

# **AGRICULTURAL SCIENCE CENTER AT LOS LUNAS**

## **STRATEGIC PLAN 2020-2025**

### **MISSION**

The Agricultural Science Center (ASC) at Los Lunas conducts research and Extension programs on various crops and plant-based systems important to New Mexicans in the Middle Rio Grande Valley (MRGV). The Los Lunas ASC works, via a cooperative agreement, with the USDA Natural Resources Conservation Service (NRCS) Los Lunas Plant Materials Center (PMC) to solve agricultural and conservation issues.

Since 1957, many types of crops have been researched on the 204-acre farm including alfalfa, corn, sorghum, grapes (wine and table), pasture grasses, chile and other vegetables, turfgrass, native plants, and fruit trees. Significant improvements in species and variety selection, plant and water management, and integrated pest control have resulted from the multi-faceted programming at the Los Lunas ASC. Research and Extension programs address the needs of farmers located on the 50,000+ irrigated acres of the Middle Rio Grande Valley, but also the urban gardeners and homeowners in the largest urban region of the state, reaching thousands of people each year.

### **STRATEGIC PRIORITIES**

- Improved sensor technology for small farm production.
- Trials of new varieties of forage and main crops.
- Niche crops and crops for new markets, horticulture plants that use less water, IPM research, mechanical green chile harvest.

### **GOAL 1: ENHANCE STUDENT SUCCESS AND SOCIAL MOBILITY**

Create plant sciences programs that effectively grow and shape diverse enrollment, support program demand, student retention, and timely graduation, and produce highly qualified graduates with value-added career outcomes.

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

#### **Actions:**

- Provide leadership for graduate students conducting applied agricultural research.
- Continue to identify and develop facilities to encourage student education and activities.
- Use the Los Lunas ASC as a student recruitment tool to expose potential students to New Mexico State University and agricultural research methods, such as hiring potential recruits for summer jobs.
- Pursue extramural grants and fellowships that target research opportunities, workshops, community projects, and professional training for researchers, extension agents, and students.
- Maintain a stakeholder advisory committee that aligns Extension, research, and other activities to meet student and public needs and thereby enhance recruitment.

- Provide experiment-based learning for students.
- Support and encourage local schools to tour the facility to expose the potential agricultural students the role of the experiment station within the university system.
- Continue to host events open to the public to highlight research on the experiment station.
- Continue to host events open to the public that support local youth agricultural programs.

**Objective 1.2:** Increase recruitment and retention as well as graduation rates of students in programs of the College of ACES.

**Actions:**

- Implement a coordinated ACES graduate recruitment and retention plan aimed at traditional, nontraditional, as well as international students that includes scholarships and highlighting the Agricultural Science Center at Los Lunas.
- Use the Agricultural Science Center at Los Lunas to support and maintain extension programs for K-12 to enhance youth outreach.
- Develop distance education opportunities that engage faculty and students with agricultural science centers and Extension programs across New Mexico.

**GOAL 1 Key Performance Indicators (KPIs)**

	<b>Metrics</b>		
	<b>Year 1</b>	<b>Year 3</b>	<b>Year 5</b>
Visitation lists on farm tours and events	20 Students	40 Students	60 Students
Employees	2 Students	4 Students	6 Students
Graduation Interaction	8 Students	10 Students	14 students
Graduate Projects	6	8	10

**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 or special events
- Number of active research projects utilizing CRLRC resources

**GOAL 2: ELEVATE RESEARCH AND CREATIVITY**

Identify creative strengths, engage graduate students, and build research capacity, funding, and reputation as defined by the four pillars of ACES.

**Objective 2.1:** Conduct research, teaching, and Extension programs to address ongoing and emerging issues.

**Actions:**

- Develop management and mitigation strategies to combat pesticide resistance.
- Build value-added programs in crop science.
- Develop horticulture programs that assist small farm/urban agricultural and green industries, including cropping systems that are more resilient to water scarcity and pests.
- Increase interdisciplinary initiatives for the production of alternative and specialty crops.
- Emphasize value-added byproducts and genetic improvement of agronomic crops.
- Foster interdisciplinary and collaborative research projects with other faculty, agricultural research institutions, the industry, and farmers.
- Acquire modern equipment to replace aging equipment for safety and efficiency.
- Continue to increase station sales.
- Increase private industry donations

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

**Actions:**

- Develop methods for mitigating emerging environmental concerns.
- Investigate land use options for enhancing ecosystem services in rural communities.
- Capitalize on grant funding opportunities requiring a formal Extension component that affords increased research opportunities.
- Increase water quality and quantity through improved water use, treatment, and conservation.
- Improve irrigation efficiency using existing infrastructure.

**GOAL 2 KPIs**

	<b>Metrics</b>		
	<b>Year 1</b>	<b>Year 3</b>	<b>Year 5</b>
Station sales	Maintain current station sales	25% increase	10% increase
Head House Remodel	Remodel plan ready for bid	Remodeling underway	Remodeling complete
Equipment/Vehicle Acquisition	Cultivator purchased Vehicle purchased	Two tractors purchased	
Graduate Students	Two graduate student research projects	Three graduate student projects	Four graduate student projects
Research Grant Monies	Maintain or increase the amount of funding on research through project grants	Increase the amount of funding on research through grants Having monies earmarked for labor, operations, and station infrastructure	Increase the amount of funding on research through grants Have grant monies equal 50% of the operational budget to relieve

### **Leading Indicators**

- Number of presentations at professional meetings.
- Number of graduate student research projects.
- Number of proposals submitted.
- Contributions to intellectual property and technology innovation.
- Amount of research grant funding and gifts.
- Number of new partnerships created.

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

Carry out programmatic activities for transferring scientific knowledge and advancements to relevant external audiences through open-access information resources, presentations, events training programs, and individual consultations.

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

#### **Actions:**

- Utilize onsite Extension specialists and collaborate with county Extension agents to provide timely assistance to clientele.
- Improve our website, use social/mass media, webinars, and print media to reach more people, especially in rural communities.
- Identify faculty to provide additional expertise in areas identified by stakeholder advisory committees.
- Host educational events for school children (e.g., Kids, Kows & More).

**Objective 3.2:** Connect current research with communities

#### **Actions:**

- Maintain a strong regional presence and grassroots connections to both rural and urban communities by hosting in-person and virtual field days, extension workshops, trainings, and classes.
- Foster departmental relationships with plant-related industries to support Extension education delivery with measurable and beneficial impacts.
- Provide flexible and timely responses to emergent situations (e.g., pest outbreaks) affecting plant-related industries in the state.
- Develop and support grant proposal submissions for on-farm projects, based on stakeholder input.
- disseminate research-based information and community development activities to the citizens of NM via workshops, field days, and demonstrations.
- Improve websites to offer results for current research.

- Collaborate with private and public sectors. Such as Olam spices, University of New Mexico, New Mexico Tech University, On-farm trials with Etgar, Harris Moran, the Plant Materials Center, IR-4, and Philmont Scout Ranch.
- Extension programs related to community and economic development.
- Extension clientele contacts, workshops, and courses.
- Evaluation of program impacts.
- Financial investment in programs.

**GOAL 3 KPIs**

	<b>Metrics</b>		
	<b>Year 1</b>	<b>Year 3</b>	<b>Year 5</b>
Number of public events at LLASC	3	5	7
Attendance at stakeholder events	2	4	8
Invited presentations	3	5	10
Number of collaborative events, with other ASC, Extension, On-farm trials, the PMC, other universities.	3	4	5

**Leading Indicators**

- Number/diversity of businesses, individuals, or communities assisted.
- Number of educational and certificate training programs.
- Number of publications and media releases.
- Number of collaborative activities.
- Student, faculty, and staff service to communities.
- Number of youth and students engaged.
- Faculty and staff numbers.
- Amount of federal, state, and county appropriations.
- Number and dollar amount of Extension proposals submitted/funded.

**GOAL 4. BUILD A ROBUST UNIVERSITY BY IMPLEMENTING COLLEGE-WIDE, MISSION-SUPPORTING STRATEGIC INITIATIVES**

Promote learning, inquiry, diversity, and social mobility with an Extension/Agricultural Science Center focus for K-12 and life-long learners, locally and internationally.

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

**Actions:**

- Employ students, as appropriate, from both the local High Schools and Universities.

- Help recruit for the local 4-H.
- Recruit for High School internships for the learning Garden under the direction of the Horticulture Extension Specialist.

**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:**

- Host events that support the local county Extension office, such as The Fall Harvest Festival, Kids, Kows and More, and the 4-H archery club.

**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:**

- Continue collaborative projects with Sandia Labs, the University of New Mexico, New Mexico Tech, and encourage collaborative projects with other outside entities.
- Initiate collaborative projects with other departments within New Mexico State University.

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

**Actions:**

- Enlist stakeholders to compose and publicize ASC impact stories.
- Collaborate with county Extension agents and industry to execute effective events to gain Extension program support from NM citizens not directly involved in agriculture.
- Inform legislators of how the Agricultural Science Center at Los Lunas solves problems for constituents.
- Pursue resources for improving the infrastructure of ACES and statewide Agricultural Science Centers.
- Inform the people of New Mexico about accomplishments, areas of excellence, and the impacts of the Agricultural Science Center at Los Lunas.
- Inform ACES and other colleges across NMSU of how the Agricultural Science Center at Los Lunas is helping them solve key problems for the people they represent.
- Encourage interdisciplinary and integrated initiatives to promote collaborations across different university entities.

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

**Actions:**

- Continue the partnership with USDA Natural Resource Conservation Service’s Plant Materials Center.

**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 hold workshops and field days, demonstrations, and special events.

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

**Actions:**

- Continue to have training available for staff on safety, research, and farm practices.
- Encourage staff to attend workshops and conferences for professional development.
- Encourage staff to participate in educational opportunities that are available to them.
- Write grant proposals to fund professional development opportunities.

**GOAL 4 KPIs**

**Key Performance Indicators (KPIs)**

	Metrics		
	Year 1	Year 3	Year 5
Hosted meetings between Center and on-campus faculty and staff	1	2	3
Personal development seminar attendance for staff	1	2	3
Faculty and staff nominations for awards	1 nomination	3 nominations	3 nominations

**Leading Indicators**

- Number of training opportunities to promote leadership and development
- Number of award nominations for faculty and staff
- Number of collaborative outreach efforts with county Extension agents, industry, stakeholders, community groups, and tribal/governmental agencies.
- Number of public media and impact stories on research and Extension.
- Number of research collaborations between specialists, other NMSU departments, in-state institutions and regional, national, and international organizations.
- Number of ASC impact stories, accomplishments, and areas of excellence presented to New Mexico legislators and citizens.