Animal and Range Science
NMSU research aims to improve the care and management of animal and range resources and conduct research that improves human health and reproduction by improving the health and reproduction of animals. Faculty conduct research in animal sciences, range management, weed and insect management, water management, and livestock and wildlife management. NMSU is home of the New Mexico Department of Agriculture and the New Mexico Cooperative Extension Service.

Foci of Faculty Research Efforts

- Management of cattle behavior and genetic selection to improve grazing outcomes
- Improved reproduction in sheep
- Nutritional management in cattle and sheep
- Nutrient utilization in horses
- Improved forage quality and range management strategies in arid climates
- Strategies to detoxify plant and environmental toxins within the gut of cattle and sheep
- Interaction of livestock and surface waters

NMSU Resources

- Cooperative Extension Service
- Agricultural Science Center at Farmington
- Agricultural Science Center at Clovis
- Agricultural Science Center at Los Lunas
- Sustainable Agriculture Science Center at Alcalde
- Agricultural Science Center at Tucumcari
- Artesia Science Center
- Leyendecker Plant Science Research Center
- Extension Plant Sciences
- Extension Animal Science and Natural Resources
- Dairy Extension Program
- Chihuahuan Desert Rangeland Research Center
- Corona Range and Livestock Research Center
- Range Science Herbarium
- Jornada Experimental Range

Major Units

- New Mexico Water Research Resources Institute
- NMSU Water Task Force
- Paso del Norte Water Task Force
- Soil, Water, and Agricultural Testing Laboratories
- New Mexico Department of Agriculture, Soil and Water Conservation
- Engineering Research Center for Re-Inventing the Nation’s Urban Water Infrastructure
- Southern Regional Water Program
Researchers

Animal Science

- **Ryan Ashley**, Reproductive Physiology
- **L. Neil Burcham**, Animal Production
- **John W. Campbell**, Reproductive Physiology
- **Gaylene Fasenko**, Companion Animals and Human-Animal Interactions
- **Jennifer Gifford**, reproductive physiology with interest on functional and molecular endocrinology
- **Mike Hubbert**, Ruminant and feedlot nutrition
- **Dennis Hallford**, Reproductive Physiology and Endocrinology
- **Shanna Ivey**, Ruminant Nutrition/Rumen Microbiology
- **Clint A. Loest**, Ruminant Nutrition
- **Sergio A. Soto-Navarro**, Ruminant Nutrition
- **Timothy T. Ross**, Applied Animal Science, Sheep Production, Reproductive Physiology, and Toxicology
- **Eric J. Scholljegerdes**, Ruminant Nutrition
- **Jack D. Thomas**, Meat Science
- **Sarah Veeder**, Horseback Riding and Therapeutic Riding
- **Laura M. White**, Pedagogy, Higher Order Thinking and Equine
- **Mark E. Wise**, Reproductive Endocrinology – Biosecurity and Food Safety Center

Range Science

- **Laurie B. Abbott**, Rangeland Ecology and Restoration
- **Kelly W. Allred**, Plant Taxonomy and Grasses of Southwest – Cooperative Extension
- **Derek Bailey**, Large herbivore grazing behavior, both modeling and empirical approaches; GPS-based animal tracking; rangeland livestock production, rangeland and riparian area management; livestock-wildlife interactions
- **Andres Cibils**, Grazing Management and Ecology
- **Alexander “Sam” Fernald**, Water Quality Hydrology
- **Amy Ganguli**, Disturbance Ecology and Plant Community Recovery
- **Jerry L. Holechek**, Range Animal Nutrition, Range Wildlife Interactions, Grazing Management on Desert Ranges, and Physiology
- **Kirk C. McDaniel**, Brush Ecology and Management

Extension Animal Sciences and Natural Resources

- **Jon C. Boren**, Wildlife/livestock Interactions with Rangelands and Forests
- **Samuel T. Smallidge**, Agriculture/Wildlife Interactions, Animal/Plant Interactions
- **Robert Hagevoort**, Dairy Industry
- **Jason Turner**, Extension Horse Specialist – Extension Animal Sciences and Natural Resources, Livestock

Jornada Experimental Range

- **Debra Peters**, Rangeland Ecology and Management
- **Kris Havstad**, Rangeland Ecology and Management
- **Brandon Bestelmeyer**, Animal Ecology, Landscape Ecology, Plant-soil Interactions
- **Jeffrey Gillan**, High-resolution 3D modeling of rangeland ecosystems, Web-based platforms for scientific knowledge exchange with an emphasis in geographically explicit information
- **Haitao Huang**, Computer Specialist
- **Jin Yao**, Plant population and community ecology, with emphasis on patterns and processes driven by landscape/spatial factors
- **Nicholas Webb**, Rangeland management, Land degradation processes and climate-management interactions, Spatiotemporal patterns and drivers of wind and water erosion, Climate change impacts and adaptation in socio-ecological systems
- **Jebediah “Jeb” Williamson**, Geographic Information Systems

Agricultural Science Center at Farmington

- **Sam Allen**, Weed control, insect control, revegetation of disturbed lands
- **Richard Arnold**, Weed control, revegetation, erosion control, grassland establishment
- **Kevin Lombard**, Horticulture and public health, wine and grape adaptability
- **Michael “Mick” O’Neill**, Agroforestry, agronomy, crop physiology, crop introduction, microirrigation
- **Daniel Smeal**, Crop water use, water use yield, water conservation

Extension Plant Sciences

- **Natalie Goldberg**, Plant pathologist, plant health management, crop biosecurity
- **Robert Flynn** (Extension Agronomist)
- **Richard Heerema**, Pecans
- **John Idowu**, Soil quality, soil tillage, applied soil management
- **Bernd Leinauer**, Turfgrass
- **Bernd Maier**, Viticulture
- **Mark Marsalis**, Forage and grain crops, silage and hay production, cereal crops for grain and forage, perennial grasses
- **Jane Pierce**, Entomology, pests and diseases
- **Carol Sutherland**, Entomology, Africanized bees and fire ants
- **Stephanie Walker**, Vegetable Specialist