Agricultural Experiment Station

Agricultural Science Center at Clovis

clovissc.nmsu.edu | 575-985-2292

The NMSU Agricultural Science Center at Clovis is centrally located in the largest crop production area of New Mexico 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.

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.

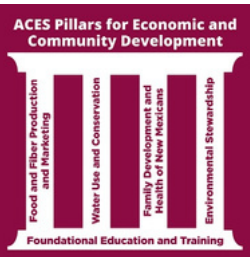
VALUE ADDED TO NEW MEXICO

- 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

ONGOING RESEARCH

The 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.



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RECENT IMPACTS

- Biochar amendment could be a climate-smart agricultural strategy for arid and semi-arid regions. Using greenhouse, laboratory, and modeling experiments, we studied biochar-mediated changes in soil properties and their contribution to C stabilization and GHG mitigation. We showed that pine wood biochar reduced cumulative N2O-N emissions by 69%—74% and CO2 equivalent C emissions by 67%—72% compared to the unamended control. It also increased soil organic carbon storage, increasing sorghum yield by up to 48%.
- Process-based models such as DayCent are valuable tools for understanding the complex relationship between soil, plant, environment, and management practices, providing insights into long-term sustainability and productivity. A simulation study in wheat-sorghum-fallow rotation using DayCent revealed that cover cropping can accumulate SOC over three decades and increase SOC stock by 26 to 36% compared to fallow. Integrating cover cropping could improve the sustainability of wheat-sorghum-fallows by increasing SOC and improving soil health.
- As part of an effort to identify suitable and effective tools in the toolbox of New Mexico dairy producers to reach environmental sustainability goals, NMSU Dairy Extension is evaluating the applicability of vermiculture utilizing a (BioFiltro) commercial pilot system on two different dairies. Evaluating possible vermi-compost and carbon-offset markets are a pet of the project.
- NMSU Dairy Extension is the lead partner in the New Mexico AgrAbility Project (NMAP), one of the 21 states providing information and resources with the goal of enhancing the quality of life for farmers, ranchers, and other agricultural workers with disabilities. NMAP is currently working with a number of clients and was able to attract the National AgrAbility Program's National Training Workshop to Las Cruces (March 2025) to coincide with the opening of a Farm & Ranch Heritage Museum's opening of the AgrAbility Exhibit.
- Each year, New Mexico State University's Clovis Agricultural Science Center in collaboration with the Cooperative Extension Office hosts the "Cultivating Young Minds" annual event. This event targeted fifth graders from schools in and around Clovis. During this event, students spend around one hour at the Center and learn about soil, plants, and where their food comes from. At the end, students go to the pumpkin field and pick one or two pumpkins to take home. With this event, we get to showcase our research station to the kids, who in turn tell their parents all about it.

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.