

SUSTAINABILITY

Soil fitness – just do it!



Fourth-generation grower Kyle Horlings is questioning the way things have always been done. Since 2015, he's taken about 10 acres of carrots and onions out of production every year for restorative cover plantings. His experiments near King, Ontario garnered him the Healthy Soil Award from the Lake Simcoe Region Conservation Authority in November. Photos by Glenn Lawson.

KAREN DAVIDSON

Since the dirty '30s, dirt has never been the same.

"Dirt is what is on your hands," spits out Kyle Horlings, fourth-generation onion and carrot grower, as if he had grit in his mouth.

"This is soil and what's going on underground is what makes you profitable. It's like a motor. There are a lot of components and you have to keep it tuned."

After decades of intensive farming in Ontario's Holland Marsh, the Horlings family – Kyle and his dad Dave – are getting their soils back in shape. In 2007, they observed that not only were yields slipping, but quality was sliding too. Of

their 150 acres near King, Ontario, they would encounter a patchy field where the carrots were short and stubby, even forked. All of these were symptoms of nematode damage and soil-borne diseases such as pythium, a root-loving pathogen.

The effects of "tired" soil? Carrots were no longer marketable from some sections. What was a bad acre one year would become two acres of questionable harvest the next. The harvester was set to dump carrots back on the field, rather than set up a special wash line to sort the mixed quality. This practice was not sustainable.

Despite trying fumigants one year, nothing worked.

A graduate of the University of Guelph Ridgetown Campus, Kyle

Horlings had been inspired by one of his lecturers who had extolled the benefits of cover cropping to improve soil health. So he set to researching the latest scientific literature. He came across the USDA publication: Growing cover crops profitably.

Since 2015, Horlings has pulled almost 10 acres of carrots out of production every year to rejuvenate the soil with cover crops. The practice has continued, rotating out of a total of 150 acres of carrots and onions.

The first year, he planted cereal rye after harvesting seed onions in late September. The following May, he plowed it under before seed heads developed. A week later, he planted sorghum sudan grass and sunn hemp. In late August, that crop was chopped down

and tillage radishes were planted to cover the land for winter. The following spring, transplant onions were planted.

"I call it a land rest cycle," says Horlings.

The next year, in a different field with either nematodes or pythium, the land was planted to mustard between the rows of rye that had been sprayed with a herbicide. The mustard was allowed to grow to about six feet in height, then chopped and incorporated for a bio-fumigation effect. A week later, sorghum sudan grass was planted, then chopped in late August. The field was planted to radishes for the winter. Transplant onions were planted in the rejuvenated field the next spring.

Continued on page 2

AT PRESS TIME...

Carrot crop late in the bin



As of mid-November, anywhere from 20 to 50 per cent of Ontario's carrot crop was still in the ground. As one of the largest grower-packer-shippers of root vegetables, John Hambly, Bradford, said that quickly accumulating wet snow on November 18 stopped harvesting for the day. He had 60 acres still to be dug at Gwillimdale Farms.

For Jean Marie Laprise, a grower supplying processing carrots to Bonduelle's Tecumseh plant, he estimated 50 per cent of his crop was yet to be harvested.

"We will be another two to three weeks harvesting. We don't like it, but it's not the latest harvest – we've gone into December before. The snow has been a bit of an asset in that the ground isn't freezing."

It's going to be a long, cold and messy winter across much of Canada, according to the seasonal forecast released November 18 by the Weather Network.

November has already brought historically early

snowfall in southern Ontario and power outages in the Prairies, setting what chief meteorologist Chris Scott said will be a trend throughout the winter.

"The upcoming winter across the country looks to be more frozen than thawed, and we've already seen an early entrance of winter weather this fall," he said. "The signs that we're seeing this year do suggest we're in for a winter that's more on than off across the country – and that it's going to be fairly long for many Canadians."

Action against tomato brown rugose fruit virus

USDA's Animal and Plant Health Inspection Service (APHIS) is taking immediate action to prevent the introduction of tomato brown rugose fruit virus into the United States. The move is to protect U.S. tomato and pepper production worth more than \$2.3 billion annually. APHIS issued a Federal Order on November 15 imposing restrictions on imports of tomato and pepper seed lots and transplants from all countries where the virus exists as well as restrictions on tomato and pepper fruit imported from Mexico, Israel, and the Netherlands.

Because Canada imports tomato and pepper fruit from Mexico that may be re-exported to the United States, USDA will also require Canada to

inspect tomato and pepper fruit to ensure it is free of disease symptoms prior to export to the United States. These actions will be effective Friday, November 22, 2019. In addition, APHIS and U.S. Customs and Border Protection (CBP) will increase inspections of tomato and pepper seed, plant, and fruit imports entering from countries where the virus is known to occur.

Per the Federal Order, APHIS will:

- Require all tomato and pepper seed lots imported from countries where the virus exists to be officially tested and certified free of the disease.
- Require all tomato and pepper transplants imported from countries where the virus exists to be officially tested and certified free of the disease.
- Require all tomato and pepper fruit imported from Mexico, Israel, and the Netherlands to be inspected at the point of origin to ensure it is free of disease symptoms.
- Require Canada to inspect all tomato and pepper fruit prior to export to the United States to ensure it is free of disease symptoms.

In addition, CBP will:

- Increase inspections at U.S. ports of entry to ensure imported tomato and pepper fruit entering from Mexico, Canada, Israel, and the Netherlands does not show any signs of disease upon arrival.

Source: APHIS November 15, 2019 news release

NEWSMAKERS

On November 20, a slightly larger federal cabinet of 36 was sworn in. **Marie-Claude Bibeau** reprises her role as minister of agriculture and agri-food. Horticultural leaders will also be interacting with a number of ministers.

- **Chrystia Freeland** will be deputy prime minister, responsible for Canada-U.S. relations but also intergovernmental affairs.
- **François-Philippe Champagne** is the new global affairs minister.
- **Jonathan Wilkinson** becomes the new minister of environment and climate change.
- **Mary Ng** returns in charge of small business but also international trade.
- **Carla Qualtrough** moves to the portfolio of employment, workforce development and disability inclusion.

The 28th annual Ontario Produce Marketing Association Gala was held November 15, honouring four outstanding contributors to the produce industry. The OPMA Fresh Award was presented to **Quinton Woods**, Gwillimdale Farms for his contributions to making it one of the province's largest grower-packer-shippers of root vegetables.



The Cory Clack-Streef Produce Person of the Year was won by **Steve Bamford**, Fresh Advancements. He led a successful industry-wide effort to keep the Ontario Food Terminal at its current site in Etobicoke.



The OPMA Outstanding Achievement Award honoured **Tom O'Neill**, Norfolk Fruit Growers' Association for his tireless efforts in the tree fruit industry, domestically and internationally.



The OPMA Lifetime Achievement Award acknowledged the outstanding efforts of Metro's **Linda Cavin** for her passion for local produce and making Foodland Ontario award-winning displays. Congratulations to all of these leaders, their families and teams!



Ontario Greenhouse Vegetable Growers honoured **Shalin Khosla**, greenhouse vegetable specialist for Ontario Ministry of Agriculture, Food and Rural Affairs at its annual general meeting on October 29. His career started with Agriculture and Agri-Food Canada's Harrow Research Station, five years before joining the provincial government. In his most current position, over the last 25 years, Khosla has witnessed many technology advancements. He retires mid-December.

Tania Humphrey is Vineland's new vice-president, research and development. She was formerly the director of strategic planning and research management. In her new role, she heads the research division which comprises 50 scientific and engineering staff. Vineland is creating a new role, vice-president, business and client development to focus on the business side of Vineland's work.

Elaine Roddy, an OMAFRA vegetable crop specialist responsible for sweet corn, cucurbits, beans, peas and asparagus, took a one-year leave of absence, effective mid-November 2019. She has accepted a full-time (temporary) teaching position with University of Guelph Ridgetown Campus for the winter semester. Her position will be filled.













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COVER STORY

Soil fitness – just do it!



Dennis Van Dyk, an OMAFRA vegetable crop specialist, has arranged for next-generation sequencing of all the organisms found in soil samples from the onion and carrot fields of Kyle Horlings. His aim is to measure how the beneficial organisms interact in the microbiome to different cover crops.



Photo by Carolyn Horlings

Cover cropping in Prince Edward Island

On the east coast, the Prince Edward Island Potato Board is involved in leading three trials as part of the Atlantic Canada Living Labs project with Agriculture and Agri-Food Canada. The co-leads are Dr. Judith Nyiraneza and Dr. Yefang Jiang.

The first project is evaluating fall cover crops after tillage in the year preceding potatoes. These include cereal and brassica species with the aim of building soil health, soil structure, and preventing erosion. These will be assessed for various soil characteristics as well as yield on potatoes next year. This cycle will then repeat until 2022.

Another project is evaluating fall cover crops following potato harvest. These are cereal crops such as spring barley, spring oats, or fall rye to get the soil covered in the fall and prevent soil erosion and nitrate leaching to groundwater.

The final project is evaluating the use of different full-season soil-building rotation crops with the goals of building soil organic matter, improving soil health, and reducing the impact of

soil-borne pests and diseases such as *Verticillium* and root lesion nematodes. These crops include brown mustard, sorghum sudangrass, forage pearl millet, buckwheat, and multi-species mixtures. These fields are assessed for a number of soil characteristics as well as potato yield next year.

“The Living Labs initiative runs until March 2023, but 2022 will be our final crop-year,” says Ryan Barrett, research coordinator and agronomy lead, PEI Potato Board. All of the trials being led by the Board are being conducted in grower fields. At the same time, a plot trial featuring many of the same species is being conducted at the AAFC farm at Harrington, led by Dr. Nyiraneza.”

Barrett makes a good point about terminology. “I tend to distinguish between ‘cover crops’ which generally go in after a primary crop is harvested and a ‘soil-building, full season’ crop or ‘service crop’ which is managed for the whole season with the goal of building soil health. It’s not normally harvested, unless for forage. An example would be sudangrass.

“This is not just dirt. There’s a lot of biology going on there.

~ KYLE HORLINGS

Continued from page 1

“This was a big success,” says Horlings. “There were no weeds. And we harvested a bumper crop of 50 boxes of onions per acre.”

That translates to 1,500 pounds of onions per box.

These results have been followed closely by Dennis Van Dyk, an OMAFRA vegetable crop specialist dedicated to potatoes and root vegetables. He’s been taking soil samples throughout the process and with funding from another project, conducted DNA lab tests to identify all the microorganisms present in the soil.

“This is next-generation sequencing,” explains Van Dyk. “The process generates gigabytes of data and allows us to identify the millions of microbes found in the soil. The idea is to see what good and bad microbes are doing and how those communities are shifting with the different cover crops grown.”

It’s too early for those test results, but in the interim Van Dyk observes that other growers are taking an interest in the long-term sustainability of their soils.

“It’s a commitment to sacrifice a year of profit for long-term benefits,” he says. “With onions being harvested in August/September, there’s time to sow a cover crop such as fall rye to keep the soil in place. This is much more difficult with carrots that come off later

and there’s no time to establish a cover.”

That was the case in a snowy November 2019, with many acres of carrots that won’t get harvested until December. Unpredictable weather determines how well a cover cropping strategy can work.

As the calendar shifts towards year’s end, Horlings is still musing about 2020 plans.

“Do we shift cover cropping to land that’s more profitable?” questions Horlings. “I’ll have to go to the drawing board for that.”

One thing he knows for sure.

“This is not just dirt,” he says. “There’s a lot of biology going on there.”

The Grower goes “Behind the Scenes” of this story to catch up with Kyle Horlings, Hollandale Farm, King, Ontario. After a late harvest season for onions and carrots, he shares his cover cropping plans for muck soils in the Holland Marsh.



The left side shows just tillage radish, while the right side shows tillage radish mixed with barley. The mixture seems to have better total coverage and biomass, showing the benefit of mixtures. Photo courtesy Ryan Barrett, PEI Potato Board.

CROSS COUNTRY DIGEST

BRITISH COLUMBIA

Cranberry yields down by half

British Columbia is home to 12 per cent of North America's cranberry harvest. So it's not good news that cranberry yields are off by 50 per cent in 2019.

Langley, BC farmer Brian Dewit, Riverside Cranberries, observed: "We've got some long-term farmers in the industry, farms that have been going for 50, 60 years and these growers have said they've never seen this before. I don't know if we can attribute it to the winters which just aren't as cold as they have been so the plants never go fully dormant."

What's normal for cranberries is to fall dormant during the winter months. However, January 2019 was unusually warm in British Columbia which prompted the plants to start budding early. A cold snap in February then 'freeze dried' the plants, causing the buds to fall off.

The 2019 harvest is a disappointment compared to last year's record-breaking crop of 120 million pounds. However, Mike Wallis, association manager, says that a heavy crop is often followed by a lighter crop as plants recover. An average crop would yield 85 to 90 million pounds annually.



ALBERTA

About 7,500 potato acres are weather-damaged in southern Alberta

An August hail storm combined with an early frost have resulted in about 7,500 acres of damaged potatoes in southern Alberta.

"Not all of these acres will be lost but the return on these acres will be severely diminished," reported Terence Hochstein in his November 2019 monthly newsletter column. "In talking with other growing areas across North America this past week, the only areas that are somewhat happy with how their 2019 crop turned out are New Brunswick/Maine, Quebec and Washington."

New Brunswick/Maine has a slightly higher than average crop, with processors taking any open potatoes that are available. Quebec's fresh tablestock crop is experiencing strong demand and pricing.

Prince Edward Island has completed harvest, with some acres left behind due to excessive water from Hurricane Dorian and a dozen inches of rain that fell during harvest. Overall, the

island crop is much better than last year.

The late season Washington Basin crop will more than offset early season disappointments. Overall, there will be some valuable overage coming out of the basin to the highest bidder.

In the mid-west, Manitoba, North Dakota, Minnesota and Wisconsin have not had a good year.

"Manitoba will end up leaving in excess of 10,000 acres in the ground and will have to deal with storage issues through the winter, due to the extreme wet harvest conditions," says Hochstein.

One positive note in Alberta is that seed growers have a very good crop in storage. Demand will be high with some growers already indicating that some varieties are sold out. Optimism prevails that American as well as eastern Canadian demand will continue to increase.

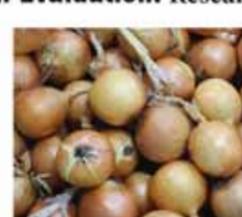
Source: *Potato Growers of Alberta November 8, 2019 newsletter*








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NEW BRUNSWICK

McCain Foods invests in new production line



McCain Foods will invest \$80 million towards a new Formed Potato Specialty production line at its existing Grand Falls, New Brunswick facility. It's to be operational by early 2021 and will feature technology for process efficiency as well as food safety, processing and packaging equipment.

"Investing in the Grand Falls facility is a testament to the many successful partnerships McCain values with our local potato growers, employees and communities," said Danielle Barran, president of McCain Foods Canada.

"Based on the Grand Falls facility expansion, there will be

demand for an additional 3,000 acres of harvested potatoes by New Brunswick potato growers in order to supply the new high-speed Formed Potato Specialty line," added McCarthy.

New Brunswick is a key potato-growing region in Canada, representing an estimated 15 per cent of the total Canadian production and acreage.

With the November 7, 2019 announcement, both the Grand Falls facility and the recent Florenceville expansion will provide McCain Foods with two of the largest Formed Specialty lines in the industry.

RISK MANAGEMENT

Protect your investment with Production Insurance and AgriStability

With harvest complete, planning is underway for the growing year ahead. Ontario fruit producers may be considering business risk management options to help protect their investment in unpredictable times. Agricorp delivers a number of affordable risk management programs, such as Production Insurance and AgriStability.

Production Insurance

Production Insurance covers production losses and yield reductions caused by insured perils, such as weather, wildlife, infestation and disease. If hail or frost impact orchards or vineyards and damage crops, Production Insurance can help cover the loss in production. Production Insurance also has coverage for tree or vine loss. Standard tree or vine loss coverage is included in Production Insurance plans for tender fruit, grapes and apples, at no cost to producers. Customers also have the option to purchase additional coverage for their trees and vines. Both fruit-bearing trees and newly

planted trees are eligible for coverage.

More value in Production Insurance

Despite substantial increases in the value of fruit crops covered by Production Insurance, premiums have remained stable over the years, making it an affordable risk management option. Over the past 10 years, while claims for most fruit crops have been manageable, the value of the insured crop has more than doubled, mainly due to higher-yielding crops, advancements in management practices and strong market prices.

The following chart shows how the values have increased from 2009 to 2019.

Thanks to input from commodity groups, enhancements over the past decade have brought new coverage options to producers, offering more protection. Examples of how the plan improved in response to industry trends include grape coverage based on brix levels and increased coverage options for fruit trees and grape vines.

How do premiums remain affordable?

The provincial and federal governments pay 60 per cent of the premium costs for most Production Insurance plans, so producers pay only 40 per cent. In addition, the program is designed to spread the impact of severe claim years over a longer period.

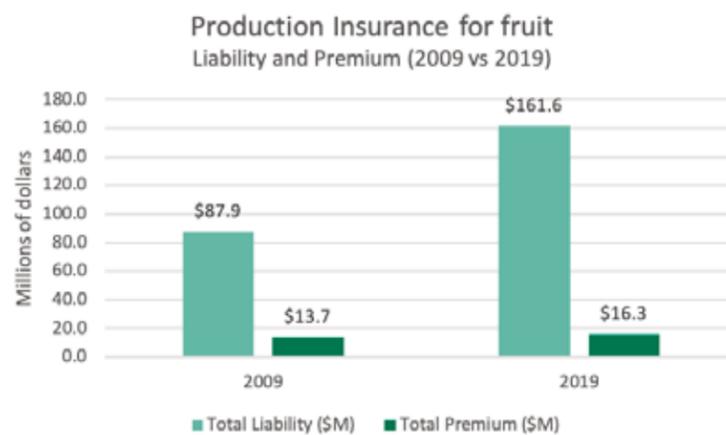
Agricorp maintains the Production Insurance Fund, which is used to make claim payments. The fund is in a financially strong position, which helps stabilize premiums. Following high-claim years, any excess reserves in the fund are used to minimize premium increases.

For 2020, the premium rates for most fruit crops have decreased due to fewer claims in 2019.

AgriStability

Fruit producers can focus on their businesses knowing their margins are protected with AgriStability.

AgriStability is a low-cost, risk management program



available to all producers. It covers large declines in net income caused by production loss, increased costs or market conditions. For example, when something such as frost or hail impacts orchards or vineyards, AgriStability can help offset the increase in expenses for managing and sorting damaged crop and for loss of market revenue.

If a producer's program year margin falls below 70 per cent of their recent average, AgriStability helps to offset the difference.

AgriStability has been a vital lifeline for Ontario farm businesses in times of disaster. According to Agricorp's annual customer survey, a majority of customers agree that AgriStability is vital in helping stabilize their income despite risks beyond their control. For example:

- When grape growers faced a long, cold winter in 2015 that led to low yields, AgriStability paid one in four grape growers.
- When growers faced rising costs for greenhouse operations between 2015 and 2017, AgriStability paid each eligible customer an average of \$250,000 per year.
- When early frost damaged apple crops in 2012, AgriStability paid double the amounts of 2011 and 2013.

How to enrol

Fruit producers who want to enrol in Production Insurance for 2020 should contact Agricorp by December 20, 2019.

The deadline for 2020 AgriStability coverage is April 30, 2020.

Call Agricorp at 1-877-247-4999 or visit agricorp.com.

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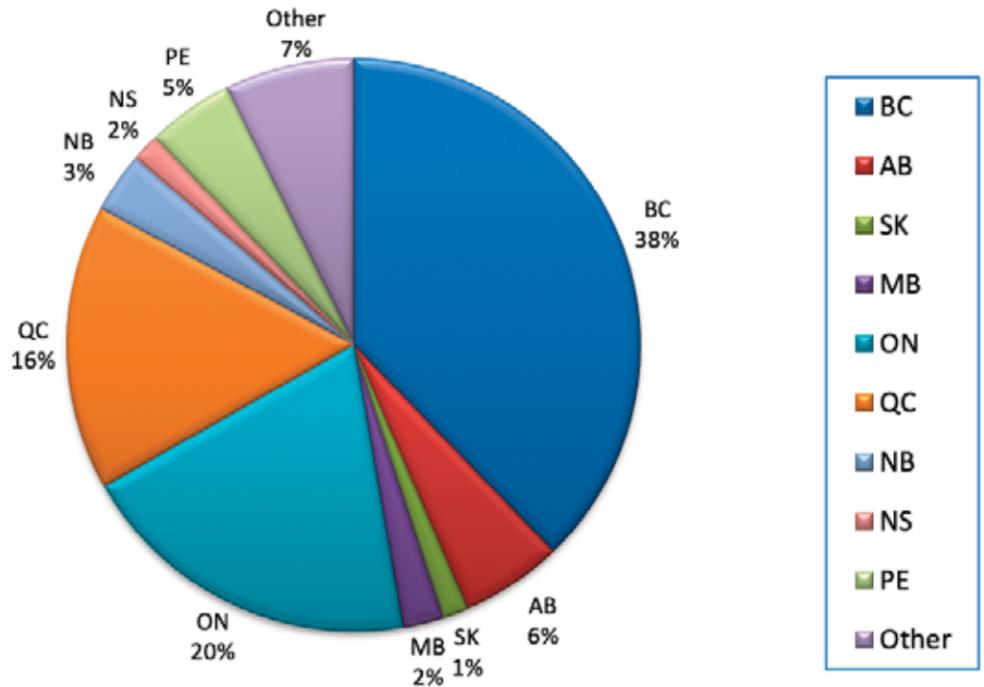
FOOD SAFETY

CanadaGAP annual report 2019



Photos by Glenn Lawson

Operations Enrolled by Province August 31, 2019



HEATHER GALE

CanadaGAP officially launched in September 2008 with the enrolment of 500 potato growers, and has grown to nearly 3,200 participating companies today from across the Canadian and U.S. fresh produce industry.

The program enjoys strong support from Canada’s retail, processing and food service sectors, as well as international recognition across the range of export markets in the U.S., Latin America, Europe and Asia.

Highlights from 2019

Below are some of the key achievements and changes over the last year:

• **Alignment with new Safe Food for Canadians Regulations:**

Federal food safety regulations came into force in Canada on January 15, 2019 under the Safe Food for Canadians Regulations (SFCR). CanadaGAP is recognized as a “model system” for food safety preventive controls that fresh produce operations must have in place under the new regulations.

CanadaGAP has been focused on ensuring full alignment between the SFCR

and CanadaGAP program requirements, and 2019 saw increased communication with industry about the program’s status with government. To ensure that CanadaGAP-certified companies are well-positioned to meet the new regulatory requirements, CanadaGAP renewed participation in a CFIA-led project that involved the Canadian Food Inspection Agency completing a comparison of CanadaGAP program requirements with the published regulations.

The comparison project was a success, showing that CanadaGAP is 100% aligned with the SFCR with respect to

food safety requirements. The positive results of the comparison, as well as further details about how CanadaGAP fits with regulatory initiatives in Canada and the U.S., are published at www.canadagap.ca/publications/presentations/.

• **Renewal of Government Recognition:**

CanadaGAP first received full Government Recognition in 2017 under the Canadian Government Food Safety Recognition Program. In 2019, CanadaGAP underwent the required 20-month “Maintenance of Recognition” process. On an ongoing basis, to maintain recognition, CanadaGAP must continue to

demonstrate sound management of the certification system, align with all applicable regulatory requirements, and receive approval from CFIA for any proposed changes to the program.

• **Maintenance of GFSI Recognition:**

CanadaGAP has been benchmarked and officially recognized by the Global Food Safety Initiative (GFSI) since 2010. To maintain our recognition, in addition to re-benchmarking each time GFSI updates its requirements, the program is newly subject to biannual spot checks and an annual office audit by GFSI. The first year of integrity assessments was successfully completed in 2019. These activities remain crucial to securing support for CanadaGAP certification from retailers, processors and food service customers.

• **Introduction of the GFSI Knowledge Exam to CanadaGAP Auditors:**

This year, CanadaGAP began administering the GFSI Knowledge Exam. Starting in 2019 all new auditors auditing to a GFSI-recognized program must first pass a general exam to assess basic knowledge of food safety, HACCP, and auditing skills and techniques. A number of new CanadaGAP auditors succeeded the exam and were brought on board this season. In addition, the majority of existing CanadaGAP auditors also sat the GFSI exam. The remainder have until December 2021 to complete the exam.

• **Changes to CanadaGAP Program Scope:**

Driven by changing risk profiles and emerging research, several technical decisions were taken in 2019 that will impact program participants going forward. In 2020, CanadaGAP certification for microgreens will no longer

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FOOD SAFETY

CanadaGAP annual report 2019



be available; likewise, aquaponic production systems will be phased out of the CanadaGAP program scope. For further information on these changes and the implementation dates, visit the CanadaGAP website.

- **Updates to the CanadaGAP Food Safety Manuals:** The CanadaGAP Stakeholder Advisory Committee and technical staff have been working hard since June 2019 to finalize updates to the Food Safety Manuals, which will be issued in late January or early February 2020. A number of changes are being driven by new GFSI initiatives to be published in Version 8 of the Benchmarking Requirements. Changes to the program take effect for CanadaGAP audits occurring on and after April 1, 2020.

- **Growth in Option D:** Since receiving GFSI recognition in 2016 for repacking and wholesaling, CanadaGAP Option D has attracted a growing number of companies involved in repack, wholesale and brokerage activities. Customer demand for supply chain certification continues to drive uptake of Option D, leading to another double-digit (15%) growth rate over the last year. The target of 100 clients that was set when the Canadian Produce Marketing Association (CPMA) Repacking and Wholesaling standard was integrated into the CanadaGAP program five years ago has now been met and surpassed!

Stakeholder Advisory Committee

CanadaGAP has a Stakeholder Advisory Committee (SAC) that is appointed by the Board and whose role is to review requests for technical changes to program materials. At the June 2019 meeting the Committee had

another full agenda.

CanadaGAP receives dozens of requests each year for changes to the food safety manuals, audit checklist or other technical documents. Each request is considered and researched by staff, and recommended changes are presented to the Committee for discussion and input. While commodity-specific representation on the committee continues to be important, a number of positions on the SAC are reserved for food safety specialists

Nominations to the SAC are accepted annually, and appointments are made by the Board for one-, two- or three-year terms.

Participation trends

The following participation trends are significant for 2019:

- Participation rates have been stable since 2016. While new participants continue to enrol in the program each year (we received more than 250 new applicants in 2019), a significant number of retirements and farm sales have also occurred, offsetting any notable growth in enrolment figures.

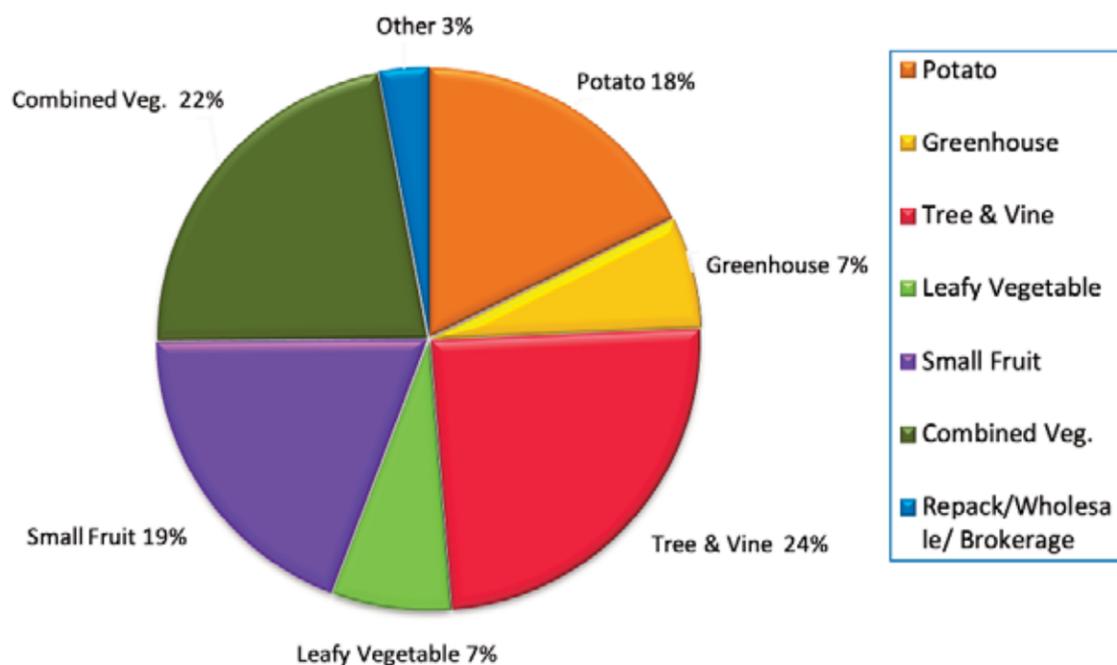
- Participation in 2019 rose most markedly among producers in Alberta and Nova Scotia. Among commodity groupings, moderate increases were seen in the Field Vegetable sector, with a slight proportional drop in participation from the Greenhouse and Small Fruit industry.

- BC continues to maintain the highest enrolment levels overall, at 38% of all CanadaGAP-certified companies.

- Growth in Option D enrolments for repacking, wholesaling, and brokerage

Proportion of CanadaGAP participants represented by crop grouping

August 31, 2019



operations continues to increase, up 15% over last year. More than 100 Option D companies are now CanadaGAP-certified.

- CanadaGAP continues to attract U.S. growers, many of whom are organized into groups to pursue food safety certification.

- Group certifications comprise 20% of all enrolments, while 24% of certified companies are enrolled in the four-year audit cycle. The number of program participants moving to an annual audit under Option C is increasing, representing 53% of participants in 2019.

- For the purposes of analyzing participation trends, enrolment figures are broken down by five crop groupings:

- o Tree and Vine Fruit
- o Field Vegetables
- o Potatoes
- o Small Fruit
- o Greenhouse

Total participation in CanadaGAP is 100%. The proportion of that total occupied by each crop grouping is presented above and within the attached program statistics, where further details as well as a provincial breakdown are included. Data is current as of August 31, 2019.

What's ahead for 2020?

- Updated CanadaGAP Food Safety Manuals take effect April 1, 2020
- Re-benchmarking to GFSI (Version 8 Benchmarking Requirements)
- Refresher testing for CanadaGAP auditors and trainers
- Participation in Leafy Greens Task Force and Science and Technology Advisory Forum at GFSI
- Continued promotion of CanadaGAP inside and outside of Canada.

Heather Gale is executive director, CanadaGAP Program, CanAgPlus

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ISSUE OF THE YEAR

Produce plastic: villain or protector?

KAREN DAVIDSON

Produce packaging contributes only four per cent to the plastic burden, but tell that to a millennial.

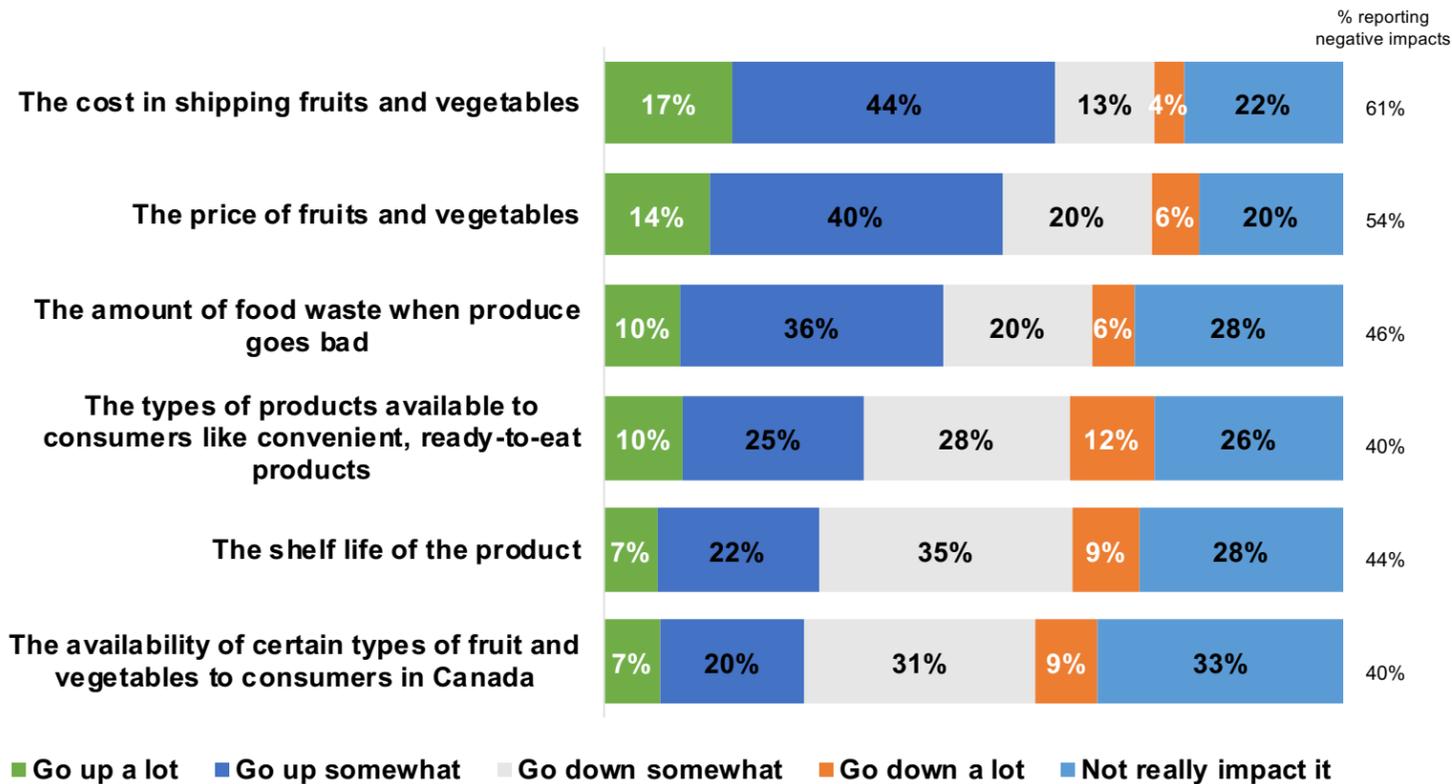
The eco-conscious consumer, born between 1981 and 1996, is faced with an awkward moment at the produce counter. On the one hand, millennials are embracing locally-grown, plant-based meals. But to bundle the household-appropriate quantity of fruits and vegetables, consumers usually reach out for the ubiquitous single-use plastic bag. Now guilt taints the purchase.

“The perception is that plastics are overwhelmingly part of the problem,” says Ron Lemaire, president, Canadian Produce Marketing Association (CPMA). “Consumers don’t think about the plastic jug of laundry soap.”

Sensibilities have shifted very quickly for actively engaged citizens, especially since the federal government signed the Ocean Plastics Charter at the G7 meeting in June 2018. Those commitments to work with industry towards 100 per cent reusable, recyclable and recoverable plastics by 2030 have been broadly publicized.

Grocers such as Sobeys have taken note, aiming to remove single-use plastic bags by January 2020. Loblaw has also announced its sustainable

IMPACT OF ELIMINATING SINGLE-USE PLASTICS



Source: From an Abacus Data survey, conducted June 13-17, 2019 with 1,500 Canadian residents, aged 18 and over, statistically weighted to match the Canadian population.

system called Loop.

The CPMA Plastics Packaging Working Group, comprised of 28 companies working within the produce supply chain, was struck in June 2019. That same month, the

federal government announced a plan for extended producer responsibility around single-use and disposable products to be launched as early as 2022.

There are conflicting needs here. Remember that plastics have enabled food safety and reduced food waste. A ban on plastics would cost \$2.5 billion to the Canadian produce sector in terms of shipping and shrink, with some commodities more at risk than others. And at the heart of the issue is how to define single-use plastics. It’s not just the plastic bags for produce but the perception of plastics in clamshells, even if they are recyclable.

Consumer research, commissioned by CPMA, reveals a perplexing dichotomy of opinions. On the one hand, about 63 per cent of a consumer sample of 1,500 Canadians aged

18 and over, said: “I strongly believe we need to reduce the amount of single-use plastics we use in our lives.” Almost an equal number of consumers – 52 per cent – said “I don’t usually think too much about the type of packaging produce comes in.”

If consumers are not pulling for change, then industry doesn’t know what change to pull for. Additionally, little consensus can be found amongst the plastics and packaging stakeholders.

As Ron Lemaire has discovered, “Plastics are largely a commodity industry driven by price and volume. Packaging manufacturers use complexity as a point of differentiation. Opinions and assumptions are trumping data and facts.”

After meeting with the plastics industry, Lemaire now

understands that economics do not favour the use of post-consumer recycled (PCR) plastics. The low cost of virgin materials are a function of resin overproduction from cheap oil and gas. PCR producers remain competitive by managing prices paid to suppliers. At this juncture, there is no stakeholder buy-in to create demand and achieve change. In the future, standards and specifications will be required to establish common understanding and to drive innovation.

With this knowledge in hand, Lemaire is sharing his insight with other food groups. He has presented to fish and bakery sectors, The Retail Council of Canada, the Canadian Federation of Independent Grocers, Food & Beverage Canada, to name a few.

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NOTICE

is hereby given that the
161st Annual Members and Directors’ Meeting
of the
Ontario Fruit and Vegetable Growers’ Association

will be held in Niagara Falls, Ontario
at
Hilton Niagara Falls February 18th, 2020

Election of Directors of the Association will take place as well as dealing with resolutions and any other business that may arise.

ISSUE OF THE YEAR

Produce plastic: a villain or protector?



“We’re not vilifying plastic,” says Lemaire. “But we are advising to take the time to do the right thing.”

CPMA will be publishing what are best practices for produce for 2020. That document will be important in communicating to the federal government what the produce sector is doing. At the same time, CPMA will be monitoring the Canadian Council of Ministers of the Environment.

“CPMA has a role in setting the tone for the conversation,” says Lemaire. “We need to build public trust in telling the story of what we’ve done so far – implementing top sealed packages, innovative new packaging that’s compostable. In Canada, we’re trying to create a model that meets consumer needs. That is convenience, without increasing costs.”



“

Complexity of this issue is such that if we do nothing, we will have a challenge. Take simple steps now in moving forward, but make the right decisions.

~ RON LEMAIRE

”



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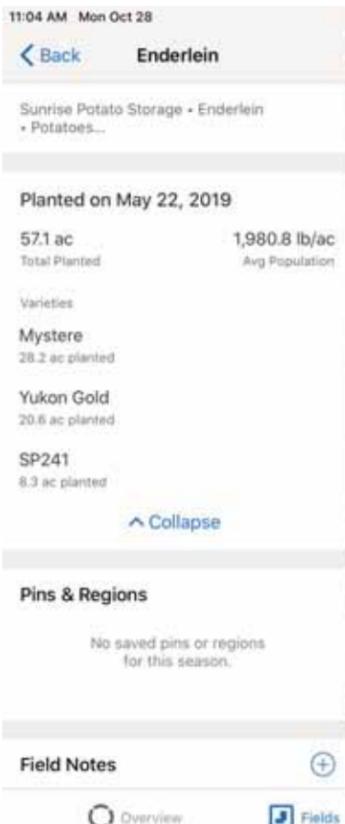
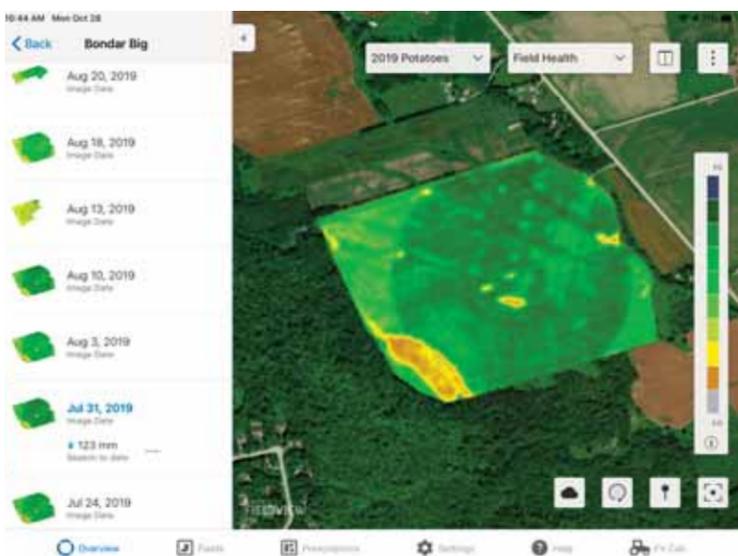
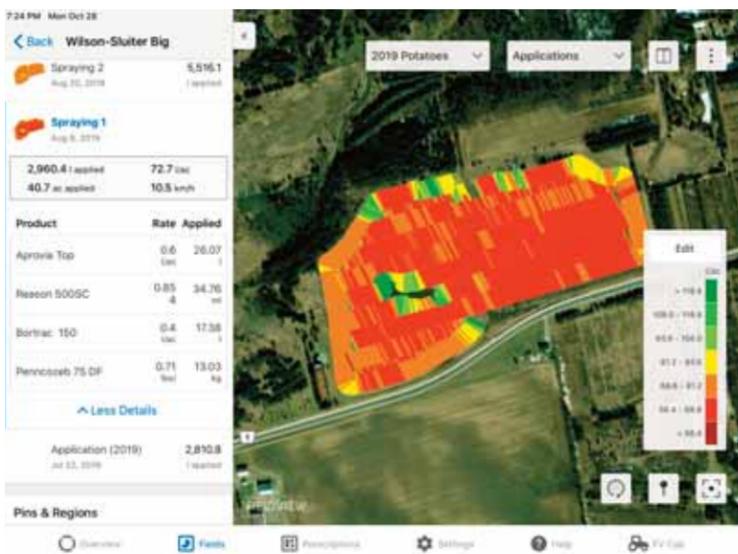


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DIGITAL HORTICULTURE

Vegetable grower touts connectivity of Climate FieldView program



KAREN DAVIDSON

The least favourite part of a farmer's life is record-keeping. However, Climate FieldView is making the grade with Nick Ploeg who is responsible for 1,300 acres of chipping potatoes at Sunrise Potato Storage, Alliston, Ontario.

"I've struggled with various programs over the years," says Ploeg. "If I can't take the program to a seasonal employee and make it work, then it's of no value."

The Climate FieldView program, offered by Bayer CropScience, has undergone many iterations since its former Google founders launched in

2006. At one point in its rapid trajectory, the company rebranded as The Climate Corporation. Monsanto bought it in 2014. Then Bayer CropScience acquired the assets when it finalized the purchase of Monsanto on June 7, 2018.

"This program is leading the next frontier in agriculture," says Denise Hockaday, climate business lead for Bayer CropScience. "The ability to collect and generate data has improved. The biggest challenge is how to make sense of data so that action can be taken."

As Hockaday explains, Climate FieldView Drive is a Bluetooth-enabled device that plugs into a tractor or combine and reads machine data during planting and harvest. The data is displayed in real-time to the Climate FieldView Cab app.

While Climate FieldView was not originally intended for vegetable growers, Nick Ploeg has used the program for a full season. It tallies all chemical sprays by potato variety. This is particularly valuable as a member of the CanadaGAP food safety program. He's tracking 300,000 hundredweight of chipping potatoes for various buyers.

What Ploeg also values is Climate FieldView Prime which includes weather and scouting. This feature ties in to local weather stations, forecasting up to three hours in advance. Growers can drop a pin on their farm location for scouting purposes throughout the season. Just as importantly, the program records the temperature and wind conditions the day of spraying.

"I did not use a rain gauge in the 2019 season," says Ploeg. "I completely relied on the program."

FieldView offers satellite imagery that updates vegetation every 10 days. Ploeg valued this function on irrigated acres,

observing where plugged spray nozzles were not working properly on the pivot.

While Ploeg did not use the drone services, he can see that the technology is evolving rapidly. Corn growers, for instance, could benefit in estimating population stands.

Another advantage is that plant emergence can be correlated with the speed of planting. Too fast? Uneven emergence will be the result.

Fields can be analyzed by variety. That's a big help with five potato varieties grown on the farm. At harvest time, the field crew used the maps to verify where varieties started and ended in each field.

"Going forward we would like to add the feature that measures yield while harvesting," says Ploeg. "We didn't utilize that this year. Something like Greentronics would have to be purchased and installed to link with the software to make that feature work."

"The nicest thing about the Climate FieldView program is that it's user-friendly," concludes Ploeg.

While the program gained users in western Canada, it was first introduced in Ontario in January 2017. Hockaday explains that the program has been adopted by both English- and French-speaking users. There have been no issues with data security.

"Bayer does not own your data," Hockaday says. "The farmer can revoke sharing privileges at any time."

Cost of the program depends on the farm size. Average costs are \$1/acre/year.

According to a Bayer CropScience November 11, 2019 news release, FieldView is currently on track for 90 million paid acres across North America, South America and Europe in 2019.




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OFVGA ISSUES AND ACTIVITIES

Better for People, Smarter for Business Act offers benefits, unknowns



GORDON STOCK
SENIOR POLICY ADVISOR &
GOVERNMENT RELATIONS,
OFVGA

OFVGA worked with its members and other associations to review and submit comments on a wide variety of proposed changes.

OFVGA was pleased to see that one of the proposed changes is to bring Ontario's pesticide classification system in line with that of the federal government to enable timely access to crop protection products. Ontario is the only province with the duplicate classification system. OFVGA has been working with the Ministry of Environment, Conservation and Parks for the past year to remove this duplicative process.

Other proposed changes such as changes to environmental non-compliance penalties will be observed closely to ensure farmers are being treated fairly by enforcement officers. For many of the proposed changes, the devil will be in the details once regulations are drafted or amended and the OFVGA will take every opportunity to advocate for approaches that promote, rather than hinder sector competitiveness.

Financial protection for growers

The OFVGA board recently had a discussion with representatives from the Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA) around the issue of financial protection for growers. OMAFRA consulted with industry in November focusing on its current financial protection programs for grain and livestock producers. The OFVGA used this opportunity to propose changes to existing Ontario legislation to enable potential protections for the fruit and vegetable sector.

SDRM redesign update

As directed by Minister Hardeman, the OFVGA continues to work with OMAFRA staff on the ongoing review and redesign of the Self-Directed Risk Management (SDRM) program, which is part of the provincial suite of risk management programming for non-supply managed commodities. OFVGA is committed to working with OMAFRA to ensure the program remains effective for growers while also meeting the needs of government.

Negative media coverage of seasonal worker programs

The OFVGA is closely watching recent negative and factually inaccurate media stories concerning seasonal agricultural workers. OFVGA recognizes the ongoing efforts by organizations such as FARMS and the Canadian Horticultural Council to push back on the false narratives in the media. In support of these efforts, the OFVGA has shared messaging with members to help farmers talk about the benefits to the workers, the Canadian public and growers. Messaging is also available on the OFVGA website.

National activities

Now that the federal cabinet has been announced, the OFVGA has written the Prime Minister, key cabinet members, several Members of Parliament and leaders of the opposition parties to congratulate them on their roles in the new parliament. We also took the opportunity to communicate priority issues for the fruit and vegetable sector, including

financial protection for growers, improving the Pest Management Regulatory Agency's process for evaluating crop protection products and the importance of the Seasonal Agricultural Worker Program.

Call for Resolutions

It's time to start thinking about resolutions for the 2020 OFVGA annual general meeting. If your organization is considering submitting a resolution on a specific issue and would like some background information that might be helpful in crafting your resolution, please feel free to contact the OFVGA. The AGM will take place February 18, 2020 at the Hilton Hotel in Niagara Falls. The deadline for submitting resolutions is January 10, 2020.

Want to see an issue highlighted here, or learn more about how OFVGA represents growers? Contact Gordon Stock, senior policy and government relations advisor, at gstock@ofvga.org or 519-763-6160, ext. 125. More detailed updates can also be found at www.ofvga.org/news

This column is to keep you informed about the key issues that OFVGA is tackling on behalf of Ontario's fruit and vegetable farmers.

Ontario Bill 132

The legislature resumed sitting in October and the provincial government announced its Better for People, Smarter for Business Act, legislation designed to reduce red tape across numerous provincial ministries. The

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CHAIR'S PERSPECTIVE

What a year it's been



BILL GEORGE JR.
CHAIR, OFVGA

The combination of a late season and the early appearance of winter means we're still harvesting grapes with snow on the ground this year. This isn't something I've seen many times before in my decades of farming, but it seems par for the course for 2019: a challenging weather year for everybody in horticulture and agriculture.

Most if not all horticulture crops were delayed by the cool, wet spring, and although most recovered sufficiently by

harvest, some growers dealt with lower yields, heavy rains and suppressed pricing.

From a political perspective, it was a year of laying ground work with the provincial government. While not new anymore – they've been in office since June 2018 – we did see a shuffle of ministers in many of the major portfolios in late spring.

We held our first lobby day at Queen's Park in April, where we proactively met with politicians, their staff and bureaucrats to introduce them to the Ontario Fruit and Vegetable Growers' Association (OFVGA) and what the fruit and vegetable sector represents to Ontario's economy. We deliberately went into those meetings without an agenda or a specific ask; our goal was simply to raise awareness of edible horticulture and let people know that we are the go-to for any policies or issues impacting our sector.

That first day was pretty successful by all accounts – so

much so that we're doing it all again at the end of November. It takes time to cultivate relationships, but it can be an invaluable resource to both policymakers and those of us involved with organizations such as OFVGA to know who to talk to and how to get in touch.

Federally, with the election now behind us and a new cabinet in place, we'll be getting back to work together with our national farm organization partners: the Canadian Horticultural Council, Canadian Produce Marketing Association and Canadian Federation of Agriculture.

With a federal minority government, it's a bit of a different situation that faces us now as we engage at the national level and determine how we can get movement on some of the main issues facing growers.

Financial protection for growers is a file we've been working on for a while now and to date, there's been little action on the side of government. That's even though the solution

we're asking for – federal legislation to give fruit and vegetable farmers priority access to an insolvent buyer's cash, inventory and accounts receivable related to the sale of fresh produce – comes at no cost to government. In addition to protecting Canadian produce sellers, this legislation would open the door for reciprocal priority protection in the U.S.

Crop protection continues to be a main focus for our lobbying efforts as product re-evaluations will be ongoing. It's a federal issue, but I believe it's also important for Ontario policymakers to know how much impact federal policy can have on a sector at the provincial level.

Labour, too, remains a priority. As the Temporary Foreign Worker Program continues to attract attention, we must differentiate the Seasonal Agricultural Worker Program and continue to seek support for this successful program that is so necessary for Canadian growers.

And finally, trade problems and a tumultuous global political environment were never far from the 2019 headlines and we will continue to watch this unfold. In horticulture specifically, we're keeping an eye on a variety of issues, from tomato negotiations between the U.S. and Mexico to asparagus dumping south of the border that could impact growers here.

And of course, the challenging relationship between China and the United States has been impacting all farmers, whether it's through higher costs for inputs, parts or equipment or more directly through trade distortions, market access restrictions or --- loss of markets entirely as fellow farmers in the crop and livestock sectors are experiencing.

As the year comes to a close, it's my hope that all of you can find some time to unwind over the holidays and enjoy time with family and friends – and I wish each and every one of you a Merry Christmas and all the best for 2020.

WEATHER VANE



One of the big stories of 2019 was the Ontario government's acknowledgement of the economic impact of the Ontario Food Terminal at its central Etobicoke site. This decision was a relief for thousands in the food chain: growers, wholesalers, retailers, foodservice, green grocers, restaurateurs and chefs. Thanks to workers such as Thinley Sangpo, Fresh Taste Produce, fruits and vegetables are shouldered from pallet to truck every day, on time, at North America's third largest food terminal. Let's pay tribute to that entrepreneurial spirit when we sit down to our holiday feast. Photo by Glenn Lowson.

STAFF

Publisher: Ontario Fruit and Vegetable Growers' Association
Editor: Karen Davidson, 416-557-6413, editor@thegrower.org
Advertising: Carlie Melara 519-763-8728, advertising@thegrower.org

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OFFICE

355 Elmira Road North, Unit 105
Guelph, Ontario N1K 1S5 CANADA
Tel. 519-763-8728 • Fax 519-763-6604

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Specialty crops spark surge in exports and equipment sales abroad



OWEN ROBERTS
U OF GUELPH

Spain, home of the Mediterranean diet, is reveling in its new designation as the healthiest country in the world.

The Bloomberg Healthy Country Index bestowed the 2019 title on Spain earlier this year, surprising many observers who expected perennial favourites from Scandinavian countries -- such as Norway and Sweden -- to prevail.

After all, how many times have you heard the average Scandinavian is umpteen times healthier than his or her much younger counterpart elsewhere?

The Spanish themselves weren't surprised at winning the crown, though. They'd long thought their traditional and zesty fruit-and-vegetable rich diet, which they balance with low-fat animal protein (particularly seafood), gave them a leg up on the healthy-country scale. They have the research to support it -- in 2013, the *New England Journal of Medicine* turned heads when it reported on how the Mediterranean diet can help prevent cardiovascular disease.

The Bloomberg index considered factors beyond diet, such as Spain's excellent health care system and a social culture that emphasizes family values over the daily grind. But there's no question diet contributed significantly to it being well on its way to overtaking Japan by 2040 as the country with the longest life expectancy in the world.

In Canada, we have a long way to go. We came in at No. 16 in the Bloomberg report, just ahead of South Korea and behind The Netherlands. University of Guelph human health and nutritional scientist Prof. Alison Duncan says we could take a lesson from Spain.

"The Mediterranean dietary pattern is very healthy with its high intake of fruits, vegetables, nuts and olive oil, its moderate intake of fish and poultry and its low intake of processed meats, sweets, red meat and dairy, as well as wine in moderation with meals," she says. "It's not only a diet but a

culture and Canadians could learn a lot from both the components of the diet but also the approach of enjoying and savouring foods, including fruits and vegetables."

This dietary phenomenon shows in the growth of Mediterranean-type food and beverage exports on the world market. From 2015-2017, fruit exports rose 120 per cent to US\$107 billion, vegetables were up 100 per cent to US\$68.7 billion, wine exports increased 70 per cent to US\$32 billion and olive oil jumped 61 per cent to US\$8.1 billion. Globally, Europe is leading the trend, where consumption traits there have significantly boosted equipment sales related to plant production and specialty crops.

So how perfect, then, that ultra-healthy Spain -- home of many of the fruit and vegetables (olives and grapes in particular) that are contributing to the country's lofty healthiness status -- was chosen to host the bi-annual Agrievolution Summit this year, an impressive event dedicated to advances in agricultural production and processing equipment.

The Agrievolution Summit is staged by the Agrievolution Alliance, the global voice for about 6,000 agricultural equipment manufacturers around the world and 15 individual associations (including the Milwaukee-based Association of Equipment Manufacturers, which represents North America).

For the first time, this year's seventh summit had two themes and two locales: training and education for the future, held in Madrid, and the mechanization of specialty crops, which took place in Valencia near the Mediterranean coast, in conjunction with a huge three-day field demonstration show called Demoagro Specialty. There, instead of corn and soybean plots you'd see at something such as Canada's Outdoor Farm Show, 23 hectares of vineyards and citrus trees -- lemons and persimmons, among them -- were featured, along with non-stop equipment demonstrations by 30 manufacturers, big and small.

The buzz around the new equipment, including smart sprayers, atomizers and super-compact, high-tech tractors with reversible driving systems, was palpable. Participants seemed particularly enthralled with the futuristic-looking New Holland BRAUD 9090X grape harvester, both during well-attended field demonstrations and later at the company's busy display area.

Growers know they need to

be profitable to afford new equipment. Ignacio Ruiz, secretary general of ANSEMAT, the Spanish agricultural machinery association, says intensive and super-intensive plantations are overtaking fields once used for arable crops, and the need for more efficient equipment is paramount.

As well, he says, consumers have higher aesthetic expectations for the commodities they purchase, putting even more pressure on new equipment.

"The main driver of the price of specialty crops is the quality of the product, particularly its organoleptic properties which are highly appreciated by consumers," he says. "Any alteration of such qualities may lead to a drop in the price of the product. So special care must be taken during last days in the trees. Harvesting techniques, transport, handling, calibration, classification and packaging require specific equipment to preserve quality from the trees



The Agrievolution Summit, Valencia, Spain.

to the consumer table."

Specialty crop equipment growth is a bright spot in farm equipment manufacturing overall. Trade wars and challenging growing seasons globally have deterred many tractor and combine buyers this year; sales have been up and down, but mostly flat.

However, if healthy-eating trends continue to throw the spotlight on the Mediterranean diet and plant-based diets,

specialty equipment growth is likely to be more than a short-term trend and spread beyond Europe to other continents.

Equipment-wise, Canada is already part of that revolution, with new European equipment starting to show up in producers' fields, orchards and vineyards. This country is ready to be an active player in long-term change.



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THE LABOUR FILE

Seasonal and Temporary Foreign Worker Programs under media scrutiny



STEFAN LARRASS

What does it mean for farmers when government staff read bad news about the Seasonal Agricultural Worker Program (SAWP) and the rest of the Temporary Foreign Worker Program (TFWP)? Or when voters read such stories?

The link between media coverage and policy changes is not always clear. But there is no doubt that in the past, changes in program rules followed sustained negative news. Take, for example, the stories about Canadian employers such as McDonald's and Royal Bank of Canada replacing existing Canadian workers with temporary foreign workers. The media uproar led to changes to the program in 2014 including stricter Labour Market Impact Assessment (LMIA) requirements such as job postings.

The issue here is that media stories often attempt to lump agriculture in with all the other sectors using TFWP. The good

news is that the public is prepared to view agriculture differently. This was evident during the period of the 2014 program changes. In May of that year, a government survey asked close to 2,000 Canadians about their views about the TFWP. While support for TFWP for all other sectors hovered in the range of 4.7 to 5.2 (out of 10), agriculture received a support level of 6.2.

This example highlights the importance of farming-specific communications efforts such as those led by the Canadian Horticultural Council, FARMS and other industry leaders. They are vital to correcting the record when it comes to the false (or over-generalizing) narrative in media stories. These communications efforts include regular media interviews, open letters to the editor, and also conversations with government officials to ensure they receive the facts about our international guest worker programs. They also include educational materials such as CHC's Heartbeat video which was released earlier in 2019 to showcase the positive nature of these programs on Canadian farms using powerful personal stories of workers and farmers.

That said, when it comes to day-to-day conversations, growers are the best ambassadors to share the overwhelmingly positive relationship between our farming community and the international workers who

voluntarily choose to come here, often returning to the same farm for decades.

Growers can keep the following eight points in mind for these conversations about SAWP/TFWP with friends, acquaintances, and even strangers:

1. Local workers first: We always try to hire locally first. In fact, every position filled by a SAWP/TFWP farm worker has at one point been advertised in local job banks. But with the lack of local workers for seasonal and rural jobs, we regularly rely on the SAWP and TFWP.

2. Protected by law: Every SAWP/TFWP worker has a legal job contract signed by them and the employer. This protects the worker, giving them all the same rights and protections as local Canadian workers, including Employment Insurance.

3. Equal wages for equal work: Foreign workers are paid the same as Canadians doing the same job. There is no way around minimum wage, it's a requirement of the SAWP/TFWP rules.

4. Building more than Canada's economy: More than \$300 million of saved earnings are sent home by SAWP employees every year, more than 11 times Canada's annual aid budget to developing regions such as

Mexico and the Caribbean. Seasonal jobs provide workers the opportunity to send their kids to good schools, buy a home, and start their own family business.

5. A guaranteed home: For SAWP, workers are guaranteed housing provided by their employer at no cost to the worker. In the rest of TFWP, employers have to ensure affordable housing is available and may charge modest rent amounts approved by Service Canada.

All housing is inspected every year by certified municipal or provincial health inspectors.

6. Health care benefits for all: All SAWP/TFWP workers have mandated access to health care under public or private insurance. SAWP workers are covered by provincial coverage

(e.g. OHIP in Ontario) from day one. In the rest of TFWP, where there is a waiting period before provincial coverage kicks in, employers are responsible for purchasing private coverage for the workers during this period.

7. A pathway to immigration: Immigration rules are set by the government. Not by farmers. That said, we are fully supportive of any pathway of immigration for workers that want one.

8. Zero tolerance for bad actors: Non-compliant employers are fined, placed on probation, or excluded from the program in the future if they fail to meet the program's very high standards.

Stefan Larrass is policy advisor, Ontario Fruit & Vegetable Growers' Association.

COMING EVENTS 2019

Dec 3	Arrell Food Summit, Globe and Mail Centre, Toronto, ON
Dec 3	Ontario Apple Growers District 3 meeting, Grace United Church, Thornbury, ON 10:30 am
Dec 3-4	GrowCanada Conference, Calgary, AB
Dec 4	Garlic Production and Pest Management Workshop, 1 Stone Road, Guelph, ON
Dec 4	Ontario Potato Board Annual General Meeting, Delta Hotel, Guelph, ON
Dec 4-8	Canada Outstanding Young Farmers Recognition Event, Delta Fredericton, Fredericton, NB
Dec 5	Fresh Vegetable Growers of Ontario Annual General Meeting, OMAFRA office, Woodstock, ON 9:30 am
Dec 6	Ontario Apple Growers District 5 meeting, Holiday Inn Express, Bowmanville, ON 9 am
Dec 6	Potatoes New Brunswick Annual General Meeting, E & P Senechal Center, Grand Falls, NB
Dec 7	Garlic Growers' Association of Ontario Fall Grower Meeting, OMAFRA office, Woodstock, ON 9:30am
2020	
Jan 14-15	National Potato Council Potato Expo, Las Vegas, NV
Jan 14-15	Canadian Fertilizer Products Forum, Ottawa, ON
Jan 19-22	North America Strawberry Growers' Association Annual General Meeting and Conference, Holiday Inn San Antonio Riverwalk, San Antonio, TX
Jan 28	BCAC Agriculture Gala, Abbotsford, BC
Jan 28-29	Nova Scotia Fruit Growers' Association Annual General Meeting, Old Orchard Inn, Greenwich, NS
Jan 28-30	Manitoba Potato Production Days, Keystone Centre, Brandon, MB

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RETAIL NAVIGATOR

After cost, volume is the next most important number



PETER CHAPMAN

Alignment with your customers is key to your success. To be aligned, you need to have a common definition of success, or one of you will never be happy. This does not mean you have to agree on everything but you do need to discuss outcomes and find some common ground.

There is more to alignment than cost of goods

Many suppliers get focused on cost, which they should be. However, alignment is not limited to cost of goods. Yes cost is important and always a negotiation, but it is not the only number you need to be thinking about. You should know your item better than they do and there are other factors where you need to be aligned to ensure you both have a common definition of success. Once you agree on the cost, make sure you cover these other topics.

Volume is a key number

You should know how much your item will sell. They do have access to the POS data but you have your own history and you should be knowledgeable about the category. After cost, this is the second most important number and one you should not be afraid to discuss.

Make sure you have a starting point or an opinion about the sales your item will deliver. This demonstrates confidence and an understanding of the situation. They might not agree with your estimate but it is something you need to include in the conversation. Explain the rationale for your estimate and let them explain why they see it differently. Work to get to a point where you both see the estimate in the same light, because when you are back for the next meeting this will be the most important number to determine your success. Often this can be the first item on the agenda at the next meeting. Write it down and make sure they know you have recorded it.

Specs and standards can change

In every perishable department there are well-defined specs and standards for products. This can include size, grade, shelf life, case pack and quality expectations. To deliver the sales estimate, your product will need to meet or exceed your customer's expectations. These can change so do not assume you know what they have in their program. Many retailers have a portal where suppliers can access these product specs and standards. Print them out and bring them to the meeting to confirm they have not or will not be changing. If possible bring some product samples to review and compare to the specs and standards.

Service level

Many retailers are very focused on service level. Their opinion would be that they are paying for a 95 per cent service level as part of the cost of goods. If orders are shorted, retailers disappoint consumers and miss sales.

Clarify the service level targets expected in your category and make sure it is achievable in your business. You will have an unhappy customer if they are expecting a 97 per cent service level and you know with weather, labour or other issues you will be 95 per cent in a good year. This is one metric you can monitor in your business and report to your customers. If you are going to have an issue be proactive. They will not be excited but in the end you do yourself and them a favour by giving them enough time to react and perhaps keep the shelf full.

Merchandising expectations impact volume

This is one part of the relationship suppliers can be reluctant to discuss. Yes it is the retailer's job to figure out how and where to display the product but for you to estimate your sales you need to know what they will do with the product.

You cannot change what they will do, but you can check to see if they are doing what they said they would do. If your category manager tells you the product will be on an end two out of four weeks and that is part of the reason they expect 5,000 cases, then you need to check. If the product never gets merchandised on the end and the sales are 4,000 cases then you should raise this issue. They will defend their actions but they know you are checking and that they did not execute.



Another bonus to asking about merchandising is they might share some changes coming up that will impact your product.

Ad plans can be the most important

With consumers' thirst for items on sale, a big part of your volume can be items on temporary price reduction (TPR). You need to know when the ads will be running and at least an idea of the level of discount they are planning. You both need to be on the same page for ads to ensure they are executed properly. This can impact your ordering of ingredients and packaging, plus your production needs to handle any increased volume.

Ad volumes are also numbers you both need to agree on. You need to be able to produce it and they will be looking to get it merchandised and sold. Success happens when you both work towards the same number of cases.

Start dates, end dates and program updates

Perishable items are sourced from multiple growing areas, which requires a lot of coordination between suppliers and retailers. Both parties need to agree on when the item will be available and shipping to the stores. Communication is key as you move through the season

and just as important on the end date as the starting date. A graceful exit is a win for both supplier and retailer. If your item is merchandised in a regular spot in the five-deck case, chances are it is part of a program. They will only review these during certain times of the year so you need to ask and make sure you propose any changes within the windows they have defined. All of these dates will impact your relationship with your customers. You need to both have the same understanding, regardless of who determines it.

Ask the questions

Relationships between suppliers and retailers move to a new place when you are both on the same page. You are in a much better position to determine if your item is successful when you ask the questions and get on the same page as your customer. You might not always like where they are but you can only get them to change their mind if you ask the questions and know what they expect. When you both have the same expectations it is very clear whether an item is performing or not.

If you have any questions about getting on the same page with your customers please give me a call at (902) 489-2900 or send me an email at peter@sku-food.com. Next month we will

discuss how to build the relationship with your customers.

WHAT'S IN STORE?

Have you had your item delivered?

Many stores are now offering delivery in the large urban markets and where that is not available, shoppers can take advantage of click and collect. Online shopping is gaining in popularity and suppliers need to be familiar with how it works and what their items look like after being delivered or selected in the store.

Sign up for online shopping and try it out.

Next time you are meeting your customer show a photo of your online order with your products in there. Hopefully it will be a great experience, if not figure out what needs to be fixed. Chances are if you experienced it, others will too!

Peter Chapman is a retail consultant, professional speaker and the author of A la Cart-A suppliers' guide to retailer's priorities. Peter is based in Halifax N.S. where he is the principal at GPS Business Solutions and a partner in SKUfood.com, an online resource for food producers. Peter works with producers and processors to help them navigate through the retail environment with the ultimate goal to get more of their items in the shopping cart.

FOCUS: SOIL HEALTH & BIOSTIMULANTS

Stand up to weather stress with plant health boosters

KAREN DAVIDSON

As extreme weather continues to take a toll on crops, more growers are finding ways to boost the resilience of plants. Foliar-applied biostimulants are one answer.

Chris Brenn, onion and potato grower near Waterdown, Ontario has used Alexin on the advice of his crop consultant. The plant health product has been used in several circumstances over recent years in onions.

“This product is pretty amazing,” says Brenn. “We’ve had consistent results in three situations over four years.”

In one situation, a hail event nipped off the top half of onions. Once the crop was dry, the product was sprayed at the recommended rate. The crop kept its green colour and bounced back.

“The product works well in stress situations, whether it’s excessive heat or a windstorm,” says Brenn.

He notes that wet conditions can cause soft rot in onions, so he proactively sprayed his onion crop in June 2019 at the two- to three-leaf stage. The foliar nutrient spray kept the plants growing well through the wet spring.

The science behind biostimulants is becoming better understood as companies such as NutriAg, manufacturer

of Alexin, conduct field trials in multiple crops. Alexin is classified as a fertilizer because it does not contain regulated components by the standards of the Canadian Food Inspection Agency (CFIA). The product helps to alleviate abiotic stress.

“The biostimulant category has gained a lot of attention without question,” says Dr. Kelly Tanaka, chief scientific officer, NutriAg, “From a regulatory perspective, it remains to be seen what happens to this category.”

Known as a leader in foliar nutrition since 1993, NutriAg has expanded into the plant health space. There are four classes of biostimulants, Tanaka explains.

Humic acid products.

Traditionally extracted from leonardite or peat, they are a complex mixture of many different acids containing carboxylic and phenolic groups. Humic acid is used to amend soil. These products help improve cation exchange capacity, soil structure, microbe activity and micronutrient availability.

Seaweed extracts. As the literature attests, use of fresh seaweed as a source of organic matter is a timeworn practice however the biostimulant effects of improving drought or salt tolerance have been the



Chris Brenn (R) and brother Shawn at Brenn B Farms, Waterdown, ON

“The product works well in stress situations, whether it’s excessive heat or a windstorm.”

~ CHRIS BRENN

main focus more recently. Seaweed extracts may include the polysaccharides laminarin, alginates and carrageenans. The type and ratio of these compounds are unique to their algal source. These products stimulate plant root development, improve nutrient availability as well as the mentioned tolerance to abiotic stresses such as salt and drought.

Protein hydrolysates and other amino-containing compounds.

Amino-acids and peptides mixtures are obtained by

chemical and enzymatic protein hydrolysis from agroindustrial by-products, from both plant sources (crop residues) and animal wastes (e.g. collagen, epithelial tissues). These compounds play several roles, modulating nitrogen uptake and assimilation, regulating enzymes involved in nitrogen assimilation and by acting on the signaling pathway of nitrogen acquisition in roots. They are also known to improve tolerance to salt, cold and oxidative stress.

Microbial-based products.

Beneficial fungi are applied to plants to promote nutrition efficiency and to improve tolerance to stress, crop yield and product quality. Research is advancing on understanding the population dynamics of mycorrhizal communities. Beneficial bacteria have been shown to help with nutrient utilization, N-fixation and abiotic stress.

Tanaka is careful to point out that biostimulants are not, at present, formally defined by any national or international body. The word is a marketing term that embraces a broad category of crop inputs as listed above. Biostimulants are not defined in Canadian legislation.

Although these materials have been used for centuries, the category is so new that the First World Congress on the Use of Biostimulants in Agriculture was held in Strasbourg in 2014. Despite recent efforts to clarify the regulatory status of biostimulants, there is no legal or regulatory definition of plant biostimulants anywhere in the world. Two draft definitions are currently under review in the European Union and in the United States.

At the core of these proposed

definitions is that they include products that promote growth/and or improve tolerance to abiotic stress. Biostimulants can be defined by what they are not. For example, they do not act on biotic stress such as pests and diseases.

In Canada, biostimulants are generally recognized to be regulated by the Canadian Food Inspection Agency (CFIA) under the authority of the Federal Fertilizers Act and Regulations as “supplements.”

There is a fifth broader class that would include biopolymers, lipids, other carbohydrates, amines, other organic compounds, and nonessential nutrients such as silicon. NutriAg has a number of biostimulant products in development. One of the products, SiliCalMax, is currently under development in potatoes and apples. The combination of calcium and silicon has been shown to improve apple quality and to decrease bitter pit in apples.

“There’s a lot of interest in silicon,” says Tanaka. “Functionally, silicon helps to fortify cell walls and thus improve resistance to disease. We’re building a stronger house if you will.”

One of the questions is how much to apply and when. This goes back to the foundation of 4R stewardship: right source, right time, right rate, right place.

In potatoes, trials are underway in eastern Canada to explore furrow-based application and whether there is improvement in yield.

As the arsenal of PMRA-registered chemicals becomes smaller, it’s thought that biostimulants may play a larger role in keeping plants healthy.

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FOCUS: SOIL HEALTH & BIOSTIMULANTS

World Soil Day is December 5

KAREN DAVIDSON

The United Nations has declared December 5 to be World Soil Day, a spotlight on the rhizosphere beneath our feet. The University of Guelph, in partnership with the Ontario Ministry of Agriculture, Food and Rural Affairs, is holding an open house at 1 Stone Road West.

“We’re trying to move the needle with joint efforts between soil specialists and graduate students,” says Cameron Ogilvie, outreach and

communications coordinator, Soils at Guelph Initiative. “As a Masters of Science graduate, I can’t express enough about the importance of working with farmers. They are the stakeholders. They can help develop and refine the research questions.”

CREATE Climate-Smart Soils is a graduate program across the country that will share knowledge about reducing greenhouse gas emissions with better soil management. Climate-smart soils refer to resiliency – soils

have capacity to retain water, but also to impact greenhouse gas emissions. Ogilvie explains that soils can sequester carbon with management practices such as cover crops. These crops, planted in rotation, can reduce nitrate leaching, protect against soil erosion and contribute to yield improvements.

Growers are invited to stop by for the meet-and-greet with soil specialists and interactive soil displays 8:30 am to 2:30 pm. Graduate students will participate in a poster symposium from 10:30 am to 1 pm.

Farm & Food Care to produce videos about soils and nutrient management



Farm & Food Care Ontario (FFCO) will receive Canadian Agricultural Partnership (CAP) funding over the next year for a project related to soils and nutrient management. As a result, a number of communication tools related to soil health will be produced and distributed across Ontario.

The project has several components which include the creation of 10 videos on various aspects of soil health and how farmers address their own specific soil management, six videos focused on the practice of strip tillage, economics and how farmers develop their unique farming systems. FFCO will work closely with farmers and the OMAFRA soils team to produce a cohesive and informative series of soil management videos. Additionally, the project will include an awareness campaign promoting sustainable practices around manure use as a fertilizer, while raising awareness on the risks of runoff if nutrients are applied on frozen ground.

SPONSORED CONTENT

New diagnostic test connects soil health with higher yields

VitTellusSM Soil Health, to measure and monitor soil health, can lead to environmental and economic benefits for producers.



A&L Canada founder and CEO Greg Patterson, speaking about the importance of soil health testing and management.

A newly available soil health test not only indicates the state of soil health, it also provides recommendations on what can be done to improve your soils. And it’s the first soil health test that makes a direct connection between healthy soils and higher yields, providing the potential for better farm profitability.

A&L Canada Laboratories’ VitTellusSM Soil Health Test is the result of over eight years of extensive field research by the London, Ontario-based company’s biologicals research team. In working with 50 farms, they assessed over 400 factors related to soil health and yield and studied the complex

relationship between plants and soil microbes. Their research was published in the Journal of Microbiology and Experimentation in 2017.

“Soil is a very complex, diverse and changing environment with physical, chemical and biological characteristics that contribute to its health and quality,” says Dr. Soledad Saldias, A&L’s Research Lab Director. “That’s why, in addition to the traditional chemical profile, VitTellusSM measures the physical and biological balance of the soil, resulting in an indexed score.”

According to Saldias, the microbe population in a highly-

producing field is significantly different than in a low-yielding field. A higher index on the 0 to 60 VitTellusSM scale means there is more microbial-plant balance in the soil, resulting in better nutrient uptake and higher yields. A&L’s research has confirmed a 93% correlation between actual yields and those predicted by VitTellusSM.

“Our approach is always looking for productivity and yield because we want a tool that is practical for farmers and results in a better bottom line while also conserving soil health and providing benefits to the environment,” says A&L Canada Labs founder and CEO Greg Patterson. “That’s why we’ve developed a diagnostic tool that can help clients make positive changes to their soil management practices while also giving them economic benefits.”

In addition to the Soil Health Index, the VitTellusSM Soil Health Test package also includes Solvita CO₂, potential mineralizable nitrogen, reactive carbon and standard fertility results. These are accompanied by crop production recommendations specific to the tested fields, as well as live customer support from the A&L agronomy team, and online client portal access to your reports and soil data that can be seamlessly integrated to

your farm management software.

“Our system is unique because we don’t just give you the test results, we also interpret them for you and provide suggestions for continuous improvement,” says Saldias.

Norfolk County producer Dan Petker first learned about VitTellusSM when he took the A&L Soil Fertility Clinic last year and is pleased with what he’s learned from trying it on his farm.

“Instead of just chasing nutrient levels, this test gives us an overall health score and a benchmark to work with for the future,” Dan says. “Our soils are actually healthier than I expected and it showed me that I’m doing the right things to ensure we have well-balanced soils.”

A regular soil test is an excellent way for farmers to start learning about their soils and ensuring their fertilizer investment follows good stewardship principles as you would find in the 4R Nutrient Stewardship Program, suggests Saldias. VitTellusSM provides the next step of deeper understanding and connecting soil health and quality to yield and economic benefit to the farm business.

For more information, visit www.ViTellus.com.

WORLD SOIL DAY

Thursday December 5, 8:30am-2:30pm
OMAFRA Building, 1 Stone Road West

- Meet-and-greet with **University of Guelph Researchers** and **OMAFRA Soil Specialists**
- Visit **interactive soil displays**
- **Graduate Student Poster Symposium** from 10:30am-1:00pm

Why should I test my soil?

- Proactive approach to improving productivity
- More crop nutrient uptake in healthy soils
- Supports 4R Nutrient Stewardship Program

FOCUS: SOIL HEALTH & BIOSTIMULANTS

The benefits of cover crops in a vegetable rotation



Examining soil samples in cover crops. Photo courtesy of Cameron Ogilvie, Soils at Guelph Initiative.



On 28 October 2019 Dr. Van Eerd's long-term cover crop experiment. Cover crops were planted in early August after winter wheat harvest (top right image) compared to those cover crops planted after tomato harvest in mid-September (bottom right). Source Laura van Eerd.

KAREN DAVIDSON

It does not take a lifetime to improve soil health. That's the conclusion of Dr. Laura van Eerd, one of a handful of scientists in North America who has been conducting trials for a decade. The University of Guelph Ridgetown Campus researcher has been studying the effects of cover crops in processing vegetables, an

industry with a farmgate value of \$100 million in Ontario.

"With vegetable crops, there is a longer window for cover crop growth," says van Eerd. Processing peas, for instance, are harvested in July and it's conceivable that a cover crop could be planted by month's end and grow for three months.

When she first started comparing a control – with no cover crop – to oats, winter cereal rye, radish, radish and rye

mixture, it was considered innovative to use a mixture. That was back in 2007, but now these mixtures and cover cropping in general are much more common.

How to measure soil health is a tricky question. It's not as simple as looking at only one thing. But if she could measure only one thing, it would be percentage of organic matter because it influences cation exchange capacity, water-holding capacity, water infiltration and more.

"In the scientific literature, there is no agreement on how to measure soil health," says van Eerd. She suggests that it would be easier to measure fewer factors to determine soil productivity.

That's why her research has looked at several methodologies including: Cornell University's Comprehensive Assessment of Soil Health (CASH); the Haney Test, and two soil 24-hour incubation tests available from Woods End Laboratories. They are Solvita CO₂ Burst and SLAN.

The CASH test looks at 16 different biological, chemical and physical properties of soil.

The Haney Test examines water extractable organic carbon and nitrogen to determine a

C:N ratio used to make general cover crop recommendations. This test also includes a 24-hour CO₂ soil respiration test (Solvita) to look at microbial biomass and potentially mineralizable nitrogen.

After the soil test results indicated better soil health with cover crops, the next question is how the numbers correlate with plant health. That's a project that is underway with partners including the Ontario Processing Vegetable Growers, Ontario Tomato Research Institute, Ontario Agri-Food Innovation Alliance and Grain Farmers of Ontario.

"Plants don't have antibodies," explains van Eerd. "So it's difficult to measure plant health."

Researchers will look at the lycopene levels, for example, in processing tomatoes in 2019 and again in 2020. An Agriculture and Agri-Food Canada phytochemist Dr. Rong Cao is currently looking at lycopene concentrations to see if there's a linkage to cover-cropped soils.

In the same long-term cover crop experiment, van Eerd has noted that tomato plants did not defoliate as quickly when cover crops had been planted the previous year. Without cover crops, the tomato plants shut

down in mid-August, making the crop more susceptible to disease. While the vines had fewer leaves, there was no statistical difference in total marketable fruit.

"Is that plant health? I'm not sure," says van Eerd. Fortunately, she and her team will be growing processing tomatoes again in 2020 so that she has another year to test this hypothesis.

Dr. Richard Vyn, a University of Guelph Ridgetown Campus economist, is researching the profit margins that might be possible with cover crops in the nine years of van Eerd's long-term experiment. At present, there seems to be a slight yield boost in processing vegetables under cover crop rotations.

"Several soil initiatives are underway in Ontario where we hope to show the 'pay-off' in improving soil health," says van Eerd.

For more in-depth analysis, she will be speaking at the annual meeting of the Ontario Processing Vegetable Industry Conference on January 29 in London, Ontario. Her topic: The Benefits of Cover Crops over the Long Term in a Vegetable Rotation.

An advertisement for A.M.A. Solutions. It features a photograph of a strawberry field with ripe red strawberries. The text includes the A.M.A. logo, the slogan "Solutions for your success", and the phrase "High yield. High profit." Below that, it says "Berry growing solutions by A.M.A." and provides the phone number "800.338.1136" and the website "amahort.com".

FOCUS: SOIL HEALTH & BIOSTIMULANTS

Researchers still unearthing secrets in the rhizosphere

The plant health benefits of arbuscular mycorrhizal fungi have been an evolving area of study since the late 1960s but it's only recently that the full extent of the soil health benefits have become better understood.

~ RANDY MARTIN

Valent BioSciences (VBC) officially launched its new biorational soil health initiative on November 18 at the 4th Biostimulants World Congress in Barcelona. The launch follows more than four years of strategic investment including the acquisition of Mycorrhizal Applications in 2015, research and development, and business development to expand the company's leading position in biological solutions for agriculture into the soil microbiome.

In the months leading up to the launch, VBC made several moves to fortify its commitment to this new area of business. In addition to multiple acquisitions, strategic partnerships, and licensing agreements, the company opened its new state-of-the-art Biorational Research Center (BRC) last year in northern Illinois. The new facilities reflect a buildout of VBC's research team to support soil health research and innovation. VBC also assembled a Soil Health Advisory Board to leverage knowledge from soil health experts across industry, academia and basic research.

Soil health is recognized to be important to the future health of the planet and a new frontier in agriculture. While the physical and chemical properties of soil are better understood, researchers are just beginning to understand the fundamental role microbes contribute to soil health. It is estimated that more than one billion microbes can exist in a single teaspoon of healthy soil.

Central to the VBC soil health platform is a line of products under the brand name MycoApply. These products are a scientifically selected consortium of arbuscular mycorrhizal fungi (AMF) species. AMF are soil-borne microbes that form a symbiotic relationship with about 80 per cent of all plant species. By connecting to roots and forming filamentous strands called hyphae, mycorrhizae can extend the absorption area of plant root systems.

AMF provide several benefits to the plant including

increased water and nutrient uptake and abiotic stress mitigation. Mycorrhizal hyphae also produce a sticky glycoprotein called glomalin that forms the basis of stable soil structure by improving soil aggregation which results in improved stability, water penetration and holding capacity. AMF are a cornerstone and indicator species of soil health but can be negatively impacted by soil disruption and intensive agricultural practices.

Supplemental applications of AMF in combination with cultural practices such as cover crops and no-till programs promise to improve soil health while providing shorter-term crop health and yield benefits.

"The plant health benefits of AMF have been an evolving area of study since the late 1960s," said Randy Martin, VBC global technical development specialist for soil health, "but it's only recently that the full extent of the soil health benefits have become better understood." Martin explains that AMF cannot persist in soils without a living host plant, and that tillage practices common to so many cropping systems leave soils bereft of the fungi that contribute to strong soil structure. Without AMF and glomalin, soil aggregates become unstable which reduces the soil's water holding capacity, and the availability of water and nutrients to the plant.

The company is in the midst of the single largest research program ever devoted to AMF, with ongoing trials on 30 crops in 30 countries.

At the Biostimulants World Congress, VBC demonstrated 3-D root imaging technology being co-developed with the Chris Topp Laboratory at the Donald Danforth Plant Science Center in St. Louis. Through innovative application of magnetic resonance imaging, VBC and the Topp Lab are able to monitor and observe plant root development and microbial interactions through non-destructive means for the first time in history.

For more information on VBC's soil health initiative and



Valent BioSciences officially opened its Biorational Research Center in Libertyville, Illinois in July 2018.

the benefits of mycorrhizal fungi, visit www.valentbiosciences.com/soilhealth.

Headquartered in Libertyville, Illinois, Valent BioSciences is a subsidiary of

Tokyo-based Sumitomo Chemical Company and is the worldwide leader in the development, manufacturing and commercialization of biorational products with sales

in 95 countries around the world. Valent BioSciences is an ISO 9001 Certified Company.

Source: Valent BioSciences November 18, 2019 news release

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FOCUS: SOIL HEALTH & BIOSTIMULANTS

Soils are the medium but seeds carry the pay load

KAREN DAVIDSON

Growers strive for healthy soils – fluffy and loamy and brimming with biological life. But the fact remains that soils can harbour fungi, bacteria and pests that can gnaw away at emerging seeds. Syngenta has perfected technologies to protect the genetic potential of seeds as they respond to two stimuli: gravity and light.

While Syngenta is well-known for its crop protection portfolio, it should be higher on the radar for its seed breeding business now considered as one of the top three globally. As recently as September 2019, Syngenta opened a new Seedcare Innovation Centre in the Netherlands. The location in “seed valley” is for good reason. One-third of all global trade in vegetable seeds originates here.

“In Enkhuizen we are accelerating our innovation capacity to provide growers worldwide with new, sustainable vegetables even faster,” said Syngenta CEO Erik Fyrdal. “Due to the rapidly changing climate, growers need new tools to adapt to different diseases, pests and weather conditions and the most efficient use of our valuable natural resources.”

For growers in Canada, it’s a little known story of how vegetable seeds are encased with exquisite fractions of active ingredient that can ward off soil-borne diseases during emergence.

FarMore technology, developed by Syngenta, is the platform that is used for crop-specific recipes. FarMoreFI400 Brassica, for example, contains three complementary fungicides that protect against seed and seedling diseases including Rhizoctonia, Fusarium, Pythium, general damping-off and seedling blight. It also eliminates or reduces the chance of viruses being transmitted by certain insects.

Dr. Doug Baumann, manager, formulation and application technology for Syngenta Canada, explains the importance of these advances. Depending on the vegetable species, there are different seed sizes, yet each seed coat must absorb and retain a prescribed amount of active ingredient. Syngenta’s research staff develops slurries so that a microscopic coat of product will adhere to the seed in all conditions.

“Too little slurry and you’ll find speckling on the seed,” Baumann says. “Too much, and the seed will be smeared. There’s just enough active ingredient with very little environmental impact. That’s part of the magic.”

The coatings developed for vegetable seeds are polymer-based explains Nancy Tout, head of research and development, Syngenta Canada. That’s to reduce dust when seeds go in the planter.

Vegetable seeds arrive in Canada, all ready to go through registered seed dealers. Who’s ready for 2020?



Pumpkin seeds are displayed by Joe Kuznia, Seedcare Platform Lead, at Syngenta’s Seedcare Institute, Stanton, Minnesota.

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Advancing control of potato common scab with molecular technology



EUGENIA BANKS
KEVIN BRUBACHER
MARTIN FILLION
MARY RUTH MC DONALD
AFSANEH SEDAGHATKISH

Common scab is the most important soil-borne disease of potatoes in Ontario and across Canada. Scab does not reduce yield, but the corky, superficial or pitted lesions that develop on infected tubers render the potatoes unmarketable.

The management practices recommended to control common scab have proven to be inconsistent: they reduce the incidence in some fields but not in others. Recent research has suggested that there are different species of the scab pathogen that react differently to recommended management practices. It is thought that *Streptomyces scabiei* is the most common scab bacterium in Ontario, but there may be other species. Accurate identification of the species should make it possible to ‘farm by field’, to adjust management practices to the bacteria present in the soil.

In 2019, the second and final year of this project, the biological control agent, *Pseudomonas fluorescens* LBUM223, was evaluated. This bacterium, reported to reduce common scab symptoms in research trials in Prince Edward Island, Quebec and New Brunswick

had not been evaluated in Ontario. It was found by Dr. Martin Fillion in a strawberry field in New Brunswick.

The evaluation of *Pseudomonas fluorescens* LBUM223 was conducted in a research plot embedded in a commercial sandy field located near Alliston, Ontario. The pH of the plot area is 7.1. Potatoes grown in the plot area where the trial was located were heavily and uniformly scabby in 2017. The pathogenic *Streptomyces* predominant in the plot was identified as *Streptomyces stelliscabiei*.

Although the 2019 growing season was extremely dry, the plants received at least one inch of water per week. They looked healthy all season long with no signs of stress.

A pure culture of *Pseudomonas fluorescens* LBUM223 was provided by Dr. Martin Fillion, formerly at the University of Moncton. The inoculum used in this trial at the concentration of 2.5X10⁹ CFU/mL was prepared by Afsaneh Sedaghatkish, a Ph.D. student of Dr. Mary Ruth McDonald at the University of Guelph. The inoculum was applied as follows:

1. Control: Seed tubers received 20mL of water at planting.

2. Seed Treatment: Each seed tuber was sprayed with 20mL of inoculum at planting.

2019
Common scab trial
Evaluation of *Pseudomonas fluorescens* LBUM223 as a biocontrol agent
Alliston, ON
Variety: Yukon Gold
PERCENTAGE OF INFECTED TUBERS

Treatment	REP 1	REP 2	REP 3	REP 4	REP 5	REP 6	Total	Average %
Check	100	60	15	15	10	10	210	35.00
Seed Treatment	80	50	10	10	5	8	163	27.16
Seed Treatment + 5 Drenches	60	7	10	20	2	2	101	16.83

Experimental Unit: 10ft row with 10 plants/row
Replications: 6
Stats Design: RCBD with 6 reps

2019
Common scab trial
Evaluation of *Pseudomonas fluorescens* LBUM223 as a biocontrol agent
Alliston, Ontario
Variety: Yukon Gold
PERCENTAGE OF TUBER SURFACE INFECTION

Treatment	REP 1	REP 2	REP 3	REP 4	REP 5	REP 6	Total	Average %
Check	25	15	20	5	5	5	75	12.50
Seed Treatment	10	10	5	5	3	8	41	6.83
Seed Treatment + 5 Drenches	10	5	4	5	5	3	32	5.33

Experimental Unit: 10ft row with 10 plants/row
Replications: 6
Stats Design: RCBD with 6 reps

3. Seed treatment plus five drenches during the season: Each seed piece was sprayed with 20mL of inoculum at planting. Then, at emergence (three weeks after planting), each plant was drenched with 20mL of inoculum applied at the base of the stem. The plants continued to be drenched at the base of the plant every two weeks for a total of five drenches.

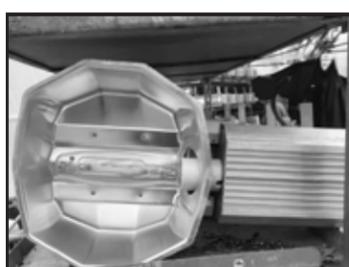
Results and conclusions. The incidence of common scab and the percentage of infection on the tuber surface were rated immediately after harvest.

The statistical analysis (ANOVA) of the data obtained was done by Dr. Mary Ruth McDonald. The ANOVA was not quite significant for the percentage of tubers with common scab lesions. However, the percent of tuber surface with scab lesions was significantly different among treatments. Tubers from treatment three, had less surface area with scab lesions. There was more variability in the seed plus drench data. Yield was taken for all the treatments, but it was not affected by any of them.

The results are promising. A

reduction on tuber surface infection is a first step on combatting common scab. What will be needed are more trials in fields where other pathogenic *Streptomyces* spp. prevail, and a practical method of applying this biocontrol agent throughout the growing season should be developed.

Eugenia Banks and Kevin Brubacher, Ontario Potato Board. Martin Fillion, formerly at the University of Moncton, Mary Ruth McDonald, University of Guelph, Afsaneh Sedaghatkish, PhD student, University of Guelph.



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Cucumber beetles: old pest, future pest?

Attractiveness to Beetles		Susceptibility to Bacterial Wilt	
Most Attractive		Most Susceptible	
Zucchini		Cucumbers	
Pumpkins		Melons	
Melons		Pumpkins	
Cucumbers		Zucchini	
Least Attractive		Watermelon	
		Least Susceptible	

ELAINE RODDY

If you grow it . . . they will come. While cucumber beetles have distinct preference for different types of cucurbit crops, the general experience is that if you grow cucurbits, you will be more than familiar with the cucumber beetle.

Since the registration of imidacloprid in-furrow treatments, and thiamethoxam seed treatment, this pest has become less of an issue for conventional cucurbit growers. Both treatments generally do a good job of controlling populations for the first four to six weeks after planting. For this reason, it is no surprise that they are popular with growers.

Cucumber beetles are a direct pest. They feed on the emerging seedling causing a loss of vigour for the young plant (Figure 1).

More importantly, they are also the primary vector of the bacterial wilt pathogen (*Erwinia tracheiphila*). Once transmitted, the bacterium quickly colonizes the vascular tissue of the host plant. They effectively plug the movement of water and nutrients into the plant causing it to wilt and die (Figure 2). Losses can range from a few plants to more than 50 per cent of the plants in a field. Once infected, there is no cure.

Infected plants typically develop dull, olive-green patches on the leaves. Leaves further down the vine become wilted and eventually the whole plant turns light brown and crispy. If the cut ends of an infected runner are placed

together and slowly drawn apart, sticky strands of bacteria are sometimes visible (especially during humid conditions, or early in the day).

With the impending changes to the imidacloprid and thiamethoxam labels, we can expect to see the removal of the field cucurbit soil (in-furrow) treatments. A review decision for the foliar insecticide cyhalothrin-lambda is also expected, which may also remove it from the options for cucumber beetle control. With no obvious replacement products in the pipeline, the changes to these labels could have a significant impact on the control of cucumber beetles in the future. A refresher in integrated pest management practices is not ill-timed.

Cucumber beetles over-winter as adults in grassy fencerows and sheltered areas. They begin to emerge as the soil temperatures reach 10°C (50°F). Emerging beetles feed on weeds, grasses and early-planted cucurbits until they breed, lay eggs and die. After the eggs hatch, the larvae feed on cucurbit roots as their only food source during juvenile development, after which they pupate and the first generation of adults emerges. Larval feeding may make the roots more susceptible to root diseases such as phytophthora or fusarium!

In Ontario, there is one generation of cucumber beetles per year; however, beetle development is often very staggered. As a result, there may be several “flushes” of beetle activity throughout

the season.

Thresholds

Spray when beetle populations exceed 0.5 to 1 beetle per plant.

Cucumber beetle populations tend to peak a week after the first beetles appear in the field. Populations change quickly so scout two to three times per week. Beetles may hide in the soil during the heat of the day; early morning scouting may be more effective. Continue scouting after an insecticide application to determine if there is a need for follow-up treatments.

Cucumber beetles tend to congregate within certain areas of a field, making them excellent candidates for spot spraying or border sprays. Cucurbits vary greatly in their susceptibility to bacterial wilt disease. They also vary in their attractiveness to beetle feeding. Planting border rows with a beetle attractive variety can act as a trap crop, keeping the beetles off the more sensitive commercial crop. Control measures may be required to keep the beetles from moving deeper into the field if populations are abundant on the trap crop.

While there are several lists available outlining the relative susceptibility of cucurbit varieties to bacterial wilt, and the relative attractiveness to cucumber beetles, see rules in the chart above.

For varieties that are more attractive, or that have a higher level of susceptibility, use the lower end of the spray threshold.



Figure 1. Cucumber beetle feeding damage on squash seedling.



Figure 2. Bacterial wilt infected cucumber plant.



Figure 3. Cucumber beetle and feeding damage on mature pumpkin rind

Cultural control methods

Crop rotation will not have a big impact on this pest, as they are very mobile. Reduced tillage or rye mulches may discourage the beetles from laying eggs in the crop, but they are not likely to have a big impact on the movement of overwintering adults into a field.

Moving to a later planting date may help to avoid the first flush of overwintering beetles on the seedling crop, if it fits with the crop’s key markets.

Floating row covers are an option to exclude the pest from the crop. However, they must be removed prior to flowering. Once flowers are present in the field the beetles prefer to feed on the blossoms and the pollen. Unless the populations are very high, this is less likely to cause yield losses.

Even after the peak risk of bacterial wilt transmission has passed, it is important to keep

an eye on the developing fruit, especially as the first generation of adults emerge. They can cause significant damage by feeding on the rinds (Figure 3).

As the re-evaluation of the primary insecticides used to control this pest fall into place, there is a great need for good, effective replacement products. Pollinator health is a key concern for everyone, but especially for crops that rely upon both native pollinators and honey bees for pollination services. The ideal product would be pollinator-friendly, while still maintaining good residual control of a pest that can infiltrate a crop over several weeks. It is actually a lot to ask for! Let’s hope that a good solution is forth coming, and soon.

Elaine Roddy is an OMAFRA vegetable crop specialist.

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SAFE FOOD FOR CANADIANS REGULATIONS

Fresh fruits or vegetables businesses subject to new federal requirements in January

LYZETTE LAMONDIN

Businesses working in the fresh fruits or vegetables sector got their first taste of the Safe Food for Canadians Regulations (SFCR) when the regulations began coming into force on January 15, 2019.

On that date, new licensing requirements began to apply for most businesses that import or prepare fresh fruits or vegetables for export or interprovincial trade. Those businesses were required to obtain a Safe Food for Canadians (SFC) licence from the Canadian Food Inspection Agency (CFIA). Most businesses except growers and harvesters also had to meet traceability requirements.

New requirements are set to come into force on January 15, 2020, when the fresh fruits or vegetables sector will come under the SFCR's provisions for preventive controls and preventive control plans. As of that date, growers and harvesters will join with most other fresh fruits or vegetables businesses and become subject to the traceability requirements. In addition, lot code labelling of consumer prepackaged fresh fruits and vegetables will come into force for all fresh fruits or vegetables businesses.

Since some of the SFCR's requirements were new to fresh fruits or vegetables, businesses in the sector have had extra time to comply.

The SFCR and FFV

Fresh fruits or vegetables are defined in the SFCR as "any fresh plant or any fresh edible fungus, or any part of such a plant or fungus, that is a food." This includes any fresh herbs, fruits, vegetables, mushrooms or sprouts, and they can be wild or cultivated.

CFIA worked with the Canadian Produce Marketing Association, the Canadian Horticultural Council and CanadaGAP to gather feedback for developing provisions in the regulations that relate to the fresh fruits or vegetables sector.

Fresh fruits or vegetables businesses are encouraged to familiarize themselves with the requirements as soon as possible to ensure compliance by January 15, 2020.

Importer licensing

As of January 15, 2019, importers of fresh fruits or vegetables were required to obtain an SFC licence from CFIA. As of January 15, 2020, importers who currently require an SFC licence and do not have one may experience delays or refusal of entry of their shipment at the border, and may be subject to other SFCR enforcement actions.

Preventive controls

Licensed fresh fruit or vegetable businesses, as well as growers and harvesters of fresh fruit or vegetables for export or interprovincial trade, will need

to have preventive controls in place. The controls would aim to address food safety hazards, such as microbiological contamination, that may be introduced during the growing and harvesting of fresh fruits or vegetables, and help prevent contaminated and non-compliant food from entering the marketplace.

Preventive control plans

The SFCR introduce requirements for most food businesses to maintain a preventive control plan (PCP). A PCP is a written document that demonstrates how risks to food are identified and controlled.

Fresh fruits or vegetables businesses with gross annual food sales of more than \$100,000 will be required to have a written PCP. This requirement also applies to businesses that grow or harvest fresh fruits or vegetables for interprovincial trade or export and that have gross annual food sales of more than \$100,000. In addition, importers of fresh fruits or vegetables will need to ensure that their PCP addresses the preventive controls for growing and harvesting done by their foreign supplier.

If a business has implemented CanadaGAP or a Hazard Analysis Critical Control Point (HACCP) system, it is well positioned to show compliance with PCP requirements relating to food safety. However, businesses should review their food safety systems to make sure that all of the PCP requirements, including those for grade and



labelling, are addressed.

Traceability

The SFCR require food businesses to track the movement of food one step forward and one step back in the supply chain. These traceability requirements come into force on January 15, 2020, for businesses that grow or harvest fresh fruits or vegetables.

To meet the requirements, businesses will need to prepare and keep traceability documents and ensure that a label containing the required traceability information is applied, attached or accompanies the fresh fruits or vegetables when provided to another person or business.

The lot code labelling requirements for consumer prepackaged fresh fruits or vegetables will come into force on January 15, 2020. CFIA is currently updating its guidance for enforcing lot code labelling for the fresh fruits or vegetables sector. They play an important role in traceability, especially

during food safety investigations or outbreaks.

Examples of lot codes include production date, best before date, establishment number or SFC licence number. Furthermore, for fresh fruits or vegetables, the lot code may also be the harvest date, grower identification number, growing region or any other code that may be used for traceability purposes.

More information

CFIA's website offers an SFCR Toolkit for food businesses. It provides information on licensing, preventive controls and traceability, including a Fact Sheet for the fresh fruits or vegetables sector.

Lyzette Lamondin is the executive director of Food Safety and Consumer Protection at the CFIA. She led the initial development, drafting, and engagement for the SFCR from 2013 to 2015. She currently oversees the implementation of the new regulations.

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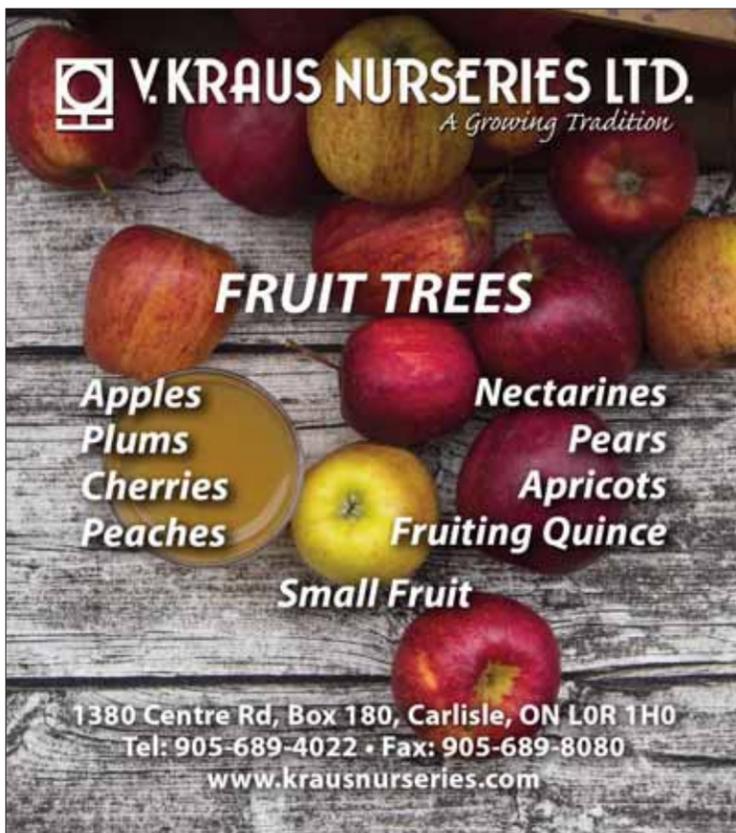
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Regulation of crop protection products in Canada is an area of shared jurisdiction. The federal government's Pest Management Regulatory Agency (PMRA) is responsible for the registration and re-evaluation process for assessing potential risks to human health and the environment. Provincial governments are responsible for regulation of the sale, use, transportation, storage, and disposal of such products. Licensing and training also fall under the purview of the provinces. Across Canada, the requirements for use and administration of crop protection products are handled quite differently as a result.

All provinces aside from Ontario rely on a federal classification system based on the PMRA-approved product label to apply their provincial regulations. The federal classification system reflects the intended use type and hazard rating of a product.

Canada's Pest Control Products Act assigns products into four classes: domestic,

commercial, restricted, or manufacturing. Domestic products are intended for home use, are packaged in smaller containers, and can be used safely with limited or no personal protective equipment (PPE).

Commercial class products are designed for use in agriculture or other commercial activities, may contain more concentrated formulations or a larger container size, and require additional PPE for their use. Restricted class products are deemed to be more hazardous by the federal Minister of Health and have additional limitations over commercial products.

Manufacturing class products are intended for use in making other products and not directly used in crop protection. These classes form the basis for provincial regulation across Canada – except in Ontario.

Before a federally registered crop protection product can be sold or used in Ontario, currently, it must be classified under the provincial Pesticides Act. The provincial regulatory system is currently based on a separate Ontario-specific classification process. A company wishing to register a new product in Ontario must first apply to have their product classified. This does not occur in any other province. Secondly, the Ontario classification system takes the four federal classes and creates a complex 12-class system. Thirdly, the process requires an unusual step of requiring an outside committee – the Ontario Pesticide Advisory Committee (OPAC) – to provide the initial classification

The proposed amendments to the Pesticide Regulation include the elimination of Ontario's duplicate and inefficient classification system.



recommendation for new products. Finally, any product containing a new active ingredient then needs to be posted to the Environmental Registry of Ontario for a minimum of 30 days of public consultation prior to final approval.

Ontario's extended process ultimately has no impact whatsoever on human health or the environmental safety of any product. This was already determined by PMRA, which prescribed any mitigation requirements, PPE, and approved use conditions during their rigorous review – with their own public consultation period. The consequences of Ontario's inefficient system are slow integration of new federally registered products within the provincial regulations. Growers in Ontario have been unable to access new crop protection products already approved by PMRA because the provincial classification process is not completed. When this delay happens just before or

during the growing season, growers can miss out on an entire year of use that would be available in any other province. If the goal of the *Pesticides Act* is to protect human health and the environment, what is this extraneous classification process accomplishing? Nothing.

Fortunately, Ontario Bill 132, Better for People, Smarter for Business Act, 2019 introduced in the legislature when the government resumed this fall on October 28, included important amendments in the regulation of crop protection products. The proposed amendments to the Pesticide Regulation include the elimination of Ontario's duplicate and inefficient classification system. Ontario would follow all other provinces and adopt the federal classifications. No application to approve a product in Ontario would be required, it would simply automatically be processed following along the federal system. Finally, no separate second public consultation period for new

active ingredients would be required. The public and government of Ontario still have the opportunity to comment during PMRA's review process.

The Bill was carried on its second reading at Queen's Park on November 7th and has been referred to Standing Committee on General Government. If given Royal Assent, it would be expected these changes will occur sometime in 2020.

Red tape policies without any particular reason for their existence are often few and far between. The adoption of the federal classifications will absolutely not change how crop protection products get used in the field or greenhouse. This is simply bureaucratic process about when these products can get to the grower. The proposed streamlining enables timely access for farmers to the newest tools without compromising on protection of human health or the environment. A true win-win.

Winning at weed control: a new podcast for tree fruit growers

Michelle Cortens, Nova Scotia's tree fruit specialist released a new podcast on November 20 with guest Kristen Obeid, Ontario's horticultural weed management specialist. The interview starts with a definition of the critical weed-free period. For new orchards, it's May and June. For established orchards, it's between bud break and 30 days post-bloom.

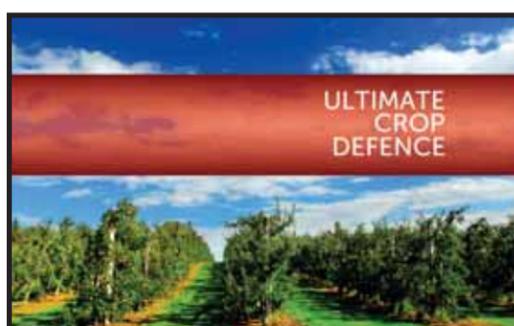
Obeid offers an easy-to-understand explanation of three different modes of action for herbicides. They are through translocation, contact or residual. For busy

orchard growers, residual or soil-applied herbicides can be used in the fall to help alleviate stress in the busy spring period. However, that's a strategy that may not work in some parts of Canada this fall.

"We're already under a foot of snow in southwestern Ontario," said Obeid from her base in Harrow.

The interview continues with several subjects including herbicide resistance.

Tune in to the monthly Orchard Outlook Podcast here: www.perennia.ca/learning/podcast/



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CROP PROTECTION CANADA

CROP PROTECTION

Delegate insecticide label expanded on grapes, fruiting vegetables



JIM CHAPUT

The Pest Management Regulatory Agency (PMRA) recently announced the approval of a minor use label expansion registration for Delegate insecticide for control of spotted wing drosophila (SWD) on grapes and control of corn borer, potato beetle and SWD on fruiting vegetables, crop group 8-09* in Canada. Delegate insecticide was already labeled for use on a wide variety of crops in Canada for control of several insects. The grape minor use project was submitted by Agriculture & Agri-Food Canada, Pest Management Centre (AAFC-PMC) and the fruiting vegetable minor use project was submitted by Ontario as a result of minor use priorities established by growers and extension personnel.

The following is provided as an abbreviated, general outline only. Users should be making pest management decisions within a robust integrated pest

management program and should consult the complete label before using Delegate Insecticide.

Delegate insecticide is toxic to bees exposed to direct treatment, drift or residues on blooming plants. Do not apply this product or allow it to drift to blooming plants if bees are visiting the treatment area. Delegate insecticide is also toxic to small wild mammals and certain beneficial insects. Do not apply this product or allow drift to other crops or non-target areas. Do not contaminate off-target areas or aquatic habitats when spraying or when cleaning and rinsing spray equipment or containers. Follow all other precautions, restrictions and directions for use on the Delegate insecticide label carefully.

For a copy of the new minor use labels contact your local crop specialist, regional supply outlet or visit the PMRA label site.

Jim Chaput, OMAFRA, minor use coordinator, November 20, 2019

Corteva to expand global spinosyns capacity

Corteva, Inc. has approved a \$145 million capital investment in the company's Midland, Michigan manufacturing facility to expand global capacity insect management technology for the natural products market.

The capacity expansion project was initiated in response to consistently high demand for Corteva's spinosyns products, including spinetoram and spinosad. Staged to come online over the next few years, the new production will enable Corteva to increase its existing capacity by 30 per cent – addressing the needs of customers in the more than 100 countries into which these solutions are sold around the world for use on more than 100 different crops.

Produced through a proprietary natural fermentation process, the spinosyns products

are naturally derived solutions that provide farmers with effective and natural insect-control options.

Both spinosad and spinetoram have been awarded the U.S. EPA Green Chemistry Challenge Award – which recognizes novel chemistry solutions that incorporate the principles of green chemistry into chemical design, manufacture and use.

The global insecticide market is estimated at \$14.5 billion and is expected to grow at a three per cent compound annual growth rate. Corteva is a leader in the insecticide market and has the number one position in naturally derived insecticides.

Source: Corteva October 31, 2019 news release

Crop(s)	Target	Rate (grams per hectare)	Application Information	PHI (days)
Fruiting vegetables, crop group 8-09*	European corn borer, Colorado potato beetle, Spotted wing drosophila	CPB: 160 – 240 ECB: 160 SWD: 280	CPB: Time the application for egg hatch or small larvae. Use the higher rate for higher pest pressure or for larger larvae. A repeat application in 7 to 14 days may be necessary depending on the pest pressure. ECB: Monitor egg laying and egg hatch to determine application timing. Time the application to coincide with peak egg hatch. A repeat application in 7 to 14 days may be necessary depending on the pest pressure. SWD: Timing of applications should be based on the presence of adult flies as determined by local monitoring. A repeat application in 7 to 14 days may be necessary depending on the pest pressure. Apply a maximum of three applications per year.	1
Grapes	Spotted wing drosophila	350	Applications should be based on the presence of adult flies, as determined by local monitoring. Maximum of three applications per year with a re-treatment interval of 5 days	7

* African Eggplant, Bush tomato, Cocona, Currant tomato, Eggplant, Garden huckleberry, Goji berry, Groundcherry, Martynia, Naranjilla, Okra, Pea Eggplant, Pepino, Pepper, bell, Pepper, nonball, Roselle, Scarlet Eggplant, Sunberry, Tomatillo, Tomato, Tree tomato. Includes cultivars, varieties and/or hybrids of these.

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THE ECO-CONSCIOUS CONSUMER

Food trends for 2020

BRUCE KELLY

When it comes to food, consumer preferences and choices have changed greatly over the last decade. We have seen the rise in popularity of “superfoods” such as kale and acai, an emergence of the chicken sandwich as a fast food staple, the commercial launch of plant-based meat alternatives in the mainstream marketplace, and far too much discussion about the relationship between “avocado toast,” millennials and home ownership.

Urban trend spotters are already looking ahead to 2020 and beyond at what’s next when it comes to food trends, and we need to be prepared for how that might affect farmers and food producers.

Pressures from the conscious consumer will continue to impact food production systems. Bringing a product that is safe, affordable and tastes great to market may no longer be good enough. Products are now under scrutiny for their perceived sustainability, environmental impact, carbon footprint, animal welfare standards and health benefit or drawback. Consumers are no longer just looking for their next meal; they’re looking for that good feeling they get from their belief

that they’re doing the right thing.

Driven by government policy and public perception, food retailers and suppliers are looking for new and innovative ways to get product from field to table in a more eco-conscious manner, but without sacrificing the shelf life and integrity of their product. This means the adoption of recyclable, biodegradable and reusable packaging and the elimination of single-use plastics from the value chain. Carrots in plastic bags may soon be replaced with a recyclable mesh. Consumers may not fully understand how modern packaging extends the shelf life of some products (i.e. greenhouse cucumbers), and therefore reduces the amount of food wasted in the home. While consumers demand more eco-conscious packaging, it is also important to address the trade-offs that may come with this shift. As a result, consumers may need to be retrained in product use, storage, and longevity.

The nature of how food is purchased is more diverse than ever before. For the last half of the century, spending on meals prepared outside the home has continued to exceed spending on home-cooked meals. The array of prepared food options grows continually; semi and prepared meals at retailers, mobile



applications such as Uber Eats and Skip The Dishes and subscriptions to ready-to-cook meal services such as HelloFresh continue to gain popularity. Grocery shopping can now be accomplished online or using a mobile app, all without leaving your home or car. It is common to find shoppers that visit a grocery store every day for fresh produce, or those that may not see the inside of a full-sized grocery store at any time in a month.

It’s undeniable that big shifts are occurring in the food sector and will likely continue well into the future. Consumers are placing more importance on sustainability, safety, convenience, health or happiness in their food choices than in the past, and retailers, processors, and farmers are taking notice.

Our food supply is full of more choices than ever, and as food producers, it’s important that consumers know the decisions made on our farms are rooted in the same values.

Bruce Kelly is program manager, Farm & Food Care Ontario.



The Nordic diet is gaining recognition says Leslie Beck, registered dietitian and columnist for the Globe and Mail in a November 11, 2019 column. Should you eat like a Viking?

The Nordic diet, with roots dating back to the Viking age, was revitalized in 2004 by a group of researchers, dietitians and chefs in an effort to promote nutritious seasonal Nordic foods to people living in Denmark, Finland, Iceland, Norway and Sweden.

Like the Mediterranean diet, the Nordic diet is predominantly plant-based with plenty of vegetables, fruits, whole grains and pulses, moderate amounts of fish, poultry and eggs, small amounts of dairy and limited red meat. It emphasizes whole and minimally processed foods that are sourced locally, which reduces energy consumption and minimizes food waste. The longer foods spend in storage and transit, the greater the chance of spoilage.

Here is what is central to a Nordic diet: cabbage (cruciferous vegetables), potatoes, berries and apples. These are eaten along with whole grain rye breads and omega-rich fish such as sardines and herring. Photos by Glenn Lawson.