

A second sugar-beet processing plant is on the drawing board for southern Alberta. At the annual general meeting of the Alberta Sugar Beet Growers yesterday morning, Medicine Hat MP LaVar Payne announced an investment to help demonstrate the viability of using beets in the production of sustainable alternatives to petrochemicals.

The investment of nearly \$600,000 will help the Alberta Sugar Beet Growers (ASBG) and a company the organization is partnering with, S2G BioChem, study the use of beets in the production of sustainable alternatives to petrochemicals. Bio-glycol, a renewable and sustainable alternative to traditional petrochemicals, that can be used to produce a wide variety of goods including plastics, polyester fibre and resin, would be the main product. According to S2G president and CEO Mark Kirby, the government money will help go towards perfecting the process.

“We have a pilot plant in Vancouver where we’re bringing in beets now,” he said last week in Lethbridge, as he added S2G has already invested \$5 million into the project. “This will help us do that work.”

Kirby said the technology has already been proven elsewhere, as a plant in China uses the same process, with a feedstock of corn glucose instead of raw sugar beets. The Vancouver company, in business since 2009, is continuing to develop the technology to commercialize the use of sugars to make various biochemicals, according to the S2G CEO, who added conversations with southern Alberta sugar beet growers in 2011 led to a partnership now on the verge of a breakthrough.

“We’re interested in working with any kind of sugars,” said Kirby. “We’re looking for a good, reliable, cost-effective source of sugar.”

He added sugar beets have never been used for this process, as he mentioned issues of yields, productivity, processing challenges and the economics surrounding it all have all provided positive results.

“We’re making sure we have a solid business case here and that it makes economic sense. We didn’t want to be dependent on government subsidies. We want to make sure we’re providing good value for the growers and a good return on the plant and for the equipment used to process this.”

That plant will be somewhere in southern Alberta, Kirby added, as the sugar beets are grown here along with other feedstocks the plant would require, such as straw, as he mentioned biodiesel producers in Alberta would also benefit, as S2G could use the glycerine waste created from the creation of biodiesel.

Kirby went on to say the business case is strong, since the plant would produce glycol used to produce a variety of products already on the market, such as plastic bottles, polyester fibres, resins and fiberglass, along with heat-exchange products, antifreeze, personal-care products and detergents.

“The one thing we like about this technology is we’re not trying to invent a new market,” said Kirby. “What we’ll be producing is the same as the current glycol products, and the users like that. This is something they can drop in that performs in the exact same manner, but it has substantial advantage.”

The difference, he pointed out, is these products would be created through a more environmentally-friendly process that would be more cost effective than petrochemicals, with an eye towards long-term substantiality. The goal would be to produce 100,000 tonnes per year of glycol, according to Kirby, which would amount to \$100 million in annual revenues.

Development of a plant to achieve this is the next step, he said, as once the pilot project wraps up in Vancouver, attention will be turned to where the southern Alberta plant will be located, the land costs involved, solving utility issues, finding employees and getting quotes on equipment and engineering costs.

"It's a lot of money we will be putting in the ground," said Kirby, who added the goal is to begin construction within 12 months on a plant he estimated could employ around 60 workers.

For sugar beet growers, the partnership with S2G represents the type growth opportunity producers have been clamouring for, according to ASBG executive director Gerald Third.

"We're experiencing shrinking acres in southern Alberta and increasing yields on sugar beets. That increasing yield has led to a decrease in acres, so we're being punished for producing a higher-quality crop, and given there's only one processor here (Lantic Sugar), producers began to look for alternatives."

Third added the partnership with S2G made sense, and mentioned after initial research done in the fall provided better-than-expected results, talk of a southern Alberta processing facility heated up.

"The drive here is rural development and increasing farmers' returns through vertical integration," said Third, who added sugar beet growers were down to 30,000 acres last year, which produced 125,000 tonnes of metric sugar. "There's only so much sugar consumption in Western Canada, and it doesn't pay to ship sugar to Eastern Canada, so our growth opportunities were very limited, so we had to ask ourselves, 'What else can we do with beets?'" Potential for growth could include up to 20,000 more acres of beets, according to Third, who added the current base of growers may be able to handle that increase, but the potential also exists for new growers to jump on board.

From the perspective of Payne, he said the government sees agricultural research and innovation as critical in creating jobs and improving the long-term prospects for southern Alberta.

"Our government's top priority remains jobs and economic growth, and the sugar beet industry plays an important role in driving our economy here in southern Alberta. This project will help pioneer cutting-edge technologies that will enable our beet growers to diversify their customer base, increase their acreage, and ultimately boost their bottom lines."

ASBG president Rob Boras said the federal-government funds will be put to good use.

"This funding will allow us to bring leading-edge green technology and significant outside investment to Alberta. Once this project is completed we expect to see that energy beets are a viable feedstock for the technology being tested, that they are commercially viable from a technical and an economic standpoint, and that moving to commercial production is achievable in Alberta."