

RAW INGREDIENTS

Fresh or processed, vegetables are under pressure



This truck load of freshly cut celery is destined for a food processing plant near Centre Hall, Pennsylvania. Holland Marsh grower Tim Horlings says that the eight-hour haul from Newmarket Ontario to the U.S. is the last stage of six months of tender care from seedling to soup. Photos by Glenn Lowson.

KAREN DAVIDSON

The lure of U.S. processing contracts is about more than the exchange rate – although, admittedly, it's tipped in favour of Canadian exporters this year. For celery grower Tim Horlings, it's about minimizing the time that he owns the crop.

"I don't have to store it," says Horlings, as he watches a tractor trailer rumble out of his Newmarket, Ontario farm drive. The load will be delivered in under eight hours to Hanover Foods Corporation.

Situated in Pennsylvania – about 700 miles south as the eagle flies – Hanover Foods Corporation is the largest fully-integrated and independent food processor in the United States. The maw of a plant transforms raw vegetables into canned, frozen, refrigerated and freeze-dried foods.

'Supporting local farmers since 1924' may be the tag line for Hanover Foods Corporation, but some of its daily bread depends on Canadian celery. As Horlings explains, American farmers don't stack up the same celery yields as those growers in Ontario's Holland Marsh.

"We produce a higher tonnage on smaller acreages," says Horlings, whose father and uncle started the trek to Pennsylvania back in the early 1990s. Blessed by muck soils and access to irrigation water, the family has specialized in processing celery that forms the flavour base of soups, stews and chowders.

Since taking over the farm in 2006, Horlings starts every March by planting Norseco's Sabrosa variety of celery in his greenhouses. By May, the seedlings are big enough to be transplanted. One might think that the agronomics of a processing variety would be less demanding than celery for the retail trade. Not so. To achieve volume yields, the crop must receive a weekly dose

of micronutrients. Boron and calcium, in particular, are needed to form strong cellular walls to support the six-pound heads at 100 days of maturity. These are twice the size of celery bound for grocery stores.

"We take tissue samples every week so that we can adjust micronutrient needs and adapt to the weather," says Horlings.

Protective fungicides are equally important to assure quality appearance of the celery. By August, diseases such as bacterial leaf spot, celery leaf curl and blackheart may "take down" plants. Why so fussy if the celery is going to be chopped and diced into Chicken Pot Pie soup? The processor's specifications require unblemished straight stalks of celery.

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Greenhouse innovation PG 12

Berry research PG 20

AT PRESS TIME...

AgriRecovery funding quintupled to \$500 million



As drought worsens and wildfires rage in western Canada, federal agriculture minister Marie-Claude Bibeau announced an increase to \$500 million for the AgriRecovery program. This includes initial funding of \$100 million announced on August 6, 2021.

The program operates on a 60-40 cost-shared basis with the provinces. Most affected are the provinces of British Columbia, Alberta, Saskatchewan, Manitoba and northern Ontario.

To date, the governments of Alberta, Saskatchewan, Manitoba and Ontario have announced provincial commitments under the AgriRecovery Framework totaling up to \$322 million.

- Alberta has announced a commitment of \$136 million.
- Saskatchewan has announced a commitment of \$119 million.
- Manitoba has announced a commitment of \$62 million.
- Ontario has announced a commitment of \$5 million.
- An AgriRecovery assessment for British Columbia is underway, but details of its provincial funding commitment have not yet been announced.

Producers can also apply for interim payments under AgriStability to help cope with immediate financial challenges. The federal government and the provincial governments of British Columbia, Alberta, Saskatchewan, Manitoba and Ontario have agreed to increase the 2021 AgriStability interim benefit payment percentage from 50 per cent to 75 per cent, so producers can access a greater portion of their benefit early to meet their urgent needs. British Columbia and Manitoba have also opened up late participation in AgriStability to farmers who did not register in 2021 so they can benefit from this important income support.

Source: *Agriculture and Agri-Food Canada August 15, 2021 news release*

October 1: deadline to register under Ontario's new Blue Box regulations

The Blue Box program in Ontario that collects and recycles materials from residential homes is moving to a system that requires producers of products packaged in blue box materials such as paper, glass, metal or plastic to be accountable and financially responsible for them after disposal by consumers.

On June 3, 2021 the government of Ontario released the new Blue Box Regulation under the Resource Recovery and

Circular Economy Act, 2016 that will begin transitioning on July 1, 2023. Currently the costs of the program are split between producers and municipalities.

The first major deadline for all producers is October 1, 2021. Producers designated under the new regulations are required to register and report their 2020 material supply data on or before this date to the Resource Productivity & Recovery Authority (RPR). The RPR will be responsible for registry administration and compliance of the new Blue Box Regulation when the current blue box program administered by Stewardship Ontario is wound down.

The Ontario Fruit and Vegetable Growers' Association has been working with other agricultural organizations to get clarity on several parts of the new regulation that will impact growers in the fresh fruit and vegetable sector. It is recommended that all potential producers review the new Blue Box Regulation and contact RPR to answer any questions on their specific business obligations.

Producers in other provinces and territories are also included if they supply product into Ontario that is packaged in materials that will end up in the blue box system.

Resources: rpra.ca/programs/blue-box/
Contact: RPR Compliance Team at registry@rpra.ca or 1-833-600-0530.

NEWSMAKERS

The board of directors of the BC Blueberry Council has elected **Dalbir Benipal** as chair. He's the first Indo-Canadian in the role. The association represents 600 growers and 27,000 acres of blueberries.



Dalbir Benipal

Wine Growers Canada (WGC) and Wine Growers British Columbia (WGBC) have announced the recipients of the 2021 Canadian Wine Industry Awards, sponsored by national accounting, tax and business consulting firm MNP. The virtual ceremony recognized:

- Canadian Wine Industry Award of Distinction – **Steve Bolliger**
- Canadian Wine Industry Champion Award – **Debbie Trenholm**
- The Karl Kaiser Canadian Winemaker Award – **Howard Soon**



Howard Soon

- Wine Growers British Columbia Industry Recognition Award – **Kurtis Kolt**
- Wine Growers British Columbia Award of Distinction – **Glenn Fawcett**

For more detail on their accomplishments, go to: <https://bit.ly/3xVPhvp>

Glen Gilvesy has been elected chair of the board for the Ontario Ginseng Growers' Association.

The Canadian Agri-Food Policy Institute (CAPI) has announced that **Tyler McCann** is the managing director. **Al Mussell** has joined as a part-time research coordinator, identifying and overseeing projects and supporting the communication of research results. He is the founder and research lead of Agri-Food Economic Systems, based in Guelph, Ontario. **Bree Jones** is the new director of fundraising, bringing previous experience with Ducks Unlimited Canada. **Ted Bilyea** has retired from the role of chief strategy officer. CAPI leads, catalyzes and coordinates independent strategic and policy analysis on emerging agri-food issues, engages stakeholders in dialogue, and advances public policy.

The Canadian Food Innovation Network (CFIN) is a new global hub for food innovation. **Joseph Lake** has joined as CEO, formerly of McCain Foods, where he's held positions in research, development and global innovation strategy management since 2009. **Dana McCauley** becomes chief experience officer. Most recently, she was director of New Venture Creation at the University of Guelph; and previously, she was the founding executive director for Food Starter, a Toronto-based food business incubator, accelerator and shared production facility. **Melanie DiReito** will be chief financial officer. Since 2013, she has provided financial services and reporting for Canadian Food Innovators among other clients. For more information, link here: www.canadianfoodinnovators.ca

The Canadian Produce Marketing Association (CPMA) is proud to recognize its 2021 Produce Champion: Ontario Senator, **Rob Black**, member of the Senate Standing Committee on Agriculture and Forestry. The CPMA's annual Produce Champion award is given to a Member of Parliament or Senator who has been supportive of the produce industry and effective at bringing industry issues to the forefront on Parliament Hill.

The BC Ministry of Agriculture, Food and Fisheries has added more responsibilities to field vegetable specialist **Susan Smith**. Greenhouse, floriculture and nursery crops are now under her mandate.

Dr. Evan Fraser has been re-appointed for a second term as director of the University of Guelph's Arrell Food Institute, effective September 1. The institute works to improve global food systems by bringing together cutting-edge research, agricultural expertise, big data, community engagement, environmental science, business and civil society at the University of Guelph. His term will end in 2026.












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COVER STORY

Fresh or processed, vegetables are under pressure



“
I contract (with Hanover) at the start of the year on how much we’re going to grow. It’s simply less of a gamble to not have to store the crop. I consider this a cash crop.

~ TIM HORLINGS

Continued from page 1

As Horlings explains, every grower wants stalks, not leaves. Upon arrival at the processing plant, the load is probed for percentage of leaves. Six per cent is the processor’s tolerance level to avoid penalties. His celery averages two to three per cent, but the goal requires all-season care. He also ensures quality with his own fabricated equipment that chops the celery into six-inch sticks whilst still in the field. Shredding celery leaves and leaving them on the soil to decompose is a better stewardship move than sending them stateside.

“I contract (with Hanover) at the start of the year on how much we’re going to grow,” says Horlings. “It’s simply less of a gamble to not have to store the crop. I consider this a cash crop.”

With 70 acres on contract in 2021, Horlings is smiling. The loonie’s tumble has been in his favour from a high of 0.83070 USD on June 2, 2021 to a low of 0.78409 USD on July 19, 2021.

Not every field vegetable grower is feeling as confident about future prospects. Mark Srokosz, a long-time grower of carrots and celery, notes that fewer vegetable acres were planted in the Grand Bend, Ontario vicinity this year. Industry observers confirm the loss of 500 acres of broccoli and 200 acres of onions province-wide. And that estimate may be low.

Srokosz says that celery contracts were cut by local

processors due to less demand from foodservice. Costs of fertilizer and crop protection products continue to rise. Growers have worries about access to labour for critical harvest periods. The burdens of these new work-related concerns amidst COVID-19 lockdowns have taken a personal toll.

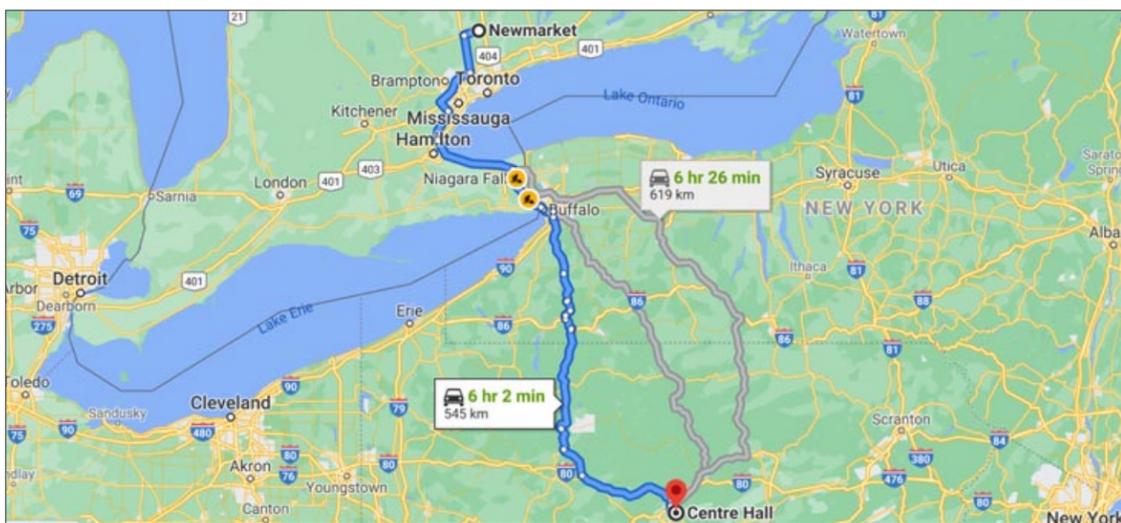
“The fresh vegetable business is in a state of emergency,” declares Srokosz. “The costs of production are driving Ontario growers out of business. This coming winter, there will be hard decisions to make.”

These contrasting stories illustrate the different paths that individual growers take to keep their operations sustainable and profitable. For them, this fall’s federal election is punctuating a difficult 18 months. The path forward will be influenced by policies in labour, housing, crop protection and value-added processing in a country that could be more self-sufficient in its food production.

Dr. Evan Fraser, director of the University of Guelph’s Arrell Food Institute, points out a need for a reset.

“Our current food system is based on assumptions of high productivity supported by access to water and an open border. That may not be the case for the next generation of farmers,” says Fraser.

He would like to see a renaissance of a local processing industry that can turn raw ingredients into value-added products. A more sustainable food system would include research into improved cultivars,



It’s 700 miles or just under eight hours to truck celery from Ontario’s Holland Marsh to the processing plant in Centre Hall, Pennsylvania. That’s where the raw ingredient will be transformed by Hanover Foods Corporation into the base for soups and stews.



Mark Srokosz, a muck crops grower near Grand Bend, Ontario, samples his carrots which are destined for a local packer.

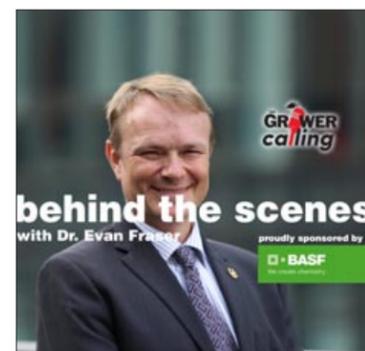
combined with new technologies that can extend the growing season to year-round.

The greenhouse sector has proved, in spades, that innovative practices can produce tomatoes, peppers and cucumbers, and more recently, strawberries, on a year-round basis. Now the movement, from other growers, is towards high tunnels for a variety of crops.

Fresh vegetable growers such as Tim Horlings and Mark Srokosz have limited options. It’s

an open-ended question how the business of field vegetables will evolve in such a competitive landscape.

The Grower goes “Behind the Scenes” with Dr. Evan Fraser, director, Arrell Food Institute, Guelph, Ontario. He shares timely insight on the future of food systems and food sovereignty. This series is sponsored by BASF Agricultural Solutions.



CROSS COUNTRY DIGEST

BRITISH COLUMBIA

Assessing heat effects on horticulture

Cities – and rural areas -- across British Columbia broke at least 59 previous temperature records in late June 2021. One example is Pitt Meadows and Maple Ridge which recorded a record 41.4°C.

The unprecedented heat dome had scorching effects on horticultural crops such as raspberries, but total losses for tender fruit won't be known until end of the harvest season. Or as tree fruit growers will attest, until next year. **The Grower** asked leaders in three sectors for their best assessments in mid-August.

Blueberries - Clara Moran, marketing and PR coordinator, BC Blueberry Council

Green berries were sun-damaged and later stopped growing and fell off the bush. The remaining berries initially lacked sweet/tarty flavour, but the cooler temperatures that followed the heat wave helped to eventually overcome any quality issues. The heat also helped to keep insect/pest (e.g. spotted wing drosophila) pressure low this season.

Growers have mitigated damage through irrigation. However, overhead sprinklers were needed to keep the developing berries cool.

Blueberry production is possibly 30 per cent lower than last season, but we won't know the full impact until later this year and next season.

Tender Fruit - Glen Lucas, general manager, BC Fruit Growers' Association

Late June temperatures were extreme (all-time record-setting) and fruit was damaged by the heat in varying degrees. The temperatures were accompanied by a very dry spring, so irrigation to replace evapotranspiration was

essential. Not all irrigation systems were designed with these extremes in mind.

Early cherry volume is down by an estimated 70 per cent. We are still assessing late-season cherries, but it appears to be averaging 10 per cent of a normal crop. Overall, the cherry crop is probably down 40-50 per cent from the potential crop that was pollinated this year.

The 2021 projected apple production for BC is 174.2 million pounds of fresh, processed and cull apples, down from 205 million pounds in 2020, a decline of about 15 per cent.

In BC, an acreage reduction of 5.6 per cent and a yield reduction of 10 per cent contributed to the decline in production. The yield reduction is primarily due to all-time record setting heat from June 28- July 1, 2021, when temperatures peaked at 45°Celsius, resulting in some sunburned and heat stressed fruit which will not be harvested.

Tree fruit growers are increasingly desperate for financial investment and financial programs by the BC government, following financial setbacks that threaten food security. For apples, the largest tree fruit crop by volume:

- A trade war between the US and China resulted in a \$0.07 per pound cash subsidy to US growers, but not in the BC apple sector.
- Retail consolidation has resulted in increasing margins for retailers and reducing margins (often negative) for growers.
- The long term impact of the massive expansion of apple acreage in the US, due to the irrigation water flows provided by the Columbia River Treaty, remains uncompensated.

For cherries, the largest tree fruit crop by revenue:

- Weather disasters in 2019 (rain), 2020 (spring frost), and

2021 (heat) have reduced saleable production.

- An increasing shortage of domestic labour leaves growers unable to harvest the entire cherry crop that remains, even after the reduction in volume due to weather impacts.

"Growing tree fruit has been very challenging the past few years. Our growers support food security and the Agricultural Land Reserve and we would naturally like to see the same level of commitment from the BC government," said Pinder Dhaliwal, President of the BC Fruit Growers' Association.

In the short-term, AgriRecovery funding could assist with the following initiatives to reduce financial risk and aid recovery in the apple and cherry sectors:

- Assistance with disease and nutrient sprays and application costs for fireblight, mildew, and canker, as well as nutrient sprays - heat-stressed trees are weakened and more susceptible to disease (Estimated compensation: \$5.8 million).
- Increasing the storage and delivery capacity of community/regional government irrigation infrastructure to prepare for new heat extremes in future years. Additional water availability is needed for recovery and future protection of trees from excessive heat (eg. \$1 million per city purveyor for planning and short term infrastructure improvements).
- Testing and analysis costs to assess fruit quality pre-harvest. For example, the purchase of internal quality meters for field staff and 5 major packinghouses (Approx. \$300,000)
- Assistance to remove damaged apples from storages and diversion to juice, to eliminate or minimize shrinkage and product returns (\$0.25/lb = \$12.5 million).

BC's interior tree fruit industry



The summer heat waves of 2021 initiated with the punishing, all time record-setting heat wave of June 28 - July 1

Date	Keremeos	Oliver	Kelowna	Vernon
June 26	38	40	38	39
June 27	41	42	41	42
June 28	43	43	42	42
June 29	41	45	45	44
June 30	44	43	44	44
July 1	38	38	39	39

represents 800 growers operating orchards that generate \$118 million in wholesale revenue and contribute \$776 million in economic activity.

Greenhouse - Linda Delli Santi, executive director, BC Greenhouse Vegetable Growers

Normally a healthy plant can withstand high temperatures, although these temperatures were extremely high. Some of our older, shorter greenhouses did experience some sun scald, soft fruit and blossom end rot but the majority of our growers did not. We did have problems with crop maintenance as it was too hot for the workers to spend the hours needed in the greenhouse. Delayed crop work may have caused some fruit set loss although we won't know to what extent until later on.

Once we started harvesting our ripe or near ripe fruit, we realized it looked good but once packaged it started breaking down. We immediately had to pivot and grade very hard to take out any fruit that had the slightest hint of

damage. The fruit was soft and started to collapse almost immediately. Even with the careful grading there were rejections at retail, especially if shipped any distance. Our cull rates increased dramatically, up to around 10 per cent and will remain there for another three weeks or so.

In the earlier stages of fruit left on the plant the size went from the majority being XXL to the majority being large or smaller. The shape also suffered. This shift is dramatic and our customers do not like it. Flowers that set during the heat wave may also have these problems and we may take six to eight weeks to come out of it.

We may have been able to harvest everything sooner when the heat started but with chronic labour shortages this just wasn't possible.

"We look forward to putting this behind us," concludes Delli Santi.

CANADA

Nine per cent volume drop estimated for Canadian apple crop

Here's the Canadian apple outlook that was presented at the U.S. Apple Outlook Conference on August 20, 2021 in Chicago. The Canadian Horticultural Council provided a preliminary estimate of 18,866,589 bushels – down 8.9% – from 2020. In volume, the top three varieties are Gala, McIntosh and Ambrosia.

British Columbia. Declining acreage (-15%) has been noted during the last three years due to intensive internal price competition and consolidated retailers. This year, record-breaking temperatures up to 45°C and drought will further impact

returns. Heat stress has caused sunburn issues and internal quality will be a concern due to sunscald storability. Growers now have weakened and disease-susceptible trees. Overall, there will be reduced quality and limited high-quality crop with crop diversions expected.

Ontario. As of July 2021, the crop estimate was down 11 per cent due to weather impacts. March, April and May were very dry, followed by a hot June and a very wet July. Southwestern Ontario experienced severe hailstorms. Disease pressures have been noted including black rot

but apple scab has not been an issue. Overall, quality and size are looking good. Growers say, "This is the earliest crop in years."

Québec. Like Ontario, the early spring was very warm, but two cold spells impacted certain growing areas. July was not as hot but very wet. Spotty problems have occurred with fire blight. Thanks to plentiful July rains, fruit is sizing nicely. U-pick orchards were extremely busy last year and growers are expecting the same trend this year. The sector is expecting 5.2 million bushels – (-8%) – down from last year. The provincial government's replant

program has ended.

New Brunswick. Growers report that the 2021 crop is looking promising with good sizing. Hot June days helped. Strong sales were recorded in the winter months. Some McIntosh apples, still in storage, need to be moved as quickly as possible before new crop.

Nova Scotia. Several recent hailstorms in specific locales have dinged expectations. However, the early spring, good growing conditions and timely rains have growers cautiously optimistic that the crop will yield 10 per cent

higher than last year. Fire blight is "simmering" but currently under control. Powdery mildew is getting worse under current spray regimes. The re-entry intervals and application restrictions are making disease control more difficult. Adequate and timely labour for harvest remains a big concern given the delays and restrictions due to COVID-19.

Growers cite several concerns: the continuing dearth of federal researchers, crop protection product cancellations and restrictions, unabated volume of imports. The province does not have a replant program.

CROSS COUNTRY DIGEST

QUÉBEC

Québec seeks more temporary foreign workers

Citing its status as “a unique province, with an immigration context that is also unique,” Québec has reached a deal with Ottawa to introduce a pilot project that will allow employers to increase the maximum number of temporary foreign workers to work in minimum-wage jobs.

Introduced under the Temporary Foreign Worker (TFW) Program, Québec employers can increase by 10 per cent to 20 per cent the maximum number of temporary foreign workers in low-wage positions and employed in certain economic sectors designated by Québec following a consultation with labour market partners; receive an exemption from existing advertising and recruitment requirements for a larger number of occupations, designated by Québec; and receive an exemption from the current policy on the refusal to process a Labour

Market Impact Assessment application in certain geographic regions designated by Québec following a consultation with labour market partners.

The agreement will also see the implementation by Immigration, Refugees and Citizenship Canada of new measures under the International Mobility Program that would allow for an additional 7,000 work permits to be issued annually to holders of a Certificat de sélection du Québec, which is required in order to become a permanent resident in the province.

These flexibilities will be part of a pilot project that will run until Dec. 31, 2023. At the pilot’s conclusion, the federal government says it will re-evaluate the measures.

During the summer of 2021, not all temporary foreign workers were at their stations in Québec.



As of mid-August, 15 Guatemalan workers had disappeared, presumably looking for a better life in the United States. Manon Vial, Union des Producteurs Agricole, confirms that the numbers of “missing” workers is much higher than in previous years

“Every year, we have between 16,000 and 17,000 temporary

foreign workers in Québec,” says Vial. “Last year, seven workers disappeared. This year, we are missing 15.”

It’s not a new phenomenon according to Michel Pilon, directeur général du Réseau d’aide aux travailleuses et travailleurs migrants agricoles du Québec, who spoke to Journal de Québec. This is the bureau for the aid of

agricultural migrant workers.

But it’s certainly a major inconvenience for farm employers who lose valuable hands overnight and who must quickly find replacements in mid-harvest.

Source: Canadian Manufacturing August 9, 2021 newsletter

QUÉBEC

Québec Parmentier acquires two potato production companies

Québec Parmentier has acquired two potato production companies, Les Fermes Petite Nation and Les Pommes de terre du Témiscamingue, located in the Outaouais and Témiscamingue regions, thus bringing its total annual production to nearly 300 million pounds.

According to CEO, Pierre Chouinard, “This transaction fits in with Québec Parmentier’s sustainable growth plan and is in line with our goal of becoming a leader in the Canadian potato sector, thereby ensuring consistent and dependable supply to our customers all year round.”

At the same time, Québec Parmentier has announced that Préval AG and Les Pommes de

terre Cardinal have joined the organization as new shareholders. As leaders in their respective fields of activity, they provide complementary expertise to the organization.

Préval AG Inc., North America’s leader in veal production, is also involved in the agricultural sector (veal, beef, lamb, field crops, vegetable crops, grain processing). For its part, Les Pommes de terre Cardinal, a family business since 1952, cultivates 2,000 acres (1,000 of which are potatoes), in addition to owning a packing station.

“Québec Parmentier is a story of producers who came together to innovate and redefine potato marketing,” declared Kevin

Rivard, president of Québec Parmentier. “We offer solutions that meet the needs of our clients; the well-suited expertise of our two new shareholders will allow us to pursue our mission. This is further proof of the success of our model, of which we are very proud.”

Québec Parmentier is the only potato producer organization in Canada with its own private varietal development program, investing in research and development of new products, producing seed potatoes (TNU, E1, E2, E3, E4), as well as producing table potatoes at its own packing station and processing plant. Founded in 2012, the company brings



together more than 25 potato producing families. The company markets its products primarily under the Propur and Mamzells brands.

For more information, visit:

www.quebecparmentier.com.

Source: Québec Parmentier August 10, 2021 news release

QUÉBEC

Vegpro International to build first greenhouse

In early August 2021, Gerry Van Winden unveiled his plans for the next strategic phase of Vegpro International – taking the Sherrington, Québec company from its foundation of growing lettuce outdoors in muck soils to its first build of a 10-acre greenhouse. The investment is pegged at \$55 million.

The CEO revealed his strategy of growing lettuce locally for Québécois year-round, despite facilities in Florida. The first greenhouse, expected to be in production during the winter of 2022, will have capacity for

100,000 pounds of lettuce per week.

“With this investment, Vegpro will reduce its environmental footprint on different levels: less transportation of lettuce from our winter production site in Florida for products destined for eastern Canada, a reduced use of water and fossil energy, as well as the elimination of pesticides,” Van Winden said in the company news release. “We make every effort to reduce the repercussions our activities have on the environment, and the construction of a greenhouse



complex is another gesture that demonstrates our desire to be an

environmentally responsible company.”

Source: Vegpro International August 10, 2021 news release

FEDERAL ELECTION

Canada's agricultural and food industry is poised to drive pandemic recovery

With the election called for September 20, 2021, the Canadian Federation of Agriculture (CFA) is calling on the federal parties to prioritize agriculture in their election platforms as a means of spurring Canada's economic recovery, while creating a foundation for economic and environmental benefits for years to come. Farmers and citizens across Canada need a government that is dedicated to unleashing the potential for agriculture not only as an economic engine, but also as an important ally in the fight against climate change.

A main priority of the sector is to increase funding for the Next Policy Framework (NPF), which will determine the bulk of funding for the agriculture sector and take effect in 2023. This additional support would position Government and producers as partners in the response to the impacts of climate change and fully embrace their potential as climate-solutions providers. The ongoing extreme drought conditions across Canada demonstrate the important role Canada's agricultural policy framework plays in responding to climate change.

"We are pleased to see the Government of Canada announce \$500 million in AgriRecovery

funding to support farmers and ranchers. As these events increase in regularity, we need to ensure the support available to producers facing truly urgent needs is timely, adequate, and based on clearly defined triggers. This is critical to mitigate any long-term consequences that might arise from producers making decisions when backed into a corner," said CFA president, Mary Robinson.

"Canadian agriculture has been repeatedly identified by the government and financial institutions as a sector that can achieve incredible growth. Our natural resources are one of Canada's strongest foundations. Yet consecutive governments have failed to provide any kind of increase in consistent funding to actually achieve this growth, failing to even keep up with inflation. Farming and food production is truly an essential industry, and we need to see actions that support and propel the industry to new heights," said Robinson.

Part of leveraging agriculture's environmental benefits is helping relieve the burden farmers face from climate change and working together to capitalize on agriculture's potential for carbon sequestration and climate change mitigation. This includes establishing carbon tax



Photo by Glenn Lawson

exemptions for climate change mitigation activities and ensuring access to emission reduction credits to help incentivize on-farm sustainability efforts.

Farmers across Canada also continue to deal with infrastructure deficits in transportation, broadband access, and skills development. These challenges hamper farmers' ability to fully harness cutting-edge technologies and access new markets.

"A lack of rural connectivity is a prime example of a problem

that can no longer be ignored, especially as we usher in a new generation of farmers who rely on the internet for their lifestyle and day-to-day business needs. Basic minimum standards need to be guaranteed that meet the needs of today and the future," added Robinson.

Apart from these central planks, CFA also recommends:

- Modernizing Canada's post-secondary infrastructure for agricultural research
- Removing bottlenecks in

- transportation infrastructure
- Facilitating the smooth and efficient transfer of family farms
- Ensuring the Canada Grain Act Review results in funding comparable to competitor countries
- Supporting regulations addressing on-farm activism that could endanger animals and farm families

Source: Canadian Federation of Agriculture August 16, 2021 news release

Canadian Horticultural Council presents its election platform brief

From the farm gate to the dinner plate, the fruit and vegetable sector is a major contributor to Canada's GDP and job market from coast to coast to coast. This year, our growers are marking the UN International Year of Fruits and Vegetables, and are proud to provide Canadians and families around the world with safe, nutritious food products that offer tremendous health benefits.

The COVID-19 pandemic has brought unprecedented challenges to Canadian businesses and supply chains, including the fresh produce industry. Some growers faced significant losses due to a lack of workforce. Many others have made significant investments to keep their workers safe, including setting up partitions, building new housing, renting house trailers to ensure proper distancing, and supplying

personal protective equipment and sanitization products to their workers. And in some cases, farms have been forced to temporarily shut down operations and have workers quarantined.

Despite these challenges, our growers have remained resilient, and continue to adapt their practices to ensure Canadians have access to healthy and local fruits and vegetables. To help bolster Canada's economic recovery, strengthen food security across the country, and ensure the success of our members now and in the years to come, the Canadian Horticultural Council (CHC) is seeking commitments from federal parties to support growers by:

- Providing the Canadian produce industry with financial protection through the creation of a statutory deemed trust, especially

considering that, now more than ever, there is a real risk of bankruptcies throughout the food service and restaurant sectors.

- Committing federal leadership to further improve the AgriStability program, specifically by increasing the margin coverage to 85% and increasing coverage to 85%.

- Providing growers with clear guidance, and ongoing financial support to renovate existing buildings or construct new ones in compliance with any new federal housing regulations.

- Supporting Employment and Social Development Canada, Service Canada, and Immigration, Refugees and Citizenship Canada with additional resources to ensure the timely flow of international farm workers and continued

partnerships with source countries.

- Developing a preventative plant health and compensation program to arm growers with comprehensive biosecurity tools and cover losses from crop destruction required to limit risks from economically devastating pests.

- Recognizing the fresh produce sector as a significant contributor to Canada's economic recovery. To ensure that horticulture is able to meet its full potential, the federal government should increase resources beyond the current Canadian Agriculture Partnership (CAP) and the Next Agricultural Policy Framework (NPF) by creating a separate fund to support innovation adoption in horticulture.

The Canadian produce

industry has weathered many challenges over the last several decades, but none have posed a greater threat or created more uncertainty than the COVID-19 pandemic. As we approach the next federal election, our growers are looking to Canada's political parties for their plan to support the sector now and into the future.

This will be imperative in maintaining Canada's food sovereignty, and allowing our growers to continue providing Canadians with the fresh, safe and local produce they need. The sector is well suited to be a significant contributor to our country's post-pandemic economic recovery, should it receive strategic investments and key support from the federal government.

OUR EXPERTS ARE HERE TO HELP!



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POTATO UPDATE

Potential of Canadian potato crop promises to fill industry needs

The potato crop in Canada is now in the very critical growth stage of tuber bulking according to the United Potato Growers of Canada (UPGC). That's the assessment as of August 19, 2021.

"Set has been determined and it is now this phase which will provide yield and determine production for this crop," says UPGC general manager Kevin MacIsaac. "While there is still considerable time left for many growing regions, the Canadian crop in mid-August appears to have good potential – in many but not all regions – to meet the needs of industry and rebound after reductions in yield and production experienced due to growing conditions in the previous two seasons.

Early harvest of table, chip and processing potatoes has begun in most provinces.

Here's the province-by-province summary:

Prince Edward Island. The first 90-100 days of the growing season have been almost ideal, with 130 plus mm of rainfall during July. Some growers feel their crop is a week to 10 days ahead of normal maturity. Field digs and industry sampling suggest very good yield and sizing. However, additional moisture is needed to finish out the crop.

New Brunswick. The overall health of the crop is good to excellent. Normally, early chip harvest would be underway, but there is no contract with the chip company. French fry plants will start on August 27 and 30. Friers are showing interest in purchasing open potatoes to cover potential shortfalls in their western production regions.

Québec. Recent heat is stressing the crop. Irrigation or timely rainfall may help the situation.

Early harvest of table, chip and process potatoes is underway with yields average to slightly above average, with good quality.

Ontario. Nice growing conditions have been experienced province-wide with abundant rainfall taking some pressure off running long days of irrigation. The crop is advancing early with growers expecting top-killing a week to 10 days ahead of normal. Early chipstock harvest has been underway for three weeks now.

Manitoba. The fresh potato-growing areas have experienced the most severe drought, with growers estimating 50 per cent of a normal crop. For processing growers, mid-30°C temperatures are stressing varieties such as Russet Burbank which are susceptible to early dying. Early harvest on Rangers began August 10, matching or exceeding expect-



Photo by Glenn Lawson.

tations for yield with good sizing.

Saskatchewan. Irrigation has resulted in a very decent looking crop. Growers expect better quality and yields than the last two years. Harvest is expected to start September 1.

Alberta. The province received one inch of rain in mid-August, the first in about two months, however crop damage is already done. Yields could be down by 15 to 20 per cent with variable size profiles and quality. Early harvest

in chipping potatoes is yielding in the 12 tons/acre range. Demand for new crop is extremely high, but the province is short on supplies.

British Columbia. Growers have managed the record-setting heat with irrigation. Average yields are expected. Demand has been good, although growers are challenged to dig early in the day and get field heat out before packaging.

Source: United Potato Growers of Canada Aug 19, 2021 news release

FUNDING FOR NEW-TO-ONTARIO AUTOMATION AND MACHINERY

Agri-tech Innovation Program open for intake



The Ontario government is investing in new partnerships in agri-food innovation, including pilot projects in robotics and artificial intelligence, to help the industry address pandemic-related challenges, ongoing labour shortages, and create new opportunities for growth across the sector.

The Innovators Stream intake will run from August 19 to September 27, 2021, according to a news release from the Ontario Ministry of Agriculture, Food and Rural Affairs. This is the second phase of the Agri-tech Innovation Program, a \$22 million program that provides up to 60 per cent funding for eligible costs, to a maximum of \$750,000.

"Investing in new technology will have tremendous potential to help our agri-food industry meet many of the current challenges it faces," said Lisa Thompson, minister of Agriculture, Food and Rural Affairs. "I'm calling on agri-food businesses, commodity

organizations and technology providers to join this exciting new initiative and help protect the safety of agri-food workers, while ensuring Ontario's agri-food sector continues to lead across North America and around the world."

The Innovator Stream intake focuses on ground-breaking projects where innovation — such as piloting the use of autonomous farm equipment in an operational environment — is new to Ontario, North America or the agri-sector. Funding eligibility will include targeted, specialized, high-impact projects that pilot or demonstrate cutting-edge technology. Projects will require collaboration between at least two agri-food businesses, organizations and agri-food technology providers or developers.

"Innovation is the driving force of competitiveness in modern agriculture, and the key to protecting our workforce while ensuring long-term success," said

Minister Thompson.

"To be a highly competitive food and beverage processing industry globally, we must be forward thinking on innovation," said Chris Conway, CEO, Food and Beverage Ontario. "This program will make it possible for leaders in technology and business to work together on priority issues such as labour productivity

and develop new solutions that will benefit the entire industry."

"The Agri-tech Innovation Program has been, and will be, instrumental to further mobilize the Ontario agricultural innovation and technology supply chain and support the sector in meeting the demands of today and the future," said Ian Potter, PhD, president and CEO,

Vineland Research and Innovation Centre. "Working collaboratively to implement innovative business-focused technical solutions and develop best practices is the path forward."

Photo courtesy of Ecoation Innovative Solutions.

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CHAIR'S PERSPECTIVE

A return to the meeting room



BILL GEORGE JR.
CHAIR, OFVGA

As the vaccine roll-out continues, many of us are hopeful of a return to something that's been missing the last 18 months: the opportunity for face-to-face meetings.

The Ontario Fruit and Vegetable Growers' Association (OFVGA) is a lobby organization and our ability to achieve results on behalf of growers is directly linked to the strength of our government relations network and the relationships our board and

staff are able to build with elected representatives, political staff and bureaucrats.

As an organization, we've invested considerable time, effort and resources into developing those relationships over the last number of years and making sure we have the in-house expertise in key policy areas in order to work effectively with government. Until the COVID-19 pandemic, many of those efforts involved direct, in-person contact. We took the grower message to Queen's Park for dedicated lobby days that involved meetings with many different people. It was often at the end-of-day reception, though, that the more meaningful conversations and interactions took place.

We also regularly attended events hosted by government and by politicians as a way of further building those relationships, and many of our directors participated regularly in meetings locally and regionally with politicians.

I think it's safe to say that we've never tested the strength of

those relationships nor fully appreciated the value of this type of outreach and networking until the last 18 months. The pandemic has been a - hopefully - once-in-a-lifetime crisis that threatened grower businesses and families, but also Canada's food production capacity.

It was by everyone working together - growers, industry, and government - that we were able to navigate our way through the turbulence and make sure we did the best we could to keep workers arriving and ensuring their safety while they are here. We've managed to keep meetings, business and networking going by moving things online. Our annual general meeting this past winter was a virtual event, and we hosted virtual lobby days provincially. There were some good outcomes, but it just wasn't the same or as effective as being able to meet face-to-face.

There's an energy that comes with being together that Zoom just can't replicate. This is especially true of situations where

you're meeting someone for the first time, and as the pandemic drags on, we're gradually starting to work with people we've never met before except online.

With a federal election called for September 20 and a provincial election coming up in less than a year, there will likely be changes with new faces and new appointments to key positions. Elections always serve as a bit of a reset for government relations activities. I'm hopeful that we'll be able to safely resume at least some of our outreach activities in person and restart more meaningful interactions.

We're still seeing some large agricultural industry events opting not to move ahead in-person, but we're hoping, for example, to be able to host our annual meeting this coming winter in-person in some way. As a board and staff, we, too, need to be able to have face-to-face discussions with each other and with growers when it comes to debating issues and setting policy.

So, we've started looking at

new ways of bringing people together safely and of getting the grower message in front of influencers and decision-makers creatively but in-person. That includes being able to bring people to farms - a picture is worth a thousand words, as they say, but an in-person visit is even better when it comes to understanding what our sector is all about.

We're also looking at what those messages should be. We know that labour, crop protection and safety net programming are always important, and we will continue to focus on those areas.

But what will the next growing season look like in terms of worker arrivals, for example? And as we transition into a post-pandemic reality, what other issues will come our way that we need to work on? What role will climate change and the environment play in our ability to grow food and be competitive?

Those topics - and more - will hopefully soon be the subject of face-to-face meetings once again.

WEATHER VANE



Thrice-weekly, produce is gathered and redistributed at the Elmira Produce Auction Cooperative Ltd. Since 2004, growers across southwestern Ontario bring their freshly picked fruits, vegetables and flowers to Elmira, Ontario, to be auctioned wholesale to independent stores and restaurateurs. While Elmira's is still this province's largest, local communities have also started produce auctions in Bruce/Huron, and Algoma. Photo by Glenn Lawson.

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The Grower is printed 12 times a year and sent to all members of the Ontario Fruit and Vegetable Growers' Association who have paid \$30.00 (plus G.S.T.) per year for the paper through their commodity group or container fees. Others may subscribe as follows by writing to the office:

\$30.00 (+ HST) /year in Canada
\$40.00/year International

Subscribers must submit a claim for missing issues within four months. If the issue is claimed within four months, but not available, The Grower will extend the subscription by one month. No refunds on subscriptions.

P.M. 40012319

ONTARIO FRUIT AND VEGETABLE GROWERS' ASSOCIATION BOARD OF DIRECTORS 2020

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THE
GROWER

URBAN COWBOY

Health officials turn to growers for vaccine leadership



OWEN ROBERTS

Growers almost always finish at or near the top of trusted-professions polls. They're right up there with first responders like nurses and firefighters.

Usually, that lofty standing is used to sell the virtues of their food. Words like safe, wholesome, local.

But could growers use their highly regarded status to help rural vaccination efforts succeed, by leading by example?

It's an approach being tried in the U.S. There, frustrated health officials are pulling out all the stops to try diffusing the fourth wave of the COVID-19 pandemic.

They're hitting a wall of resistance in rural areas, hotbeds of disbelief about the potentially fatal repercussions of not being vaccinated.

That's odd, in a way. Rural

areas are closer to any others when it comes to the irrefutable power of vaccinations. Producers routinely vaccinate livestock to stave off disease, and few people blink an eye.

Granted, few people actually see hypodermic needles in action on the farm. But vaccinations are a big part of livestock culture, and livestock is a big part of rural culture.

Still, polls suggest most unvaccinated people simply don't want it. The issue is trust, not access: some people remain skeptical of the vaccination's safety. They're more willing to take a chance with the actual infection than the vaccination.

Of course, besides putting themselves at risk, unvaccinated people are putting others at risk, such as friends and their own family members, by spreading the virus around. That's especially true now that the more contagious delta variant has taken hold.

But friend-and-family arguments aren't putting needles in arms. In June, the U.S. National Public Radio and Johns Hopkins University found new COVID-19 hotspots cropping up in urban and rural areas with dangerously low vaccination rates, especially in the South, Midwest and West.

Some so-called rural states, with big farm sectors such as Illinois, Missouri and Utah, are

seeing higher infection rates in non-metro areas.

So the National Rural Health Association and the National Farmers Union have teamed up to try something new: that is, having farmers and ranchers speak openly about why they've chosen to be vaccinated.

It's an interesting tactic, and proven to work in sales. Marketers know testimonials and strong voices from trusted sources carry a lot of weight. Look at farm publication advertising and invariably you'll see producers implicitly or explicitly endorsing products they use.

The rural health association likens this kind of endorsement to a one-on-one conversation. Follow someone's Twitter account, a medium highly popular with producers, and it's possible to connect on a personal basis (or at least as personal as a computer or smart phone allows).

A tool kit has been created at www.ruralhealthweb.org/programs/covid-19-pandemic/covid-19-vaccine-resources to support the campaign, and those



Photo by Glenn Lawson

who get involved.

The organizers are not asking growers, farmers or producers to become health experts. They just want them to give honest, straightforward accounts of why they chose to get vaccinated, in the hopes that their reasoning will resonate with others.

Organizers recognize that being a resource for someone else at this time is a challenge for some producers. During the pandemic and its surrounding hysteria, uncertainty and chaos, it's been hard enough just looking

after your own affairs, let alone carving out time to help others through it.

But helping others is part of rural culture, and of the spirit of agriculture. Farmer-to-farmer support is a hallmark of the drive towards better mental health for producers. Can that same spirit be parlayed into physical health promotion and wellness leadership too?

Owen Roberts is a faculty member at the University of Illinois at Urbana-Champaign.

SCENE ON TWITTER



Jason Deveau @Spray_Guy · 50m

Have you ever tried to extend a tape measure vertically? It's a massive pain that rarely works.

Here's a simple trick for approximating height that's of particular relevance when working in orchards and hopyards.

You're welcome.



A surveyors' trick for determining canopy height

1. Ask a colleague how tall they are.
2. Have them stand near the canopy for reference.
3. Stand back as far as you're able.
4. Hold up a pen (or similar) and match their height.
5. Stack that height against the canopy to approximate its height.

Sprayers 101



Perennia @NSPerennia · 2h

Be sure to listen to the latest episode of the Wild View on Blueberries podcast! This month, @NSWildBlue chats with Dr. Charles Forney about post-harvesting of blueberries.

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BITS AND BITES

Where agricultural plastic is generated in Canada by region and sector

Table 1 - Estimated ag plastic generation by sector

Sector	Annual Tonnage (est.)	% of National Tonnage
Field Crops	36,767	59
Non-Greenhouse Vegetables	6,099	10
Greenhouse Vegetables	5,876	9
Pesticide and Fertilizer Packaging	4,761	8
Fruit, Berries and Nuts	1,665	3
Maple Syrup	1,661	3
Cattle	1,638	3
Nursery Production and Plants	1,373	2
Horticultural Flowers and Plants	1,281	2
Cannabis	633	1
Total	61,754	100

Table 2 - Estimated ag plastic generation by resin type in Canada

Resin Type	Annual Tonnage (est.)	% of National Tonnage
LDPE	30,113	49
PP	8,516	14
Mixed Plastics	6,946	11
PS	6,464	10
HDPE	6,127	10
EPS	1,806	3
mPE	1,332	2
PVC	316	1
Nylon	134	<1
Total	61,754	100

When categorized by resin type, an indication of the amount of feedstock available to recyclers, the data estimates that more than 50 per cent of plastics generated are LDPE.

Cleanfarms has released a first-ever national benchmark report that documents how much agricultural plastic is generated – by sector and region – across the country.

Field crop production, which includes grain and oilseeds and growing hay and fodder for

livestock account for 59 per cent of the total amount generated annually in the form of grain bags, silage wrap, bale wrap, baler wrap and bunker covers.

Vegetable production, whether in field or in greenhouses accounts for another 10 per cent of the annual total and includes items

such as propagation trays and greenhouse films.

The research estimates that Canadian farmers use nearly 62,000 tonnes of ag plastic products and packaging annually. More than half of that, about 53 per cent, is generated in the Prairie provinces; Ontario and

Quebec combined generate another 37 per cent; BC accounts for about seven per cent, and the Maritimes produce the remainder at three per cent.

“This data is available at an important time. There is considerable activity at the global level aimed at changing the ways that plastics are managed,” said Cleanfarms executive director Barry Friesen. “Closer to home, we can now measure our progress just as new initiatives are put in place that complement both established and high-performing recycling programs and the ongoing commitment in the farming community to do even more.”

Cleanfarms currently operates a Canada-wide program that recovers empty 23L and smaller pesticide and fertilizer containers. The program has been in operation for 30 years. In 2020, 76 per cent of the empty containers were recovered for recycling. The research was funded in part by Environment and Climate Change Canada.

The report, Agricultural Plastic Characterization and Management on Canadian Farms, has been posted to cleanfarms.ca

Source: Cleanfarms August 3, 2021 news release

COMING EVENTS 2021

Sept 4	Verona Lions Garlic Farmers' Market, Verona, ON 9 am – 2 pm
Sept 7-9	Macfrut and International Asparagus Days, Rimini Expo Centre, Italy
Sept 14	Berry Growers of Ontario Field Tour, Simcoe, ON
Sept 15	Ontario Produce Marketing Association 26th Annual Golf Tournament, Lionhead Golf and Country Club, Brampton, ON
Sept 20-22	United Fresh Annual Washington Conference, Grand Hyatt, Washington, DC
Sept 23-27	Canadian Farm Writers' Federation Annual General Meeting, Windsor, ON VIRTUAL
Sept 28-30	Asia Fruit Logistica CANCELLED
Oct 5-11	Norfolk County Fair & Horse Show, Simcoe, ON
Oct 6-7	Canadian Greenhouse Conference, VIRTUAL
Oct 13-14	Public Trust Summit, Canadian Centre for Food Integrity, Toronto, ON
Oct 28-30	Produce Marketing Association Fresh Summit, New Orleans, LA LIVE
Nov 5-14	Royal Agricultural Winter Fair, Exhibition Place, Toronto, ON VIRTUAL
Nov 4 -6	Interpoma, Bolzano, Italy
Nov 21	Induction Ceremony, Canadian Agricultural Hall of Fame, Fairmont Winnipeg, Winnipeg, MB
Nov 22-24	Alberta Potato Conference and Trade Show, Cambridge Hotel and Conference Centre, Red Deer, AB
Nov 29	CanAg Plus Annual General Meeting, VIRTUAL
Nov 30-Dec 2	Grow Canada Conference, Calgary, AB
2022	
Feb 8-9	Pest Management Centre Priority Setting Workshop C VIRTUAL
Feb 9-11	Fruit Logistica, Berlin
Feb 16-17	Pest Management Centre Priority Setting Workshop B VIRTUAL
Feb 22	Canada's Agriculture Day

CanAgPlus AGM to be virtual



More than 3,200 produce suppliers are currently CanadaGAP-certified, according to the most recent annual general report. That's all the more reason to take note of the next annual general meeting on Monday, November 29.

The meeting will be held virtually, allowing participants to join by Zoom or by phone for those with limited internet access.

Members in good standing are encouraged to attend. Look for registration details on the CanadaGAP website. A registration package will be sent to members in October. Those unable to attend may appoint a member representative to participate on their behalf, or may participate in the advance election of directors on-line or by mail-in ballot.

The deadline for resolutions: October 1, 2021.

Members in good standing may submit resolutions in advance for consideration at the annual general meeting.

Business to be transacted includes: presentation of the 2020-21 financial statements, appointment of the public accountant, annual report, election of four director positions on the CanAgPlus Board and resolutions.

For more information, contact 613-829-4711 or info@canadagap.ca

Source: CanAgPlus August 13, 2021 communiqué

RETAIL NAVIGATOR

Considerations for a fourth wave of COVID-19



PETER CHAPMAN

Talk to your customers to understand what they see in the fourth quarter. My advice would always be to do your homework and provide them with a forecast. Then have the conversation to understand if you are both looking at the volume with the same changes planned. Retailers do not like to do your work so put together a forecast and review it with them. You will be judged by your ability to meet their expectations, so you need to understand what they are looking for.

As the impact of the pandemic continues, we are experiencing different realities in different provinces or regions. It will be important to understand the retail environment in the regions where your customers are located. If you are producing in the west and selling into stores in Ontario and Québec, the opportunity might be very different in each province and what you see at home.

Food service recovery will impact retail

There is only so much people can eat and where they choose to purchase their food can have a big impact on your business. We know food service was severely impacted by the pandemic and many suppliers had to find alternative markets or perhaps stop producing. As food service recovers and consumers gain confidence in going out or ordering in, our industry will have to adapt again.

The recovery will be slow as food service has to find staff and for many, re-open. This is a challenge and they will have to be cautious to ensure they do not incur a lot of shrink or food waste. Learn about how they plan to re-open and consider the changes they will manage such as new staff, more take-out than eat-in, less complicated menus etc. Similar to retailers, they are all different so if you sell into food service, try to learn about their plans.

All indications are that Canada will be coping with a fourth wave of COVID-19 and it will likely have a different impact from previous waves. With vaccination levels growing, but different in every province, the impact of the fourth wave will require focus in your business to manage through it.

The message from public health officials is that two doses of vaccine are the best defense and many Canadians are following this advice. We still have to consider there are no vaccines approved for anyone under 12 and there will be a percentage of the population who are not vaccinated. Consumers will behave differently during this wave.

Sales forecasting

An important consideration is what will happen to sales? It has been very challenging to forecast and we know the fourth quarter of 2021 will be different from the fourth quarter of 2020. It is likely the market will look more like a mix of 2019 and 2020. With restaurants open, that will be more similar to 2019 however many people are still working remotely and therefore eating more at home. Travel within Canada is more accessible but the fourth wave might reduce people's desire to be moving around and on airplanes.



Goodfood Market Corporation is a Canadian online grocery, home meal and meal kit company based in Montréal, Québec.

There could also be opportunities in this sector as some suppliers might have shifted focus or moved on.

Shifts within retail formats

One impact the pandemic had on retail was consumers shopped more in conventional stores. For many it was about one stop and the conventional stores had a larger listing base. Consumers had the most confidence in getting what they needed in these stores.

Despite the fourth wave, it is apparent consumers are going back to discount stores. This will lead to more focus on price from retailers. At the height of the pandemic it was more about service level. This will still be important but with consumers going back to discount stores, suppliers need to expect more focus on discount packs and prices.

If you have had changes in your costing (which many have), talk to your customers up front. Make sure they understand the facts and that a previous cost is no longer attainable. They need to know in advance that they might have to consider 3/\$2 or 2/\$3 instead of the .99 they did in

2019.

The shift back to discount will also impact product mix. These stores have a smaller listing base and different product sizes. Consider this in your fourth quarter planning.

The e-commerce channel is up and down

Retailers invested significantly in online shopping, order selection and developing the digital relationship with their shoppers. During the height of the pandemic, this was capturing 10-15 per cent of sales at some retailers. It is likely this has subsided as many consumers are back to old habits and shopping in-store.

During a fourth wave, it is likely consumers with children under 12 will be more likely to take advantage of online shopping. These are valued consumers because they usually buy a lot. Retailers will be looking for opportunities to appeal to them with online offers.

We know retailers do not invest money and resources and then sit back if results are not there. They will be looking for opportunities to encourage consumers to continue shopping

online. Sobeys made a significant investment in their online shopping, order selection and delivery in Ontario with Voilà, so they will need to keep volume moving through there.

Every retailer has their own solution to online shopping. Stay close to your customers and watch what they are doing. There could be opportunities to support some of the initiatives and find more volume.

Unfortunately we cannot see into the future and understand the impact of the fourth wave. However, your customers -- the retailers and food service industry -- will appreciate it when you discuss your plans with them. When you both have the same forecast you have the best chance of success. Continue talking to your customers through the fourth wave and exceed their expectations when you can.

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 SKUFood. Peter works with producers and processors to help them get their products on the shelf and into the shopping cart.

RETAIL NEWS

Ricardo Media finds partner in IGA

Two of Québec's flagship brands will now forge forces with the news that IGA has invested a majority stake in Ricardo Media. The IGA brand is owned by Sobeys.

Ricardo Larrivé, award-winning chef and cookbook author, has given interviews about the quickly changing media landscape that's affected his magazine, TV shows and other entities.

"We have lost about 45 per cent of our media revenues in two years, because of Facebook, Google, Apple and Amazon," he told Voir. "Never have I received so many awards, but never has it been so difficult, never have we been so in danger. If it weren't for the Ricardo sauces in the IGAs, we'd already be closed. We

must diversify our sources of income, because we can no longer just depend on media. Eventually, media will be just 10 per cent -- and not more, because I don't see any other short-term solutions. (...)

Our market can only grow outside of Quebec, in English-speaking Canada and in French-speaking Europe. The United States, I don't put a lot of effort into it."

Ricardo Media will continue to operate in its current form. Co-founders Ricardo Larrivé and Brigitte Coutu will remain in their respective leadership positions.

"These two organizations are highly committed to the vivacity of the Québec market," said Pierre St-Laurent, executive vice-president and COO, Sobeys inc./IGA. "For IGA dealers, this

means creating extraordinary opportunities to further inspire their customers on a culinary level. For both of our organizations, this will also be an opportunity to create projects that can drive growth both in Québec and throughout Canada."

Both Ricardo Media and IGA are firmly rooted in the Quebec food landscape and have complementary strengths that drive their respective business objectives. The two companies have been working together for more than 20 years, such as the integration of some of Ricardo's recipes on IGA's website, and Ricardo food products and magazine in IGA stores.



Ricardo Larrivé and Brigitte Coutu.

FOCUS: GREENHOUSE INNOVATION

Apivectoring research shows proven control of thrips



Photos by Glenn Lawson

About 120 acres of greenhouse strawberries are commercially grown in Ontario. Pioneers such as Del Fresco Pure Produce Ltd have worked with Agriculture and Agri-Food Canada researchers to refine how bumblebees can pollinate strawberry flowers and inoculate them at the same time from thrips.

Peter Kevan, Roselyne Labbé and Charlotte Coates have published their research on bee vectoring, showing that the practice can be an efficient way to distribute entomopathogenic inoculum to greenhouse strawberry plants, especially to foliage which harbours pests such as thrips. Specific practices can optimize how crop inoculum is distributed.

First, hive placement and numbers should be maximized over a given crop area, with a minimum of three hives per half acre. Hives should be evenly spaced

throughout the crop to ensure that inoculum gets distributed everywhere.

“As we saw in our study, inoculum delivery is greatest within the area directly around each of the bee vectoring hives,” they write. “In these locations, bee vectoring afforded the greatest level of crop protection. As bees travelled more than five metres away from hives, they delivered less inoculum to leaves or flowers.”

To improve bee vectoring results, the researchers suggest incorporating more hydrophobic or electrostatic carriers so that the biocontrol agent can adhere better to the bumblebee body. The goal would be to increase the distance that inoculum can travel throughout the crop.

Other researchers and indeed, commercial companies, have been successful with bee vectoring to protect outdoor crops, from orchards to open strawberry fields. However,

this study was unique in respect to the target crop and delivery of the biological control agent.

“A consistent source of microbial inoculum can help reduce pest pressure over time,” the researchers conclude. “The insight gained from this research sets Canada’s greenhouse industry as a potential future leader in apivectoring technology with benefits to consumers in the form of higher quality production with fewer chemical inputs and residues.”

Peter Kevan is professor emeritus, School of Environmental Sciences, University of Guelph. Dr. Roselyne Labbé is a research scientist in greenhouse entomology, Agriculture and Agri-Food Canada, based in Harrow, Ontario. Charlotte Coates is an MSc student.

Koppert develops eco-friendly bumblebee hive

Koppert Biological Systems has developed a bumblebee hive for crop pollination that reduces

the CO2 footprint of the hive by 52 per cent by using 85 per cent recycled or renewable materials.

The cardboard used for the Natupol range has been made from recycled paper for some

years now. More recently, the plastic components of the hive, such as the ‘bee home’ door and the inner lining of the hive have been produced from 100 per cent post-consumer recycled plastic waste. The printing ink used on the exterior of the packaging is free of heavy metal substances.

The post-consumer recycled plastic used for the Natupol hives is of a high-quality grade and has been thoroughly tested to secure

both functionality of the product and the needs of the bumblebees. Koppert’s supplier declares that it “lowers the carbon footprint by 52 per cent, compared to traditional, virgin plastic polymers.” This new product update is the next step towards a 100 per cent eco-friendly hive.

FOCUS: GREENHOUSE INNOVATION

Leading the way discovering rugose virus resistance

Vineland's greenhouse tomatoes-on-the-vine (TOVs) breeding program – the only one of its kind in Canada – has focused since 2013 on developing high yielding varieties with improved flavour and production traits adapted to Canada's climate.

The program reaped success in 2019 with the commercial release of three TOV varieties with new and differentiated flavour profiles preferred by consumers.

That same year, thanks to funding from the Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA) and Ontario Greenhouse Vegetable Growers (OGVG), the focus of the breeding project is now encompassing resistance to diseases including the devastating tomato brown rugose fruit virus for which currently no resistant cultivars exist.

"Our rugose project plans to identify a source of resistance to the virus and then develop a genetic marker – laboratory-tested – that will allow us to quickly breed rugose resistance into our tomato lines," said Travis Banks, Vineland's director, plant variety development.

The Vineland team is involved in two separate efforts to identify rugose resistance. First, there's a collaboration with Agriculture and Agri-Food Canada (AAFC) to screen hundreds of diverse tomato lines from Vineland's germplasm collection. Also underway is a collaboration with a group of international breeding organizations to screen a large set of germplasm in Europe and Asia. These efforts have been fruitful and promising sources of resistance have been identified. These have been integrated into Vineland's breeding program to add resistance to Canadian- adapted TOVs.

"Industry and government have been clear that addressing this new disease is a top priority," said Banks. "Vineland is working as quickly as possible and Ontario-adapted TOVs from our breeding program with rugose resistance are on the horizon."

This TOV research breeding program is funded through AAFC, OGVG and OMAFRA.

Photo right: Dr. Travis Banks



Plug in to virtual speaker program for Canadian Greenhouse Conference

Paid registration is required to access the live sessions on October 6 and 7, 2021, supplementary resources, New Product Display and post-show recordings.

Sessions will be recorded and available on the virtual conference platform for 90 days. A full-access registration will be required to log on to the platform after October 7. Registration will remain open

until January 6, 2022. For more information, go to: www.canadiangreenhouseconference.com

Highlights for Wednesday October 6, 2021

Plant vaccines for greenhouse crop prevention. Genevieve Marchand, Agriculture

and Agri-Food Canada researcher at Harrow, Ontario, will speak about the basic concepts, potential benefits and drawbacks of these new tools.

Data in agriculture. Terry Vermeer, ET Grow Inc., will talk about how to track and evaluate big data.

Highlights for Thursday, October 7, 2021

Shedding light on sustainable packaging. Sonia Benoit, Cascades, will provide insight on looking for a packaging solution to lower your environmental footprint.



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FOCUS: GREENHOUSE INNOVATION

Ask the right questions of your Big Data

“

Make an honest assessment of your problems and the true cost of those problems. You’ve got to get to the dollars before your journey of discovery in data.

~ SABER MIRESMAILLI

”

KAREN DAVIDSON

Big Data is no small matter. For the last decade, ever-more sophisticated computers have stored reams of data, overwhelming many greenhouse managers. The key issue is how to interpret the numbers and to connect the dots in real time.

From Saber Miresmailli’s perspective, the bottom-line question is whether the data is

saving money or making money. And the right people within an organization may not be asking that question. Head growers have a passion for tending plants and may be irked by small blips that, at the end of day, don’t impact the bottom line. Creating a solution for that perceived problem may be an expensive quest that’s not the most sustainable path forward.

“The data question should be posed to the chief financial



Photo courtesy of Ecoation Innovative Solutions.

officer,” says Miresmailli, co-founder and CEO of Ecoation Innovative Solutions Inc. From his new company office in Kingsville, Ontario, he’s advocating for a mindset change in how managers make the greenhouse vegetable sector more

profitable. The sector is on the verge of autonomous greenhouses, with major decisions to be made on where to invest and how to make the most of neural networks of data.

After a decade working with artificial intelligence, Miresmailli

says his company has tracked data for more than 3.3 trillion square feet of greenhouses, flagged about 250,000 pests and diseases, analyzed 50 million fruits and predicted 68 million potential outbreaks of pests and disease.

“This is the tip of the iceberg,” says Miresmailli. “What we’ve learned is that there’s a difference between dynamic and static data collection. The sensors for changes in the environment allow managers to be dynamic in their decisions.”

Clearly, the pressure is to manage all these data points. To relieve that stress, Miresmailli says that managers should define a data strategy. And that strategy can’t be developed without knowledge of what data leads to profitability.

Here’s an example. Seed companies spend immense resources measuring leaf area, distance between nodes and number of fruits per cluster in order to promote new varieties. For the grower, that may seem on the surface to be relevant data for choosing varieties. However, Miresmailli points out that if the grower can’t identify broken heads, then two weeks of production are lost while the plant takes time to reshoot. The true genetic potential of the plant is lost.

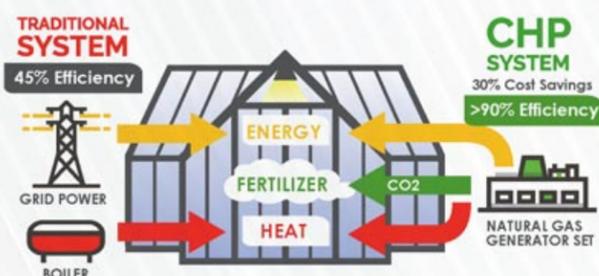
So artificial intelligence must be paired with human intelligence. Ask the tough questions. How much do your pain points cost?

“Make an honest assessment of your problems and the true cost of those problems,” says Miresmailli. “You’ve got to get to the dollars before your journey of discovery in data.”

Editor’s note: Saber Miresmailli is one of the guest speakers in the Big Data session, being held from 2 – 4 pm on Wednesday, October 6, 2021 at the Canadian Greenhouse Conference. For more details, go here: <https://bit.ly/3y0mSTU>

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GREENHOUSE GROWER

Houweling USA rebrands as Longvine Growing Co

Houweling US Holdings, Inc. is launching the Longvine Growing Co as the company rebrands and resets for the next evolution of company growth. The rebranding project was initiated in early 2020 as the Houweling family, headquartered in Delta, British Columbia, exited its ownership position from the U.S. operations.

David Bell, chief marketing officer, Longvine Growing Co. notes, "Through the discovery process, we were delighted to identify many of our strengths, match the traits our re-defined target consumers value. Focus on sustainability, transparent communications and worker welfare through certifications already position us to create strong connections. We equated this, to having all the key components of a brand, with an open book to re-name and re-image a new company that represents our entire team. Longvine Growing Co, speaks to

the literal vines that produce fresh tomatoes, peppers and cucumbers, but also the many individuals who guide the process from seed, through the long journey to a consumer's table."

Early in 2021 the company received notice that the owner of the Camarillo, California farm had engaged in a potential sale option of the facility to a buyer who intends to convert the site into non-vegetable production. With uncertainty around the California facility, the company focussed on building out and expanding the successful partner grown programs to off-set the loss of the underperforming California facility.

Kevin Doran, Longvine CEO, comments on the closure of the Camarillo farm: "While the site offered operational challenges, the talented team members at the farm are incredible, hard-working people. We have been advocating since day one and are working with the buyer to ensure as many



people as possible have opportunities to excel in the new operation."

To further support the expansion of the grower network, Longvine is doubling the size of its Nogales, Arizona packing and distribution center.

Looking to the future Doran continues, "The business model going forward shows that in combination with the new brand, we have a launchpad to accelerate our growth and an equity partner in Equilibrium Capital, who will work with us to deploy capital

responsibly and strategically. Starting with a 30-acre Mona, Utah expansion with ground works underway." The Mona farm will serve as the new head office going forward and the expansion will further cement the company's position as a leader in high-tech glass house growing technology.

Equilibrium recently announced the closing of Controlled Environment Foods Fund II with total commitments of \$1.022 billion. The fund, which is the largest controlled

environment agriculture fund globally, will be deployed in high-tech greenhouses, indoor farms, and other CEA segments. Equilibrium will deploy \$60 million to the Mona, Utah site doubling the growing area and making other site improvements including new office space at the company headquarters.

Source: Houwelings USA August 11, 2021 news release

Mastronardi Produce and AppHarvest join forces

Mastronardi Produce Ltd. and AppHarvest have signed a non-binding letter of intent to form FarmCo, a joint venture to develop a portfolio of controlled environment agriculture (CEA) facilities.

FarmCo plans to have its own leadership team and calls for the two partners to contribute equity and assets of more than \$100M. The venture would use the equity contributed from both companies to raise additional capital to fund its growth, targeting to build more than 750 acres of CEA facilities in the United States to grow fresh fruits and vegetables including leafy greens.

"We are extremely pleased to be entering into this letter of intent with AppHarvest," says Paul Mastronardi, president and CEO of Mastronardi Produce Ltd. "We have seen the demand for locally-grown produce skyrocket, particularly over the past 18 months as more people are cooking from home, and this partnership will allow us to significantly increase our ability to get more fresh, flavourful locally-grown produce to tables across America."

"Mastronardi is the unquestionable leader in marketing and distributing CEA-grown produce to top grocers and restaurants in North America, and partnering more closely with them to fulfill the growing demand for quality local, fresh produce across the United States positions us together to make an even greater impact to establish a climate-resilient, sustainable

food system to ensure food security," adds Jonathan Webb, AppHarvest founder and CEO.

Source: Mastronardi Produce August 11, 2021 news release



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FOCUS: GREENHOUSE INNOVATION

Westmoreland turns to Apeel to eliminate single-use plastics

KAREN DAVIDSON

Food gone bad? Stop, says Apeel Sciences. Food gone good is possible using materials that exist in the peels, seeds and pulp of all fruits and vegetables. Repurposed and reimagined, these materials can create a protective edible peel that seals moisture in and keeps oxygen out.

Headquartered in Goleta, California, Apeel is partnering with Westmoreland Sales in Leamington, Ontario to eliminate single-use shrink wrapping on long English cucumbers. It's the first Canadian supplier relationship for the company that first germinated in 2012 with a \$100,000 grant from the Bill and Melinda Gates Foundation.

Now fuelled by more than \$100 million in funding, Apeel Sciences has expanded beyond avocados.

"We're excited to work with

Westmoreland on their admirable journey to eliminate single-use plastic from their long English cucumbers," said Erich Klawuhn, VP of Product at Apeel. "Inspired by nature, Apeel's plant-based protection maintains quality and freshness - no plastic needed."

Indeed, founder James Rogers' insight is to use food to preserve food. One of his earliest examples is to use the leftover grape pressings from wineries.

Westmoreland's greenhouse-grown long English cucumber currently uses a plastic film to maintain the shelf life of each cucumber but uses an estimated 90 tons of plastic to do so each year.

Now, Westmoreland's cucumbers will be protected by a little extra "peel." Apeel's plant-based protection creates an edible barrier that can't be seen, felt, or tasted.

"We're thrilled to team up with Apeel," said Westmoreland's

VP of sales and marketing, Dino Di Laudo. "We want to do better for our earth, our retailers and all the families we help feed every day. This partnership with Apeel allows us to check all three of those boxes. In the first year alone, Westmoreland is aiming to prevent the equivalent of eight million water bottles worth of single use plastic from entering North American landfills."

In the first year of the partnership, Westmoreland expects to avoid 185,000 pounds of plastic use - which is the equivalent of 200 million plastic straws, or enough shrink wrap to cover 485 football fields.

As sustainable packaging becomes more of a marketplace necessity, many greenhouse growers are meeting consumer demands to become environmentally friendly, while satisfying retailer demands for shelf life.



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Here is a list of **The Grower's** upcoming focus sections. There are always early-booking incentives, so plan ahead and save.

October - Storage, Containers & Packaging

November - Seed & Rootstock

December - Soil Health & Crop Nutrition

January - Grapes, Vineyards and Berries

For early booking incentives email advertising@thegrower.org

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CROP PROTECTION

Processing tomato growers achieve an industry first



CHRIS DUVELSHOFF
CROP PROTECTION ADVISOR

first and foremost a system designed for ensuring worker safety and food traceability.

The primary goal of the program is to keep track of product applications for restricted-entry intervals and pre-harvest intervals. Growers create a spray record for each field and application and the system automatically calculates and monitors these intervals. Multiple individuals can be added where there are multiple applicators or custom operators working on a farm. Farm employees and others who visit fields regularly can be instantly informed before entering any fields with entry restrictions. Fields can also be monitored at harvest for when the pre-harvest interval has been met. Growers consent to sharing their records with their processor and the grower association in aggregate form; confidentiality is assumed.

Initially developed with funding from Growing Forward 2 and the Ontario Tomato Research Institute, the operational cost of SprayHub is now covered directly by the processing tomato growers. Growers agree in their contract to use SprayHub. As a result, enrollment in the program is industry standard with approximately 65 growers enrolled in 2021. Growers support the costs of running the program through their licensing fees which currently run at seven cents per tonne of production. The OPVG collects and processes this payment on their behalf.

The program is now in its fifth year of operation having collected data since 2017. With a multi-year history of data now accumulating, a new benefit has



emerged – the ability to produce comprehensive aggregate summaries of crop protection use information. This represents the average use of crop protection products on the crop across the industry. What additional benefits does this bring?

Regulatory decisions made by the Pest Management Regulatory Agency (PMRA) rely on estimating how much of a particular product is used by growers. Unfortunately, availability of this information, particularly for horticultural crops, is poor. When conducting a product re-evaluation, in the absence of updated use information, PMRA assumes the worst-case scenario: the maximum number of applications at the maximum label rate. This results in the estimated usage being higher than actual use -- many times higher would not be uncommon under this scenario.

With updated use data, PMRA revises risk assessments based on real usage which can make an active ingredient much

more likely to successfully pass re-evaluation if there are challenges. The value of this is recognized by PMRA in the integrated approach model for re-evaluation proposed in 2020. Under the title of improved information for regulatory decisions, crop protection use information was mentioned as an important pillar.

Providing crop protection use information is likely the most beneficial thing that growers can do to support re-evaluation decisions. As written in previous columns, this is about collecting provincial level summary statistics on how crop protection products are actually used by growers such as information on rate, number of applications and acres treated. This only requires aggregate, non-personal data and does not need to identify a farm or specific locations. Individual privacy is a key consideration in developing such summaries.

By accessing the SprayHub database, the OPVG can aggregate a set of crop protection use information from the

processing tomato crop. This contains information on the product used, rate, acres treated, and time of application. The fact that the information is housed by the grower association ensures that this information is fully under the control of the growers and is only shared at their discretion.

Many of Ontario's processing tomato growers are seeing the value of using SprayHub and the benefits it can bring in managing their own farming operations. Ensuring worker safety and food traceability remains paramount. However, the secondary benefit of aggregating crop protection use summaries has emerged which should provide dividends to processing tomato growers down the road. Requests for updated usage information are only going to increase as PMRA transitions to the new model for re-evaluation. Other horticultural sectors should consider their own approaches for how to collect, organize, and manage this information for their benefit.

Health Canada pauses decision on glyphosate

Federal ministers of health, agriculture and agri-food, environment and climate change have announced a pause on proposed increases to Maximum Residue Limits (MRLs) including for glyphosate. As a result, there will be no increases to MRLs until at least spring 2022.

The respective ministers, Patty Hajdu, Marie-Claude Bibeau and Jonathan Wilkinson, also said that consultations will begin on specific provisions of the Pest Control Products Act to consider ways to balance how pesticide review processes are initiated in Canada and how to increase transparency.

In addition, the ministers announced \$50 million in investment in Health Canada's Pest Management Regulatory Agency (PMRA) and Agriculture and Agri-Food Canada's pest management research, to be

supported by Environment and Climate Change Canada. \$42 million will be invested over three years in the Health Canada's PMRA to further strengthen its human and environmental health and safety oversight and protection, including improving the availability of independent data to further support pesticide review decisions, and the transparency of decision-making. A further \$7 million will be invested to Agriculture and Agri-Food Canada, and \$1 million to Environment and Climate Change Canada in supporting work, to accelerate the research, development and adoption of alternative pest management solutions.

When conducting pesticide approvals, Health Canada considers data and information provided by manufacturers; published scientific reports; federal, provincial, and territorial governments; other regulatory agencies; and

Canadians. This new funding will increase the availability of independent data in this process by parties such as universities, NGOs and governments. This funding will allow Health Canada to increase independent data generation, including new water and agricultural monitoring data. It will also allow the creation of a new expert panel process to provide advice, as appropriate, prior to evidence-based decisions of the PMRA on pesticides, including on MRLs.

In background notes, the news release stated there is no change to the Canadian use pattern of glyphosate. Neither how much nor how frequently glyphosate can be used changes as a result of the proposed MRL changes.

Source: Health Canada August 4, 2021 news release



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Spotted lanternfly is spreading in New York state

The spotted lanternfly -- an invasive, destructive pest with a wide range of hosts including grapes, apples, hops, maple and walnut -- has spread to a growing number of counties in New York state.

The first major infestation in the state was detected in Staten Island in August 2020, and the insect appears to have established itself there. Two months ago (spring 2021), a population of spotted lanternflies was found in Orangeburg, Rockland County, but its establishment there remains too early to determine.

The pest has also been reported and confirmed in Sloatsburg, Rockland County; Port Jervis, Orange County; and in Ithaca.

While the tree of heaven is the pest's preferred host, the insect is of agricultural concern as its host range covers some 70 different species of plants, including those that fuel New York state's agricultural economy. New York is the country's second-largest apple producer with average annual harvests of close to 30 million bushels. The state's wine industry -- from grape growing to bottle sales -- generates an annual economic impact of \$6.65 billion, according to the New York Wine and Grape Foundation.

"Once these insects reach some of the [state's] grape production areas, there's going to be an impact," said Alejandro Calixto, director of the New York State Integrated Pest Management program at the College of Agriculture and Life Sciences.

Calixto has been running

training sessions with Hispanic agricultural workers.

"They're the ones on the front lines, so we're teaching them how to identify and spot those insects and then to report them to their managers so they can take action quickly," Calixto said.

In areas where the pest has been found, the advice is to remove infested plants, especially tree of heaven, a preferred host plant for this insect.

Native to Asia, the spotted lanternfly was first discovered in the U.S. in southeastern Pennsylvania in 2014. It has since spread to New Jersey, Delaware, Maryland, Virginia and New York.

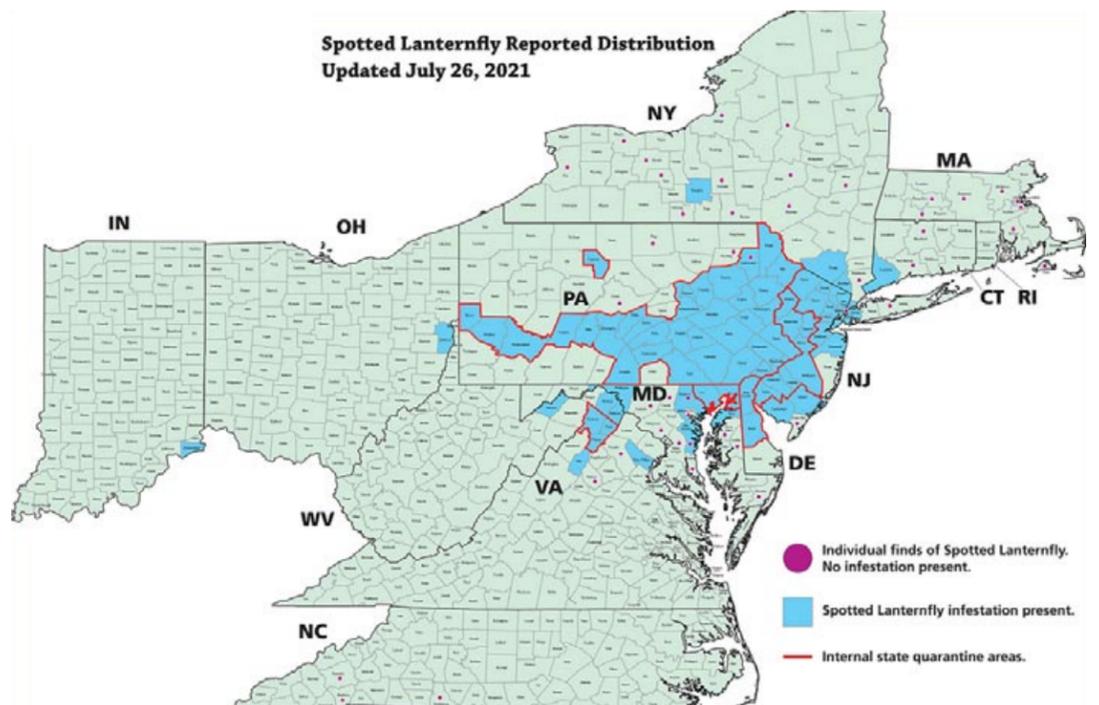
Spotted lanternflies are not flies, but are actually large planthoppers, with adults growing to about an inch long with gray wings and black spots. They undergo five life stages before reaching adulthood, including a fourth stage when they are vibrant red, with patches of black with white spots. They don't bite or sting, and pose no threat to people or animals.

The nymphs and adults have mouthparts that drill into plants and suck sap, causing damage that makes plants susceptible to other bugs and disease. They also excrete a sticky fluid called honeydew, which attracts other insects, sticks on cars and can become a breeding ground for sooty mold.

Source: *Cornell Chronicle*, July 28, 2021



A spotted lanternfly in its fourth stage, just before becoming an adult.



This map is provided so the distribution of the Spotted Lanternfly can be viewed on a regional basis. The county records are based on information supplied to Cornell by individual states' regulatory agencies. Although the map shows entire counties shaded, the actual infestation may only encompass a small portion of that county.

UPL to partner with Cohort Wholesale

UPL AgroSolutions Canada, a global provider of sustainable agriculture products and solutions, has reached an agreement to have Cohort Wholesale act as a distributor of UPL's growing portfolio of outdoor horticultural crop protection products.

Effective September 1, 2021, Cohort Wholesale will provide technical, sales, warehousing, and logistical support for UPL products, such as Casoron, Devrinol, Microthiol and Orthene, as well as other key brands across the country.

"UPL's agreement with Cohort

Wholesale is a true partnership. This arrangement will, on a national scale, allow us to not only continue to grow our Canadian horticultural business but also ensure that customers receive the support they need to successfully integrate UPL products into their pest management plans," commented Trent McCrea, UPL Canadian country head.

Scott Hodgins, manager of Cohort Wholesale, added, "We are humbled by the opportunity to help UPL continue to expand its footprint in horticulture crop



protection. We can't wait to start conversations with customers to help them plan for the 2022 season and beyond."

As a result of evaluating its horticultural distribution strategy, UPL will also begin distributing Penncozeb directly to channel customers alongside its Manzate product

line.

To learn more about UPL's work, visit upl-ltd.com and follow on LinkedIn, Twitter, Instagram and Facebook.

Source: *UPL/Cohort Wholesale August 9, 2021 news release*

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Effect of crown size on strawberries



Figure 1. Strawberry Plants with variable sizes after planting.



Figure 2: San Andreas transplants: large, medium and small.

MATTHEW WAKE and
ERICA PATE

The OMAFRA berry team has been working on a trial assessing the impact of crown size on fruit yield. The basis of the strawberry trial follows the study design of other similar projects, including an ongoing project led by Mark Boldea of UC Cooperative Extension, who has been working on crown size trials in California. The main objective of the research is to determine whether crown size affects overall yields in strawberries. Basically, the goal is to determine whether

plants with larger crowns lead to higher yields and if plants with smaller crowns lead to smaller yields.

Bare-root transplants often vary in crown sizes, and differences between plants is evident shortly after planting (Figure 1); while some plants have green fruit, other plants have not yet bloomed. However, does this mean that these larger plants will produce higher total yields? Is there an advantage to sorting the plants by crown size?

A study from Florida (Torres-Quezada et al. 2015) studied the effects of crown diameter on the performance of three short-day

Florida cultivars: Florida Radiance, Strawberry Festival, and WinterStar. The crowns were sorted into two different sizes: less than 10mm and more than 10mm. This trial was conducted over two seasons in a split-plot design. In both seasons (2012 and 2013) larger crowns resulted in higher early and total yields for all three cultivars. Large crowns (>10mm) had 18 per cent and 27 per cent higher total yields in the two seasons. However, Torres-Quezada et al. (2015) point out that the weather and soil conditions after planting may affect how important crown size is on overall performance.

Twilight tour set for September 14

ERICA PATE

Join us for the Berry Growers of Ontario Twilight Tour in Simcoe, September 14.

The tour will begin at Meadow Lynn Farms at 3:30 pm,

and then will move to the Ontario Crop Research Centre-Simcoe for 5:30 pm. The tour will include a demonstration of robotic weeders, a tour of research plots at the research centre, and dinner.

Contact Kevin Schooley at info@ontarioberreries.com to register. Looking forward to seeing you all again!

Erica Pate is OMAFRA fruit specialist.



Figure 3: Plots after planting in May.



Figure 4: during harvest in August.

Alternatively, another study from South Korea (Fridiaa et al. 2016) had different results from a crown size comparison trial. This trial was conducted in a greenhouse, using three strawberry cultivars: Albion, Seascope and San Andreas. Plants were sorted into three different crown sizes: small (4-7mm), medium (7.1-10 mm), and large (>10mm). Larger crown diameters resulted in earlier flowering, up to six to eight days faster than small- and medium-sized crowns did. However this study found the different crown sizes had no effect on the number of berries per plant and no significant effect on total yield.

Because of the different systems, conditions, and cultivars used in Ontario compared to these other regions, it's important to conduct our own studies on crown sizes. The study being conducted at the Simcoe Research Station includes two day-neutral strawberry cultivars, Albion and San Andreas, in a randomized complete block design. The strawberry plants were separated and planted based on their crown size with three classifications of sizes: small, medium and large. The Albion crown classifications are as follows: large crowns are larger than 10mm in diameter, medium

crowns are less than 10mm in diameter with secondary roots and slicks are plants with no secondary roots. The San Andreas crown classifications are as follows: large crowns are larger than 10mm in diameter, medium crowns are between 7mm and 9mm in diameter, small crowns are less than 7mm in diameter. Figure 2 shows an example of the different crown sizes before planting. The hypothesis heading into the study is that bigger crowns result in larger, more productive plants and higher total yields.

Plant assessments have been completed on a weekly basis to track leaf growth and crop stage (Figure 3 and 4). Buds were removed throughout the first five weeks following planting to promote further plant development before fruiting. Harvesting started in week 12 post-planting (July 27) and will continue until frost. Results will be available to growers this winter to help answer our questions around crown size.

Mathew Wake is an OMAFRA summer research assistant. Erica Pate is OMAFRA fruit crops specialist.

