OSU provides information about purchasing and storing biodiesel

Stillwater, Okla. – Jan. 14, 2010

The production of biodiesel has increased tremendously in the last 10 years. The National Biodiesel Board has estimated 700 million gallons of biodiesel was produced in the U.S. during 2008.

With the increase in alternative fuels, especially biodiesel, specialists at Oklahoma State University’s Robert M. Kerr Food & Agricultural Products Center and the biosystems and agricultural engineering department want to make sure biodiesel producers and consumers are aware of some of the issues associated with purchasing and storing biodiesel.

“It was brought to my attention that some companies in Oklahoma are being sold fuels, specifically diesel, with no quality certification,” said Nurhan Dunford, FAPC oil/oilseed specialist and biosystems and agricultural engineering associate professor. “It is very important for both petroleum diesel/biodiesel blenders and consumers to know the quality of the product they are getting.”

Blending biodiesel with petroleum diesel is very common. Although the most common biodiesel/petroleum diesel blend is B2, which contains 2 percent biodiesel, blends with higher biodiesel content also are available.

Consumers need to make sure they are using a blend that is approved by their vehicle manufacturer, Dunford said. Use of an unapproved biodiesel blend may result in void of engine warranties.

“I highly recommend that petroleum diesel/biodiesel blenders purchase their biodiesel from BQ-9000 certified producers and marketers,” Dunford said. “This would ensure the quality of the product.”

A list of the certified biodiesel producers can be found at the following Web site: http://www.bq-9000.org/companies/producers.aspx.

Biodiesel quality deteriorates quickly if it is not stored properly. However, biodiesel will store longer if it is kept in a low moisture, temperature and oxygen environment.

If biodiesel is stored in tanks that are clean, lined and sparged with nitrogen, it can be stored for one year; otherwise, the biodiesel could be out of standard quality specifications in a short time.

Biodiesel stability also depends on the fatty acid composition of the oil or fat used to make it.

Biodiesel made from animal fat, which contains high concentrations of saturated fats, would be more stable than the biodiesel made from soybean oil. However, biodiesel made from highly saturated fats or oil will cause fuel injection and engine problems during cold weather.

Dunford said it is important to understand that oxidative stability of petroleum diesel and biodiesel blends will be lower as the biodiesel amount increases in the blend.

“I recommend that diesel blenders plan their biodiesel purchase, so they do not have to store biodiesel for extended time,” Dunford said.

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