

Start your engines: The 200,000-acre promise

By Lisa McLean for Soy 20/20

A California tech company is driving towards a piece of the lucrative motor oil market with a clean-running product that outperforms its premium synthetic petroleum counterparts.

The motor oil – which utilizes oil from high oleic soybeans, a crop rich in Omega 9 fatty acids – offers promise to Canadian soybean farmers interested in growing premium beans.

Greg Blake, Senior Vice President of Biosynthetic Technologies, discussed his company's product at the 25th Canadian Conference on Fats and Oilseeds held in Quebec City October 5-6.

Blake says his company has studied non-food oil products for many years, and its researchers have successfully managed to overcome the challenges associated with using vegetable oil in motor oil and other demanding lubricant applications.

“Vegetable oils are a preferred product because they are renewable, non-toxic and biodegradable, and they have excellent lubricity,” said Blake. “However vegetable oils also present some hurdles. They have been instable, and they haven't performed as well at cold temperatures – until now.”

A technology turning point

Passenger car motor oil (PCMO) represents nearly half of the 38 million tonne lubricant market worldwide, and it's a category with very high performance requirements. The company has earned its performance-based certifications for motor oil from various certifying bodies around the world, including the American Petroleum Institute.

“Our motor oil performs – and in many cases outperforms – the petroleum alternative,” Blake says. “The opportunity for this technology is astounding. It has applications in industrial, auto, marine and oil and gas as well.”

Biosynthetic Technologies has developed technology that transforms vegetable oil into a synthetic oil product – one that does not use petroleum. The company has some heavy hitters behind it, including BP and Monsanto.

The company appeared on Soy 20/20's radar in 2012 says Rob Roe, the organization's bioproduct commercialization director. Soy 20/20 is an industry organization with a goal to stimulate and seize new global bioscience opportunities for Canadian soybeans.

“We follow a number of companies that are doing innovative and promising work with soybeans,” said Roe. “Motor oil is virtually untapped in the biobased marketplace. The technology -- to take a vegetable oil and transform it into a synthetic product – represents a turning point for vegetable oils as lubricants, Soy 20/20 wants to help encourage this market for Canadian soybeans.”

Preventing “silent oil spills”

“From an environmental perspective, we have a real opportunity to make a significant impact,” said Blake.

Motor lubricants in use today come from crude. In Canada alone, 400 million litres of motor oil is “lost in use” every year, creating a scenario Blake refers to as “silent oil spills.” Blake said motor oil that leaks from cars is responsible for 40% of water pollution in North America.

“It’s not very often that the product that’s best for the environment is also the best performer technically,” Blake says. “We’ve been able to achieve that here.”

Reving up for production

Biosynthetic Technologies has built a demonstration pilot scale plant in Louisiana, and the company is eyeing multiple production sites around the world – including one Canadian location in Ontario. Blake notes once building begins, it will extend through two growing seasons before it would be ready to accept soybean oil feedstock.

“I’d say we’ll be ready to go within three years,” Blake said.

If the company sets up one of its production facilities in Ontario, growers could expect a market for the oil from approximately 200,000 acres of soybeans, says Soy 20/20.

The Canadian Conference on Fats and Oilseeds was jointly organized by the Canadian section of the American Oil Chemists’ Society (CAOCS) and the Consortium for Research and Innovation in Industrial Bioprocesses in Quebec (CRIBIQ). The conference had a focus on new developments and innovation trends, targeting academic, technical, industrial and commercial audiences.

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