

# SoyDiesel Proclaimed Good

(Continued from Page A1)

At the start of the trip, the Pennsylvania Energy Office marked the occasion by granting its Alternative Fuels Pioneer Award to SoyDiesel, the first vegetable oil-based fuel to receive the award.

While a first for Pennsylvania, this event joins dozens of testing and large-scale demonstration projects now underway in the U.S. SoyDiesel is a biodegradable, non-toxic, soybean-based alternative fuel. Ken Peters of the National SoyDiesel Development Board in Missouri was on the trip and provided much of the background of the new fuel for reporters.

Peters said that in 1900, Dr. Rudolph Diesel showed his diesel engine at the Paris World's Fair. At the time it ran on 100 percent vegetable oil. Actually, the engine came before diesel fuel as we know it today.

The Soybean Board, funded by farmer's check-off moneys, currently is working with the U.S. Bureau of Mines where air is a real problem, and any spills or leakages become a real problem. Transit systems are finding that 20 to 30 percent blends are optimum. A demonstration boat uses 100 percent SoyDiesel. Officials believe about five percent of the market will eventually go to SoyDiesel.

Beam said the motor in the tractor that was running on SoyDiesel had not been changed to accommodate the new fuel. "I drained out the diesel fuel and poured in the SoyDiesel," Beam said. "I bailed hay yesterday, and the tractor worked well."

"I want to grow soybeans because it breaks the cycle of weeds and insects in the corn. I can often save the expense of using insecticides for rootworm and other insects. This protects the environment, and it saves me money. Unfortunately, the soybean price is not always what it should be, so I am very interested in finding new markets to turn the bottom line and make a profit."

Sara Nichols, staff attorney for the Delaware Valley Clean Air Council, said the new fuel was "just fantastic."

"When you consider the issues that this fuel is going to positively impact, I am standing here thinking this is almost a miracle."

"It's easy to focus on pollution problems that are most obvious, but the most harmful from almost every point of view is air pollution," Nichols said. "Yet air pollution is the one you can't see. But it is creating long term harm to us, the animals, the earth, the water, crops and everything. So anything we can do is fabulous."

"It amazes me that very few people really understand the dramatic effect the air has on public health, the economy and on agriculture. Most people don't know that motor vehicles generate pollution that causes \$5 million in crop loss to America's farmers and adds \$94 billion to health care costs. The number one cause of water pollution comes from the air. sulfur dioxide is one of the major causes of acid rain, and Pennsylvania is the most acid affected state in the country."

Representative Art Hershey (R-13) said as a farmer, legislator and a citizen with concern for the environment that he was pleased to be involved in the demonstration of the effectiveness and efficiency of SoyDiesel. Hershey said the cleaner burning fuel made it easier to comply with the increasing environmental protection laws and standards.

Credit is given to SoyDiesel for reducing exhaust smoke by 70 percent and reducing engine wear. "The economic impact from new markets will increase the demand for crops and be good news for farmers and the communities in which they live," Hershey said. "The issue of farmland preservation and open space dovetail into this exciting development."

Spurred by EPA Clean Air standards, SoyDiesel has recently become a competitive player in the alternative fuels arena. The fuel is virtually free of sulfur emissions (a major cause of acid rain), produces fewer particulates, comes from a renewable domestic source and can be used in existing diesel engines

with no modifications. (Mercedes-Benz, for example, warranties their heavy duty engines on biodiesel.) Biodiesel is therefore an attractive option for many cities coping with tougher clean air standards, because it delivers emissions reductions while maintaining a city's current bus fleet, refueling stations, spare parts inventories and skilled diesel mechanics.

Independent research shows that biodiesel in a 1:5 blend with petroleum diesel, along with use of a catalytic converter, reduces particulate matter by 31%, carbon monoxide by 21% and total hydrocarbons by 47%. Yet biodiesel performs the same as petroleum diesel in terms of torque, horsepower and miles-per-gallon. SoyDiesel is also an efficient fuel to produce: while soybean oil requires about 5,200 BTUs per pound to produce, crush and refine, the same amount of oil contains 17,000 BTUs.

SoyDiesel is currently in use in large-scale demonstrations in sev-

eral U.S. cities. The greater St. Louis transit authority has now logged over 200,000 miles on SoyDiesel, with tests showing performance, mileage and drivability the same as with conventional diesel, but with a 30% opacity reduction and significantly improved exhaust odor.

The fuel is made from soybean oil through a simple refining process called "transesterification." This involves mixing methanol and sodium hydroxide with soy oil and letting the glycerine settle out. The resulting products are methyl soyate (SoyDiesel) and glycerine — both considered safe by EPA with no restrictions to their use or disposal. The glycerine has over 1,600 existing commercial applications, from toothpaste and cough syrup to environmentally friendly antifreeze. Research is also underway to substitute ethanol for methanol in the process, but it currently costs up to three times as much as has a lower conversion rate (80% compared to 98%).

While currently most popular in Europe due to tax exemptions and even some mandated use, SoyDiesel is also immediately avail-

able in the U.S. and already exceeds early demand projections by nearly 10 times. Manufactured by Proctor and Gamble, the fuel is marketed in Interchem Environmental in Kansas and can be purchased in quantities from five-gallon drums to semi and rail tanker loads. It is registered and certified with EPA as an alternative fuel. It also meets all relevant ASTM (American Society for Testing and Materials) criteria for diesel fuel.

Current costs for pure methyl

soyate run about \$2.50 per gallon, with projections of \$1.50 to \$2.00 as production increases. Cost is further reduced by using biodiesel in a 1:5 ratio with conventional diesel, while still achieving all major emissions reductions.

The Pennsylvania SoyDiesel Bus Ride was funded in part through a national soybean check-off fund, a special farmer effort since 1991 to support research and development of new and improved soybean products and to help develop and expand markets for American agricultural commodities.

## Highland Cattle Sale At KILE

HILTON, N.Y. — The North East Highland Cattle Association is sponsoring its first ever Highland cattle auction, "Showcase 93."

The sale will be held in conjunction with the Keystone International Livestock Exposition in Harrisburg on Oct. 2. Highland activities begin at 12:30 p.m. with the NEHCA annual show followed by the "Showcase 93" sale starting at 8 p.m.

"Showcase 93" is to feature 22 lots of the finest Highland females

in North America. Consignors from across the Eastern United States and Canada are bringing top females to showcase their herds in this sale.

Convention activities include business and educational meetings, a farm tour, a banquet and plenty of time to socialize and enjoy the show.

For further information on the "Showcase 93" sale or the Highland breed contact Roger Jestel (716) 392-9062.

A KICK OFF CELEBRATION OF 65  
YEARS OF FFA IN PA  
WITH EAGLES CHEERLEADERS  
AND OTHER CELEBRITIES

## FIRST ANNUAL FORE FFA GOLF TOURNAMENT

DATE: October 4, 1993

PLACE: Hawk Valley Golf Club, Denver, PA

TIME: 11:00 a.m. - 12:00 p.m. Registration

12:30 p.m. - Shotgun Start

6:00 p.m. - Dinner/Auction

ENTRY FEE: \$75.00

(Includes lunch, dinner, cart & greens fee)

DINNER ONLY: \$50.00

Call now to make your reservations by VISA or Mastercard  
at (215) 648-0674

Benefiting the Pennsylvania  
FFA Foundation, Inc.

Sponsored by:

**HOSS'S**  
Steak and Sea House

More Than 30  
Locations  
In Pennsylvania  
Waiting to Serve  
You!

