

Rex E. Kirksey Agricultural Science Center at Tucumcari

BE BOLD. Shape the Future.
College of Agricultural, Consumer
and Environmental Sciences



The Rex E. Kirksey Agricultural Science Center at Tucumcari (REKASCT) is known for conducting locally driven, globally relevant research related to crop (including forages) and livestock production under irrigated and dryland conditions. These efforts focus on: **improving the quality, safety, and reliability of food and fiber products**, which enhances agricultural profitability; **stimulating economic development** using natural resources; sustaining the environment and protecting natural resources with sound practices, and **improving the quality of life for the people of New Mexico**.



FUTURE GOALS

- Replace, upgrade, and/or construct buildings and facilities to meet the demands of ongoing and increasing programs.
- Evaluate the cropping potential and environmental impacts of using treated municipal wastewater for agricultural irrigation.
- Address rangeland health issues in northeastern/east-central New Mexico.
- Discover horticultural crop options for small farms with few available resources, particularly in regard to water.



Only center reusing treated municipal water for irrigation, **providing a year round source for irrigated research**.



Capacity to conduct **both crop and livestock research**.



Over 30 external partnerships/ collaborators, including five international connections



(continued on back)

ACES Pillars for Economic and Community Development



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. New Mexico State University is an affirmative action/equal opportunity employer and educator. NMSU and the U.S. Department of Agriculture cooperating.

2019 IMPACTS

Beef herd improvements have been made for more than half a century due to feed efficiency testing. **This has led to an estimated value exceeding \$800,000 annually to New Mexico's beef cattle industry.**

Alfalfa variety testing potentially returns \$46 million to New Mexico's growers. Differences between the highest- and lowest-yielding varieties in irrigated alfalfa tests statewide ranged from 1.11 to 1.61 tons per acre in 2019. If sold as hay, this translates to a potential difference in returns of \$273 to \$396 per acre due to variety.

Strip-tillage for corn production has environmental and economic benefits in New Mexico. Corn constitutes about 17% of New Mexico's irrigated crop area. **The strip tillage yield advantage in corn in New Mexico is estimated to be \$12.9 million over conventional tillage** in addition to energy savings and the advantages of controlling soil erosion and improving water- and nutrient-use efficiency.

Manure application costs can be cut by up to 60% by applying manure only in the strip-till zone. Additionally, three years after a single 10 tons /A manure application, with or without incorporation, grain sorghum biomass continues to be greater by no-till planting into the original strip-till zone.



ONGOING RESEARCH

Reviewing results of applying of a multi-nutrient source to potassium-deficient soils for boosting alfalfa yield and nutrient value.

Continuing to test bulls and heifers for improved beef herd genetics. This testing has led to an estimated value of \$800,000 annually to New Mexico's beef cattle industry.

Evaluating conditions to improve yield and quality for guar producers. Growing guar domestically would reduce production and importing costs drastically.

Continuing the search for summer annual legumes to grow with summer annual cereal forages and management practices to improve forage yield and nutritive value.



Rex E. Kirksey Agricultural Science Center at Tucumcari

New Mexico State University

6502 Quay Rd. AM 5, Tucumcari, NM 88401

Phone: 575-461-1620

Email: tucumcar@nmsu.edu

Web: tucumcarisc.nmsu.edu

New Mexico State University Agricultural Experiment Station