

# Dairy AgResearch and Education Center

## Discovery

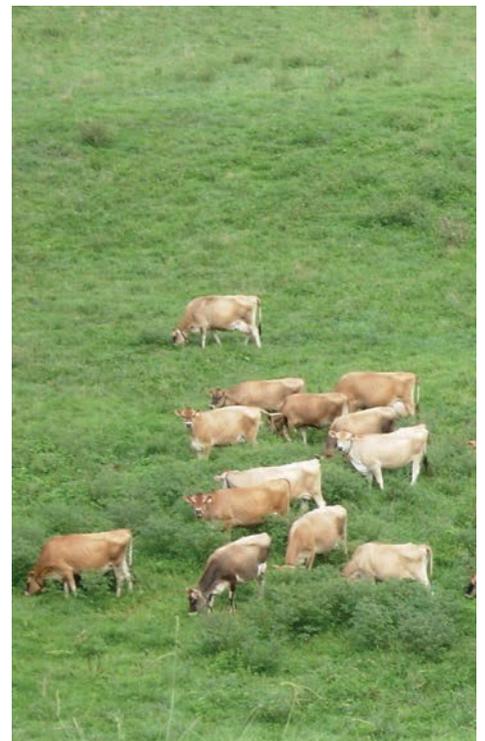
Discovery-based research conducted by scientists at the Dairy AgResearch and Education Center has resulted in findings that could prevent mastitis in dairy cows. Mastitis is an inflammation of the udder that can cause abnormalities in milk and impact milk production. It's estimated that mastitis costs Tennessee dairy farmers more than \$10 million annually. Scientists have identified a bacterial protein that could serve as a vaccine for the prevention of mastitis. The ultimate goal is to prevent or reduce the severity and economic impact of mastitis, which would increase production and profitability of dairy farms and ensure an ample supply of safe and nutritious dairy products for consumers.

## Innovation

Feed is often one of the most costly inputs in any kind of animal production. Farmers must balance cost with nutritional needs, and they are always looking for the most efficient feed and forage plan. Native warm-season grasses have the potential to provide important summer forage for dairies, as well as beef cattle operations. At the center, researchers are establishing basic production guidelines for these grasses. They are also evaluating the impact on animal gain for bred dairy heifers on native warm-season grasses managed by rotational or patch-burn grazing. This work will also provide information on wildlife responses to both grazing systems.

## Application

As we look to the future, the center will continue to focus research programs to meet the needs of Tennessee's agriculture industry. This focus includes forage and grazing management, robotic milking technologies, dairy and beef heifer development programs, and nutrient management applications. We are also implementing cooperative research blending between UT's departments of Animal Science and Forestry, Wildlife and Fisheries. We will continue to facilitate research that will help farmers make sound economic decisions. Research findings are shared through UT Institute of Agriculture publications, on-site demonstrations, and through local UT Extension agents.



# Dairy AgResearch and Education Center



## About Us

The Dairy AgResearch and Education Center was established in 1929. Originally operated by the Bureau of Dairy Industry, U.S. Department of Agriculture, it was the first research dairy in the southern United States. The University of Tennessee became a cooperating partner in 1948. Today UT is the sole operator.

Currently, the center's 615 acres are the site of research on the use of forage in dairy rations, dairy cattle breeding and genetics, dairy reproduction, mastitis and udder health, and water quality and dairy waste.

## Location

The facility is nestled in the hills of Lewisburg, Tenn., approximately 60 miles south of Nashville.

Situated near the southern end of the Central Basin, the area is characterized by rich, fertile farm country. Agriculture is deeply rooted in this region, and it remains an important industry. Marshall County ranks fourth of all Tennessee counties for its number of milk cows.

You can find the center at 1070 New Lake Road, Lewisburg, Tenn., or you can find it online at <http://dairy.tennessee.edu>.

**The Dairy AgResearch and Education Center contributes more than \$1.5 million to the local economy.**

The facility is home to an award-winning, all-registered Jersey herd consisting of 100 cows and 90 heifers. Jerseys are a smaller breed of dairy cattle, popular for their production of rich, nutrient-laden milk. The breed is also known for its good-natured disposition and its milk production efficiency. On average, a cow at the center will produce more than 17,000 pounds of milk per year — more than 17 times her bodyweight.

Jerseys are also one of the most reproductively efficient cattle breeds in the world. However there is always room for improvement. Researchers at our facility are evaluating methods to improve pregnancy rates in heat-stressed dairy cows. They have also developed methods that allow dairy producers and veterinarians to identify cows that are inefficient for artificial insemination programs, enabling sound economic decisions.

The center is also noted for its nutrition studies to evaluate various forage crops fed to high-producing cows. The modern dairy management program includes computerization of feeding of concentrates and milk weight recording. Current research at the center also includes studies on calf and replacement heifer management.

The Dairy AgResearch and Education Center hosts visitors throughout the year at various adult and youth educational events. While there have been many changes through the years, the purpose of the center has remained the same: to determine the most efficient agricultural production practices.

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

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