
EXTENSION IMPACT REPORT

TABLE OF CONTENTS

Message from Dean Stokes	4
Extension by the Numbers	6
Statewide Extension Highlights	8
Regional Extension Highlights	10
Family and Consumer Sciences	12
Agriculture and Natural Resources/Community Economic Development	14
4-H	16
Honors & Accolades	18



COST-BENEFIT ANALYSIS

\$1 to \$8.29

For every \$1 in public funds invested in UT Extension programs, an estimated \$8.29 is returned to the people of Tennessee.

UT Extension influenced agriculture, natural resources, and community economic development across the state to the tune of **\$309.9 million**; family and consumer sciences programs, **\$234 million**; and 4-H, Master Gardener, family, and consumer education programs, **\$4.5 million**. What's more, the economic impact on Tennessee from 275 4-H All Star service projects totaled **\$4,987,365**.

Together. As I think about our Extension Impacts, this is the word that summarizes how incredibly well our professionals throughout UT Extension work with our partners, communities, families, supporters, and industries to make a difference for people across Tennessee. I would like to take this occasion to thank all of you for your role in this success. We have grown innovative programs, broadened our community reach, strengthened partnerships, and benefited millions of people across the state and beyond.

I have thoroughly enjoyed getting to know so many of you and learning about our communities, families, industries, and partnerships since joining the UT Institute of Agriculture in February 2021. It is easy to see why we are known for having a world-class team of Extension professionals who are truly incredible.

We are proud of the addition of thirty-two agents to our Extension key program areas in 4-H youth development; family and consumer sciences; and agriculture, natural resources, and community and economic development. The Tennessee Legislature and Governor Bill Lee funded these positions to support our most distressed communities. Legislation was also passed unanimously in both the House and the Senate to increase student access to 4-H programs, ensuring students in Tennessee public schools are counted as “present” at school if participating in 4-H youth development activities.

UT Extension has offices in all ninety-five counties, three regional hubs, and four 4-H youth development centers across Tennessee and is valued as a science-based, credible, and highly trusted source of information. That is why our Extension specialists and agents in family and consumer sciences were selected to develop and provide educational materials to help communities navigate the sometimes overwhelming and inconsistent information available about COVID-19.

Many of our community members have been impacted by uncertainties and pressures from financial, work, family, or health challenges, and our rural communities have been the hardest hit. UT Extension is leading thirteen states and two US territories along with more than fifty partner organizations to provide stress management assistance to the families who work in agriculture.

In spite of challenges with gathering in person, UT Extension agriculture and natural resources programs had 3,692 farmers, families, and industry partners complete at least one of our seven master producer educational programs. Our partnership with the agriculture enhancement program of the

Tennessee Department of Agriculture has resulted in tremendous benefits for producers across the state and is recognized as the best in the country.

As an example of a program that truly can save lives, UT Extension has provided grain bin safety/rescue awareness training for more than 100 Extension agents, rescue personnel, and agriculture producers in Tennessee. This training is a partnership between Extension and the Tennessee Association of Rescue Squads, focusing on overall grain bin safety, proper rescue techniques, and the role farmers play if an accident or entrapment occurs on their land.

The world is evolving quickly, and we have been changing along with it. It has been inspiring to see how we have risen to meet potential roadblocks with creativity and excellence, while always staying firmly rooted in our traditions and core values.

Looking to the future, we are committed to strengthening our great programs and exploring new opportunities across UT Extension that will benefit agriculture and the communities that are at the heart of what we do.

And, as always, remember that together, we are making a difference for Tennesseans.

Thank you for being a part of the incredible impacts we make across Tennessee,

Ashley Stokes
Dean, UT Extension
University of Tennessee Institute of Agriculture



5,607 STATE VOLUNTEERS

contributed nearly

\$5 MILLION OF THEIR TIME*

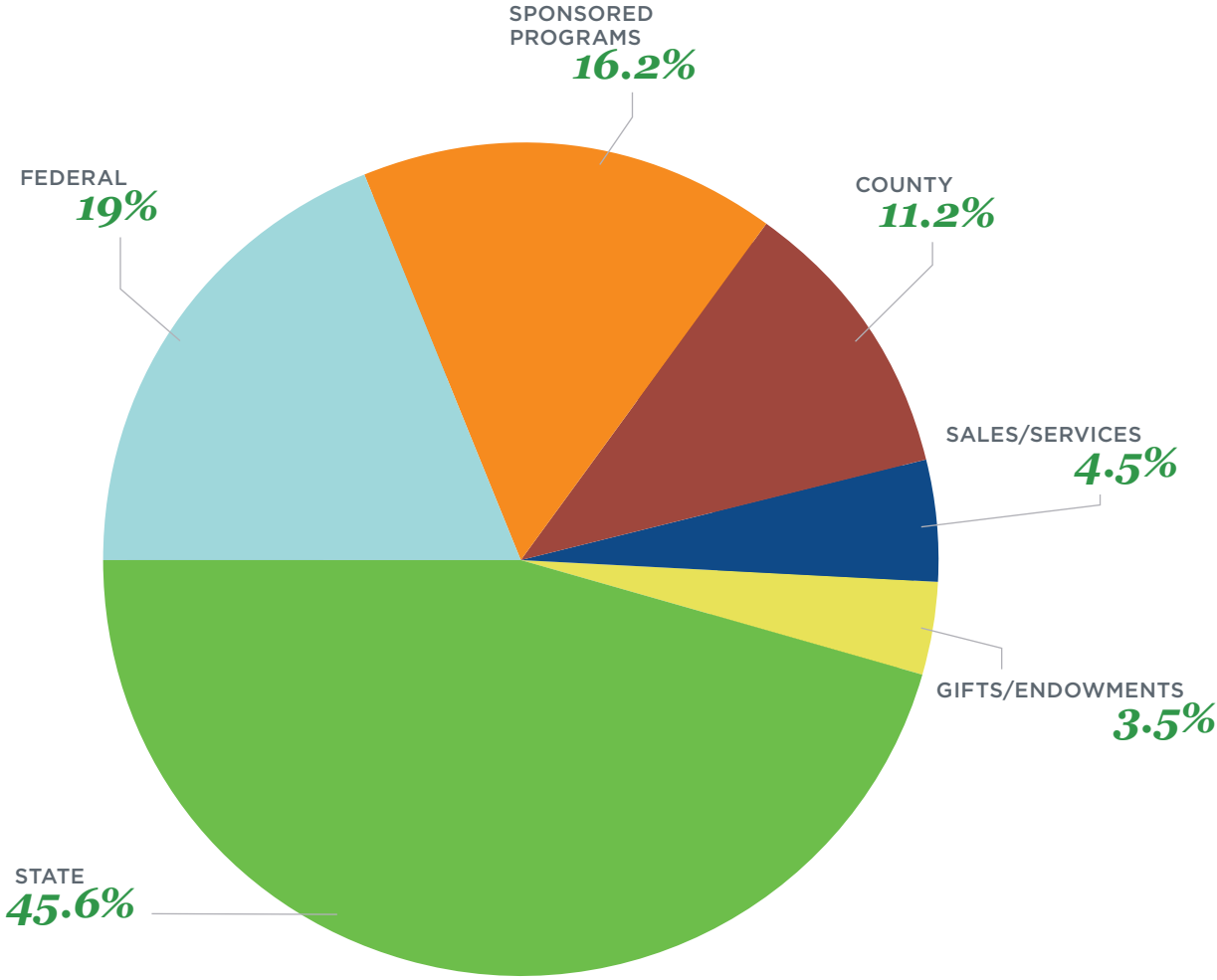
to enhance UT Extension programs across the state, primarily youth development activities, but also for other programs such as the Tennessee Extension Master Gardeners.

*Calculated with the standard rate for volunteer hours as provided by Independent Sector (independentsector.org).

This includes

58,299 VOLUNTEER HOURS contributed by

471 FAMILY AND COMMUNITY EDUCATION VOLUNTEERS



EXTENSION BY THE NUMBERS

Together, we are making a difference.

Across the state, UT Extension is improving the lives of Tennessee farmers, foresters, nursery growers, families, and youth.

The impact of our programs is measured in the success of their livelihoods, the quality of their lives, the stability of their communities, and even the smiles on the faces of young people as they learn and grow through 4-H and other youth educational programs.

The proof is in the numbers.

In 2021, UT Extension agents and specialists—who work in all ninety-five counties across the state—made **1,374,449 contacts** through group meetings; **196,526 contacts** through on-site visits; and **20,220,136 digital contacts**.

Even more impressive are the economic impacts that these numbers represent. UT Extension influenced agriculture, natural resources, and community economic development across the

state to the tune of **\$309.9 million**; family and consumer sciences programs, **\$234 million**; and 4-H, Master Gardener, family, and consumer education programs, **\$4.5 million**. What's more, the economic impact on Tennessee from 275 4-H All Star service projects totaled **\$4,987,365**.

These advances were achieved through the talents of our agents, faculty, and staff, as well as support from a variety of funding sources. Grants and contracts totaled **\$13,871,349**. Combined with gifts and endowments; sales and services;

and federal, state, and local county funding, the total funding for Extension in 2021 was **\$85,411,447**.



BUILDING ROOTS

Significant progress has been made at Lone Oaks Farm in Hardeman County. In 2021, the facility opened The Clays, a state-of-the-art shooting sports center, featuring a 4,000 square-foot clubhouse, pro-shop, and hunter education classroom.

Lone Oaks also began construction on two 4-H Cabins and the STEM learning center. The cabins will be able to house sixty-four students at one time. The STEM Education Center will have indoor/outdoor classrooms, labs, and a cafeteria surrounded by an interactive garden.

Created with attention to incredible design and hands-on education opportunities, the youth camp is nearing completion and is expected to open fall 2022.



ON THE ROAD

4-H Summer Camp went on the road in 2021 with the 4-H Traveling Roadshow. Thanks to the generosity of a donor and friend of 4-H, each 4-H Camp in the state received a trailer with everything needed for summer camp, including games, arts and crafts, and other activities. The traveling “camps” visited all ninety-five counties in Tennessee, providing a low-cost summer camp to more than 2,800 children. By being flexible, 4-H was able to reach a wide range of children who may not have been able to attend a summer camp under normal circumstances. We are proud to have summer camp back at our 4-H centers across the state for 2022.

PHILANTHROPIC SUPPORT FOR EXTENSION CALENDAR YEAR 2021

TOTAL GIFTS/ENDOWMENTS

\$3,021,740

ENDOWMENTS

Kennon and Molly Hampton Lone Oaks Farm Endowment— Understanding the need to be flexible as needs arise, Kennon and Molly Hampton established their endowment for Lone Oaks Farm to provide unrestricted support.

Bob and Debbie Sinclair continue to provide support for Extension with the Bob and Debbie Sinclair Financial Excellence Endowment and other gifts. This year, UT Extension Family and Consumer Sciences led Money Week programming for elementary school students with the funds and included Bob and Debbie in the festivities.

Standlee Premium Western Forages and Purina Mills provided significant dollar values of supplies and feed for the Starved Horse Program the Department of Animal Science housed at the Middle Tennessee AgResearch and Education Center.

Again this year, Altria supported tobacco Extension programs, internships, and equipment for tobacco Extension needs.

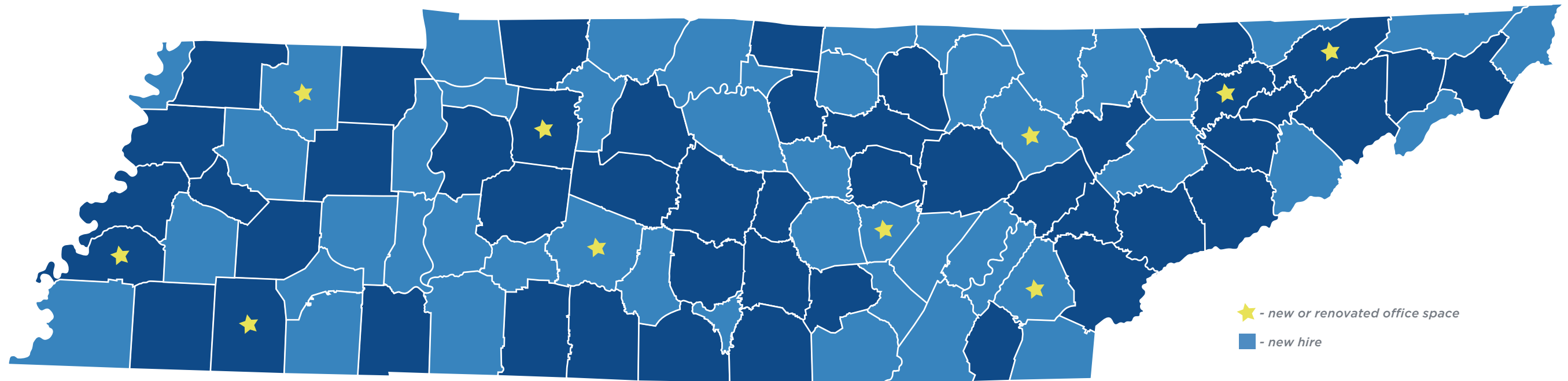
Ernie and Julie Kleinlein funded new pavilions, playground upgrades, and a golf cart for transportation at the Clyde Austin 4-H Center in Greeneville.

A donor provided funds needed for a new truck for the Extension poultry specialist.

QUASI-ENDOWMENTS

Greene County livestock programming quasi-endowment.

Blount County quasi-endowment for Extension Family and Consumer Sciences.



WEST TENNESSEE

2021 NAE4-H YDP National Conference

Regional staff and Western Region agents from all program areas went above and beyond the call of duty to make the 2021 NAE4-H YDP National Conference at the Peabody Hotel in Memphis a success. More than 800 4-H professionals from across the nation left Memphis with a positive experience due to the tireless efforts of Tennessee Extension. Many participants commented it was the best conference they had attended.

Podcast Production

Two podcasts continued to reach Tennesseans. *Farm 2 Family* podcast recorded sixteen sessions with agents and local guests to connect listeners to the people who grow their food and promote agriculture. *Bringing it Home with Sarah and Tennille* podcast recorded fifty sessions in 2021, reaching more than 1,500 listeners. The podcast focuses on everyday problems and solutions Tennesseans face.

MIDDLE TENNESSEE

Farm and Ferment

UT Extension held the Tennessee Farm and Ferment at the UT-TSU Extension Office in Rutherford County. More than 140 people attended the January event. The number of craft breweries, local distilleries, and wineries in Tennessee has increased rapidly and is largely an untapped market for Tennessee producers. This presents new marketing and diversification opportunities. The event brought together industry partners including TN Beef, TN Pork Producers, TN Corn, TN Craft Brewers Guild, TN Distillers Guild, TN Wines Association, MTSU Fermentation Science, and the Tennessee Department of Agriculture.

To meet the needs of distillers and brewers, a malthouse is under construction in Rutherford County, keeping locally grown barley local before it is brewed and distilled. UT Extension has also teamed up with Agricenter International to put barley trials at AgResearch and Education Centers across the state.

Upper Cumberland Beef Summit

The eleven counties came together to host the Upper Cumberland Beef Summit on November 13 in Cookeville. More than 125 producers learned about Breeding More Efficient and Profitable Cows, Beef Cattle Economics, Considerations for Direct Marketing Live Animals and Meat, and Managing Heifers from Weaning to Calving. An extensive trade show including equipment, feed, and animal health dealers was also held.

Food Preservation Work

Twelve agents in the Central Region produced a series of recorded food preservation demonstrations and posted them to Facebook and YouTube, providing needed food safety education. Topics included strawberries, tomatoes, pickles, green beans, apples, and more. In the future, the group plans to expand the curriculum and include agents to provide gardening tips. Participating counties have recorded over 250,000 educational contacts.

EAST TENNESSEE

Eastern Region 4-H Fall All Star Conference

The Eastern Region 4-H Fall All Star Conference took place in Gatlinburg in November 2021. With an emphasis on service, All Stars completed nine projects which involved 140 All Stars and sixteen adults and totaled 308 hours of service conducted at a monetary benefit of \$9,854 dollars. The All Stars also collected fourteen boxes of school supplies estimated at a value of \$750, bringing the service project's economic impact to \$10,604 dollars. In all, 63,344 people benefited from these projects, which includes projects at Pi Beta Phi and the Fantasy of Trees.

FAMILY AND CONSUMER SCIENCES

UT Extension Family and Consumer Sciences provides information and education in the areas of community health, family economics, human development, and nutrition and safety for the people of Tennessee.



The Farm and Ranch Stress Assistance Network, a three-year, \$7.2 million US Department of Agriculture (USDA) grant, addresses individual- and family-level stress in farming, ranching, and forestry occupations. Heather Sedges, associate professor of human development, is the Southern Region's principal investigator. Through a hotline, website, resource clearinghouse, e-academy, and support groups specifically for agricultural-related professions, the team is hoping to curb suicide rates in this community.

350 participants learned that exposure to electronic cigarettes or liquid nicotine in the eyes, mouth, or skin can lead to a poison emergency.

Family Economics

Consumer economics training activities reached thousands of people with trusted education. Classes included bankruptcy education, homebuyer education, personal finance training for teachers, saving education for adults and youth, workforce development education, and financial education simulations for youth. Efforts included more than 260 Skill Up Tennessee program participants. The economic impact of consumer economics programming is estimated at \$120,320,945.

Human Development

The UT Extension Afterschool initiative celebrated eighteen years of funding to strengthen students' social and emotional skills and academic achievement. Total 2021-2022 funding from the Tennessee Department of Education and the National Institute of Food and Agriculture is \$950,000.

Community Health

Extension agents held eighteen *A Matter of Balance* workshops across the state, reaching 192 people. The program, funded through the Administration for Community Living, helps older adults maintain their independence and increases their confidence in preventing and managing falls.

PROMPT TN, a partnership of Extension, East Tennessee State University's Addiction Science Center, and the TN Department of Health, addresses the opioid epidemic and supports families in need. The initiative reached more than 4,000 people through Zoom and social media.

UT Extension achieved Centers for Disease Control and Prevention (CDC) Full Recognition for the National Diabetes Prevention Program in Washington County, implemented virtual curriculum, and received multiple grants.

UT Extension agents reached more than 10,000 adults and youth through educational programs and promotions focused on poison. More than

Hardeman Healthy Outreach (H2O) for Healthy Weight, supported by High Obesity Program funding from the CDC (\$500,335 per year for five years), uses a systems-based approach to increase access to healthier foods and establish new or improved transportation systems. H2O worked with community leaders to provide access to a basketball and pickleball court, make park enhancement projects, distribute fresh food, increase access to EBT, work with farmers markets, and improve food quality at three small retailers.

Integrating Classroom Activities for Regulating Emotions, or ICARE, is a response to the many negative impacts of COVID-19 on children. A toolkit, created for teachers to incorporate social and emotional activities within K-2 classrooms, addresses adverse childhood experiences.

Nutrition and Food Safety

The state team grew nutrition and food safety programs in partnership with the Tennessee Nutrition and Consumer Education Program and Expanded Food and Nutrition Education Program, reaching more than 13,000 people:

- Shop Smart Tennessee encouraged food retailers to stock healthier items and provide recipes and shopping prompts to encourage healthy food consumption.
- Teen Cuisine, geared toward middle schoolers, was piloted to reach older youth.
- *Global Cookbook* was published to expand reach to refugee and immigrant communities across the state.

Two new programs launched statewide: *Live Healthy, Work Healthy* and *A Taste of African Heritage* promote health in working individuals and honor African heritage through food.



Family and Consumer Sciences received three grants totaling \$3.13 million to address vaccine hesitancy and education needs statewide. The funds help agents in high-risk counties identify constituent concerns and bring together the community expertise of UT Extension and the clinical expertise of the UT Health Science Center, the Tennessee Department of Health, and the UT Knoxville College of Nursing to support community-based education.

AGRICULTURE AND NATURAL RESOURCES/ COMMUNITY ECONOMIC DEVELOPMENT



UT Extension's Agriculture and Natural Resources/Community Economic Development (ANR/CED) Team is a premier source of educational programs and information about agriculture, natural resources, and the food system. Working across ninety-five counties and eight UTIA departments, specialists and agents provide leadership to statewide initiatives; regional, national, and international projects; training sessions; demonstration projects and applied research; collaborations with UT AgResearch; and various 4-H projects, programs, and events. In a year that brought continued pandemic challenges, Extension ANR/CED programs responded, resulting in a \$336 million in economic impact in 2021.

Program Growth, Success, and Accomplishment

Extension's County Standardized Trials (CST) provide unbiased yield data that helps producers select varieties/hybrids and aids the overall industry in selecting a well-adapted seed portfolio for Tennessee's row crop farmers. The program had 146 on-farm trials of soybean, corn, cotton, and wheat in forty-two counties. More than fifty Extension county agents worked closely with more than 100 row crop producers, generating an estimated \$120 million in economic impact and planting more than \$400,000 in donated seed.

In December 2021, UT Extension's Center for Profitable Agriculture and UT Southern's Turner Center teamed up to host four workshops in Pulaski. The Reaching Local Farms series provided education to farmers and farm families about carbon markets and carbon credits, considerations for growing various specialty crops, technology's effects on farming practices, and considerations for direct marketing meat and live animal sales for custom harvest.

Last year, the UT Extension Soil, Plant and Pest Center tested more than 15,000 soil samples, almost 1,000 plant and insect samples, and about 250 bio-pond samples for farmers and homeowners. The Center provides services and information to prevent excess fertilizer and pesticide application, to optimize crop yield and fertilizer expenditures, and to provide analyses to aid in proper livestock rations and assessing forage quality. It also collaborated with the Beef and Forage Center to analyze 972 forage samples.

Energetic program planning and implementation by the Consumer Horticulture and Master Gardener Workgroup resulted in fourteen Extension publications, eight agent in-services, thirty-one webinars, fifty educational videos, 186 home garden variety trial citizen scientists, and fourteen new residential horticulture teaching presentations for agent use.

The **Domestic Kitchen Course** educates food entrepreneurs starting a food business in their home kitchen to manufacture non-potentially hazardous foods. This course covers basic good manufacturing practices; food safety issues; and descriptions of products that can be manufactured in an uninspected kitchen for direct sale to consumers within Tennessee. This is a self-paced, online course.

Back Porch Forestry launched during the COVID-19 telecommute period and continued throughout 2021. The educational video series is structured as thirty slides in thirty minutes and provides information on sustainable forest management.

The **Tennessee Healthy Hardwoods program**, now in its sixteenth year, educates family forest owners of the importance of sustainable forestry practices. The on-site field days primarily are held on UT and Division of Forestry properties.

Tennessee Smart Yard Communities is a certification program for communities, ranging from school groups to neighborhood associations, that seek to create healthier, more ecologically sound landscapes through education, stewardship, and connection. To be recognized as a Tennessee Smart Yard Community, the community creates and maintains a plan to execute at least two pre-approved activities under each of three impact categories.

Agricultural asset mapping helps local leaders identify agriculture-related assets that can be used to support local economic development in economically distressed counties. A final report helps generate and support new local agricultural based projects that contribute to local incomes and create local jobs.

Other programs developed and/or expanded include:

- Farming Fundamentals
- Grain Bin Rescue Training
- Tennessee Tree Day
- Regenerative Agriculture
- Farm Tax Education Program

4-H YOUTH DEVELOPMENT



Tennessee 4-H is a youth development program of UT Extension and Tennessee State University. 4-H helps youth thrive through participation in 4-H clubs, special interest groups, afterschool programs, camps, and other events. 4-H youth learn by doing, and they take part in hands-on activities that often start in their own communities and reach far beyond, while empowering them to develop and strengthen valuable life skills that “make the best better.”

The program serves more than 100,000 youth in all ninety-five counties. Strong partnerships with the Tennessee Department of Education provide 4-H club experiences to youth in more than 6,000 classrooms across Tennessee. 4-H members are engaged in one of twenty-seven different project areas, ranging from communications/public speaking to veterinary science and almost everything in between.

Highlights

Tennessee 4-H faced many barriers to its in-person programming amid the COVID-19 pandemic. Among the greatest challenges was the summer camping program. With some innovative thinking and investments, the State 4-H Camping Program purchased cargo trailers for each 4-H Center, filled them with equipment for activities, and took summer camp on the road for daylong programs in local communities. This 4-H camp travelling road show reached more than 2,800 youth, and the 4-H Centers were able to offer a lower cost alternative to the traditional residential camp program.

In addition, Camp Woodle in Middle Tennessee offered Pioneer Camp, a four-day overnight camp serving thirty-two youth, with thirty-plus adult volunteers, and six agents. Youth participated in fly fishing, archery, rifle shooting and safety, axe throwing, wood duck and bat box construction, Dutch-oven cooking, kayaking, creek stomping, rope making, woodwork and heritage skills, and history demonstrations. Three campers caught their first fish on a fly rod as a result of our program!

Other highlights include:

- Agents held monthly virtual cooking demonstrations. They reached 533 4-H members, and members received \$5,330 to purchase ingredients to cook along. In a post-event survey, 79.3 percent of participants responded they were very likely to prepare some of the food items presented, 55.2 percent were completely confident and 41.4 percent were fairly confident in their ability to prepare a meal. When asked what they learned from the demo, 34.5 percent said nutrition information, 27.6 percent said how to make a recipe healthier, 17.2 percent said how to prepare or cook vegetables or fruits, and 13.8 percent said cooking skills.
- Tennessee 4-H volunteers contributed 58,559 hours of time to 4-H positive youth development work. Using independentsector.org data to calculate the value of volunteer time (\$24.52 per hour in Tennessee), the volunteers generated \$1,435,866.68 worth of value to 4-H positive youth development work in Tennessee.
- Members of the 4-H All Star organization implemented 275 service projects totaling 174,750 hours donated. Projects included sewing face masks, making wood duck boxes, packing Operation Christmas Child boxes, and organizing food drives. The service contributed to a total economic impact of \$4,987,365 to Tennessee.
- Fifty-five UT Extension employees participated in the B.E.S.T. (Building Exceptionally Skilled Teachers) training program. Ninety-two percent noted an increase in their confidence level regarding teaching in person and online, resulting in a financial impact of \$1,925,000.

EXTENSION ANNUAL REPORT HONORS AND ACCOLADES

NATIONAL AND REGIONAL AWARDS

Ann Allgood Berry
UT Extension Family and Consumer Sciences
The Excellence in Extension Award of the National Extension Committee on Organization and Policy (ECOP)

Robert Burns
Department of Biosystems Engineering and Soil Science
The Henry Giese Structures and Environment Award, Structures and Environment Division of the American Society for Agricultural and Biosystems Engineers

Amy Fulcher
Department of Plant Sciences (with A. Wszelaki, M. Leffew, and M. Velandia)
Blue Ribbon Extension Communication Award, Southern Region of the American Society for Horticultural Science for their publication *D 114 Operation of a Garden Center During the COVID-19 Pandemic*

Amy Fulcher
Department of Plant Sciences (with L. Fessler and T. Stackhouse)
Blue Ribbon Extension Communication Award, Southern Region of the American Society for Horticultural Science for their publication *PB 1882 A Green Industry Guide to Plant Patents and Other Intellectual Property Rights*

Jennie L. Ivey
Department of Animal Science
2021 Extension Award, American Society of Animal Science, Southern Section

Megan Bruch Leffew and Hal Pepper
Center for Profitable Agriculture (with A. Hopkins, L. Humpal, D. Morris, D. Yates, J. Clark, P. Nelson, J. Mehlhorn, R. Pruitt, and R. Tewari)
2021 Extension Risk Management Education Center (ERME's) Outstanding ERME Project for the Southern Region

Neil Rhodes
Department of Plant Sciences
Named an honorary member of the Tennessee Agricultural Production Association (TAPA)

Aaron Smith
Department of Agricultural and Resource Economics
Early Career Contributions to Public Policy Award by the Council on Food, Agricultural and Resource Economics

Annette Wszelaki
Department of Plant Sciences
2021 Outstanding Extension Educator Award, The American Society for Horticultural Science

UTIA AWARDS

David Bilderback
UT Extension Eastern Region
William D. Bishop Award

Chris Binkley
UT Extension Van Buren County
Vernon and Ida Darter Award

Emily Osterhaus
UT Extension Bedford County
Alice Ann Moore 4-H Agent Award

Brigitte Passman
UT Extension Tipton County
Bill and Ann Hicks New Extension Worker Award

Justin Rhinehart
Department of Animal Science
Charles and Patricia Goan Customer Service Award

Heather Sedges
UT Extension Family and Consumer Sciences
J.E. Moss Achievement Award

Amy Willis
UT Extension Rutherford County
G.L. Carter 4-H Agent Award

Alan Windham
Department of Entomology and Plant Pathology
Webster Pendergrass Award

Cavender Award for Best Publication (Two Awards)
Manufacturing Non-Potentially Hazardous Foods in Tennessee Without a Permit (PB 1881)
Mark Morgan, Department of Food Science
Nathan Miller, Department of Food Science
Megan Leffew, UT Center for Profitable Agriculture

Your Guide to Food Pantries (PB 1884)
Chris Sneed, Janie Burney, and Ann Berry, all with UT Extension Family and Consumer Sciences

Tennessee Association of Agricultural Agents and Specialists/Hicks Award

Dallas Manning
UT Extension Coffee County
Blake Ramsey
UT Extension Hawkins County

Charles and Julie Wharton Award of Extension Achievements

Vickie Clark
UT Extension Carter County

Sondra Ganus-Thorne
UT Extension Hardin County

Timmy Mann
UT Extension Robertson County



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