Agricultural Experiment Station

Rex E. Kirksey Agricultural Science Center at Tucumcari

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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.

VISION

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

MISSION

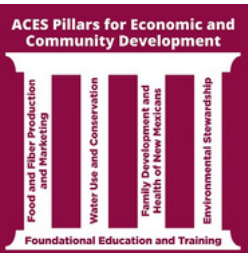
New Mexico State University's Rex E. Kirksey Agricultural Science Center at Tucumcari exists to discover, develop, and deliver information about innovative solutions for water-smart crop and livestock systems in irrigated and dryland agriculture that are of benefit to New Mexicans and also globally applicable.

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

ONGOING RESEARCH

Primary research conducted at the Rex E. Kirksey ASC focuses on semiarid cropping systems, irrigated forage crops and grazing management, genetic improvement of beef cattle through feed efficiency testing, and reuse of treated municipal wastewater for agricultural irrigation.



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.

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RECENT IMPACTS

- The Tucumcari Feed Efficiency Test increased capacity again in 2024 from 160 to 224 bulls tested during winter, with plans in place to also test heifers and continue year-round testing. Genetic improvement in feed efficiency of New Mexico's beef cattle herd brings greater returns to the state's ranchers and those retaining ownership in the feedlot. It also helps with limited forage production during drought and greater pregnancy rates at New Mexico'sranches. The widening audience of the Feed Efficiency Test and Sale has resulted in a more competitive market for the participating producers.

- Successful identification of efficient cropping systems to replace traditional semi-arid cropping systems will not only help the local NM farming community achieve greater resource use efficiency (especially water), productivity, and sustainability but also reduce the seasonal risk of crop failures due to water scarcity. Opportune crop rotations with winter wheat are being evaluated for their water use, production capacity, and influence on soil health under limited irrigation conditions using grain/forage legumes, millets, and cover crops to replace fallow. Opportune cropping to achieve greater resource use efficiency (especially water and nutrients) and productivity will not only generate increased farm-level income for producers but also promote broader marketing and economic opportunities in NM.

- Planting legumes with forage sorghum may increase protein content and/or yield and save on nitrogen fertilizer applications. Increasing the protein content of harvested forage also reduces the protein supplementation requirement for livestock. Grazing winter canola in autumn and harvesting for grain in spring may add value to canola grain systems as it does for winter wheat. Each of those scenarios reduces production costs for New Mexico's forage producers, also maintaining lower food costs for all New Mexicans.

COMMUNITY OUTREACH

The Rex E. Kirksey ASC 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.

The Center annually hosts a Field Day to showcase their research efforts. The purpose of this free event is to bring producers and researchers together to visit and interact with each other and share ideas and opinions about different cultural practices. This is the perfect opportunity for producers to tour the Center and see the research projects that are being conducted, providing an environment for visitors to ask questions and get answers with the research team in a one-on-one setting.