

# New Mexico (New Mexico State University Main Campus)

## Plan of Work for 2023-2027

Status: Final (Approved 9/21/2022)

### Executive Summary Overview

New Mexico's rich history is rooted in agriculture and remains a top producer in the agricultural industry. New Mexico State University (NMSU) College of Agricultural, Consumer and Environmental Sciences (ACES) research and extension support fundamental and applied science and technology research and outreach to benefit New Mexico's citizens in the economic, environmental, social, health, and cultural aspects of agriculture, natural resources management, and family issues.

The NMSU College of ACES bases research, extension, and education programs on four pillars, which are the critical issues identified for our state. Each of these pillars drives economic and community development within the state of New Mexico. These critical issues are (1) Food & Fiber Production and Marketing, (2) Water Use and Conservation, (3) Family Development and Health of New Mexicans, and (4) Environmental Stewardship, all of which are based on the foundation of education and training of qualified professionals in the field of agriculture.

Food & Fiber Production and Marketing – The focus is on several key areas that support the growth and improvement of plant and animal agricultural products in New Mexico. The College of ACES faculty and staff foster technological innovation to enhance the competitiveness and security of New Mexico agriculture, and increase value-added in the state. Research projects will encompass functional genomics in crop and livestock systems, food processing and safety, biomedical and animal health interaction, sustainable production for food systems, food, and fiber supply chain, and animal health and welfare.

Water Use and Conservation – Water is the most limiting resource for New Mexico. All aspects of water use affect agricultural efficiency, profitability, and human health. Water management will become more critical as water demands for urbanization and industrialization increase. AES research encompasses water quality and availability, sustainable management of water resources, alternative crops for water-limited systems, and resilience in coupled human-natural aquatic systems.

Family Development and Health of New Mexicans – The family is the fundamental institution of society. The College of ACES researches human behavior, child and adolescent development, human nutrition and food science, clothing and textiles, and family resource management. The College's research and Extension programs on human nutrition and wellness are aimed at keeping people from becoming ill and are likely considered "preventive medicine" programs. Research and Extension programs will include pathways to human health and wellbeing, increase economic opportunities in New Mexico, agricultural literacy and education, and diversity, equity, and inclusion in agriculture.

Environmental Stewardship – Rural and urban human activities affect land, water, and air. Through teaching, research, and extension programs, the College of ACES is committed to furthering our understanding, using science-based knowledge of human impacts on the environment and supporting environmentally-sound agricultural and natural resource practices. AES research includes sustainable systems and thriving economies, carbon, food, energy, and water systems (CFEWS), geospatial technology and modeling for environmental management, and ecosystem structure and function in a changing world.

## Merit and Scientific Peer Review Processes

Internal University Panel

External University Panel

External Non-University Panel

All projects directed by the Agricultural Experiment Station (AES) and Cooperative Extension Services (CES) are subject to a peer-review process. Planned activities and research can be brought forward by faculty and/or specialists in response to an area of interest or high demand or can be brought forward by external advisory committees. These advisory committees provide suggestions to ensure research and outreach are meeting the needs of communities that AES and CES continue to serve the varying parts of the state.

## Stakeholder input: Action Taken to Seek Stakeholder Input

Use of media to announce public meetings and listening sessions

Targeted invitation to traditional stakeholder groups

Targeted invitation to non-traditional stakeholder groups

Targeted invitation to traditional stakeholder individuals

Targeted invitation to non-traditional stakeholder individuals

Targeted invitation to selected individuals from the general public

Survey of traditional stakeholder groups

Survey of the general public

Survey specifically with non-traditional groups

New Mexico State University will continue to use a variety of methods to seek and collect feedback from our stakeholders. AES and CES support programs within the College of ACES on the NMSU main-campus as well as at 12 off-campus agricultural science centers (ASCs) and 33 individual county offices. Each ASC hosts an annual field day where research is presented, and new initiatives are discussed. Public input is provided from small-scale farmers and ranchers utilizing the ASCs and advisory committee members who provide external reviews. Cooperative Extension hosts events regularly throughout the state through varying media platforms to seek stakeholder input and actively share research findings with the public.

## Stakeholder input: Methods to Identify Individuals and Groups

Use Advisory Committees

Use Internal Focus Groups

Use External Focus Groups

Open Listening Sessions

Needs Assessments

Use Surveys

NMSU uses advisory committees that represent the populations they serve around the state, focus groups, and knowledge of specialists, agents, and researchers to identify stakeholders. Community members are encouraged to provide feedback throughout the year, which help guide programs. The public is invited to participate in any listening sessions offered.

## Stakeholder input: Methods for Collecting Stakeholder Input

Meeting with traditional Stakeholder groups

Survey of traditional Stakeholder groups

Meeting with traditional Stakeholder individuals

Meeting with the general public (open meeting advertised to all)

Survey of the general public

Meeting specifically with non-traditional groups

Survey non-traditional groups

The College of ACES uses a variety of methods to collect stakeholder input, as noted previously. Meetings are the most common method used to collect data. This includes virtual meetings and virtual surveys to engage audiences through a variety of mediums and access. When necessary, specific meetings will be held with appropriate stakeholder groups to solicit input.

## Stakeholder input: A Statement of How the Input Will Be Considered

In the Budget Process

To Identify Emerging Issues

Redirect Extension Programs

Redirect Research Programs

In the Staff Hiring Process

In the Action Plans

To Set Priorities

Feedback from our stakeholders is used to assess and determine current critical issues within the state. Feedback will continue to be collected and will be used to plan research and extension priorities for the College of ACES. Stakeholder feedback is also used to assist in budget allocation and hiring decisions.

## Critical Issues

### **Environmental Stewardship**

Initiated on: Nov 26, 2019

State: New Mexico

Term Length: Long-term (>5 years)

Environmental stewardship research includes soil coverage, plant, nutrient relationships; management of saline and sodic soils, and salinity. This also includes management of range resources, management and sustainability of forest resources, urban forestry, aquatic and terrestrial wildlife, conservation of biological diversity; waste disposal, recycling, and reuse; and natural resource and environmental economics.

Science Emphasis Area

Agroclimate Science, Environmental Systems, Sustainable Agricultural Production Systems

### **Family Development and Health of New Mexicans**

Initiated on: Nov 26, 2019

State: New Mexico

Term Length: Long-term (>5 years)

The NMSU College of ACES takes pride in caring for the whole family unit from physical to mental health. Research focuses on human behavior, child and adolescent development, human nutrition and food science, clothing and textiles and family resource management. This critical issue also includes youth development programs.

Science Emphasis Area

Family & Consumer Sciences, Food Safety, Human Nutrition, Youth Development

### **Food & Fiber Production and Marketing**

Initiated on: Nov 26, 2019

State: New Mexico

Term Length: Long-term (>5 years)

Food & Fiber Production and Marketing focuses on several key areas that support the growth and improvement of plant and animal agricultural products in New Mexico. This includes dealing with animal genetics and genomics, nutrition, reproduction, physiology, stresses, and management systems; genetics, genomics, stresses, efficiencies, and management systems of plants; and pests and pathogens of plants and animals, weeds, biological control, and integrated pest management systems. Additionally, this plan will support research for animal welfare/protection, as well as economics and marketing of agricultural products and businesses. NMSU is expanding transdisciplinary research with a focus on food

processing, food safety, and developing value-added agricultural products that support community development and the New Mexico economy.

Science Emphasis Area

Agroclimate Science, Bioeconomy, Bioenergy, and Bioproducts, Food Safety, Sustainable Agricultural Production Systems

## **Water Use and Conservation**

Initiated on: Nov 26, 2019

State: New Mexico

Term Length: Long-term (>5 years)

Water is the most limiting resource for New Mexico. Therefore, research and extension efforts on water-related issues are critical. Efforts will focus on various facets of water management systems, including irrigation, policy, conservation, and use. These activities naturally overlap with the production and environmental aspects of programming.

Science Emphasis Area

Agroclimate Science, Environmental Systems, Sustainable Agricultural Production Systems