



# Testing, Testing, TOV

## Travis Banks knows the pressure of a deadline.

The research scientist, who's overseeing Vineland's program to enhance flavour and production traits in greenhouse tomatoes, is feeling it right now as the target date nears to bring a new, tastier hybrid tomato-on-the-vine (TOV) to market by 2022.

That might sound like all the time in the world, but it's not when there are six candidate tomatoes that need to be trialled in Ontario greenhouses and whittled down to one winner — their performance scrupulously evaluated in the process.

Did they grow easily, holding their own against disease while turning out enough clusters of tomatoes that are just the right shape and size?

Then there are the tomato seeds that need to be produced and marketed to farmers so they can start growing the juicy red tomatoes already taste-tested by consumers, by fall of 2021.

"It's a very, very ambitious timeline," Banks said. "It's an ambitious timeline just for getting product to people. It's also ambitious in that it only works if, in the first trialling of hybrids, we find something that works better than what's already on the market."

And therein lies Banks' and the tomato breeding program's *raison d'être*: to develop new varieties of TOVs for consumers looking for more flavourful options beyond what's currently available.

Sixty per cent of consumers say they like the most commonly available greenhouse tomatoes sold in grocery stores, but that leaves a good number hungry for something different.

In the process of filling that void, Vineland scientists are also tackling resistance to pepino mosaic (a disease that makes tomatoes blotchy), bacterial canker and other afflictions that can cause headaches for growers.

The program is a partnership with Ontario Greenhouse Vegetable Growers (OGVG), who have helped identify growers willing to trial Vineland's top TOV hybrids for the first time this year to evaluate their performance.

"Every grower has their own production practices and these subtleties can impact how tomatoes grow in their hands," Banks explained. "The hope is what we're asking growers to produce will do well but we're also hoping they'll taste great."

It's expected the six varieties will be narrowed to three by the end of the 2018 growing season, then down to two by 2019. By 2020, Banks anticipates that three years of OGVG growing data will point to a clear winner.

All the while, researchers at Vineland are still continuing their breeding work to identify new tomatoes that will go through the same trialling process, improving upon what they've already done.



Travis Banks, Vineland's bioinformatics research scientist



"This year is an important step and the wheel has to keep turning to keep the pipeline full," Banks said. "We have a lot of activity going on around tomatoes. Right now nobody else in the world is breeding new greenhouse tomatoes for the Ontario market."

That doesn't mean only Ontario growers stand to benefit from the work happening here and Vineland's tomato breeding program is generating interest from unexpected places, including the Yukon and Alberta.

Finding a way to get the tomato seed to market is the next critical step after growing trials, and it could be the most challenging. There are no greenhouse seed production companies in Canada. Vineland's business development team will determine the tomato's best path to market.

"You have to find a company that can produce a lot of seed. Then you have to treat that seed and do quality assurance on it. Then you have to package the seed, market it and distribute it," Banks explained.

"We have an aggressive target of getting seed to market and the entire team is focused on this goal. To meet it we have to anticipate and manage problems coming our way. So far, so good."



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