

# West Tennessee AgResearch and Education Center

## Discovery

UTIA faculty members conduct outstanding research at the West Tennessee AgResearch and Education Center (WTREC). We're improving crop genetics, testing the new lines in real world conditions, and informing growers of the benefits of the improved varieties. WTREC scientists are educating producers on how to manage weeds, insects, nematodes and disease effectively and economically. And we're focusing studies on plant nutrient needs, planting density, and fertilizer and irrigation efficiency in an effort to ensure that local producers optimize their crop yields. Our research on the growth, adaptation and aesthetic value of plants for ornamentals, in addition to turfgrasses for lawns, athletic fields and golf courses, is fueling the fastest growing industry in the state.

## Innovation

With the world population topping 7 billion, a figure expected to double in the next 50 years, the job of feeding and clothing the world will become even more challenging. Scientists at WTREC are evaluating crops that promise to help farmers meet the needs of a booming population through genetic modification. This process prevents damage from insects, weeds and disease, while helping reduce the application of chemical pesticides and the cost of bringing a crop to market. Crops can also be more tolerant of cold and drought, allowing farmers to grow them in formerly inhospitable places. WTREC is at the forefront in assessing the benefits and risks of biotech crops and informing producers of their proper use.

## Application

WTREC is facilitating projects that will have a profound effect on agriculture and society. The information we collect from our studies is invaluable to Tennessee producers and those working in the nursery industry. It allows them to optimize their resources and make the best decisions for their operations and often provides significant cost savings. We share our research findings with area producers through UTIA publications, our website (<http://west.tennessee.edu>) and at our three annual public field days — Summer Celebration Lawn and Garden Show, Cotton Tour and Pumpkin Field Day. Additionally, we host a biennial Weed Tour and a Fall Plant Sale. Attendance at these events tops 3,200 per year.



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## U.S. Department of Agriculture – Agricultural Research Service

The USDA-ARS Crop Genetics Research Unit is located at WTREC. Here, scientists concentrate on development of host plant resistance for controlling the soybean cyst nematode and foliar diseases of soybean. Soybean cyst nematode is the most damaging soybean pest in the United States, causing estimated annual losses exceeding \$1 billion. Using molecular genetics along with conventional techniques, USDA researchers are partnering with UT scientists to accelerate genetic gains in soybean lines and bring improved varieties to producers more quickly. Additionally, they are gaining an increased understanding of soybean cyst nematode and will be able to protect producers' soybean crops in the region more effectively.

**The West Tennessee AgResearch and Education Center pumps more than \$4 million into the local economy annually.**

## About Us

Established in 1907, the West Tennessee AgResearch and Education Center (WTREC) is the oldest center in the University of Tennessee AgResearch system. Every year we conduct more than 100 research trials on agronomic row crops, ornamentals, and native and turfgrasses.

WTREC comprises 647 acres with 18 different soil types. It is here that some of the nation's leading agricultural scientists conduct research aimed at optimizing crop production, improving pest control and adding value to one of the fastest growing industries in the state — the green industry. Our grounds also serve as a teaching tool that area producers can use to observe different crop varieties or production techniques.

We employ close to 100 full- and part-time employees and pump more than \$4 million into the local economy annually. In addition to AgResearch faculty and staff, UT Extension Western Region Headquarters and several UT Extension specialists are housed in our building, as well as the offices of the UT Institute of Public Service and the U.S. Department of Agriculture — Agricultural Research Service.

WTREC is also home to the UT Gardens, Jackson, a “laboratory” garden where university horticulturists evaluate hundreds of plants for disease resistance, heat and humidity tolerance, and quality of blooms and foliage. Their research also creates one of the most beautiful and fascinating gardens in the state. The UT Gardens, Jackson, is open daily to visitors.

While our work is vital to agricultural stakeholders in the region, we are also an integral player in our local community. Located just minutes from the heart of downtown Jackson, we routinely host county government meetings, garden tours and UT Extension events, in addition to three public field days.

Visit the AgResearch website at <http://agresearch.tennessee.edu>.

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Programs in agriculture and natural resources, 4-H youth development, family and consumer sciences, and resource development.  
University of Tennessee Institute of Agriculture, U.S. Department of Agriculture and county governments cooperating.  
UT Extension provides equal opportunities in programs and employment.