



# Agricultural Experiment Station Sustainable Agricultural Science Center at Alcalde

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## MISSION

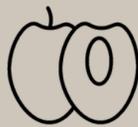
The mission of the Alcalde Sustainable Agriculture Science Center (SASC) is to conduct agricultural and natural resource research to benefit small-scale family farms and ranches of north-central New Mexico.

Six acres of the station are certified organic, and recent certified crops include apple, peach, pear, plum, sweet and sour cherry, and cucumbers.



Through testing of different crops, varieties, and production techniques, the goal is to provide new information that producers can adapt to their operations for greater productivity and profitability. The Center was the first ASC to carry out research on certified organic land and hold an organic certification.

Jujube's have been growing at the SASC at Alcalde since 2011, with cultivar trials ongoing since 2015.



## Ongoing Research

- Table grapes are a popular fruit among consumers. In New Mexico, there is potential to expand production and direct-market in farmers' markets, schools, and grocery stores. However, there is a lack of information on appropriate table grape varieties that producers can grow in northern New Mexico. New table grape varieties offer advantages in cold hardiness, cluster architecture, Phylloxera tolerance, and staggered ripening/timing in addition to improved taste/aroma and texture characteristics. Research at SASC is part of a statewide effort to evaluate 15 cultivars for suitability to New Mexico's unique edaphic and climatic growing conditions. Testing of each cultivar in comparison to current market standard cultivars will gauge and quantify consumer acceptance of locally produced table grapes. Table grapes offer a potential economic outlet for NM commercial grape producers, provide small and local market farmers an avenue of income diversification, and can increase the healthfulness of local diets, especially with regards to increasing the consumption of fresh fruit by children aged 6 to 12.

Numerous high tunnels are used in which we explore season extension, frost protection, and year-round cultivation.



### Value Added to New Mexico

- Historical Property
- High-Value Crops
- Acequia Research
- Small Farmers



### ACES Pillars for Economic and Community Development

Food and Fiber Production and Marketing

Water Use and Conservation

Family Development and Health of New Mexicans

Environmental Stewardship

Foundational Education and Training

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.

## Ongoing Research (cont.)

- The USDA imported various lines/varieties of jujubes in the early 1900s. Some breeding and line development took place at the USDA Chico, CA, research station. These and other jujube lines/varieties have become dispersed throughout the U.S., but their identities are unclear and there has not been much genetic or molecular work on jujubes for cultivar classification and grouping in the U.S. Researchers at SASC are working with scientists at the USDA Beltsville, Maryland who focus on genotyping to identify and group jujube germplasm that exists in the U.S. This essential work on cultivar classification will allow effective and efficient research on jujubes in the future. Producers will benefit by having reliable information on jujube cultivars and their characteristics.



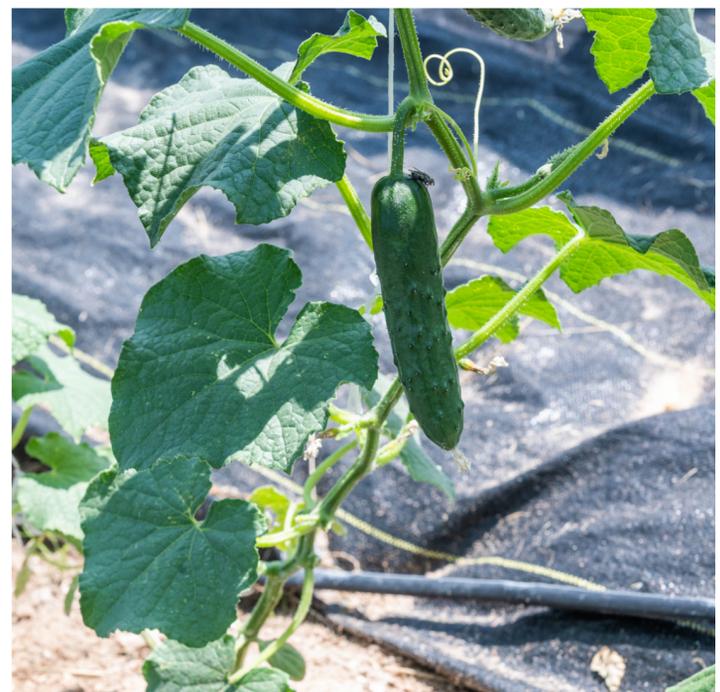
## Recent Impacts

- The NM hemp industry is faced with challenges entering this new industry and expanding hemp production. Research at SASC aims to find industrial varieties that are suitable for production in the state, evaluate the potential for establishing hemp market use outside of CBD, and identify pests that are common to hemp fields. Trials of CBD, grain and fiber varieties of hemp are being conducted at three Agricultural Science Centers (Alcalde, Los Lunas and Leyendecker) to evaluate the suitability of different varieties to the unique climatic areas throughout the state and provide initial opportunities for scouting pests and diseases. The potential impacts of this research include developing recommendations for hemp farmers based on their location within the state, identifying the most relevant downstream uses for the biomass that is produced in NM, and establishing pest management guidelines for the different regions of the state.



## Community Outreach

- A collaboration with Taos Land Trust and the Youth Conservation Corp led to involving students in apple and jujube fruit harvest at the Station, and subsequent donation of fruit to schools, and food banks in Taos and Abiquiu. The center plans to expand the program to include not only harvest, but also training on pruning, thinning, high tunnel maintenance and repair, and irrigation.
- Field bindweed is a serious problem in New Mexico's cultivated land. Its roots can reduce soil moisture below the wilting point of many crop plants. Besides competing for nutrients and water, field bindweed can pull plants to the ground and smother them completely. The Bindweed mite program uses a biological mite to help control this weed. Bindweed mites were distributed at the Alcalde Field Day, and by appointment with Del Jimenez.
- The center hosts a variety of virtual and in-person presentations and workshops for Northern New Mexico growers on topics such as lab and field soil test options, compost and vermicompost, grafting and the growing habits and pruning of fruit trees, including Jujubes.



### Sustainable Agricultural Science Center at Alcalde

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