Bioscience company foresees future opportunities on PEI

by Heidi Riley

Ceapro Inc. is an Edmonton-based company that has expanded its research to PEI. The company develops and commercializes products for the human and animal health market. They research such natural sources as oats, sweet lupins, rosehips, seaweed and spearmint, and extract their active ingredients. These extracts are used by the cosmetic and personal care industries.

"Natural products have been used in traditional medicines for thousands of years," says **David Fielder**, Chief Scientific Officer for Ceapro. "Now we know that many traditional medicines are based on science.

Azoy Kumar Kundu, Research Scientist, and David Fielder, at the National Research Council Institute for Nutrisciences and Health on the UPEI campus.

"Cosmetics and pharmaceutical companies add plant extracts to their products because today's consumer is looking for natural ingredients," says David. "Products made in Canada have the advantage of being perceived as coming from a place that is wild, natural, and pristine."

"This is not a short-term business. Researching and developing extracts and manufacturing processes takes years. And cosmetics and pharmaceutical companies typically need two to three years to create a new product and make it ready for the marketplace."

Expanding the product line

In 1999, Ceapro began to research and develop processes to extract and purify the active ingredients in oats. Oat extracts are added to creams to soothe the skin and reduce inflammation. Now they are expanding their product lines to include extracts made from other natural products, and are looking to expand their facilities.

From right: David Fielder, Ceapro and David Main, Agriculture and Agrifood Canada, check spearmint growing at the Crops and Livestock Research Centre in Harrington.

In Edmonton, the company is growing and researching uses for extracts from the seeds of sweet blue lupins, which are different from the variety that grows wild in Atlantic Canada. The extracts are added to hair care products to strengthen hair and allow colourants to adhere better. The seeds can also be a good source of protein.

On PEI, Ceapro is researching the benefits of a unique variety of spearmint. The essential oils in commercial spearmint varieties are added to toothpaste, gum, candy, and other products. This variety of spearmint has been found to have anti-inflammatory properties that may relieve the symptoms of arthritis and other types of inflammation.

Last year, Ceapro set up a lab at the **National Research Council Institute of Nutrisciences and Health** (NRC-INH) on the UPEI campus. They hired one immunologist and two microbiologists to test different spearmint extracts which are developed by the Ceapro research team in Edmonton.

Field work on PEI

At the **Agriculture and Agri-Food Canada (AAFC) Crops and Research Centre** in Harrington, scientists are tending a thriving field of spearmint. The plants are also being grown by farmers in two other areas of the province, as well as in Alberta and Ontario. Based on last year's results, the company found that this variety of spearmint grew best on PEI. The plants are harvested, dried, and then the active ingredients are extracted.

Benefits to the farmer

The demand for plant extracts has given farmers high-value alternative crops, and this demand also expands the market for existing crops. Companies making extracts pay a premium price for products that usually do not command high prices. Local PEI farmers have been contracted to grow spearmint for Ceapro. "If our research determines that the product will continue to do well here, we may be looking for more growers in the future," says David.

PEI's infrastructure supports bioscience

"We have formed collaborations with the Bio | Food | Tech and NRC-INH researchers to assist in commercializing the results of both our extracts and their research," says David. "The PEI government strongly supports the bioscience industry, and government officials are very accessible. We have found that we can get things done much more quickly than in other provinces.

"We are assessing and evaluating the costs, benefits and opportunities to develop manufacturing space at the Biocommons Manufacturing Facility. We are currently working with local architects and engineers to determine the pros and cons of setting up this space to our specifications and strict international protocols. We expect to make a decision by the end of the current year. We want our involvement on PEI to be a long-term commitment. We see positive opportunities to grow here."

Present staff

"We are a small company," says David. "We have about 25 staff in total, half of which work in the manufacturing plant in Edmonton. One full-time and two part-time research scientists work at the lab in Charlottetown."

Future hiring

"When we do hire, we will hire locally where possible," says David. "Our plant in Edmonton is competing with the oil industry when it comes to hiring. It can sometimes be difficult to hire and retain workers there. Employees in the Maritimes have a great reputation for loyalty and good work ethics.

"We are collaborating with the NRC, Bio | Food | Tech, Agriculture and Agri-Food Canada, and local private companies to find the expertise we are looking for. We are very pleased with our progress so far on the Island.

"We plan to take advantage of government programs to help us hire recent graduates or people looking to get into a new career. There are many people in the farming and fishing industry with a mechanical aptitude who could transfer their skills to making our products.

"When the manufacturing facility is operational, we will be hiring plant operators and process engineers.

"We will need people with a mechanical aptitude to operate and maintain the machinery. The skill sets needed to ferment, extract, filter, purify, pasteurize, and package our extracts would be similar to those needed to work in the brewing industry. Training in food chemistry, organic chemistry, pharmacy, biology, and botany would also be valuable."

For more information, visit **www.ceapro.com**