Rex E. Kirksey Agricultural Science Center at Tucumcari

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Mission Statement

The New Mexico State University Rex E. Kirksey Agricultural Science Center at Tucumcari (REKASCT) conducts 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.

The Tucumcari Feed Efficiency Test, LLC (TFET) conducts annual Tucumcari Bull Test and other feed efficiency tests to encourage beef cattle herd improvement.

More than 50 species of trees and shrubs are established at the center.

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

Capacity to conduct both crop and livestock research.

LOCATION

The Rex E. Kirksey Agricultural Science Center at Tucumcari is located on U.S. Highway 54, three miles northeast of Tucumcari and Interstate 40, Exit 333. The center'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.

WEATHER

The weather station at the Rex E. Kirksey Agricultural Science Center at Tucumcari has remained in continuous operation since its establishment at its current location in January 1912. Weather observations include maximum and minimum air, soil, and water temperatures; precipitation; wind speed; and aboveground pan evaporation.

OUTREACH ACTIVITIES

Due to the COVID-19 pandemic, many events have been canceled or rearranged to be offered virtually, to include:

- Canadian River Soil and Water Conservation District meetings
- Solicited support for educational programs from local businesses, raising $1650
- Annual Tucumcari Bull Test and Sale
- Farm Day presentations to Tucumcari Elementary School students
- Pumpkin Patch distribution to a local elementary school

Under New Mexico State guidelines, the 2021 Annual Field Day was hosted in-person at the Rex E. Kirksey Agricultural Science Center on August 3rd.

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.

2020 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 $15 million to New Mexico's growers. Differences between the highest- and lowest-yielding varieties in irrigated alfalfa tests statewide ranged from 0.42 to 2.91 tons per acre in 2020. If sold as hay, this translates to a potential difference in returns of $97 to $672 per acre due to variety.

- Whitefringed beetle infestations continue to be the cause of early stand decline in alfalfa. Persistent beneficial entomopathogenic nematodes with the potential to control whitefringed beetle infestations in alfalfa, as well as other root-feeding pests of many crops, can be introduced into irrigated fields in New Mexico to protect crops and recover fields.

- Spring planting of alfalfa can be used to recover some or all of the establishment costs in the seeding year. Further, it is possible that earlier spring planting leads to greater annual yields throughout the life of the stand compared to late summer seedings by approximately 1.5 tons/acre/year, at least in intensive management systems that maximize the number of harvests taken each production year.

Ongoing Research

- Continuing to evaluate the effect of applying 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.

- Continuing grazing research to evaluate economic enhancement through dual purpose of grain crops.

- Continuing to evaluate the long-term effects of a singe manure application in dryland sorghum production.

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