

Dean Lee Research Station



December 2019

About the LSU AgCenter

The LSU AgCenter is dedicated to providing innovative research, information and education to improve people's lives. Working in a unique 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

Agronomy

The goal of the Agronomy Program is to increase yield and profit potential for Louisiana cotton, corn, soybean, and grain sorghum producers. Research efforts include studies in fertility, seeding rates, row widths, and planting methods. These efforts are important to assist in validating and to help improve upon the practices currently used by producers. Official variety trials for cotton, corn, soybeans, and grain sorghum conducted to evaluate the yield potential and adaptation of new varieties before producers' risk planting them on their farm.

Weed Management

Research efforts continue to address crop and weed response to herbicides and to develop economical and environmentally feasible weed management strategies for crop producers in the Louisiana Red River Valley.

Field Crops Entomology

Research is focused on insect management and crop response to new and currently registered insecticides, development/ updating of economic thresholds in field crops, quantification and characterization of insecticide resistance by target insects. Identification and documentation of invasive insect species, development of IPM programs in field crops and investigation of insect resistance management strategies to evade or mitigate insects that could or have developed resistance to insecticides.

Field Crops Pathology

Research is conducted to evaluate and develop effective plant disease management programs in cotton, corn, grain sorghum, small grains, and soybean. The goal is to develop effective strategies for our stakeholders utilizing cultural practices, genetic resistance, and fungicides. Some of these efforts are directed toward assessing the impact of planting date, identifying disease resistant varieties, and evaluating fungicides for disease development. Other research is aimed toward monitoring for pathogen resistance to fungicides. The unbiased results from this research is used by stakeholders to optimize their production systems and maximize profits.

Beef Cattle and Forages

Nutritional and nutrition x environment effects on intake, performance, and progeny's growth and development of crossbred and Brangus cows are under evaluation. Forage research is concentrated on determining the productivity and evaluation of winter and summer annual forages under grazing conditions and their inclusion in sustainable year-round forage systems. Evaluation of management practices to increase profitability of the beef herd is warranted.

Dean Lee Research Station

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Alexandria, LA 71302

Location: The station is six miles south of Alexandria on Hwy. 71, adjacent to the LSU– Alexandria campus.

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https://www.lsuagcenter.com/portals/our_offices/research_stations/deanlee

Office Hours:

7:30 a.m. - 4:30 p.m.
Monday-Friday.

Daniel Stephenson

Professor and Research Station Field Crops Coordinator/

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Size: 3,155 acres, including 500 acres in field crops research and 600 acres in pasture and beef cattle research. The station also has over 1,000 acres of hardwood timber.

Research focus:

- Agronomy research and variety testing
- Weed, Insect and Disease management of field crops
- Beef cattle and Forage Research

Precision Agriculture

Precision agriculture is a technology that applies agricultural inputs in tuned quantities to better match crop needs. In its most basic form, it can simply be splitting a field up into two separate areas, and applying different inputs to each, or by using highly specialized equipment to record and treat multiple land areas automatically. The goal of precision agriculture is not always to produce higher yields, but to achieve maximum yields with the least amount of inputs. Louisiana is a good fit for precision agriculture because of its river and flood plain basin type soils which leads to many soil structures per field.

Significance of Research

Research on agronomic practices can make Louisiana producers more competitive in a global market.

Each year, over 50 cotton varieties, 150 soybean varieties, 50 corn hybrids, and 25 grain sorghum hybrids are tested in variety and hybrid trials. These tests provide important information to farmers for variety and hybrid selection.

Disease resistant varieties have been identified in the Official Variety Trials and Plant Introduction tests. These varieties can be utilized by stakeholders which reduces the need for fungicides for disease management. This also reduces the pesticide load in the environment.

Beef cattle research will result in healthier cattle and increased productivity.

Forage research is aimed at suitability for year-round grazing systems with improved efficiencies.

2017 Agricultural Statistics

More than 69 million bushels of soybean were produced in Louisiana.

Total value of soybean, corn and cotton production was \$1.2 billion in 2017.

The beef cattle industry includes over 11,000 producers and contributes over \$400 million to the agricultural economy in the state each year.

Data from the Louisiana Ag Summary Web site:
LSUAgCenter.com/agsummary

Future Plans

Research efforts will continue to address the changing landscape of crop production methods and techniques. The commodity markets will continue to influence Louisiana crop production and new crops and rotations will be researched as needed.

Up-to-date research on newly released varieties will be a focus area of the program in the future. As higher-yielding varieties are continually introduced, research on their management and adaptation will be needed to optimize production and profitability for Louisiana farmers.

In cotton, corn, and soybeans, complex combinations of genetic technologies are now included in the seed. Management of these genetic technologies and information such as when and where they are needed, will be an important part of variety testing in the future.

The LSU AgCenter is committed to providing our stakeholders with unbiased information on disease management. Therefore, research will continue in the future and evolve with the changing agricultural landscape to address stakeholder needs and keep them profitable.

William B. Richardson, LSU Vice President for Agriculture, Louisiana State University Agricultural Center, Louisiana Agricultural Experiment Station, Louisiana Cooperative Extension Service, LSU College of Agriculture. The LSU AgCenter and LSU provide equal opportunities in programs and employment.

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 13 departments shared by the LSU AgCenter and the LSU College of Agriculture, as well as 16 research locations across the state. To fund the basic and applied research, scientists compete for federal and state grants and checkoff dollars provide 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, fifteen 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.



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LSUAgCenter.com