

NMSU ALCALDE SUSTAINABLE AGRICULTURE SCIENCE CENTER

STRATEGIC PLAN 2020-2025

MISSION

The mission of the Alcalde Sustainable Agriculture Science Center (SASC) is to conduct agricultural and natural resource research to benefit small-scale family farms and ranches of north-central New Mexico. Through testing of different crops, varieties, and production techniques, the goal is to provide new information that producers can adapt to their own operations for greater productivity and profitability. SASC serves as the headquarters for the Cooperative Extension Service's Rural Agricultural Improvement and Public Affairs Project (RAIPAP). CES RAIPAP provides programs in sustainable agriculture to the 13 northern counties that comprise the Small Farm and Ranch Task Force.

OPPORTUNITIES

- Soil Health/"Regenerative Ag"
- Water
- Jujube and other New or Value-Added Crops
- RAIPAP Collaboration
- Espanola/Northern NM Food Hub

GOAL 1: ENHANCE STUDENT SUCCESS AND SOCIAL MOBILITY

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

Actions:

- Include graduate research assistantships in SASC researcher-led grant proposals.
- Collaborate with campus and other Science Center faculty on grants that include graduate student research in northern New Mexico.
- Maintain and expand housing for graduate students at SASC.

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

Actions:

- Include student work opportunities in grant proposals.
- Recruit high school or undergraduate students when hiring summer help.

Key Performance Indicators (KPIs)

	Metrics		
	<u>Year 1</u>	<u>Year 3</u>	<u>Year 5</u>
Graduate research assistantships	≥ 1/yr	≥ 1/yr	≥ 2/yr
Student work opportunities	≥ 1/yr	≥ 1/yr	≥ 2/yr

Events with youth $\geq 1/\text{yr}$ $\geq 2/\text{yr}$ $\geq 3/\text{yr}$

Leading Indicators

- Number of graduate students researching at or in collaboration with ASC-Alcalde
- Number of student work opportunities at ASC-Alcalde
- Number of youth tours, events, and related at or in collaboration with ASC-Alcalde

GOAL 2: ELEVATE RESEARCH AND CREATIVITY

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

Actions:

- Advance understanding of high tunnel use for year-round, high-value crop production.
- Support research on organic crop production, high-value vegetable crop production, and regenerative agriculture practices that build soil health.
- Increase understanding of jujubes, medicinal herbs, and other alternative crops for New Mexico.
- Increase understanding of appropriate rootstocks, varieties, and management of traditional tree fruits for New Mexico.

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

Actions:

- Maintain research on acequia hydrology and watershed science.
- Conduct research on water use in agroecosystems of north-central New Mexico.

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:

- Develop and enhance collaboration with other units at NMSU, other universities, federal agencies, and private industries involved in research.
- Develop research collaborations through consortia and international programs.
- Identify and target public-private relationships and partnerships.

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

Actions:

- Advance our understanding of soil quality/health principles.
- 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 controls over nutrient fluxes, utilization, and cycling/recycling, including acequia hydrology.
- Investigate multiple land use options for rural communities that include ecosystem service markets.

Key Performance Indicators (KPIs)

	Metrics		
	<u>Year 1</u>	<u>Year 3</u>	<u>Year 5</u>
Ongoing fruit studies	≥ 3/yr	≥ 3/yr	≥ 3/yr
Ongoing vegetable and alternative crop studies	≥ 2/yr	≥ 2/yr	≥ 3/yr
Ongoing hydrology & cropping system studies	≥ 1/yr	≥ 1/yr	≥ 1/yr

Leading Indicators

- Number of high tunnel projects
- Number of projects on high value and/or alternative crops
- Number of projects on soil health/regenerative agriculture
- Number of trials on tree fruit rootstocks, varieties, etc.
- Number of projects on acequias and hydrology

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:

- Support the Small Farm and Ranch Task Force counties/agents in delivering needed agricultural and natural resource educational programs.
- Develop multi-county Extension education conferences, workshops, and field days.
- Develop Extension and outreach publications.

Objective 3.2: Connect current SASC research with the community.

Actions:

- Hold field days, workshops, and seminars.
- Support development of Extension publications on SASC research topics.
- Support development of SASC Impact flyers and Research Snapshot flyers.
- Maintain a comprehensive SASC website.
- Collaborate with local 4-H agents and leaders.
- Be a resource for local K-12; inform local schools of opportunities to tour Center.
- Maintain a strong connection with SASC Advisory Committee.

Key Performance Indicators (KPIs)

	Metrics		
	<u>Year 1</u>	<u>Year 3</u>	<u>Year 5</u>
Extension and Outreach events	≥ 8 events/yr	≥ 8 events/yr	≥ 8 events/yr
Extension and Outreach publications	≥ 1 pubs/yr	≥ 1 pubs/yr	≥ 1 pubs/yr

Leading Indicators

- Number of field days, workshops, and conferences
- Number of Extension circulars and guides, articles, press releases
- Number of meetings, tours, and contacts with clientele/stakeholders

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:

- Include high school student work opportunities in grant proposals.
- Recruit high school or undergraduate students when hiring summer help.

Objective 4.2: Expand the 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:

- Include high school student work opportunities in grant proposals.
- Hire high school or undergraduate students when hiring summer help.
- Collaborate with local 4-H agents and leaders.
- Be a resource for local K-12; inform local schools of opportunities to tour Center.

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:

- Encourage participation in interdisciplinary and multi-state research projects.
- Encourage interdisciplinary and integrated research and Extension projects to promote collaborations across different university entities.

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

Actions:

- Support ACES' efforts to repair and maintain SASC's facilities.
- Develop information that can be used to communicate the broad and high-quality activities of the SASC.
- Inform the people of New Mexico about accomplishments, areas of excellence, and the impacts of the SASC's accomplishments.
- Inform ACES and other colleges across NMSU of how the SASC is helping them solve key problems for ACES clientele.
- Continue communication and cooperative efforts with family and agricultural commodity groups, and trade, business, and educational associations.
- Collaborate in developing/improving online distance education capabilities and other educational facilities (hands-on/experiential) for students so that the experience of SASC faculty and staff can be leveraged in academic settings.

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

Actions:

- Continue with multistate, regional, and international programs, as appropriate to SASC faculty and SASC mission.
- Work with industry to develop workforce opportunities for students.
- Communicate the importance of regional and international activities to New Mexico citizenry and legislators.

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:

- Use the SASC Advisory Committee and other key constituents to expand and refine ACES and SASC legislative initiatives.
- Foster engagement with industry through internships, externships, and work experiences for students.
- Enhance staffing at ASC-Alcalde.

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

Actions:

- Strengthen initiatives in leadership development.
- Provide faculty and staff with training opportunities that will empower them to identify and implement processes that enhance system efficiency.
- Recognize faculty and staff excellence in service and research support.
- Attend professional meetings.
- Attend grower meetings, conferences, workshops, etc.

Key Performance Indicators (KPIs)

	Metrics		
	Year 1	Year 3	Year 5
Positions added	1/yr	1/yr	1/yr
Number of interdisciplinary/multi-state projects	≥ 1 /yr	≥ 1 /yr	≥ 2 /yr
Number of meetings, conferences, etc., attended	≥ 3 /yr	≥ 4 /yr	≥ 5 /yr
Number of buildings repaired	1/yr	1/yr	1/yr

Leading Indicators

- SASC is adequately staffed.
- Number of interdisciplinary and multi-state research projects.
- Number of professional meetings attended.
- Number of grower meetings, conferences, workshops, etc., attended.
- Number of buildings repaired.