

VISION

Advancing climate-resilient agriculture in semi-arid agricultural systems through research and innovations in soil health, water, and carbon management.

MISSION

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

- Cropping systems and soil management programs investigate soil-plant-environment interactions in arid and semi-arid regions.



- Improving water cycle, soil health, and ecosystem services using circular grass buffer strips of native perennial grasses.



- Enhancing the breeding potential of Valencia peanuts for early maturity, drought and disease resistance for NM and worldwide production.



Value Added to New Mexico

- Establishing a soil health framework for water-limited environments
- Climate resilience through carbon sequestration and soil health
- Monitoring greenhouse gas emissions in diverse cropping systems



The NMSU Agricultural Science Center at Clovis is centrally located in the largest crop production area of NM and is uniquely qualified to conduct agricultural research and producer outreach activities aimed at efficiently managing the area's limited water resources and increasing the economic viability and sustainability of agricultural production. It is the only research center focusing on sustaining the Ogallala Aquifer in the state.

The efforts to address current challenges faced by reduced irrigation or dryland agriculture and preparing for future challenges will be extremely important as temperatures continue to rise, and water becomes more limited.

ONGOING RESEARCH

ASC Clovis has positioned itself as the carbon management and soil health research center with significant activity on soil carbon sequestration, soil health assessment and management, and greenhouse gas mitigation. The carbon management program has attracted national and international collaboration. Researchers at the center also pioneered the development of a soil health matrix for water-limited regions.



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

- Sustainable nitrogen (N) management has emerged as a critical challenge of the 21st century due to the need to minimize its loss to the environment and maintain food production. In a recent study, findings showed urea cocrystal fertilizer provided a balanced nitrogen supply, increased crop yield, and nitrogen use efficiency of sorghum. Enhanced-efficiency fertilizers can be alternative fertilizers for improving nitrogen supply and reducing nitrogen loss to the environment.
- By storing carbon, soil provides natural solutions to climate change, yet there is a research gap on the soil carbon sequestration potential of arid and semi-arid regions. One study synthesized the global data on soil organic carbon sequestration potential of conservation agriculture in dry environments.
- The innovative cropping design of Circular Buffer Strips improved the conservation of heavy-intensity rainfall events of over 2 in. by 100% and improved microclimate to increase the efficiency of using that water by 40%.
- Newly released Valencia Breeding lines from NMSU outyielded the local varieties in Bangladesh, Canada, and Haiti to enable sustainable livelihoods, food security, and nutrition worldwide.
- The herd size of NM dairies is more than 10 times the US average. Effective training of current and future employees is imperative. Limited educational opportunities exist. A training program was launched to improve job performance and is provided in a preferred language available (English, Spanish, or K'iche). Approximately 6,000 employees have been trained in dairy safety and animal handling.

COMMUNITY OUTREACH

The Center plays a major role in connecting the rural agricultural producers in this region with expertise for efficient and higher-yield farming practices. Every year, the ASC at Clovis hosts multiple community outreach events to inform industry partners, youth, and local farmers about various projects and their results. On field days, producers and researchers can visit and interact with each other. This is the perfect opportunity for producers to tour and see the research projects that are being conducted at the Center and also to engage with researchers in a one-on-one setting. Additionally, Cultivating Young Minds is an annual event targeting 5th-grade students from Clovis elementary schools. Students can visit the Center and learn about plants. At the end of their visit, students are able to go to the center's pumpkin field and pick a pumpkin or two to take home. In 2022, about 661 students from 14 schools attended the event.

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