

School of Plant, Environmental & Soil Sciences



Report to Stakeholders

October 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.



School of Plant, Environmental & Soil Sciences Office

Address: J.C. Miller & Sturgis Hall LSU campus
Phone: 225-578-2110
Fax: 225-578-1403

Website:
www.SPESS.lsu.edu

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

Don R. Labonte, Ph.D.
Interim Director/Professor
dlabonte@agcenter.lsu.edu

Academic/Research/Extension Highlights

Extension faculty work with research and teaching faculty to assist parish county agents in delivering the latest research-based information to Louisiana citizens in both rural and metropolitan settings.

Evaluation and development of new sweet potato varieties includes the recently released Evangeline — a deep-orange-flesh variety with unusually high sucrose content. The breeding program also recently released the popular Murasaki-29 — a purple-skinned, white-flesh variety. This specialty variety represents a small but growing segment of the industry.



Extension efforts include sustainable agriculture production, environmental awareness and improved quality of life. The youth component provides career exploration and personal development through 4-H programming and FFA contests.



To capture USDA-NRCS parish soil survey information, faculty from the school are digitizing this data for dissemination on the Web.



Graduate students have opportunities to work with Louisiana Agricultural Experiment Station personnel in the areas of plant breeding and genetics, weed science, biotechnology, plant nutrition, plant growth and development and plant propagation in areas of agronomy and horticulture.



The school offers a variety of soil, plant tissue and water tests to the general public and research community, they include: soil testing & plant analysis, cotton fiber testing, and coastal wetlands characterization.

Academic Focus:

The school provides a solid foundation and prepares students for successful professional careers in the study of sciences related to agronomy, horticulture and environmental management.

Research Focus:

Through research the school enhances, develops and delivers expertise that anticipates and responds to society's changing needs.

Extension Focus:

Develop educational opportunities for professional and consumer clientele through field days, variety trials, workshops, extension publications and mass media.

Significance of Programs

- The Environmental Management Systems program provides students with the knowledge & skills to work as part of the environmental community in many areas, including air permitting, environmental enforcement, soil permitting, environmental compliance, coastal restoration, and risk assessment and management.
- The Plant & Soil Systems program prepares students for careers in turf grass management, landscape management and ornamental horticulture.
- Sustainable Cropping Systems, a new area of concentration, is a blend of horticulture, agronomy and economics and prepares students for careers in crop consulting and agricultural sales.

School of Plant, Environmental and Soil Sciences Facts

- The school has 14 professors, 6 associate professors, 3 assistant professors and 5 instructors.
- Over 100 students study in program offerings in the school.
- The school has been one of the most successful in securing grants from state and federal agencies and private industry, with a grant portfolio of more than \$10 million.
- Research is conducted to address horticulture problems through fundamental and applied approaches.
- The school has a premiere wheat and oat breeding program which serves producers in the state and those in the Southeast U.S.

Future Plans

Researchers in the School of Plant, Environmental & Soil Sciences have recently developed a technique for rapidly quantifying the amount of total petroleum hydrocarbon contamination in soils-on-site. The technique utilizes visible near infrared diffuse reflective spectroscopy to detect contaminated soils. The technique has put a powerful tool in the hands of first responders working with oil spill cleanup from the recent Deepwater Horizon spill who need on-site information of contaminant levels. The technology also can be used to quickly assess the spatial extent of contamination plumes or to document the effectiveness of remediation methods employed. Research from the initial study was selected for the cover of the July/August 2010 issue of the *Journal of Environmental Quality*.

The Louisiana coastline is disappearing at a rate of up to 35 square miles a year. A School of Plant, Environmental & Soil Sciences faculty member, who is the only sea oats breeder in the nation, has been identifying sea oat lines with proven performance in natural beach environments after major hurricanes. Through her work, four lines of sea oats have been identified. She also is investigating methods to produce sea oats on a commercial scale and is using vegetable float systems as her model for restoration.



LSU AgCenter Departments and Schools

Maximizing the potential for the state's agricultural industries and improving the quality of life for all Louisiana citizens are the major initiatives of the LSU AgCenter.

To achieve its mission of serving the people of Louisiana and providing them with the latest research-based information on a vast variety of topics, the LSU AgCenter operates 11 academic departments/schools in Baton Rouge in conjunction with the LSU College of Agriculture. In addition, four other specialized departments also contribute to the mission. These 15 units are an integral part of the LSU AgCenter's research and outreach activities.

Faculty members in the LSU AgCenter's on-campus units are involved in a variety of efforts, including research, classroom teaching and extension education. They cover topics ranging from agricultural economics to human ecology and from entomology to experimental statistics.

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.



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

Visit our website: LSUAgCenter.com

Louisiana State University Agricultural Center: William B. Richardson, Chancellor. Louisiana Agricultural Experiment Station: David Boethel, Vice Chancellor and Director. Louisiana Cooperative Extension Service: Paul D. Coreil, Vice Chancellor and Director.

The LSU AgCenter provides equal opportunities in programs and employment.