AGRICULTURAL SCIENCE CENTER AT CLOVIS
STRATEGIC PLAN 2020-2025

MISSION

The mission of the Agricultural Science Center at Clovis is to conduct crop research and disseminate viable strategies that benefit New Mexico's Citizens and agricultural production. We anticipate challenges, solve problems, build relationships, and secure funding.

The NMSU Agricultural Science Center at Clovis is centrally located in the largest crop and livestock (dairy in particular) production area of New Mexico and is uniquely qualified to conduct agricultural research and producer outreach (Extension) activities aimed at efficiently managing the area's limited water resources and increasing the economic viability and sustainability of agricultural and dairy productions.

The research and outreach program at the Clovis Agricultural Science Center is guided by an Advisory Committee comprised of agricultural producers and business leaders from the area. In 2004, The Advisory Committee worked with center staff and college/university administration to develop a legislative initiative to enhance the research and extension programs offered at the Center. Since 2004, with the Advisory Committee leadership in this area the Clovis ASC has been successful in obtaining funds from the New Mexico Legislature.

OPPORTUNITIES

- The center is strategically located to work on collaborative projects with Texas Agri-Life research centers at Lubbock and Amarillo, and Eastern New Mexico University.
- Improving the sustainability of dryland and limited-irrigated agriculture in transition.
- Diversity in expertise of scientists at the center for collaborative projects.
- Strategically located on the tail end of Ogallala aquifer (a threatened resource). Water is getting limited and the development of varieties that can perform better under dryland conditions is needed.
- Niche market in organic crop and dairy productions.
- Increase graduate student, post-doc involved research collaboration with large research institutes (surrounded by 2 USDA-ARS, 3 four years colleges, 2 large TAMU research centers)
- With additional funding, the dairy workforce training programs can be duplicated across additional areas.
- The increased attention to the program has lead and continues to draw the attention of proposal writers needing access to dairies for research and access to teaching programs

for their extension goals in the proposals. The Dairy Consortium has successfully been written into several large Integrated USDA (CAP) grants.

GOAL 1: ENHANCE STUDENT SUCCESS and SOCIAL MOBILITY

Objective 1.1: Maintain and enhance the existing structure that supports student success.

Actions:

- Pursue extramural grants and fellowships that target research opportunities and professional training for students.
- Collaborate with campus and other ASC faculty on grants that support graduate student research.

Objective 1.2: Increase recruitment and retention of undergraduate and graduate students in programs of the College of ACES.

Actions:

- Use stakeholder advisory committees in student recruitment and support activities.
- Provide immersion-based learning opportunities for students.
- Include ASC faculty on departmental and college recruitment committees.

Goal 1 Key Performance Indicators (KPIs)

	Year 1	Year 3	Year 5
Graduate Students	3	4	6
Guest Lectures	2	3	4
Graduate Research Projects	3	4	6

Leading Indicators

- On-campus presentations and/or guest lectures in class or lab.
- On-site field trip, presentation, and or guest lectures for visiting class or labs.
- Student participation in research projects.

Goal 2: ELEVATE RESEARCH AND CREATIVITY:

The overall goal of research at the Clovis Agricultural Science Center is to conduct applied research to improve sustainability and resiliency of dryland and limited-irrigated cropping systems in the face of increasing water limitation, soil fertility depletion, and climate change.

Objective 2.1: Conduct research, teaching, and extension programs on emerging issues.

Actions:

- Maintain and enhance existing infrastructure and capability that supports innovative applied research.
- Support research for the development of crops and cropping systems that are resilient to water scarcity, pests, and disease.
- Developing weed management strategies in core crops (winter wheat, sorghum, and corn) as well as alternative crops (canola).
- Evaluate cropping systems that focus on conservation tillage, crop rotation, cover cropping, and crop residue management strategies for improving soil quality, water use, and crop productivity in dryland and limited-irrigated cropping systems.
- Evaluating alternatives for smooth transitioning of irrigated agriculture into limited-irrigated or dryland production.
- Variety testing to evaluate the performance of several winter wheat, corn, and sorghum varieties for forage and grain productions.
- Develop management strategies to prevent or slow pesticide resistance.
- Conduct research supporting industries that benefit the economy of New Mexico.
- Developing a long term peanut breeding program to identify diverse germplasm with beneficial traits from subsp. fastigiata var. fastigiata (Valencia) and markers associated with agronomic and seed quality traits, resistance to pod rot, and tolerance to drought.

Objective 2.2: Address critical water use and conservation issues in New Mexico and beyond (national/international) using a science-based approach.

Actions:

- Advance our understanding of impacts of using alternative water sources for irrigated agriculture.
- Evaluate stress-tolerant and well adopted alternative crops for the region.
- Deficit irrigation management practices and water use efficiency.
- Understanding heat and drought Stress Physiology of crops.

Objective 2.3: Encourage and reward interdisciplinary and integrated relationships with other research efforts across the university and external partners, emphasizing both applied and fundamental methods for developing comprehensive solutions to relevant issues.

Actions:

- Collaborate with other units at NMSU, other universities, federal agencies, and private industry involved in research.
- Develop international research collaborations.
- Identify and target public-private relationships and partnerships.

Objective 2.4: Address critical environmental issues in New Mexico and beyond.

Actions:

- Evaluate soil and crop management practices that enhance efficiency, profitability, and soil and environmental quality in dryland and limited irrigated cropping systems in current and future climate scenario.
- Focus on generating much-needed information on soil organic matter dynamics, nutrient cycling, soil erosion control, soil water conservation for improving sustainability and resiliency of cropping systems in transition.
- Adapting Crop Simulation Models on Underutilized Potential Alternative Crops.
- Support programs that seek to understand how microbial community diversity and ecosystem functionality impact desertification and rangeland management, as well as soil health in cultivated systems.
- Investigate the natural environmental system and agricultural industrial controls over nutrient fluxes, utilization, and cycling/recycling.

Key Performance Indicators (KPIs)

	Year 1	Year 3	Year 5
Externally funded research	$200,000	$225,000	$250,000
Research projects	25	30	35
Research Productivity	4	4.5	5

Leading Indicators

- Research and development expenditures
- Number of Grant and Proposal Submitted
- Number of Grant and Proposal Funded
- Research productivity (Publications)
- Number of graduate Students, post-Docs, and visiting scholars
- Graduate student, presentations at local regional, and national meetings
- Number of joint/collaborative projects
- Number of workshops/presentations/field tours
- Number of advisory board meetings

GOAL 3. AMPLIFY EXTENSION, OUTREACH, AND ECONOMIC AND COMMUNITY DEVELOPMENT

Objective 3.1: Develop innovative, multidisciplinary educational programming addressing issues relevant to New Mexico and expand the clientele base.

Actions:

- Produce materials for dissemination through mass media outlets, including in various languages –

- Initiate faculty lines to provide expertise in areas identified by stakeholder advisory committees.
- Continue with the "Cultivating young Minds" program targeting 5th graders from Clovis Elementary Schools.

Objective 3.2: Connect current research with the community.

Actions:
- Host workshops, field days, and field tours for our clientele to come and see firsthand the research that is being conducted at the Center.
- Prepare area producers and other stakeholders to cope with potential impacts of water limitation, climate variability, and changes.
- Active participation in on-site consultations to address the needs of our local producers
- Disseminate and present research results at local, regional, national, and international meetings.
- Improve websites that describe results of current research.
- Increase social media presence to highlight research and creativity activities.
- Assist the Cooperative Extension Service to disseminate research-based information to the citizens of NM, including co-authoring Extension publications based on research conducted at the ASCs.

Key Performance Indicators (KPIs)

	Year 1	Year 2	Year 3
Annual Field Day	1	1	1
Outreach Events	2	3	+5

Leading Indicators

- Number of field tours
- Number of workshops
- Number of clientele contacts
- Number of presentations at local, regional and national meetings
- Number of publications and media releases

GOAL 4. BUILD A ROBUST UNIVERSITY SYSTEM

Objective 4.1 Recruit undergraduate and graduate students and faculty globally and increase the recruitment from underrepresented groups.

Actions:

- Provide opportunities for faculty to develop novel innovative research that will provide preliminary data to support faculty seeking extramural funds

- Provide a venue to bring NMSU faculty and staff to interact with New Mexicans and help support the mission of meeting the needs of New Mexico

Objective 4.2: Expand a K–20 outreach program, inclusive of 4-H, focused on increasing participation and underrepresented groups to increase student awareness and participation in ACES programs and associated careers.

Actions:

- Communicate opportunities, cooperate with youth development coordinators, and provide an affordable venue for youth activities

Objective 4.3: Encourage interdisciplinary and integrated management approaches in planning and implementing programs, emphasizing both applied and fundamental methods for developing comprehensive solutions to important issues.

Actions:

- Communicate willingness to provide facilities and infrastructure to scientists for developing comprehensive solutions to important issues

Objective 4.4: Elevate and promote the impacts and visibility of the AES and ASCs.

Actions:

- Provide service or product to stakeholders, therefore, completing a positive engagement
- Strategic use of gift account to support events through stakeholder event sponsorship and/or participation

Objective 4.5: Continue a targeted involvement in multistate, regional, and international programs.

Actions:

- Continue to provide facility and infrastructure support for scientists and specialists for developing research ideas and educational programming

Objective 4.6: Increase the level of support for ACES from the citizens of New Mexico; local, state, and federal governments and agencies; private corporations; foundations; and alumni.

Actions:

- Continue to work closely with our advisory committee to elevate our recognition within NM
- Partner with industry to develop support for research and outreach programming
- Cultivate positive interactions between staff and the citizens of NM

Objective 4.7: Encourage and cultivate staff excellence, and support staff training, development, and recognition.

Actions:

- Ensure that communication between Clovis ASC and campus faculty and staff is clear and effective, such that research objectives are met and challenges are addressed early and effective solutions to issues can be established
- Encourage staff to be involved throughout the state and attend pertinent professional development activities

Key Performance Indicators

	Year 1	Year 3	Year 5
Hosted meetings between Clovis ASC and On-campus faculty and staff	1	2	3
Support of novel innovative projects	1	2	3
Personal development seminar attendance for staff	1	2	3

Leading Indicators

- Increased collaborative research that has been fostered by open communication
- Novel research projects supported have resulted in federally-funded grant proposals
- Staff have attended personal development programs that have enhanced the mission of the Center