College of Agricultural, Consumer and Environmental Sciences

The Center of Excellence for Sustainable Food and Agricultural Systems New Mexico State University aces.nmsu.edu



Research to Practice in Rural New Mexico Modern Role for Agricultural Research

Jay M. Lillywhite Associate Dean & Director, Agricultural Experiment Station

Legislative Finance Committee Tucumcari, NM May 15, 2025

The College of Agricultural, Consumer and Environmental Sciences is an engine for economic and community development in New Mexico, improving the lives of New Mexicans through academic, research, and Extension programs.

The Economic Importance of Agriculture in New Mexico

Output

- Direct contribution \$20.9 billion
- Total contribution (including induced and indirect) \$45.0 billion¹

Labor

- Direct contribution 144,424
- Total contribution 253,529



Approximately one-quarter of New Mexico's 1.2 million jobs are supported by the food and fiber supply chain!



Sources of agricultural growth





Contribution of Agricultural Research



New Mexico's Agricultural Experiment Station

- A component of the Land Grant University system as articulated in the Hatch Act of 1887
- Constitutionally mandated in New Mexico in 1915
- Research arm for the College of Agricultural, Consumer, and Environmental Sciences
- Researchers on the main campus and remote science centers





Agricultural Experiment Station Research





Agricultural Experiment Station Research





Agricultural Experiment Station Research







Agricultural Experiment Station Funding, FY2000 – FY2024

Economic impacts of AES research



Economics of Raramuri Criollo and British crossbred cattle production in the Chihuahuan desert: Effects of foraging distribution and finishing strategy

An NMSU researcher led an effort to understand how beef genetics impact the profitability of beef production in arid environments. Significant challenges for raising beef cattle exist in the arid and semi-arid regions of the United States. Limited forage availability and small profit margins are among the greatest concerns in Western U.S. ranching operations. One potential option for ranchers in these regions is using alternative cattle genetics, such as Raramuri Criollo (RC), a Mexican heritage biotype of cattle brought to the Americas by Spanish Conquistadors. More...

Environmental Stewardship 📗 Food & Fiber Production and Marketing

Department of Animal and Range Sciences



Biological Control of Insect Pests in New Mexico

Biological Control has the potential to control many insect pests but is frequently undervalued. Control of insect eggs alone is often over 80% when populations of predators are not disrupted by frequent insecticide applications. The ASC farm has maintained good control of alfalfa weevil with biological control for 20 years. Replicating this type of control in just alfalfa and pecan will save growers over \$6.5 million per year in reduced losses and control costs. More...

Artesia Agricultural Science Center Environmental Stewardship

Department of Entomology, Plant Pathology and Weed Science



Alternative value-added agricultural production





Making research available to stakeholders

AES

aes.nmsu.edu

IMPACT REPORT

NMSU ACES AGRICULTURAL EXPERIMENT

STATION

Agricultural Experiment Station NN Rex E. Kirksey Agricultural Science Center at Tucumcari tucumcarisc.nmsu.edu | 575-461-1620

The Rex E. Kirksey Agricultural Science Center is one of the oldest NMSU ASC, adding historical knowledge and value to the local community and state. The ASC's property consists of 464 acres, with 170.9 acres having Arch Hurley Conservancy District water rights and a contract for 300 acre-feet annually for treated municipal wastewater to be delivered from the City of Tucumcari Wastewater Treatment Plant and applied through center pivot irrigation. Research capacity was enhanced in 2024 with the installation of a variable rate irrigation system.

Efforts at the center focus on improving the quality, safety, and reliability of food and fiber products to enhance agricultural profitability; stimulate economic development using natural resources; sustain the environment and protect natural resources with sound practices; and improve the quality of life for the people of New Mexico.

Primary research conducted at the Rex E. Kirksey ASC

focuses on semiarid cropping systems, irrigated forage

beef cattle through feed efficiency testing, and reuse of treated municipal wastewater for agricultural irrigation.

crops and grazing management, genetic improvement of

ONGOING RESEARCH

Leading innovative, water-smart crop and livestock research to help farmers in semiarid environments adapt to the changing climate for agriculture.

MISSION

VISION

New Mexico State University's Rex E. Kirksey Agricultural Science Center at Tucumcari exists to discover, develop, and deliver information about innovative solutions for water-smart crop and livestock systems in irrigated and dryland agriculture that are of benefit to New Mexicans and also globally applicable.

VALUE ADDED TO NEW MEXICO

· Usage of reclaimed water

- · Alternate, opportune, and cover cropping systems and soil amendments
- · Efforts to mitigate effects of limited irrigation due to climate change

The College of Agricultural, Consumer, and Environmental Sciences is an engine for economic and community development in New Mexico, improving the lives of New Mexicans through academic, research and Extension programs.

ANNUAL REPORT

CLOVIS AGRICULTURAL

SCIENCE CENTER

CLOVIS@NMSU.EDU CLOVISSC.NMSU.EDU



New Mexico State University aces.nmsu.edu

12

Challenges





Agricultural Science Centers are Living Laboratories





Capital Improvements





Thank you!



Jay M. Lillywhite Associate Dean / Director, Agricultural Experiment Station

College of Agricultural, Consumer, and Environmental Sciences MSC 3169 New Mexico State University P.O. Box 30003 Las Cruces, NM 88003

Office: 575-646-5321 Email: lillywhi@nmsu.edu

