

## Questions. Answered.

Kitchen Bliss, November 11, 2017  
By Diane Galambos

Research. There was a time I found that to be a scary word, mainly because I was in university and knew that sooner or later they would make me do this thing called research. It sounded terrifying.

In time I realized that research involved asking questions – and trying to find the answers. To this day, I ask questions every single day! Obviously I don't do applied research, but trying to problem-solve and find answers is totally engaging.

Turns out, I love research!

So, it should come as no surprise that my recent visit to the Vineland Research and Innovation Centre (VRIC) was like a play date – my idea of fun!

I joined other FBC bloggers at what was described as an “exclusive, behind-the-scenes ‘Inside the Science’ workshop”. I’m betting you will be astonished to hear about some of what goes on behind those closed doors.

I hasten to add that if you're interested, those doors are not “locked” to the public. Join their mailing list or follow them on Twitter to learn about events, including their annual Open House. They will soon be advertising for new taste testers. And apparently the grounds of their “campus” are often crawling with people taking photos of their cute stone bridge and amazing old trees. And I do mean old... the setting for VRIC is an endowment from Moses F. Rittenhouse dating back to 1906.

Just before getting to the fun stuff, it's worth sharing their Vision and Mission.

*“A vibrant, prosperous and sustainable horticulture industry working with innovation to fill our world with fruits, vegetables, flowers and plants... Enriching people's lives through science and discovery in horticulture.”* Their focus is on breeding, not GMO. Their activities linked to horticulture, applied genomics, consumer insights, robotics and automation all happen within the broader context of Canada, our climate, consumers and producers.



Where there's science there are usually big words, but VRIC is purposeful about making their work accessible. One of the many questions they ask is "*how to best communicate biotechnology to the public / consumers*". What, for example, do we know or think about the term "biocontrol"? Does it sound futuristic? Maybe even "evil"? Turns out it is a fancy term for bugs eating bugs. VRIC offers up a setting and staff that are inviting, and the closest thing I saw to a lab coat was our greenhouse footwear.

I'm about to share some fascinating info about apples, sweet potatoes, taste testing – oh... and pears. For the full story that includes okra, eggplant and mini-cukes, browse the very readable "Innovation Report" (October 2017). I am having a tough time limiting the number of links I offer for your reading pleasure, and worry they might make you disappear down rabbit holes. I hope your curiosity matches your time available for reading.

**Words, words, words.** The workshop included participation in variations on Consumer Surveys, and that puts you in front of words, words, words. Yes, central to some of the research are the descriptors used. When rating apples, for example, the survey asked which apple had better taste, which was more flavourful. What's the difference? Taste is sweet, sour, bitter, salty and umami. Flavour refers to terms such as lemony, chocolate-y, buttery, cheesy. (See more flavour words.) It can take the VRIC team two to three months to develop a lexicon of descriptors for one item. For cider, for example, they identified 22 attributes. In the taste test we did, only 6 terms were used – among them "candy apple, pear, yeasty, barnyard". I think I'd need more taste tester training! (Read more about taste testers. It's a paying job and they will soon be hiring more.)

**Apples.** VRIC's extensive research has produced profiles of what consumers most like/dislike about apples. They use that knowledge to identify the ideal apple to grow – though it has to be a good match to local growing conditions. Funny story. What consumers like may not be what growers like. Turns out that Honey Crisp has fast become a favourite among consumers, but producers balked at the pressure to replant orchards with an apple that was hard to grow. In this case the consumer won, enjoying Honey Crisp taste and texture. By the way, texture often trumps taste in surveys. See! I'm not the only one who loves crunch. (Did you read my blog post on "crunch"?)

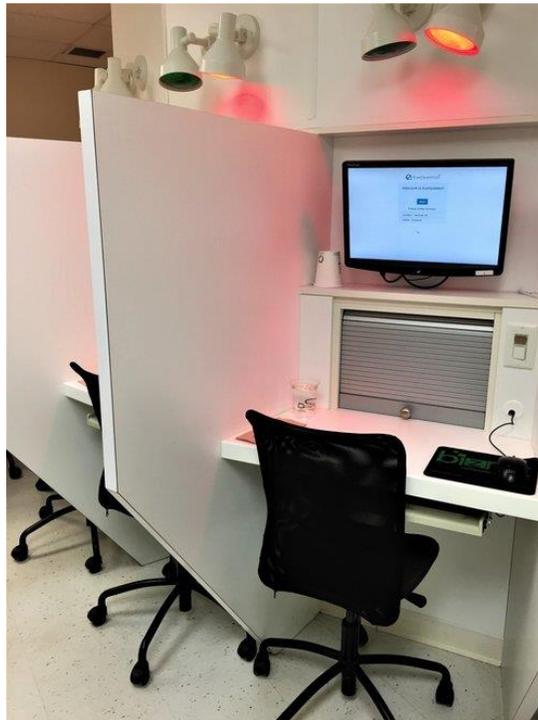
Like scouts in sports, VRIC is always on the lookout for plant varieties, which are then tested in our climate, and with luck move on to next step in the pathway to commercialization. That all takes much more time than one might think. VRIC projects 2022 to be the year that a new apple called "Smitten" (TM) will become widely available. According to insiders, "*People who think they don't like apples will love this product.*" An early yellow apple is also in the works.

**Sweet Potato.** During the sweet potato taste test I was struck by the fact that I had never eaten "naked" sweet potatoes. My preference is oven roasted, but that implies some oil and seasonings. Am excited to report, that one of the samples we

tasted (and the one I preferred) was the new (not yet named) variety that will show up at markets in 2019.

Sonia Day, Gardening Columnist for the Toronto Star, sadly reports that it is hard to grow sweet potatoes in our yards, so we are left to producers to satisfy our need. And how that need has exploded! Nutritional benefits – and apparently sweet potato fries – have doubled consumption in the last decade, but so far 85% of the supply is imported.

Of the apples available to consumers, most of us know our favourite. Not so with sweet potatoes – every grocery store has one bin, one choice - although there are hundreds of varieties – one estimate is 6,500 worldwide. Of course, if grown in Canada it needs to be hardy, happy being planted early and harvested late, and must be high yield to make it all worthwhile. And VRIC discovered that consumers want a "bright orange, uniform colour". Eastern Canada (Nova Scotia) has joined the quest to capture a share of the Canadian market. Grab a coffee and read this short but fascinating article. You can read more from the sidebar at this site.



**The Sensory Lab**, where we tested tomatoes and cider, was the most high tech. Testers are semi-isolated to avoid being biased by the reactions of other testers. Food emerges from a secret cupboard and a red or green light may mask the product colour. Turns out that colour also biases our food preferences – and can even change our experience of taste.

**Roses.** As a footnote we also completed surveys about roses being developed at VRIC. Seems I already missed buying these new varieties that can survive winter temperatures of minus 40.



*Canadian Shield and Chinook Sunrise - new roses!*



*Sweet potato puree – eggplant and mushroom, chicken.*



*Cold Snap - all developed with VRIC*

Our workshop ended with great food that used VRIC sweet potatoes, eggplants and apples.

If that was not a heavenly enough day – mine ended with the acquisition of Cold Snap pears, which also have a connection to VRIC. I first hunted them down in 2015. Did not see them at all in 2016. Eureka! Yummers!

All in all, the day was my idea of a good time!! Any questions?

Or perhaps you agree with Kafka -

*"So long as you have food in your mouth, you have solved all questions for the time being."* [Source]

<http://kitchenbliss.ca/blog/2017/11/10/questions-answered>