

LSU AgCenter Research Station Profile

Report to Stakeholders August 2024



ABOUT THE LSU AGCENTER

The LSU AgCenter is dedicated to providing innovative research, information and education to improve people's lives. Working in a statewide network of parish extension offices, research stations and academic departments, the LSU AgCenter helps Louisiana citizens make the best use of natural resources, protect the environment, enhance agricultural enterprises and develop human and community resources.

RESEARCH HIGHLIGHTS

Station Overview

For 75 years the LSU AgCenter's Sweet Potato Research Station has been solely devoted to sweet potato research and development. The mission of the station is to produce high-quality planting material to serve the commercial sweet potato industry and to conduct research in various disciplines to enhance production of sweet potatoes, including breeding, cultural practices and pest management.

Foundation Seed Program

The main goal of the foundation seed program is to maintain the integrity and quality of commercial sweet potato varieties. The Sweet Potato Research Station serves all parishes involved in sweet potato production in Louisiana. In addition to satisfying in state needs, the station also supplies seed and plant material to other states and countries.

Breeding

The LSU AgCenter's Sweet Potato Breeding Program is one of only three active breeding programs for sweet potato in the United States. Varieties developed at the station, including the Beauregard variety, are grown throughout the United States and around the world. Numerous varieties have been released from the LSU AgCenter breeding program during the last twenty years, including Evangeline, Orleans, Bayou Belle, Bellevue, Bonita, Vermillion, Murasaki-29, and most recently Avoyelles.

Production Research

Research focuses on using an integrative approach to sweetpotato production that focuses on storage root formation as key to the testing and development of management practices and grower decisions support tools for increased production efficiency, food safety, and reduced input costs. Central to this integrative approach is the consideration of root system architecture as an integrator of internal, environmental, and management determinants of storage root yield, quality, and shape attributes. The long-term goal is to develop tools for manipulating root system architecture for increased nutrient efficiency and resilient sweetpotato yields for fresh and processing markets under diverse and changing environments.



SWEET POTATO RESEARCH STATION

PO Box 120,
130 Sweet Potato Road,
Chase, LA 71324

Location:

The station is located approximately
5 miles south of Winnsboro on
Highway 15

Office Hours:

8 a.m.-4:30 p.m.
Monday-Friday

Phone: 318-435-2155

Fax: 318-435-2110

Website:

LSUAgCenter.com/SweetPotatoStation

Research Station Coordinator

Dr. Tara P. Smith
tsmith@agcenter.lsu.edu

Sweet Potato Specialist & Onsite Foundation Seed Contact

Mr. Cole Gregorie
Cgregorie@agcenter.lsu.edu

Size:

308 acres, including 140 acres of
cropland and 130 acres of
woodland.

Research station focus:

- Greenhouse propagation
- Virus-tested foundation seed production
- Variety development
- Improving agronomic practices
- Insect, weed and disease management

Outreach and Extension:

- Rapid dissemination of production and pest management information
- Consumer and youth awareness

SIGNIFICANCE OF SWEET POTATO RESEARCH

- Sweet potato varieties developed at the LSU AgCenter's Sweet Potato Research Station are grown not only in Louisiana but throughout the United States.
- Production research and variety development have resulted in have resulted in significant yield increases over the last several years.
- Research conducted on production practices at the Sweet Potato Research Station increases production efficiency and contributes to the state's economic development.
- Production of foundation sweet potato seed developed at the Sweet Potato Research Station provides high quality planting material for sweet potato producers.

2023 SWEET POTATO INDUSTRY FACTS

- More than 2.7 million bushels of sweet potatoes produced in Louisiana.
- 5403 acres of sweet potato in production.
- On average, 506 bushels (50lb) of sweet potatoes produced per acre.
- Total farm-gate value of sweet potato production was \$47.3 million, and value added to sweet potato production was \$35.5 million for a total economic contribution of \$82.8 million.
- Sweet potatoes are produced commercially in nine parishes
- Data from the Louisiana Ag Summary at www.LSUAgCenter.com/agsummary.

FUTURE PLANS

Stratifying Sweet Potato Research Station Capabilities and infrastructure through NCPN

The National Clean Plant Network (NCPN) for sweet potato is an association of clean plant centers, scientists, educators, state and federal regulators, certified seed growers, and commercial growers from the fresh market and processing industries concerned with the health of planting stock (seed roots and vine cuttings). Sweet potato formally joined the NCPN specialty crops network in 2015. The LSU AgCenter Sweet Potato Research Station is one of 6 sweet potato clean plant centers in the United States. The network operates under the umbrella of the United States Department of Agriculture (USDA).

Other Goals:

- Develop varieties for the fresh market and processing sector.
- Conduct research to promote more efficient use of soil resources in variable growing environments.
- Maximize intrinsic (varietal) and external cues (nutrients) that affect root development.
- Work closely with producers, processors and industry representatives who are involved in the sweet potato industry.



LOUISIANA AGRICULTURAL EXPERIMENT STATION

Louisiana's unique combination of crops — ranging from corn, cotton, rice and sugarcane to extensive forestry, poultry, cattle and fisheries industries — presents challenges for providing research-based information to ensure sustainable agricultural production systems.

To address the needs of these industries, the Louisiana Agricultural Experiment Station operates 14 departments shared by the LSU AgCenter and the LSU College of Agriculture, as well as 15 research locations across the state. To fund the basic and applied research, scientists compete for federal and state grants and checkoff dollars provided by some farmers' groups, along with state and federal dollars. Many of the facilities also sustain their research operations through the sale of agricultural commodities produced on the stations.

The LSU AgCenter has the most successful record of commercialization of intellectual property in the LSU System. Since 2000, 18 new companies have been started based on licensed technology from LSU AgCenter. The income is distributed among the LSU System, the inventors and more research.



For the latest research-based information on just about anything, visit our website:

LSUAgCenter.com