Current Research

• Cotton research, including the New Mexico cotton breeding program, precision organic cotton production, cottonseed oil used for food and fuel, and gossypol-free (“glandless”) cotton to provide both robust lint and better cottonseed byproducts.
• Research on insecticides, foliar fertilization, fertilization, and irrigation for pecan.
• The IR-4 Project helps provide effective pest control options for food crop producers while ensuring safe and healthful fruits, nuts, and vegetables for consumers.
• The Nematology Lab program focuses on plant-parasitic nematodes, which are persistent and often serious pathogens of many New Mexico crops.
• Weed science research provides sustainable, reduced-risk pest management practices that enhance food safety and maintain market competitiveness for New Mexico-grown crops.
• The NMSU onion breeding program is one of only two active, public onion breeding programs in the United States releasing cultivars and/or germplasm lines. One of the program’s objectives is the continued development of onion cultivars that allow New Mexico growers to compete in other onion markets in the United States.
• Using alfalfa in crop rotations helps stabilize soils, improve water quality, and reduce fertilizer, pesticide, and fuel inputs, making it a critical component of sustainable agriculture. Alfalfa hay constitutes most of the diet for New Mexico’s rapidly expanding dairy livestock industry. Research at the Center works to develop drought-tolerant alfalfa cultivars for New Mexico growing conditions.
• Aquaculture research to determine the feasibility of using a mix of algae and cottonseed meal to grow saltwater Pacific white shrimp indoors in aquatic systems.
• The NMSU chile pepper breeding program creates high-quality, non-GMO cultivars for New Mexico’s chile pepper food industry and value-added products, increasing growers’ incomes throughout the state.
• Research examining plant/soil microbiomes and how changes in a soil microbial community influence plant growth and the development of plant/soil microbiome synergies. Research to determine the efficacy of using mustard seed meal to fight Phytophthora blight and Verticillium wilt afflicting our chile crops.

Collaborators, Sponsors, and Contributors

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