

How it Works: The University of Tennessee Institute of Agriculture

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By now, you have likely heard someone talk about “telling your story” as a beef cattle producer. As a cattleman, it can be easy to lose sight of the fact that most people consuming the product you make do not understand the process it takes to get it to their plate. It is easy to see how that can happen with the grind of daily responsibilities to keep the cattle healthy and productive. While tremendously rewarding, it can also be stressful and overwhelming.

Those of us that work in support roles to the industry are also guilty of taking for granted that the clientele we serve understand exactly how our “product” is made. So, the next two articles in the “How it Works” series will describe how the *University of Tennessee Institute of Agriculture works* to create new technologies, adapt existing technologies to your farms, or develop educational programs that help you be more efficient and profitable. To do that, it is important to first understand the history of Land-Grant universities and discuss what that structure looks like in Tennessee.

Land-Grant universities in the U.S. developed from the same legislation and have the same basic three-pronged strategy; teaching, research and outreach. The Morrill Land-Grant Acts of 1862 and 1890 established colleges that were accessible to students that did not traditionally attend college and teach them subjects directly related to production agriculture and industrial development (as opposed to only liberal arts). The objective was to empower the population to more efficiently feed and rebuild the country after the Civil War.

After establishing these teaching colleges (most of them are universities now), the need for more advanced information to teach the students was met through research. The land-grant mission was then expanded by the Hatch Act of 1887 that established Agricultural Experiment Stations. Ultimately, the outreach component was added by the Smith-Lever Act of 1914 that established Cooperative Extension to translate research findings and teach/demonstrate them directly to farmers.

These three bills are often cited as the most responsible set of bills in congressional history because it incorporates local, state, and federal funding for a system that benefits the entire country through improved food production. Over the years, the names of the three Land-Grant arms have endured rebranding and drastic changes in funding from each level of government. But, for the state of Tennessee, the original design and objectives remain intact.

What does all of that look like for the state of Tennessee? As most of you know, the University of Tennessee is our Land-Grant institution and the UT Institute of Agriculture (UTIA) deals with subjects related to food, fiber and biofuels. In UTIA, the teaching arm is called the College of Agricultural Sciences and Natural Resources (CASNR). The creation of new technologies, and improvement of established technologies, is coordinated through UT AgResearch. The outreach component - education and demonstration of these technologies to you the producer - is carried out through UT Extension. An additional element of UTIA is the UT College of Veterinary Medicine, one of only 30 veterinary colleges in the nation.

How does this impact Tennessee beef cattle producers? Within UTIA, there are several departments and centers that house faculty with commitments to all three arms of the Land-Grant mission. All of these departments have something to offer the beef cattle industry. Students with the goal of working directly in beef cattle management usually complete a degree in Animal Science and take classes in several of the other departments. Many additional degree paths are offered in other departments that prepare students to work in fields related to beef cattle production (Ag. & Resource Economics, Biosystems Engineering & Soil Science, Food Science & Technology, and Plant Sciences; just to name a few).

Faculty and graduate students in those departments also conduct research to develop new technologies or enhance and adapt proven technologies for use by Tennessee beef cattle producers. This is done primarily on the UT AgResearch Research & Education Centers (often referred to by their previous name of “research stations”) that were profiled in several editions of the Tennessee Cattle Business magazine in 2015.

UT Extension is considered your front door to the University of Tennessee because there is an office in all 95 counties across the state. In each office, Extension Agents serve either production agriculture (referred to as “Adult Ag.” within the system), 4-H youth activities or a combination of both. These are the UTIA employees that are responsible for relating the information generated through research directly to beef cattle producers in their county or region. UT Extension also partners with Tennessee State University to do this work more efficiently by incorporating the 1890 Land-Grant institution.

The middlemen - UT Extension Specialists - translate research findings into educational materials to be delivered by County Agents. They also perform applied research and field trials when needed. These specialists are employed as faculty members in the department that relates to their discipline. For instance, the Animal Science department currently employs three faculty that work in beef cattle production. They have education as well as production and research experience in Genetics (David Kirkpatrick), Nutrition (Jason Smith) and Reproduction (Justin Rhinehart).

That is only part of the story. Again, next month’s article will continue this mini-series (within the “How it Works” series) by telling more of the story about how UTIA works with other educational institutions and industry leadership groups to conduct research and deliver educational material. More importantly, it will focus specifically on the relationship with farmers and how Agents and Specialists design education and research to fill the gaps in understanding and resources. As always, please feel free to provide feedback on these articles and suggest future topics (e-mail: jrhinehart@utk.edu).