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## “A Growing Benefit for Everyone”

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By Margaret Wagner

Special to The Guardian

When Darcy MacDonald left Souris, P.E.I. to complete a B.Sc. in mechanical engineering at the University of New Brunswick, he assumed his career would inevitably lead him away from the Island.

“With limited P.E.I. job opportunities, my wife and I believed we wouldn’t be back until retirement in 40 years,” MacDonald said.

Steve Howatt from South Freetown was more fortunate. With a B.Sc. (Nova Scotia Agricultural College) and M.Sc. (McGill University) in agriculture, he returned to establish a P.E.I. private crop research company, providing agricultural and environmental services throughout Quebec and Atlantic Canada.

In 2008, he was asked by Rory Francis, executive director of the P.E.I. BioAlliance, to assist with overtures to Nature’s Crops International, a specialty oilseed production and oil processing operation owned by Technology Crops International (TCI).

“Rory, with colleagues, went to North Carolina to convince the company P.E.I. was the place to be,” said Howatt.

Recognizing P.E.I.’s growing bioscience cluster, farmers experienced with specialty crops, first-class research resources, and supportive federal and provincial government partners, TCI established Canadian operations in Kensington. Howatt became general manager and ultimately vice president for agronomy and business development globally. Darcy MacDonald became TCI’s general manager in P.E.I.

TCI is a premier supplier of organic, non-genetically modified, pressed plant oils used in functional food, pharmaceuticals, lubricants, plastics, cosmetics, and specialty chemicals. With federal and provincial government support — including a \$2.7 million Atlantic Innovation Fund award to assist in the R&D of new crops and products — TCI constructed a \$10 million, 25,000-square-foot oilseed processing plant, including a refinery and analytical lab, at its Kensington site.

The facility — capable of large-scale mechanical pressing and small-scale cold pressing — can filter, centrifuge, neutralize, water wash, bleach, winterize, de-wax and deodorize unique specialty oils. Packaged oils are capped with nitrogen to prevent oxidation and create long-term stability.

Lab technicians ensure quality control and perform pilot-scale trials on high-value specialty oils prior to full-scale commercial production. The residual meal is utilized for animal feed, soil amendment, or fuel for bio-gas.

The company partners with local farmers to grow specialty crops that are refined, packaged and warehoused in P.E.I. before global export boosting the economic benefit for the province.

TCI also contracts U.S., U.K. and New Zealand growers to cultivate crops such as meadowfoam, with moisturizing and UV protection properties integral to personal care products, and borage, an economical source of GLA fatty acids for the health food and pharmaceutical industries.



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Darcy MacDonald, general manager of Technology Crops International (TCI) in P.E.I., says Prince Edward Island has a lot to offer agrit-companies. He says firms like TCI can offer opportunities for people who would otherwise be heading out West for work.



Garth Cole, a former dairy farmer, serves as crop manager, recruiting P.E.I. growers interested in enhanced profitability by partnering with TCI. In 2013, it will contract P.E.I. farmers to grow significant acreage of crambe and borage, and lease land to cultivate additional crops, ensuring supply and building agronomic expertise.

Barry Cudmore, a sixth-generation Brackley Beach farmer, has partnered with TCI for four years and lauds the company's efforts to introduce new crops.

"Through multi-year trials, we're determining their unique properties and challenges," he said. "The key is establishing effective crop rotations, motivating farmers to make long-term commitments."

One strategic crop being developed in P.E.I. test plots is AHIFLOWERTM, a sustainable, plant-based source of Omega 3 and 6 essential fatty acids designed to meet a global demand traditionally sourced from the world's dwindling fish oil stocks. As production expands, the specialty oil will be processed in P.E.I., a convergence of bioscience and bio-based product development within the agri-food sector that is securing a place in global supply chains and economic benefit for P.E.I.

TCI values its Kensington relationship where 20 people are currently employed, soon to be 30 with a full-capacity operation.

MacDonald describes it as "a great place for agri-companies. Almost 75 per cent of our employees are Islanders, and we rely on local contractors, skilled tradespeople and support services to set up our facility and maintain it. We're lucky to have a location with so much to offer."

MacDonald sees another advantage accruing to the province that has so actively invested in the bioscience sector.

"Companies like TCI are providing opportunities for people who would normally be heading West for work. In our 'Oil Patch,' the oil comes from plants grown here on P.E.I. farms. The economic spin-off is a gain for everyone."

One in a series of stories about the P.E.I. BioScience Cluster by Margaret Magner, Ph.D., who lives in Charlottetown.