

Update: Grow your own biofuel crop

By JOHN VOGEL

BIOFUEL — growing and making it — was a top attraction at August's Penn State Ag Progress Days. Farmer interest in raising oilseed crops such as canola and camelina, which can be pressed and burned straight in diesel engines, is growing beyond curiosity.

Consider researching and experimenting with winter canola as a double-crop and potential cover crop, suggests Glen Cauffman, farm manager for Penn State's College of Ag Sciences. It's more winter-hardy than spring-seeded canola. Since it's a rapeseed crop, it may qualify for cover crop payments if your state offers them.

Fall-seeded rapeseed (winter canola) is already being tried in Maryland and Delaware. Perdue Inc. put out plots this fall, according to company officials.

"Canola will take off now," predicts Cauffman. "Farmers are concerned about diesel fuel costs. When you raise your own fuel, you'll know your costs."

Twin-tank tech is here

Ag Progress Days was one of the first North American public exposures of a straight-vegetable-oil fuel system on major-manufacturer Tier 3 tractor engines. New Holland had fitted two tractors with the Elsbett twin-tank system, marketed mainly in Europe, reports New Holland engineer Paul Trella.

The tractors start with biodiesel. Once under load, they switch to vegetable oil, then back to biodiesel when idling, explains Cauffman.

Diesel fuel and biodiesel combust better at cold temperatures, but vegetable oil combusts more completely when the engine is warm. Computer controls sense engine operating parameters and automatically switch as needed.

Trella cautions that SVO is still being evaluated. CNH/New Holland does not yet approve SVO or the Elsbett system.

SVO fuel quality is a concern voiced by Trella and Elsbett experts. Rapeseed oil is the most commonly used SVO in northern Europe. Special quality standards exist for rapeseed oil used as road fuel.

Elsbett, for instance, recommends SVO and its fuel system only for heavy-use engines. It also advises shorter service intervals between oil changes, or



BIOFUEL PUSHER: Penn State farm manager Glen Cauffman, working with New Holland, has led the college's efforts in becoming a national research leader on biofuels, particularly biodiesel.

Key Points

- Fall-seeded canola varieties have potential as a straight biofuel.
- Rapeseed may qualify as a cover crop and a cash crop.
- European technology is available to burn farm-grown oil crops.

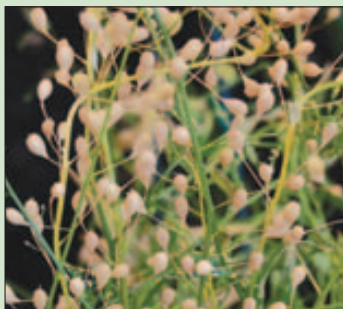
having your engine oil analyzed. These measures prevent potentially damaging "polymerization" of vegetable oil mixing with the engine lubricating oil.

On two-tank conversions, the company advises running on conventional diesel before letting the motor cool. This flushes the SVO out of the injection system and readies it for a cold start next time.

Learn more about the German technology and Elsbett's U.S. marketing partners on the Web at www.elsbett.com.



TWIN-FUELED: This Elsbett auxiliary fuel tank feeds diesel fuel to fuel injectors until the engine automatically switches to straight vegetable oil.



OILY PODS: Camelina seed pods are the size of small peas with pin-head-sized seeds that are 40% oil, compared to only 20% for soybeans.

Camelina growers breaking ground for biofuel revolution

MOST places in the East are still talking about the coming biofuel revolution. But in Crawford County, Pa., farmers already are growing for it.

The local Extension office organized about 15 growers into a cooperative to produce a promising oilseed feedstock called camelina.

"This year, we had about 300 acres planted on a dozen farms," says Joel Hunter, Crawford County Extension agronomist.

The group was working with the owners of a Union City crush plant to extract oil. They drew on the experience of Ernst Seeds of Meadville for harvesting

and handling the tiny seeds.

No contractual agreement exists with Lake Erie Biofuels. But Hunter says, "They'll buy all the oil we can give them." Up to this point, Lake Erie Biofuels imports most of its oil from out of the region.

Camelina could play a key complementary role in a no-till system, based on cover crops and rotations. With a growing season of 85 to 105 days, it can be no-tilled early, then followed by another crop.

This crop grows to about 3 feet and has branched stems that become woody at maturity. Once the oil is pressed out, a

meal high in omega-3 fatty acid is left. Marketing it is one of the details still to be worked out.

Future plans?

"We want to add acres and growers in 2009," says Hunter. "We want more people to get involved and let capitalism take over."

"The potential is there to do value-added ag products from the meal," the Penn State Extension agent adds. "We're hoping we can feed it to poultry for production of high omega-3 eggs. But at this point, we would settle for just feeding it to livestock."