

Slipping into sweet potato production

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Written by Vineland Research and Innovation Centre



February tends to be a slow time at Roelands Plant Farms Inc.

The greenhouse vegetable propagator in Lambton Shores, ON, has usually shipped the last of its orders for the year's tomatoes, cucumbers and peppers to clients throughout North America, and its busy season winds down.

But not this year. Once those vegetables destined to grow under glass were on their way, owner Adrian Roelands and his team started ramping up production of a new baby plant crop: sweet potatoes.

Roelands was tasked with propagating sweet potato slips to trial Vineland's made-in-Canada variety of the popular storage vegetable on about 25 Canadian farms this year.

"It's a nice fit for our organization," Roelands said. "When we heard about the opportunity (to propagate slips), we thought this fits well with our business plan."

In the process, Roelands and Vineland are establishing a domestic slip production industry, which didn't exist previously.

The Vineland sweet potato, called Radiance (a variety bred in collaboration with Louisiana State University), matures in less time than the usual commercial varieties typically grown in the long, hot seasons of the southern U.S. R

Radiance has also been deemed a winner in the flavour department by consumers who are hungry for the versatile root vegetable enjoying superfood status.

Prior to the breeding of Radiance, however, Canadian sweet potato growers relied on slips from the U.S., often in short supply once American farmers' orders are filled. Those sweet spuds also require long growing seasons, which can be elusive on this side of the border.

The hope is Radiance will be ready for harvest in time for Thanksgiving and offset some of the nearly 66 million kilograms of sweet potatoes imported into Canada to keep up with demand.

"In order to commercialize our variety, we had to develop that (slip) industry here," said Valerio Primomo, the Vineland research scientist who bred Radiance.

So far Radiance is getting solid reviews from growers, which bodes well for Roelands, currently the only licensee to produce the slips for this variety. This year, the operation turned out about 200,000 slips to fill 15 acres throughout Canada with Radiance.

If the sweet potato checks all the performance boxes come harvest, slip production could increase ten-fold in 2019, Roelands said.

It will likely only increase from there. It would take 24 million slips just to fill the 2,000 acres of sweet potatoes currently grown in Ontario, Primomo explained.

An additional 48 million slips are needed to grow another 4,000 acres of Radiance in Canada and offset sweet potato harvests imported from the U.S.

The potential for Roelands, Radiance and the Canadian slip industry is huge.

It took Roelands about four months to propagate the sweet potatoes required for this year's trial. The process starts in a propagation chamber under conditions that cause the vegetables to sprout. Those shoots are cut, then grown in small soil beds in a greenhouse. Once they reach the right size, the shoots are harvested and delivered to growers to plant in their fields.

Roelands is no stranger to propagating field crops but sweet potatoes are a first. Vineland provided support to Roelands throughout, with staff from the research centre visiting as often as every week to offer guidance and oversee the process.

The biggest challenge, Roelands said, was ensuring they produced enough slips that were the right size by the promised shipping date. In the process, he and Vineland came up with ideas to streamline and increase production next year, all within the same tight timeline, and potentially at a lower price for growers buying slips,

Primomo said.

“There was definitely a big learning curve,” Roelands said. “We know, even for next year, there are some changes we can make, and hopefully improve moving forward. The first year is not about making money. It’s about doing a good job and getting great quality. Our main goal is to show improvement over the next year.”

This story was originally published in Vineland's Innovation Report, available [here](#)

<https://www.greenhousecanada.com/crops/new-varieties/slipping-into-sweet-potato-production-32691>