

BUSINESS ENVIRONMENT

Cannabis clouds competitiveness of greenhouse vegetable sector



Canada's greenhouse vegetable sector is feeling the heat from energy prices to carbon taxes to cannabis conversions. But Duffy Kniaziew, owner, Orangeline Farms, is sticking with what he knows: peppers. While he feels there's much he can't control, he's developed several strategies to remain competitive. Exclusion insect netting, shown here, is the accordion-style material that fills the roof vent openings to keep his Leamington greenhouses as clean as possible from pests. Photos by Glenn Lowson.

KAREN DAVIDSON

Duffy Kniaziew is on a rocky greenhouse high. He's invested more than a million dollars in rooftop netting to exclude insects from his climate-controlled greenhouses. But looking ahead, he sees more threatening business risk on the horizon. Like the other 205 greenhouse operators in Ontario, the Leamington grower is facing new headwinds on April 1 – a federally imposed carbon tax.

"Growers are scrambling to understand the new system and rules, along with the multiple exemption forms that must be submitted," says Kniaziew, referring to the Canada Revenue Agency ruling that Ontario greenhouse growers will be exempt from 80 per cent of the

carbon tax. It's a nod to Ontario growers who argued successfully that they should be on equal footing with Alberta and British Columbia operators.

In the space of 18 short months, Ontario has pivoted from one set of rules under cap-and-trade to a new energy tax being collected by the gas utilities. With energy costs comprising up to 60 per cent of greenhouse operating expenses, it's no small worry to the sector.

According to Joe Sbrocchi, general manager for the Ontario Greenhouse Vegetable Growers, in the not-too-distant future, the major issue will become access to hydro, water and natural gas. He points to the rapidly developing Essex-Windsor area – the epicentre for Ontario's 3060 greenhouse vegetable acres – which will have significantly higher electricity demands

in five to seven years.

"Our colleagues in the cannabis business use a lot of power," explains Sbrocchi. "At this rate of economic development, we'll need more service lines."

The cannabis industry has disrupted the greenhouse vegetable sector in ways that are only now being clearly understood. Sbrocchi's 2018 estimate for 9.7 per cent growth in Ontario greenhouse vegetable acreage tumbled to just two per cent by year's end. As in British Columbia, some existing greenhouses were being retrofitted for cannabis while other purpose-built cannabis facilities were coming on stream. Increased demand for land, building permits and suppliers accounted for higher costs and many delays, but another spoiler was added to the mix: the American-imposed

steel tariffs.

"The building cycle for all greenhouses, including vegetables, has stretched from 24 months to 36 months and more," says Sbrocchi. "And the cost of building has gone up an estimated 20 per cent! All of this poses worrisome obstacles for future growth at a time when we will need to provide more food to the world."

Kniaziew confirms that serviced land now commands \$25,000 to \$40,000 per acre.

"There's no question that the per-acre cost for new construction has reached unprecedented levels and continues to increase," says Kniaziew, "but the price of vegetables has not kept pace."

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AT PRESS TIME...

\$4.2M announced for Canadian fruit growers

Canada's new agriculture minister Marie-Claude Bibeau announced a \$4.2M investment under the Canadian Agricultural Partnership (CAP), AgriScience Program to the British Columbia Fruit Growers' Association, during her stop March 11, 2019 in Kelowna, B.C.

The funding will support the association in developing successful Canadian-bred apple and sweet cherry cultivars that enhance the profitability of the nation's tree fruit sector.

The project, which builds on research funding received under previous agricultural programs, consists of 10 activities, with research and testing taking place in British Columbia, Ontario, Quebec and Nova Scotia.

Erin Wallich, research and development manager for Summerland Varieties Corporation, is the project administrator. She noted that Dr. Amritpal Singh will be collaborating with Dr. Daryl Somers at Vineland Research and Innovation Centre to modernize breeding and selection techniques. For example, they will be able to determine if an apple tree will produce crisp fruit before it is even old enough to flower. Other researchers include: Dr. Peter Toivonen, Dr. Masoumeh Bejeia, Dr. Hao Xu and Dr. Paul Wiersma.

Source: Agriculture and Agri-Food



Ag Minister Marie-Claude Bibeau meets with Sukhpaul Bal, president of the BC Cherry Association.

Canada, March 11, 2019 news release.

Advisory group named

Ernie Hardeman, Ontario's agriculture and agri-food minister, has convened an advisory group to look at the competitiveness of the sector. The scope also includes providing "input on crucial future decisions such as changes to the Ontario Food Terminal network for the next five, 10 and 50 years."

According to OMAFRA's communications staff, the minister's advisory group is comprised of a variety of volunteers from across the province – from Niagara, northern, eastern, southwestern and central Ontario.

The volunteers are: R.J. Taylor, Jack Chaffe, Clarence Nywening, Kirk Kemp (Algoma

Orchards representing apples); Tonya Haverkamp, Michelle Saunders, Brandon Postuma, Chris Van de Laar (2018 Grape King); Martin Dinnissen, Kim Sytsma, Jennifer Innis, Robert Mitchell, Mark Brock, Pat Jilesen and Rosemary MacLellan.

There are farmers from the supply-managed sector, livestock, greenhouse, grain and oilseeds sectors, as well as people with experience in aquaculture, the food processing industry, agribusiness and the rural municipal sector. From the fruit and vegetable sector, there are people who grow grapes, tomatoes and apples. The volunteers come from a cross-section of ages with different levels of involvement in agricultural organizations.

If the public wishes to share information with the Minister's Advisory Group, they can do so at MinistersAdvisoryGroupOMAFRA@ontario.ca.

NEWSMAKERS

Congratulations to the Ontario Fruit and Vegetable Growers' Association 2019 board of directors, elected at the annual general meeting on February 19. Front row: L-R: **Jan VanderHout**, past-chair; **Bill George**, chair; **Shawn Brenn**.

Back row: L-R: **Fred Meyers**; **Kenny Forth**; **Carl Atkinson**; **Alison Robertson**, executive director; **Norm Charbonneau**; **Mike Chromczak**; **Mark Wales**; **Ken Forth**; **Jason Verkaik**; **Charles Stevens**, vice-chair.



On March 1, Quebec MP **Marie-Claude Bibeau** (Compton-Stanstead) was appointed federal agriculture and agri-food minister. She replaces PEI MP **Lawrence MacAulay** who moved to the veterans affairs ministry.

Hats off to **Ken Porteous**, apple and tender fruit grower who will be inducted into the Ontario Agricultural Hall of Fame on June 9, 2019 along with four others. They are **Marie Pick**, **John Maaskant**, **Wilfred Schneller** and **Peter Twynstra**. To qualify for this prestigious recognition, inductees must have demonstrated visionary leadership, innovation, and entrepreneurship in the advancement of agriculture in Ontario. Porteous is a president of Lingwood farms, co-founder of Norfolk Cherry Company and is a past-chair of both the Ontario Fruit and Vegetable Growers' Association (1991) and the Canadian Horticultural Council (2007).



Apple grower **Lisa Jenereaux**, president, Spurr Brothers, Melvern Square, Nova Scotia was elected president of the International Fruit Tree Association at its February 2019 conference in Rochester, New York. The 12-member board also includes two other Canadians: **Chris Hedges**, Ontario and **Hank Markgraf**, British Columbia.

The Pest Management Regulatory Agency (PMRA) is looking for a new head of its Agricultural Stakeholder Engagement Unit which was set up in July 2018. **Terri Stewart**, a PMRA veteran of 16 years, has left for CropLife Canada. She's now director, science and regulatory affairs for chemistry.

The Ontario Fruit and Vegetable Growers' Association welcomed three young farmers to the February annual general meeting. They were: **Rob Alexander**, Nature's Bounty; **Matthew Somerville**, Two Blokes Ciders; **Tim Horlings**, Holland Marsh Growers' Association.

Berry Growers of Ontario elected new directors at its recent annual general meeting. They include: **Fiona McLean**, Del Fresco Pure, Kingsville (one-year term); **Matt Tigchelaar**, Tigchelaar Berry Farm, Vineland (three-year term); **David Philipps**, Avonmore Berry Farm, Avonmore (three-year term); **Nick Vranckx**, Blueberry Hill Estates, St Williams (three-year term). The remaining directors are: **Kevin Howe**, Alymer; **Morris Gervais**, Springwater; **Steve Kustermans**, Mount Brydges; **Dusty Zamecnik**, Langton; **Tom Heeman**, Thorndale is chair; **Norm Charbonneau**, Port Elgin.

The Canadian Federation of Agriculture has announced new leadership with Prince Edward Islander **Mary Robinson** taking the helm. She is joined by first vice-president **Keith Currie** from Ontario and second vice-president **Chris van den Huevel** from Nova Scotia.

Vineland Research and Innovation Centre has announced its new CEO. **Dr. Ian Potter** will join the organization effective April 1. He has served in senior leadership roles with both the National Research Council Canada and Alberta Innovates – Technology Futures throughout his 25-year career. He also brings significant operating expertise and commercialization know-how to Vineland.

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COVER STORY

Cannabis clouds competitiveness of greenhouse vegetable sector



The reality is that natural gas is a Canadian resource but we have a massive reliance on an old pipeline.

There’s no question that the per-acre cost for new construction has reached unprecedented levels and continues to increase, but the price of vegetables has not kept pace.



Continued from page 1

Although dozens of acres converted from vegetables to cannabis in British Columbia, all greenhouses suffered from volatile energy prices. A little known fact nationally is that in October 2018, a large explosion on the Prince George natural gas pipeline severely reduced British Columbian supplies.

Most of the B.C. growers sunk anywhere from 25 to 50 per cent of their annual energy budget in the month of February alone, a month when new plantings must be coddled for the best start in life. Delaying planting offered no cost relief since Metro Vancouver and its nearby greenhouses went on to experience the coldest February on record, an average of 0.4°C compared to the average of 4.9°C.

Growers were squeezed as normal prices of \$3 per gigajoule soared to \$80 to \$100 per gigajoule. The crisis spiked with spot prices at \$200 per gigajoule in early March. Imagine watching \$90,000 go up in smoke in one day!

“What business model can sustain these increases?” asks Ruben Houweling, general manager, Houweling’s Nursery Ltd., Delta. “The reality is that natural gas is a Canadian resource but we have a massive reliance on an old pipeline.”

As both a tomato grower and propagator with 50 acres in Delta, Houweling is trying to weather these structural changes in the industry.

“In just 18 months, 105 acres of vegetables have been

converted to cannabis in British Columbia,” he says. “The change has been very rapid.”

It used to be the case that the most B.C. acreage was in peppers, followed by tomatoes and cucumbers. Cannabis acreage has now surpassed cucumbers, says Houweling, predicting the leisure and medicinal product will be in second place behind peppers by 2020.

“The biggest change for us is that we are retrofitting a quarter of our propagation acres to cannabis seedlings,” says Houweling. “This is to serve the new cannabis clientele.”

The boom in cannabis has captured business-press interest with headlines of “Canadian marijuana stocks ripe for the picking” and “Is pot the right pick for your portfolio?” Bets are that investors are now talking about cannabis rather than cucumbers over their cocktails. And that’s another big risk for the billion-dollar vegetable greenhouse business in Canada. To continue expansion, there must be access to capital at a reasonable cost.

For Ontario growers such as Duffy Kniaziew, the irony couldn’t be more stark. As cannabis has been legalized, he must maintain rigorous production protocols for peppers and strawberries marketed under the Zing! Healthy Foods brand.

This comes under clouds of a perfect storm: higher energy, labour and expansion costs.

Why grow food when you can grow weed? It’s a topsy-turvy world to be sure as greenhouse vegetable growers clear their heads for the competitiveness challenges ahead.



Ruben Houweling is retrofitting a quarter of his propagation facilities at Delta, British Columbia to service cannabis growers.



Retailers welcome colourful peppers grown under the Zing! Healthy Foods brand.

Greenhouse vegetable acreage in Canada

Greenhouse Vegetables		
Province	2018	2019 estimates
British Columbia	750	810
Alberta	170	170
Ontario	3060	3125
Quebec	300	300
Atlantic	15	15
Total	4,295	4,420

Source: Greenhouse vegetable acreage as reported at Canadian Horticultural Council Greenhouse Committee, March 7, 2019.

The Grower goes “Behind the Scenes” of this cover story and speaks with Duffy Kniaziew, Orangelina Farms, Leamington, Ontario about the business environment in 2019. To listen, visit www.thegrower.org/podcasts



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CROSS COUNTRY DIGEST

BRITISH COLUMBIA

The Japanese market beckons BC cherries



MYRNA STARK LEADER

Growing world market access continues to be on the minds of BC cherry growers as was evident at their February 21 annual general meeting in Kelowna.

2019 will see full access to Japan after some 25 years of work, adding to existing markets in China and California. Sukhpaul Bal, president, says he is pleased with how the association's Market Access Committee has been working with the Canadian Food Inspection Agency (CFIA), and congratulated the two volunteer farms (Northern Fruits and Coral Beach Farms) which opened their operations to Japanese inspectors in 2018, to help get final approval for the Japanese

market.

"There's some specific things that the Japanese are looking for like how we wrap and tape pallets, which is different than what we normally do, so we were able to show them the process," said Bal.

Bal did not speculate on 2019 volumes for shipments to China, Japan and Thailand, but estimates only a half dozen packing houses will apply for Japanese trade.

"I'm hoping there's a good uptake in Japan, but I think it's going to be a slower market to develop," says Bal explaining that Canadian cherries were getting to China through grey access, and then in 2014, to some cities so there was an existing relationship with Canadian product.

"In Japan we are starting from square one," he says.



2019 BC Cherry Association Board of Directors (L to R): Beth Cavers, program administrator, Lindsay Hainstock, director (BC Tree Fruits Appointee), Ravi Dhaliwal, director, Harman Bahniwal, director, Sukhpaul Bal, president, Graem Nelson, secretary, Neal Vander Helm, director, Dr. David H. Geen, director, Erin Carlson, treasurer. Not pictured: David A. Geen, vice president, Daniel Trotter, director, André Bailey, director. Photo by Myrna Stark Leader.

The association's next priority is South Korea. Bal is optimistic the market will open up in the next couple of seasons. Talks are ongoing between the CFIA and that country on issues such as pest risk management.

"South Korea could be a similar market to China taking lots of volume," says Bal. "We think this because the Americans are already sending a lot of fruit to South Korea and it's a good market for them. So, we could come in on the late season when volumes decrease on American fruit – like middle to late August."

India is also getting

attention. Although there's Canadian access to India today, the association has asked CFIA to focus on a possible reduction in the 10-day cold storage parameters set by India before they'll accept shipments.

"We see this as a growing market given their growing middle class," Bal says adding there may be a small delegation going to India this year to help demonstrate Canada's commitment to quality cherries.

Most of the cherries grown in Canada (95%) are in British Columbia, primarily the Okanagan, Similkameen and Creston Valleys, according to BC Cherry Association's new website which was launched in 2018.

"Production in the valley will be increasing and the current markets we have, I think, we can satisfy those markets but you always have to look forward and the more markets we can access, the better for our growers," says Bal.

Board director Dr. David Geen told the crowd it's vital for the association and growers to keep focusing on trade programs. "The stronger our programs are, the higher our assurance that we will continue to have access to these markets because we know that markets aren't assured."

To ensure trade, on-going surveillance for insects and disease is required. 2020 marks the renegotiation of the agreement between Canada and the People's Republic of China so grower surveillance and management of cherry pests, potential disease and reporting is vital.

"China is a huge export market so we need our growers to be following the procedures and protocols to show both our government and the foreign government that we are doing the right thing, and that's

what's sometimes a challenge to get across," says Geen. "How important checking a fruit fly trap is directly relates to accessing the cherry market."

In 2018, 5,311 traps were examined representing 119 growers (60 BC Tree Fruits and 59 independent growers).

"There are some orchards reporting no *Rhagoletis indifferens* (western cherry fruit fly) but I'm telling people not to be worried if you find signs . . . we need to ensure the governments that we're doing our due diligence. Don't panic if you've found something on a trap," Bal stressed. "It's positive in that we can show that they are on the trap but when we test the fruit, there's no larvae. Although we are doing well, there's still some room for surveillance improvement."

In general, Bal sees potential and opportunities for growers and farmers across the country to test the export market more to gauge demand for their products. Cherry growers have been in the lead in finding customers who value the high-quality Canadian product, and have a model others could follow - looking at the markets first, seeing what those markets are willing to pay and then figuring out how to make the product work.

"My family has been growing this product for generations, so rather than just continue doing that too, it's about looking at a more global sense. Maybe that product has a higher value somewhere else and could bring the farm some better returns. Visiting trade shows in Berlin and Hong Kong has really opened my eyes to how global the fruit and vegetable markets are. There are people looking for these products."



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CROSS COUNTRY DIGEST

QUEBEC

Award to Quebec apple grower

The Apple Growers of Quebec honoured Mario Bourdeau with its Louis-Hébert Award of Merit at its January annual general meeting. The citation mentioned his 20 years of contributions to advancing the Quebec industry and his mentorship.

Photo right: Marcel Groleau, président général Union des Producteurs Agricole; Mario Bourdeau (award winner), François Jobin, N. M. Bartlett Inc; and Stéphanie Levasseur, president.



NOVA SCOTIA

New research winery opens in Kentville, NS

The opening of a new \$1.8 million research winery in Kentville, Nova Scotia will generate knowledge for growers and vintners about locally grown grape varieties, growing conditions and best vineyard practices, to support expansion of the wine industry in Nova Scotia and the unique qualities of its wines.

The official opening was February 28, one day before the federal agriculture minister Lawrence MacAulay was moved to the ministry of veterans affairs.

Researchers will also study wine-making techniques, working with commercial wineries to evaluate the impact of fermentation and temperatures on the quality of wine. Research will include identification and use of natural yeasts found in Nova Scotia that contribute to characteristics of taste and aroma in the province's wine profiles.

In 2018, the province's 23 licensed wineries produced 1.5 million litres of wine valued at more than \$23 million, and employed more than 700 people. Approximately 1,200 acres (485 hectares) of vineyards were under production that year.

In addition to the 360-square-metre winery, the wine research program includes eight scientists, a vineyard and an on-going project to map the grape varieties, growing techniques and conditions of every vineyard in Nova Scotia. Taste sensory panels will be part of the winery, with sommeliers and local wine makers likely to be part of the panels to assess the flavour characteristics of the experimental wine.

Source: Agriculture and Agri-Food Canada



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CANADIAN HORTICULTURAL COUNCIL 97TH ANNUAL GENERAL MEETING

The Doug Connery Award – a salute to leadership

KAREN DAVIDSON

Murray Porteous, a past-president of the Canadian Horticultural Council (CHC) was honoured at the 97th annual general meeting in Halifax with the Doug Connery Award. Since 2012, this award has been given in the name of Manitoba vegetable grower Doug Connery who made giant contributions to the labour file before an untimely passing.

In the same vein, Porteous was honoured for his unwavering commitment to the horticultural industry. He has made his mark near Simcoe, Ontario growing asparagus, apples, pears and sour cherries under the name of Lingwood Farms Ltd.

Along with Schuyler Farms Ltd., Lingwood Farms owns and operates the Norfolk Cherry Company Ltd. growing

and packing sour cherries. Porteous was an early adopter of high-density apple orchards and was one of the first to adopt variable rate fertilizer applications. He saw the benefits of Harvista, a new pre-harvest technology for apples, with on-farm demonstrations.

His many chairmanships – including Agricorp, Ontario Fruit and Vegetable Growers' Association, Asparagus Farmers of Ontario, Ontario Tender Fruit Growers, Ontario Apple Growers – and others attest to his leadership skills.

Most recently, Porteous has advocated for filming the personal stories of seasonal agricultural workers in Canada. The result is that CHC officially launched the 30-minute documentary titled "Heartbeat: A celebration of international farm workers" at a March 20 event in Ottawa.



Murray Porteous in his apple orchard near Simcoe, Ontario. Photo by Glenn Lawson.

Timing of this award to Porteous in the same month as the video launch could not be

better. Awards are a brief moment to savour the most meaningful relationships before

another growing season springs to life.

Growing produce is easy compared to growing public trust

Tons of the safest and healthiest Canadian produce come to market every year, but for growers, consumer gratitude seems to be in short supply.

"I'm distressed about the term 'civil society'," reported Brian Gilroy, president of the

Canadian Horticultural Council at its 97th annual general meeting in Halifax, Nova Scotia. "In my meetings this past year, I've discovered that governments are consulting civil society about how food should be grown. But these folks have little intimate

knowledge of agriculture." One example is Montreal-based Food Secure Canada. On the face of it, the organization appears to have a very good mission to make sure Canadians have access to safe, healthy food. But the group has been



Brian Gilroy (L), president of the Canadian Horticultural Council posed with outgoing federal agriculture minister Lawrence MacAulay at the meetings in Halifax, Nova Scotia. Agriculture and Agri-Food Canada announced an investment of up to \$11.5 million to the Horticulture Cluster under the Canadian Agricultural Partnership. Industry has matched the funds with \$6.5 million.

infiltrated by organic extremists who demand no pesticides, right now.

"It's disturbing that governments are giving attention to this group," said Gilroy. "Farming is one of the most underrated professions in the country. I'm amazed at the resilience of the farming community. We shall persevere."

At the end of the March 5-7, 2019 meetings, the following board of directors was announced:

Brian Gilroy, president; Jan VanderHout, vice-president. They are joined by the following directors: Marcus Janzen and Peter Simonsen, British Columbia; Beth Connery and David Hoekstra, Prairies; Bill George, Ontario; Stephanie Levasseur and Jocelyn St-

Denis, Quebec; Gerald Dykerman and one more to be announced for the Maritimes.

Chairs of the various committees are as follows: Ken Forth, Trade and Marketing Committee; Mark Wales, Business Risk Management Committee; Nathan Warkentin, Energy, Environment and Climate Change Committee; Jody Mott, Industry Standards and Food Safety Committee; Beth Connery, Labour Committee; Jason Smith, Crop, Plant Protection and Environment Committee; Linda Delli Santi, Greenhouse Committee; Joanne Driscoll, Vegetable Committee; Bill Zylmans, Potato Committee; Brian Gilroy, Apple and Fruit Committee.

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CANADIAN HORTICULTURAL COUNCIL 97TH ANNUAL GENERAL MEETING

Carbon taxes: another cost, another bureaucracy

As of April 1, a patchwork of carbon pricing will come into effect across Canada. This is the date that regulatory charges on fossil fuels will apply in the provinces of Ontario, New Brunswick, Saskatchewan and Manitoba. Some provinces such as British Columbia, Alberta and Quebec are already governed by a provincial carbon pricing regime.

Judy Meltzer, director general, Carbon Pricing Bureau, Environment and Climate Change Canada, explained the

federal carbon pollution pricing system to the CHC annual general meeting. It's generally payable by fuel producers or distributors at the rate of \$20/tonne of carbon dioxide, rising by \$10 per year to \$50 per tonne in 2022. The Canada Revenue Agency has downloadable exemption forms on its website to meet compliance obligations for farmers. There is an 80 per cent exemption for greenhouse operators.

One outstanding question posed by Dr. Justine Taylor,

Ontario Greenhouse Vegetable Growers, is whether the proposed 10 per cent of fuel surcharge proceeds earmarked for Small and Medium-Sized Enterprises (SMEs), municipalities, schools, hospitals and Indigenous communities will include farmers as SMEs.

In terms of growing food and competing against imports, and in view of the new Canada Food Guide shifting recommendations to half of the consumer's plate as fruits and vegetables, the industry says

that carbon taxes are yet another hurdle to competitiveness. When growers ask for how one tonne of greenhouse gases translates to costs per litre of fuel, there is no simple answer. Different fuels combust differently, so there are different costs. In 2019, the federal fuel charge for gasoline will be 4.42 cents/litre. Light fuel oil=5.37 cents/litre; natural gas = 3.91 cents/m³ and propane=3.10 cents/litre.

"We need to exempt food production from carbon

pricing," says Mike Chromczak, vice-chair of the CHC energy, environment and climate change committee. "There are a number of unknowns in terms of how carbon pricing will affect packaging costs, irrigation costs."

Meltzer explains that the revenues collected will be distributed back to consumers. From the perspective of growers, this is another bureaucracy. For more information how carbon pricing will work, go to: <https://bit.ly/2q8RfHl>

Crop protection

Without a crop, there are no other relevant issues. Without crop protection products, the issues of labour, food safety, energy, trade and business risk management all become irrelevant.

Ten out of 25 resolutions that came to the floor of the Canadian Horticultural Councils' 97th annual general meeting focussed on crop protection.

Here are the key ones:

- The Pest Management Regulatory Agency (PMRA) has a default maximum residue limit (MRL) of 0.1 part per million (ppm) for any product that does not have a defined MRL. As Canadian growers continue to lose crop protection products under the re-evaluation process, this default puts Canadian produce at a disadvantage compared to imports. CHC delegates voted to modernize and harmonize MRLs and establish a limit of 0.0 ppm for active ingredients cancelled in Canada.

- Environment and Climate Change Canada should be encouraged to collect water monitoring data that could be shared with PMRA to make pesticide re-evaluation decisions. This move would negate the need for PMRA to depend on another country's data that may not represent conditions in Canada.

- Information gathering for different horticultural crops and for all the different crop protection products is arduous. To circumvent industry surveys, often at the most hectic times of the year, CHC delegates are asking Agriculture and Agri-Food Canada to develop a way to collect data that can be shared with PMRA during the re-evaluation process.

Jason Smith, a B.C. blueberry grower, was re-elected chair of the crop, plant protection and environment committee.

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A preview to the New Product Showcase 2019

KAREN DAVIDSON

This year's crop of new products is exciting in terms of innovation and packaging execution. Winners of the New Products Showcase will be announced April 3. In the meantime, savour five of 53 products which will be on display in Montreal.



Martin's Saladitions – Since the successful launch of Martin's Apple Chips in 2013, the Waterloo, Ontario-based company, Martin's Family Fruit Farms, has been looking for ways to add value beyond dehydrated apples. Using other locally-grown produce such as pumpkin seeds, beets, onions and sweet potatoes was a natural evolution. Salad toppers with different flavour profiles have been developed with the expertise of George Brown College says Peter Katona, director of sales and marketing. The product is expected to be available to retailers by end of May, just in time for salad season.



Sunset Shazam! Shishito Peppers -- Shazam! Shishito Peppers were launched in 2018 as a breakthrough item in the fresh pepper category. Part of the SUNSET chef-inspired line, this product was the first to offer consumers retail access to shishito peppers—one of the fastest-growing categories of produce across restaurants. Resident chef Roger Mooking has a great recipe for putting these peppers under the broiler and then mixing them in a chili lime soy sauce.



Del Fresco Pure Basil -- This basil microgreen is one of several on offer. They include cilantro, radish trio and other branded mixes. What's also of interest is the growing method itself. The LivingCube growing machines are individually climate controlled to optimize the environment for each crop and then are connected to a fully enclosed climatized common work area. The microgreens are available year-round with no pesticides used. Packaging is made from 100% post-consumer recycled PET.



Ready Russets –Ray Keenan, president Rollo Bay Holdings Ltd., Prince Edward Island is developing a market for small-sized (one-inch to two-inch sized) Russet potatoes. The company has worked with Canada's Smartest Kitchen to develop a product that's microwaveable in about seven minutes. A trip to Fruit Logistica three years ago was pivotal in identifying packaging that contains a vent for microwaving. "This packaging was integral to the concept," says Keenan. To date, Ready Russets are available through IGA stores in Quebec. A chef will be in booth 522 at the CPMA preparing samples of this product.

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Harvest Fresh Riced Cauliflower – Veg Pak Produce Co. Ltd is positioning its riced cauliflower as the perfect replacement for rice. Versatile, it can make a healthy side dish or be added to soups, stir fries, risotto or make a gluten-free pizza crust. There are no preservatives, additives or artificial colours. This product is available in grocery stores in Toronto and southern Ontario. To see the entire New Product Showcase, go here: www.convention.cpma.ca/exhibit/nps-2019

CANADIAN PRODUCE MARKETING ASSOCIATION

APRIL 2-4, 2019

Passion for Produce spotlights rising stars

ROBYN MEERVELD

Fifteen enthusiastic, future industry leaders from Canada's produce industry have been selected as participants in the Canadian Produce Marketing Association (CPMA) 2019 'Passion for Produce' (PFP) program, taking place at the annual convention and trade show, April 2-4, 2019 in Montreal.

"The Passion for Produce program is an excellent career building block for young emerging leaders in the fresh produce business. We're proud to be celebrating the 10th year in Montreal," said Ron Lemaire, president of the CPMA. "As the program continues to grow, so do the

participants' careers, and it's very inspiring to see their progress and success as their passion takes them to new levels in our industry."

Over the three days of the show, PFP participants connect with industry leaders and mentors, and participate in off-site tours, interactive sessions, networking events and more, to learn all they can about the fresh produce industry in Canada. PFP participants gain knowledge through first-hand experiences, discussions and

networking that empowers them to return to work with an enriched understanding and renewed enthusiasm for the produce industry.

For a listing of the 2019 PFP participants, click here.

Photo right: Kara Badder, marketing program director, NatureFresh Farms, Leamington, Ontario.

Source: Canadian Produce Marketing Association, March 11, 2019 news release



Keynote speakers



Keynote speaker Justin Kingsley will get your engine started to kick off the conference. A *New York Times* bestselling author, Justin Kingsley is a storyteller, strategist, creative director, photographer and a former press secretary under Prime Minister Paul Martin. Named one of Canada's most creative people by *Marketing Magazine*, Kingsley has served as creative director for NHL superbrand the Montreal Canadiens.

What's his message for the Canadian produce industry? You'll have to rise and shine to find out. **Date:** Breakfast, April 3, 2019 8 am-9:45 am

A taste of disruption

A panel of six next-generation leaders will speak about innovation, analytics and digital transformation in a business session. For more details:

<https://bit.ly/2Hqa5Ve>

Date: Mid-morning, April 3, 2019, 10 am-11:15 am

Your table is reserved to hear

Paul Richards is the sector lead for Agri-Technology for Innovacorp, Nova Scotia's early stage venture capital organization. He focuses on enabling knowledge-based companies to accelerate the commercialization of their technologies and to create a dynamic high-growth entrepreneur culture in Nova Scotia. His portfolio of early stage start-ups has raised more than \$50 million dollars.

Date: Lunch, April 3, 2019 11:30 am-1:15 pm

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OFVGA ISSUES AND ACTIVITIES

Full steam ahead for provincial and federal advocacy



GORDON STOCK
SENIOR POLICY ADVISOR &
GOVERNMENT RELATIONS,
OFVGA

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

Edible Horticulture Support Program (EHSP)

By now, Ontario farmers who received funding through the EHSP in 2018 have received notice from the Ontario

Ministry of Agriculture, Food and Rural Affairs (OMAFRA) that the government will not be proceeding with the second and final installment in 2019.

OMAFRA has communicated that the government has made other policy changes regarding minimum wage and repealing cap-and-trade. Although disappointed with the decision, the OFVGA is committed to working with the provincial government to support sector competitiveness, including red tape reduction.

Self-Directed Risk Management (SDRM)

OFVGA has been meeting with officials from OMAFRA and Minister Ernie Hardeman to discuss the Self-Directed Risk Management (SDRM) program and how it is working for growers. OFVGA's goal is to ensure the program continues to operate effectively and is meeting the needs of fruit and vegetable growers. It is anticipated that discussions with OMAFRA will continue in the

coming months. Government has committed that no changes will be made for the 2019 SDRM program.

Environment

In February the province posted its plans for carbon emission reductions, including plans for emissions performance standards and carbon pricing for large emitters. OFVGA will be responding to this consultation and closely watching details for how the plan impacts the greenhouse sector.

The province continues to fight the federal carbon tax, which came into effect on April 1, 2019 in Ontario. Farm use fuel (gasoline, diesel) are exempt from the tax so long as the farmer has filed a Fuel Charge Exemption Certificate with their fuel provider. Similarly, a certificate is required for greenhouse operators to receive the 80 per cent relief. Certificates are available from the Canada Revenue Agency.

In March the Ontario



Modernization of provincial alcohol regulations

The provincial government has indicated its intent to modernize alcohol sales in Ontario, including expanding points of sale. OFVGA representatives recently met with MPP Downey, Parliamentary Assistant to the Minister of Finance, to express perspectives on expansion of alcohol retail sales in Ontario. OFVGA believes that these policy changes need to recognize and support the opportunities for the growth of wine and ciders containing 100 per cent Ontario-grown grapes, apples and tender fruit.

National activities

OFVGA representatives attended the annual meeting of the Canadian Horticultural Council (CHC) in Halifax in March. CHC works on behalf of growers on issues of national scope, including trade, labour and crop protection. Ontario had significant representation at the meetings and the industry passed many important resolutions on issues of crop protection, labour and food safety. Along with many other Ontario resolutions, a resolution submitted by the OFVGA board was passed by the CHC membership to encourage additional lobbying related to implement a PACA-like trust in Canada.

On May 7, OFVGA representatives will be attending a joint lobby effort of CHC and the Canadian Produce Marketing Association. This last event in advance of the federal election will focus on labour, crop protection, PACA-like trust and food policy.

For more information on any industry issues, please 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

government rolled out a discussion paper titled "Reducing Litter and Waste in Our Communities" which proposes a number of waste reduction initiatives, including the reduction of single-use packaging. The OFVGA will be following this closely to ensure economically viable and safe packaging options remain for produce.

Provincial advocacy

OFVGA representatives will be at Queen's Park on April 10 to educate Members of Provincial Parliament, key ministers and staff of current opportunities and challenges faced by the fruit and vegetable sector. Meetings with government representatives are being planned during the day and a general reception in the evening. Building strong relationships with this relatively new government and ensuring they are aware that the OFVGA is the voice of fruit and vegetable farmers in the province are primary goals for the event.

Following the day at Queen's Park, the new provincial government will release its first budget on April 11. The OFVGA will be reviewing the budget for any aspects that could impact the fruit and vegetable sector.

Canadian Agricultural Partnership funding

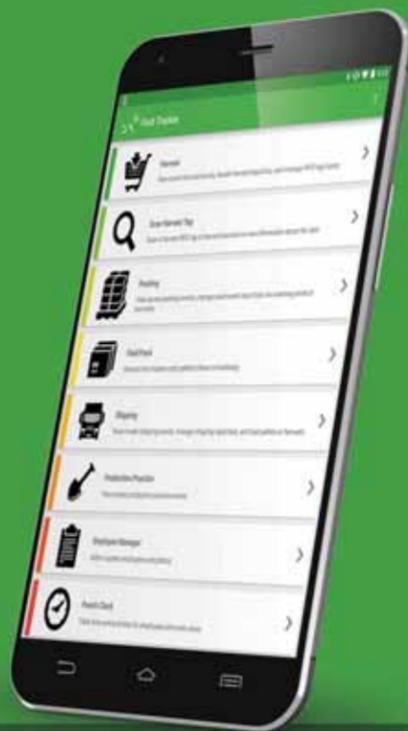
New Canadian Agricultural Partnership funding program intakes have been announced by OMAFRA for both producers and organizations and collaborations. Producers may apply for cost-share project funding through the Ontario Soil and Crop Improvement Association between March 22, 2019 and May 6, 2019. Organizations and collaborations can submit project applications to the Agricultural Adaptation Council from March 4, 2019 to April 5, 2019.



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NEW TECHNOLOGY

Heads-up on a scanner that can estimate fruit quality in the orchard



Growers can scan bins in the field using an iPad.



The iPad scanner takes hundreds of quality samples per apple.



The scans are processed and generate detailed reports for a single bin or group of bins. Photos by Glenn Lawson.

KAREN DAVIDSON

Down under, a New Zealand farmer is pilot testing a handheld scanner that may better estimate the quality of kiwifruit as they come off the orchard tree. In four months, that technology will be tested by the Norfolk Fruit Growers in apple orchards near Simcoe, Ontario.

Masterminded by software engineer Mike Hall and the team at Croptracker, the new device is essentially a camera connected to an iPad. It can scan a bin of apples in real time. The data points can be translated into such valuable information as size of fruit, colour and defects.

“If the grower can make decisions in the orchard and

sort accordingly into storage, there’s a better handle on knowing what is in inventory,” says Matt Deir, chief software architect, Croptracker. “This information can be used to move product to market.”

The Harvest Quality Vision technology does not replace the optical sorting equipment on many apple packing lines. But it does give a heads-up on a four to six per cent sampling of a bin.

Deir explains that the package will cost about \$500 for the handheld camera and software suite. The grower can set the parameters in terms of how to classify the fruit by block, colour or size profile. The data is stored in the cloud.

“To date, the New Zealand trial is going very well,”

reports Deir. “We think the cost savings will be significant as more data is known about fruit going into storage.”

While the Harvest Quality Vision technology will be tested on apples, Deir thinks there is no reason why it can’t be used for tender fruit and berries.

Croptracker, based in Kingston, Ontario, is a crop and farm management software company focused on the fruit, vegetable, greenhouse, and specialty crops sectors. For several years now, Croptracker has been helping producers and processors with labour tracking, traceability, spraying, harvest, packing, storage and shipping of their crops.

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CHAIR'S PERSPECTIVE

A focus on competitiveness



BILL GEORGE JR.
CHAIR, OFVGA

160 acres of wine grapes in the Niagara region, as well as harvesting and processing ice wine juice on a farm that has been in our family since 1796. I'm a graduate of the University of Guelph, where I studied horticulture, and in 2001, I had the pleasure of serving as Grape King, a title that is bestowed annually by the Grape Growers of Ontario based on vineyard management and knowledge of the industry.

My career in farm politics started in 1995 when I became a director on the Grape Growers of Ontario board, eventually becoming vice-chair and then serving as chair for nine years. It was during the mid- to late-1990s that I had my first introduction to the OFVGA, representing grape growers on that board.

Four years ago I came back to OFVGA as a director, and was elected vice-chair two years ago. Through that role I was heavily involved with the minimum wage file, and also

began representing OFVGA on the Canadian Horticultural Council (CHC).

In fact, that's where I am right now as I write this column – attending the CHC annual meeting in Halifax and immersing myself in the issues that face fruit and vegetable growers right across this country.

Trade and crop protection, for example, both fall under the umbrella of the federal government, as do many aspects of the labour and safety net files. The federal election coming later this year will provide us with additional opportunities to get our messages out at the national level and lay the groundwork for the next four years of government relations federally.

I believe strongly that competitiveness lies at the heart of success in our industry and it's where I'll be focusing a lot of my attention as chair of the OFVGA. So many of the files we work on directly impact our ability to compete – labour is a significant one that goes to the

core of being competitive in a global marketplace, for example -- as is crop protection.

There's no doubt that as growers we also have our own responsibility to look at efficiency in our operations and make investments in innovation, but we also need a supportive regulatory environment municipally, provincially and federally that encourages growth in our sector.

To help make that happen, a significant part of the OFVGA's role – and indeed mine as chair – is to make policy makers aware of issues at the farm level. The decisions they make, in areas from environment and labour to infrastructure, finance and beyond have consequences for our sector and will affect growers – and by extension, other parts of the value chain such as processing – both positively and negatively in ways they may not be aware of.

Over the last several years, our organization has put a lot of effort into building those rela-

tionships with policy makers in government and it continues to be a strong focus for us in the months and years to come. In April, for example, OFVGA will be hosting our first lobby event at Queen's Park to build on our existing outreach efforts.

We recognize the budgetary challenge our provincial government is facing and the accompanying need for restraint. But there are ways the government can support growers that don't require spending money. Last year's freeze of the minimum wage at \$14 per hour and removing the cap-and-trade burden are two examples of actions taken by the government to improve the business and regulatory environment for Ontario's fruit and vegetable growers.

To that end, we're here to work with government to keep our sector open for business, and we welcome dialogue on issues and files with the potential to impact the horticulture industry.

It was at this year's annual meeting of the Ontario Fruit and Vegetable Growers' Association (OFVGA) that I had the honour of becoming chair of this organization. We have a long and proud history of working for growers – this year we marked our 160th annual general meeting, making us one of the oldest farm organizations not only in Ontario, but also across Canada.

My wife Lesliann and I grow

WEATHER VANE



The Ontario Fruit and Vegetable Convention trade show -- held every February in Niagara Falls, Ontario -- is an excellent venue to see new technology that contributes to industry competitiveness. One example is Harvest Quality Vision, a pilot currently underway in New Zealand and demonstrated by software engineer Mike Hall (L) and CEO Matt Deir of CropTracker Ltd. In essence, it's a handheld camera connected to an iPad that can scan bins of fruit in the orchard for an accurate sampling of size and colour. Photo by Glenn Lowson.

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THE GROWER

URBAN COWBOY

Celebrate local food day in season, says founder

OWEN ROBERTS
U OF GUELPH

Food Day Canada. “There is nothing more patriotic or more environmentally responsible than feasting on our northern culinary bounty,” she says. “It’s about culinary sovereignty.”

And every year, she leads the charge, inviting Canadians to celebrate local food on Saturday of the long weekend in August.

“It’s a magnificent time of year,” she says. “Local food abounds; summer is at its often-steamy height and Canadians are ready to party while honouring those who feed us so very well.”

In the past couple of years, another well-intentioned citizen has been making an effort to recognize local food nationally. That’s British Columbia NDP MP Wayne Stetski, the former mayor of Cranbrook, who wrote Bill C-281, an act to have a national local food celebration on the weekend before Canadian Thanksgiving.

Stewart supports the spirit of Bill C-281. Eating locally has been and always will be a great idea, she says. Having a Local Food Day makes what she calls “infinite sense” and provides producers and processors there with a potential competitive advantage.

But she’s pushing back at the proposed timing. October is not the height of local food. For the most part, harvest has ended. By that time, some regions in Canada have experienced their first frosts, if not snow.

It’s such a contrast from warm and sunny August, when Canadian fruit, vegetables and other such fare are everywhere.

So Stewart’s campaigning to have an amendment to Bill C-281 that would designate Saturday of the long weekend in August as Canada’s national local food day.

She says this date better reflects the reality of our local food supply in Canada without the risk of “conflating” a national local food day with another major Canadian holiday, Thanksgiving.

This is more than a turf war for Stewart. She got the ball rolling for local food back in 2003, when she created the World’s Longest Barbecue. At the time, it was to support the beleaguered beef industry, which was getting hammered with BSE and struggling with consumers. The response was tremendous, and really helped shape the local food movement in this country. For this and other efforts to put Canadian food on the map, Stewart was recognized with the

Order of Canada.

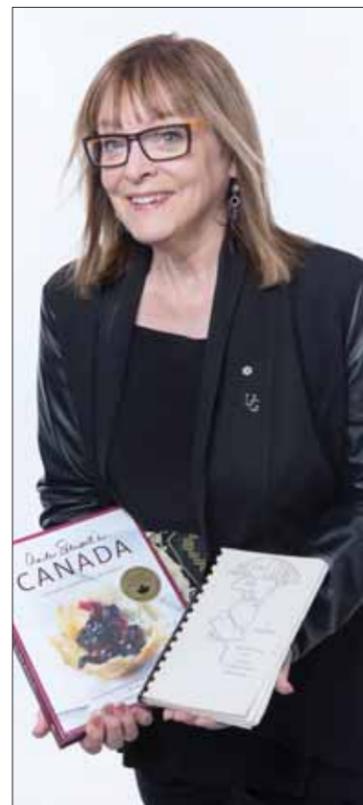
There’s no one more qualified in Canada to suggest the proper date to recognize local food nationally.

And she says it should be the Saturday of the August long weekend.

“It’s become crystal clear that’s the day when Canadians are buying -- often at farmers’ markets -- cooking and sharing the local harvest,” she says. “This is not my invention; this is reality. It was a local food day in every remote town, every small village and every urban centre across Canada even if it hadn’t yet been named officially.”

And now that it’s officially on the table, she doesn’t want it the country to blow it.

Neither do some other well-known Canadian culinary leaders who are joining her in petitioning for a change, including chef Michael Smith and Shanna Munro, president and CEO of Restaurants Canada. Stewart is pushing hard to get Canadian senators to speak in favour of the August date as well, and has visited with them about it on several occasions lately, when they were visiting with agriculture and food leaders at institutions such as the University of Guelph, where she

Anita Stewart. Photo courtesy
Sophie Hogan

serves as Food Laureate.

“It’s my hope that wisdom will prevail and that we can continue to empower one another, encouraging real Canadians, including all our Honourable Senators, to put Canada on the menu,” she says.

If anyone can do it, it’s Anita Stewart.

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FARM & FOOD Care ONTARIO

Farm fire prevention – be proactive, be prepared

BRUCE KELLY

Fire prevention is critical at all points throughout our food production system. Last month, two separate fires destroyed fish processing plants in Newfoundland; and a fire in early March threatened Oxford Frozen Foods, the largest blueberry processing plant in Canada. In 2009, the Chapman's Ice Cream plant was destroyed by a fire, and although the company's recovery is now a great success story, many businesses struggle to overcome these incidents. Farms are food businesses too. Farm fires involving barns, equipment, and warehouses are devastating events for farming

families. The financial and emotional impacts can be felt for years afterward.

In the wake of a series of barn fires over the past five years, Ontario's agricultural industry came together to evaluate and recommend fire prevention strategies. As a result, the Ontario Ministry of Agriculture, Food, and Rural Affairs' (OMAFRA) engineers, commodity organizations, regional fire officials, and insurance representatives have developed a new farm management fact sheet outlining 10 Ways to Reduce the Risk of Barn Fires.

Incorporating these recommendations into your farm's daily operations and maintenance schedule can

significantly reduce the risk of a fire on your farm. Each type of farm operation presents a unique set of risk circumstances. The type of equipment, equipment storage, and the use of gas or electrical heating all impact the risk profile of an operation. Following are some key considerations for a fire prevention plan.

Better housekeeping

Barns, sheds, and seed preparation areas can become dusty, with combustible materials in close proximity to chemicals or machinery, resulting in a possible fire hazard. Regular cleaning is a simple and cost-effective way to reduce the likelihood of a fire.

Keep debris and combustible materials away from possible ignition sources such as electrical and heating equipment.

Field equipment can get very hot, so bearings and hydraulic systems should be regularly inspected and blown clean. Inspections with FLIR (heat sensing) cameras can help to detect electrical components that may be overloaded or corroded which create a fire risk potential. These inexpensive tools can be used to inspect bearings on mobile and stationary equipment and are available for loan from Farm & Food Care Ontario. The high-heat regeneration systems on new tractors cause the exhaust to heat up when cycling. Ensure that the storage areas for this machinery is free of combustible materials that could easily ignite.

Hot works safety and storage

Equipment repair and maintenance are routine on any type of farm. Ensure that equipment repairs are done safely, and with fire prevention in mind. Inspect your work area for fire hazards and combustible materials before performing hot works, such as welding or grinding. Many farm fires have been caused by cutting the lid off of an old drum to create a garbage can. This can be dangerous, even years later, as fumes may remain inside the drum. The Chapman's Ice Cream plant fire is thought to have been caused by a spark from a welding torch catching the building's insulation. Use welding mats to catch sparks and always keep an ABC fire extinguisher accessible to the work location.

Maintain electrical systems

Wire connections in panel boxes should be regularly inspected and maintained by a licensed electrician to ensure proper function. Electrical connection lugs can become loose through thermal cycles, and are prone to corrosion and arcing. When making electrical repairs on the farm, ensure proper connections are used, and all cover plates and panel covers are replaced before the circuits are re-energized.

Electrical systems, including panels and connectors, should be inspected every few years by a licensed electrician, or more frequently if the opportunity arises. Farmers can also monitor electrical systems using thermal FLIR (heat sensing) equipment, which are available for loan through Farm & Food Care Ontario. Email info@farmfoodcare.org for more information.

Upgrade plugs and receptacles

While fruit and vegetable production buildings are less prone to corrosion than

livestock barns, some structures, such as potato storage, present a similar combination of humidity and potentially corrosive gases that may corrode electrical connections. The use of traditional cord plug ends, especially in highly corrosive areas of a barn, is a leading cause of electrical farm fires. The best defense against corrosion of electrical equipment is adopting electrical enclosures rated 4X by the National Electrical Manufacturers Association (NEMA), which are waterproof and resistant to corrosion. NEMA 4X plugs and receptacles are the standard for food processors and packing plants. These are manufactured with a waterproof outer seal, and are made of high nickel, corrosion-resistant metals. Replace plugs and receptacles in high-corrosion areas or on inaccessible equipment such as wall fans, auger motors, and ceiling outlets that may be exposed to higher concentrations of humidity or gases.

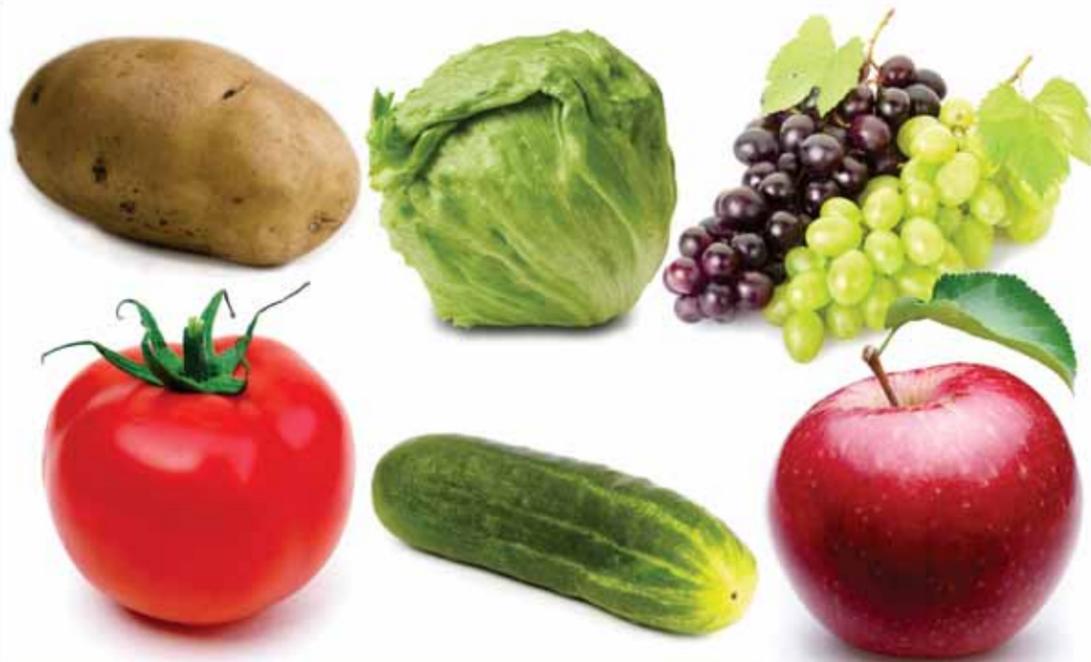


Farm fire prevention resources

For more information on farm fire prevention, visit www.farmfoodcareon.org/live-stock-emergencies, or read the full resource, 10 Ways to Reduce the Risk of Barn Fire at www.omafra.gov.on.ca.

This article was produced as part of the Farm & Food Care Ontario: Livestock Emergency Preparedness Project and the Reducing the Risk of Barn Fires Advisory Panel (2016). A group of concerned Ontario Farm Commodity Groups, Fire Prevention Officers, Electrical Safety Professionals and Government of Ontario staff. This project was funded in part through the Canadian Agricultural Partnership, a federal-provincial-territorial initiative. The Agricultural Adaptation Council assists in the delivery of the Partnership in Ontario.

Bruce Kelly is environmental project manager, Farm and Food Care Ontario.



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MAKING MOVES

Trade show transportation – Yes! it is a huge pain



JENNIFER MORRIS

As owner of a logistics company, it is not really advised to turn down or run from business but when clients mention they have a trade show coming

up, I literally shudder, then refer them to another company. This is not because we do not have the capabilities, however, it is a waste of time and money for us to get between the professionals that do trade shows all the time and a client. Now let's take a look at the reasons why trade show transportation is challenging and why it is better to leave it to the experts.

1. Time consuming

Normal transportation can be time consuming, but trade show transportation is another level. Hours can be spent planning, preparing documents, tracking the product, making

appointments, labelling, etc. Trade show transportation can turn into a time vampire if you are not dealing with companies that are experts. Time can be much more valuable than money, so pay the additional cost to have everything taken care of properly.

2. Amount of freight

Typically shipping to a tradeshow is not a full load. This also complicates an already complex project. Then it is likely that companies are sharing a truck going to the same show and in that case have to be clearly marked and organized to avoid missing pallets or delays at receiving. Or a company can pay a full load rate if they wish to have more control.

3. Red tape and documentation

No one likes red tape and paperwork but with transportation it is unavoidable and with trade show freight, the amount of documents and paperwork for preparation is even more. Usually it is required that each pallet, if not box is labelled by colour based on when it is due to the booth. For example, materials for booth construction may be due to the show floor two days before the show opens, and marketing materials or samples are required to be delivered the morning of the show. In this case, each pallet for

construction materials may have blue labels and the samples might be pink labels. This way, trade show staff can tell quickly what needs to be where and when.

4. Off-site facilities

For many trade shows, there is a pre-delivery partner for exhibitors to send product and samples to ahead of time (especially, perishables). This is an added cost but ensures certain products are there and ready to go when needed. Also beware if there is a large amount of items that need to be moved to the floor multiple times during the show. Similarly the convention centre may also use a marshalling yard. This is an off-site location where incoming trucks can be put in line based on arrival times and particular delivery requirements.

5. Material handling and drayage

This is the unloading and delivery of booth materials, products or samples from the back area of the convention centre to the trade show floor at the appropriate booth. Sometimes this also includes storage of empty boxes and crates for pack-out at the end of the show. Of course, there is a charge and everything must be clearly labeled for them to make it back to the booth at the end

of the show.

6. Sending items back

Finally trade show shipments do not typically just go to the show. Marketing materials and booth materials need to go either back to the client or even on to the next show if they are one after the other. Most companies that specialize in trade show service will quote round trip when requested and can even quote on-going projects for multiple trade shows. Some companies even have storage services between shows.

Trade shows are already stressful and there is a lot to do. Do not skimp when it comes to transporting the company's booth and product. These are the things people are coming to the show to see. Ensure they arrive on time and at the right place with companies that offer proper trade show services.

Jennifer Morris is president of Two Roads Logistics based in Toronto, Ontario. She is an international shipping and logistics consultant with 15 years of experience in produce transportation. Her passion for helping small and innovative businesses is a welcome addition to the Education Committee of the Canadian Produce Marketing Association. She holds a degree in psychology from the University of Windsor.

COMING EVENTS 2019

- April 2 Berry Growers of Ontario Blueberry Workshop, Simcoe, ON Pre-registration: info@ontarioberries
- April 2-4 Canadian Produce Marketing Association Trade Show & Convention, Montreal, QC
- April 3 Grape Growers of Ontario Annual General Meeting, Club Roma, St. Catharines, ON
- April 5 Airblast 101 Workshop, Brighton, ON To register: <https://bit.ly/2RLS59m>
- April 10 Farm & Food Care Annual Conference, Country Heritage Park, Milton, ON
- April 10 OFVGA Lobby Day, Queen's Park, Toronto, ON
- April 11 Niagara Peninsula Fruit and Vegetable Growers' Award of Merit Recognition Event, Glen Elgin Room, Ball's Falls, ON 7 pm
- April 13 Garlic Growers of Ontario Annual General Meeting, OMAFRA office, Woodstock, ON
- April 22-26 Cider and Perry Production Course, CCOVI, Brock University, St. Catharines, ON
- April 24-25 Canadian Corrugated and Containerboard Association and AICC Canada Trade Show and Convention, Pearson Convention Centre, Brampton, ON
- May 1 Ontario Craft Wineries Conference & Trade Show, Beanfield Centre, Toronto, ON
- May 7 CHC/CPMA Farm to Plate Produce & Politics Spring Event, Ottawa, ON
- May 28 Food and Beverage Ontario Annual Conference, Steam Whistle Brewery, Toronto, ON
- June 3-7 Ontario's Local Food Week
- June 8 Garlic Growers of Ontario Field Day, Wroxeter, ON
- June 9 Ontario Agricultural Hall of Fame Induction Event, Country Heritage Park, Milton, ON
- June 10-12 United Fresh Expo, Chicago, IL
- June 22 Farm & Food Care Ontario Breakfast on the Farm, ON
- July 18-19 Annual Conference of Federal-Provincial-Territorial Ministers and Deputy Ministers of Agriculture, Quebec City, QC

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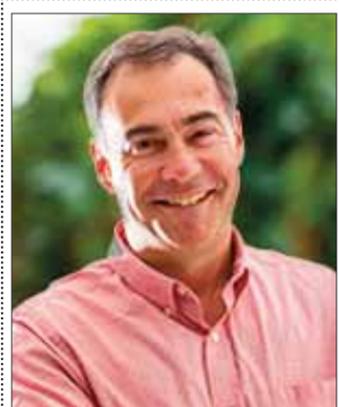
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RETAIL NAVIGATOR

British Columbia: Five million consumers and lots of diversity



PETER CHAPMAN

these areas, there are unique characteristics of populations and climates for growing.

British Columbia's population continues to climb and in Q4, 2018, it was estimated to be 5,016,322. This is the first time the provincial population has exceeded the five million mark. After Ontario and Quebec, British Columbia is the third largest market. The population is spread out with concentrations in Metro Vancouver, Victoria and the other regions. With close to half of the provincial population in Metro Vancouver, the density of the population in the city is very different than other areas.

Another characteristic of the B.C. population is ethnic diversity. Certainly the geographic influence of Asia has an impact and also as we see in other regions, ethnic groups are most comfortable building their own cultural communities. There is also a significant difference between Metro Vancouver and the rest of the province. The products in

demand in Vancouver will be different than the other parts of B.C.

Overall, the B.C. population is growing at a rate of five per cent per year. As with the other demographics we have explored, there are pockets where growth is much higher than the average and others where it is lower. Metro Vancouver continues to grow faster than the rest of the province.

The five per cent growth and the diversity of the market offer good opportunities for food producers and processors. One other characteristic of B.C. consumers is that they are often early adopters. Within the Canadian market many trends and new items start in the west and move east.

Customers influence the buying decision

All of the large food retailers have a presence in British Columbia except Metro. Overwaitea has its roots in

We have made it to the west coast as our journey across Canadian markets has taken us from the Atlantic to the Pacific. British Columbia (B.C.) is a very interesting market to explore because of its individual markets that have their own characteristics and fabric of growers. There is the dense urban core of Vancouver, the interior with a different climate and smaller cities, the northern sparsely populated region and Vancouver Island. Even within

	Vancouver % total population	British Columbia % total population	Canada % total population
Total visible minority population	48.9	30.5	22.3
South Asian	12.0	8.0	5.6
Chinese	19.6	11.2	4.6
Filipino	5.1	3.2	2.3
West Asian	1.9	1.1	.8
Southeast Asian	1.9	1.2	.9
Korean	2.2	1.3	.5
Japanese	1.2	.9	.3
Other	5.0	3.6	7.3

the B.C. market. The company started more than 100 years ago and has grown to be a force in the retail food business. Save On has expanded from B.C. to Manitoba. It is one of the few retailers to continue opening new stores each year. Other retailers open or renovate stores but the total square footage is not growing. Save On stores offer a traditional supermarket format with more emphasis on local. The company also operates Urban Fare stores in the urban core. These smaller, market style stores offer great fresh produce and a wide assortment of prepared foods.

Co-op stores continue to operate in B.C. in rural markets where consumers have strong ties to this brand. Co-op continues to be locally owned and support local products and initiatives. The stores are supplied by The Grocery People for fresh produce.

Loblaw operates Real Canadian Superstores, Loblaw City Markets, No Frills and Extra Foods in B.C. These four banners give the company the flexibility to offer everything from discount to full service, depending on the market. The Loblaw City Markets are more recent additions in dense urban markets such as West Vancouver, across the street from Whole Foods. The company also owns the T&T stores, which started in B.C. Although operated independently they are part of the Loblaw format offering.

Sobeys has been restructuring its business nationally however the retail formats in B.C. have remained unchanged for the most part. The company operates Safeway and Thrifty Food Stores and one Sobeys store in the province. The Safeway brand is very strong in this market and they have been reluctant to make changes as stores continue to perform. Sobeys has indicated plans to bring FreshCo to the western provinces to give an option in the discount segment of the market. Sobeys service B.C. stores from large distribution

centres in Alberta.

IGA and Fresh St Market are supplied and operated by H.Y. Louie. The company also operates the London Drug store chain. IGA is a similar model to IGA in other markets with strong franchise owners helping to differentiate the offering. The Fresh St Market stores are market style and compete directly with Urban Fare, Whole Foods Market and Loblaws City Market stores.

Walmart has continued to expand the number of Supercenters in the province. Walmart operates the B.C. stores from its national office in Mississauga, however as in many Walmart markets, stores do have some autonomy to ensure they meet the needs of consumers in the market.

Costco has 13 warehouses in B.C. The stores are concentrated in the lower mainland, Vancouver Island and Prince George. All stores are operated out of the Burnaby, B.C. Costco office. These warehouses offer similar assortments to warehouses in other regions.

Your competition

British Columbia has very favourable climates for production in selected fruit and vegetable crops. The province produces the most highbush blueberries, sweet cherries and raspberries in Canada. Growers also produce the second highest volume of cranberries.

A number of commodities fall under the B.C. Vegetable Marketing Commission. As stated on www.BCVeg.com, "The BC Vegetable Marketing Commission provides for orderly marketing in the vegetable industry. It is directed by an appointed chair and vegetable producers are elected democratically by their fellow producers."

The commission is vested with the power in the province to promote, control and regulate in any respect the production, transportation, packing, storage and marketing of a regulated product.

Continued on the next page

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Risk management options for vegetable growers

Vegetable growers face many risks beyond their control each year. Things like hail, drought, excessive rainfall, market prices and energy costs can have an impact on farm businesses. The federal and provincial governments provide a comprehensive suite of business risk management programs to help mitigate some of these risks.

Production Insurance

For low yields and crop losses in the field

Growers receive a payment when an insured peril causes their yield to fall below their guaranteed production. Fresh market vegetable growers can insure their crops in either yield-based plans or acreage-loss plans.

AgriStability

For unexpected, large declines in income

AgriStability is an affordable program that helps with cash flow when unexpected disasters happen, costing just \$315 for every \$100,000 of reference margin. If a grower's margin falls below 70 per cent of their recent average, AgriStability helps to offset the difference.

AgrilInvest

For small declines in income

AgrilInvest allows growers to deposit up to 100 per cent of their allowable net sales into a bank account, and the government adds to their contribution. Growers can then withdraw funds at any time. AgrilInvest is funded by federal and provincial governments and is delivered in Ontario by Agriculture and Agri-Food Canada (AAFC).

For more information about programs, contact Agricorp.

RETAILING

How a Superstore built a local community

KAREN DAVIDSON

Almost a year ago, the student union at St. Francis Xavier University put out its standard call for sponsorship of frosh week in the town of Antigonish, Nova Scotia. The request landed on the desk of Allan Cameron, manager of the Loblaw Superstore. His remarkable response was anything but standard. In fact, a year-long relationship has been established out of an opportunity that could have evaporated in a week.

Cameron called upon consultant Sally Huffman Brown to negotiate a new deal with St. FX, as the university is fondly known. Thanks to her guidance, the relationship with St. FX has overcome past history with a grocery competitor and progressed in a way that's healthy for all.

"I stated that competition can be good and if you have an arrangement where everyone benefits then why create controversy forcing the limitations of exclusivity," recalls Huffman Brown when she first met with the student union. "I was then offered the standard sponsorship list -- buy space on a calendar, have your company logo printed on handout items, etc."

This approach seemed to have limited legs and didn't match Huffman Brown's experience or research. Universities in western Canada

have started to support students in need with on-campus food banks. Recent research has unveiled the surprising number of students living with food insecurity and unhealthy eating habits. For grocers, university students have not necessarily been on the radar. Yet, this is a demographic bearing huge costs and living far from home. These are small-dollar customers now, but represent future foodies and educated consumers.

So here was the deal. The Superstore agreed to advertise on the yearly calendar about its discount program of 10 per cent for students shopping on Tuesdays. As part of the agreement with Superstore, the student's union extended its Drive-U safe-drive-home service to transport students to and from Superstore free of charge. For its part, Superstore promoted its newly launched online-delivery service, PC Express, to increase efficiency for students to pick up groceries.

The Superstore sweetened the pot with two bursaries in the form of gift cards for use by students approved by the university's financial aid office. These were for a value of \$100 per month for eight months. And the student Food Resource Center could purchase groceries at the Superstore to stock its shelves. Social media enhanced the profile of the Superstore and its good works.

"This program has been very impactful," says Tega Sefia,

vice-president finance and operations for the St. FX student union. "There are a lot of bursaries for books and fees but not for nutrition and healthy living."

Going forward for the semester starting September 2019, Sefia has garnered other donors for \$4,000 in food bursaries. He's hoping that Superstore will increase its support from two to five students. There's also dialogue about the potential for providing nutrition sessions for students at the local Antigonish Superstore kitchen on a twice-a-month basis.

In a totally unexpected chapter, the St. FX student union has taken the idea of food security a step further. Last Christmas, it delivered 20 hampers to seniors and made 10 hampers available to international students who stayed in Antigonish for the holidays.

While the Superstore is building its relationship with St. FX University, the student union is building its relationship with the community. Superstore stepped up again, providing grocery bags for PC food products donated to seniors.

"This is how an investment in sponsorship should involve a longer-term mutually beneficial arrangement rather than just giving out funds and not being engaged," says Huffman Brown. "Consumers are numb to logos and print and TV ads. Instead of creating more hype and more



Pictured are Tega Sefia, Students' Union vice-president of finance and Rachel Dickey, Student Food Resource Centre Volunteer for St. Francis Xavier University. Photo by Michelle Campbell.

advertisements, here's an example of how Superstore reached out and made the community a better place. That commitment takes more time to build but the outcomes last longer. It's small-town market-

ing for big-business operations." The postscript? The Antigonish Superstore recently won honours for "Community Outreach" at an awards presentation for all Atlantic Canada Superstores and Zehrs.

British Columbia

The following are regulated products:

STORAGE CROPS – conventional and organic:

- Beets (tops off)
- Green Cabbage
- Red Cabbage
- Carrots (tops off)
- Parsnips
- Rutabaga
- White (purple top) turnips
- Yellow onions
- Potatoes (all types and varieties)

GREENHOUSE CROPS – conventional and organic:

- Cucumbers (all types)
- Tomatoes (all types)
- Peppers (all types, including hot/spicy varieties)
- Lettuce

PROCESSING CROPS

- Peas
- Beans
- Corn
- Broccoli
- Brussels sprouts
- Cauliflower
- Strawberries

The diversity of the regions and the population within the B.C. market make it a very interesting opportunity for retailers and producers. The trend of being early adopters and the mix of dense urban core in Vancouver and more rural markets ensure there is something for every taste and style.

If you have any questions about selling your products or developing strategies for specific customers please give me a call at (902) 489-2900 or send me an email at peter@skufood.com.

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 on line 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.

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FOCUS: WATER MANAGEMENT & IRRIGATION

Irrigation water quality and mitigating food safety risks



REBECCA SHORTT,
KATHRYN CARTER, AND
DANIELLE VISSCHEDIK

Irrigation water can contain pathogens, microorganisms that cause illness or death in humans. Every time contaminated water comes in direct contact with fruit or vegetables, there is a risk that these pathogens may be transferred to the produce.

Regulation 119/11 section 4 states that you cannot harvest, pack, sell or transport contaminated produce. Every effort should be made to

prevent contamination of produce with pathogens to ensure the safety of consumers.

Water used for irrigation should comply with the Canadian Water Quality Guidelines

- Fecal coliforms (*E. coli*): Fewer than 100 bacteria per 100 mL water
 - Total coliforms: Fewer than 1,000 bacteria per 100 mL water
- Source: Canadian Council of Ministers of the Environment November 2008

High generic *E. coli* counts can occur in any water supply including streams, canals, ponds, lakes and even wells.

This bacteria has been observed to survive for days to almost a year in soil, manure and water habitats. Rain events can cause significant spikes in *E. coli* levels. High levels of *E. coli* in irrigation water are a concern as they indicate fecal contamination, and may be a sign that pathogens are present.

Examples of pathogens include *Salmonella spp.*, the Shiga toxin-producing *E. coli* (STEC) such as *E. coli* 0157:H7, *Campylobacter* and parasites such as *Cryptosporidium parvum*.

Conservation Authorities have been monitoring water quality and producing

watershed report cards since 2012. Many monitoring sites showed average *E. coli* levels above the recommended guideline. Contact your local Conservation Authority for data in your area.

Food safety programs often include the requirement of assessing the quality of your irrigation water. Taking water samples at your pumping location for microbial testing is a good way to get a better idea of what's in your water.

Ready-to-eat produce, which is not cooked before eating, poses a higher food safety risk, and requires extra precaution during production. If your irrigation water is variable, or poses higher risk due to the presence of *E. coli*, mitigation strategies must be considered to reduce the risk.

So what options are available to growers if they have variable or high risk water due to the presence of *E. coli*?

1. Use a form of irrigation where the water will not directly contact the fruit i.e. drip irrigation or micro sprinklers (under tree).
2. Choose a different water source which meets the Guideline e.g. a well or municipal supply.
3. Treat water to improve its quality and meet the Guideline.

The U.S. Food Safety Modernization Act (FSMA), Produce Safety Rule states that it is possible to reduce food safety risks from poor quality irrigation water by establishing a waiting period between the irrigation and harvest. This waiting period is known as the pre-harvest interval, or PHI. In the U.S., growers are provided the guidance that *E. coli* die off will occur at a rate of 1 log for every two days. 1 log is equal to a reduction to 10% of the original value. A two-day PHI will reduce bacterial load to 10% of its original value. A four-day

PHI will reduce bacterial load to 1% of its original value.

This guidance extends to a maximum reduction of *E. coli* to 1% of its original value.

However, the rate at which die off occurs is not guaranteed. Also, the rate at which other pathogens die off, may or may not be the same as *E. coli*, for example *Cryptosporidium* oocysts may also be present in the contaminated water and can survive longer. As a result, it is impossible to predict how long growers must wait after irrigating with contaminated water to ensure the crops are not contaminated.

Studies have shown that *E. coli* can survive more than 25 days on lettuce. The winter of 2018 *E. coli* outbreak in romaine lettuce was tied to tainted Arizona irrigation canal water. That *E. coli* outbreak killed one person, sent 75 people to hospital, and sickened 172 people across 30 states. The outbreak resulted in a significant economic impact to the romaine lettuce industry with a 45% reduction of sales in May 2018, and prices for whole heads of romaine lettuce down 60%.

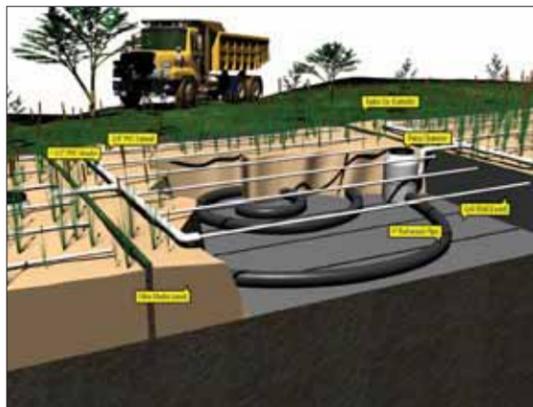
Contamination of a food product can have wide-ranging and damaging implications for an entire industry. The best way to ensure food safety is to prevent pathogens from coming into contact with crops.

Additional information on sampling irrigation water for food safety and interpreting the results can be found at: www.omafr.gov.on.ca/english/food/foodsafety/foodsafetyprograms.htm
www.omafr.gov.on.ca/english/crops/facts/10-037.htm#4

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The 'AQUA Wetland System' is operated out of doors and can achieve year-round tertiary treatment of wastewater. This sub-surface, vertical flow constructed wetland consists of sand & gravel beds planted with moisture tolerant plant species. Water is pumped vertically from cell to cell. There is no open or standing water. Treatment occurs through physical filtration & biological degradation. Plants shade & insulate the cells, cycling nutrients while preventing algae growth. There is no production of sludge.



The AWS has been approved for use by the Ontario Ministry of Environment through over 40 Environmental Compliance Approvals. Recently the Region of Niagara began approving the AWS for treatment of 'small flow' winery washwater i.e. < 10,000 liters per day. Other agencies who have issued approvals include Health Canada, USEPA and OMAFRA. Recent projects include:

- 1) treatment & re-use of greenhouse irrigation leach water at greenhouses in Niagara & Haldimand
- 2) treatment of winery wastewater at Greenlane Estates Winery & numerous other in Niagara
- 3) treatment of landfill leachate at sites in Pembroke, Niagara and Alabama

For additional information please contact Lloyd Rozema at 905-327-4571 or email lrozema@aquat-t.com



FOCUS: WATER MANAGEMENT & IRRIGATION

A report card on Ontario's water health shows mixed results

KAREN DAVIDSON

For the second time in five years, Ontario's 36 conservation authorities issued a 2018 report card with mixed results for surface water quality, forest conditions and groundwater quality. An A minus for groundwater quality (nitrates) is the best score.

Depending on where you operate, the scores are very encouraging. The Georgian Bay area, for example, reports excellent water conditions as does the area near Alliston. These are regions known for production of apples and potatoes respectively. The Ontario watershed report is a good high-level introduction to what conservation authorities are working on and what growers can anticipate moving forward. For the details, go here: www.stateofwatersheds.ca.

"Our Conservation Authorities' concerns are our concerns and I think we can both agree that the risks to our watersheds are multifaceted," says Mike Chromczak, chair of OFVGA's Environment and Conservation committee.

The EcoAg Coalition, formerly Growing Ontario Together, has taken a pause to assess the future intentions of the working group and hopefully gain a few more members on the livestock side. The question of the next algae bloom is not if but when.

"We want to make sure we move forward with a productive and effective approach so that a knee-jerk policy reaction to a bloom doesn't further compromise the competitiveness of fruit and vegetable production in the province," says Chromczak.

As for irrigation and water management, OFVGA is requesting that the Ministry of the Environment, Conservation and Parks reconsider the implementation of the on-farm permit to take water. In an effort to reduce red tape, growers are asking the Ontario



government for a more reasonable permit-to-take-water process that reduces the levels of bureaucracy without impacting the sector's environmental performance.

"It is imperative farmers are not charged a fee for the permit-to-take-water on water used for food production," says Chromczak. "If the Ontario government ever implements a meter on each intake source, for every farmer who renews a permit or requests a new one, then the government should be the body responsible for the cost – not the farmer."

All that said, precision agriculture is having a huge

impact on mitigating environmental stresses. Competitive farmers are doing more with less, using technology and best management practices to minimize inputs and maximize efficiency. From seed, cover crops, tillage, labour, drip irrigation, fertilizer to packaging, there's constant innovation to minimize waste and protect resources.

"I don't know anyone that can afford to be in business while being inefficient with inputs," says Chromczak.

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FOCUS: WATER MANAGEMENT & IRRIGATION

Purchasing capital equipment

Editor's note: This is an excerpt from Publication 854, *Vegetable and Fruit Washwater and Treatment Manual*. Reprinted with permission.

The purchase of new treatment equipment for any washing facility is an important part of operations. Be involved and actively manage the purchasing process to control cost and reduce risk. Hiring a consultant to manage some aspects of the process may be a good investment.

There are 10 steps to purchasing treatment equipment (see figure 1.1)

Purchasing Treatment Equipment

Step 1: Determine Washwater Treatment Equipment Requirements

The first step is to determine the hydraulic and mass loading entering the treatment system, and the required equipment performance to meet endpoint use (Chapters 5–8). This is important information for the equipment suppliers to use to design the washwater treatment equipment.

Determine if sufficient

infrastructure is available to ensure the washwater treatment equipment can be installed at the planned location.

Step 2: Document Equipment Requirements

Develop an equipment specification using all the equipment performance requirements determined in Step 1. Include a statement on the water quality after treatment in the specification.

The purchase of treatment equipment is a negotiation process with the supplier. Include negotiable items in the Terms and Conditions section of the purchase agreement. These are not related specifically to equipment performance and include the following items.

- **Delivery schedule** — Delivery of the equipment is dependent on when the equipment must be commissioned and functioning, taking into account the time required to install and ensure the equipment operates as required.

- **Equipment performance verification** — Describe how the equipment will be tested to

confirm that it meets the performance requirements. Ensure the supplier includes the costs (e.g., laboratory, on-site technician) associated with testing in the equipment price.

- **Payment** — Include a payment schedule. Final payment is only made after equipment performance has been verified. The following is an example of a payment schedule:

- 20% payment with placement of purchase order
- 20% payment when equipment ready to ship
- 40% payment when equipment condition and performance is confirmed after installation
- 20% 30 days after equipment acceptance on-site, receipt of the system manual, completion of all training and equipment verification

- **Shipping** — Decide who is responsible for preparing equipment for shipment, shipping and associated costs (e.g., packing, trucking, border crossing fees). A few options are:
 - Ex Works — The purchaser is responsible for loading the

Figure 1.1. Steps to purchasing capital equipment



equipment onto a truck at the supplier's location, shipping to the installation site and unloading.

- **Free On Board (FOB)** — The supplier loads the equipment onto a truck supplied by the purchaser. The purchaser is responsible for unloading the equipment at the installation site.

- **Installation by supplier** — The supplier is responsible for all aspects of equipment shipment and installation.

- **Installation** — Determine who is responsible for equipment installation and the tools required for installation (e.g., crane service, backhoe, millwrighting, electrical connection, plumbing, water, and inspections).

- **Warranty** — Understand the equipment warranty period, terms conditions.

- **Manual and training requirements** — Ensure a detailed system operation and maintenance manual is delivered before final payment. Finalize the training schedule before installation of the equipment.

- **Penalties** — Negotiate a monetary penalty for late equipment delivery and for not meeting treatment objectives.

Step 3: Obtain Quotes from Suppliers

The completed equipment specification is sent to potential equipment suppliers with a quotation submission deadline.

It should take less than 3 weeks for a supplier to prepare a quotation. If possible get three quotes, which may not be for the same technology but meet the treatment objectives. The quotation document from the supplier must provide sufficient information for the washing facility to evaluate the:

- proposed washwater treatment technology

- system purchase and installation costs

- operational and maintenance costs

- treatment objectives will be met

- waste output characteristics

- delivery timing

Step 4: Choose the Supplier

Carefully review the quotations received to confirm whether they fulfill all the requirements listed in the equipment specification. Often the quotes do not meet all the specifications so the purchaser needs to determine which option is both the lowest cost and lowest risk. Note that the lowest quotation price may not actually be the best option, when all the other details in the equipment specification are taken into account. Annual operation and maintenance costs can amount to a significant cost and can vary greatly between different treatment technologies.

Continued on next page

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FOCUS: WATER MANAGEMENT & IRRIGATION

Purchasing capital equipment

Continued from last page

Consider the required infrastructure changes when evaluating quotes as some equipment may need more work to fit into the system than others.

Consider the company's reputation when choosing a supplier and whether they are able to deliver what they have committed to in their quote. The facility should request the equipment suppliers to provide references for similar projects. The quotations received almost always include the supplier's terms and conditions — read these as they may be different from those included in the facilities' equipment specification. Negotiate with the supplier to achieve mutually acceptable terms and conditions.

Sometimes it is possible to conduct a pilot project to confirm the efficacy of the proposed washwater treatment technology before making a large investment in the technology. There may be costs associated with a pilot project but it is considered a good investment.

Step 5: Finalize the Purchase Agreement

Document any changes to the final purchase agreement to minimize risk to the facility, and finalize the purchase agreement.

1. Inform the successful supplier by issuing them a Purchase Order (PO) document (Appendix A). The PO document must specifically reference the final equipment specification.

2. Include a receipt of Purchase Order Acknowledgement form (Appendix B) the supplier must sign to confirm they have received the PO and agree to comply with all the conditions in the equipment specification.

3. Require an invoice from the supplier for the initial deposit payment. This invoice is only paid once the signed receipt of Purchase Order Acknowledgement has been received from the supplier.

This process results in a document trail that confirms all the expectations, terms and conditions associated with the purchase agreement. These documents are very important if there is a disagreement which may result in a legal conflict.

Step 6: Prepare the Equipment Installation Site

Work with the supplier to

understand the site specifications for the equipment ordered. While the equipment manufacturing process is underway, prepare the facility for the installation by:

- Obtaining a building permit (if required).
- Installing equipment foundation (e.g., concrete and steel).
- Building structures to protect equipment.
- Relocating and modifying surrounding equipment.
- Installing services (e.g., electrical, compressed air and plumbing).
- Preparing for equipment access to site.
- Obtaining quotes for all services required to install equipment (e.g., crane, millwright, electrician, plumber).

Step 7: Validate Equipment at the Supplier

If possible, travel to the supplier to view the equipment and verify its performance prior to shipment. It is easier for the supplier to fix equipment problems and make adjustments at their location rather than the installation site. If it is not possible to con-



firm the system performance, view the equipment to confirm workmanship, completeness, configuration, footprint and details such as lifting locations to simplify the installation process prior to shipment. There is usually a payment milestone associated with equipment validation and shipment.

Step 8: Coordinate Shipment and Installation

A thorough job in preparing the equipment installation site (Step 6) significantly reduces the effort of this step. The purchaser needs to supervise this process quite closely as unanticipated problems can arise. As an alternative, the

consultant contracted to manage the capital equipment purchase process can coordinate the shipment, installation and validation activities on behalf of the facility.

Step 9: Verify Equipment On-Site

Carefully examine the condition of the installed equipment in comparison to the equipment specification. Conduct all performance verification tests outlined in the specification including water quality. The equipment must pass all these tests. Refer to the purchase agreement terms and conditions if the washwater treatment equipment supplied does not meet the required treatment

objectives. A significant payment milestone is the successful completion of this step.

Step 10: Close the Purchase Agreement

This step involves the completion of all outstanding project details. Ensure the supplier provides the operating manuals, spare parts lists, warranty information and conducts training as required by the purchase agreement before making the final payment. The equipment warranty period begins at the completion of this process step.

Top photo courtesy Glenn Lawson.

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Look to CAP funding to improve food safety



Product Category	Category Code	Cost-share Percentage	Project Cap	Description
Food Safety				
Food Safety and Traceability GAP Assessment and Pre-audit	FSAP-PD-A	45%	\$2,000	Projects to support GAP assessments and pre-audits by a qualified third party against internationally or nationally recognized programs to advance food safety and traceability systems.
Food Safety and Traceability Training	FSED-PD-A	45%	\$1,500	Projects to support food safety and traceability training from a qualified third party to increase knowledge and adoption of recognized food safety or traceability systems.
Food Safety Equipment	FSEQ-PD-C	35%	\$10,000	Projects to support the purchase of equipment designed to eliminate or reduce food safety risk and hazards
Traceability Equipment	FSEQ-PD-D	35%	\$10,000	Projects to support the purchase, installation or upgrading of equipment that is directly related to the implementation or improvement of traceability systems.
Food Safety and Traceability System Improvements	FSIM-PD-E	50%	\$60,000	Projects to support food safety and traceability system development, implementation, or improvements through; writing systems to a recognized standard, equipment purchases, facility upgrades, validation studies as well as initial food safety certification to recognized international standards.

KAREN DAVIDSON

For those Ontario growers looking to upgrade washwater equipment to meet food safety standards in a national program, there is cost-shared funding available under the latest Canadian Agricultural

Partnership (CAP) intake. The period for applications runs from March 22 to May 6, 2019.

This is the second year of CAP funding. For those expecting support for irrigation equipment and water wells, that opportunity no longer exists explains Barb Caswell, program coordinator, Ontario Soil and Crop Improvement Association (OSCIA).

When you delve into the various categories of eligibility, look for “Protection and Assurance.” Then look for sub-category of food safety. Refer to the table for specifics.

For all the details, go to: www.ontarioprogramguides.net

Metrics for Alberta’s irrigation water quality are available online

The Alberta Irrigation Districts Association (AIDA) has released its Irrigation District Water Quality data tool which provides online access to water quality information collected within Alberta irrigation infrastructure. Nearly 8,000 kilometres of canals and pipelines, 57 storage reservoirs

and 4,800 kilometres of drainage infrastructure make up Alberta’s irrigation infrastructure.

In the past, water quality information evaluated for the project has been available to irrigation districts, agricultural producers, commodity organizations, agri-food

processors, government agencies and others by request. Users can now access sampling site locations, site photos, download water quality information and view annual water quality index scores for each site by visiting the Irrigation District Water Quality data tool online at www.idwq.ca.



Photo courtesy Potato Growers of Alberta

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“Monitoring and reporting irrigation water quality shows our due diligence in food safety that extends to everything that goes into our plant. It is very helpful to be able to access the tool for documentation and come audit time I will be bringing the site up to show our CanadaGAP auditor for verification,” says Norm Wynne, farm food safety/CanadaGAP manager, Gouw Quality Onions, Taber.

Chris Gallagher, manager of the Taber Irrigation District (TID) explains, “One of TID’s strategic goals is to deliver the best possible water quality to our water users. As a vital part of our Integrated Watershed Management approach, the IDWQ project helped us identify contaminant sources to

design and prioritize solutions such as constructed wetlands, bioreactors and reservoir riparian enhancements. Many of these are collaborative projects with local municipalities and include technical and financial support from provincial government agencies and programs, such as the Watershed Resiliency and Restoration Program and the Alberta Community Resilience Program.

Visit www.idwq.ca to access the online Irrigation District Water Quality data tool. For more information on irrigation water quality google “Alberta Irrigation Water Quality.”

Source: Alberta Irrigation Districts Association March 15, 2019 news release

POLICY

The federal 2019 budget includes several agricultural initiatives

KAREN DAVIDSON

Finance Minister Bill Morneau released the federal 2019 budget on March 19, garnering plaudits from agricultural organizations. The Canadian Produce Marketing Association (CPMA) for example, is underlining the “transformative” investments in rural broadband, funding for A Food Policy for Canada, increased focus on food loss and waste, improved regulatory processes and tax changes to the Small Business Deduction.

“Budget 2019 provides important investments in key areas impacting the fresh produce industry,” said CPMA president Ron Lemaire. “We are thrilled to see that the government has implemented many of the recommendations put forward by CPMA through the pre-budget consultation process and our ongoing advocacy efforts. These investments and changes to the Small Business Deduction for growers will help bolster the



fresh produce industry and grow the economy.”

Regarding the Small Business Deduction, the government promises to continue outreach to farmers throughout 2019 to develop new proposals to better accommodate intergenerational transfers of businesses while protecting the integrity and fairness of the tax system.

Currently, certain relief is given to Canadian-controlled private corporations carrying on a farming business from the tax rules designed to prevent the multiplication of the small business deduction. Budget 2019 proposes to extend that relief to sales of farming products to any arm’s length

Rural	Urban
Download 11.15 Mbps	Download 22.92 Mbps
Upload 5.45 Mbps	Upload 12.4 Mbps
Variability 383.88 ms	Variability 288.93 ms
Latency 166.59 ms	Latency 95.15 ms

Rural vs Urban use of internet

Using the Statistics Canada definition of metro versus non-metro, the Canadian Internet Registration Authority shows that urban users experience much faster download times and a higher-quality experience.

Factoid: Canada’s Internet Factbook 2018 contains valuable insight on digital trends. For example, 74 per cent of Canadians spend at least three to four hours per day on the internet. Half of Canadians have five or more internet-connected devices in the home.

corporation. This measure applies to taxation years that begin after March 21, 2016.

In its news release, the Canadian Federation of Agriculture supported the development of a National Food Policy. This policy tackles food waste, improving community access to healthy food and shines a spotlight on Canadian

food both at home and abroad.

One important initiative within the National Food Policy is a three-year agricultural immigration pilot – an addition to the recently announced rural immigration pilot. Programs such as this are critical to help alleviate critical labour shortages while creating a skilled agricultural workforce for

the future.

The commitment to \$5-6 billion to provide highspeed internet to all Canadians by 2030 is vital for farmers to conduct day-to-day commerce as well as to embrace cutting-edge precision technology.

The full budget can be accessed here: budget.gc.ca/2019/home-accueil-en.html



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Ontario Ministry of Agriculture, Food and Rural Affairs

Early season insect pests of tomato

AMANDA TRACEY

Colorado Potato Beetle

Colorado potato beetles (CPB) overwinter as adults in the soil and will have two or three generations in a growing season. The first generation tends to be the one of greatest concern for growers as it can cause a significant amount of damage to young transplants. Tomatoes planted near fields that had potatoes, eggplants or tomatoes in the previous year are at the greatest risk.

Scouting for CPB should begin shortly after transplanting. Examine whole plants, looking for egg masses, adults and larvae. Early season threshold for CPB is 0.5 adults or larva per plant within the first two weeks of transplanting. Currently, it is common practice to use Admire* (imidacloprid) in-furrow at planting to control early season CPB. However, with the re-evaluation of this and other group 4A products, such as Actara* (thiamethoxam, also in Minecto Duo*) and Assail* (acetamiprid), by the Pest Management Regulatory Agency (PMRA), uses and use patterns may change.

It is important to start thinking of other options. There are several products available for CPB control, though the beetle is known to be resistant to several of them, including group 1A, 1B and 3A insecticides. Some foliar products that are still expected to have efficacy against CPB include Sivanto Prime (flupyradifurone,

group 4D), Success or Entrust (Spinosad, group 5), Coragen (chlorantraniliprole, group 28), Exirel (cyantraniliprole, group 28), Minecto Pro (cyantraniliprole+abamectin, group 28/6) and Harvanta (cyclaniliprole, group 28). Timing of foliar insecticide applications to target young larvae is essential to good control and relies heavily on crop scouting.

Cutworms

Black cutworm moths fly into Ontario on south winds, usually in April and May, but have been seen as early as March. Females generally lay eggs in areas of the field with heavy residue or weeds and where soil moisture is high. Scouting for cutworm should begin shortly after transplanting, especially in areas of the fields with high weed pressure prior to tillage. Look for plants that have been cut off at the soil level and dig around the base to find the culprit, being sure to note its size.

Small larvae (<2.5 cm) are easier to control with insecticides, while larger larvae (>2.5 cm) may not warrant control as they near the pupal stage. The threshold for black cutworm is five per cent plant damage. There are several products available for cutworm control. Orthene* (acephate, group 1B) can be used as a transplant water treatment prior to planting. After planting options include Sevin (carbaryl, group 1A), Matador* (lambda-cyhalothrin, group 3A), Ambush

or Perm-UP or Pounce (permethrin, group 3A), Voliam Xpress* (lambda-cyhalothrin +chlorantraniliprole, group 3A/28), Minecto Duo* (thiamethoxam+cyantraniliprole, group 4A/28), Success or Entrust (Spinosad, group 5), Delegate (spinetoram, group 5), Intrepid (methoxyfenozide, group 18), Coragen (chlorantraniliprole, group 28), Exirel (cyantraniliprole, group 28) and Minecto Pro (cyantraniliprole +abamectin, group 28/6).

Wireworms

Wireworms can be a problem, more so in cool, wet springs, when they can remain in the root zone for a longer period of time. They tend to be more of an issue on sandier soil and cause damage by feeding on portions of the plants' roots and stems underground. Scouting for wireworms can start as early as mid-April by placing two baiting stations in the field at high-action sites, such as sandy knolls or in heavy grass infestations. To create a baiting station, dig a hole approximately 15 cm wide and five to eight centimetres deep. Bury a nylon mesh bag containing one cup of untreated, soaked corn and wheat mixture or one cup of freshly cut potatoes.

Be sure to mound the soil over the baiting station to prevent standing water and mark the location with a coloured flag. A few days before planting, dig up the bags and record the number of larvae found at each station. Most wireworm species take two to five years to complete their development, so identifying problem fields early and implementing control strategies prior to crop planting is important. Orthene* (acephate, group 1B) can be used as a transplant water treatment prior to planting, but there are no products registered for wireworm control on tomatoes once plants are in the ground.

More information on wireworm damage and infestation levels in tomatoes is needed to develop better management strategies. If you have wireworm in your crop, please contact Amanda Tracey at amanda.tracey@ontario.ca or 519-674-1699. Always read labels carefully before using any pest control products.



Colorado Potato Beetle egg mass on tomato transplant



Colorado Potato Beetle larvae on tomato transplant



Cutworm



Wireworm

*products contain at least one active ingredient currently under re-evaluation by the PMRA. Uses and/or use patterns may change upon completion.

Amanda Tracey is vegetable crop specialist, OMAFRA.

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Asparagus fertility – nitrogen, phosphorus and potassium

Table 1. Asparagus Nitrogen Guidelines

Timing	Actual N kg/ha	
	Ontario	Michigan
Nursery	75 ¹	112 ²
New plantings	110 ³	112 ²
Established plantings		
Pre-harvest	55	45
Post-harvest	55	45
Total	110	90

¹ An additional 50 kg nitrogen/ha may be applied as a side-dress application in August or early September if rainfall was excessive in the summer.

² Split application, evenly divided between pre-planting (broadcast and incorporate) and when the plants are 6" tall (side dress).

³ Broadcast all the recommended nitrogen and potash prior to planting.

ELAINE RODDY

Fertilizer decisions for asparagus can be difficult. Sandy loam soils, which favour asparagus production, are also particularly prone to nutrient losses through leaching or wind erosion. A robust, healthy root system will support high yields over the long term. Crop management and plant health is especially important during the establishment period -- years one through five -- when the crown is rapidly building and expanding.

Once the crown is established, the amount of nutrient that is removed in the harvested portion of the crop is quite small. An asparagus crop yielding 5,000 lbs/acre will remove 33.5 lbs nitrogen, 10 lbs of phosphate, and 25 lbs of potash per acre.

At the end of the growing season, nutrients from the fern are reallocated back to the roots. The fern-root system resembles a closed loop in which further nutrients from the soil are required only to maintain and repair the crown and feeder-roots as they age.

Nitrogen

Nitrogen is naturally present in all soils. As soil microbes feed on crop residues and soil organic matter, they release nitrogen into the soil. As soil organic matter levels increase, so do the levels of naturally available nitrogen. Soil management practices such as reduced tillage and cover crops help to enhance a soil's natural fertility levels.

During harvest, the crop's needs are supplied by the crown and there is little nutrient uptake from the soil. The bulk of the crop's uptake

occurs during fern development. Split applications of nitrogen fertilizers with the balance applied early post-harvest can reduce the risk of losses due to leaching during the harvest season.

Phosphorus and potassium

Prior to planting, test the soil to determine phosphorus and potassium requirements and necessary pH adjustments. It is difficult to adjust phosphorus and pH levels after planting. The target pH range for asparagus is 6.0 to 6.8.

If required, apply the phosphorus in the spring prior to planting and in the furrow below the crown during planting. Soils phosphorus soil test levels above 31 ppm (Olsen) are unlikely to respond to additional fertilizer inputs. In a recent survey of 12 commercial asparagus fields from 2015-2017, we found that all fields fell into the rare response (RR) or no response (NR) categories for phosphorus.

Soil test regularly to identify if additional fertilizer inputs are required. Soils with levels above 250 ppm potassium (ammonium acetate) are also unlikely to respond to additional fertilizer inputs. In the 2015-2017 survey, approximately half the sites were categorized at the moderate response level (MR) suggesting that additional fertilizer applications would be profitable.

For a build-and-maintain approach to soil fertility, aim to keep soil test levels at a moderate response (MR) level, see Table 2, Phosphorus and Potassium on Mineral Soils.

Elaine Roddy is vegetable crops specialist for OMAFRA.

Table 2. Phosphorus and Potassium Requirements for Asparagus

HR = High Response, MR = Moderate Response, LR = Low Response, RR = Rare Response, NR = No Response.

Phosphorus			Potassium		
Sodium Bicarbonate Phosphorus Soil Test (ppm)	Rating	Phosphate (P205) Required kg/ha	Ammonium Acetate Potassium Soil Test (ppm)	Rating	Potash (K2O) Required (kg/ha)
0-3	HR	110	0-15	HR	420
4-5	HR	100	16-30	HR	400
6-7	HR	90	31-45	HR	360
8-9	HR	70	46-60	HR	320
10-12	HR	50	61-80	HR	280
13-15	MR	20	81-100	HR	250
16-20	MR	20	101-120	HR	220
21-25	LR	20	121-150	MR	190
26-30	LR	20	151-180	MR	160
31-60	RR	0	181-210	MR	130
>61	NR	0	211-250	MR	80
			>250	LR	0






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VALUE-ADDED PERSPECTIVES

Senate ag committee studies value-added sector

KAREN DAVIDSON

There was no shortage of horticultural-themed stops for the Senate’s agriculture committee to visit in southern Ontario, a hotbed of value-added operations. During the week of March 11, six of the committee’s dozen senators visited the Ontario Food Terminal, Barrie’s Asparagus Farm and Country Market, GoodLeaf Farms, Martin’s Family Fruit Farms, Chudleigh’s apple blossom plant, Willibald Farm Distillery and Wheelbarrow Orchards.

These were part of an ambitious study tour that also visited the University of Guelph, the Elora Dairy Research Facility, Maple Leaf ThinkFOODS Culinary Centre

and others.

“At each of these stops, it was remarkable to see the passion for agriculture, whether it was employers or employees,” says Senator Rob Black, who was appointed February 27, 2018. As the former CEO of the Rural Ontario Institute and a past-president of the Canadian 4-H Council, Black had considerable input into the agenda. “It’s eye-opening for my fellow colleagues.”

The tour is part of a study which launched last year to examine Canada’s value-added food sector. According to the Senate’s April 17, 2018 news release, “A Senate committee is examining how Canadian food processors can take advantage of a golden opportunity to keep exporting quality foods and strengthen a homegrown



Senator Robert Black, far right, listens intently during a tour of the Ontario Food Terminal.

economic sector at the same time.”

The news release acknowledges, “However, the sector is experiencing challenges, including access to foreign markets, the tendency of Canadian farmers to export their raw products instead of selling to domestic food-processing plants and a labour shortage in Canadian food-processing plants that prevents

work from being done in Canada.”

Black confirms that the committee has heard about the barriers and challenges from previous tours to British Columbia, Manitoba and Quebec, and now Ontario. They include: multiple layers of regulations from different levels of government, labour shortages, succession planning and the difficulties for

early-stage startups. All of these prevent the agri-food sector from moving the export agenda forward to meet a target of \$75 billion by 2025.

Black says that the Senate committee’s report should be published by end of June 2019 when the House of Parliament rises for the summer. It will contain recommendations to the federal government for consideration.

Crabapples, the forgotten fruit, get an untraditional makeover



KAREN DAVIDSON

How do you make a profit out of something as fiddly as a

crabapple? Just ask Alex Smyth, co-owner of Apple Flats Limited.

“You make it less fiddly,” replies the indomitable Smyth.



He and his brother Glen have revived their grandmother’s crabapple jelly recipe and now their bottles of heirloom products are in 450 stores from



Photos courtesy of Apple Flats Ltd.

Ontario to British Columbia. Their tag line? Regrowing a wild tradition.

In 2014, Glen decided to return to his roots by making crabapple jelly. A local restaurant in Stratford, Ontario took 40 one-litre jars that first season. Fast forward a few years and now the brothers have branded their business Appleflats Foods with the ambitious plan to add more products to their Shakespeare, Ontario warehouse. One example is a cocktail mixer that’s popular with those who want less sugar in their drinks, no artificial flavours or colours.

This value-added venture is not for the faint of heart because it’s challenging to scale up. By end of 2020, the Smyth’s anticipate seven to 10 acres in production. The Dogo varietal, to be specific, produces a larger crabapple that’s usually harvestable in early August. The variety is almond-shaped, about the size of a golfball. But the crabapple is still two inches

in diameter or less – a diminutive size that makes it labour-intensive to harvest.

That’s why the Smyth brothers have reached out to Elmira Secondary School to build a harvest proto-type.

“We harvest crabapples like olives or sour cherries,” explains Alex Smyth.

The obvious question is what to do with all the waste cores and stems. That’s one of their trade secrets in terms of how they take the waste pulp and make it into crabapple soap.

Brothers Alex and Glen Smyth are one of a handful of Canadian growers dedicated to crabapples. Maybe the only one. They would like to connect with others who have crabapple pollinators in their orchards or who have a few trees.

“We are looking for anyone who might have a tree that we can harvest or talk about their production methods,” says Smyth. Email alexsmyth@appleflatfoods.com



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LEADERSHIP

Lisa Jenereaux: first female president of IFTA



Nova Scotian apple grower Lisa Jenereaux has taken on the role of president of the International Fruit Tree Association for the next two years. She's supported by her family operation, Spurr Bros., based at Melvern Square. L-R: John Spurr, Bill Spurr, Lisa Jenereaux, Katie Campbell, Will Spurr, pictured at Melvern Square, Nova Scotia. Photo left: Lisa Jenereaux



KAREN DAVIDSON

Perhaps no one is more surprised than Lisa Jenereaux that she's the new president of the International Fruit Tree Association (IFTA), the first female to hold the role. When she became orchard manager for Spurr Bros back in 2000, her memories of the family farm near Melvern Square, Nova Scotia were of "picking up the drops" and removing brush.

"I've had a lot of support from the tree fruit community," says Jenereaux, recalling her first IFTA meeting in 2003. "My grandfather used to go to these meetings."

Apple farming was not her intended career path. She started out in the travel and tourism business, before being lured back to the home farm in 2000. The unexpected opportunity was to fulfill the role of orchard manager. She describes the first three years as a steep learning curve, but welcomed the many educational opportunities at conferences and workshops.

IFTA, a 300-member organization, has played a large role in professional development, both in agronomics and leadership. Jenereaux, who was elected at the February 24-28, 2019 annual meeting in Rochester, New York, has been on the board for the last six years. One of her priorities is to maintain a superior level of education with the best speakers and presentations possible. Another goal is to encourage the next generation of apple growers.

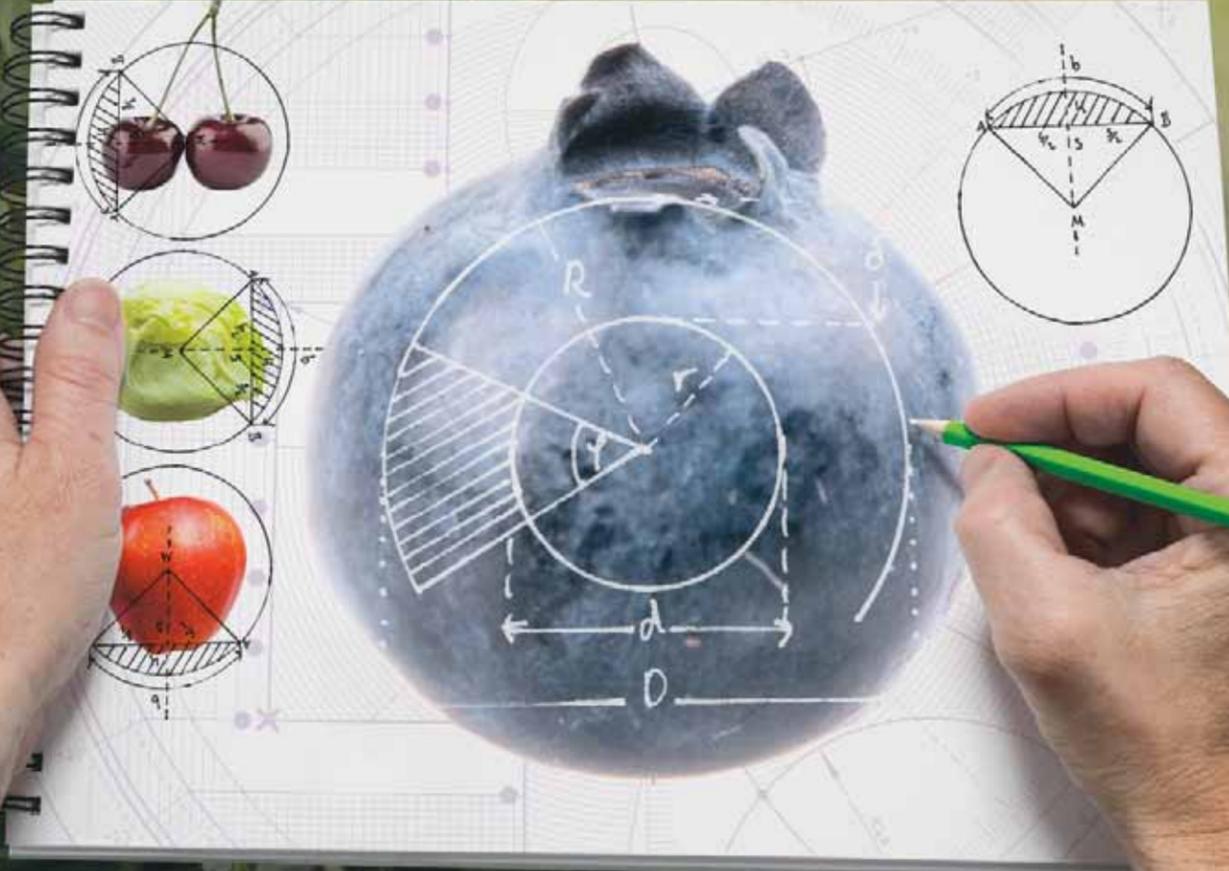
"If you look around a meeting room, there's a gap between the 50-year-olds and the 30-year-olds," says Jenereaux. "We will have a hard time bridging that gap and it's a real challenge for the industry in the years to come. We will be encouraging this younger generation to take on leadership roles earlier."

Jenereaux leads a 12-member board of directors with two others from Canada: Chris Hedges from Ontario and Hank Markgraf from British Columbia. She will be attending the IFTA summer study tour to be held in Ontario's Norfolk County and Georgian Bay areas from July 21-24.



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CROP PROTECTION

Some gratitude for Canada's safe food



CHRIS DUYVELSHOFF
CROP PROTECTION ADVISOR,
OFVGA

As I eat my breakfast of oatmeal and blueberries this morning, I'm glad I live in Canada and can trust my food. Really, I can't remember the last time I was about to eat something and thought for a second it might not be safe for me. It is just assumed in our country food is safe – and for good reason. Canada is consistently recognized as having one of the safest food systems in the world. From production on our farms, through distribution, to retail, and to food service, there are countless safeguards in place to ensure public safety.

Despite Canada's very high standards of food safety, food producers still often find themselves defending the safety of their products to the public. Healthy discussion is great and important, however, in the disinformation age of "fake news," there are certainly many instances where a loud minority have simply accused producers of unsafe practices – almost invariably with scant supporting information. These types of campaigns have resulted in a strange juxtaposition in society where recent surveys show public trust remains high of farmers but not necessarily in farming.

The ongoing debate recently inspired the parliamentary Standing Committee on Agriculture and Agri-Food to move on February 19th to undertake a study on the public perception of the Canadian agriculture and agri-food sector. Its objective is to understand challenges and opportunities to improve public trust in

agriculture. Of course, one of the aspects most often receiving public interest is around crop protection. The recent Pest Management Regulatory Agency (PMRA) statement and subsequent news stories around the use of glyphosate in Canada is a perfect example. So, for the record, let's take a closer look into the steps that help ensure safety in crop protection.

To start off, crop protection is highly regulated in Canada – almost to the same degree as the pharmaceutical industry. Before any crop protection product can be used on a Canadian farm it must first be registered and approved by the PMRA in Ottawa. Registration requires that it be proven effective and also not present unacceptable risks to human health and the environment. Hundreds of federal scientists with expertise ranging from toxicology, human and animal health, and environmental science are part of teams reviewing these crop protection products.

Upon registration in Canada, the PMRA then also establishes a maximum residue limit (MRL) that is a legally enforceable limit on the amount of residues that can be found in any food item as a result of approved product use. The PMRA sets these science-based MRLs at levels well below the amount that could pose a health concern to ensure that the food Canadians eat is safe. Foods of both domestic and imported origin are then subject to this limit. If any fresh or processed food item contains residues in excess of the specified MRL, then it can be considered to be adulterated or contaminated and be removed from the marketplace. Ensuring adherence to the MRLs is then accomplished both before and after food is harvested.

Before food is harvested, PMRA assigns a pre-harvest interval for every crop protection product and crop that determines when the last application can be made prior to its harvest to prevent any unacceptable residues in food. It is then the producer's responsibility to ensure they are not using any product too close



to harvest. Major food retailers such as Loblaw and Sobeys will require producers to be enrolled in a food safety program such as CanadaGAP to sell products in their stores. Food safety programs include following these pre-harvest intervals as a requirement and independent auditors will regularly examine them during on-farm inspections.

Following harvest, the Canadian Food Inspection Agency (CFIA) conducts random residue testing in the marketplace on both domestic and imported food items to determine if they are in compliance with the assigned residue limits. Termed the National Chemical Residue Monitoring Program (NCRMP),

the CFIA publishes this data for public review. In 2014-2015, the most recent year that data is available, the CFIA conducted more than 100,000 tests for residues of veterinary drugs, pesticides, metals, and other contaminants on more than 14,000 food samples collected across Canada. For fresh and processed fruit and vegetable products produced in Canada, CFIA determined that just 30 samples of the 1485 tested were not compliant with established Canadian limits – a compliance rate of 98 per cent. Consistent with previous years, the CFIA summarized the annual report by stating "the overwhelming majority of food on the market meets Canadian standards for food safety."

As long as we have pests, we will continue to need ways of controlling them – be that through the use of crop protection products or other means. Canadians can be confident that there is extensive regulatory oversight on the use of these products and monitoring data from actual food samples confirm that system is working. This is why food with "Product of Canada" is highly regarded in export markets as some of the safest products available. A little gratitude is due to our producers who have established themselves as amongst the best in the world. Now, what's for lunch?

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CROP PROTECTION

Corteva Agriscience deploys the largest agricultural drone fleet in the world

Corteva Agriscience, the Agriculture Division of DowDuPont, has announced a global agreement to use DroneDeploy in its fleet of more than 400 DJI drones across the company's global seed production and supply chain, as well as its Pioneer strategic account management and agronomy teams in the U.S., Canada, Brazil and Europe. DroneDeploy is the market leader in commercial drone software and aerial site intelligence for the construction and agriculture sectors.

"This agreement fortifies Corteva Agriscience as a leader in the use of advanced UAV technology," said Jeremy Groeteke, Corteva Agriscience U.S. digital agriculture lead. "The field intelligence technology will enable our Pioneer agronomy and strategic account management teams to

work with farmers to provide real-time aerial views of their operation."

The advanced mapping software from DroneDeploy combined with the expertise of Corteva Agriscience field teams offers immediate insights to diagnose and correct agronomic, disease or pest concerns, as well as to optimally place products. UAV operators can survey a 160-acre field in less than 15 minutes, quickly spotting variations in plant and soil health. Every operator will be trained on how best to harness the power of the aerial technology and will be certified according to local aviation regulations.

"We are also deploying the advanced UAV technology in our seed production network," said Matt Kurtz, Corteva Agriscience global seed technology lead – seed production and supply chain.



"We are aggressively evaluating and implementing decision agronomy tools such as DroneDeploy to enable our agronomists and contract seed growers to make timely decisions impacting seed yields and quality."

DroneDeploy is the leading provider of commercial drone software for the construction and agriculture sectors, with Skylogic 2017 Market Sector survey indicating 47 per cent market share among agriculture drone users. 74 per cent of

global UAVs flown are made by DJI. Together they assert that they are unaware of another agricultural company deploying 400 or more drones globally.

Source: Corteva Agriscience news release

Chikara herbicide for vineyards



Belchim Crop Protection Canada has announced the introduction of a new herbicide available for use in vineyards across Canada.

Chikara is a broad-spectrum, systemic and residual herbicide. The active ingredient, flazasulfuron, will provide both post-emergence and pre-emergence (soil residual) control of key annual and perennial weeds and grasses including clovers, chickweed, dandelion, foxtail, sowthistles, nutsedge, groundsel, common mallow and ryegrass.

Belchim Canada product manager Nigel Buffone noted, "Chikara is effective in low concentrations and can provide season-long residual control which is a great benefit to grape producers."

Chikara is available as a water dispersible granule (WG) in 6 x 404 gram packaging that is easy to mix and convenient to use.

For more information contact Belchim Crop Protection Canada at info.canada@belchim.com or 866- 613-3336

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CROP PROTECTION

An update on global minor use submissions

Growers around the world share many pest management problems. However, for producers of minor crops - crops that are high in value but grown on small acreages such as fruits, seeds, forages, and other specialty crops--access to pest management tools can be limited. This is largely because manufacturers of crop protection products (fungicides, herbicides, and insecticides) find that the sales potential is not sufficient to justify investments required to register their products for use in minor crops.

Moreover, trade barriers can occur due to different standards set by countries in establishing acceptable maximum residue limits (MRL) - the maximum amount of pesticide residue, expected to remain on food products when a pesticide is used according to label directions, that will not be a concern to human health. Currently an international collaboration is hoping to harmonize standards for crop protection products - and Agriculture and Agri-Food Canada (AAFC) is part of the driving force.

The Global Minor Use Workshop first took place in 2015, in the U.S. In 2017, the second workshop was held in Montreal, bringing together specialists from more than 35 countries to exchange information and find ways to collaborate on global priorities. Experts at AAFC's Pest Management Centre (PMC) are leading two global projects from these workshops: one to control mites on greenhouse tomatoes and peppers, and the second to control downy mildew on basil.

In terms of Canadian production, in 2017 greenhouse tomatoes and peppers were valued at \$978 million, some of which were exported to eight countries. The elimination of the European Union tariffs in 2017 have further opened up this export market. While basil is an emerging market for Canadian producers, with most production consumed domestically, PMC's work on global trials will benefit this growing sector through work on both field and greenhouse basil.

Once the research trials and laboratory analyses are completed (i.e., product efficacy, crop tolerance, and pesticide residue) the PMC team will compile the data into an internationally acceptable submission package with the goal of receiving registration of the product for use in countries around the world. Ultimately, the final reports will be submitted to the United Nations Joint Food and Agricultural Organization/World

Health Organization Meeting on Pesticide Residues for review to also obtain internationally recognized (CODEX) maximum residue limits.

This work will promote simultaneous global regulatory reviews and will help harmonize trade between nations.

Source: Pest Management Centre: Dr. Jennifer Allen, David Courcelles, Shirley Archambault February 26, 2019 news release



Red spider mite on tomatoes



Downy mildew on basil

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