

Biodiesel

Research & Extension

at the
W.A. Callegari
ENVIRONMENTAL CENTER

The LSU AgCenter's W. A. Callegari Environmental Center plays a vital role in meeting future domestic energy needs. It produces alternative, renewable fuels as part of its waste recycling and waste minimization program to help Louisiana and the nation meet new clean air standards.

As part of the AgCenter's bioenergy research program, the Callegari Center plays an active role in developing alternative fuels such as ethanol and biodiesel. The center features a bio-diesel plant that's used in conjunction with established laboratory procedures to characterize ethanol and bio-diesel and evaluate quality control procedures.

Along with traditional food crops such as corn, soybean, sugarcane, sorghum and sunflowers, scientists are evaluating non-food crops such as rape seed, Chinese tallow and palm oil as feedstocks for biofuels. The center soon will be producing biodiesel from used vegetable oil from LSU campus food service operations. This fuel will be blended with petroleum-based diesel fuel for use in heavy equipment and transportation vehicles.

Education

The entire process of converting used vegetable oil into biodiesel can serve as a "living classroom" for communities across Louisiana. The center will be a source of information for entrepreneurs and small businesses that want to learn about biodiesel production and be a real-world laboratory for engineering and chemistry students at LSU.

Environment

Biodiesel has significantly lower emissions compared with petroleum-based fuels. Converting biomass into fuel improves the environment, and including used vegetable oils diverts these waste materials into useful products.

Economics

Biomass-derived fuels produce financial benefits of fuel savings, disposal savings, employment opportunities and environmental improvements. Besides transportation, biofuels can replace other fuel sources for such uses as heating and electrical generation.

Laboratory

The center's laboratory capabilities include instrumentation, measurement and data analysis to test biodiesel for quality assurance and quality control according to ASTM methods. They include

- Shelf life of biodiesel.
- Quality measures regarding different processing techniques
- Options for the use and re-use of byproducts, mainly glycerin and methanol
- Evaluation of various sources of plant feedstocks
- Methods for improving fuel and by-product quality

The W.A. Callegari Environmental Center is the LSU AgCenter's research and training facility for composting organic waste and for water and air quality. Located on an 8-acre site on the Central Research Station south of Baton Rouge, the Callegari Center serves researchers, agricultural producers, private companies, governmental agencies and the general public in the areas of composting, water quality, air quality and bioenergy.

W.A. Callegari Environmental Center

Louisiana State University AgCenter

P.O. Box 25100, Baton Rouge, LA 70894-5100

(225) 578-6998 Labs: (225) 765-5155

Fax: (225) 578-7765

Email: bcarney@agctr.lsu.edu

Visit our Web site: www.lsuagcenter.com

Louisiana State University Agricultural Center

William B. Richardson, Chancellor

Louisiana Agricultural Experiment Station

David J. Boethel, Vice Chancellor and Director

Louisiana Cooperative Extension Service

Paul D. Coreil, Vice Chancellor and Director

Issued in furtherance of Cooperative Extension work, Acts of Congress of May 8 and June 30, 1914, in cooperation with the United States Department of Agriculture. The Louisiana Cooperative Extension Service provides equal opportunities in programs and employment.

