



**Pennycress Project:** Farmer Stan Peacock in his field near High Prairie.

## The Sweet Smell of Stinkweed

**W**hen Stan Peacock took the first steps to turn the stinkweed growing on his farm near High Prairie from a problem into profit, the Lesser Slave Lake Economic Alliance (LSLEA) was ready to help out.

Like many farmers in north-central Alberta, Peacock used to battle the weed, which grows extremely well on marginal farmland. An interest in biodiesel got Peacock wondering whether the little seeds of the stinkweed, which also goes by the name pennycress, might be crushed into usable oil.

"I took some canola seed and we crushed it. There was a lot of pennycress in it and we noticed that it came out good, even better (than canola alone)," Peacock says. This incident planted the seed of an idea in Peacock's mind, but he needed some capital to help it grow.

Peacock turned to the LSLEA, which serves the region in north-central Alberta, and made a presentation to its board. "To be quite honest, we were surprised that an old problem could be turned into something viable," says LSLEA board chair Alvin Billings. Despite their initial surprise, board members instantly liked Peacock's proposal, and with some help from the neighbouring Peace Region Economic Development Alliance, LSLEA provided funding for initial pennycress crop research.

Now, the pennycress research that LSLEA helped fund is one year underway. Alberta Agriculture and Rural Development researchers harvested the first test fields in Edmonton, Grande Prairie and High Prairie in July 2009.

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According to Kwesi Ampong-Nyarko, a special crops research scientist who is leading the pennycress project, the first crops were successful, but the team is still trying to determine the best time to plant pennycress seeds, fertilizer requirements and how pennycress competes with other weeds. He is optimistic about what he sees, and estimates pennycress could be commercialized within the next five years. "We are very excited," Ampong-Nyarko says. "I've worked with so many crops, but I think this one is going to be very easy. It usually takes so long for new crops to be commercialized, but I think this one is going to be different."

Tanya McDonald, a bio-energy research scientist at Olds College, oversees the portion of the research

that examines pressing techniques to extract oil from the seeds. McDonald is also looking into uses for pennycress meal – the organic material that remains after the pressing process. "It was a good fit for us because we had been doing work in biodiesel (development) for a few years," she says. "We were already looking at alternatives to using food-grade oil as fuel."

As the project moves into its second year, both Billings and Peacock are optimistic that this initial research will lead to a pennycress biodiesel plant in the Lesser Slave Lake area.

Pennycress also has the potential to provide an alternative for cattle ranchers in the area, many of whom faced significant challenges as markets and prices deteriorated. Peacock has already sold off part of his cattle herd and planted 1,000 acres of pennycress on his property. Recently, investors and researchers from Ontario, the United States, and even South Korea have shown interest in Peacock's pennycress project.

Peacock says getting to this point wouldn't have been possible without the support provided by LSLEA. The board's vision for economic development in the region invites innovation, capturing new opportunities. "That's why the pennycress project has moved ahead so far," Peacock says. "They're realistic and saw that this could be great for the region's farmers." ■