Sustainable Agriculture Science Center at Alcalde

The Sustainable Agricultural Science Center at Alcalde serves north-central New Mexico through applied research, outreach and education focused on sustainable agricultural systems. Through testing crops, varieties and production practices, the center develops science-based recommendations that improve productivity, profitability, resilience and resource-use efficiency for growers. The center continues its long tradition of supporting innovative agricultural enterprises while advancing climate-smart solutions for small and medium-sized farming operations. Six acres of the center are certified organic and support research on sustainable production systems and specialty crops adapted to New Mexico conditions.

SCAN THE QR CODE TO VISIT OUR WEBSITE
alcaldesc.nmsu.edu

MISSION

The Sustainable Agriculture Science Center at Alcalde's mission is to conduct agricultural and natural resource research on native and high-value crops, improving sustainable and climate-smart approaches to benefit small family farms and ranches of north-central New Mexico.

VISION

Pioneering new approaches to native and high-value crops for sustainable, climate-smart agriculture.

Research Focus

Research at the center emphasizes high-value specialty crops, native plants, fruit production systems, soil health and sustainable cropping systems adapted to New Mexico conditions. Current projects include:

- jujube cultivar development and evaluation
- saffron production
- lavender cultivar evaluation and essential oil quality assessment
- chickpea (garbanzo bean) variety evaluation and production systems
- industrial hemp
- pome and stone fruit production
- table grapes
- soil health management
- pollinator habitats
- acequia-related agricultural systems
- high-tunnel fruit and vegetable production

Emerging research efforts focus on lavender and native essential oil-bearing herbs, including medicinal and aromatic plants with potential for specialty crop and value-added markets. Research evaluates cultivar adaptation, productivity, essential oil yield and quality, sustainable production practices, and market opportunities for growers seeking alternative crops suited to New Mexico's water-limited environments.







The College of Agricultural, Consumer and Environmental Sciences (ACES) is an engine for economic and community development in New Mexico, improving the lives of New Mexicans through research, teaching and Extension.

Recent Impacts

- The NMSU jujube program has evaluated numerous cultivars and identified superior fresh-market selections with strong potential for commercial production and diversification of New Mexico agriculture. Jujube's late-blooming habit helps reduce the risk of spring frost damage and provides producers with a reliable alternative crop.
- Saffron research has demonstrated strong potential for production in Northern New Mexico, providing opportunities for diversification with the world's highest-value specialty crop. Research is generating production recommendations for local growers and supporting development of a regional saffron industry.
- Lavender evaluations are identifying productive cultivars adapted to New Mexico environments while assessing essential oil quality characteristics. This research supports expansion of specialty crop enterprises, value-added products and new economic opportunities for small-scale producers.

VALUE ADDED TO NEW MEXICO

- High-value, low-input crop research
- Saffron production and value-chain development
- Lavender cultivar evaluation and essential oil quality assessment
- Native medicinal and essential oil-bearing herb research
- Jujube research, production and cultivar development
- Chickpea (garbanzo bean) variety evaluation and production research
- Industrial hemp production and management
- Research for crop and fruit production under late spring frost conditions

- Research on chickpea (garbanzo bean) is identifying adapted varieties and management practices that can provide New Mexico growers with a drought-tolerant, nitrogen-fixing rotational crop, contributing to farm diversification and soil health improvement.
- Research on industrial hemp and native medicinal and aromatic plants is generating information on crop adaptation, management practices and value-added opportunities for growers seeking alternative crops suited to New Mexico conditions.



Community Engagement

The center provides educational opportunities for farmers, ranchers, students and community members through workshops, field demonstrations and outreach programs. Recent efforts include saffron harvesting and processing workshops, development of the NMSU saffron research webpage, and creation of a short video guide on saffron production for New Mexico farmers.

The center also hosts chickpea-related workshops, fruit grower meetings and pruning workshops that connect producers with current research findings and practical production information. Demonstration plots developed in collaboration with Tribal 4-H programs provide hands-on learning opportunities and strengthen engagement with youth and tribal communities. Annual field days, stakeholder meetings and collaborative outreach activities strengthen connections among researchers, producers, Extension personnel, students and rural communities while supporting the adoption of innovative and sustainable agricultural practices.

New Mexico State University is an equal opportunity employer and educator.
NMSU and the U.S. Department of Agriculture cooperating.