



# Agricultural Experiment Station

## Agricultural Science Center at Farmington

[farmingtonsc.nmsu.edu](http://farmingtonsc.nmsu.edu) | 505-960-7757

### VISION

**Building agricultural and community resilience with innovative science that respects regional cultural values in the Four Corners Region (Navajo Nation and beyond).**

### MISSION

**The mission of the New Mexico State University Agricultural Science Center at Farmington is to conduct research, demonstration, and educational programs that will best fill the needs of the agricultural community of San Juan County and the Navajo Nation in particular, and the State of New Mexico, Four Corners Region, and United States in general. -1968 Charter**

- NMSU is the only 1862 Land-grant University to have a science center reside on sovereign First Nations Land, the Navajo Nation.



- Home to the Yéego! Healthy Eating and Gardening Project which evaluates community and school garden curriculum working with the surrounding community.



- Weather conditions in the Four Corners region are variable and influence crop-growing periods across the region with late spring and early fall frosts.



### Value Added to New Mexico

- Center pivots and drip irrigation
- Specialty, commodity, cover crop, and certified organic crop production
- Agroforestry; Environmental and agricultural soil quality monitoring



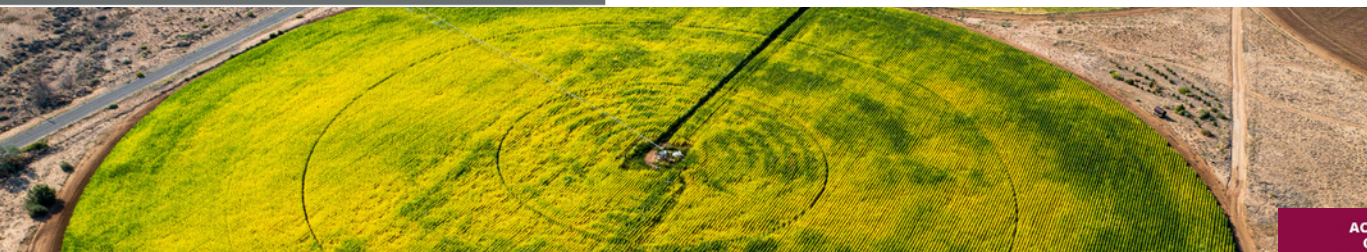
The NMSU Farmington Agricultural Science Center (ASC) conducts research to support fundamental and applied science and technology research to benefit New Mexico's citizens in the economic, social, and cultural aspects of agriculture, natural resource management, and family issues.

Research is conducted in soil and crop evaluations and their intersect with community wellness, economic development potential, water conservation, and environmental stewardship.

### ONGOING RESEARCH

Potato response to irrigation and nitrogen fertilizer is being investigated with the intent of exploring the best intervals of water and nitrogen input to ensure water and fertilizer conservation while maintaining high yield, quality, and improving crop water productivity.

Farmington features one of three ASC vineyards established in the state to cultivate and test 12 table grape varieties, grown using a "Y" trellis system. Sensory evaluations with students are conducted to determine likability. Other trials of specialty crop evaluations include specialty grains, pollinator plants, jujube, and cherries.



*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.*

#### ACES Pillars for Economic and Community Development



## RECENT IMPACTS

- Farmington ASC viticulture enables the evaluation of potential table grape varieties for fresh market sales and consumption. Impacts can contribute to a diversified variety production.
- One study aims to develop nitrogen fertilizer production functions for potatoes and holds the potential to increase potato growers' net economic returns while reducing contamination of soil and groundwater by nitrates.
- An investigation was launched to establish the first and second-year optimum nitrogen fertilizer application rate of corn after 3 to 5 years of irrigated alfalfa production. Findings could potentially increase corn growers' net economic returns while reducing contamination of soil and groundwater from applied nitrates.
- Few healthy eating, school-based interventions have been rigorously evaluated in American Indian communities. Type-2 diabetes is a serious issue on the Navajo Nation. Collaborative efforts supported the implementation of a school gardening project in local areas. Students in the intervention schools had self-efficacy scores for eating fruits and vegetables that were significantly higher than those in the comparison schools.

## COMMUNITY OUTREACH

Farmington ASC community engagement occurs at multiple scales, from backyard gardens to center-pivot field production. Field days and farmer visits form the basis for traditional place-based outreach. Since 2009, Farmington ASC faculty have been partnering with Public Health researchers from the Fred Hutchinson Cancer Research Center to examine the transects of horticulture and diabetes risk reduction. This outreach-oriented research enables Farmington ASC faculty to work with communities to address solutions that promote both gardening and healthy eating among Navajo elementary school children and their families with the ultimate goal of impacting public policy across the Navajo Nation. The Farmington ASC continues to assist farmers with understanding the impacts of the Gold King Mine spill of 2015. The impact of this work is aiding a broader effort in San Juan County, NM to reduce the stigma of the spill and build up the agricultural economy of Northwestern NM. Of note, in 2022, officials from the Farmington ASC and the University of Arizona teamed up to host the "Sustainability Fair" at Shiprock.

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