NM STATE

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

MISSION

The New Mexico State University Rex E. Kirksey Agricultural Science Center at Tucumcari (REKASCT) conducts locally driven, globally relevant research related to crops (including forages) and livestock production under irrigated and dryland conditions.

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

Value Added to New Mexico
- Reclaimed Water
- Dry Beans
- Oldest NMSU Agricultural Science Center-adding historical knowledge and value to the community and state.
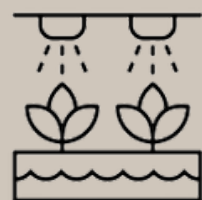
The Rex E. Kirksey Agricultural Science Center at Tucumcari is located on U.S. Highway 54, three miles northeast of Tucumcari and Interstate 40, exit 333. The center's property consists of 464 acres, with 170.9 acres having Arch Hurley Conservancy District water rights and a contract for 300 acre-feet annually for treated municipal wastewater to be delivered from the City of Tucumcari Wastewater Treatment Plant.

Efforts at the center 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.

Ongoing Research

- Ongoing beef herd improvements have been made for over half a century due to feed efficiency testing leading to an estimated value exceeding $800,000 annually for New Mexico's beef cattle industry. Average feed to gain ratio for the test is 5 lb feed per lb of gain while the national average is 6 lb feed/lb gain.

- Field bindweed is a competitive, summer-active weed that reduces productivity in irrigated pastures. Ongoing results indicate a potential reduction in bindweed biomass and the number of clones in spring and summer by grazing.

- Manure application costs can be cut by up to 60% by applying manure only in the strip-till zone. Additionally, six years after single 10 tons /A manure application with 6-inch incorporation, grain sorghum biomass yield was still greater by 14%, compared to the no manure control.

- Evaluating conditions to improve yield and quality for guar producers. Growing guar domestically would reduce production and importing costs drastically.
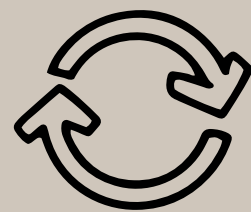
The College of Agricultural, Consumer, and Environmental Sciences is an engine for economic and community development in New Mexico, improving the lives of New Mexicans through academic, research and Extension programs.

- Successful identification of crop species or variety in New Mexico to replace the fallow period in semiarid cropping systems will not only help the local farming community to achieve higher resource use efficiency (especially water) and productivity, but also promote state-level infrastructure and broader marketing opportunities in New Mexico. Introduction of resource use efficient crop selection will result in broader diversity in the existing cropping systems. It is anticipated that identifying the water use efficient dry bean/guar will increase the per acre productivity in approximately 380,000 acres by rotating with winter wheat/alternate semi-arid crops in New Mexico.

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

- Began evaluations of dual-purpose (grazing and grain) winter malt barley.

- Continued studying the effects of using treated municipal wastewater for agricultural irrigation on soils and crops.

Recent Impacts

- Producers of the arid southwest can benefit from the current research recommendations about cover crop choices for the summer season in the desert southwest. However, region specific recommendations based on local weather conditions and specific agricultural and economic needs should be carefully considered before practicing these recommendations.

- Using pearl millet rather than sorghum-sudangrass for late summer through autumn pastures for growing cattle offers producers an opportunity to increase returns on the similar investments of establishing and managing warm-season annual forage crops each year and allows more time to stockpile cool-season perennial and annual forages for winter and early spring grazing or to reduce hay feeding.

- Variety selection is key to a highly productive stand of any crop at the same production costs. Differences between the highest- and lowest- yielding alfalfa varieties in irrigated tests statewide ranged from 0.60 to 3.06 tons per acre in 2021. If sold as hay, this translates to a potential difference in returns of $135 to $689 per acre due to variety, or a potential increase of at least $18 million for the industry.

Community Outreach

The Rex E. Kirksey Agricultural Science Center serves as a hub for community support in Tucumcari. By hosting an annual bull sale, 4-H events, field trips for elementary students and other educational events, the center takes pride in offering a space for agricultural research to be accessible to New Mexicans.

Field Day: The purpose of this free event is to bring producers and researchers together to visit/interact with each other and share ideas/opinions about different cultural practices. This is the perfect opportunity for producers to tour and see the research projects that are being conducted at the Center and also to ask questions and get answers in a one-on-one setting.

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