



MARTIN

**Center of Excellence for
Experimental Learning in
Agricultural Science**

**FY 2026
Annual Report**

Department of Agriculture, Geosciences, and Natural Resources

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Center of Excellence for Experimental Learning in Agricultural Science Mission Statement

The mission of the Center of Excellence (COE) for Experimental Learning in Agricultural Science is to provide an innovative infrastructure through which existing and new experiential inter-disciplinary studies in production agriculture, the environment, and conservation techniques can take place. The COE in Agricultural Science is designed to create a model for quality teaching across various disciplines, while facilitating and increasing external grant and contract activities, increasing public/ private partnerships, and increasing outreach efforts. Other goals of the COE in Agricultural Science involve collaboration with secondary institutions, expanding livestock, crops, equipment, natural resource areas and other facilities to enhance experiential learning and yielding a major impact on the economy of the State of Tennessee.

Executive Summary

In accordance with the Center of Excellence (COE) for Experimental Learning in Agricultural Science mission statement, since January 2002, attention has been devoted to establishing a model field laboratory with facilities and resources to support experiential activities and research for students. This model field laboratory is used to promote and meet all goals of the COE mission statement. A major component of the COE is the operation of a teaching and demonstration farm to complement ongoing academic programs in the Department of Agriculture, Geosciences, and Natural Resources (AGN) at the University of Tennessee at Martin (UTM). This endeavor was expanded effective January 1, 2006, when the Department of Agriculture, Geosciences, and Natural Resources assumed operational control of the entire 640 acres and associated buildings formerly operated by the Martin Experiment Station (University of Tennessee Institute of Agriculture). A major objective of this effort is to provide resources dedicated to the establishment of a quality experiential learning and applied research environment for the UTM campus and the citizens of Tennessee. This in turn meets the goals and objectives of the COE for Experimental Learning in Agricultural Science mission statement.

Presently, there are approximately 250 acres of COE property in field crop production with another 250 acres devoted to forage production and pasture for teaching herds/flocks of beef cattle, swine, horses, meat goats, and sheep. In addition, there are six outdoor research ponds (0.1 acre each) and ten indoor research tanks used for fisheries management. The COE also includes an alternative fuels (biofuels) laboratory, a wildlife biology field laboratory, a Tyson poultry facility, a companion animal laboratory, and two Veterinary Technology teaching laboratory facilities. As a major thrust of the COE, the UTM Teaching and Demonstration Farm provides resources and facilities for public service activities and research to support public and private stakeholders involved in agricultural and natural resource sciences. Animals and facilities associated with the COE provide resources for training competitive teams for local, regional, and national competitions, as well as involvement in assisting collegiate and high school FFA and 4-H teams preparing for and competing in their respective interscholastic events across the state. This subsequently increases collaboration with secondary institutions and outreach efforts in accordance with the mission statement.

The University of Tennessee at Martin is an ideal location for the COE due to the existence of agricultural entities already in operation. The West Tennessee Agricultural Pavilion (Ned R. McWherter Agricultural Complex) serves as a hub of activity for clients in a variety of ways, ranging from livestock shows to the annual Santa's Village. The Santa's Village event has been in operation for the last 41 years and is a cooperation between the city of Martin and university faculty, staff, and students. The event provides great community outreach and community service through the collection of more than 18,000 canned goods and toy donations for the under-provided in our county. (Figure 1) The COE enables current and future faculty to not only serve the academic needs of current campus- based and online students, but also to expand opportunities for a statewide mixture of students in secondary schools as well as adult stakeholders through continuing-education offerings and events. The COE features applied research and external grant supported projects that complement the undergraduate and graduate teaching missions of the University of Tennessee at Martin.

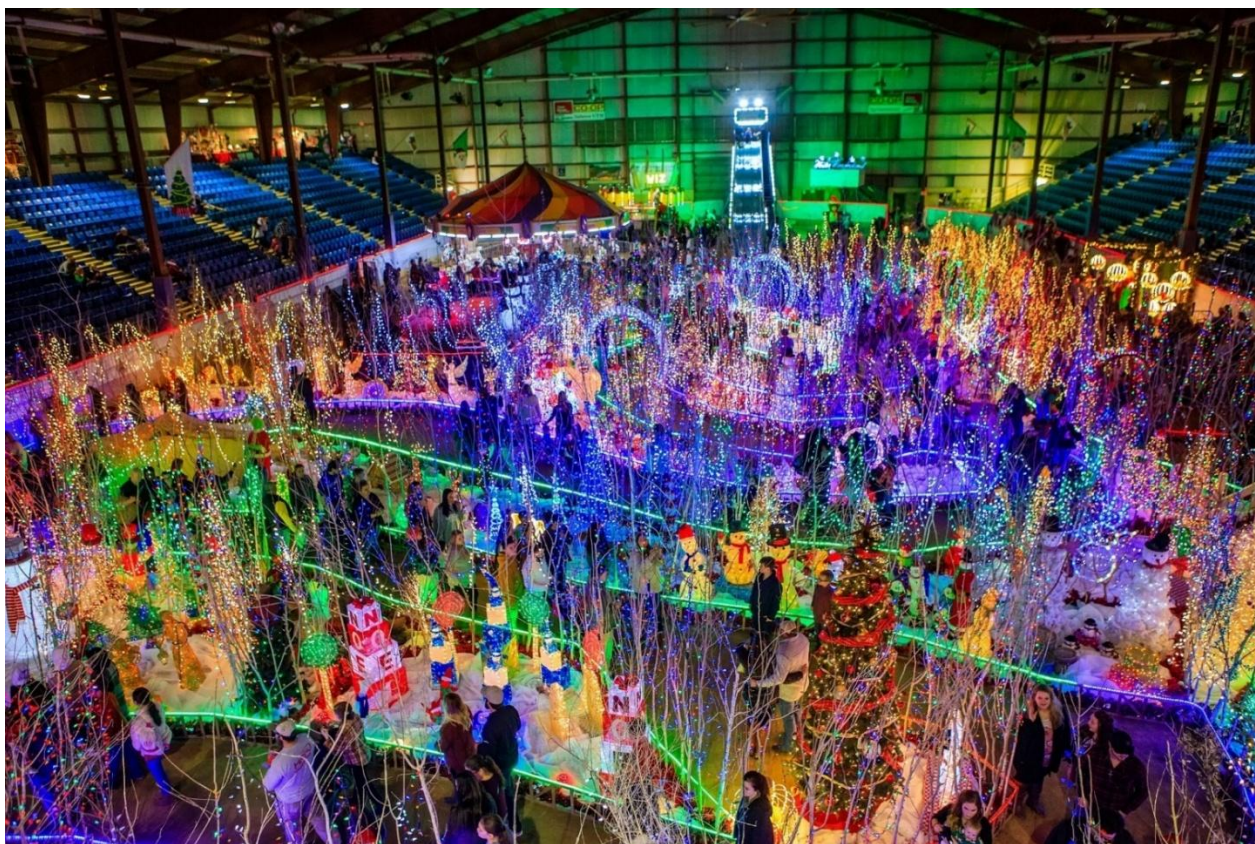


Figure 1. Santa's Village Display at the Ned R. McWherter Agricultural Complex

Soil, Animal, Food, and Economic (SAFE) Research, Education, and Outreach

Middle Tennessee State University (MTSU), in collaboration with the University of Tennessee at Martin (UTM) and Tennessee Technological University (TTU), initially funded through a USDA Non-Land-Grant Capacity Grant is investigating the impact of soil management practices on crop, animal and food production and economics, update coursework, and communicate results to agricultural audiences through field day activities, virtual demonstrations, training and professional development opportunities. (Figure 2 and 3)

Due to the rapidly increasing human population, sustainable agricultural management practices are difficult to achieve and encourage. This has led to concerns about providing food, feed, and fiber sustainably for the projected 9 billion people by 2050 (Vorosmarty et. al., 2000; Foley, 2014). One way to address this problem is through conservation agriculture and improved soil quality by focusing on soil health and the related effects on animal production, food quality, and economic viability of vertically integrated farming systems. This integrated collaborative project, Soil, Animal, Food, and Economic (SAFE) Research, Education, and Outreach, has utilized a systems approach to explore how changes to soil management practices alter food production outcomes, with an emphasis on equipping current producers with resources to better inform on farm decision making practices and providing future producers with access to information through increased utilization of technology and hands-on learning in high school agricultural education programs. To accomplish this, over a three-year period various soil plots have been established, and a livestock feed crop (MTSU), vegetable crop (UTM), and forage crop (TTU) have been grown in each plot because of the soil quality. The feed crop has been used for silage to feed livestock, in this case, dairy cattle. Milk from the dairy cows have been used to produce dairy food products. At each step of the food systems, soil, crops, milk, and milk food products have been analyzed for various characteristics. Those characteristics have been analyzed to determine the economic relationships between soil quality for feed and food production to milk quality and dairy food product quality. As research is being executed, new course development and existing course enhancement has occurred, and outreach efforts have targeted farmers and high school agricultural education teachers through field day activities, seminars, webinars, publications, and professional development activities. This approach allows us to simultaneously support in-practice farmers and educate the next generation of agriculturists so that we can increase the number of students entering food and agriculture-related science, technology, engineering, and mathematics (Ag-STEM) disciplines.

The following objectives will guide this work:

Objective 1 - Utilize soil management practices to improve crop and pasture production for enhanced productivity and food quality across different food systems.

Objective 2 - Establish a food system training center to provide support in the areas production, processing, preservation, safety, and food science education.



Figure 2. Undergraduate experiential learning



Figure 3. Overview of SAFE plot on UTM Teaching and Demonstration Farm

Coon Creek Science Center

April 2021, The University of Tennessee, on behalf of its Martin campus, had a grand opening to elaborate the acquisition and future use of the Coon Creek Science Center. (Figure 4)



Figure 4. Coon Creek Science Center facilities

The property was obtained from the Pink Palace of Museums for institutional use as a field laboratory for teaching, outreach, and research activities in Geosciences, Natural Resources Management, Astronomy, and Agriculture. The Coon Creek Science Center is one of a dozen most significant fossil sites in North America. The site has yielded over 600 different species of marine creatures, preserved as unaltered fossils. The Pink Palace museum's Coon Creek Science Center collection – includes skull and skeletal remains of a 25ft. Mosasaur – dating from the late Cretaceous, 75 million years ago, (a.k.a. -- the end of the Age of Dinosaurs) (Figure 5). The University utilizes the property to offer enhanced undergraduate and graduate courses; public summer programming; Eco- and Paleo- tourism; and research. STEM teacher training is also performed and will continue at the site.



Figure 5. Coon Creek Science Center Fossil Dig

West Tennessee Animal Disease Diagnostic Lab

Funding provided by the Tennessee Department of Agriculture and the Tennessee Agriculture Enhancement Program funded the establishment and operation of a West Tennessee Animal Disease Diagnostic Laboratory (Figure 6 a, b, c, & d) that opened on July 1, 2008. This laboratory serves as a satellite of the C.E. Kord Laboratory at the Ellington Agriculture Center in Nashville, Tennessee. Necropsies performed on animals used for food or fiber are performed at no charge to producers and public partners and all other lab services are performed on a fee schedule. The lab increases public and corporate partnerships with outreach efforts, in addition to being a valuable teaching tool. The lab is also used for instruction and demonstration for students and visiting groups that come to campus.



Figure 6 a West Tennessee Animal Disease Diagnostic Laboratory



Figure 6 b & c West Tennessee Animal Disease Diagnostic Laboratory



d. West Tennessee Animal Disease Diagnostic Laboratory Director Dr. Clint Ary

Veterinary Technology Facility

The Veterinary Technology concentration provides students an opportunity to earn a 4-year degree with a major in Veterinary Science and Technology, while meeting all the qualifications established by the American Veterinary Medical Association to sit for the National Licensing Exam for Veterinary Technicians. The Veterinary Technology concentration received initial accreditation in May 2014 from the American Veterinary Medical Association and the Committee on Veterinary Technician Education and Activities (CVTEA). We had our CVTEA site accreditation visit in February 2024 and received full accreditation through 2029.

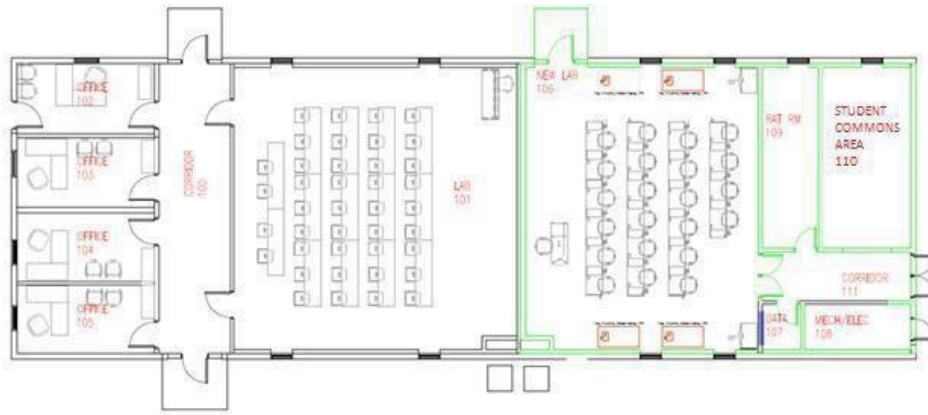


Figure 7. Vet Health Tech Facility Floor Plan

During spring 2015, a free stall barn adjacent to the Veterinary Technology Lab was partially renovated using Title III grant funds, as well as funds secured from a USDA RBEG grant. The Title III grant is providing over \$300,000 over five years and includes a four-phase renovation (Figure 7) to the free stall barn. The barn was eventually renamed the Veterinary Technology Facility. Phase I work totaled approximately \$140,000 and the partial renovation created a new state of the art smart classroom equipped with Clear Touch Panel computing technology. Phase II and III renovations began in 2016 and were completed in the summer of 2018 to provide four office spaces (Figure 8) and a state-of-the-art laboratory for Veterinary Technology students.

Title III grant funds were used for phase IV renovations on the rear section of the Veterinary Technology Facility to create a new teaching laboratory (Figure 9) for laboratory animals and a new student commons area for the growing Veterinary Technology concentration. This project was started during the 2017-2018 academic year and was completed during the 2018-2019 academic year. During the 2019-2020 academic year, this facility growth of the Veterinary Technology concentration increased available instruction and research capacity for all Animal Science faculty.

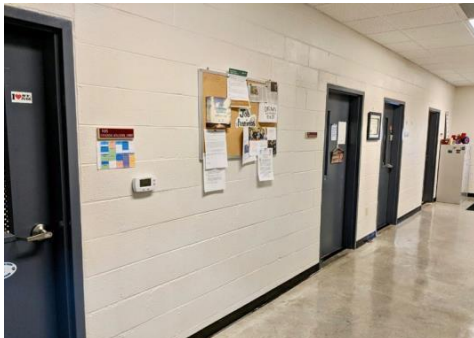


Figure 8. Offices at Vet Health Tech Facility



Figure 9. New Laboratory at Vet Health Tech Facility

Most recently, the CVTEA reaccreditation visit February 2024 indicated that the program has outgrown our current Kennel Facility that provides learning space for the ANSC 230 Companion Animal Science class. Subsequently, we have initiated a 3-phase plan to renovate the Veterinary Technology Lab to include a larger, state of the art kennel. This renovation project was initiated in summer 2025 and is scheduled to be completed by spring 2027 in time for fall classes. Additionally, this renovation will include and provide additional laboratory, office space, and a conference room. Additional lab space is needed for experiential learning and office space is needed for our growing number of Veterinary Science and Veterinary Technology faculty.

Veterinary Technology Kennel Facility

The Veterinary Technology concentration received initial accreditation in May 2014 from the American Veterinary Medical Association and the Committee on Veterinary Technician Education and Activities (CVTEA). We had our latest CVTEA site accreditation visit in February 2024 and received full accreditation through 2029. During this latest site visit, the site accreditation team determined that the concentration has outgrown our current veterinary technology kennel facility. This facility upgraded prior to the next accreditation site visit in 2029. We began fundraising for this renovation immediately and have a three-phase plan to renovate/upgrade the existing kennel facility to meet CVTEA standards. The first phase is fully funded and work on the first phase began summer 2026 and will be completed by Spring 2027. Fundraising is still ongoing for phases two and three. .



Figure 10 a – outside of new kennels



Figure 10 b – inside of new kennels



Figure 10 c – inside of new kennels



Figure 10 d – inside of new kennels



Figure 10 e – inside of classroom upgrades



Figure 10 f - inside of classroom upgrades



Figure 10 g – inside of classroom upgrades



Figure 10 h - inside of classroom upgrades

Cattle Outreach Workforce (COW) Facility

Another important experiential learning project that has been funded through the TN State Legislature, is the design and construction of a new Beef Cattle Facility. The center has been renamed the Cattle Outreach and Workforce (COW) Facility. The COW facility will provide experiential learning opportunities for animal science students utilizing and growing the current cow-calf herd, with a goal of expanding operations to include an embryo transfer recipient herd. Cattle Reproduction will be an emphasis of the facility. The embryo transfer activity will provide a service to cattle producers in the region. The COW facility will include a 1,245 ft² laboratory and a 250 ft² student commons area, (Figure 10) and a large, covered livestock working facility. This laboratory will also increase available interdisciplinary research capacity for all Animal Science faculty. This project has moved into the design phase. Construction should began by January 2028, with completion of the project by January 2029. Fundraising is continuing for fencing and equipment needed in the facility. Fencing was added Spring 2020 for farm production, research, and pasture in preparation for construction (Figure 12a and 12b).

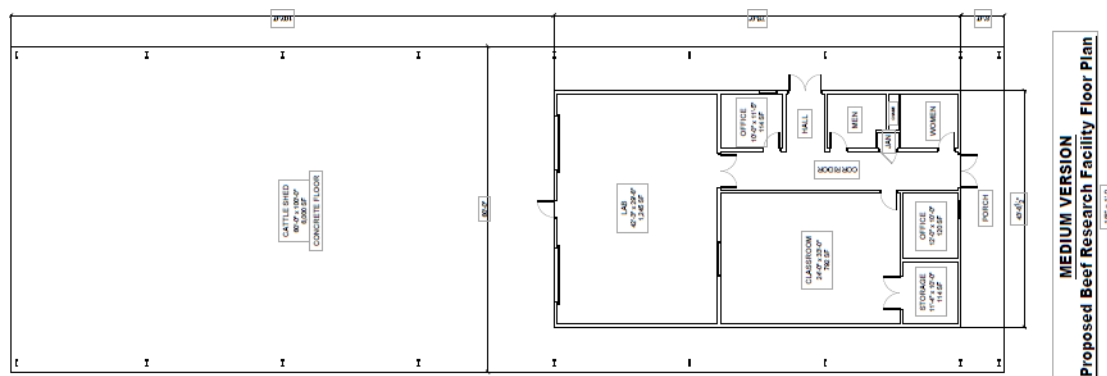


Figure 11. COW Facility Floor Plan.



Figure 12a & b. New fencing around future COW facility location.

Capacity Building Grant for Forage Education Resources

The productivity and nutritive value of cool-season forage species such as tall fescue decreases during hot and dry summer months, which is referred to as the “summer slump”. This typically occurs in the mid-south region including the state of Tennessee. Warm-season annual grass species can provide a useful option for supplemental summer forage in the region. They can be a good option either for grazing or to harvest as baleage for use in winter. Summer annuals are also higher in forage quality and can be more productive than warm-season perennials in a short period time, which qualifies for use as emergency forages during the drought periods. Our research at the University of Tennessee at Martin is investigating the use of drought-tolerant, warm season annual forage species such as: Teff (*Eragrostis tef*); sorghum-sudangrass [*S. bicolor* (L.) x *Sorghum sudanese* (Piper) Stapf; SxSU] and Pearl millet [*Pennisetum glaucum* (L); PM], as a potential solution for ‘summer slump’ providing summer forage for livestock producers in the region. The funding for this study was provided by the Capacity Building Grants for Non-Land Grant Colleges of Agriculture Program (NLGCA), United States Department of Agriculture, National Institute of Food and Agriculture (Project No: R054105183).

This study can provide guidelines for the production and management of alternative warm-season forages in the region. This research acquaints livestock producers with potential alternative summer forage species, their management, utilization, and nutritive values in the west Tennessee region. This research also provides an initial foundation for generating greater opportunities for undergraduate students’ involvement in forage-livestock systems research and, initiating and strengthening much needed collaborations and/or affiliations with NGOs (Tennessee Cattlemen’s Association), extensions, companies, public universities, etc. for research, extensions, and student internships.



Figure 13a - Fistulated cows for ruminant research



Figure 13b - Forage field plots



Figure 13c - Undergraduate researchers and Dr. Isaac Lepcha

UTM Apiary

In 2012, alumni faculty member Dr. Bob Hathcock, with the support of current faculty member Dr. Joseph Mehlhorn and the Northwest Tennessee Beekeepers Association, installed a small 11-hive apiary on the north end of the UTM Teaching and Demonstration Farm. The purpose of this apiary was to provide a vehicle for instruction/outreach regarding best management practices in beekeeping for West Tennessee beekeepers. In 2016, Dr. Hathcock and the Association turned the apiary over to the Department of AGN for future use and upkeep. In 2017, the apiary was upgraded to 25 hives and the Department of AGN began to involve Teaching and Demonstration Farm student workers to complete apiary maintenance (Figure 14a and 14b). This provides a unique hands-on learning experience for these students. The apiary also allowed for cross- collaboration between the Department of AGN and other departments on campus such as faculty and students from the Department of Chemistry.

Beginning September 2017, honey and lip balm from the apiary is being sold in the UTM Bookstore, at UTM football games, and at other public events on the UTM campus. This project continued to be successful and continued to grow through 2020. COVID-19 years, 2021-2022, resulted in an overall reduction in our number of hives and a subsequent reduction in our production.



Figure 14 a and b. Student workers completing apiary maintenance.

Currently, we have 14 active hives in 2026 and have developed a honey extraction facility within one of the old swine facilities on the UTM Teaching and Demonstration Farm. We have one full-time Teaching and Demonstration Farm employee along with 3-4 student workers providing leadership over and carrying out the day-to-day activities at the UTM Apiary. Additionally, we have established a working relationship with the Northwest Tennessee Beekeepers Association. We host their monthly meeting here on the UTM campus and we host their annual Field School which utilizes our UTM apiary.

The Center of Excellence has hosted the Tennessee Governor's School for the Agricultural Sciences (TGSAS) since 2004. TGSAS provides exceptional agricultural experiential learning opportunity for Tennessee high school rising juniors and seniors. (Figure 15 a & b) The academic program is a 4-week residential program that covers a variety of agriculture and natural resource topics. Students' complete college courses as well as learn research techniques through group study research projects. A copy of the 2026 TGSAS Annual Report can be found on the Center of Excellence web site: <http://www.utm.edu/departments/agnr/coe.php>

With the tremendous success of the Tennessee Governor's School for the Agricultural Sciences from a student recruitment standpoint, there was an excellent opportunity to develop an "honors" program specifically for AGN students. With this vision and the help of a dedicated group of AGN faculty, the Agriculture, Geosciences, and Natural Resources Fellows Research Program (AGN-FRP) was born. The program includes an additional 3 hours of course work tailored AGN-FRP to enhance students' investigative skills and promote undergraduate research. The AGN-FRP provides an opportunity for outstanding AGN students to gain organized experiences in research and scholarships through a mentored relationship with an AGN faculty member. The primary goal of the AGN-FRP is to foster and enhance undergraduate research in a manner that is mutually beneficial for the student and the faculty mentor. The additional training from the FRP program has positioned the students to be successful in advanced academic fields.

Figure 15. a) 2026 TGSAS Counselors



b.) Class of 2026



UTM Continues Partnership with Tyson Foods Inc.

The University of Tennessee at Martin has continued to partner with Tyson Foods Inc. to add chickens to the list of animals UT Martin students experience at the UT Martin Teaching Farm. The facility (Figure 16) is a repurposed swine barn, renovated into a broiler floor. Tyson provides the broiler chicks, feed, and supports stipends for students which are employed at the facility. After an approximately 60-day growth period the broilers are harvested. Chicken nuggets from the flock are then sold on the UT Martin campus. The facility is used for teaching, research, and career training for students desiring to enter the poultry workforce. Because of the success, we are in discussions with Tyson about expanding the facility for larger production.



Figure 16 – The Tyson Facility at UTM

UTM Wildwood Farm at Germantown

The University of Tennessee at Martin received the largest single gift in its history when Melanie Smith Taylor and her family announced that Wildwood Farm in Germantown, TN, will be transferred to the university upon her death. The gift will allow UT Martin to increase educational program offerings in veterinary technology and other agricultural disciplines soon. The gift will provide opportunities for UT Martin to collaborate with the University Tennessee Institute of Agriculture. (Figure 17a & b)

The farm includes 350-acres of mixed pasture and mature oak woodlots surrounded by dense residential development. The Big Barn was completed in 1935 and became the hub of equestrian history in the Mid-South. Originally built as one of the top American Saddlebred show stables in the country, Wildwood transformed into setting for many equestrian events.

The gift will make possible educational opportunities in veterinary technology, horsemanship, plant and soil science, environmental management, and natural resources management. Early programming will focus on adding cohort for veterinary technology to complete the core of 200-400 level veterinary technology courses.



Figure 17a. Ms. Melanie Taylor Smith (third from left) Wildwood Farm gift signing



Figure 17b. Aerial view of Wildwood Farm in the heart at Germantown, TN

Global Engagement and Exchange: A Capacity-Building Partnership in Kenya.

Funded by a USDA-NIFA Capacity Building Grant for Non-Land-Grant Colleges of Agriculture.
\$745,000 for three years (2024-2027, 1 year extension pending).

Co-Project Director: Todd A. Winters

Other Principal Investigators: W.K. Dooley, E. Williams, S. Goyret, B. Carroll, J. Cole, C. Darroch, B. Darroch, S. Dunagan, C. Ideus, I. Lepcha, B. Makinia, F. Onyango, L. Palet, and B. Wolters.

Non-Technical Summary:

Global engagement by universities with international partners is fundamental for building multicultural competency among our nation's future agricultural workforce. Students of agriculture and related sciences must understand global food systems in order to produce safe and nutritious diets for expanding populations. This proposal brings together the University of Tennessee at Martin (UTM), Innov8Africa, and the Northwest Tennessee Local Food Network (LFN) in a three-year initiative to strengthen foundations of sustainable food security through education, research, and outreach in Northwest Tennessee and Kenya. UTM faculty will mentor undergraduate students, facilitate service-learning trips to Africa, conduct various research projects in consultation with Innov8, and assist LFN to develop learning partnerships between K-12 schools in Northwest Tennessee and Kenya. Specific objectives will 1) Enhance the curriculum in agriculture at UTM by developing educational and outreach experiences in an international food system; 2) conduct research to improve nutrition, water usage, and food production in Kenya and the U.S; 3) To improve long-term food production, food security, and rural school nutrition in Kenya while enhancing the agriculture education and farm-to-table programs at Northwest Tennessee schools through educational, research, and outreach activities; and 4) Engage U.S. and Kenya stakeholders in activities that promote interest and success in agricultural related education, practice, and resource management across the lifespan. Achieving these objectives will promote global competence in our nation's future agricultural workforce and align with the United Nations' worldwide goals of ending hunger, achieving food security, improving nutrition, promoting sustainable agriculture, and ensuring availability and sustainable management of water.

Accomplishments:

Goal 1) Enhance Curricula: Initiated Curriculum development in sustainable agriculture practices for U.S. and Kenya elementary students; 27 College Students, 2 Weakley Co. elementary students, 4 Weakley Co. School Teachers (K-12), 3 extension agents, 2 partners, and 4 UT Martin Faculty have participated in two Service-Learning Travel-Study to Kenya performing research and service-learning projects in Innov8 Africa Maasai Schools. (Figure 18a,b)

Goal 2) Conduct joint agriculture and nutrition research: Forage, Fruit, and Vegetable Research & Demonstration Plots initiated and/or established at Kenyan and U.S. K-12 Schools, and at UT Martin; Longitudinal nutrition and food preference studies initiated with Maasai children and Weakley Co. (U.S.) school children utilizing foods grown in school gardens; Data collections is underway. At the UT Martin Teaching Farm, two high tunnel greenhouses were constructed and an alley agroforestry system for comparative research studies and education. (Figure 18b,c,d)

Goal 3) Farm to School Programming: Kenya-inspired fruits and vegetables were planted at Sharon School in Weakley Co. TN in 8 raised beds and incorporated with their STEM curriculum. Similar plots, high tunnels, and vertical "wedding cake" gardens were established in Kenyan Schools. This impacted 188 students and 23 teachers at Sharon School. In addition, alley agroforestry forage systems were established at the Weakley Co. Schools Livestock Center at Dresden High School impacting 323 students and 24 teachers. Approximately 2,000 Kenyan elementary students were impacted. (Figure 18e)

Goal 4) Engage Stakeholders: Four U.S. teachers and three extension agents joined the students on the service-learning travel-study to Kenya concentrating on Sustainable Agriculture; One student presented her research project at Small Farmers Sustainability and Local Foods Symposium on August 14, 2025- Over 100 small farmers, educators, and allied field associates attended this symposium. Outreach for the Maasai community in Kenya is estimated to be approximately 10,000. (Figure 18f)



Figure 18a: Veterinary Science student Eleanor Freed with her Chicken Tractor Grazing Project in Kenya



Figure 18b: FCS Education student Kristy Long do a food preference/nutrition study in Kenya and U.S. Schools



Figure 18c: Alley Farming Agri forestry plots at the UTM Farm



Figure 18d: New High Tunnels at the UTM Farm



Figure 18e: Kenyan “Wedding Cake” garden at Sharon School in Weakley Co. TN



Figure 18f: Small Farmers Sustainability and Local Foods Symposium, Discovery Park of America, Union City, TN

Faculty and Staff of Center of Excellence for Experimental Learning in Agricultural Science

Center of Excellence Faculty

Name	Title	Area of Expertise
Ary, Clint	Associate Professor	Veterinary Science
Bird, Will	Associate Professor	Agricultural Education
Castleman, Alex	Lab Instructor	Veterinary Technology
Chesnut, Matt	Lab Instructor	Veterinary Technology
Cole, John	Associate Professor	Agricultural Engineering
Darroch, Barbara	Professor	Plant and Soil Science
Harl, Audra	Assistant Professor	Animal Science
Hudson, Maryanna	Assistant Professor	Veterinary Science
Lepcha, Isaac	Lecturer	Plant and Soil Science
Mehlhorn, Joey	Professor	Agricultural Business
Mehlhorn, Sandy	Professor	Agricultural Engineering
Moore, Amber	Assistant Professor	Veterinary Science
Morphis, Zach	Lab Instructor	Veterinary Technology
Pelren, Eric	Professor	Wildlife Biology
Roberts, Jason	Professor	Veterinary/Animal Science
Smartt, Philip	Professor	Natural Resources Management
Tewari, Rachna	Professor	Agricultural Economics
Totten, Wes	*Director/Professor	Plant and Soil Science
Waldon, Amanda	Lab Instructor	Veterinary Technology
Watson, Diana	Associate Professor	Animal/Veterinary Science
Winters, Todd	Professor and Dean	Animal Science
Wolters, Bethany	Associate Professor	Plant & Soil Science

Center of Excellence Staff

Smithson, Callie	Business Manager	Budgets and Accounting/TGSAS
Forsythe, Zach	Teaching Farm Supervisor	Crop Management
Crockett, Jamie	Senior Farm Equipment Operator	Equipment Operation & Mgt Student
Bell, Kiersten	Administrative Associate	Support & Contracts/TGSAS
Jones, BeLynda	Administrative Associate	Veterinary Science & Technology
Leiter, Kim	Equestrian Coach	Horsemanship
Woods, Tara	Farm Research Associate	Animal Care and Support

Student Information

The Center of Excellence for Experimental Learning in Agricultural Science works closely with the Department of Agriculture, Geosciences, and Natural Resources to meet all student needs and the COE mission statement. The department has a current enrollment of approximately 1,270 students with areas of interest in Agricultural Business, Agricultural Science, Animal Science, Plant and Soil Science, Agricultural Engineering Technology, Geosciences, Wildlife Biology, Park Administration, Environmental Management, and Soil and Water Conservation. To see specific student awards and internships see Objective 8 on page 28.

Planned Program Activity in FY2026-2027

Activities of the Center for each general objective will include, but are not limited to:

Objective 1: Submit external grants seeking to support the Center of Excellence and its activities consistent with the mission and objectives of the Center of Excellence.

Target: Efforts will be directed at adding \$100,000 in new grants and contracts during FY 2025-26 and maintaining or continuing existing grants and contracts.

Response: During the 24th year of operation, faculty members of the Center of Excellence were successful in acquiring a total of \$3,761,598 in active grants (Appendix A). The continued success in acquiring external funding is due primarily to faculty appointments in the Department of Agriculture, Geosciences, and Natural Resources. The faculty identified potential funding sources and subsequently prepared grants and contracts from seven different funding agencies in FY2026. Along with this funding the faculty continued research from grants and contracts established with five different funding agencies in prior fiscal years. A full report of all grants funded can be found on the Center of Excellence web site. <https://www.utm.edu/offices-and-services/center-of-excellence/>

Objective 2: Continue with the planning and design phase of a \$4.6 million Cattle Outreach and Workforce construction project.

Target: Design and fundraise for a new Cattle Outreach and Workforce facility to support academics, outreach, and research activity for FY 2026-27. This facility will be comprised of a 40-seat state-of-the-art classroom and student commons area. This laboratory will aid in student instruction but will also provide needed research space for undergraduate, graduate, and faculty research projects in all areas of beef cattle production. It will also be utilized as an outreach and service facility for regional beef cattle producers to improve the genetics of their herds through embryo transfer.

Response: Funding for the \$4.6 million project was received in Spring 2026. The design phase was initiated in Fall 2026. Construction is scheduled to be completed by January 2029.

Objective 3: Partner with agronomic companies desiring demonstration areas for seed and chemical applications on a cost-sharing basis.

Target: Continue field operations for the 200-acres of crops currently in production emphasizing variety trials and demonstration plots for alternative crops. Complete a systematic review of all agricultural production areas of the COE and amend where necessary to ensure optimum productivity (pH, fertilization, organic matter, etc.). Identify new partnerships for field trials and alternative crops to enhance area agricultural enterprises. Continue to offer producer-oriented field day programs in cooperation with area equipment dealers, chemical companies, and/or seed companies.

Response: We continue to partner with the following seed and crop protection companies:

Agrigold	Tyson Poultry Barn
BASF	Syngenta
Beck's Hybrids	Nutrien Ag
Helena Chemical	Greenpoint Ag
Weakley County Farmers Co-Op	Southern FS

Objective 4: Generate timely, state-of-the-art information on key topics related to food, agriculture, and the environment with special attention to emerging issues that may have long-term implications for production of agricultural commodities while protecting natural resources in Tennessee.

Target: Seek to sponsor at least 30 speakers/programs that will be directed at enhancing knowledge of emerging issues in the agricultural sciences to include natural resources.

Response:

1. Kaitlin Bray, Veterinary Emergency Group
2. Leslie Wereszczak, The University of Tennessee College of Veterinary Medicine
3. Erin Robbins, Auburn College of Veterinary Medicine
4. Deb Kidwell - Lake Nowhere Mule and Donkey Farm
5. Rachel Hahn - Tyson
6. Jason Kemp - Weakley County Schools Ag Complex (Dresden High School)
7. Dr. Heather Kelly, Extension/Research Plant Pathologist and IPM Coordinator, UT Extension/UTIA (as part of the Soybean Disease Field Day and also as a speaker in the classroom)
8. Dr. Tyson Raper, Extension/Research Cotton Agronomist, UT Extension/UTIA, and others (as part of Cotton Tour).
9. Dr. Chris Main, Phytogen Seeds
10. Dr. Larry Steckel, Extension/Research Weed Scientist, UT Extension/UTIA
11. Mr. Jay Yeargin, Yeargin Farms
12. Dr. Jake McNeal, Extension/Research Corn and Soybean Agronomist, UT Extension/UTIA
13. Dr. Mark Gadlage, Corteva Agriscience
14. Nutrifafa Adotey, University of Tennessee Institute of Agriculture
15. Craig Houin, Sunrise Cooperative
16. Ben White, Greenpoint Ag
17. Emily Workman, Greenway Equipment
18. Bill Micke, Precision Drone Services

Objective 5: Communicate the objectives of the COE and related action programs to raise public awareness of the importance of the agricultural sciences and natural resources to the economic wellbeing of Tennessee and the surrounding areas.

Target: Continue to utilize technology to enhance education for on-campus and off-campus students. Endeavor to offer at least one new program promoting agriculture and natural resources in Tennessee. Maintain and enhance course offerings for dual enrollment programs with high school students in Tennessee. Offer at least ten department courses for online delivery.

Response: The following courses were taught for high school dual enrollment credit in the 2025-26 academic year and below is the current flier that was distributed to the high schools.

AGEC 110	Introduction to Agricultural Business
AGEC 250	Introduction Agricultural Sales
AGET 110	Introduction to Agriculture Engineering Technology
ANSC 110	Introduction Animal Science
ANSC 210	Introduction Horse Science
ANSC 230	Companion Animal Management
ANSC 260	Behavior Farm & Companion Animal
ANSC 270	Animal Welfare and Ethics
GEOS 110	Geoscience in Everyday Life
PLSC 110	Introduction Plant & Soil Science

In addition to the dual credit and online course, the AGN Department along with Regional Centers and Online Studies have developed articulation agreements for 1+3 programs with various TCATs in West Tennessee in FY2024/AY2023-2024. Additional articulation agreements with other regional TCATs are in development. Also, new courses are being developed and added online yearly.

AGRICULTURE PATHWAY FOR DUAL ENROLLMENT STUDENTS

Dual enrollment students are encouraged to satisfy general education requirements prior to taking agriculture-specific concentration courses.
Students can earn up to 30 hours which could allow them to graduate college in three years.

GENERAL EDUCATION

English (9 hrs): ENGL 111, 115* COMM 220*	Mathematics (6 hrs): MATH 140* MATH 230*	Social Science (6 hrs): POSC 200, 202 PSYC 101 SOC 201, 202
Fine Arts (3 hrs): ARKP 100 ARTH 211 MUS 111, 112 THEA 110, 111	Physical Systems (3 hrs): GEOS 110/110L GEOS 130/130L*	
Humanities (9 hrs) HIST 121, 122 HIST 201, 202 PHIL 110, 120		

CONCENTRATION-SPECIFIC

Agribusiness or Farm & Ranch Mgt. (6 hrs): PLSC 110 ANSC 110 AGEC 110 AGEC 250 AGEC 271	Animal & Vet Science (6 hrs): AGEC 110 ANSC 110 ANSC 230 ANSC 260	Plant Science (6 hrs): PLSC 110 MATH 140* MATH 230 MATH 140* PSYC 101 SOC 201, 202
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Courses in *ITALICS* can also be used for multiple concentrations. (Example: AGEC 110 can be used in the Animal & Vet Science, Agribusiness, and Farm & Ranch Management concentration)

FOR MORE INFORMATION, CONTACT:

Dr. Wes Totten Erica Bell
(731)881-7262 | wtotten@utm.edu (731)881-7089 | ebell@utm.edu

COURSE TITLES

Courses from the front page are listed below with their full class title.

GENERAL EDUCATION

ART 110- Understanding Visual Art
ARTH 211- The History of Art
COMM 220*- Public Speaking
ENGL 111- English Composition
ENGL 115*- English Composition
GEOS 110/110L- Geoscience in Everyday Life
GEOS 130/130L*- Global Change and Earth History
HIST 121- Development of World Civilization I
HIST 122- Development of World Civilization II
HIST 201- History of the United States I
HIST 202- History of the United States II
MATH 140*- College Algebra and Elementary Functions

CONCENTRATION

AGEC 110- Introduction to Agricultural Business
AGEC 250- Introduction to Agricultural Sales
AGEC 271- Farm Management
ANSC 110- Introduction to Animal Science
ANSC 210- Introduction to Horse Science
ANSC 230- Exotic and Companion Animal Management
ANSC 260- Behavior of Farm and Companion Animals

MATH 210*- Elementary Statistics and Probability
MUS 111- Masterpieces of Music
MUS 112- Music in Our Time
PHIL 110- Adventure of Ideas: Historical
PHIL 120- Adventure of Ideas: Contemporary
POSC 200- American Government and Politics
POSC 202- American Political Institutions and Policy
PSYC 101- Introduction to Psychology
SOC 201- General Sociology
SOC 202- Social Problems
THEA 110- Understanding Theatre
THEA 111- Understanding Theatre

ANSC 270- Animal Welfare and Ethics
MATH 140*- College Algebra and Elementary Functions
NRM 101- Wildlife, Conservation and Environmental Issues
PLSC 110- Introductory Plant and Soil Science
PSYC 101- Introduction to Psychology
SOC 201- General Sociology
SOC 202- Social Problems

*Prerequisites:
ENGL 110-C or higher in ENGL 111.
COMM 220-C or higher in ENGL 111.
GEOS 130/130L-GEOS 110/110L or any 2 semesters of university-level lab science.
MATH 140-Two units of high school algebra and a 20 ACT Math score.
MATH 220-MATH 100/110, or 140, or 170, or 185, or 231 or a 24 ACT Math score.

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MARTIN**

Objective 6: Provide a forum for dialogue, debate, information sharing, and consensus building among policymakers, researchers, and leaders in non-governmental organizations, the private sector, and media through seminars, workshops, conferences, service learning, and publications.

Target: Plan and present at least 8 seminars/workshops on current topics of interest to animal and crop producers, as well as programs in natural resource management.

Response:

Conferences/Workshops

- a) Tennessee Academy of Science – Amber Moore, Clint Ary, Diana Watson and several students
- b) Feb. 2026 - Music City Veterinary Conference, Murfreesboro, TN – Dr. Jason Roberts, BeLynda Jones, Matt Chesnut, Alex Roberts, Amber Moore, Mallory Edwards and students from VET 480 class and Vet Science Club officers
- c) Sept. 2025 Soybean Disease Field Day, Milan Research and Education Center, Milan, TN. Attended by Barb Darroch and students in PLSC 322.
- d) Sept. 2025 Cotton Tour, West Tennessee Ag Research and Education Center, Jackson, TN. Attended by Barb Darroch and students in PLSC 433.
- e) November 2025 CANVAS; International Annual Meetings of the American Society of Agronomy, Crop Science Society of America, and Soil Science Society of America. Salt Lake City, UT, November 9-12, 2026. Attended by Barb Darroch, Bethany Wolters, Isaac Lepcha and five students.
- f) NACTA Judging Conference, April 20-23, 2026, University of Illinois, Normal, IL. Bethany Wolters and 4 students.
- g) Minorities in Agriculture, Natural Resources, and Related Sciences 40th Annual Training Conference and Career Expo, Dallas, TX. April 9-11, 2026. Bethany Wolters, Patrick Bishop, Becky Dykes and 14 students.
- h) Tewari, R., M. Miller Foster, E. Sanchez, D. Foster, I. Lepcha, E. Pelren, B. Wolters, S. Dunagan, and J. Mehlhorn. Embedded courses as collaborative pedagogical tools: fostering sustainability and global engagement in higher education. Selected presentation at the 9th International Academic Conference on Education. University of Zurich, Switzerland. July 4-6, 2025
- i) Ricketts, J.C., L. Petrie, J. Norwood, B. Kibirige, S. Nahashon, A. Kilonzo-Nthenge, L. Davis, and T. Winters. 2026 Perceptions and Impacts of a Worldwide Workforce Development Study Abroad Program for NEXTGEN Scholars: Cohort One. Proceedings of the 2026 Association of International Agriculture and Extension Education Annual Conference, pg. 69-73. San Jose, Costa Rica, April 13.

Presentations:

- Increasing Understanding and Knowledge Application: Utilizing the Creation of a Pre-Surgery Course to Enhance Student Ability to Perform in a Subsequent Course *Ambria White, Alex Castleman, Mallory Edwards, Maryanna M. Hudson*
- Literature Review: Investigating Barriers to Canine Heartworm Prevention Compliance *Caroline Cloud, Maryanna M. Hudson, Jason Roberts*
- Corson*, B., Wolters, B., Darroch, B. A., Delmond, A., & Scott, A. (2025) A Digital Approach to Predicting Climate Change Effects on Soybean Yields [Abstract]. CANVAS 2025, Salt Lake City, UT.
- Jones*, T., Wolters, B., Darroch, B. A., & Lepcha, I. (2025) Getting to the Root of Nutrients: Biostimulants in Action [Abstract]. CANVAS 2025, Salt Lake City, UT.
- Darroch, B., Wolters, B., Darroch, C., Carmon, G., Lewis, S., Kirk, P., Saunders, G., & Weir, W. (2025) Does Poultry Litter Affect Soybean Nodulation and Yield? [Abstract]. CANVAS 2025, Salt Lake City, UT.

- Wolters, B*. 2025. Reflections on Integrating AI into Teaching and Learning in Natural Resources Course. ASA, CSSA, SSSA International Annual Meeting, Salt Lake City, UT. Nov 9-12, 2025. Oral Presentation. <https://scisoc.confex.com/scisoc/2025am/meetingapp.cgi/Paper/166618>
- Davis, J.*+, Wolters, B., S. Laws. 2025. Can summer cover crops replace nitrogen fertilizer in arugula production? ASA, CSSA, SSSA International Annual Meeting, Salt Lake City, UT. Nov 9-12, 2025. Poster Presentation. <https://scisoc.confex.com/scisoc/2025am/meetingapp.cgi/Paper/165705>
- Lepcha, I*, R. Tewari, E. Sanchez, M. M. Foster, D. Foster, E. Pelren, S. Dunagan, Wolters, B., J. Mehlhorn. 2025. Embedded course as collaborative pedagogical tools: fostering sustainable and global engagement in agricultural problems. ASA, CSSA, SSSA International Annual Meeting, Salt Lake City, UT. Nov 9-12, 2025. Poster Presentation. <https://scisoc.confex.com/scisoc/2025am/meetingapp.cgi/Paper/165987>
- Jones, T.*+, Wolters, B., B. Darroch, I. Lepcha. 2025. Getting to the Root of Nutrients: Biostimulants in Action. ASA, CSSA, SSSA International Annual Meeting, Salt Lake City, UT. Nov 9-12, 2025. Poster Presentation. <https://scisoc.confex.com/scisoc/2025am/meetingapp.cgi/Paper/165808>
- Pritchett, C., Lepcha, I., Williams, E., Onyango, F., Benard, M., Winters, T., Dooley, K., Cole, J., Wolters, B., Darroch, C., Darroch, B., Goyret, S., & Ideus, C. 2025. Student Field Experience in Alley Cropping Systems: A Case Study from Kenya. ASA, CSSA, SSSA International Annual Meeting, Salt Lake City, UT. Nov 9-12, 2025. Poster Presentation. <https://scisoc.confex.com/scisoc/2025am/meetingapp.cgi/Paper/166004>
- Tewari, R.*, M. Miller Foster, E. Sanchez, D. Foster, I. Lepcha, E. Pelren, B. Wolters, S. Dunagan, and J. Mehlhorn. Embedded courses as collaborative pedagogical tools: fostering sustainability and global engagement in higher education. Selected presentation at the 9th International Academic Conference on Education. University of Zurich, Switzerland. July 4-6, 2025.
- Clint Ary - "Putting Pizzazz in Parasites: Creative Projects in Veterinary Parasitology Education" Poster Presentation, NACTA Conference, Summer 2026
- Brittany Cole, Clint Ary, and Jason Roberts- "Dreaming Big or Small: Veterinary Science Students and Small Business Interests", Poster Presentation, Southern Agricultural Economics Association, Spring 2026
- Eva Mohl and Clint Ary – "Histomoniasis in a Juvenile Turkey from West Tennessee: Pathognomonic Gross and Histologic Lesions", Student Poster Presentation, Tennessee Academy of Science, Fall 2025
- Johnson, C., A. Whiles, B. Wolters, T. Winters, C. Ideus, and S. Goyret. 2026. How interactive educational activities can improve school-age students' understanding of food safety risks in agricultural system. Proceedings of the CANVAS26 Conference, Poster Presentation, Portland, OR, November
- Lepcha, I., J. Kemp and T. Winters. 2026. Alley Cropping as an Experiential Learning Platform: Connecting High School and University Students to Global Forage-Livestock Systems. Proceedings of the CANVAS26 Conference, Poster Presentation, Portland, OR, November
- Smith-Goyret, S., C. Ideus, T. Winters, K. Dooley, E. Williams, and L. Palet. 2025. Tennessee-Kenya: Cross-Cultural Farm to School. Proceedings of the National Farm to School Conference. Poster Presentation #2, Community-Building and Partnerships. Albuquerque, NM. Dec. 2.
- Pritchett, C., I. Lepcha, E. Williams, F. Onyango, M. Benard, T. Winters, K. Dooley, J. Cole, B. Wolters, C. Darroch, B. Darroch, S. Goyret, C. Ideus. Student Field Experience in Alley Cropping Systems. A Case Study from Kenya. Proceedings of the CANVAS25 Conference, Student Poster Presentation, Salt Lake City, UT, November 12.
- Prichett, C., I. Lepcha, and T. Winters. 2025. Student Field Experience in Alley Cropping Systems: A Case Study from Kenya. Proceedings of the Joint Murray State/UT Martin Scientific Research Symposium. Oral Student Presentation. Murray, KY. Oct. 25.
- Winters, T., K. Dooley, E. Williams, L. Palet, S. Goyret, and C. Ideus. 2025. Global Engagement and Exchange: A Capacity Building Partnership in Kenya: Year 1. Poster Presentation at the Annual Meeting of the Non-Land-grant Agricultural and Renewable Resources Universities showcasing projects funded by the USDA-NIFA Capacity Building Grants Program for Non-Land-Grant Colleges of Agriculture. Memphis, TN Sept. 21-23

Publications

1. Mandapalli, J., R. Tewari, and I. Lepcha. Predicting School Safety Using Machine Learning: Insights from Chicago Public Schools. *Journal of Contemporary Research in Education and English Language Teaching*. Accepted July 2025.
2. Haymaker, J. R., R. D. Stewart, B. Wolters, K. Stephenson, K. S. Balkcom, M. S. Reiter. 2026. Long-term effects of cover crops and no-tillage on soil health in the Virginia Coastal Plain. *Soil and Tillage Research*, volume 256. doi: <https://doi.org/10.1016/j.still.2025.106898>.
3. Winters, T. 2025. Vegetarian Farm Animals. Invited article for the 2025 Tennessee Soybean Festival Magazine. Pg. 47.
4. Winters, T. 2025. Soybeans for a Health and a Longer Life. Invited article for the 2025 Tennessee Soybean Festival Magazine. pg. 50.

Objective 7: Provide enhanced laboratory facilities and resources to support experiential learning.

Target: Expand experiential learning experience for students with at least one international travel course and offer at least 40 opportunities for internship participation. Identify opportunities for international study or internships.

Response:

- | | | |
|-----|--------------------|----------------------------------|
| 1. | Olivia Barnett | VET |
| 2. | Jaylee Burhart | Blue Pearl – Nashville |
| 3. | Monica Castejon | NVS – Nashville |
| 4. | Kayla Chaidex | NVS Clarksville |
| 5. | Mekayla Gilliam | Blue Pearl – Brentwood |
| 6. | Michael Gladney | MVS |
| 7. | Geralynn Moon | MVS |
| 8. | Bailegih Waldrop | Auburn |
| 9. | Julie Brown | VEG |
| 10. | Stevie Brown | Rood and Riddle |
| 11. | Macey Ciramella | Cannon County Animal Clinic |
| 12. | Cora Curd | Auburn |
| 13. | Mariah Curry | Blue Peral North Hills Pittsburg |
| 14. | EllieGrace Gipson | East Brook Animal Clinic |
| 15. | Perry Ingram | Knoxville |
| 16. | Holly Lamb | Jackson Pet Emergency Clinic |
| 17. | Madison Malone | Blue Peal |
| 18. | Baylee Masonoff | Auburn |
| 19. | London McDonald | NWTVS – Dresden |
| 20. | Candice Mitchell | Cox Farms Veterinary Services |
| 21. | Candice Mitchell | Goodrum Veterinary Clinic |
| 22. | Calie Pickering | NVS – Clarksville |
| 23. | Josie Pigg | Shoal Creek Animal Hospital |
| 24. | Juliana Reifsnider | Auburn |
| 25. | Macy Springer | Huntingdon Animal Clinic |
| 26. | Ben Terrell | Knoxville |
| 27. | Hannah Tipton | Knoxville |
| 28. | Rebecca Varneke | Paris Vet clinic |
| 29. | Macie Wainscott | Morristown Animal Hospital |
| 30. | Rachel Werner | Blue Pearl |
| 31. | Ambria White | Auburn |
| 32. | Emily Wilcher | Sparta Road Vet Clinic |
| 33. | Savannah Williams | Knoxville |
| 34. | Zoe Williams | Terrell Veterinary Clinic |

35.	Jake Davis	AGN dept., UT Martin
36.	Calvin Fisher	Standing Ston Nursery
37.	Jett Franks	Bell AG Services LLC
38.	Hudson Freeman	Nutrien Ag Solutions
39.	Lawson Hamlin	BASF Corporation
40.	Clark Henderson	Diamond P. Farms LLC
41.	Allen Jones	AGN dept., UT Martin
42.	Mason Taylor	Diamond P. Farms LLC
43.	Gavin Berry	Helena Agri-Enterprises
44.	Sophia Chaplin	University of Tennessee Institute of Agriculture
45.	Elea Corson	UT Martin Plant and Soil Science Research
46.	Cooper Harris	C2 Soil & Environmental
47.	Lucas Hund	CNH Industries
48.	Reese Sisk	UT Martin Plant and Soil Science Research
49.	William Southall	First Farmers Co-Op
50.	Hank Bayless	First Creek Land Services
51.	Tyler Davis	Fisher Arnold
52.	Alexis Deinlein	Vermeer

Objective 8: Support local, regional, and national competitions.

Target: Continue to host or participate in a minimum of 10 local, regional, and/or national competitions by UT Martin students and faculty.

Response:

1. TAS Poster presentation contest: Autumn Martin, Caitlyn Henry, Kenzie Stockton, Makayla Stewart, Charley Crawford
2. Four students participated in the National Weeds Contest in Blacksburg, VA., August 2024.
3. Allison Zelenski participated in the SASES oral research presentation competition and Sam Laws participated in the SASES Internship poster competition at the 2024 International Annual Meetings of ASA, CSSA, and SSSA. San Antonio, TX, November 2024. Four students, including those listed above, also competed in other contests there, including quiz bowl and the pedology contest.
4. Five students participated in the Crops Contest at the NACTA (North American Colleges and Teachers of Agriculture) Judging Conference in Canyon, TX, April 2025.
5. Four students participated in the Horticulture Contest at the NACTA (North American Colleges and Teachers of Agriculture) Judging Conference in Canyon, TX, April 2025.
6. Southeastern Region Soil Judging Contest, Lexington, KY, October 2025. 10 students and 1 faculty attended. Team placed 7th
7. MANRRS National Quiz Bowl competition, 4 students participated
8. NACTA Soil Judging Contest, Canyon, TX. 6 students and 1 faculty attended.
9. Sobek, B., R. Tewari, and B. Wolters. Evaluating Smallholder farm owners' perspectives at a regional conference. Tennessee Academy of Sciences Annual Meeting, Lincoln Memorial University, November 2025. Third-place winner in the student oral competition

Objective 9: Provide enhanced resources to assist in the operation of the Tennessee Governor's School for Agricultural Sciences.

Target: Continue to seek new experiential learning opportunities for the Tennessee Governor's School for the Agricultural Sciences.

Response:

The Department of Agriculture, Geosciences, and Natural Resources hosted the 2026 Tennessee Governor's School for the Agricultural Sciences (TGSAS) on campus from May 31 to June 26, 2026. The program consisted of 32 scholars from across Tennessee. Scholars completed three hours of college coursework. Courses taught included AGE 110: Introduction to Agricultural Business or NRM 101: Wildlife, Conservation, and Environmental Issues. Scholars also participated in research activities through a variety of Group Study Projects (GSP). The GSPs covered precision agriculture, agricultural engineering technology, animal science, and veterinary medicine. The TGSAS leadership team began meeting early in the spring 2026 semester to plan for the upcoming year. Our TGSAS counselors did an outstanding job with our scholars again this year.

These included field trips to the following: • Tyson Tour, Union City, TN • Yeargin Farm Tour, Greenfield, TN • Tennessee State Capitol Tour, Nashville, TN • Middle TN AgResearch and Education Center, Nashville, TN • TN Farm Bureau Headquarters, Columbia, TN • Espy Cotton Gin, McLemoresville, TN • Agricenter, Memphis, TN • Bayer Crop Services, Union City, TN

Objective 10: Provide local and regional experiential learning opportunities at the Coon Creek Science Center.

Target: Seek to sponsor at least 30 speakers/programs that will be directed at enhancing knowledge of emerging issues in the agricultural sciences to include natural resources.

Response: Activity continued to increase significantly in August 2024 of the 2024-2025 FY. Several large groups are slated for research and educational visits during the month, which continues to be very positive.

Planned Program Activity in FY2026-2027

Activities of the Center of Excellence for each general objective will include, but are not limited to:

Objective 1: Submit external grants seeking to support the Center of Excellence and its activities consistent with the mission and objectives of the Center of Excellence.

Target: Efforts will be directed at adding \$100,000 in new grants and contracts during FY 2025-26 and maintaining or continuing existing grants and contracts.

Objective 2: Continue with the planning and design phase of a \$4.6 million Cattle Outreach and Workforce (COW) Facility construction project.

Target: Design and fundraise for a new Cattle Outreach and Workforce facility to support academics, outreach, and research activity for FY 2026-27. This facility will be comprised of a 40-seat state-of-the-art classroom and student commons area. This laboratory will aid in student instruction but will also provide needed research space for undergraduate, graduate, and faculty research projects in all areas of beef cattle production. It will also be utilized as an outreach and service facility for regional beef cattle producers to improve the genetics of their herds through embryo transfer.

Objective 3: Partner with agronomic companies desiring demonstration areas for seed and chemical applications on a cost-sharing basis.

Target: Continue field operations for the 200-acres of crops currently in production emphasizing variety trials and demonstration plots for alternative crops. Complete a systematic review of all agricultural production areas of the COE and amend where necessary to ensure optimum productivity (pH, fertilization, organic matter, etc.). Identify new partnerships for field trials and alternative crops to enhance area agricultural enterprises. Continue to offer producer-oriented field day programs in cooperation with area equipment dealers, chemical companies, and/or seed companies.

Objective 4: Generate timely, state-of-the-art information on key topics related to food, agriculture, and the environment with special attention to emerging issues that may have long-term implications for production of agricultural commodities while protecting natural resources in Tennessee.

Target: Seek to sponsor at least 15 speakers/programs that will be directed at enhancing knowledge of emerging issues in the agricultural sciences to include natural resources.

Objective 5: Communicate the objectives of the COE and related action programs to raise public awareness of the importance of the agricultural sciences and natural resources to the economic well-being of Tennessee and the surrounding areas.

Target: Continue to utilize technology to enhance education for on-campus and off-campus students. Endeavor to offer at least one new program promoting agriculture and natural resources in Tennessee. Maintain and enhance course offerings for dual enrollment programs with high school students in Tennessee. Offer at least 10 department courses for online delivery.

Objective 6: Provide a forum for dialogue, debate, information sharing, and consensus building among policymakers, researchers, and leaders in non-governmental organizations, the private sector, and media through seminars, workshops, conferences, service learning, and publications.

Target: Plan and present at least 8 seminars/workshops on current topics of interest to animal and crop producers, as well as programs in natural resource management.

Objective 7: Provide enhanced laboratory facilities and resources to support experiential learning.

Target: Expand experiential learning experience for students with at least one international travel course and offer at least 40 opportunities for internship participation. Identify opportunities for international study or internships.

Objective 8: Support local, regional, and national competitions.

Target: Continue to host or participate in a minimum of 8 local, regional, and/or national competitions by UT Martin students and faculty.

Objective 9: Provide enhanced resources to assist in the operation of the Tennessee Governor's School for the Agricultural Sciences.

Target: Continue to seek new experiential learning opportunities for the Tennessee Governor's School for the Agricultural Sciences.

Objective 10 (new): Develop the newly acquired Kruzich Natural Resources Management Laboratory in Dresden

Target: Improvements will be made on approximately 50 wooded acres obtained in January 2026 through a bequeath. The field laboratory will be utilized for teaching and research primarily by the Natural Resources Management program including Environmental Management, Park Administration, Soil and Water Conservation, and Wildlife Science. Initial improvements will include utility upgrades and development of an indoor classroom.

Objective 11 (new): Reorganization of the College of Agriculture and Applied Sciences will include reorganization of the Center for Excellence for Agricultural Sciences.

Target: Reorganization of the College of Agriculture and Applied Sciences is being initiated during the Fall of 2026 and will be completed by January 2027. This will include:

1. Reorganization of the current Department of Agriculture, Geosciences, and Natural Resources into two schools.
 - a. School of Agriculture and Natural Resources including the majors: Agriculture (BS), Agricultural Business (BS), Natural Resources Management (BS) and Agriculture and Natural Resources (MS)
 - b. School of Animal and Veterinary Sciences including majors: Animal Science (new from former Agriculture major) and Veterinary Sciences and Technology (both BS degree programs)

- c. The Geosciences major will leave the College and become a Department of Earth and Atmospheric Sciences in the College of Engineering and Natural Sciences.
- 2. Reorganization of the Center of Excellence in Agricultural Sciences
 - a. Supervision of the COE will be shared by the new Associate Deans leading the two new Schools with the Dean providing executive oversight over budget and business management.
 - b. The Kruzich Natural Resources Field Laboratory will be added to the COE
 - c. The Coon Creek Science Center will be removed from the COE
- 3. Exploration of a cooperative learning program at the farm.
 - a. Student groups under faculty supervision will be given an opportunity to make management decisions and work cooperatively at various agricultural units at the Teaching Farm (i.e. Cow/Calf, Sheep & Goat, Greenhouses and Vegetable Plots, Apiary, etc.)

Staffing of the Center of Excellence for Experimental Learning in Agricultural Science

The staffing strategy for the COE focuses on bringing a diversity of talent to the Center of Excellence to better meet the goals and objectives of the Center of Excellence. This is accomplished by offering staffing appointments ranging from 25 percent to 50 percent to faculty and staff of the Department of Agriculture, Geosciences, and Natural Resources. Staffing includes the Director (25 percent appointment) and Business Manager (25 percent appointment) and faculty who are selected through a proposal process (25 percent appointments and one cooperating faculty member with no formal assigned appointment) and the Director of the Tennessee Governor's School for the Agricultural Sciences. Three support staff members are also assigned to the COE. Staffing assignments (with COE appointment percent) include:

Administration:

Dr. Wes Totten	Director (25%)
Dr. Jason Roberts	Assistant Director (25%)
Mrs. Callie Smithson	Business Manager (25%)

2026-27 COE Faculty:

Dr. Clint Ary	Animal Diagnostic Lab (25%)
Dr. Philip Smartt	Park Administration/IT Support/TGSAS (25%)
Dr. Wes Totten	Golf Course and Landscape Management (25%)

Staff:

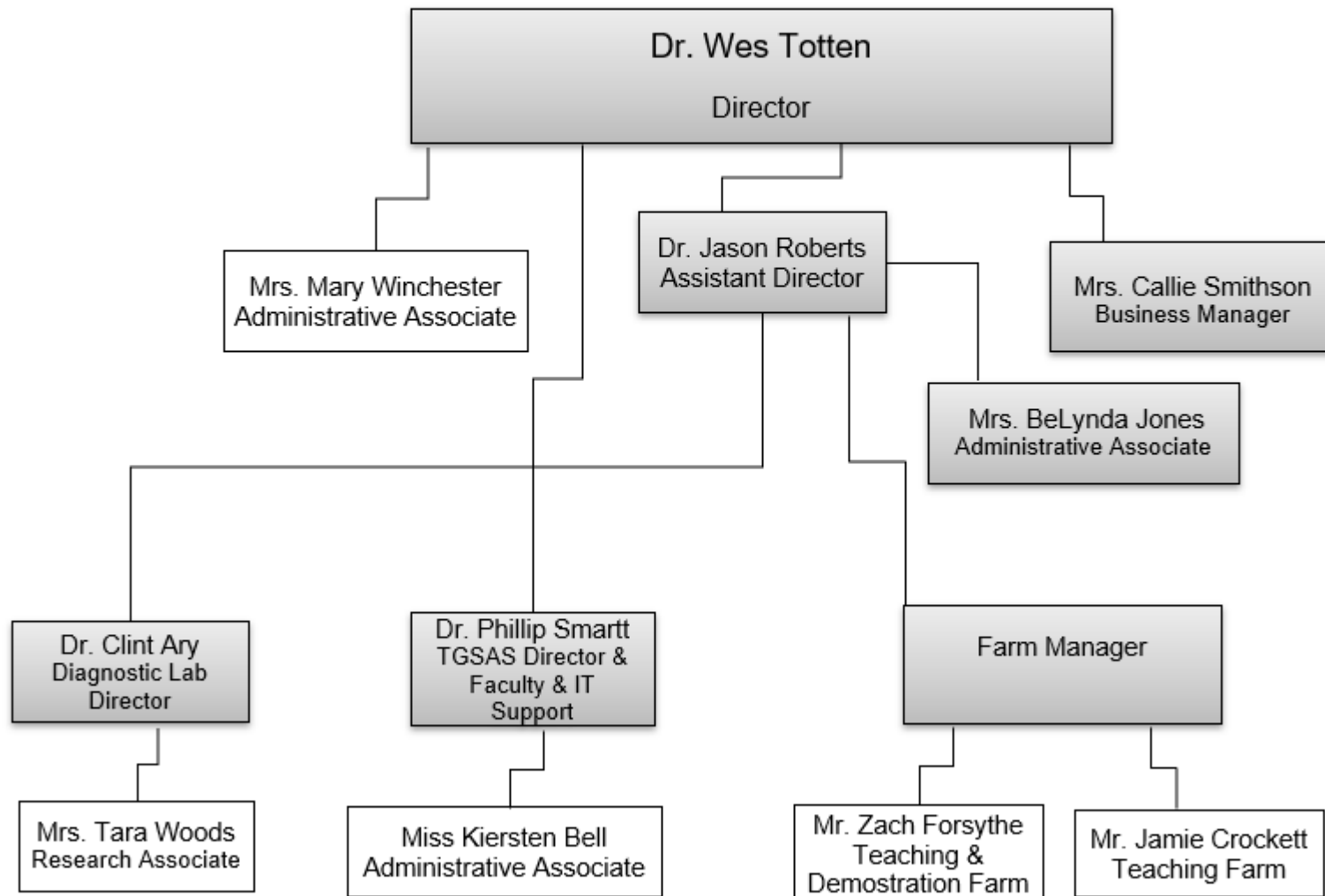
Mr. Zach Forsythe	Teaching and Demonstration Farm/Ag Pavilion (100%)
Mr. Jamie Crockett	Teaching and Demonstration Farm/Ag Pavilion (100%)
Mrs. Tara Woods	Research Associate/Diagnostic Laboratory (100%)

A complete Faculty/Staff listing is on page 10.

An organizational staffing chart is included.

Center of Excellence for Experimental Learning in Agricultural Science

Organizational Staffing



Contact Information



Dr. Wes Totten
Department Chair -- Director of COE
Professor, Plant & Soil Science
(731) 881-7262
257 Brehm Hall
ftotten@utm.edu



Dr. Jason Roberts
Asst. Director of COE
DVM, Professor, Animal Science
Director of Veterinary Technology
(731) 881-1011 216 Football Press Box
jrober29@utm.edu



Mrs. Callie Smithson
Business Manager
(731) 881-7221
253 Brehm Hall
csmiths3@utm.edu



Mrs. BeLynda Jones
Administrative Associate II
(731) 881-1011
208 Football Press Box
bjone124@utm.edu



Ms. Kiersten Bell
Administrative Associate
(731) 881-7260
256 Brehm Hall
kbell52@utm.edu

Appendix A

Summary of Contract, Grant and Unrestricted Gift Activity

Ary, Clint. Funding for the operation of West Tennessee Animal Disease Diagnostic Laboratory. State of Tennessee, Department of Agriculture \$2,500,000 (Funded)

Jones, Stephanie. “Ultrasound Machine” The Alliance of Women Philanthropists for an ultrasound machine to use on the Center of Excellence farm. \$10,059 (Funded)

Morris, Danny. “Enhancing Beef Cattle Selection and Carcass Quality through Ultrasound-Based Producer Education in Tennessee”. Tennessee Beef Council. \$2,000 (Funded)

Pelren, Eric. “National Wildlife Turkey Federation Super Fund Project”. National Wildlife Turkey Federation. \$23,607 (Funded)

Smartt, Philip. “Tennessee Governor’s School for Agricultural Sciences” State of Tennessee, Department of Education \$181,000 (Funded)

Tewari, Rachna. “Empowering Small Farmers & Agriculture Students.” United States Department of Agriculture, National Institute of Food and Agriculture. \$299,932 (Funded)

Winters, T.A, W.K. Dooley, E. Williams, S. Goyret, B. Carroll, J. Cole, C. Darroch, B. Darroch, S. Dunagan, C. Ideus, I. Lepcha, B. Makinia, F. Onyango, L. Palet, and B. Wolters. 2024. Global Engagement and Exchange: A Capacity-Building Partnership in Kenya. Funded by a USDA-NIFA Capacity Building Grant for Non-Land-Grant Colleges of Agriculture. \$745,000 for three years.

Ricketts, J. C.; Ibrahim, M.; Reddy, C.; Rudd, R.D.; Nahashon, S.N.; Richards, J.K.; Kilonzo-Nthenge, A.; Singh, H.P.; Zhang, C.; Mehlhorn, J.; Young, D.; Nandwani, D.; Broyles, T; Webber, E.Y.; Hafer, J.; Camp, J.S.; Winters, T.A; Mosley, C.; Greig, J.A.; Ragland, K.; Granberry, T.C.; Maharjan, P.; Chen, Y.; Wakefield, D.; Rockers, A.C.; Stewart, B.; Lockett, B.; Davis, L.; Mahmud, S.; Johnson, O.; Westfall Rudd, D.; Cook, S.; Dundon, L.; Faircloth, M.. 2023. NEXTGeneration Inclusion Consortium (NIC) for Building the Food, Agriculture, Natural Resources, and Human Sciences Pipeline (FANHP). USDA-NIFA From Lending to Leading: Cultivating the Next Generation of Diverse Food and Agricultural Professionals (NEXTGEN). \$18,110,000 for five years (UTM share: \$186,618)