

## Alberta's bio-industrial opportunity

The agriculture industry is one of the province's most innovative, forward-looking economic sectors. While best-known as a producer of safe, high-quality foods, Alberta's crop producers and processors are increasingly part of the emerging bio-industrial sector.

This sector is based on adding value to bio-based materials, including:

- crops such as canola, wheat, barley, hemp and flax
- crop residues left on the field when a crop is harvested, such as wheat and flax straw
- materials that remain when crops are processed, and were formerly wasted.

These materials can be processed into a wide, and growing, variety of practical applications, such as chemicals, plastics, energy and cosmetic and personal care products.

According to Hong Qi, Alberta's bio-industrial opportunity shouldn't be seen as something that might occur in the future. It's happening right now.

"The bio-industrial sector is growing fast in Alberta and Canada," says Qi, Director of Alberta Agriculture and Forestry's Bio-Industrial Opportunities Section. "We see companies growing and serving new markets and there is an opportunity for them to grow further."

### *A few examples*

Edmonton-based Ceapro Inc. develops and markets natural ingredients for the human and animal health markets. In 2016, the company opened a new bio-processing extraction facility in Edmonton.

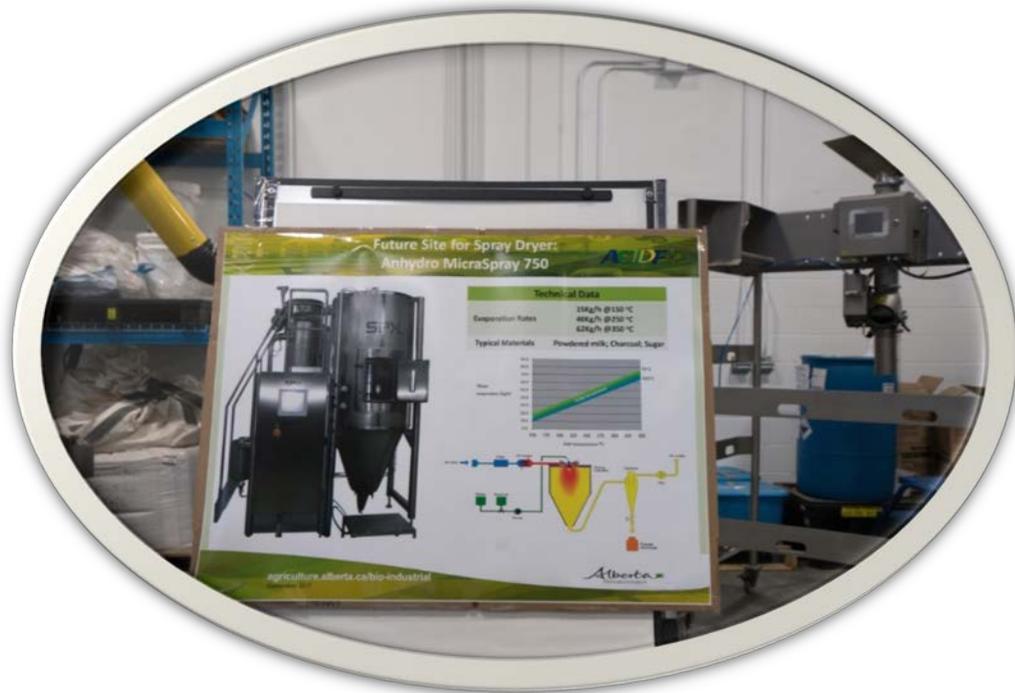
Calgary-based Botaneco develops natural ingredients for personal care products, and recently opened a technical service lab in Lambertville, New Jersey, in the heart of the U.S. personal care products industry.

Calgary-based Canadian Greenfield Technologies is commercializing concrete that's reinforced with hemp fibres, providing a green solution to increase the performance of concrete.

As Qi notes, alongside such established companies are a host of entrepreneurial start-ups that have chosen to make Alberta home. The mission of Alberta Agriculture and Forestry's new Bio Processing Innovation Centre is to help both established companies and up-and-comers make it.

"The Government of Alberta supports bio-industrial development," says Qi. "We can help companies through the use of our equipment to work on their processes and provide technical expertise to go with it. We have also found that business issues can be significant barriers to success and we have team members who can advise and help in this area, too."

*BPIC spray dryer set for December start-up*



When visitors attend the BPIC Grand Opening and Open House on September 21, one area will still be under construction. It's the place where a \$600,000 German-made spray dryer is being installed, with commissioning anticipated by December 2017. Ownership of this equipment is being transferred to Alberta Agriculture and Forestry from the Alberta Crop Industry Development Fund (ACIDF).

The unit was originally jointly purchased in 2010 by ACIDF and Western Economic Diversification, with ACIDF assuming full ownership in 2016.

Doug Walkey, ACIDF's Executive Director, notes that the unit can dry 20L of liquid material per hour, using relatively low temperatures to protect the quality of the material. This will give BPIC more capacity and flexibility in fractionating bio-based materials.

Along with the \$600,000 value of the spray dryer itself, ACIDF is contributing toward the construction of a wall to separate the unit from other BPIC functions for reasons of food safety. Moving the unit from Agri-Food Discovery Place, along with related engineering, installation and commissioning work, puts ACIDF's total contribution at approximately \$1 million.

"The whole fractionation field is now much more important than it was in 2010, when the spray dryer was first purchased," says Walkey. "The maturity of the industry, and the direction of the industry, have progressed significantly. ACIDF is pleased to contribute to the success of BPIC and the growth of bio-industrial processing in Alberta."