

Biotech crops lead to economic success

When Canadian scientists pioneered the development of canola in 1974, no one could have guessed how important it would become.

The canola industry today is worth more than \$14 billion to the economy. The total value of canola seed, oil and meal exports is about \$2 billion. Depending on the year, canola is either Canada's first or second most valuable field crop (vying for top spot with wheat).

Over 90 percent of all canola grown in Canada is herbicide tolerant (the first herbicide tolerant canola variety was developed in 1995, allowing farmers to kill weeds with herbicide, without destroying the crop). "This means that the soil has to be tilled less, reducing water loss and soil erosion. Over time this has meant reduced use of herbicides," says CBI Canada Secretariat Janice Tranberg.

The canola industry aims to have at least 15 million acres under pro-

duction by 2015, with average yields of 40 bushels per acre. Of that production, 6.5 million tons will be for export, and 7.5 million tons for crushing, with 5 million tons going to food and 2 million for biodiesel, says the Canola Council of Canada.

Oilseeds as fuel?

There is interesting innovation going on in several fronts across the country, including work on oilseed crops to create oils that will be used in hydraulic fuels.

For example, Linnaeus Plant Science in Saskatoon is creating a genetically modified oilseeds crop that will manufacture lubricants, plastics, nylon and greases. It was reported earlier this year that the company began a pilot project with Toronto Community Housing to use vegetable-based hydraulic fluids in 200 trash compactors.

Sustainable Chemistry Alliance's President and CEO Murray McLaughlin says sustainable chemistry is exciting because "we use different pro-

cesses that allow companies to reduce greenhouse gases, and reduce waste materials."

"We see this as a tremendous opportunity because it relies on natural resources. It is an opportunity for us to create value and create jobs. Canada is already a world leader in ordinary oilseed agriculture," McLaughlin said.

Genetically modified oilseed plants also have an enhanced oil output, meaning higher profits for farmers.

Managing public perceptions

Last week, science reports trumpeted the news of genetically modified salmon which will grow twice as fast as "normal" salmon. The fish has not yet been approved for human consumption.

There was, understandably, disquiet in some quarters about the health effects of eating "tampered" fish. Such news reminds us that despite the impressive strides in biotechnology, a sometimes skittish public has

to be skilfully managed and provided with solid information.

However, the Canadian public is getting better educated and more savvy says Tranberg. Speaking from a plant science perspective, she says, "We get criticised as an industry, but we believe we can provide solutions to the world's problems. The next big issue is really focused on water, so we are developing crops that use less water yet produce the same amount.

"Many people claim these products are not safe, but a lot of money, time and research and development have gone into perfecting these varieties."

She adds that Biotech crops are the most intensively studied by regulatory agencies around the world and so far, not a single peer-reviewed study has shown the negative effects of such crops.

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