



College of Agricultural, Consumer and Environmental Sciences

Department of Family and Consumer Sciences Profile

Agricultural Experiment Station • aces.nmsu.edu/academics/FCS/ • 575-646-3936



Selected Program Impacts

- **Interdisciplinary researchers from food science and chemistry are working on new technology for the detection of foodborne pathogens.** The new technology will allow food producers and processors to test their food products in the fields or processing facilities, increasing food safety and increasing compliance with the Food Safety Modernization Act.
- **“Which is the best?”** Answering this question is critical to the commercial success of value-added food processors. Food scientists are working on improving sensory experimental design and data analysis in consumer studies.
- **Research has shown that folic acid fortification of nixtamal (hominy) can improve the nutritional value of blue corn products in New Mexico.** This fortification will benefit Hispanic and Native American populations, as well as the emerging gluten-free population, who have high levels of consumption of corn masa products, reducing congenital disabilities such as spina bifida, heart defects, and cleft palate.
- **Food scientists and mechanical and industrial engineers are developing equipment** that will make the de-hulling process of glandless cottonseed more efficient, and are developing a solar dryer for the jujube industry in New Mexico and California.
- **Researchers are working on microencapsulation of bioactive compounds present in jujube fruit.** Microencapsulated polyphenols and other bioactive compounds have a longer shelf life and can be used to produce new functional foods with health benefits.
- **Researchers have been working on new sources of plant proteins.** Together with Cotton Inc., a new glandless cottonseed meal protein has been isolated and characterized. The new plant protein can be used like a soy protein, increasing revenue for cotton producers in the region.
- **Human nutrition researchers are working with marketing faculty and the USDA to develop an understanding of SNAP (formerly food stamps) participants’ willingness to purchase groceries online,** and testing marketing strategies that encourage online shoppers to make healthier purchases.

Mission Statement

The mission of the Department of Family and Consumer Sciences is to serve the culturally diverse clientele of New Mexico and the border region through quality teaching, research, and service. We produce and disseminate scholarly information that advances the understanding of the citizens of New Mexico in the areas of clothing, textiles, and fashion merchandising; human development and family relations; family and consumer sciences education; food science and technology; and human nutrition and dietetics. The department works closely with the Extension Family and Consumer Sciences department to provide research-based information and educational programs to residents throughout the state.

4 Pillars for Economic and Community Development

Food and Fiber Production and Marketing

Water Use and Conservation

Health of New Mexicans

Environmental Stewardship



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Selected Program Impacts (cont.)

- **Research being conducted by FCS faculty can be used to further enhance the parenting skills of New Mexicans.** This work is crucial given that New Mexico is ranked as the second-worst state in child welfare according to the 2017 New Mexico Kids Count Data Book. Additionally, 28% of Doña Ana County residents live in poverty.
- **Under food science faculty supervision, Steinman Fellow undergraduate students have successfully completed research projects to develop novel foods and extracts from glandless cottonseed and jujube fruit.** Research also demonstrated that food byproducts from chile, cotton, and fruit processing can be utilized to make nanofiber mats that can then be used in edible films.
- **Research has found that Hispanics' sense of belonging to the university, and their academic success, was significantly impacted by their relationships with their high school teachers,** based on a study of high-achieving Hispanic students at NMSU.
- **The lack of reliable data concerning FCS teachers and programs, and the overall teacher shortage, is a problem in New Mexico and reflects a national trend.** Research that profiles FCS teachers and Extension agents in New Mexico, including existing or perceived barriers to teaching FCS content, will be used to help increase numbers of certified teachers and Extension agents, increase diversity in recruits, and recruit teachers for Native American schools.

Faculty and Expertise

- **Sharon Bartley**, Associate Professor, Family and Consumer Sciences Education and Family Studies
- **Efren Delgado**, Assistant Professor, Food Processing and Food Biotechnology
- **Esther Devall**, Professor, Parenting Education and Prevention of Adverse Childhood Experiences
- **Nancy Flores**, Extension Food Technology Specialist, Development of Novel Foods from New Mexico-Grown Commodities
- **Merranda Marin**, Associate Professor, Border Health Issues, Poverty in Diverse Populations and Resilience
- **Marcel Montanez**, Associate Professor, Equine-Assisted Therapy
- **Stu Munson-McGee**, Professor, Experimental Design, Fermentation Science/Technology, Food Engineering
- **Stephanie Rogus**, Assistant Professor, Economic, Social, and Environmental Influences on Food Choice and the Impacts of Food Programs and Policy on Diet Quality and Chronic Disease
- **Kourtney Vaillancourt**, College Associate Professor, Marriage and Family Therapy

Selected Partnerships

- AVANCE Parent-Child Education Program
- California Center for Cooperation Development
- Cervantes Enterprises
- Cotton Inc.
- Doña Ana County Detention Center
- Families and Youth, Inc.
- Family, Career and Community Leaders of America Organization
- High Desert Jujube Cooperative
- Instituto Tecnológico de Durango
- Jardin de los Niños
- La Clinica de Familia
- Pay 'n Save (regional grocery store)
- Southwest Counseling Center
- The Mojave Desert Resource Conservation District
- University of California Cooperative Extension Service
- USDA-ARS
- Universidad Autónoma de Chihuahua
- University of Baja California, Mexico
- Colorado State University-Pueblo

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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.