That motivates me.”

- Mike Stanley

Supports a 4-H camp scholarship for students

Mike Stanley has built his career in technology at the University, working in the background to support the mission of higher education.

“I didn’t know much about 4-H before I started here,” Stanley says. “I didn’t even know much about Extension.”

But as he learned more about each traveling from county Extension office to county Extension office, he was inspired by the impact of the Tennessee 4-H Youth Development Program and the individuals dedicated to its success.

“I will never be in a position to have a college named after me or to provide a multi-thousand dollar scholarship every year for

somebody,” Stanley acknowledges, “But for an amount of money that, frankly, I would never notice coming out of my check, a kid can go to camp at no cost to themselves or their parents. That motivates me.”

“Every little bit helps, and you can start small and grow.” Gifts large and small join together and have powerful impacts in youth education across the state, says Stanley.

Support for youth education and the work at UTIA can take many forms. A gift in kind is a donation of tangible or intangible property that can benefit the Institute.



Explore Lone Oaks in a video at together.tennessee.edu/ExploreLoneOaks.



A surprise gift in kind came from the couple who established Lone Oaks Farm, Scott and Kathy Ledbetter. Their gift was an immense collection of carefully curated historic hand tools used in carpentry. At Lone Oaks Farm, the property where the Institute's new 4 H camp and conference center is being developed, the collection serves as a gateway to our collective past.

To Ron Blair, director of STEM learning at Lone Oaks, the tools also can be a focal point for student creative projects and papers. "For instance, a student might focus on how a set of these was used to build a building, from felling trees through final millwork." He adds that the tools have not lost their relevance, either. "I tell youth you could build a skyscraper with these. I genuinely believe you could."

Outside of 4 H centers, UTIA is supplementing the education of Tennessee's children in their schools. A program called On My Own has striven to instill financial literacy in Tennessee youth for more than a decade. Operated through UT Extension's Department of Family and Consumer Sciences, On My Own reaches an average of 30,000 youth a year, ages eleven to eighteen, in more than 250 schools.

The program immerses teens in a simulation of real life "adulting." Participant responses to the simulation include comments such as,

"If my gifts can help even one young person find a life of service and commitment to 4-H and an ag career, it will be worth it."

- Warren Gill ('73, '75)
Supports 4-H

"You can't throw money around like candy," "Groceries are expensive," "I should have picked a better job," and "One thousand dollars a month does not go nearly as far as I thought."

Last summer SunTrust Foundation expanded its partnership with UT Extension through a \$300,000 grant to the On My Own program. With this additional funding and support, the program is now able to reach youth in afterschool and alternative programming, such as the Boys' and Girls' clubs, in special youth symposiums, and at events that serve disadvantaged children.

SunTrust Foundation and UTIA share the vision of achieving financial stability and security for Tennesseans of all ages. Where the Institute and private companies' visions align, programs like On My Own gain traction even faster.

Kane Reeves, an Extension agent serving Madison County, says, "Students have expressed that their On My Own experience helped them understand their parents' struggles to make sure that they have the things that they need from month to month."

Individuals and even companies have the power to invest in communities. UTIA has the infrastructure to leverage that support toward greater impact and to strengthen the roots of outreach already deeply established in Tennessee.



My time at UTIA was wonderful!
The professors were always there for
us as students and willing to listen
and give advice. I hope that other
students on the campus can continue
to have the same experience.”

- Artise Stewart (01, '05)
Supports UTIA and UTCVM



GROWING OUR COMMUNITIES

Currently, the UT Gardens, Crossville, affectionately known as the Plateau Discovery Gardens, is maintained almost entirely by volunteers. These individuals believe in the importance of a dedicated green space in their community. The Gardens, part of the State Botanical Garden of Tennessee, has enjoyed steady growth in visitors and is seeing a growing demand for programming.

“It is amazing what this group of volunteers has been able to accomplish, but the exponential growth increases the demand for horticulture expertise and educational programming,” says Walt Hitch, director of the Plateau AgResearch and Education Center that houses the Gardens.

Hitch saw the need early for a dedicated staff member to better serve the growing needs and outreach of the public gardens. In 2015, community members established the Plateau Discovery Garden Endowment. In 2018, the first full-time staff member for the UT Gardens, Crossville, was hired.

The success of the UT Gardens, Crossville, is a wonderful example of how UTIA’s units work together in a unified vision. Extension and its Master Gardeners, AgResearch, and others make the green space in Crossville possible. The Gardens’ location on the AgResearch and Education Center grounds is a catalyst for connecting the Center’s advances in agriculture to the people in the community. Master Gardeners, members of a volunteer program through UT Extension, maintain the grounds. These volunteers brighten their community through cultivation and share their expertise through classes.

The fully funded Plateau Discovery Garden Endowment, which will provide support in perpetuity, and the staff position it made possible, indicates the high value that the Crossville community has found in the UT Gardens.

Endowments at UTIA are a way that programs and positions of value can secure funding for the future, even in a climate of wavering federal and state support. For some programs, an endowment has become life support.

Human-Animal Bond in Tennessee (HABIT) is an outreach program of the UT College of Veterinary Medicine. It relies on volunteer and community funding to provide support animal services to a wide range of populations in Tennessee.

Among those visited are hospitals and nursing homes, and K-12 schools. Even college students are assisted.

The program depends heavily on donor support. Forty-five percent of HABIT funding comes directly from private gifts, fundraising, and employer matching gifts and Campus Chest. Three endowments provide some perpetual support, which HABIT Program administrator Karen Armsey says has been the difference between the ability to continue the program or shut it down.

“It is hard to overstate how much we depend on the donations by the public,” says Armsey. “We truly depend on the kindness of strangers.”



GROWING OUR WORLD

Many donors to UTIA begin as strangers. But by connecting with the programs, outreach, faculty, staff, and students of the Institute, friendships are forged. That's why all donors to UT are called friends. We connect individuals' passions to our own zeal for the land-grant mission. It is a sentiment that provides the nutrients for agrology both at home and abroad. We believe our land-grant mission extends past oceans. Donors and alumni ('80) Donnie and Terry Smith, who established the Smith Center for International Sustainable Agriculture, agree.

The Smith International Center brings science-based, sustainable agricultural solutions to meet the challenge of nourishing the world's population while restoring the planet on which we depend. It facilitates UTIA faculty and staff in developing partnerships with local organizations and institutions all around the world. The Center focuses on developing programs worldwide, funded both through federal agencies and through private foundations and individuals.

One such private gift is supporting work in Guatemala. J. Kelly and Beverly Milam recently committed an additional \$200,000 to extend the reach of the Milam Fund for Guatemalan Agriculture. Their goal is to establish projects for faculty and student research in Guatemala, with group projects to include at least one student to join in travel and work with Guatemalan communities. Another aim is to partner with Health Talents International and provide expertise in designing, creating, and maintaining a demonstration farm where Guatemalans can learn about agriculture practices to increase their food production. The final part of the gift serves to leverage funds from the Smith International Center to support the work of a newly hired coordinator serving Latin America.

Over the next five years, the UTIA Guatemala Collaboration and Development Program will expand UT faculty, staff, and students'

On a research trip to Guatemala, students from the Herbert College of Agriculture and other UT colleges witnessed the hot, arid conditions that challenge farmers. They also met with members of a Mayan women's organization that produces and sells traditional textiles through a fair-trade store. Proceeds help the women overcome poverty and other hardships. Learn more about how the Smith International Center has worldwide impacts at together.tennessee.edu/SmithInternationalCenter.

awareness of the challenges faced by the citizens of Guatemala. Through research, teaching, and extension opportunities awarded on a competitive basis, the program challenges Institute members to identify science-based agricultural solutions that can work for the Guatemalan people. Students who engage in the program gain experiential learning opportunities, and through their international experiences, faculty and staff broaden their outlook in their area of expertise.

This is why UTIA has the goal to raise \$175 million from nonpublic sources by 2022. It is the most ambitious fundraiser ever undertaken by the Institute. However, the Institute has become more ambitious in the pursuit of Real. Life. Solutions.

"The private investments we receive today will have an impact on our mission as an Institute, and whether that is a current gift or an endowed investment, both are paramount," says Keith Barber, vice chancellor for institutional advancement. "Our charge as a land-grant university in our state is to provide opportunity, education, and cutting-edge research. Every gift invested into those purposes will produce exponential impacts."

Together. It means Extension, AgResearch, the Herbert College of Agriculture, and the UT College of Veterinary Medicine. It means faculty, staff, students, and volunteers. But it also means you. It will take all of us to impact tomorrow. Together, we grow. ■

A young man with dark hair, wearing a yellow and red life vest, is holding a large, silvery fish with both hands. He is looking down at the fish with a focused expression. The background is a bright, slightly blurred outdoor setting with green foliage and a clear sky. The text "TOGETHER WE GROW OUR IMPACT" is overlaid in large, white, bold, italicized capital letters on the upper left portion of the image.

TOGETHER WE GROW OUR IMPACT

Numbers add up. So do donations. And when it comes to giving to support Real. Life. Solutions., our alumni are second to none within the UT System. Whether you are one of our alumni, or a friend of the Herbert College of Agriculture, your support helps us improve human and animal health, enrich the economy, and protect the environment. Together, we can grow even greater solutions for the next generation of alumni.

[TOGETHER.TENNESSEE.EDU/SCHOLARSHIPS](https://together.tennessee.edu/scholarships)

WAYS TO CONTRIBUTE

Did you know a variety of ways exist to support the UT Institute of Agriculture through philanthropy? Gifts of cash, securities, and real estate are just a few means by which you can help advance our land-grant mission and provide a benefit to yourself. The team in the UTIA Office of Institutional Advancement will work with you to connect your passion with an area of need, strengthening our teaching, research, and outreach missions.

TOGETHER.TENNESSEE.EDU



ONLINE GIFTS

An online gift is perhaps the easiest way to contribute. It requires the completion of a simple and secure form at together.tennessee.edu/support. Online gifts may be a one-time contribution, or you can set up monthly or yearly recurring support.



ANNUAL GIFTS

An annual gift is a gift, matching gift, or a pledged gift received on a yearly basis that is designated for use within that calendar year. Examples of annual gifts include support for one of our UT Gardens sites, one-time support for a special project in a department, and gifts from graduating seniors in the Herbert College of Agriculture.



ENDOWED FUNDS

An endowed fund is one in which the original principal is conserved, enabling the gift to extend in perpetuity. Endowments generally are funded within five years of the initial contribution. Income is distributed annually in accordance with the spending policies adopted by the University of Tennessee Foundation, and no income is distributed until the endowment is fully funded. There is no limit for donating gifts to already existing endowments, but the foundation's minimum requirement for establishing new endowments is \$25,000. Each endowment is supported by an accompanying fund agreement. This document explains the gift's purpose and use and is signed by the donor and the UT Foundation. Examples of endowments include scholarships, program support, and professorships.



PLEDGES

A pledge is a promise from a donor to invest funds into the UT Foundation to support the mission of UTIA. If your goal is to make contributions over a period of time for a particular effort, you may choose to create a pledge to fulfill your commitment. For example, if you would like to support the Livestock Judging Team with \$5,000, you can let us know this and we can send you reminders to donate \$1,000 per year for five years. A pledge allows our faculty and staff the opportunity to plan in advance for the use of the gift value pledged.



GIFTS IN KIND

Donations of tangible and intangible property are treated as gifts by both the IRS and the University. Gifts in kind such as equipment, software, or other physical assets may be used immediately to carry out our mission. Gifts in kind of real estate, art, rare coins, books, or materials that hold value may be converted to cash and then used to fund UTIA priorities.



DEFERRED GIFTS OR PLANNED GIVING

Deferred gifts are often called “planned gifts” because they are connected to financial plans, estate plans, or both. They range in size from smaller bequests to multimillion dollar trusts. This type of support is often called deferred gifts because even though they are given today, the benefits will not be realized until some point in the future. With smart planning, you may actually increase the size of your estate and/or reduce the tax burden on your heirs. Find out more about planned giving options at together.tennessee.giftplans.org.

READY TO LEARN MORE?

The UTIA Office of Institutional Advancement employs several highly trained and experienced professionals to help you make the most of your philanthropic intent. We are well-versed in Internal Revenue Service rules and have a strong back-office support system to help maximize your giving. We look forward to working with you as Together We Grow. ■

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GROWING PRIORITIES

by April M. Massengill and Lisa G. Stearns



An organization without a plan is like a seed without water. In order to grow, we must know how we will achieve results. In 2018, the UT Institute of Agriculture released its new strategic plan, *A Decade of Excellence*. This roadmap for the future is the result of months of work and input from faculty, staff, and stakeholders. The strategic plan for the Institute's next ten years is an ambitious one, tackling some of the grand challenges we as a society face.

"Our faculty and staff do tremendous work to create solutions to our most pressing issues," says UTIA Chancellor Tim Cross. "*A Decade of Excellence* outlines our goals and priorities in ways that will move us forward together as an Institute, strongly united in our teaching, research, and outreach." And just as the strategic plan is woven throughout the fabric of the Institute, it also is woven throughout UTIA's giving campaign, Together We Grow.

"The priorities outlined in the strategic plan and those outlined in Together We Grow are one and the same," says Keith Barber, UTIA vice chancellor of advancement. "Together, we can lift the Institute to new heights."

Through the campaign, the Institute intends to raise \$175 million to further Real. Life. Solutions. that will strengthen food, fiber, and energy systems; enhance biodiversity and environmental quality; enrich our economy; develop our workforce; and strengthen our health.

"UTIA is poised to help ease Tennessee's educational attainment gaps, bolster economic opportunities on and off the farm, conserve natural resources, provide solutions to complex health and family challenges, and help the Tennessee farming community transition to the next generation," says Cross. "It will take all of us—faculty, staff, friends, and alumni—working together to be successful. That's why the strategic plan and the Together We Grow campaign are so pivotal to the Institute and how we can serve."

The campaign is already creating that kind of change.

The Smith Center for International Sustainable Agriculture, made possible through the generosity of alumni Donnie and Terry Smith, is helping communities learn farming methods that will impact generations to come. Thanks to Jim and Judi Herbert, the Herbert College of Agriculture is equipped with expanded resources to educate tomorrow's leaders in the field. Both successes align with the Institute's strategic plan and priorities.

The Institute looks forward to many more successes to come. To learn more about the UTIA strategic plan, and how together, we can grow, visit tiny.utk.edu/UTIAstrategicplan. ■

UTIA STRATEGIC PLAN GOALS

A Decade of Excellence encompasses the feedback of faculty, staff, students, friends, and stakeholders. It includes six distinct goals, all tied to the land-grant mission and the Institute's promise to create **Real. Life. Solutions.**

GOAL 1: DRIVE DISCOVERY

Cultivate innovation and invention to meet the grand challenges of tomorrow by collaborating within our organization and with outside partners and by building on existing strengths.

GOAL 2: EXPAND REAL-LIFE LEARNING

Develop students and professionals to be lifelong learners and leaders in the agriculture, natural resource, and public and animal health industries.

GOAL 3: RAPIDLY DEPLOY SOLUTIONS

Rapidly deploy practical, cutting-edge solutions through effective use of innovative educational methods across a variety of platforms.

GOAL 4: DELIVER PROGRAMS THAT IMPROVE LIVES

Deliver programs that improve health and well-being, conserve natural resources, and help Tennesseans adapt to a rapidly changing world.

GOAL 5: GROW AND DIVERSIFY RESOURCES

Strengthen our relationships with funding partners by demonstrating relevant impact; diversify our sources of funding through entrepreneurship and new partnerships.

GOAL 6: IMPROVE INSTITUTE EFFECTIVENESS

Reinforce a positive work culture, increase efficiency and productivity, and simplify administrative processes.



UTIA PRIORITIES

We are committed to discovery and solutions that boost our economy, protect the environment, and enhance health for the people of Tennessee and our world. Together, we will:

Support Food, Fiber,
and Energy Systems

Enhance Biodiversity and
Environmental Quality

Enrich Our Economy

Develop Our Workforce

Strengthen Our Health



“Working together we have the ability to change the world by providing Real. Life. Solutions. for many years to come.”

TIM CROSS, CHANCELLOR





FOR THE COLEYS, MULTIPLE UTIA CONNECTIONS AND CAREER DIRECTIONS

For the Coley siblings, going to college was never a question. As soon as each child was old enough to join 4-H, a college savings account was opened.

“Our father never attended college himself, but he encouraged us to go,” says Jim Coley (BS animal husbandry ’76), second of four. “He really gave us no choice.”

Every year, each of the four siblings was given their own Hereford heifer to care for, groom, and show. At the family’s annual Hereford cattle sale in March, each sibling sold their heifer and put the money into their savings account.

“It was how we paid for college,” says Carol Coley McDonald (BS animal science ’82), the third sibling.

The upbringing of the Coley siblings isn’t unique to their rural Macon County. Clinging to the northern border of Tennessee, the county depends largely on agriculture. The Coley family contributed through its 250-acre purebred Hereford cattle farm.

Today, the siblings are scattered across the East and their vocations are just as varied—a large animal veterinarian, a cattleman, agricultural advocate, and an entrepreneur.

Their family name ties them together; however, so do their alma mater and college degrees. All four siblings graduated from the Department of Animal Science at the UT College of Agriculture, now the Herbert College of Agriculture.

Bob Coley (BS animal science ’74) began the tradition when he attended the College in the early 1970s. Jim followed two years later. They are the only ones of the Coley siblings to overlap their experience at the Herbert College of Agriculture.

“In those days the ag campus was more by itself than it is today,” Bob remembers. “I enjoyed the classes, and the professors were more personable and understanding than others on the main campus.”

Bob and Jim further supported their college education by living and working on the Blount and Alcoa UT Farms. When it was Carol’s turn at higher education, she didn’t consider any other school. Her blood ran orange and agriculture was her passion. Livestock Judging, Meats Judging, and Block and Bridle were highlights of each of the Coley siblings’ college experiences.



Each year, (left to right) Bob, Bonnie, Carol, and Jim try to reunite at the Tennessee Beef Agribition in Lebanon, Tennessee.

The youngest Coley, Bonnie Coley-Malir (BS animal science '88), did buck tradition by starting her college career in communications before switching to animal science.

When Bonnie was eleven years old and Carol was in high school, they feared that their tie to the farming world would be severed far too soon. The patriarch of the Coley family died before his time and the Hereford herd was dispersed. Along with it, the girls' tie to livestock showing and their opportunity to save for college disappeared.

"I was afraid I would never be able to show cattle again," Bonnie says.

That's when the Coley brothers stepped in. Bob had already established his career as a veterinarian in New Market, and Jim was a herd manager for a purebred Hereford operation in Middle Tennessee.

The brothers supplied their sisters with heifers from their herds to carry on the tradition of showing. They also provided steers for the sisters to show and sell to add to their college fund.

"They even took us to shows," Bonnie remembers. "It was such a part of our youth. They made sure that continued."

Today, all four siblings have careers firmly rooted in agriculture with strong ties to the livestock industry.

Bonnie and husband, Rick, founded City Barbeque in Ohio in 1999. Rick is currently the CEO of the company. With forty-four locations in seven states, the business has grown to be a significant supporter of the livestock business. They purchase over three million pounds of brisket and over four million pounds of pork each year.

Carol advocates for the legislative needs of those in the agriculture industry through her appointment as the Tennessee Department of Agriculture's assistant commissioner for policy and legislation. She is the department and the industry's tie to the Tennessee General Assembly. Carol also serves on the UT Institute of Agriculture's Animal Science Advisory Council.

Bob Coley cares for the health of livestock as a veterinarian based in New Market, about forty minutes outside of Knoxville. He ensures the health of herds spanning ten counties. Current UT veterinary students ride along on calls for real-world experience. Although his veterinary degree predates UT's own program, he supports the College of Veterinary Medicine at UT by serving on its advisory council and as a member of the UTIA advancement board. Bob also has a farm and raises Hereford cattle.

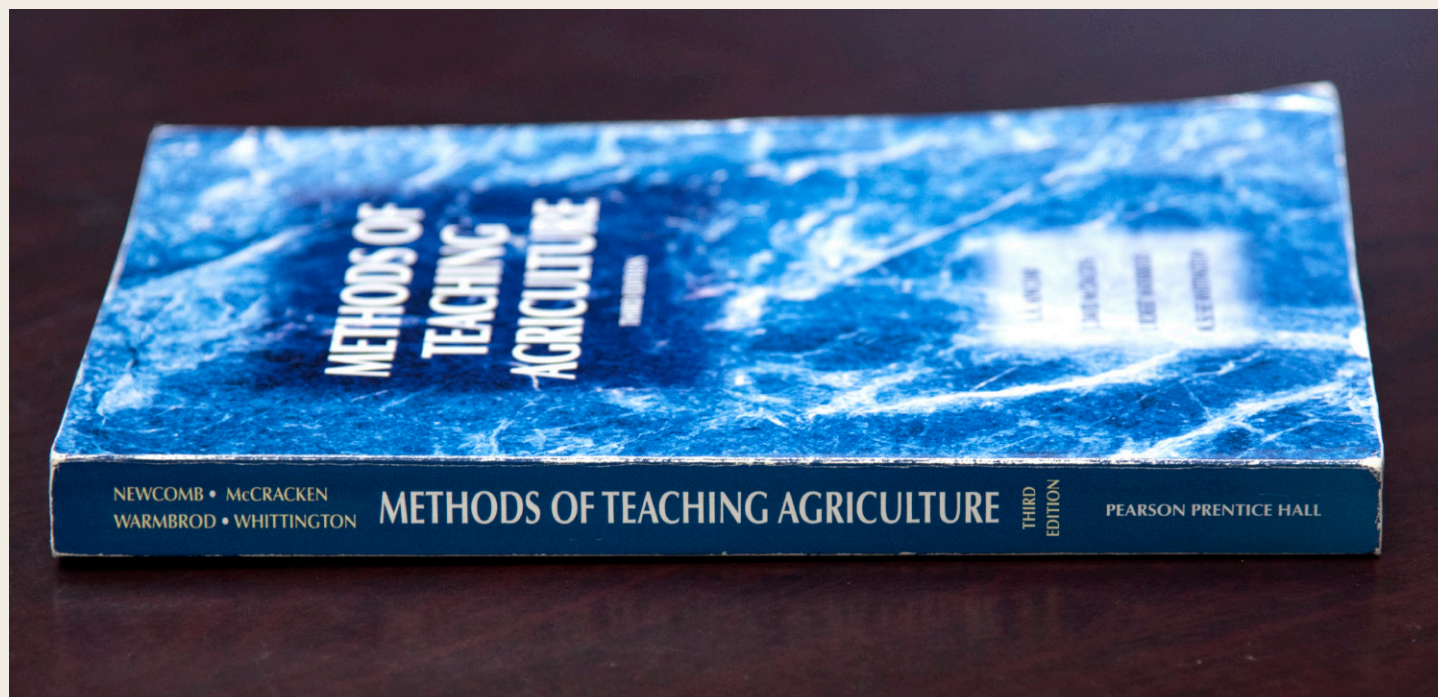
However, it was Jim who continued the family farm, re-forming the herd in Macon County. And this past year, he restored the family farmhouse.

Last Christmas all four Coley siblings returned to the newly renovated farmhouse to celebrate as a family.

"I thought it might be emotional and a little sad to go back to the house," admits Bonnie. "But it was just really happy. It is good to see the land with Hereford cattle again and a house filled with family and kids laughing."

Like their connection to the cattle industry, UT remains a valued part of the siblings' lives. Their parents were even selected as honorary members of the UT Block and Bridle Club. The Dee W. and Dorothy Coley Memorial Stockman Award is given to graduating seniors each year at the Animal Science Awards Banquet. The siblings established the award in 1978. ■

- Lauren Vath



HE EDUCATES ABOUT AG, AND LEADS IT

For J. Robert Warmbrod, attending the University of Tennessee is a deeply rooted family tradition. Warmbrod's father and his siblings earned degrees from UT, and he understood from a young age that he would be attending UT, too. While he could have chosen to major in anything, Warmbrod says being raised on the family farm in Belvidere, Tennessee, became one of two chief factors in the path he chose.

"My background in agriculture coupled with my mother being an elementary school teacher and principal helped me decide I wanted to get my bachelor's in agricultural education. I truly believe that what people do in life is influenced by their background."

In the profession of agricultural education, Warmbrod found his passion. His interest in the field grew as he advanced in his studies, first earning a BS (1952), then his master's (1954), from the then UT College of Agriculture. Following active duty in the US Air Force, he accepted a one-year appointment at UT as an instructor with his home department, the Department of Agricultural Education, now known as the

Department of 4-H Youth Development and Agricultural Leadership, Education and Communications within the Herbert College of Agriculture.

Warmbrod's path in agricultural education next led him to teach agriculture at Franklin County High School in Winchester, Tennessee, from 1957 to 1959, during which time he decided he wanted to deepen his knowledge by earning a doctorate. He earned a doctor of education degree at the University of Illinois in 1962 and was a faculty member there for six years. A sabbatical leave at The Ohio State University in 1968 led to the offer of a position there, where he served in multiple roles, including professor of agricultural education, department chair, vice president of agricultural administration, and dean of the College of Agriculture, until his retirement in 1995.

Warmbrod's journey—in work and in study—provided him with deep insight and understanding of agricultural education's history and development, along with its challenges and the many opportunities it offers to students. He joined three other faculty members to coauthor a textbook focused on the foundations and techniques of teaching agriculture. The result was *Methods of Teaching Agriculture*, a book first

published in 1986 that became a landmark guide in its field.

Christopher Stripling is an associate professor and undergraduate coordinator in the Department of 4-H Youth Development and Agricultural Leadership, Education and Communications. He regards Warmbrod's book as a foundational text in its discipline. "This book serves as a point of reference for discussions within agriculture teacher education," Stripling explains. "It illustrates how educational theory can be applied by agriculture teachers to improve teaching and learning, and it is used in colleges of agriculture across the US and in other countries."

In addition to the research and experience that resulted in that achievement, Warmbrod made substantial contributions in other areas during his tenure at Ohio State. One was in having lasting impacts upon the research dimensions of OSU's agricultural education graduate program. In fact, strengthening that program was the initial charge given to him upon his employment, and it became one that engaged him throughout his time at the university. Warmbrod's impacts in this area include developing graduate courses in statistics and research methodology.



Herbert associate professor Christopher Stripling says Warmbrod's book is a reference point for discussions about agricultural education.

In recognition of his many career impacts, OSU bestowed the title of Distinguished University Professor Emeritus to Warmbrod upon his retirement in 1995. Although he officially retired that year, he continued to teach five years more before concluding his time at Ohio State.

Larry Arrington, UTIA chancellor emeritus and PhD graduate of OSU's agricultural education program, notes the influence Warmbrod has had on generations of graduates in the field. "Dr. Warmbrod is essentially the 'grandfather of agricultural education' in the United States," Arrington says. "His leadership in this discipline of study is unmatched in higher education."

Agricultural education programs mentor and grow new generations of agricultural leaders. A career spent working in this discipline, in turn, influenced Warmbrod's desire to help UT students obtain degrees in this field. Putting that desire into action, Warmbrod has steadily donated funds to assist students for more than six decades.

"The University of Tennessee was a major part of my academic career, and I feel it is important to help in whatever way you can. In my case, my contribution to UT was in the form of scholarships for students studying agricultural leadership, education, and communications."

Giving back to his alma mater, Warmbrod says, feels like the natural thing to do. His gifts to UTIA have helped set students throughout the Department of 4-H Youth Development and Agricultural Leadership, Education and Communications on paths to follow in his footsteps to better the field of agriculture and its future. ■

- Emily Haskew

WHY I GIVE



HOW A COLLABORATOR GROWS SUPPORT... AND THE UT GARDENS

Gretchen Orrin remembers standing with a handful of students on the long, flat floodplain at the south end of campus. Legendary UT professor Don Williams wanted to turn the floodplain into a garden. A garden would need an irrigation system. Who better to build it, he reasoned, than students in colleague Garry Menendez's first semester irrigation class? So, Williams and Menendez set the students to it.

"We didn't know anything about irrigation systems. We didn't know about plumbing. We just had a bunch of pipes to deal with," says Orrin (BS ornamental horticulture and landscape design '94). "But we kept working at it and somehow, we figured it out. We developed such a sense of camaraderie from doing it."

When Orrin needed help figuring out something critical—how to pull together her coursework and grades to complete her degree—it

"That's the power each of us can have in giving. It's why I encourage people to give what they can to the causes that matter to them most. Together we grow."

was her beloved academic advisor, Sue Hamilton, who sat down and brainstormed with her. Together, they got it done.

Now thirty years later, Hamilton is director of the UT Gardens, Knoxville—the gardens that grew upon that long, flat floodplain and the pipes that Orrin helped lay. Orrin is president of Athena Construction Group Inc. in College Park, Georgia. She founded the company because she saw a need in the industry in Atlanta for subcontractors to be better team players with general contractors. "If we could work together more collaboratively and be advocates for each other, we'd get more done and more efficiently." Together, Athena and Orrin have thrived, and so has the industry.

Collaboration is central to the UT Institute of Agriculture's Together We Grow campaign, and it runs like a thread through Orrin's life and career. She says collaboration, also, is the key to having big impacts in charitable giving. Orrin's goals in giving to UT are to support Hamilton and Hamilton's vision for the Gardens. "Sue has achieved so much for the Gardens and benefited so many people. I want to do what I can to assist her."

A gift from Orrin enabled construction of the Gardens' new McIlwaine Pavilion to fully realize the quality of craftsmanship sought for the facility. The pavilion has received two prestigious American Institute of Architects awards for its superb detail, yet it's the beauty that greets students and visitors to the Gardens that matters most to her.

Last fall, Orrin funded a \$5,000 challenge grant for gifts made to the UT Gardens during the University's 24-hour Big Orange Give Campaign. The grant helped grow the amount of contributions. Her gift also grew the number of people engaged in the UT Gardens.

"Few people may be able to write a check for \$35,000 for a cause that's important to them," Orrin says. "But most of us can find \$200, \$300, or \$500 to give. And little by little, gifts like these do add up."

Orrin has often discovered a donation, even when the amount seems small, arrives at the moment it is most needed, to make something possible that had come to seem impossible. "That's the power each of us can have in giving. It's why I encourage people to give what they can to the causes that matter to them most. Together we grow." ■

“Felix spent his entire career as an Extension agent, doing what he loved to do. UTIA played such a significant role in my husband’s life. I want other students to have the opportunity to pursue their passions just like he did.”

WHY I GIVE

AN EASY GIFT TO MAKE

ANNUITY PROVIDES A HELPING HAND FOR COLLEGE-BOUND 4-H’ERS

Helen Knight has always had a passion for helping students. Born and raised in Knoxville, Knight earned a BS in office administration at UT in 1950. She then taught business education in Maury, Rutherford, and Davidson Counties before returning to Knoxville to retire. She now channels that passion into helping students at the UT Institute of Agriculture.

“My late husband Felix and I spent our lives in public service—he as an Extension agent and me as a high school teacher,” Helen explains. “Because we had no children of our own, the students we served became our children—particularly the students involved in the 4-H program.” So it was no surprise when the Knights made gifts to fund a scholarship endowment for 4-H’ers.

Felix, a native of Dayton, Tennessee, earned a BS in dairying from UT in 1950 and an MS in animal husbandry in 1961. He began his career with UT Extension as an agent in Maury County. He enjoyed teaching and encouraging 4-H youth there and in Rutherford County where he worked next. Felix invested the largest portion of his career in Davidson County, where he served for twenty-three years before retiring as county Extension leader. He passed away in 2006.

“I saw firsthand the benefits of Extension and particularly 4-H,” Helen says. “Our hope was that the Knight scholarship could ease the financial burden associated with going to college for those 4-H students.”

The Felix and Helen Knight Memorial Scholarship Endowment was initially funded with a bequest and a charitable remainder trust. Following Felix’s death, Helen, however, felt called to do more. That “more” came in the form of a charitable gift annuity.



Helen Knight and her late husband, Felix, poured their time and energy into serving students, particularly those who were involved in 4-H activities such as showing sheep.

“I was intrigued by the charitable gift annuity because I was able to make a charitable gift and receive a tax deduction and then get an income stream for life,” she says. “Evan Beech, assistant director of advancement, suggested it, and it made perfect sense for my situation. The advancement team assisted with the paperwork, and I didn’t even have to see my lawyer. It was an easy gift to make.”

At its heart, a gift annuity is simply a contract between a donor and a charity such as the UT Foundation for the benefit of UTIA. In exchange for a charitable gift, the UT Foundation agrees to make specified quarterly payments for life to the beneficiary. Numerous charitable strategies allow the donor access to an income stream when making a charitable gift. One of the oldest and most popular is the charitable gift annuity.

Because of the Knights’ generosity, many 4-H’ers are able to study at the Herbert College of Agriculture.

“Felix spent his entire career as an Extension agent, doing what he loved to do,” Helen says. “UTIA played such a significant role in my husband’s life. I want other students to have the opportunity to pursue their passions just like he did.”

For more information about planned giving at UTIA, visit together.tennessee.giftplans.org. ■



TOGETHER WE GROW
Steven
Bennett

TOGETHER WE GROW
Jamie
Bennett



Together. It means faculty, staff, and students located across the state of Tennessee and beyond. It means you, your neighbors, your friends. Together includes all of us. Friends and supporters joined together on September 21, 2018, the eve of the public launch of UTIA's most ambitious campaign ever, to celebrate achievements met and goals for tomorrow. ■



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SAVE THE DATE!

Make plans to join us for **Ag Day 2019** on **Saturday, October 5**. Festivities will be held in and around Brehm Animal Science Arena starting 4.5 hours before Tennessee takes on the Georgia Bulldogs. Visit ag.tennessee.edu as the date nears for more details.