Sustainable Agriculture Science Center at Alcalde

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College of Agricultural, Consumer and Environmental Sciences

NM STATE

Working closely with Cooperative Extension Service specialists in the Rural Agricultural Improvement and Public Affairs Project (RAIPAP), the Sustainable Agriculture Science Center at Alcalde (SASC) serves the producers and consumers of north-central New Mexico. Most irrigated agricultural land in the region belongs to small scale farmers and ranchers with fewer than 20 acres, and since 1952, our research has focused on enhancing the productivity, profitability, and sustainability of a long farming tradition.

In 2002, the first certified organic acres for research at NMSU were established at SASC to better address issues in organic agriculture.

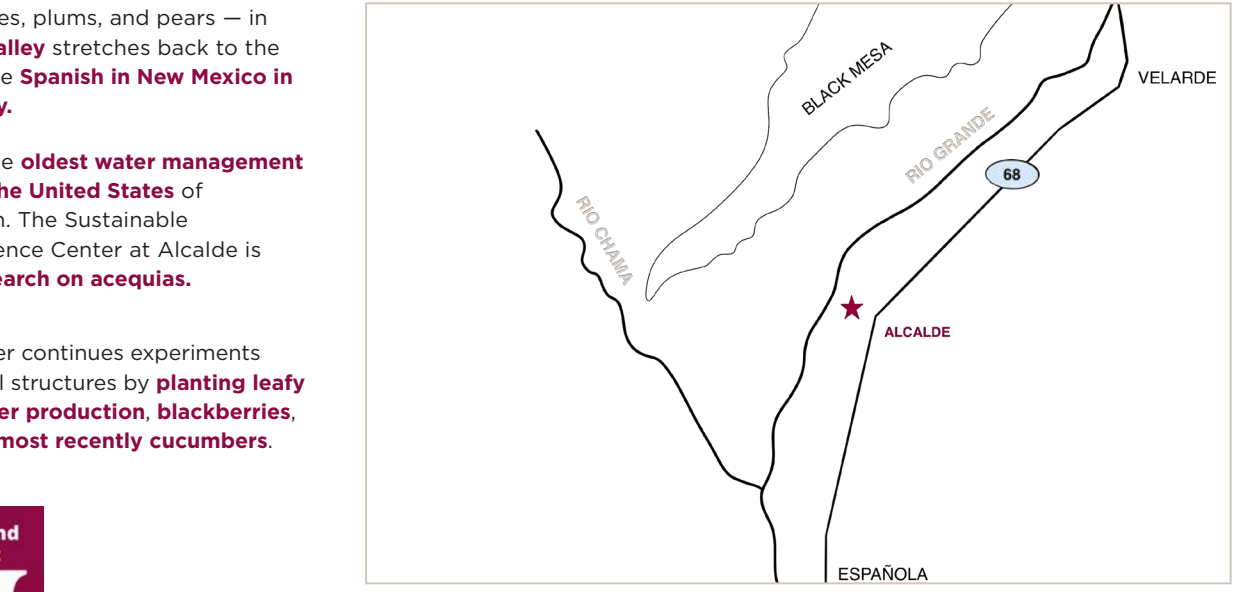
LOCATION

Alcalde lies in the Upper Rio Grande Valley, between Española and Velarde, in Rio Arriba County. Geologically, it is within the bounds of the Española Basin, part of the larger Rio Grande Rift system. Irrigated pasture and forages dominate these areas, but there are also numerous orchards and intensive, high value fruit and vegetable producing operations. Outside of the irrigated valley areas, in the grasslands and shrublands, grazing is the primary agricultural activity.

The history of tree fruit — apples, apricots, peaches, cherries, plums, and pears — in the **Española Valley** stretches back to the early days of the **Spanish in New Mexico in the 17th century.**

Acequias are the **oldest water management institutions in the United States** of European origin. The Sustainable Agriculture Science Center at Alcalde is **involved in research on acequias.**

Today, the center continues experiments with high tunnel structures by **planting leafy greens for winter production**, **blackberries**, fruit trees, **and most recently cucumbers**.



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

2019 IMPACTS

The purpose of the Native Bee Monitoring Protocol project is to assess native bee populations by comparing a native wildflower field to a field of the more traditional crop alfalfa. The project is measuring diversity and collecting individual bees.

Jujube is a nutritional fruit that has historically been important to Traditional Chinese Medicine. It is high in vitamin C, cyclic adenosine monophosphate (cAMP), phenolic compounds, and antioxidants. Jujube has grown and fruited well in initial trials, but determining the best ways to store, process, and market these fruits will be the key to the long term success of the crop.

The objective of the High Tunnel Stone Fruit Production in Northern New Mexico project is to assess the feasibility of using high tunnels for spring frost protection of peach and cherry in northern New Mexico.

ONGOING RESEARCH

One ongoing project characterizes the interactions between surface water and groundwater among acequias, irrigated fields, the source river, and the aquifer. In another project, tilled treatment plots were tilled and cover crops sown in till and no-till plots on October 31, 2019. Cover crops grew until termination by rolling in the spring, and till and no-till plots were seeded again in fall 2020.

The NC-140 program is a nationwide rootstock evaluation program for different temperate fruit species. We set up our first NC-140 organic apple rootstock trial to test different rootstocks for organic planting with a tall spindle system at NMSU Alcalde Center in 2015. Data collection will continue through 2025.

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