

Sugar Research Station Profile



Report to Stakeholders

September 2010

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

Sugarcane variety development is the primary objective at the Sugar Research Station. Variety development begins with crossing at the photoperiod and crossing houses. Early-stage selection begins at the research station and testing occurs in nursery, infield and outfield locations throughout the Louisiana sugarcane belt. In 2009, 635 crosses were made in newly renovated crossing facilities, resulting in the production of a record 842,055 true seed produced.



Pathology research focuses on management of the important diseases of sugarcane that cause yield, quality and economic loss to the industry. Disease management is an integrated program, which includes the use of new fungicides and healthy seed cane programs to manage ratoon stunting disease and screen for resistance to other major diseases.

Weed research includes weed management programs for fallow-field, at-planting and spring herbicide applications. A major focus is to reduce the number of tillage operations, conserve moisture and reduce fuel costs.

Entomology research is also based on an integrated pest management program that combines the use of insecticides, adult population dynamics, scouting and host-plant resistance to control the major pests of sugarcane. The Mexican rice borer is a potential new and emerging pest for Louisiana producers, and current efforts include monitoring its movement from the west. New insecticides are also being evaluated for their effectiveness in controlling this pest.



Sugar Research Station Office

Address: 5755 LSU Ag Rd.
St. Gabriel, LA 70776

Location: On Hwy. 30, 11 miles south of Tiger Stadium (LSU Campus) or 9 miles north of Gonzales.

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Fax: 225-642-5339

Email:
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Web site:
LSUAgCenter.com/SugarStation

Office Hours:
7:30 a.m.-4:00 p.m.
Monday-Friday

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Size: 525 acres

Sugarcane Research Focus:

- **Breeding — Variety Development**
- **Weed Control**
- **Disease Management**
- **Insect Control**
- **Plant Nutrition**
- **Cultural Management**

Significance of Sugarcane Research

The development of new sugarcane varieties by the LSU AgCenter focuses on improvement of agronomic traits to provide Louisiana's producers the greatest opportunity for profitability in sugarcane production statewide.

Pest management research helps to assess the impact of diseases, insects and weeds on sugarcane. New and emerging pests are also identified to determine the best approach for control by developing the most economical and environmentally friendly strategies available to the industry.

Research on cultural practices is designed to develop best management strategies to increase sugarcane production and simultaneously improve the agricultural-environmental relationship. This includes the judicious use of fertilizers and other agronomic inputs, tillage practices that conserve soil and water, and determining the best methods for post-harvest residue management.

2009 Sugarcane Industry Facts

- Nearly 14 million tons of sugarcane are produced in Louisiana.
- 417,869 acres of sugarcane were in production.
- On average, 33.4 tons of sugarcane were produced per acre, with 204 pounds of sugar per ton.
- Sugarcane was produced in 22 parishes.
- Gross farm value was \$447 million, and value added to sugarcane production was \$305 million for a total economic contribution of \$752 million. When compared to the 2008 crop, there was a 25% increase in the value of the cane to LA producers, processors and landlords.
- Sugarcane is ranked first in value among the state's row crops.

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 11 departments shared by the LSU AgCenter and the LSU College of Agriculture, as well as 20 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, nine 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.

Future Plans

In 2010, sugarcane variety L03-371 was released. L 03-371 was derived from a cross made on October 9, 1998, between CP 83-644 as the female parent and LCP 82-89 as the male parent. Yield data collected from 53 replicated, combine-harvested Outfield Trials indicated that L 03-371 produced approximately 9% greater recoverable sugar yield (pounds per acre) than HoCP 96-540 when averaged across plant-cane, first-ratoon, and second-ratoon crops. L 03-371 is early-maturing and produced 5% greater sucrose content (pounds per ton of cane) than HoCP 96-540 averaged across all tests. L 03-371 had sucrose content values similar to L 99-226 and L 01-283 but not as high as HoCP 00-950.



The Sugar Research Station conducts an annual field day on the third Wednesday of July every year. We highlight current breeding, production, disease and pest research projects.



For the latest research-based information on just about anything, visit our Web site: LSUAgCenter.com