



HISTORY

The Jackson Agricultural Research Station was established in 1968, when OARDC signed a 40-year lease for 334 acres belonging to the former Jackson County Home Farm. The size of the station was expanded through the purchase of an additional 158 acres by the state of Ohio. The lease with Jackson County was renewed in 2008.

Scott Payne, Manager
Jackson Agricultural
Research Station
19 Standpipe Road
Jackson, OH 45640

740-286-3803
payne.252@osu.edu
go.osu.edu/Jackson



JACKSON AGRICULTURAL RESEARCH STATION

BOOSTING THE PROFITABILITY OF SOUTHERN OHIO'S BEEF CATTLE INDUSTRY



Located on 495 acres in the rolling hills of southern Ohio, the Jackson Agricultural Research Station focuses on beef cattle production research and evaluation of forage production systems. Both are critical to the economy of Ohio's Appalachian counties.

Jackson Station personnel work with Ohio Agricultural Research and Development Center (OARDC) scientists, Ohio State University Extension specialists, farmers, and industry groups to conduct innovative studies on cattle reproduction and nutrition, improved forages, and lower-cost feeding options; to communicate with and educate producers regarding new production strategies and techniques; and to transfer knowledge throughout the beef cattle industry.

The beef industry has a significant impact on the economy of the Jackson County region: nearly \$87 million a year.



THE OHIO STATE UNIVERSITY

COLLEGE OF FOOD, AGRICULTURAL,
AND ENVIRONMENTAL SCIENCES

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RESEARCH FOCUS



The Jackson Agricultural Research Station has served as a key source for animals used in research designed to increase reproductive efficiency, test groundbreaking cattle production technologies, and develop value-added products from beef cattle.

Sheep are an important industry in this region of the state, and in 2014, sheep were added to the station for research and outreach in reproductive, parasite, and grazing management. Additionally, station research in forage management systems has contributed to the grazing approaches used by cattle and sheep producers today.

Studies conducted at the Jackson Station could help increase pregnancy rates in beef cattle by 10–14 percent—generating millions of dollars in added economic value in Ohio.

KEY RESEARCH STUDIES CONDUCTED AT THE STATION INCLUDE:

REPRODUCTION

Effective methods to synchronize estrus (or heat) cycles in cows, including the use of progestin hormones, have been successfully developed at the station. Studies have shown that using artificial insemination together with estrus-control practices can substantially enhance the breeding efficiency of beef cattle, saving producers time and money.

The station's reproductive management studies have helped set estrus-synchronization standards used by industry in Ohio, the United States, and around the world—including the Select Synch, CO-Synch, and Hybrid-Synch programs. The station is also recognized as the key site for research to determine the proper use of CIDR technology for increasing conception rates in beef cattle.

NUTRITION

Researchers and personnel at the station work to match feed resources to beef cow milk production, which helps optimize calf nutrition, health, and development, while making beef operations more efficient.

Another area of research is weaning age. Scientists have found that weaning calves at 100 days of age instead of the normal 200 days reduces a cow's need for feed in late summer, when pasture production is lower. Also, removing calves from cows early improves body condition of the cows before going into the winter months.

FORAGE PRODUCTION

The station conducts forage studies using both small, replicated plots and large pasture

acreage. Variety trials are conducted to evaluate yield, quality, persistence, and insect-resistance of alfalfa, red clover, and tall fescue.

Applied research at the station has focused on extending the fall grazing season, reducing dependence on mechanically harvested and stored forage, and lowering winter feed costs.

ECONOMIC IMPACT

Ohio's beef industry, the 16th largest in the United States by number of beef cattle operations, has an annual value of \$1.3 billion,



generating nearly \$745 million in total production impact for the Buckeye State. In Jackson and surrounding counties, the beef industry has a significant

economic impact: nearly \$87 million a year. Here are some of the ways the Jackson Station contributes to this industry and to Ohio's economy:

- Studies conducted at the station could help increase first-service artificial insemination pregnancy rates in beef cattle by 10–14 percent—generating millions of dollars in added economic value in Ohio.
- Extrapolating this increase in reproductive efficiency to the entire U.S. beef industry, the economic value of Ohio State research has the potential to exceed \$1 billion.
- Facilities and other resources at the Jackson Station give OARDC scientists the ability to obtain highly competitive federal

grants and industry funding—supporting research and development activities that directly impact the overall economy of southern Ohio.

COMMUNITY AND SUSTAINABILITY

In addition to research, the Jackson Station engages in outreach activities and works with various community organizations. The station hosts educational K–12 programs with the Jackson City Schools in collaboration with Farm Bureau, the Soil and Water Conservation District, and other local agencies. In conjunction with OSU Extension specialists, station personnel organize field days and workshops for producers and other audiences. The role of the station's advisory committee is crucial in this regard, as it contributes to planning and provides a direct contact with local clientele and stakeholders.

The Jackson Agricultural Research Station is also aligned with the ecological paradigm fostered by Ohio State's College of Food, Agricultural, and Environmental Sciences. With sustainable production being a top priority, the station has made concerted efforts to protect streams that run through its land; the efforts demonstrate effective environmental safeguard techniques. Initiatives include designing and installing approved stream cattle crossings; fencing waterways to limit cattle access, protect riparian areas, and reduce stream bank erosion; and establishing and evaluating various tree species along stream corridors and at other strategic locations to provide shade for grazing cattle.