

A CASE FOR THE RED AND WHITE NATION

As the grape industry naturally ages, future trends emerge



Growing grapes and getting paid to grow grapes are two different things. As Gerald Klose recounts his 40 years of 'paid' duty, he points out that every season is different and that learning never stops. He was honoured this past year with BASF Canada's Cuvée Vineyard of Excellence Award. In his role as director of viticulture, east, Arterra Wines Canada, he shares some of his canopy management wisdom in a Chardonnay block at his personal Niagara-on-the-Lake, Ontario vineyard. Photo by Glenn Lowson.

KAREN DAVIDSON

The untimely death of Karl Kaiser marks a pivotal moment in the Canadian grape and wine business. At 76, he was revered as an icon of the industry co-founding Inniskillin Wines along with Donald Ziraldo in 1975. The advent – and ascent –

of Icewine in Canada is attributed to this duo. Kaiser made it. Ziraldo marketed it.

As industry friends attended his memorial in Niagara-on-the-Lake in early December 2017, they were reminded of how far the Ontario cool-climate region has evolved – in its viticultural practices, its winemaking and its marketing as a destination for

quality wine. No one knows the story better than Gerald Klose because he was at the side of these two pioneers decades ago.

“What a crazy idea we thought Icewine was,” recalls Klose, not believing that the ‘eiswein’ of Kaiser’s Austrian birthplace could be made in Canada. “We produced only 200 litres the first year.”

Klose witnessed the early failures of handpicking when it was too warm and breaking machine parts when it was too cold. Only when the farmers got to that sweet spot of picking grapes at minus 10°C to minus 12°C, did the process start to work.

“Then the machine harvester worked brilliantly with frozen

grapes that rippled through the netting like marbles,” says Klose.

Today, Gerald Klose is director of viticulture, east for Arterra Wines Canada, responsible for 650 acres and liaising with 100 growers from all appellations. With 40 seasons of experience, he’s seen it all.

Continued on page 3

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AT PRESS TIME...

OFVGA moves annual meeting to February

Mark your calendar for a new date for the Ontario Fruit and Vegetable Growers' Annual General Meeting. Instead of January, mark February 20 at the Hilton Hotel and Suites, Niagara Falls, Ontario. The streamlined business meeting is intended to attract more involvement.

Plan to attend the meeting for an update on OFVGA activities and an industry pub night, one day ahead of the Ontario Fruit and Vegetable Convention. Go to www.ofvga.org to register and for program details.

OFVC early-bird special

The Ontario Fruit and Vegetable Convention (OFVC) will be staged at the Scotiabank Convention Centre in Niagara Falls, Ontario on February 21 and 22.

Pre-register by February 14, 2018 and save \$30 off a two-day or \$20 off a single day package. The educational sessions schedule is now posted on the website at www.ofvc.ca. Speakers and topics are subject to change. New for this year is the Young Farmer Forum on Thursday, February 22. During the past several years, there has been a resurgence of younger people returning to their farming roots. This event is a way to connect with young farmers, 40 and under, from across the province while enjoying refreshments and featured speaker, agriculture



Andrew Campbell, Fresh Air Media.

advocate Andrew Campbell of Fresh Air Media.

There is no charge for this event however, interested participants must register online when purchasing the OFVC 2018 registration package. This event, scheduled for 11:45 am to 1:30 pm is open to OFVC registered attendees only. Seating is limited. Returning events, by popular demand, are: Meet the Buyer, Craft Cider Competition, The Great Ontario-Hopped Craft Beer Competition.

DRC information sessions continue

The Dispute Resolution Corporation (DRC) is continuing its outreach and education initiative pertaining to the proposed CFIA regulatory requirement for a DRC membership for Canadians who buy, sell, import or export fresh fruits and vegetables unless exempted from the requirement.

The initiative, including a

cross-country tour, is designed to help industry navigate the upcoming regulations. DRC is actively reaching out with a particular emphasis on parties not previously subject to regulation. The tour has included sessions in Prince Edward Island, British Columbia and Ontario which have ranged from 30-minute presentations to a two-hour seminar. The seminar presentation highlights trade and commerce-related changes from the existing regulations to the proposed regulations, an in-depth review of DRC's comprehensive risk management services which include education, mediation and arbitration. Member rights and responsibilities, who may file a claim, the most common types of inquiries and consultations addressed by the Help Desk, as well as a review of the DRC complaint process are also covered.

Education materials pertaining to the Safe Food for Canadians Regulations include factsheets and a series of self-assessment guides to assist in determining if one is subject to the regulatory changes or exempt. These are available on FVDRC.com in English, French, Spanish, Punjabi and Chinese.

The proposed regulations are expected to come into force mid-2018 and info sessions will continue until March 31, 2018. Members of the DRC team are available to attend your event at no cost to you. To inquire about booking a session, please contact Anne Fowlie:

DRC Help Desk | 613-234-0982 | afowlie@fvdrc.com

NEWSMAKERS

The Canadian grape and wine industry celebrated the life of **Karl Kaiser** on December 6. He was a pioneer in the ice wine business and a founding co-partner with **Donald Ziraldo**, Inniskillin Wines, Niagara-on-the-Lake, Ontario. Kaiser passed away as the result of complications from a stroke. He was 76.

The Agricultural Adaptation Council has announced its 2018 board of directors. **Kelly Duffy**, representing agribusiness, is the chair. The horticultural representatives are tender fruit farmer **Ray Duc** and vegetable grower **Jason Verkaik**.

The Prince Edward Island Potato Board has elected its board for 2018. **Darryl Wallace, O'Leary**, is the new chair, representing the processing sector. He is joined by **Jason Hayden**, Pownal, vice-chair and



Darryl Wallace

John Hogg, Summerside, secretary-treasurer. **Chad Robertson** is joining the board for the first time. Remaining directors include: **Rodney Dingwell, Alex Docherty, Fulton Hamill, Glen Rayner, Wayne Townshend, David Francis, Mark MacMillan** and **Harris Callaghan**.

Canadian berry growers welcome the appointment of **Dr. Beatrice Amyotte** to the position of Research Scientist, Small Fruit Germplasm Development, with Agriculture and Agri-Food Canada. She is stationed at the Kentville Research and Development Centre in Nova Scotia, continuing the work of **Dr. Andrew Jamieson** who has retired. Previously involved with the apple breeding program at Vineland Research and Innovation Centre in Ontario, she is now devoted fulltime to developing improved strawberries, raspberries and blackberries for the Canadian small fruit industry.

Asparagus Growers of Ontario have elected a new slate for 2018. They are: **Rebecca Compton**, chair; **Mike Chromczak**, vice chair; and directors: **Joe Koteles, Peter Streef, John Jaques, Marc Wall, Brenda Lammens** was recognized posthumously for her contributions over the years. **Ken Wall** was also recognized for his service as a director and chair.

The Ontario Potato Board has installed its 2018 board of directors. **Glenn Squirrell** remains chair as does **Harry Bradley**, vice-chair. Newly elected board member is **Brad Blizman**. They are joined by directors **Shawn Brenn, Homer Vander Zaag** and **Bert Tupling**.

The Potato Growers of Alberta have a new board chaired by **Russell Van Boom**, Northbank Potato Farms Ltd. Vice chair is **Michel Camps**, CP Farms. Directors include: **Lyndon Nakamura**, Nakamura Farms Ltd.; **Jeff Ekkel**, Sunnycrest Seed Potatoes Inc.; **Tony Bos**, Boston Farms Ltd.; **James Bareman**, Bareman Farms; **Louis Claassen**, Claassen Farms Ltd.

Industry veteran **Mike Mauti** recently launched Execulytics Consulting in the Greater Toronto Area, promising to bridge the gap between produce suppliers and produce buyers. Two decades in fresh retailing led him to develop products that prepare suppliers to better negotiate with retailers. Go to execulytics.ca/produce-division or email him directly at mike@execulytics.ca.

Congratulations to three women inducted into the Canadian Agricultural Hall of Fame on November 30. **Robynne Anderson** began her career as a legislative assistant to the Deputy Prime Minister's Office, working on the new Plant Breeder's Rights Act. After her government career she created Issues Ink, a consulting firm that worked closely with the Canadian Seed Trade Association. Over the years, she founded and published several agricultural magazines including *Germination* and *Spud Smart*. **Patty Jones**, esteemed livestock photographer, and **Jean Sznolnicki**, president of the Canadian Animal Health Institute for the last 25 years, were also honoured.

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COVER STORY

As the grape industry naturally ages, future trends emerge



What a crazy idea we thought Icewine was. We produced only 200 litres the first year.

~ GERALD KLOSE



Continued from page 1

“We’ve had drought, hail, early frost, late frost, bitter winters,” says Klose. “No two summers are alike. For example, 2017 had a lot of rain so we were dealing with downy and powdery mildew and botrytis.”

Consolidation

The lineage of Arterra Wines Canada is a story in itself, descending from the Vincer – Constellation Brands era. A year ago, October 2016, the Ontario Teachers’ Pension Fund bought the Canadian operations of American-owned Constellation Brands.

Importantly, this is much more than a patriotic move to wave the red-and-white Canadian flag. The \$1.03 billion investment signals a deep confidence in the business and growth opportunities of the domestic grape and wine industry. The acquisition included seven of the top 20 wine brands in Canada, including the well-known Inniskillin and Jackson-Triggs labels.

Secondly, the consolidation embraces a pan-Canadian vision, including many wineries in the southern stretch of the Okanagan Valley in British Columbia. This is diversification in the true sense because of the arid to semi-arid climate, varying terroir, aspects and elevations which produce award-winning red wines. Within a 30-minute drive, there can be a range of 1,100 to 1,600 growing degree days explains Troy Osborne, director of viticulture, west, also for Arterra Wines Canada.

“Land is finite in the Okanagan Valley and land prices are at an all-time high,” he says. “It was only two years ago that the valley was in over-supply whereas today, with the increased demand for Okanagan VQA, we are experiencing an increasingly short supply. Many growers and wineries are expanding vineyards to bridge this gap.”

Based in Oliver, British Columbia, he oversees 1,100 acres and works with 35 to 40

growers who are keenly in step with their terroir. Every block of grapes has an end destination before pruning begins. If the target is to produce a \$30 bottle of Merlot, then the crop load is managed differently than if the target is a \$12 Merlot.

With consolidation comes the capital to mechanize. Osborne says 85 per cent of his crops are machine harvested. That’s good news in an environment of increasing labour shortages. However, as owners of family estate wineries exit for well-earned retirements, there is a dearth of talent and skills to work at all levels of vineyards and wineries.

“The next pinch will be finding qualified vineyard staff,” predicts Osborne. “We need vineyard managers and technical specialists.”

The courts

While Canada’s 700 wineries need skilled talent, they also need new consumers. It’s a surprising fact that of all Canadian sales of wines, only 32 per cent are of domestic origin. No matter where wineries are rooted in Canada, they need to expand the domestic market, and that often means beyond provincial borders.

As John Peller – of Peller Estates fame -- recently wrote in the *Globe and Mail*, only British Columbia, Manitoba and Nova Scotia have the right to directly deliver their products beyond provincial borders. That’s why the Canadian Vintners Association has gained intervenor status in a case now being deliberated by the Supreme Court of Canada. It would be considered a giant step forward into the 21st century to gain this right for Canadian wines.

China, two ways

Nowhere are the challenges of the 21st century felt more keenly than in British Columbia. Chinese investment is driving up land costs. Look for example to the Black Sage bench, the site of a new winery called Phantom Creek Estates. Slated to open in 2019, the facility will include a production



and bottling area, a restaurant, sales and administration and an outdoor entertainment venue. Cost of the land and winery? \$100 million.

Chinese industrialist Bai Jipin has gained a taste for Bordeaux-style wines, and sees an opportunity for a vine-to-wine vertically integrated operation. British Columbia’s reputation for Cabernet Sauvignon, Merlot and Cabernet Franc fits his vision.

Thousands of miles away, China’s growing middle class beckons. Ontario premier Kathleen Wynne led a trade mission last month that included several grape growers.

“The Canadian brand is immensely strong,” says Sue-Ann Staff, representing her own eponymous label in Jordan, Ontario. “Chinese consumers regard Canadian products as clean, pure, well-made and honest. The authenticity and traceability features are very important to their food and wine purchases.”

Staff has visited China on prior trips, but this was the first time on behalf of Sue-Ann Staff Estate Winery. Her hopes are to sell Icewine, but understands that much education will be required.

“This is a very challenging endeavour,” she says. “We need to teach the Chinese how to drink it, not to mix with gingerale. And to drink it neat. It’s feet on concrete in this marketplace.”

Contrary to the name of Icewine, it’s not served with ice. Staff is happy to be nicknamed the “Ice Queen” if that translates well to the Chinese culture. Before their memories melt, she’ll be following up in China in March.

Karl Kaiser would have been proud of her tenacity.

Editor’s note: For our Behind The Scenes podcast with Sue-Ann Staff go to: www.thegrower.org/podcast



Sue-Ann Staff was a participant in the Ontario premier’s trade mission to China and Vietnam which ended in early December.

A tribute to Karl Kaiser, 1941 - 2017

Today, the Ontario grape and wine industry is an economic driver with 500 growers generating more than \$100 million in annual farmgate revenue. According to the 2017 report -- Canada’s Wine Economy: Ripe, Robust Remarkable -- the economic impact of the provincial grape and wine industry is \$4.4 billion.

Red and white hybrids, particularly Baco Noir and Vidal, fit the Ontario terroir. Another example is Chardonnay vinifera which is flexible for sparkling wines, tank fermenting with no oak, or barrel aging with oak. It’s also an asset for blending. Most commonly used for Icewine are Vidal (hybrid) and vitis vinifera grapes: Cabernet Franc, Riesling, Cabernet Sauvignon and Gewurztraminer.

According to Statistics Canada, national Icewine exports have grown from 222,731 litres valued at \$15.4 million in 2012 to 336,355 litres valued at \$19.4 million in 2016. Icewine represented 24.2 per cent of total export value and 0.5 per cent of export volume in 2016. Ontario is Canada’s largest exporter of Icewine valued at \$17.1 million in 2016. There were 87,076 nine-litre cases of Icewine produced in 2016.



As Karl Kaiser told one interviewer, “The location where we made our first wines was owned by the commander of the Inniskillin regiment during the War of 1812.”



CROSS COUNTRY DIGEST

MANITOBA

Vegetable bundles raise more than \$3 million for school fundraising

Peak of the Market has steered a Farm-to-School Fundraising program to ever greater success. With the last bundles delivered before Christmas 2017, the total is more than \$3 million raised over seven years for prairie schools and licensed daycares.

“This program has expanded from Manitoba to Alberta -- where we have a distribution centre -- to Saskatchewan and northern Ontario,” explains Larry McIntosh, CEO, Peak of the Market. The farmer-owned

cooperative based in Winnipeg, Manitoba is committed to the program that runs from mid-September to late December. Over the years, 5.6 million pounds of vegetables have been delivered. Fifty per cent of the price of a \$12 bundle of carrots, onions and red potatoes goes directly to the school. The same holds true for a \$22 bundle of carrots, onions, parsnips, cabbage and red potatoes.

The program is totally coordinated with in-house staff and promoted by the Manitoba



Association of Home Economist. It’s a challenge to work on the logistics because sometimes truck, train and airplanes are required to deliver produce to northern Ontario communities such as Thunder Bay, Kenora and Dryden. “My favourite story is figuring out how to fly bundles

to a small town in northern Manitoba where skidoos pick up the delivery and transport it to a reserve,” says McIntosh. “It may cost us \$2,700 to deliver a \$500 package but we think it’s worthwhile to do.”

What’s also heartwarming is the fact that many schools donate vegetable bundles to

local food banks. In the last four years, half a million pounds have been donated.

“This is a labour of love for us,” says McIntosh, on behalf of the 20 family-farm members. “It’s important to support the health of Canadians.”

QUEBEC

Quebec’s Outstanding Young Farmers win national competition



Francois Handfield and Veronique Bouchard were honoured at Canada’s Outstanding Young Farmers event for their business success and organic brand built in Mont-Tremblant, Quebec. The annual event was hosted in Penticton, British Columbia in early December.

The OYF program is open to farmers 18 to 39 years of age who make the majority of their income from on-farm sources. Seven regional honourees and two national winners are chosen each year based on the following criteria:

- Progress made during their farming career
- Maximum use of soil, water and energy conservation practices
- Crop and livestock production history
- Financial and management practices
- Contributions to the well-being of the community, province and nation

With no farm history but shared values and dreams, Veronique and Francois became owners of “ferme aux petits oignons” where they grow more than 65 different vegetables, aromatic herbs, flowers and fruits that are certified organic by Ecocert Canada. Protecting soil, water and energy is important. They market their products through a summer market, their own store and through internet subscriptions for organic baskets. Veronique has a Masters in Environment and Francois is a bioresource engineer.

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RISK MANAGEMENT

Process for accessing \$60M hort funds

KAREN DAVIDSON

The Ontario agriculture ministry has announced \$60 million in two-year SDRM-like funding for the province's edible horticulture sector. Funding was announced in Ontario's fall economic statement.

"We understand that no application process is needed for any grower already enrolled in the Self-Directed Risk Management (SDRM) programs," says Mark Wales, chair of the safety nets section of the Ontario Fruit and Vegetable Growers' Association (OFVGA). "That number is about 2,100."

Monies are projected to flow

in the spring of 2018 based on Allowable Net Sales for 2016. The same will occur in the spring of 2019 based on Allowable Net Sales for 2017.

For those growers not actively participating in SDRM, a window early in the new year will be open to receive applications for funding in both eligible years. Growers will be required to supply a premises ID number and/or 2016 tax data. Full program details will be available on the Agricorp website early in the new year.

"We continue to communicate to government that horticultural growers face daunting challenges to compete in a global marketplace with perishable produce," says Wales.

Small business tax changes loom



Bill Morneau, federal finance minister, explains new rules for income sprinkling.

2018 is the year to take careful stock of your financial arrangements. Thanks to the federal government's changes to tax law, three major issues affect agriculture says Mark Wales, chair of the safety nets section of the Ontario Fruit and Vegetable Growers' Association (OFVGA).

Income sprinkling – the practice of giving dividends from a small business corporation to a spouse or children for work – is a common practice on the farm. While a contribution test is likely to be instituted, the barriers will not be high for those in agriculture, Wales predicts. This tax change was debated in the House of Commons on December 13 and is expected to receive Royal Assent in March 2018.

Changes to the treatment of capital gains are not expected to affect farmers and their ability to pass the farm to the next generation.

Of more concern is the

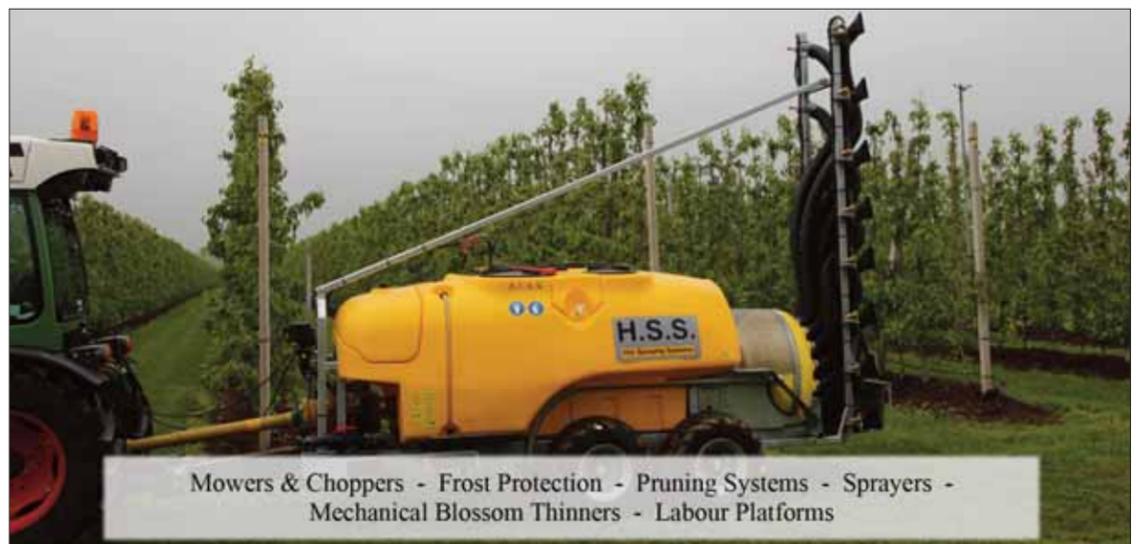
future treatment of passive investments says Wales. This topic may not affect farmers as much as professionals such as lawyers and accountants. That said, Wales urges farmers to understand what is projected to happen in the 2018 tax year. If farmers invest profits in a real estate property, guaranteed investment certificates or other instruments, then the income from these investments is currently taxed at 50 per cent. As Wales explains, most farmers don't leave free cash invested for long. It is usually reinvested into land or equipment.

"The question for farmers is do they come out and declare having passive investments and pay 50 per cent tax on the annual profits from these investments or do they continue to fly under the radar? My guess is these individuals will be at high risk if they are caught and the penalties will be onerous," concludes Wales.



Photo by Glenn Lowson

“ We continue to communicate to government that horticultural growers face daunting challenges to compete in a global marketplace with perishable produce ~ MARK WALES ”



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CANADIAN HORTICULTURAL COUNCIL

Positive outcomes for Seasonal Agricultural Workers Program

Members of the Canadian Horticultural Council (CHC) were recently in Barbados for the 2017 Annual Review Meeting of the Canadian/Caribbean Seasonal Agricultural Workers' Programme (SAWP). According to Murray Porteous, chair of CHC's Labour Committee, it was the "most congenial and positive meeting we've had in at least six years. Everyone was very happy with the outcomes."

First, Employment and Social Development Canada (ESDC), the ministry responsible for administering the SAWP in Canada, will be dropping the requirement for Canadian employers to advertise for two weeks before workers can be transferred between farms. Employers will still have to apply for a Labour Market Impact Assessment (LMIA), but the requirement to advertise for two weeks has been removed. CHC is asking the government to go even further and drop the requirement

to advertise a position when a worker needs to be replaced completely in the event of a grave illness or family emergency). The government is now considering this request.

ESDC remains focused on worker protection and gender equity, in both the SAWP as well as the Temporary Foreign Worker program (agricultural stream).

Because various sectors seem to attract a predominance of one gender over another, CHC encouraged the government to consider employment equity between genders at a country level, rather than at an industry or sector level. If one looks at all workers from Barbados who are employed in a Canadian job, it is possible that both genders are much more equally employed than they would be if looking at just one specific industry. Farming, for example, tends to hire more men, versus hospitality and homecare, which tends to attract more women.

The Seasonal Agricultural

Workers Program (SAWP) is a tripartite agreement between Canada, Canadian employers, represented by Foreign Agricultural Resource Management Services (FARMS) in Ontario, Fondation des Entreprises en Recrutement de Main-d'œuvre agricole Étrangère (FERME) in Quebec, and the BC Agricultural Council, and participating CARICOM countries. The Canadian Horticultural Council is a signatory of this agreement. In this context, the role of the CHC Labour Committee chair is to build consensus and understanding between Canadian employer groups and Canadian government representatives.

SAWP has been incredibly positive for employers, workers and source countries. The SAWP contract is reviewed every year so that it can continue to be refined and improved.

SAWP celebrated its 51st anniversary this year.



From left to right: 1) Phillipe Massé, Director General, Temporary Foreign Workers Program, Employment and Social Development Canada; 2) Her Excellency Yvonne Walkes, High Commissioner of Barbados to Canada; 3) Jacinthe Roberge-Binovec, Immigration Programme Manager, High Commission of Canada in Trinidad and Tobago; 4) Senator Dr. Hon. Esther Byer Suckoo, Minister of Labour, Social Security and Human Resource Development, Barbados; 5) Nathalie Smolynec, High Commissioner of Canada in Jamaica; 6) Murray Porteous, National Labour Chair, Canadian Horticultural Council.

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to attract a predominance of one gender over another, CHC encouraged the government to consider employment equity between genders at a country level.

Canadian Agricultural Partnership to launch April 1

Announced in July 2017, the Canadian Agricultural Partnership, is a five-year, \$3 billion federal-provincial-territorial investment in Canada's agriculture and agri-food sector. The program is set to launch on April 1, 2018.

According to the announcement, the government is focused on growing trade and expanding markets, innovative

and sustainable growth, and supporting a diverse, dynamic, and evolving sector. Six federal programs will support these priorities and the long-term prosperity of the sector.

- AgriMarketing
- AgriCompetitiveness
- AgriScience
- AgriInnovate
- AgriDiversity
- AgriAssurance

CHC strategy for AgriScience



Since 2016, the Canadian Horticultural Council (CHC) has been working with apple, berry, potato, greenhouse, and vegetable grower groups, in addition to researchers and industry stakeholders, on a series of strategy documents covering several priority areas, including pest management, variety evaluation, energy, and labour efficiency.

In 2017, CHC put out a call for expressions of interest and proposals, and has been working on collecting peer reviews and confirming financial support.

We are currently in the final stages of developing applications and intend to submit applications for all commodity groups by the February 1, 2018 deadline.

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INTERNATIONAL

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Robotizing the lettuce industry



Taylor Farms, a major grower of lettuce, is rapidly developing platforms for robotic thinning, weeding, spraying and harvesting. About 95 per cent of the company's romaine lettuce now comes to market thanks to automated harvesters. Significant investments have been prioritized by looking at where to clear bottlenecks and how to improve ergonomics for employees.

The robotic arms in the Salinas-California processing facility have the ability to assemble 60 to 80 salads a minute, which is double the output of packing by hand. This type of automation creates opportunities for higher skilled positions, directing employee growth to roles where they are supervising automated lines or focusing on quality control.

Source: FreshPlaza.com

GERMANY

Fruit Logistica shortlists top 10 innovations



Berlin, Germany will be the centre of the produce universe on February 7-9. Increasingly, many Canadian growers are making the transatlantic flight to check on the latest technology and products at Fruit Logistica.

One of the most popular aspects of the show is the Innovation Awards. The top 10 nominees have been published out of 70 submissions. They can be products, services or technical advancements. One of the nominees is "LogoFrucht" by German company, Kellermeister Manns.

It's a process for printing on fruits and vegetables of any shape. Round objects can be accurately and individually printed with a neutral, water-resistant, high-contrast food colouring which is gentle on the product.

NETHERLANDS

Calling all berry growers



An International Soft Fruit Conference will be hosted in the Netherlands on January 11. The host is BVB Substrates and Delphy and the venue is Hertogenbosch.

Confirmed speakers for the conference are: Marc Kenis, CABI, Switzerland (Biocontrol of *Drosophila suzukii*), Bart Jongenelen BSc, Researcher Strawberry, Delphy (Evolution of the everbearer: results of today and the opportunities of tomorrow), Jurgen Verheyen, Crop specialist berries, Biobest (Thrips biological control in strawberries and other soft fruit).

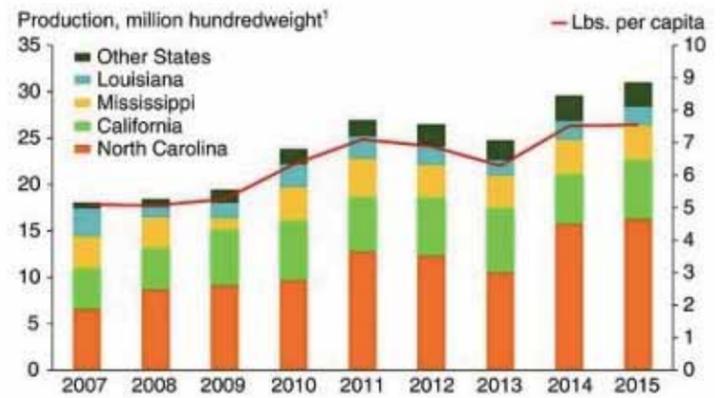
One presentation to consider: Say goodbye to gut feelings, start leveraging your data. A field trip on January 12 will focus on glasshouse-grown blackberries.

For more details, go to: www.softfruitconference.com/

UNITED STATES

Sweet potatoes continue to gain favour

U.S. sweet potato production and per capita availability on the rise



¹Hundredweight is equal to 100 pounds. Sources: USDA, National Agricultural Statistics Service QuickStats database and USDA, Economic Research Service calculations.

Statistics show that U.S. production of sweet potatoes hit a record in 2015 with 3.1 billion pounds. That's a peak for production since World War II. North Carolina, California, Mississippi and Louisiana are the top-producing states.

The popularity of the vegetable has grown with the promotion of its antioxidant properties.

Source: FreshPlaza.com

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- Grower-friendly plant
- Bicolor SE variety



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Beautifully refined ear and kernels

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- Superior eating quality
- Attractive, large ear - glossy kernels
- Excellent field holding ability
- Relative maturity: 74 days

ECONOMIC ANALYSIS

Competitiveness and the cost of doing business in Ontario

Editor's note: This is a reprint of the executive summary of "Competitiveness of the Ontario Fruit & Vegetable Sector." Presented by JRG Consulting Group.

The Ontario fruit and vegetable sector is a price taker, which implies that as costs increase within the production sector that these higher costs cannot be passed through to consumers. It also means that as downstream supply chain partners, such as packing operations, incur higher costs, then these higher costs are passed back to growers through lower net farm gate prices.

This report shows that the Ontario fruit and vegetable sector will be adversely affected by three policies of (1) higher minimum wages, (2) low carbon economy policies initiated by the province of Ontario and by the federal government and (3) the higher electricity prices that are expected to be place within Ontario in a few short years. All of these increase the cost of doing business in Ontario.

- The higher minimum wage will increase labour costs by at least \$150 million per year, which is a 6.9% point decrease in sector profitability;
- Carbon taxes associated with the low carbon economy

Table 1 Impact of Policy Changes on the Ontario Fruit and Vegetable Sector

| Item | Fruit \$ million | Vegetables \$ million | Potatoes \$ million | Greenhouse \$ million | Ginseng \$ million | Shipping \$ million | Total \$ million |
|----------------------|---------------------|--------------------------|------------------------|--------------------------|-----------------------|------------------------|---------------------|
| Pre-Policy | | | | | | | |
| Labour | \$123.4 | \$166.4 | \$30.1 | \$203.1 | \$41.4 | | \$564.4 |
| Low carbon | \$10.4 | \$11.9 | \$3.8 | \$97.5 | \$1.0 | | \$124.5 |
| Electricity | \$6.4 | \$10.5 | \$3.5 | \$21.9 | \$1.4 | | \$43.7 |
| Total Above | \$140.1 | \$188.7 | \$37.5 | \$322.5 | \$43.8 | | \$732.6 |
| Share of Revenues | 48% | 25% | 33% | 45% | 18% | | 35% |
| Policy Impact | | | | | | | |
| Labour | \$33.6 | \$42.8 | \$6.9 | \$56.9 | \$12.3 | | \$152.5 |
| Low carbon | \$1.6 | \$1.9 | \$0.6 | \$45.3 | \$0.2 | \$5.7 | \$55.3 |
| Electricity | \$3.6 | \$6.3 | \$1.9 | \$11.0 | \$0.8 | | \$23.6 |
| Total Above | \$38.8 | \$51.0 | \$9.5 | \$113.1 | \$13.3 | | \$231.3 |
| Share of Revenues | 13% | 7% | 8% | 16% | 6% | | 11% |
| Future State | | | | | | | |
| Labour | \$157.0 | \$209.2 | \$37.1 | \$259.9 | \$53.7 | | \$716.9 |
| Low carbon | \$12.0 | \$13.7 | \$4.4 | \$142.8 | \$1.1 | \$5.7 | \$179.7 |
| Electricity | \$9.9 | \$16.8 | \$5.5 | \$32.9 | \$2.2 | | \$67.3 |
| Total Above | \$178.9 | \$239.7 | \$47.0 | \$435.6 | \$57.0 | | \$963.9 |
| Share of Revenues | 61% | 32% | 42% | 61% | 24% | | 46% |

initiatives will decrease farm sector returns by another \$55 million, which reduces profitability by 2.5%;

• Higher electricity costs, which can be expected to occur within the next few years, will increase costs by \$24 million (from a 2017 cost base), which decreases profitability by 1.1%. The combined impact of \$231 million of higher costs, which is 11% of marketplace revenues, are costs that cannot be passed through; rather they directly decrease profitability by the same amount.

The sector, in all probability, is operating with net profit margins that are less than 10%

of sales. As a reference point, Statistics Canada reports (based on tax-filer data) that net income (after considering capital cost allowance) was less than 6% for the sector (in 2013 and 2014).

Statistics Canada also reported that the contribution margin (EBITDA as a percent of revenues) was 15.4%, which means that the contribution margin decreases to only 4.4%. This is insufficient to cover interest costs, debt repayment obligation, depreciation, and a return to owners' equity.

The simple conclusion is that after these policies are in effect, the Ontario fruit and vegetable



Photo by Rosemary Chaput

sector will be operating at a loss and will not be able to invest in maintaining current output levels. Without redress, over time some growers will exit the business and overall output will decline, with the sector offering fewer fruits and vegetables to Ontarians. The economy will also be negatively affected with the sector making a much smaller contribution to the overall Ontario economy through jobs and tax revenues for all three levels of government.

The greenhouse vegetable sector is one of the sectors that is most affected by these policies since greenhouse vegetable production requires intensive use of labour, natural gas and electricity. The value of these greenhouse vegetable crops as they leave the greenhouse is over \$800 million, with costs increasing by \$113 million, which is 16% of revenues. Net profit margins are much less than this 16%, which simply means that any positive cash flow realized by the greenhouse vegetable industry is through living off of depreciation, for those that have few liabilities on the balance sheet. With contribution (EBITDA) margins of 20% to 25% a 16% decrease to 4% to 9% contribution is not sustainable; as this minimal contribution margin must cover interest payments, debt payments,

depreciation and a return to owner's equity.

The fruit sector (e.g., apples, other tree fruits, grapes, berries) will be primarily affected by higher labour costs, since 42% of market place revenues is paid to labour, with labour costs increasing by 27% due to the higher minimum wage. After the three policy changes are in effect, labour and energy will account for 60% of marketplace receipts for the average fruit grower. This 13% increase in costs cannot be passed through to the market and fruit growers will also have negative profit margins.

The general conclusion is that the fruit and vegetable sector will be adversely affected by higher labour costs, higher natural gas, propane and fuel costs due to low carbon economy policies and by the on-going trend of much higher electricity prices (despite the temporary reprieve). Growers will need to invest in labour-saving and energy-saving technologies to have a chance of being in business in the near future. Unfortunately the much lower margins (contribution or profit) will not allow for such investment for many growers. One approach is for government policy to offer programs that enable growers to invest in the future.

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POTATO PRODUCTION

Dickeya is a seed issue



Photos by Gary Secor

KAREN DAVIDSON

The continuing outbreaks of *Dickeya dianthicola* are worrying the North American potato industry. It's a seed disease that can destroy an entire crop of potatoes. Since its first detection on the eastern seaboard of the U.S. in September 2014, researchers have documented outbreaks every year up to and including 2017.

Because so many questions still remain, researchers and extension workers at the University of Maine hosted a summit in November 2017. Jan M. van der Wolf, a researcher from Wageningen University in Europe says the initial sources are still unknown but the likely suspects are machines and airborne infection. The use of clean, certified seed is paramount.

"*Dickeya* is a seed issue," says Steven Johnson, University of Maine potato extensionist. "The symptoms in the U.S. are different than in Europe. The symptoms in the eastern U.S. are different than those in the western U.S."

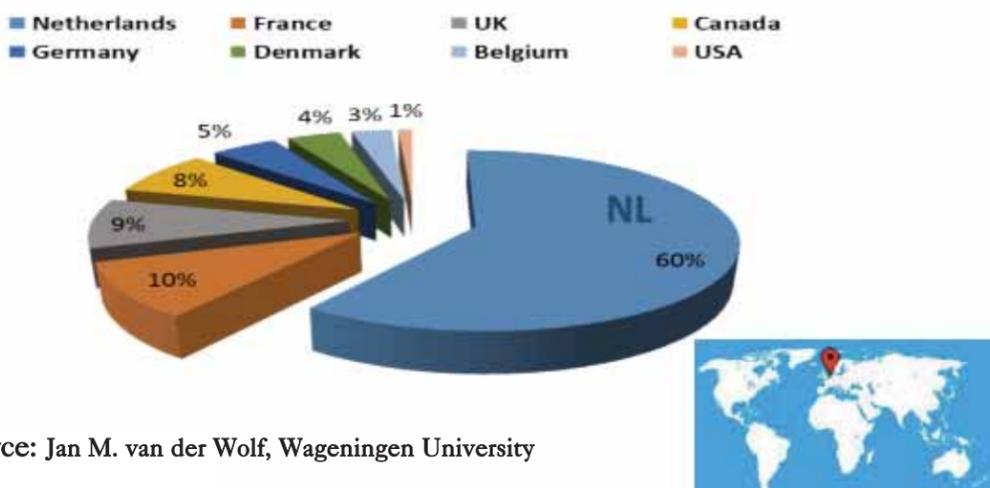
Dickeya is a bigger problem in some seed lots and in some seed varieties than others. Even low levels of *Dickeya* can cause damage. It spreads rapidly with potato handling and builds up quickly in subsequent seed generations. *Dickeya* does not survive well in soil, however it thrives in water.

Johnson notes that *Dickeya* can cause significant field losses although visible and apparent symptoms are absent in the seed. The most damage occurs when temperatures exceed 77°F.

"We don't know what we have besides *Dickeya*," says Johnson, inferring a mystery culprit. More scientific enquiry is needed to understand the thresholds for certification, sublethal infection spread, epidemiology and etiology.

Growers should look for symptoms such as: stem rot, hollow stems (not black slimy stems) and vascular discoloration. For proper identification, send a tissue sample to a laboratory for PCR tests.

INTERNATIONAL SEED POTATO TRADE



Source: Jan M. van der Wolf, Wageningen University





6



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Lessons from the trade mission to China



JAN VANDERHOUT
CHAIR, OFVGA

I recently returned from the Ontario Premier's trade mission to both China and Vietnam. It was an excellent opportunity to take a close look for potential market opportunities in the two countries as well as to network with government officials, civil servants and other people in industry who were also part of the delegation.

There were three groups on the mission: one from science and technology, one from medical technology and the other, which I was part of, from agri-food. Each day the three delegations would split into separate meetings to hear more about the opportunities in the city we were attending, meet with potential trading partners and make some relevant site visits. In each case we heard about trade volume of the city, the population and the growth over the last number of years, projected GDP, population and growth for the coming years. At the beginning and end of each country there was also a reception which included some high-profile people from the host country.

China has an advanced emerging economy which presents some potential opportunities for Ontario producers. Growers of greenhouse cucumbers are leading the charge with the intent to be selling regular volumes into the Chinese market early next year. The hope is that, in time, tomatoes and peppers will also have access to the China market. China presents an opportunity to sell premium-quality products into a market where quality, flavour, food safety standards and Canadian image are highly valued. Vietnam has fewer market

opportunities as its economy is not yet as vibrant as China's. Perhaps in the future Vietnam will present some opportunity.

It may be worth pursuing the sale of some premium fruit crops as I received many questions from potential buyers and importers about the availability of fruits and vegetables from Canada. After touring some grocery stores, I believe that the products most in demand would be apples, peaches and pears. Other fruits with a significant volume of supply may also be worth considering. The Chinese buyers were sometimes very concerned about price which will be difficult for us to meet due to our premium production and transportation costs. For the high end market we may have just what they are looking for in their boutique grocery stores and markets. Products such as Ontario Honey Crisp and Ambrosia apples are potential candidates for the Chinese market. Apples are a good fit because they can be stored making sea freight journey of one month a real possibility. Other more perishable products such as tender fruit can be shipped by air freight which naturally comes at an additional cost.

If you are wondering how many of those Chinese people could possibly be interested in a high-cost product, there are some stats to consider. First, the population of China is approximately 1.4 billion with the population in some major cities exceeding the population of the province of Ontario. The Pearl River Delta in south eastern China has a population of 120 million people. If only one out of every thousand people can afford our products that is still a huge potential market for premium-quality, safe and nutritious Canadian produce. It is also certain that the Chinese consumers recognize the value of our produce grown with clean Ontario water, something we Ontarians take for granted.

Some of the products promoted on the mission include maple syrup, wine, Icewine, dried cherries, cherry juice, greenhouse cucumbers, greenhouse tomatoes, greenhouse peppers, ginseng, soy



Jan VanderHout, chair of the Ontario Fruit and Vegetable Growers' Association visits with Ontario premier Kathleen Wynne on the recent trade mission to China.



beans, baked goods, craft beer, apples, pears, and peaches. If production were available, there would be huge demand for fresh berries and cherries as well.

The promise of Chinese markets

Access to the Chinese market is not a certainty and there are many challenges to overcome. Many products would need to be cleared for import into China as they manage bio-security and phytosanitary risk especially with

respect to pests and disease. Logistics, importation and distribution also need to be considered once product enters China and naturally payment terms and an assurance that the seller will be paid in full.

The province of Ontario, the Premier's Office and the Ministry of International Trade did an excellent job of organizing and executing the missions in both countries. Many meetings and tour buses and flights were organized in almost perfect timing. This was very well planned and a job well done by both political staff as

well as the civil service.

I believe that China holds some opportunities for those who want to invest the time and money into exploring and developing the market for their products. What products and in what time frame I do not know but I certainly feel that there is potential in that area of the world to access a market that will appreciate the quality and flavour we pack into everything we grow.

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THE GROWER

PERSPECTIVE



No relief in sight for pressure on farmers



OWEN ROBERTS
U OF GUELPH

Magic doesn't happen when the calendar turns. But trends may take hold, especially in an election year like the one Ontario will experience.

Politically, and some say practically, the province is torn between urban and rural. Food is one thing that unites us, and the interest in its production in rural Ontario continues to grow. As that happens, it will intensify as a political issue.

In 2018, you'll hear a lot of campaign promises about saving taxpayers money, and how governments are going to help citizens deal with the rising cost

of getting by.

At some point, the focus will fall on the rising cost of food, as it always does. The annual food price forecast by the University of Guelph and Dalhousie University predicts food prices will rise one to three per cent in 2018. That's a little less than \$350 a year, on a family's annual food bill that will grow to almost \$12,000.

That rise is unexpectedly modest, especially when researchers break it down and note about \$200 of the anticipated \$350 will come from consumers eating out more, and opting for prepared food. That's where they're putting their food dollars.

Meals out have to be prepared and served by someone. That costs money, particularly in a province where minimum wage is on the rise.

So if the remainder of the one to three per cent rise in food prices must be shared among the entire food chain, there isn't much to go around. Politicians need to take note of this reality when they make policies and create standards

that affect rural Ontario.

Sure, we need impeccable and irrefragable standards, not only for our own sake, but to maintain and grow export markets, a provincial imperative. It's become clear that well-oiled export-seeking bureaucracies are using our environmental standards as a point of distinction compared to our competitors, and rightly so. The clean, green, pristine image abroad of Ontario and Canada could hardly be a better selling point.

But a prosperous economy depends on an equally prosperous agri-food sector. Research is showing that producers are under tremendous pressure in the face of a more demanding public, and that it's a major factor in mental illness problems on the farm. It's a real issue, and producers need help to meet the growing demands being put on them.

From everything I've read, part of the pressure is coming from the public's lack of understanding of agriculture. Many producers feel vilified and victimized. Current efforts



Food prices are expected to rise one to three per cent in 2018.

to connect agriculture with urban Canada are inadequate, relegated to too few people with huge mandates and miniscule budgets. And there's no prediction anywhere that 2018 will see a meaningful bump in the commitment to connect rural and urban Ontario.

A bright spot on the horizon for the fruit and vegetable sector is the part of the food price forecast that says half of all consumers want to make plant protein more a part of their diet. There's some suggestion that insect protein will have a role in their non-meat protein choices too, but really, it's no substitute for fresh produce. A key will be helping

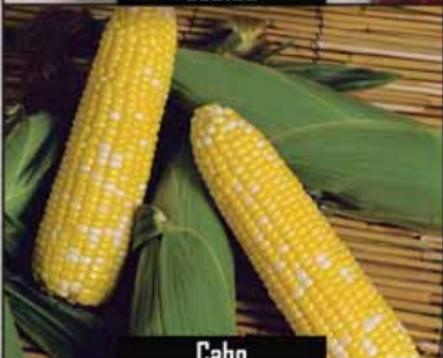
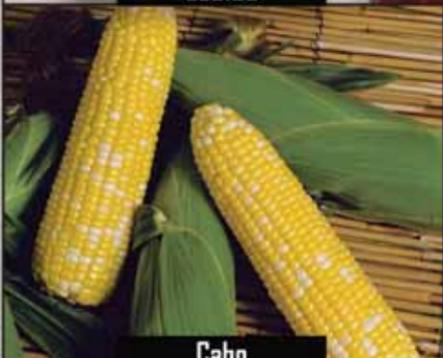
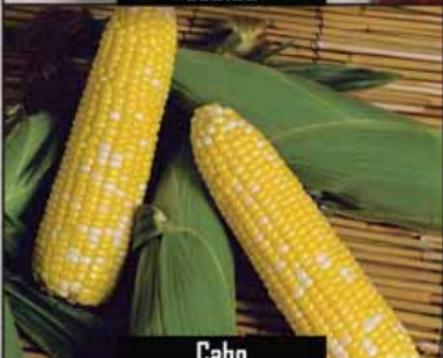
consumers figure out how to stop wasting produce once they get it home. As prices crawl up, waste will become increasingly irksome to consumers who make healthy choices, only to see them spoil.

And finally, the food price forecast says consumers are likely to take a harder look at animal welfare in 2018, prompted in part by global efforts to reduce antibiotic use throughout society. This doesn't directly affect fruit and vegetable growers. But it certainly adds to the overall uncertainty consumers feel about what goes on behind the farm gate – and what they can be led to believe.

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TRANSPORTATION

Electronic logging devices now in effect in U.S.

The United States now has a mandate for Electronic Logging Devices (ELD) which went into effect December 18, 2017. Jennifer Morris, president, Two Roads Logistics, has created a one-page information sheet for customers, urging them to understand the new rules.

The electronic logging device (ELD) rule is intended to help create a safer work environment for drivers, and make it easier and faster to accu-

rately track, manage, and share records of duty status (RODS) data. An ELD synchronizes with a vehicle engine to automatically record driving time, for easier, more accurate hours of service (HOS) recording.

If more information is needed, go to the Federal Motor Carrier Safety Administration website: www.fmcsa.dot.gov/



Electronic Logging Device Mandate.

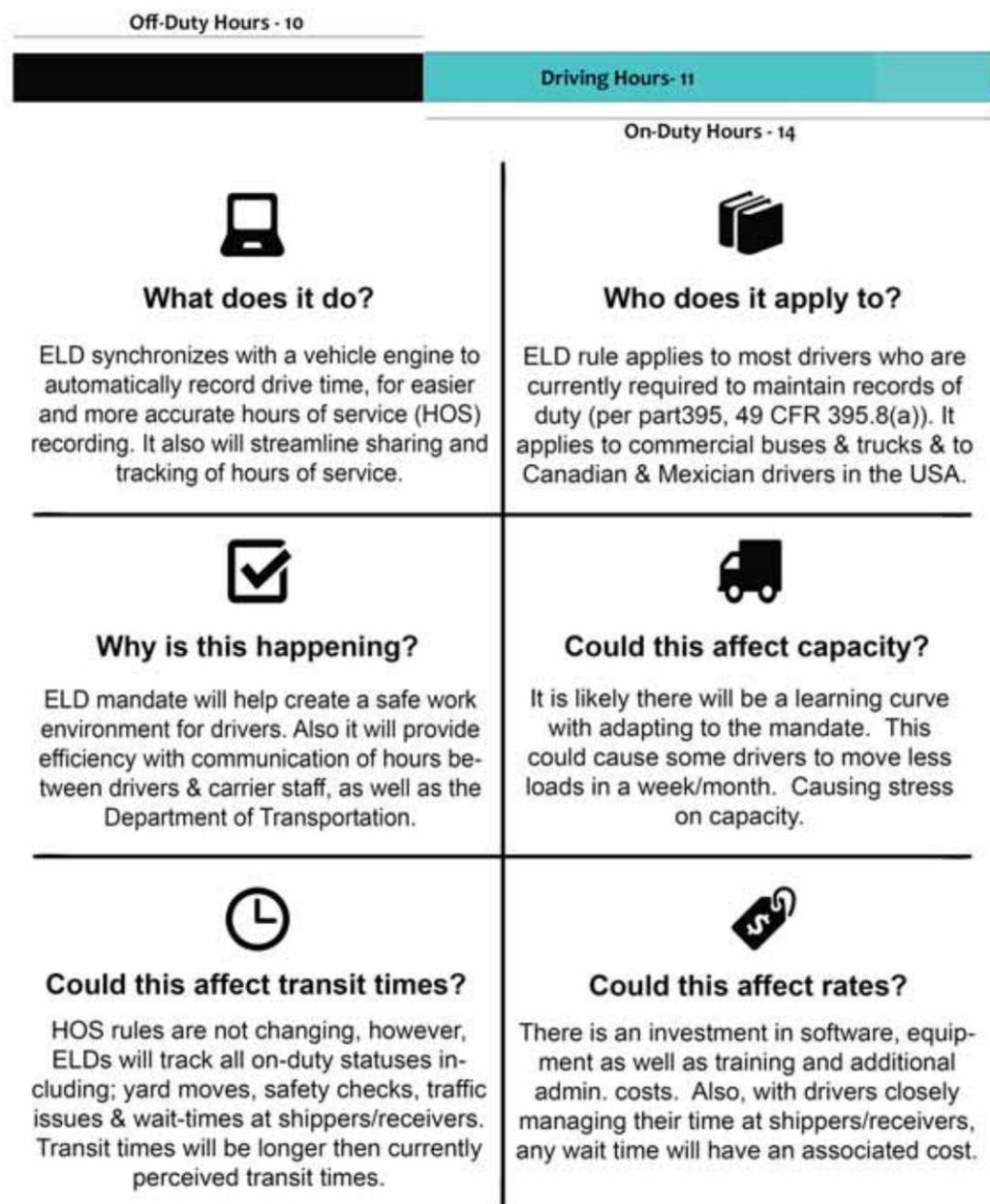
What is it and how could it affect my supply-chain and transportation strategy?

In 2012, the US Congress enacted the MAP-21 bill. That bill, which outlined the criteria for highway funding, included a provision requiring the FMCSA to develop a rule mandating the use of electronic logging devices (ELDs). In its simplest form, an ELD is used to electronically record a driver's Record of Duty Status (RODS), which replaces the paper logbook some drivers currently use to record their compliance with Hours of Service (HOS) requirements.

This mandate takes effect December 18, 2018.

Hours of Service

Drivers have to follow these rules while driving in the US. The below graphic is based on a 24 hour period. For more detailed breakdown please visit <https://www.fmcsa.dot.gov/>



This Infographic is not a government guide, should you need more detailed information or have additional questions, please refer to <https://www.fmcsa.dot.gov/>.

COMING EVENTS 2018

- Jan 10-12 National Potato Council Potato Expo, Rosen Shingle Creek Resort, Orlando, FL
- Jan 11 International Soft Fruit Conference, Hertogenbosch, Netherlands
- Jan 16 Les Producteurs de Pommes du Quebec (Apple Growers of Quebec) Annual General Meeting, L'Espace Rive-Sud, La Prairie, QC
- Jan 16 GMOs: Facts & Misconceptions – a viewing of the movie Food Evolution, Isabel Bader Theatre, Toronto, ON For tickets: <http://bit.ly/2oNLH7q>
- Jan 16-18 Empire State Producers' Expo, Onondaga Community College's SRC Arena & Events Center, Syracuse, NY
- Jan 17 GMOs: Facts & Misconceptions – a viewing of the movie Food Evolution, Humanities Theatre, University of Waterloo, Waterloo, ON For tickets: <http://bit.ly/2BMiGo>
- Jan 20 FarmSmart Agricultural Conference, Rozanski Hall, University of Guelph, Guelph ON
- Jan 21-24 North American Strawberry Growers' Association Annual General Meeting, New Orleans, LA
- Jan 23-24 Nova Scotia Fruit Growers' Association Annual General Meeting and Convention, Old Orchard Inn, Greenwich, NS
- Jan 23-24 Ontario Apple Academy Conference, Nottawasaga Inn, Alliston, ON
- Jan 23-25 Manitoba Potato Production Days, Keystone Agriculture Centre, Brandon, MB
- Jan 24 BC Agricultural Council Gala, Quality Hotel and Conference Centre, Abbotsford, BC
- Jan 25-27 20th Annual Pacific Agriculture Show, Tradex Exhibition Centre, Abbotsford, BC
- Jan 31-Feb 1 Ontario Processing Vegetable Industry Conference, Four Points by Sheraton, London, ON

Register for Apple Academy 2.0

The latest research and trends will be addressed with a top-drawer roster of speakers. See below for the event schedule.

Monday, January 22, 2018

- Welcome Reception from 7:00 – 9:00 p.m.

Tuesday, January 23, 2018

- Speaker Session from 8:30 a.m. – 5 p.m.

- Reception and Banquet – 6 p.m. to 10 p.m.

Wednesday, January 24, 2018

- Speaker Session from 8:30 a.m. – 12:30 p.m.

Where:

Nottawasaga Inn, Alliston, ON - www.nottawasagaresort.com/

Topics include:

- Tomorrow's Forecast: Warmer, Wetter & Wilder – David Philips, Environment Canada
- Managing for Orchard Soil Health – Tom Forge, AAFC
- Finding the Next Generation of Farmers – Andrew Leach, Farm Life Financial

- Growing Great Gala & Ambrosia – Hank Markgraf, BC Tree Fruits
- It's About Making Money – Matt Wells, New York Apple Sales
- Integration of Technology to Maintain Profitability of the Apple Industry – Dr. Amit Dhingra, WSU
- Why do Apples Blush? – Rich Marini, Penn State University
- And more . . .

Cost is \$175 per person and includes meeting materials, welcome evening reception on January 22nd, two breakfasts, two lunches, three breaks and a dinner banquet. Click here to register – <https://appleacademy2018.eventbrite.ca>. An invoice will be sent to you after you register.

Nottawasaga Inn conference room rate is \$130 per night. Please call 1-800-669-5501 to reserve your hotel room!

RETAIL NAVIGATOR

For the rest of the article visit www.thegrower.org

Low prices drive traffic



PETER CHAPMAN

stores as labour costs continue to rise and also just the cost of attracting help is going up. The low fixed and variable costs are realized with less expensive fixtures, lower priced real estate and even fewer lights. The winners in this segment do the most volume with the lowest margins. One of the hallmarks of a great discounter is that the quality does not suffer. When consumers perceive they are getting the same quality fresh (onion to onion or pork chop to pork chop) that they get in

There are more options for consumers to buy food. The same corporate parents own many of the formats, but the market is becoming more fragmented. This means more options for producers and processors to find the right fit in the marketplace. One of the fastest growing segments in our Canadian retail landscape is discount. This was reinforced recently with Sobeys' announcement that they will be converting 77 stores in Western Canada to FreshCo. Consumers have embraced these low-price stores with limited assortment and few staff on the floor to help.

Discount stores

Discount stores are not new to our Canadian retail landscape. No Frills has been a force in the market for many years. The three large Canadian food retailers each own discount banners; Loblaw has No Frills and Maxi in Quebec, Sobeys has FreshCo and Price Chopper in Ontario and Metro has Super C in Quebec and Food Basics in Ontario. Overweitea operate Price Smart stores in Western Canada. We continue to see more food sold in Giant Tiger, which straddles the mass merchant/discount segments. If you have not been in one of these stores recently they are selling a lot of food.

The stores all operate on the same principles, which are:

1. Lowest prices
2. Limited assortment
3. Reduced labour
4. Low fixed and variable costs

Low prices are the cornerstone of the model. They drive traffic and turn inventory. The stores will protect their price image with a vengeance and if they are perceived to be even the highest in the segment of the market, they will lose sales. Price conscious consumers have options and usually the attribute that brought them in will take them elsewhere.

The limited assortment reduces shrink and the cost of paying for and merchandising slow-moving items. Reduced labour will prove to be a bigger advantage over the traditional



conventional stores the discount will usually win most of the consumer's food dollars.

Other markets have also experienced growth in the discount segment. Large global chains such as Lidl and Aldi have moved into many markets

with disruptive results.

Peter Chapman is a retail consultant, professional speaker and the author of *A la Cart-A suppliers' guide to retailer's priorities*. Peter is based in Halifax N.S. where he is the principal at GPS Business Solutions and a

partner in *SKUfood.com*, an online resource for food producers. Peter works with producers and processors to help them navigate through the retail environment with the ultimate goal to get more of their items in the shopping cart. peter@skufood.com

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FOCUS: BERRIES, GRAPES & VINEYARDS

Evolving lessons from Spotted Wing Drosophila

KAREN DAVIDSON

The summer of 2017 was a test for any berry grower as Spotted Wing Drosophila (SWD) emerged earlier and remained active later than in any previous season. As late as September 8, 2017, Ontario's fruit specialist Erica Pate warned that the threat would be serious for blueberry, day-neutral strawberry and fall-bearing raspberries until the end of harvest.

She had several pieces of advice:

- apply regular insecticides (every five to seven days)
- rotate through different chemical groups
- achieve excellent coverage so the fruit is protected. Slow down, don't reduce water volumes, calibrate your machines and open up the canopy. Use the highest rates available
- schedule harvests regularly, every day or two if possible
- cool fruit immediately post-harvest
- crush or removed dropped fruit – don't leave fruit on the ground
- clean up after pick-your-own fields

In nearby Michigan, a state with more than 20,000 acres of blueberries, conditions were also challenging. Dr. Phil Fanning, an entomologist at

Michigan State University, has been studying the invasive pest for years. Working with Dr. Rufus Isaacs, in the Berry Crops Entomology Lab, Fanning has a good handle on the chemistries that can be used. But there are cultural and biological controls that can also be part of an integrated pest management program.

Fanning says that if the extra labour can be justified, the local field environment can be made less hospitable to SWD. He suggests taking advantage of the insect's habits. For example, the insect does not like to move in mid-day. Fly activity and egg laying are highest between 6 am and 8:30 am and then again in the evening between 6 pm and 8:30 pm with lower activity during the heat of the day.

"Use that knowledge," says Fanning. "An evening spray, when pollinators are no longer active, will be most beneficial in targeting the insect when it's active and spraying at this time allows time for drying before beneficial insects become active the next morning."

Try mulching treatments such as black fabric which radiates heat and creates a less humid climate around blueberry bushes. "Our observations from our research planting shows that this tactic can delay SWD infestations early in the season, when populations are low, by up to two weeks," he says.



Winter morph of Spotted Wing Drosophila is pictured on the right.

Black fabric may not work in established fields, but consider it for new plantings of blueberries. This tactic could also work for strawberries.

Additionally, Fanning says that black fabric limits the ability of the pupae to burrow into the soil where temperatures are more favourable for development, and makes them more vulnerable to predators such as ants.

Another tactic is pruning of blueberry bushes to open up the canopy and reduce humidity. The also allows for better spray coverage.

The entomology team is monitoring different crops, looking for any native natural enemies. A UC Berkeley researcher may have some leads on biological control agents that are active on SWD. Two parasitoids look promising and

applications are being made to USDA for their release.

"Our 2017 data show that the first trap catch of SWD was recorded on May 14, 2017 versus a range of June 15-28 in the three preceding years," says Fanning. "This is the earliest catch since we started to keep records," says Fanning.

"Populations spike in late season, and at that point, cultural methods are less effective and insecticides are the best option to prevent infestation."

The mild winter of 2016/2017 may be aiding the overwintering of this pest. As part of a larger project, funded by the Specialty Crop Research Initiative through the USDA, MSU researchers are studying a different morph of SWD: the winter morph. In October through December, they have observed winter morphs – that

is, adult SWD which have a darker body and longer wings. The seasonal activity of SWD suggests they can adapt to changing temperatures.

"In early December 2017, we started an experiment by putting adults of these winter morphs into a pot of soil with a source of food, an apple slice," says Fanning. "The pots were put into a forested tract of land and heaped with leaves. Even with air temperatures of 5°F, they are surviving so far."

For more information and webinars on this SWD research, go to: swdmanagement.org/

Editor's note: Dr. Phil Fanning will be speaking at the Ontario Fruit and Vegetable Convention, February 21 in Ballroom A. The title of his talk: Spotted Wing Drosophila Management – What's working, novel approaches

\$1 million of federal funding for risk assessment in Nova Scotia

Nova Scotia's agricultural industry and specifically grape growers will benefit from a federal investment of \$1 million for the Nova Scotia Federation of Agriculture (NSFA).

The funds will be used to pilot a dynamic risk assessment tool for the province's agricultural sector starting with grape growers and the wine sector. This tool will also be important to other sectors that become vulnerable to severe weather change and aging infrastructure, such as degrading dikes. The tool will evaluate the impact of different risks and test various mitigation strategies.

"The changing climate is one of the numerous unstable factors that farmers face," said Chris van den Heuvel, president, Nova Scotia Federation of Agriculture. "With the variability and unpredictability of extreme weather events, farmers in



vulnerable regions protected by dikes need to know the likelihood of overtopping or breach. Farmers also need to understand how climate change may impact their yields and in turn influence the value chain in which they operate."

This \$1 million investment is made through AgriRisk which is a \$60 million program under Growing Forward 2 – Business Risk Management that provides financial assistance to support the development of new risk management tools and services.

Source: Agriculture and Agri-Food Canada December 1, 2017 news release



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FOCUS: BERRIES, GRAPES & VINEYARDS

Don't waste your energy more efficiently!

KAREN DAVIDSON

Since 2005, Bill Redelmeier has operated Southbrook Vineyards from a sustainable perspective. It's always been an idyllic 150 acres near Niagara-on-the-Lake with 70 grazing sheep providing the manure for the vines.

"At Southbrook we make every effort to live in harmony with the land," says the chirpy copy on the website. "From our biodynamic, organic vineyard we produce fine age-worthy wines, most notably Cabernet Sauvignon, Cabernet Franc, classic Bordeaux blends and Chardonnays."

But behind that scenic vineyard and winery was a utility bill that was downright ugly. Redelmeier's energy literacy has spiked with the employment of energy consultant Enviro Stewards Inc. based in Elmira, Ontario. Here's an example of one improvement.

Says Redelmeier, "One assumption is that a storage room has to be 16°C. at all times to keep the wine temperature steady. We have found that we can set the temperature setpoints 1°C. cooler at night and 1°C. warmer during the day without affecting the wine temperature. The coolers work more efficiently at night, and a nice bonus is that electricity is cheaper than too."

Niagara-on-the-Lake (NOTL) Hydro recently commissioned a conventional energy conservation study for Southbrook which was already a LEED gold-certified facility. At the outset, it would seem that there would be few areas to squeeze out more savings, and indeed, the recommendation came back for five per cent savings with a 20-year payback after new refrigeration equipment was installed. However, Enviro-Stewards' subsequent audit discovered that Southbrook could reduce both electricity and natural gas consumption by 40 per cent with a combined payback period of four months. NOTL Hydro then assisted with co-funding implementation of the conservation opportunities. These measures will also reduce greenhouse gas emissions by 55 tonnes per year and reduce the number of solar panels required for net metering by one-third.

"We have become addicted to solar," says Bruce Taylor, president, Enviro Stewards. "Don't waste your energy more efficiently! When North Americans think of green energy, we typically think of installing solar panels. But energy conservation has better

returns than net metering with solar."

In July 2017, Southbrook commissioned a net metering solar project to supply most of the remainder of its electricity consumption. As previously mentioned, conservation measures reduced the number of panels required and hence avoided covering productive vineyard acres with solar panels. In turn, that land can produce wine, about 50 cases per year valued at \$20,000.

"What Southbrook proved is

that addressing conservation first had a substantial economic advantage over proceeding directly to installing renewables," says Taylor. "It's normally hard to show not doing something. In this case, you can literally come to Southbrook and drink the wine that was preserved by conserving energy."

Picture right: Southbrook Vineyards, Niagara-on-the-Lake, ON.



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FOCUS: BERRIES, GRAPES & VINEYARDS

New table grape varieties on the way

New Canadian fresh grape varieties will expand growers' offerings and fill up shelf space with flavour profiles that meet market demand. The Consumer Insights team at Vineland is working to ensure the new varieties are exactly what consumers are looking for.

In partnership with the Ontario Fresh Grape Growers, Vineland hosted a grower/retailer open house to showcase new scouted varieties on the vine this past fall.

The Jupiter grape, developed at the University of Arkansas, was the most appealing by more than 75 per cent of participants. All attendees named Jupiter as the variety with the most commercial potential and commented on its flavour, sweet taste, berry size and shape, as well as colour.

Vineland's Consumer

Insights team also completed focus groups on blue and green grapes and found some unique insights including:

- Consumers are receptive to new Ontario varieties even though there is little recognition of the fresh grape industry in the province
- Grape varieties are recognized by colour and not by name
- While texture and appearance are important, taste/flavour are key
- Jupiter was picked as the top variety in blue grape focus groups for taste/flavour
- Participants liked the unique, muscat flavour of Jupiter and that it tasted differently from varieties they are accustomed to
- Consumers in general don't look for blue grapes. This

perception will need to change and be supported through marketing efforts

Next steps in this project include consumer information to develop a commercial name for Jupiter with the goal of introducing to retail by 2022. This project was funded in part through Growing Forward 2 (GF2), a federal-provincial-territorial initiative. The Agricultural Adaptation Council assists in the delivery of GF2 in Ontario.

For more information, contact Michael Kauzlaric, technology scout and grower outreach, Vineland at 905-562-0320 x 755 or Michael.kauzlaric@vinelandresearch.com.

This article is reprinted courtesy of Vineland Research and Innovation Centre, Winter 2017 newsletter.



Jupiter grapes at Vineland's test block.

Introducing Dr. Beatrice Amyotte, Small Fruit Germplasm Development Program

The berry breeding program at the Agriculture and Agri-Food Canada (AAFC) Kentville Research and Development

Centre in Kentville, Nova Scotia, is now the Small Fruit Germplasm Development Program.

The new approach to plant breeding will allow the fruit industry to be more involved in the release of new Canadian varieties of strawberries, raspberries, blackberries and grapes that are developed from a bigger, hand-picked genetic pool of superior plant traits.

The Centre currently has a collection of more than a thousand different selections of the fruit and is looking to significantly expand it with new material from genebanks in Canada, the United States and Europe.

"The objective in germplasm development is to create variation," says Dr. Beatrice Amyotte, who joined the research centre this year as a lead researcher with the new program. "We can use that variation to not only develop plants with interesting traits that are commercially valuable but also plants that can be used for further research."

"There is going to be plant material that will be quite different from what producers have seen before. They'll have a chance to evaluate it in their own growing conditions and decide which of these plants should become varieties."

For more than 100 years, the berry breeding program in Kentville developed commercial plant varieties from start to finish. These included popular strawberry varieties such as the large-fruited 'Annapolis,' the early-fruited 'AC Wendy' and the easy-picking 'AAC Lila.'

But the department has been hearing from the members of the Canadian fruit industry who have been asking for a bigger



Dr. Beatrice Amyotte is the lead researcher in Agriculture and Agri-Food Canada's new Small Fruit Germplasm Development Program at Kentville Research and Development Centre in Kentville, Nova Scotia.

role in deciding which plant selections become commercial varieties.

A recent departmental survey of the Canadian strawberry industry found strong support for early testing of new strawberry selections by industry across the country.

AAFC will develop a new commercialization model so that interested growers and nurseries will have the opportunity to test, select and name the small fruit varieties that are best suited for their growing environments and production systems.

The Kentville Small Fruit Germplasm Development Program will continue to develop new, unnamed small fruit selections which can be tested across Canada.

National and provincial stakeholder organizations will be notified directly when new

small fruit plants are available for testing.

"Industry engagement is key to the germplasm program's success," says Dr. Amyotte. "Input from growers and stakeholders will be used to determine trait priorities for germplasm development."

Dr. Amyotte says she's hoping to hear from more producers and fruit industry representatives from across the country to get their thoughts and priorities.

"That's a priority for me," she says. "My goal is to try and help you grow the best fruit for your customers and environment, so tell me about what you want to see in terms of plant traits. I want to hear from you."

You can reach Dr. Amyotte at Beatrice.amyotte@canada.ca.

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FOCUS: BERRIES, GRAPES & VINEYARDS

Wine grape trials show promising early results

LISA McLEAN

When Dr. Helen K. Fisher retired as viticulture research scientist at Vineland Research and Innovation Centre (Vineland), there were a few loose ends to tie up. Namely, what to do with her research on advanced wine grape selections for cold climate wine growing regions.

“Breeding work for wine grapes is a very slow process,” says Fisher. “Not only are you trying to find a plant that fits a climate, but it also needs to fit into a wine profile wineries are looking for.”

Vines can take up to four years to become established in the soil and produce quality grapes. To determine if the fruit fits a desired wine profile, it must be processed into wine, and then assessed after aging for three or more years.

“We’re looking for good quality reds that are tough in terms of agronomic potential and can withstand cold winters and wet growing seasons, that aren’t susceptible to disease or weather,” says Fisher.

Fisher says her work holds potential for larger Canadian wineries that want a sturdy but neutral wine that can be used for blending with other grapes. But to get meaningful results, the hybrids need more time. After retiring and losing access to land and laboratories, Fisher found new ways to continue her research.

“I was left with the dilemma of what to do with the plant material when it was at a stage that wasn’t even close to being presented to the public,” Fisher says. “Fortunately, Wes Wiens of VineTech Canada, a local nursery, donated land so the research could continue. It was tough land on a cold site – perfect, for my purposes.”

Fisher worked with the VineTech team to repropagate 40 plant selections from the Vineland property, based on genealogy and a superficial look at the most recent crop. She applied for funding through the Gryphon’s LAAIR Program and hired a summer student to collect data from the field. She also enlisted nearby Niagara College to make wine with the harvested grapes.

“Baco has had a good run in Niagara, but this is a chance to develop a new hybrid that offers a good amount of disease resistance and cold tolerance, perhaps with less acidity,” says Fisher.

Next, Fisher says project partners will test the wine quality, which she hopes to bring to two large wineries, to

attract further interest and a long-term home for the research.

This project is funded in part by Growing Forward 2, a federal-provincial-territorial initiative, through the Gryphon’s LAAIR Program.

Lisa McLean writes for AgInnovation Ontario.



Wine grapes in Niagara. Photo by Helen Fisher

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Plotting the future of 'mouthcatcher' berries in Canada

The situation

Imports, production and demand – 2000-2015

- Raspberry imports increased from 4.030 MT to 40.600 MT
- Raspberry production in Canada decreased by 36.6 per cent
- Per capita consumption increased to 1.57 kg in 2016



Courtesy of Vineland Research & Innovation Centre



Quebec berry producers attended the Vineland Berry Workshop: (L-R) Alexandre Tanguay, Plant Products; Denis Canuel, Ferme Francois Gosselin, QC; Valerie Bernier, Ferme Onesime Pouliot; David Lemire, Production Agricole Horticole; Rejean Demers, Production Demers.

KAREN DAVIDSON

If you asked consumers what fruit they eat on Canada Day, chances are they would say strawberries. Or blueberries, or raspberries. That's the pinnacle of the Canadian growing season. But thanks to a global marketplace, berries are now available year-round.

The berry category, under the harsh light of consumption statistics, reveals that fewer berries are being grown in Canada and more imports are taking centre plate. Consider the raspberry numbers (see slide above) compiled by Viliam Zvalo, research scientist, horticultural production systems, Vineland Research and Innovation Centre.

This was a starting point for a workshop sponsored by Vineland Research and Innovation Centre in November, 2017. About 30 gathered to consider changing the dynamics of the current Canadian market. The group comprised growers from eastern Canada, researchers, propagators and retailers.

The good news is that berry consumption in Canada is increasing, and while imports have taken a chunk of that business, it's worthwhile examining if the value chain can replace imports. At the moment, the estimate is that every major Canadian grocery store takes about 10 flats of blackberries per week and 20 flats of raspberries per week. While strawberry demand seems to be levelling off, the retailers are noting increasing demand for blueberries, blackberries and raspberries.

As Peter Chapman, SKU.com retail consultant pointed out, the berry category is tricky but not insurmountable. Retailers like the fresh image, the fact that berries lead to impulse and incremental sales.

"Multiples work," said Chapman. "Other

berries are your friends."

On the flip side, retailers don't like shrink or the need for refrigeration. Nor do they like the hassles of maintaining consistency of supply. It takes a ton of work to confirm lead times. And they like working with fewer, larger growers.

One major retailer confirmed the desire to buy more locally produced raspberries with the proviso: "if the quality is there."

And so with that advice, berry growers are analysing what it would take to grow more raspberries. The natural place to start is with the Netherlands. Willem van Eldik, a pioneer of Delphy's production system in Europe, shared the journey of the last decade and how the marketplace has been revolutionized with long-cane production of raspberries.

The yield potential is three to six kilograms per plant or up to 2,030 tonnes per hectare. This is an intensive system requiring expertise. Analysis is required for soil, water, substrates and drip-drain water. The propagation process has moved to tray plants and flower mapping.

"Seventy per cent of your crop is made in propagation," said van Eldik.

Of course, propagation shouldn't start without a detailed analysis of what the consumer and the retailer want. Michael Kauzlaric, Vineland's technology scout, indicates that the key attributes are: disease tolerance/resistance, high colouring, higher heat tolerance, "mouthcatching" texture and flavour.

Some of the raspberry cultivars currently under review are: Kwanza, Kweli, Tulameen and Chemainus. The blackberry cultivar from the Scottish Crop Research Institute is Loch Ness.

"There's a fine line between sweet and sour," says Kauzlaric. "You must leave these on the vine for proper ripening."

Continued on next page

FOCUS: BERRIES, GRAPES & VINEYARDS

Plotting the future of 'mouthcatcher' berries in Canada



Continued from last page

"Before you plant, define your consumer," advises Peter Chapman, retail consultant. "Look at Driscoll's which dominates the berry category from the U.S. The company solicits consumer input with its berry club. They have more than 500,000 consumers worldwide to give input."

"If you're going to be into raspberries and blackberries, give consumers great reasons to change their buying habits," urges Chapman. "You've got to build your story and explain why."

Chapman offers an unvarnished picture of the retail sector, explaining that if consumers don't put your product in the shopping cart, all your hard work is for naught. Lots of effort is going into innovation, getting to the shelf, and then getting lost.

"Let's face it. The shopping cart may be obsolete in the next few years," says Chapman, referring to online retailing.

The new trend of buying meal kits online should not be dismissed.

"How many of you have ordered a meal in a box?" Chapman asks. "Here's an opportunity for you —there's no fruit in the box, and that's not a price play."

Look at Driscoll's. Their three attributes are taste, appearance and shelf life. If you can excel on one of those attributes, then there is crack in the door.

Look at packaging. The packaging in Europe shows tomatoes that say "I feel good



Loch Ness blackberries

in a salad." This is starting a conversation with consumers.

Brainstorming next steps

- A key need is to access material for propagation. Bringing plant material through the virus testing program on Vancouver Island takes time.

- Made-in-Canada research is crucial. It all comes down to variety and how the varieties respond to Canadian light conditions.

- If consumer consumption is now one kilogram of berries per year, can that be increased to 1.5 kilograms per year in the next decade?

- If Driscoll's berries rate an eight out of 10, then choose one criteria where there is an opportunity to differentiate and have a different story. If local berries have better taste, then also deliver on appearance and shelf life. Figure out the supply chain to move berries the same or better than Driscoll's.

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MINOR USE

Finding common ground with the U.S. and Mexico

CALEIGH IRWIN

Last November, I had the pleasure of representing the Canadian Horticultural Council (CHC) at the NAFTA Technical Working Group on Pesticides in Guanajuato, Mexico. Industry, government, and grower representatives from Canada, Mexico, and the United States met for two days, with a concluding farm and greenhouse tour. Our hosts were both generous and hospitable.

The meeting prioritized joint reviews for the registration and re-evaluation of pesticides, and the harmonization of Maximum Residue Limits (MRL) among the NAFTA countries. Discussions were quite valuable because they included representatives from Canada's Pest Management Regulatory Agency (PMRA), Agriculture and Agri-Food Canada (AAFC), the U.S. Environmental Protection Agency (EPA), Mexico's Servicio Nacional de Sanidad, Inocuidad y Calidad Agroalimentaria (National Service for Agri-Food Health, Safety and Quality), among others.

Grower representatives were invited to the Industry Working Group (IWG) session that

preceded the formal NAFTA presentations, and to the IWG's debrief session afterwards. In this working group, industry representatives were able to speak up and raise additional issues. The format of the IWG meeting, however, didn't provide industry representatives with access to government representatives. Such access would facilitate progress in future meetings.

Canadian representatives in both IWG and NAFTA presentations identified the harmonization of the re-evaluation process as a priority issue. The misalignment between Canadian re-evaluations and those of the U.S., especially with regards to diverging safety factors, results in growers losing valuable tools and to limited market access. Joint reviews seem to be going well for new active ingredients – the ability to share data is demonstrable – and could perhaps be applied to close the current data gaps. In addition, both Canada and the U.S. have fallen behind on their respective re-evaluations. Are there ways in which growers and grower representatives can help? CHC is attempting to address this problem in Canada. In many ways, the crop protection needs across all three NAFTA countries are similar.



Although re-evaluations are a complicated issue, this similarity could simplify how we approach the problem, as both industry and government could apply common solutions.

Slow but steady progress is being made on the MRL front. Different efforts are required from each country, but the needs are similar across commodities. As a Canadian attending the meeting for the first time, I learned that Mexico has many prime advantages: climate (2.5 crops/year!), labour, variety, and technology. However, Mexican growers also have very similar hurdles to the ones we have in Canada: access to tools (in this case, with the

registration of new active ingredients), and access to markets, due to missing or un-harmonized MRLs. In order to address these difficulties, agencies in all three NAFTA countries have increased efforts with regards to the Codex process. These efforts have been demonstrated with increased funding, training, and commitment to Codex meetings and processes. In addition, an international workshop on missing MRLs is being held in February, supported by PMRA, AAFC, and other governmental agencies.

While there is still much work to be done, CHC sees the potential for increased

collaboration and agreement at upcoming meetings, including the Technical Working Group on Pesticides. All three countries agreed that Canada's science-based approach to risk is appropriate, and emphasized the need for good, defensible science. Canadian, American and Mexican growers face similar challenges: access to tools and access to markets, harmonization of MRLs and re-evaluation of pesticides. Coordination would benefit us all.

Caleigh Irwin is manager, crop protection, for the Canadian Horticultural Council.

Watch for Luna Sensation in 2018

Bayer is bringing Luna Sensation, a broad-spectrum, systemic fungicide with the active ingredients of fluopyram and trifloxystrobin (Groups 7 & 11 respectively), to horticulture growers in Canada. The product is currently registered for leafy green and petiole vegetables and brassica leafy vegetables with more crop labels on the way.

Luna Sensation is already registered for many crops in the U.S. where George Musson, product development manager, offers first-hand experience.

"The crop label is for both fruits and vegetables," says Musson. The list includes Brassica leafy vegetables, leafy green/petiole vegetables, stone fruit, low-growing berries (strawberries and low-bush blueberries) cucurbits, root vegetables and hops.

The fungicide is especially helpful at time of fruit bloom, preventatively applied anywhere from closed buds through pink tip to petal fall. Company data show improvements to fruit set and ultimately yields. The product has high efficacy on closed buds in a pre-bloom application for improved control of Botrytis and Monilia,

particularly when blossom staging is inconsistent.

Another observation by Musson is the post-harvest disease benefits, specifically improved control of latent disease during storage.

"When Luna Sensation is used in an in-season spray program, we've seen dramatic reductions in storage losses after harvest," says Musson. "It's a testament to the disease control ability of the product. The better the disease control in the field, the less storage loss at harvest."

Luna Sensation is the second product in the Luna family to be brought to Canada. The other, Luna Tranquility, has been used by apple, potato, onion growers and more for the past three to five years.

The goal of bringing Luna Sensation to the Canadian market is to provide access to Luna for crops that aren't covered by the current registrations on the Luna Tranquility label.

Bayer will have a booth at the Ontario Fruit and Vegetable Convention, February 21 and 22, at Scotiabank Conference Centre, Niagara Falls. Look for booth 814/816.

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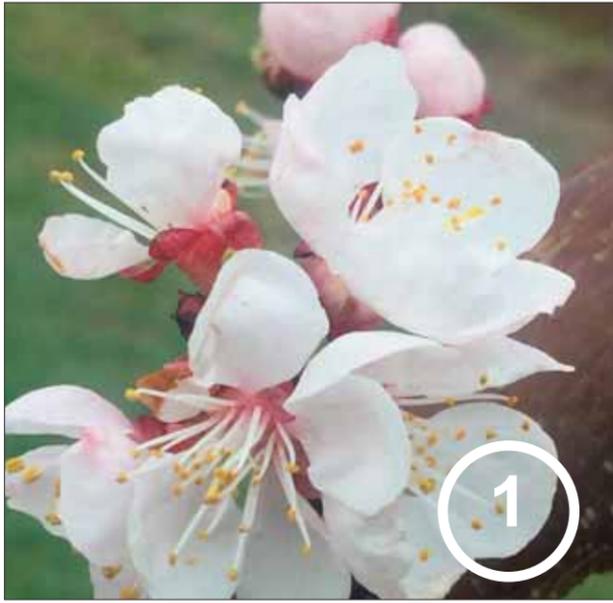
What's the difference between a fruit and a vegetable? Sometimes kids ask the darnedest questions. Botanically, fruits and vegetables are classified depending on which part of the plant they come from.

A fruit develops from the flower of a plant, while the other parts of the plant are categorized as vegetables. Fruits contain seeds, while vegetables can consist of roots, stems and leaves. There's a conversation for the dinner table!

Throughout our travels in the field, it's always a marvel to observe the diversity of flowers in fruits and

vegetables. They range from frilly to whimsical to voluptuous. Each species has a design for the best possible reproduction in an environment that depends on pollinators.

For the answers, please go to page 27.



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Fungicide resistance management

MICHAEL CELETTI

Fungicides are important tools that are vital for the management of plant diseases in many crops. Without fungicides, the quality, quantity and availability of many fruits and vegetables that we enjoy throughout the year would be compromised. Most modern fungicides are very specific on how they work and on the range of plant disease they will control. Unfortunately the repeated application of modern fungicides with the same mode of action over time can result in selecting for resistant pathogens. To reduce the probability of selecting for a fungicide-resistant population and preserve particular products in the disease management tool kit, the following general tips should be considered.

1. The application of fungicides should be done prior to an infection period. Disease prediction models have been developed for some plant pathogens in some crops using environmental data that favour

pathogen spore germination and infection. These models can help growers target fungicide application preventatively as well as reduce the number of fungicide applications.

Unfortunately, growers may not be able to spray their crops preventatively due to wet or windy weather and may have to use products after infection takes place. Although many of the modern fungicides have excellent curative properties, applying them on established growing lesions increases the probability of selecting for resistance.

2. Always use the full rate of the fungicide according to the label with the proper amount of water to ensure good coverage.

For some fungicides, reducing rates may save money in the short term but may result in costly losses due to resistance developing in the future.

3. Try to use registered tank mixes of fungicides with different modes of action. New fungicides developed recently are being prepackaged with older broad spectrum fungicides

or other modern fungicides with a different mode of action to reduce the risk of resistance developing.

4. Always rotate and alternate fungicides with different modes of action when alternatives are available. Knowing what products belong to the same group of fungicides and which products have different modes of action is necessary to avoid applying a fungicide that is similar to the previous one.

5. Limit the number of application of fungicide groups per season. The number of applications per season will depend on the disease and crop, however, as a general rule, the more frequently a plant disease population is exposed to the same fungicide or group of similar fungicides, the greater the probability resistance to that group of chemicals will develop.

Following good Integrated Pest Management (IPM) practices will reduce the probability or delay fungicide resistance developing to certain pathogens in some cropping systems. Unfortunately some



Strawberry anthracnose



Botrytis grey mould

IPM practices may actually increase the probability of resistance developing for a few pathogens. To find out more about resistance management attend the 'Does IPM Contribute to Pesticide Resistance' Session on February 22 at the 2018 Ontario Fruit and Vegetable Convention in Niagara Falls Ontario.

To learn more about managing fungicide resistance

in berry crops attend the Berry Growers of Ontario annual meeting on February 20 and to the 'Berries' Session on February 21 at the Ontario Fruit and Vegetable Convention to hear about new research and management strategies to address this problem when managing for berry diseases.

Michael Celetti is OMAFRA plant pathologist-horticulture crops.

New pest management tools coming to a farm near you

OMAFRA's fruit team is busy updating Publication 360, Guide to Fruit Production. Our last supplement was distributed a year ago in November, 2016. Since then, there have been new registrations for fruit growers. The new registrations and new uses for berry growers are highlighted here. Look for the February issue of the Ontario Berry Grower Newsletter for more information on new herbicides. The revised edition of Publication 360 will be available online in the spring, with the hard copy to follow.

Blueberry:

- Vegol Crop Oil (canola oil), NC: aphids, scales.

- Fitness (propiconazole), Group 3: mummyberry.
- Kenja (isofetamid), Group 7: Botrytis grey mould.
- Botector (*Aureobasidium pullulans*), NC: Anthracnose fruit rot (suppression), Botrytis grey mould (suppression).

Currant and Gooseberry:

- Vegol Crop Oil (canola oil), NC: aphids, powdery mildew (suppression)
- Kenja (isofetamid), Group 7: Botrytis grey mould.

Raspberry and Blackberry:

- Assail 70 WP (acetamiprid), Group 4A: aphids, leafhoppers.
- Exirel (cyantraniliprole), Group 28: Spotted Wing

- Drosophila (1 day PHI).
- Malathion 85 E (malathion), Group 1B: rose chafer (blackberries only), clipper weevil.
- Sivanto Prime (flupyradifurone), Group 4D: aphids
- Vegol Crop Oil (canola oil), NC: aphids, mites (control) powdery mildew (suppression).
- Fitness (propiconazole), Group 3: yellow rust.
- Kenja (isofetamid), Group 7: Botrytis grey mould.

Saskatoon:

- Cosavet DF Edge (sulphur), Group M: Entomosporium leaf and berry spot
- Fitness (propiconazole), Group 3: Entomosporium leaf and berry spot, Saskatoon juniper rust

- Vegol Crop Oil (canola oil) NC: aphids, powdery mildew (suppression)

Strawberry:

- Exirel (cyantraniliprole), Group 28: aphids, thrips.
- Vegol Crop Oil (canola oil), NC: mites, aphids, powdery mildew (suppression)
- Botector (*Aureobasidium pullulans*), NC: Anthracnose fruit rot (suppression), Botrytis grey mould (suppression).
- Double Nickel LC (*Bacillus amyloliquefaciens*), Group 4: powdery mildew (suppression), Botrytis grey mould (suppression).
- Fitness (propiconazole), Group 3: common leaf spot
- Switch 62.5 WG

- (cyprodinil + fludioxonil), Group 9+12: anthracnose.
- Velum Prime (fluopyram), Group 7: Root knot nematode (suppression), root lesion nematode (suppression).

Diazinon 50 WSP, Malathion 25, Thionex 50 WSP are no longer registered. Diazinon 500 E use has been reviewed and is registered for use on raspberries on crown borer, maximum one application per year.

Look for the 2018 version of Publication 360 for information on timing, application instructions and all other registered products and other fruit crops. Check the label for rates, preharvest intervals and specific precautions.

NC= not classified

NEW
DATE
NEW
LOCATION

NOTICE OF MEETING

is hereby given that the 159th Annual Members and Directors' Meeting of the
ONTARIO FRUIT AND VEGETABLE GROWERS' ASSOCIATION
will be held at the HILTON HOTELS & SUITES NIAGARA FALLS/FALLSVIEW
6361 Fallsview Boulevard | Niagara Falls ON L2G 3V9
February 20, 2018

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

ONTARIO BERRY NEWS

Don't miss the FIRST Berry Growers of Ontario meeting!

ERICA PATE

The Berry Growers of Ontario (BGO) are having their first annual meeting February 20, 2018, followed by the Ontario Fruit and Vegetable Convention (OFVC) Feb 21-22, 2018. These three days will be full of pest management, production and marketing information to help berry growers succeed in the 2018 season. Scientists and berry experts are joining the BGO to share their experiences and research results on a variety of issues and opportunities, including managing strawberry anthracnose and viruses, labour management, innovative production practices and different marketing strategies.

Anthracnose fruit rot: Ontario berry researchers have been working on a strawberry anthracnose resistance and management project for two years. Mike Celetti, OMAFRA's plant pathologist in horticulture crops, will discuss their findings and recommendations for managing strawberry anthracnose in the coming years. Dr. Frank Louws, from North Carolina State University, will be discussing his work in North Carolina on managing anthracnose, including work on resistance and forecasting models. Dr. Louws will also speak about emerging problems with fungicide resistance regarding botrytis and anthracnose management. Don't miss these two speakers!

Spotted Wing Drosophila (SWD): 2017 was a very challenging year for strawberry, raspberry and blueberry growers in Ontario. SWD emerged two to three weeks earlier in Ontario than in previous years, making it difficult for growers to manage SWD throughout the long season. Michigan and New York berry growers had a similar year. Join Philip Fanning, from Michigan State University, will talk about the research being conducted in Michigan and different management practices for controlling this pest.

Labour management: Learn from other growers in this panel discussion on different labour management strategies. Three growers from Ontario strawberry, blueberry and raspberry farms will talk about how they manage their labour force, what has worked for them, and what challenges they have encountered. Take this chance to ask questions and hear stories straight from the field.

Pruning blueberries: Michigan produces almost 20,000 acres of blueberries, and is one of the top blueberry producing states in the U.S. Mark Longstroth, a fruit extension specialist from Michigan State University, therefore has a lot of experience to share with our growers. Come hear about how to prune your blueberry bushes to maximize yield and growth.

Other berry sessions of interest include day-neutral strawberry production, nematode management in raspberries, tank-mixing pesticides, and biocontrol.

Berry sessions will be held during the BGO annual meeting on the 20th, and during the OFVC on the 21st. Plan to attend all three days of program. For more information visit www.ofvc.ca

Tues. Feb 20: BGO annual meeting (preconference)

Wed. Feb 21: Berry sessions continue at OFVC. Other sessions include Finding Money and Managing it Better, Fertigation, Biostimulants, and the trade show.

Thurs. Feb. 22: Many sessions including Promoting Pollinators on Your Farm, Food Safety, Pesticide Resistance, direct farm marketing, and the trade show.

Erica Pate is OMAFRA's fruit crops specialist.



Gall wasp damage



Azalea bark scale on blueberries



Angular leaf spot on strawberries

New resources for berry growers

High Tunnel Raspberries and Blackberries guide for growers

The High Tunnel Raspberries and Blackberries production guide is a new resource now available for berry growers. This guide includes information on site selection, tunnel construction, controlling environmental conditions, different production systems, plant selections, pest management considerations and determining a budget for your project. The information found in this guide is based on the research and experience from raspberry and blackberry high tunnel projects in the northeast U.S. This guide was written by Marvin Pritts, Laura McDermott, Lathy Demchak, Eric Hanson, Courtney Weber, AJ Both, Greg Loeb and Cathy Heidenreich.

The guide is available on line at www.hort.cornell.edu/fruit/pdfs/high-tunnel-brambles.pdf

Video Course for Commercial Blackberry Producers

A self-guided video course on blackberry production is available on-line from the University of Arkansas. There are four to five videos for each season. Topics include the basics of blackberry production, pest management, trellising, pruning, and weed management. The videos were made as part of the Arkansas Blackberry School. These videos are targeted towards the Southeast U.S. but could be interesting and informative for Ontario growers. Check out this link for more information and to view the videos: <https://uaex.edu/farm-ranch/crops-commercial-horticulture/horticulture/commercial-fruit-production/blackberry-school.aspx>



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MINOR USE

CRAIG'S COMMENTS

Resolutions for a perfect world

CRAIG HUNTER
OFVGA

Every December we get inundated with Christmas-themed movies. Our favourites from childhood are still aired every year and include: 'Miracle on 34th Street' (Written by Valentine Davies), 'It's A Wonderful Life' (Written by Phillip Van Doren Stern as a short story called 'The Greatest Gift'), and 'A Christmas Carol' (Written by Charles Dickens). There are many more new movies each year but another old favourite is a made-for-TV movie seldom shown now called 'Silent Night, Lonely Night' starring Lloyd Bridges and Shirley Jones.

I watch most of them because I am a sucker for how they always work through the problems and in the end everything turns out well for all concerned. Maybe it's because I am seeking the perfect ending that keeps eluding me (us) when it comes to dealing with pesticide issues. Maybe the promise of a good ending is just what human nature has been programmed to look/hope for.

With that in mind, I am going to look for some 'resolution' of current issues bearing in mind that New Year's resolutions rarely last for a full year!

In the spirit of transparency, the Pest Management Regulatory Agency (PMRA) will publish the names of all those staff members who participated in a registration or re-evaluation decision (as the U.S. Environmental Protection Agency already does). This

would allow us to be able to directly contact the 'right' person(s) with new/different information than what was used for each proposed decision segment. Likewise, each of those folks should have key contact names/numbers for registrants and stakeholders on speed dial to immediately clarify (anything) that they need to reach those decisions. It must be a two-way street so the final decision can be agreed by all to be appropriate from all the available data.

In a perfect world, the PMRA would be provided with the appropriate human and financial resources to undertake their responsibilities and to do their work well and on time. There is a train wreck coming at them (and us) fast unless serious changes are made to their ambitious plans for re-evaluation. The crash will come at a price to growers that we do not want (nor can afford) to pay. There is just too much for the PMRA to do if the work-plan is to be completed within the proposed time-frame. I have long been a proponent of 'work smarter not harder' but NO ONE can work that much smarter! There are just too many actives that need to be re-evaluated. There are just so many total staff hours to do the job. Canada is NOT aligned with the U.S. re-evaluation cycle and does not (cannot?) take advantage of using a joint working approach on these.

It's funny really. We can and do such joint work on brand new actives as routine activity, but seem to be averse to doing it where there is a much bigger need! If we are several actives 'behind' the U.S. schedule of work we should simply park the intermediary ones and immediately start on joint work (using the EPA work plan schedules) from here on. The savings of staff time alone would provide the resources needed to complete the others 'in time' (15-year cycle) as well as by using the already completed EPA reviews on all those intermediary actives. Simple



HMS Resolution 1915 - 1946 -- Inspiration for many convoys in WWII

solutions are often the best!

One area that continually seems to be a sticking point is the reliance that PMRA puts on foreign data sources that in turn reflect foreign use patterns, foreign crop production practice, and foreign worker job requirements and the times of such activity. In a perfect world there would be a Canadian version of such factors. While not impossible to produce, it is not cheap to conduct surveys for every crop out there. Perhaps they should consider an 'expert panel' that could be convened and used when such Canadian data is needed in a review, to 'get it right.' The PMRA could reference those folks by name as their source if that is what is needed for comfort.

A perfect world needs changes from where we are today. Pesticide use patterns vary every season for a host of reasons. The Crop Profiles do a good job of providing an 'average' seasonal crop protection program. However, registrations are required that cover worst case scenarios. The 2017 season is a good example. When late blight showed up very early in the Ontario processing tomato crop, there was an immediate need to shorten the spray interval, and to maintain a protective fungicide from late June until September, with increased total amounts needed for the season. Fortunately there were still protective fungicides available to do so.

Growers still remember what happened when a lack of suitable rotation partners led to

the loss of every registered insecticide for control of Colorado potato beetle. In other crops, the loss of pesticides for apple scab, botrytis, powdery mildew, red mites, cut worms and other pests have all been attributed to the loss/absence of suitable rotation partners or simply poor pesticide use management. When faced with imminent loss of a crop and therefore income for the farm, growers will use what they have now, and next year is next year. Unless we have suitable choices, bad choices will be forced upon us. Growers need good control products since pests are inevitable. They need labelled use patterns that account for worst case scenarios. These may be seldom (hopefully never) utilized, but still need to be on a label. Any regulatory decision should not be made taking this worst case scenario as the norm. It is to cover all eventualities rather than every day, every year. Somehow the bridge of understanding between these differences needs to be crossed. (Another modern Christmas Movie called 'The Bridge' [written by Karen Kingsbury] is recalled as I pen this!)

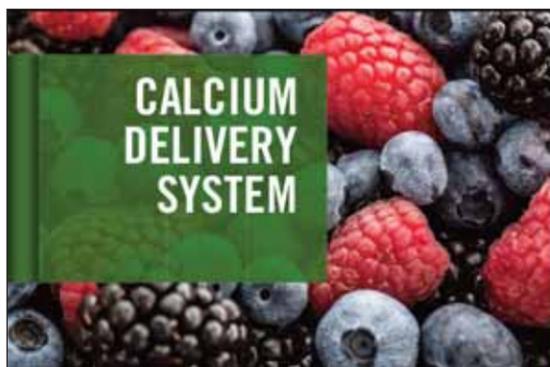
We tried to make it a better world this summer by taking PMRA staff on farm tours. Moreover, we want more practical experience being made available to all regulatory staff in the coming years. While it was gratifying to hear such staff say how much they appreciated the chance to actually visit a farm this summer, it is just as disheartening to realize there are another 300+ that we need

to get out there. It is just not the same to do a video 'virtual' tour. Getting one's hands and feet into the soil, seeing the actual production equipment and the production site, handing the crops, talking with the farmer and all the others on a tour during the visit and on the bus, and getting a bit damp from the shower that (for the farmer) means a better crop but also means he has to fire up the sprayer once the tour leaves (because he needed to be sure all re-entry times were met to accommodate the tour) are all part of the tour experience. Maybe 'Santa' can arrange more tours and gain 'permission' for many more staff to be able to get away from their desks to take part. I know about their work load, but I also know that the knowledge gained will make staff more productive, and more than compensate by such efficiency gains.

Lastly, I would like to think that in this perfect world we are all taking the time to help mentor along some new staff. At a meeting in late November it became forcibly evident that a lot of old faces and colleagues have moved along (retired) this year. There were lots of new shining faces present from those who are picking up the reins. They can benefit from your knowledge being passed along too. Experience is gained just one day at a time, but upon a retirement 30+ years can be 'lost' in a heart's beat.

Resolve to share what you have with those who are picking up your torch!

Happy New Year!

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DELIVERY
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InCa is a highly efficient foliar calcium fertilizer that is uniquely formulated to facilitate delivery of calcium to critical areas within the plant. InCa is ideally suited for unpredictable seasonal weather changes and calcium demanding periods of growth. InCa helps protect blossoms and enhances fruit colour and firmness for improved marketability.

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MINOR USE

Bayer launches potato herbicide

Bayer has announced the launch of Sencor STZ, an innovative new herbicide for broad-spectrum control of all major annual grass and broadleaf weeds in potatoes. The STZ stands for the active ingredient sulfentrazone, a group 14 herbicide.

Sencor STZ combines the trusted control of Sencor with a new Group 14 mode of action, providing Canadian potato growers a new weed control option for their fields and offering a convenient resistance

management tool. As a pre-emergent herbicide, Sencor STZ has uptake through the roots and shoots of weeds, providing early-season weed control during critical crop stages. The product works on emerged weeds and provides residual broad-spectrum control of weeds yet to germinate. It will be provided in a convenient co-pack.

“As the first innovation in the potato herbicide space in many years, Sencor STZ offers an exciting new tool for

Canadian potato growers to combat a wide spectrum of weeds and maximize crop yield,” says Jon Weinmaster, crop and campaign marketing manager, Horticulture & Corn at Bayer.

Sencor is a proven performer that delivers reliable broad-spectrum weed control to Canadian potato growers. Trials utilizing Sencor STZ have demonstrated efficacy against Group 2- and 7-resistant biotypes, while providing essential control of Group 5-resistant

broadleaf weeds, demonstrating the added benefit of the product’s Group 14 herbicide.

“Given the increasing occurrence of herbicide resistance and a potentially shrinking number of solutions available for combatting tough-to-control weeds, Sencor STZ presents a welcome opportunity for growers to ensure they have the crop protection they need,” says Weinmaster. “This new herbicide affirms Bayer’s position as a leader in potato solutions and our commitment to growing and

furthering innovation within horticulture.”

Sencor STZ will be available to potato growers in Eastern Canada and British Columbia for the 2018 season. Sencor STZ comprises Group 5 (metribuzin) and Group 14 (sulfentrazone) herbicides.

For more information regarding Sencor STZ, growers are encouraged to talk to their local retailer or visit cropscience.bayer.ca/SencorSTZ

FMC acquires some DuPont assets

FMC Agricultural Solutions has acquired select DuPont Crop Protection assets, positioning it to provide customers with innovative crop protection solutions across all major Canadian crops.

From a horticultural perspective, the acquisition includes industry-leading insecticides such as Coragen., Altacor, Exirel and Verimark.

FMC now offers a complementary crop protection portfolio, deeper pipeline, greater regional reach, and a full-discovery research and development engine. Post acquisition, FMC is now a tier-one agricultural technology supplier in Canada and the fifth-largest crop protection company globally.

Flower quiz answers



1. apricots (photo by Phil Tregunno)
2. beans (photo by Carmen Perez) Suntech Greenhouses
3. rhubarb (photo by Glenn Lowson)
4. Asian pear (photo by Karen Davidson)
5. grapes (photo by Jamie Quai)
6. raspberries (photo by Glenn Lowson)
7. pumpkin (photo by Trevor Herrle-Braun)
8. horseradish (internet)

Here's to the
GROWER

“When I was a boy in India, I never could have imagined the opportunities I'd have in Canadian agriculture. My orchard business takes hard work, but I'm glad to see my kids grow up on a farm, just like I did. My name is Lakhwinder Brar and I grow fruits and vegetables.”

From all of us at FCC, thanks for making Canadian agriculture so amazing.

#HeresToCdnAg [Twitter](#) [Facebook](#) [Instagram](#)

fcc.ca

CANADA'S AGRICULTURE DAY FEBRUARY 13

Farm Credit Canada
Advancing the business of agriculture

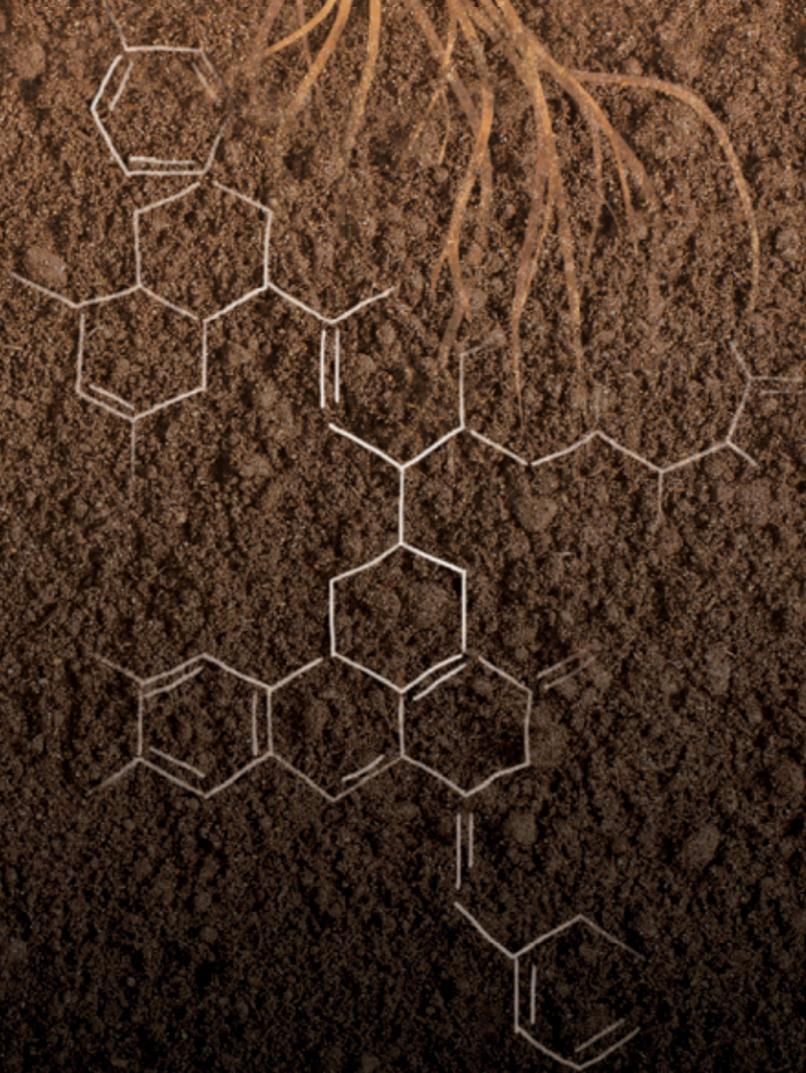


OUR SCIENTISTS LOVE PLAYING IN THE DIRT

AT INOCUCOR, WE DON'T THINK YOU SHOULD NEED A PH.D. IN MICROBIOLOGY TO UNDERSTAND CROP INPUTS — THAT'S OUR JOB.

We've conducted hundreds of field trials to ensure just the right combination of microbial strains to improve soil microbial activity. That's the science that makes our powerful natural crop optimizers simple to use, safe for people and animals, and beneficial to your farm's bottom-line.

Whether you're growing tomatoes or blueberries, Inocucor will improve your crop yields, support plant health and uniformity, and create healthier, more productive soil.



To speak to an Inocucor soil health expert about creating a customized plan for your farm or greenhouse operation, contact

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