



## Agricultural Systems

PHOTO: Moore

# Land-grant university research, outreach support beef production

*The United States is the world's top producer of beef, contributing to about 20% of the world's production. In 2023, the U.S. beef industry had an estimated value of \$102 billion. Land-grant universities are supporting the beef industry through research, Extension and education, ensuring producers remain economically viable and are able to safely meet changing market demands.*

### Here are a few examples of that work:

- **Arkansas** cattle producers are increasing direct marketing of their products to consumers, meaning they must shift practices to bring their own cattle to market weight instead of relying on large-scale feed lots. Researchers are helping producers determine cost-effective practices to bring cattle to market weight using locally available grasses and feed. *Arkansas Agricultural Experiment Station; State Appropriations. See [full statement](#).*
- Researchers in **Pennsylvania** are using genetic analysis to determine the genetic basis for a disease that makes calves unable to stand, causing them to die prematurely. The researchers are developing an innovative test that can help breeders ensure healthy herds. *Pennsylvania Agricultural Experiment Station; Hatch. See [full statement](#).*
- The cost of cattle feed can be up to 75% of the direct cost associated with beef production, and there is significant variation in an individual animal's ability to convert feed to growth. Researchers in **Missouri** are exploring DNA variants related to feed efficiency that ultimately can be included on commercially available assays to enable producers to select the most efficient animals. *University of Missouri Agriculture Experiment Station; Other USDA Competitive and Hatch. See [full statement](#).*

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## landgrantimpacts.org

The National Land-grant Impacts Database (NIDB) documents the individual and collective impacts of the national Land-grant University System of joint research, education and Extension. Much of this work is supported by capacity and competitive funds through the USDA's National Institute of Food and Agriculture.

This document was prepared by the NIDB communications team. The Association of Public and Land-grant Universities' Board on Agriculture Assembly manages the NIDB.



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- **Texas** Extension professionals support sustainable beef production in the state by providing producers with tools to improve animal welfare, animal and beef quality and overall profitability while addressing important resource and animal management challenges. The program is expected to bring \$2.57 million in economic benefits through cost savings and income increases to the Texas High Plains region. *Texas A&M Agrilife Extension; State Appropriations, Fee-based funding. See [full statement](#).*
- The Beef Quality Assurance program provides **Oklahoma** cattle producers with science-based training on best practices in optimized animal husbandry and health management, resulting in healthier, higher-value cattle and improved consumer confidence in the supply chain. Oklahoma Cooperative Extension Service; Smith-Lever (3b&c). See [full statement](#).