



Gene miners: Meet PGI, Vineland's first spin-off company

Another shingle has been hung at Vineland Research and Innovation Centre.

Platform Genetics Inc. (PGI) is the latest endeavour to set up shop on the research centre campus. It's also Vineland's first spin-off business, offering private enterprises, including breeding companies, the chance to tap into its reverse genetics expertise and technology to improve crops.

Vineland has been using its patented Deep Variant Scanning (DVS) technology in several of its own breeding programs, including those focused on developing flavour in greenhouse tomatoes, and disease resistance in other crops.

But other organizations have asked to utilize the potential of the genomics/bioinformatics platform for their own needs. With 10,000 breeding companies in Europe alone, PGI's potential was impossible to ignore.

"This is a large opportunity," said Lana Culley, Vineland's director of business development. "It has application in virtually every crop. This was an opportunity to create a spin-off company that would meet an industry need without distracting Vineland from its core business."

The technology that PGI uses can easily analyze the DNA of thousands of plants at one time, enabling breeders to quickly and cost-effectively isolate desired genetic material.

"It's extremely efficient," Culley said. "You can use it on any crop and as many times as you want. You can keep going back to the gene pool."

Ultimately, PGI mines a plant's genes, then gives seed back to the client to grow and decide what they want to include in their breeding program, she explained.

The genetic information gleaned from the analysis can be invaluable to plant breeders who want to develop specific traits to tackle a particular issue in a crop, but don't want to take on the costs of establishing proprietary technology or plant populations.

Tapping into PGI's services will enable breeding companies to keep their focus on issues such as drought tolerance and disease resistance. Even a grower who wants to develop a more flavourful strawberry, for example, could turn to PGI for help. "All of these opportunities can be tackled with this technology," Culley said.

PGI was created to commercialize Vineland's own proprietary technology. The research centre currently owns the company, but PGI operates as an autonomous organization with a separate board of directors.

Vineland partnered with Bioenterprise, a non-profit business accelerator in Guelph, ON; local incubator Innovate Niagara; and MaRS, a Toronto, ON-based technology commercialization firm, to explore the start-up opportunity and launched PGI in late 2016.

The venture fulfills the research centre's mandate of economic growth and job creation. Culley expects the company's clients to be predominantly international, given most plant breeding happens outside Canada.

Still, exporting technology and attracting international clients to do business in Ontario is a boon for the domestic economy. And the work PGI does could one day benefit Canadian growers, she noted.

"It's like Canada providing a value-added service. The varieties that PGI will enable are likely to come back to Canada for the benefit of growers and ultimately consumers", Culley said.



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