



SUSTAINABLE AGRICULTURE SCIENCE CENTER AT ALCALDE

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

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.

STAFF AND CENTER

Staff specialize in various areas of crop growth and production particular to Northern New Mexico. SASC offers field days, workshops, and seminars to educate the public about ongoing research, Extension education projects, and other activities. SASC also collaborates with other local growers and experts.

SELECTED PROGRAM IMPACTS

- SASC is evaluating jujube (Chinese date) as a new fruit crop for New Mexico. Jujube fruit is a nutritious, high-value crop that can be relied on to produce every year due to its late flowering cycle. Jujube contains several antioxidants and has a vitamin C content several times higher than oranges. Dried organic jujubes from California have been sold locally for about \$4 per ounce.
- SASC has constructed low-cost high tunnels (hoop houses) to assess the production of winter greens, blackberries, cucumbers, and apricots. High tunnels extend the growing season and protect crops from late spring frosts. In addition, farmers can receive several dollars more per pound for greens produced in winter than those sold during the normal growing season.
- Research indicates that many acequia irrigation systems provide benefits, such as recharging the local aquifer and storing and then releasing water underground to streams later in the year. This storage and release function may actually save water on a regional basis by reducing evapotranspiration losses.
- In 2002, the first organically certified research acres at NMSU were established at SASC to assist fruit, medicinal herb, and specialty crop growers interested in producing and marketing organically.
- SASC implemented studies under certified organic management on organic codling moth control in apples, peach cultivar evaluation, sweet and tart cherry cultivar evaluation, plum cultivar evaluation, wine grape soil management, table grape cultivar evaluation, bramble cultivar evaluation, and native medicinal herb production. Based on this research, several local growers have begun to grow and sell organic strawberries through high-value markets, grossing the equivalent of up to \$40,000 per acre.
- Research evaluated kura clover, birdsfoot trefoil, and brassicas as alternative options for forage and livestock producers.
- SASC developed the popular and locally adapted chile variety 'Española Improved'.
- Relay-interseeding a second crop into sweet corn and chile has shown that significant yields of additional forage or green manure (if the second crop is used for soil-building) can be

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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.

attained. For example, an added ton/acre of turnip can be gained in the fall after summer interseeding into sweet corn, or an added 3 tons/acre of hairy vetch in May after being interseeded into chile the previous season.

- Thirteen NMSU graduate students from 2008–2017 have conducted their research in north-central New Mexico with assistance from SASC faculty and staff.

CES RAIPAP IMPACT STATEMENTS

- CES RAIPAP specialists have assisted over 5,000 socially disadvantaged farmers and ranchers through technical and educational programs, which help to improve the sustainability of their farms and ranches and provide opportunities for increasing the income of these producers.
- CES RAIPAP has provided support to over 1,400 New Mexico producers in building high tunnel/hoop house units in order to extend the growing season, thus improving annual incomes through additional crop production.
- Through the support of the USDA–NIFA Beginning Farmer and Rancher Development Program, CES RAIPAP has trained over 160 Native American beginning farmers and ranchers in the northern and southern pueblos, thus increasing farm incomes and maintaining cultural values and traditions.
- Over several years, CES RAIPAP has been influential in aiding USDA–NASS by dramatically increasing the numbers of socially disadvantaged farmers and ranchers identified and counted in Northern New Mexico through the USDA Census of Agriculture, thus resulting in Congress providing additional financial resources to local USDA agencies to assist this traditionally underserved audience.
- CES RAIPAP has assisted over 300 socially disadvantaged farmers in Northern New Mexico with soil testing and interpretations in an effort to fully maximize production while retaining sustainability on their small-scale farms.



CES RAIPAP PARTNERS

- New Mexico Small Farm and Ranch Task Force
- NMSU Sustainable Agriculture Science Center at Alcalde
- NMSU Agricultural Science Center at Los Lunas
- USDA Farm Service Agency
- USDA Natural Resources Conservation Service
- USDA National Agricultural Statistics Service
- USDA Risk Management Agency
- USDA–NIFA Family and Small Farm Program
- USDA–NIFA Beginning Farmer and Rancher Development Program
- USDA Office of Advocacy and Outreach
- Institute of American Indian Arts
- Northern Pueblo Governor’s Council
- Southern Pueblo Governor’s Council
- Northern New Mexico Stockman’s Association
- New Mexico Acequia Association
- New Mexico Farm and Livestock Bureau
- New Mexico Cattle Growers Association
- New Mexico Beef Council
- Sangre de Cristo Livestock Growers Association
- Los de Mora Growers’ Cooperative, Inc.
- Western Region Extension Risk Management Education Center at Washington State University

SUSTAINABLE AGRICULTURE SCIENCE CENTER PARTNERS

- Local Farmers and Ranchers
- New Mexico Department of Agriculture
- CES RAIPAP
- New Mexico Small Farm and Ranch Task Force
- New Mexico Acequia Association
- Institute of American Indian Arts
- University of New Mexico
- Oregon State University
- Texas A&M University
- New Mexico Institute of Mining and Technology
- San Juan College
- Emerson College
- USDA Natural Resources Conservation Service
- New Mexico Water Resources Research Institute
- Rocky Mountain Farmers Union Cooperative Development Center

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