Agricultural Science Center at Clovis

The NMSU Agricultural Science Center (ASC) at Clovis is centrally located in the largest crop production area of New Mexico and serves as a critical hub for research and outreach focused on water conservation, soil health, nutrient management and sustainable agricultural production. As water supplies become increasingly unpredictable, the center plays a vital role in helping producers adapt to current challenges and build long-term agricultural resilience. It is the state's only research center dedicated to dryland transition strategies and the only plant breeding center engaged in developing Valencia peanuts.

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clovissc.nmsu.edu

Research Focus

Current research efforts at ASC Clovis include programs focused on improving soil health, food security and resiliency to extreme weather events. Cropping systems and the soil management team study multiple agroecological practices (e.g., cover cropping, crop rotation, tillage management, etc.) to improve soil health, soil organic matter storage and nutrient cycling. Other research efforts include using data-driven insights to support farm decision-making, optimizing resource use efficiency and enhancing soil fertility. Dairy research also advances sustainable manure and nutrient management through biological wastewater treatment, nutrient recovery and strategies to improve water quality. Researchers also study impacts of circular grass buffer strips (CBS) of perennial grasses to enhance multiple ecosystem services and cotton production. Additionally, the NMSU Valencia peanut breeding program develops climate-resilient cultivars tailored to the production environments of Eastern New Mexico and the Southern High Plains. These improved cultivars strengthen the competitiveness of New Mexico's peanut industry while providing growers with reliable, high-value varieties adapted to water-limited production systems.

MISSION

The mission of the Agricultural Science Center at Clovis is to conduct crop, soil and water research, disseminate viable cropping strategies that benefit New Mexico's citizens and beyond on agricultural production, anticipate challenges, and build strong relationships with stakeholders.

VISION

Advancing resilience and sustainability in semi-arid agricultural systems through research, extension education, and innovation in crops and cropping systems, soil health, water and carbon management.

VALUE ADDED TO NEW MEXICO

- New Mexico's peanut production was valued at over $24 million in 2025.
- Improved soil health with cover cropping increased forage production by two to four tons per acre, substantially increasing milk production and quality.
- Conservation farming (e.g., no-tillage, cover cropping, crop rotation) reduced soil erosion, resulting in enhanced air and water quality.
- Circular buffer strips have been shown to improve water conservation and water use efficiency, while improving productivity, soil health, carbon sequestration and biodiversity conservation.

The College of Agricultural, Consumer and Environmental Sciences (ACES) is an engine for economic and community development in New Mexico, improving the lives of New Mexicans through research, teaching and Extension.

Recent Impacts

- Research on CBS is gaining national and international attention for its potential to enhance multiple ecosystem services and improve agricultural sustainability.
- Biochar has shown significant potential to improve soil health while increasing carbon storage in arid and semi-arid regions. Greenhouse, laboratory, and field studies demonstrated that pine wood biochar reduced nitrous oxide emissions and CO_2-equivalent carbon emissions compared to unamended controls.
- Studies revealed that while cover crops increase surface soil moisture, the pea-oat mixture enhanced precipitation use efficiency and achieved the highest crop water productivity compared to single-species cover crops and fallow controls. Machine learning models are useful in water-management decision making in cropping systems.
- The NMSU Peanut Breeding Program develops next-generation Valencia cultivars with superior yield, premium kernel quality, high oleic acid content, and durable resistance to major soil-borne diseases.





NMSU Dairy Extension Research

Located at ASC Clovis, NMSU Dairy Extension connects applied research, education and industry partnerships to strengthen dairy production, workforce capacity and agricultural communities in New Mexico, the western U.S. and internationally. The program addresses animal health and welfare, employee safety and animal handling, environmental stewardship, emerging technologies, regulatory compliance and farm sustainability. Microalgae-based dairy wastewater treatment findings demonstrate that microalgae systems have the potential to reduce nutrient loading while recovering nutrients in algal biomass. The project supports development of a circular manure management approach by linking wastewater treatment with biomass recovery. Dairy Extension research focuses on nutrient and wastewater management, environmental impact reduction, and practical nature-based approaches to recover nutrients and water.

COMMUNITY ENGAGEMENT

ASC Clovis strengthens connections between NMSU and agricultural communities. Annual events such as the field days and farm outreach days engage producers and industry partners by showcasing research and gathering stakeholder input to guide future priorities. The center also hosts youth education programs, including Cultivating Young Minds, which introduces local students to agriculture through hands-on learning experiences.

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NMSU and the U.S. Department of Agriculture cooperating.