

## **Biofuels Surge**

When Ed Ulch checks out the soybean fields on his farm near Solon, he sees more than just a food source.

He's also looking at a fuel \_ one that's harvested rather than pumped from the ground.

Soybean oil can be turned into biodiesel, a renewable fuel that gains more notoriety by the week and offers such promise that investors are lining up to plunk down their money to finance new refineries.

Iowa has three biodiesel plants operating now. Three more are expected to begin production this year, more than tripling the state's capacity, and at least 10 other biodiesel projects are in the works, according to the Iowa Soybean Association.

``It's just exploding," Ulch said.

Ulch is a leading proponent of biodiesel, which can be made from vegetable oils, grease or animal fats. He sits on the Iowa Soybean Promotion Board, is a director for the National Biodiesel Promotion Board and has watched with interest as biodiesel production rose dramatically in this decade.

In 1999, U.S. biodiesel manufacturers produced about 500,000 gallons. Production rose to 25 million gallons in 2004, the National Biodiesel Board said, and was estimated at 75 million gallons last year.

``We kind of expected this to happen," Ulch said. ``But it's broader and deeper than we thought it was going to be. There's so much enthusiasm for biodiesel. Everything about it is good. It's a win, win, win situation for everybody involved."

High oil prices, the renewal of a \$1-a-gallon tax credit, stricter emission standards about to take effect and a general feeling that the nation should wean itself from foreign oil have combined to spark interest in biodiesel.

Gov. Tom Vilsack last year ordered state agencies to use at least a 5 percent biodiesel blend in their vehicles by next year and a 20 percent blend by 2010. In what was seen as a major boon for the industry, the American Trucking Association last fall endorsed the use of 5 percent biodiesel (B5), saying blended fuel could help extend the supply of diesel fuel.

And celebrities are singing the praises of biodiesel \_ literally. Singers Bonnie Raitt, Willie Nelson and Neil Young fuel their tour buses with biodiesel. Nelson even has his own company, Willie Nelson's Biodiesel B20.

``The only thing that's grown faster than the production is the interest in its use," said Monte Shaw, executive director of the Iowa Renewable Fuels Association.

Minnesota went so far as to require all diesel fuel contain a 2 percent biodiesel blend, though the requirement was suspended for 21 days this winter after complaints that it was clogging some fuel filters in cold weather.

By the end of the year, Shaw expects Iowa to pass Minnesota as the nation's No. 1 producer of biodiesel.

Biodiesel supporters say the fuel improves an engine's lubricity, burns cleaner because it contains no sulfur and can be used in most diesel engines without having them modified. They say EPA standards that take effect in June and will require most highway

diesel to have a sulfur content of no more than 15 parts per million, down from 500 ppm, should be a huge plus for the biodiesel industry.

“It's a perfect time for that to happen,” said Ulch, who uses biodiesel in his machinery.

Farmers could benefit from higher prices for their beans. Karen Anderson, marketing director for the Iowa Soybean Association, said it's estimated that a sustained demand for 200 million gallons of biodiesel a year would raise soybean prices 17 cents a bushel. Based on Iowa's production of 500 million bushels a year, that would mean an additional \$85 million for growers.

“I wouldn't be surprised if we hit 200 million by the end of this year,” Anderson said.

Ulch, though, said farmers are interested in more than just the potential of higher prices.

“We also benefit from clean air and cleaner running engines, the same thing the public does,” he said.

Anderson noted that biodiesel plants also create jobs, both in construction and in operating positions; they add to the tax base and create business for trucking companies that deliver the product.

Iowa's operating biodiesel plants are in Ralston, Sergeant Bluff and Milford and produced about 22 million gallons last year, Ulch said.

A group called Western Iowa Energy is building a 30 million-gallon plant in Wall Lake that's expected to open this spring. It will use waste fats from area meat processors as well as soybean oil. Cargill is building a 37.5 million-gallon plant in Iowa Falls and a refinery capable of producing 5 million gallons a year is expected to open soon in Clinton.

In Ralston, West Central Co-op was the groundbreaker in biodiesel, starting production in 1996 when the word had barely entered the nation's vocabulary. West Central decided to build a new plant in 2001 and it has worked on a continuous flow operation, 24-7, since 2002.

“That preceded any government income tax credit, any of those things,” said Nile Ramsbottom, who is president of Renewable Energy Group, which West Central formed to build and manage biodiesel plants.

“We kind of stuck our neck out, if you will,” he said. “But we have been able to run it at capacity.”

Renewable Energy Group built a biodiesel plant in Albert Lea, Minn., it's building the Wall Lake plant and has several other projects going around the country, including one in Newton, Ramsbottom said.

There have been stunning success stories in financing biodiesel plants. Western Iowa Energy needed only 11 days to get pledges of \$22 million from 700 people for its Wall Lake plant. In January, organizers raised more than \$7 million in two days toward construction of the Newton plant. Each investor had to pledge at least \$25,000.

But Shaw urges investors to proceed cautiously.

“Just because demand is expected to grow pretty rapidly doesn't mean everybody should go out and build every plant they're thinking about,” he said.

Soybean oil is derived from beans that are crushed for meal, so the availability of oil depends on the market for meal and on soybean production, Shaw said.

“I'm not trying to say people shouldn't build,” he said. “I do believe demand is going to grow very rapidly. But you need to educate yourself. Where's the best location? How much biodiesel will be needed and how soon?”

There also are concerns that even if soybean oil supplies remain firm, demand still will outstrip what's available.

“The question is, will we have to import soybean oil into our country?” Anderson said. “That's not our preference. But if we use up all our stock ... That's why there's a lot of discussion right now.”

When the talk involves biodiesel, there are no signs it will wane anytime soon.