

# BIODIESEL TESTIMONIAL

## DECKER TRUCK LINES – 2 MILLION MILE HAUL

Biodiesel is found to be performing similarly to diesel fuel in trucks during the first year of a field study conducted to examine the benefits of a 20 per cent soy Biodiesel blend (B20) in the United States. The "2 Million Mile Haul," is conducted by Iowa Soybean Association (ISA) in partnership with Iowa Central Community College, Decker Truck Line Inc., Caterpillar Inc., the National Biodiesel Board, Renewable Energy Group, Inc. and the U.S. Department of Agriculture.

"The trucking industry is by far the single largest consumer of diesel fuel," said Grant Kimberley, ISA director of market development. "This study demonstrates in a real-world environment that Biodiesel can be used successfully year round."

Don Heck, coordinator of biotechnology and biofuels programs at Iowa Central Community College in Fort Dodge, Iowa, said, "Although we have data from only the first year of the study, we are pleased with the results to date. Preliminary results are that B20 Biodiesel performs similarly to 100 percent diesel. We found a slight decrease in overall fuel efficiency for the B20 group of trucks, but it was not statistically significant."

The study consists of two groups of 10 Decker Truck Line Inc. semis running with flatbed trailers on matched routes to either Minneapolis or Chicago. The control group uses 100 percent No. 2 petroleum diesel. The B20 test group uses a blend of 20 percent Biodiesel from Renewable Energy Group Inc. and 80 percent No. 2 petroleum diesel.

More than 1.5 million miles had been logged by the end of the first year, from Oct. 1, 2006 to Oct. 1, 2007. Overall fuel efficiency, including idle time, was slightly reduced in the B20 group. Average fuel consumption for the control group was 6.29 miles per gallon (mpg) and for the B20 group it was 6.15 mpg. The fuel efficiency difference of 2.2 percent between groups is not considered significant, especially when compared to driver variability.

Driver fuel efficiency ranged from 5.72 mpg to 7.40 mpg for the control group, a 23 percent spread. For the B20 group, fuel efficiency ranged from 5.76 mpg to 7.00 mpg, an 18 percent spread among drivers.

Winter driving resulted in relatively few problems regarding cold-flow issues. Fuel for both groups was treated with a commercial fuel additive, and No. 1 diesel, a 40 percent blend, was used for a brief time during a severe cold snap in February 2007. No drivers experienced fuel gelling problems.

Early in the study, a few filter plugging problems occurred in trucks using the B20 blend. After changes were made in the blending of the Biodiesel fuel in early February 2007, the rate of filter plugging for the B20 group dropped significantly.

"We are continuing to investigate the causes of filter plugging that occurred last winter," Heck said. "The problem could be from improper blending techniques that have been remedied, or an interaction between Biodiesel and the waxy particulates in new ULSD, or some combination of those factors. Right now, the B20 performs similarly to the 100 percent diesel fuel in this study." Heck noted that many people have told him anecdotally that Biodiesel has increased their mileage and that may be the result of "cleaning out" an older engine.

He said, "Oil test data shows no appreciable differences between the fuels. We expect that the B20 group of engines will show less wear than the control group." At the conclusion of the study, engines from both the control group and B20 group will be torn down for a closer analysis of engine wear.