

Fueling progress

August 10, 2010

A Calgary company hopes to tap into an unconventional source of fuel and help impoverished people at the same time – and it's seeking help from Central Albertans.

Bedford Biofuels Inc. wants to grow jatropha plants on hundreds of thousands of acres in Africa. Biofuel could be extracted from the resulting seeds, said John Mitchell, the company's general manager, and the plantations would promote food production and provide income for local inhabitants.

Bedford Biofuels has research and development facilities in Zambia, and is arranging long-term leases for hundreds of thousands of hectares of land in that country and Kenya.

The key to its plans is the jatropha plant, and in particular its seeds – about 35 to 40 per cent of which consists of an oil that can be burned as a precombustion engine diesel or marine-grade diesel, said Mitchell. With further processing, the oil is suitable for high-tech diesel engines and even as an aviation fuel.

But its best use might be close to the jatropha plants themselves, which grow best in tropical climates near the equator.

"In most of the Third World countries, you just squeeze it, filter it and put it in your vehicles," said Mitchell.

Alternatively, he added, the oil could be used to power generators.

"Third World countries, 90 per cent of those people don't have electricity."

Another benefit of jatropha production is that the drought-resistant plants help stabilize and enrich the soil. That opens the door for other crops within the plantations.

"We're actually going to plant grass and run cattle crops in there," said Mitchell, explaining that this will provide a source of protein for the people who live there.

The plantations will also mean jobs, he added, with the workers fed and paid. Bedford Biofuels also plans to grow food crops on other lands, and build facilities like schools and dental clinics.

"Four per cent of our budget as a company is allocated to humanitarian work."

Bedford Biofuels is currently raising capital, with Mitchell in Red Deer on Wednesday to speak to prospective investors.

“We’re going to have meetings in Red Deer every two weeks,” he said, adding that Bedford Biofuels is opening an office here.

The company is already making regular presentations in Calgary and Edmonton, with investors in Fort McMurray, Vancouver, Winnipeg and other cities also being solicited.

“We need North American capital to put the plantations in,” said Mitchell, who emphasizes the humanitarian and environmental benefits of jatropha, but also its potential profitability.

“Is there anybody out there who doesn’t think oil is going to increase somewhat over the near future?”

“We plant a tree that’s going to produce oil.”

Those who put money into the venture will receive a share of an African jatropha plantation, each of which will consist of about 10,000 hectares. The first, in Kenya, is expected to be planted within the next year.

Jatropha plants take about four years to reach maturity, but thereafter will produce usable seeds for about 45 years, said Mitchell. Because Kenya has two rainy seasons, two harvests a year are expected.

Each pod contains three large seeds. Their non-oil component can be used for fertilizer, animal feed, pesticides and herbicides, cosmetics, brake fluid and other products, he said.

“The other byproducts, besides the oil, are almost as valuable as the oil is,” said Mitchell.

Jatropha oil produced on the west coast of Africa was shipped to Europe during the First and Second World Wars to help address diesel fuel shortages, said Mitchell.

“Other than that, it hasn’t been looked at as a commercial biofuel product because it grows only in the tropics.”

That changed about a decade ago when the world became interested in biofuels. Jatropha oil production has since been pursued by a number of countries and companies, although some have stumbled out of the gate.

“Too many people have just thought you could plant it anywhere and it’d grow,” said Mitchell.

“It will grow anywhere, it just won’t fruit and flower and make money anywhere.” ■

Additional information about Bedford Biofuels can be found online at www.bedfordbiofuels.com.