

AUTOMATION

Ground truthing robotic weeders starts now



In November 2021, the Holland Marsh Growers' Association organized a field demonstration of Dino, a robotic weeder. Farm host Doug Van Luyk (middle) was curious about how this model might solve the issue of removing resistant pigweed on his muck soils near Newmarket, Ontario. Joining him on the left are Grant Elgie, ag innovation lead for precision technology company Haggerty Creek Inc and to the right, Charles Lalonde, consultant, Holland Marsh Grower's Association. Photos by Glenn Lowson.

KAREN DAVIDSON

Doug meets Dino.
“How smart do I need to be to operate this smart equipment?” It’s one of the questions posed – with a poke-in-the-ribs laugh -- when growers are kicking the tires of a machine that looks more suited to a moon walk.
Doug Van Luyk is not alone. The Newmarket, Ontario grower is curious yet skeptical about how a robotic weeder could solve the issue of resistant pigweed in his root vegetables on muck soils. He looks at Dino and wonders if a worker would be needed to supervise the robot.
His doubts are confirmed by Dr. Mary Ruth McDonald, professor, University of Guelph and research program director, Ontario Crops Research Centre. She’s been providing input to some of the robotic developers for the past few years.

“Yes, you need more highly trained personnel to operate the robot,” says McDonald. “We’re in the early stages of these robots. Think of a model T. In 10 years, I think they will be much more effective.”
Personnel need to be trained in the use of the cultivation tools. Typically, the human tractor operator can make those adjustments while they are operating, but since the robot has no operator, they need to be using a tablet or other computer interface ahead of time. This generally requires a different skill set as compared to a tractor driver.

Trends

Dino is one of more than 250 robots worldwide manufactured by Naïo Technologies. Pronounced NI-OH, the company is based in Toulouse France where engineers have worked for a decade to perfect the robotics. In late 2021, the company announced that its autonomous

robots are certified under European law to work unsupervised as of 2022. Two major risks have been overcome: colliding with a person and exiting an authorized area onto a road.
As the Naïo company’s news release explains, “The farmer creates a map of each field the robot needs to weed using its GPS system, uploads it into Dino through a USB key, puts the robot in front of the first field and Dino does the rest.”
That’s a simplistic description as many variables affect performance such as soil density, crop type, weed size and access to recharging stations. The Dino can operate for between six and eight hours, depending on soil conditions and how many of the machine’s tools are in use at one time. The batteries require about eight hours to recharge, but Naïo’s engineers are working on speeding up the recharging time.
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AT PRESS TIME...



Windsor-Essex health unit rescinds three-week halt to TFW arrivals

Dr. Shanker Nesathurai, the acting medical officer of health for the Windsor-Essex County Health Unit (WECHU) stunned the horticultural industry on January 11 with an order barring entry to temporary foreign workers (TFWs) into Essex County until February 1, 2022. Three days later, he rescinded the order.

The unprecedented situation was resolved with local, provincial and federal leaders in the healthcare, agricultural and social service communities to establish the level of support necessary to meet health requirements for TFWs who are isolating or in recovery from COVID-19. However, the disruption to greenhouse and nursery growers would have been considerable given the timing of the crucial planting season.

“This was a complete surprise,” says Aaron Coristine,

manager of science, regulatory affairs and government relations, Ontario Greenhouse Vegetable Growers, based in Leamington. “The damages would have been extensive.”

About 900 TFWs were already in the area, with several hundred more workers expected to land by end of January through the Seasonal Agricultural Worker Program (SAWP) and the Ag Stream. It’s unknown to what degree flight arrangements were cancelled. Many of these workers would have been in transit from remote regions to Mexico City or Kingston, Jamaica.

In his rationale for announcing the original order on January 11, Dr. Nesathurai cited a “significant number of outbreaks at agricultural enterprises” and that the community had “limited capacity to manage the surge occurring with the introduction of the Omicron variant.” He was referring to lack of resources to house and isolate workers who might test positive.

The Ontario Greenhouse Vegetable Growers contend that

Dr. Nesathurai’s predictions were based on modelling many times greater than what was being experienced in the county. Of the 46 positive COVID cases amongst TFWs, most are double vaccinated. And many have their booster shots. The fact that COVID-19 positive workers and their close contacts are not allowed to self-isolate on farms adds further stress and in Coristine’s words “unnecessarily burdens the region’s capacity to support workers through utilization of the Isolation and Recovery Centre.”

Urgent meetings were undertaken with the Mexican consulate, Premier Doug Ford, Ontario’s chief medical officer of health Dr. Kieran Moore as well as the Ontario minister of agriculture Lisa Thompson and her colleagues in health and labour. At the federal level, the minister of agriculture’s office was involved as well as officials from Employment and Social Development Canada, the agency that manages the SAWP. Local MPs assisted in the discussions.

Although the immediate crisis is resolved, the agricultural sector continues to look to engage with local health authorities on how to support workers in the future.

NEWSMAKERS



Ken Knox



Hazel and John Robinson

Congratulations to **Ken Knox**, former Ontario deputy minister of agriculture, former chair Ontario Food Terminal Board, for being named to the Order of Canada. The well-known civil servant has led many high-profile initiatives such as the creation of Agricorp, the Advanced Agricultural Leadership Program, the Ontario Genomics Institute, the Ontario Science and Innovation Council, and the Vineland Research and Innovation Centre.

Hazel and John Robinson were also named to the Order of Canada for their leadership in Prince Edward Island’s agricultural sector. Daughter **Mary Robinson** is the current president of the Canadian Federation of Agriculture.

Christy McMullen was appointed as chair of the Ontario Food Terminal Board on October 14, 2021. She is the vice president of Summerhill Market in Toronto. Her community involvement includes being a board member of the Vineland Research and Innovation Centre and the former chair for the Canadian Federation of Independent Grocers.

The Agricultural Adaptation Council has elected a new roster for 2022. The new chair is **Doug Alexander**, representing agribusiness/retail/food processor sector. Representing horticulture are **Norman Charbonneau** and **Mark Wales**.

The BC Vegetable Marketing Commission has appointed two independent members as of January 14, 2022 for a minimum of one year to a maximum of three years. They are **Natalie Janssens** and **Craig W. Evans**.

The Nova Scotia Fruit Growers’ Association held its annual general meeting on January 19. The board of directors consists of: **Janet Chappel**, president; **Joan Hebb**, vice-president; **Peter Eisses**, past-president. Directors are: **Dwayne Barteaux**, **Jeffrey Walsh**, **Travis Pearson**, **Doug Nichols**, **Stephen Van Meekeren**, **Cassian Ferlatte**, **Tim Stirling**, **Kim Thiessen**, **Starr Best**. The board has appointed **Doug Nichols**, treasurer, **Larry Lutz**, director at large and **David Power**, Canadian Horticultural Council member.

Manitoba has a new minister of agriculture. He’s **Derek Johnson** (Interlake-Gimli). Agriculture is an important driver of the provincial economy, representing 11.5 per cent of GDP.

Border crossings vex truck drivers

After 24 hours of confusion, the Canadian government clarified that unvaccinated or partially vaccinated Canadian truck drivers returning to Canada will no longer be exempt from entry requirements as of January 15, 2022. Enforcement of the border vaccination mandate went forward as was previously communicated to the trucking industry.

The statement also indicated that unvaccinated Canadian truck drivers entering Canada after January 15 will need to meet requirements for pre-entry, including producing a PCR test prior to arrival and quarantine requirements, but they can’t be denied entry into Canada.

Government officials also confirmed that the mandate will also remain in effect for unvaccinated or partially vaccinated foreign national truck drivers entering the country as of Saturday, January 15. The Canadian Trucking Association (CTA) continued to work with the American Trucking Association on enforcement details for the U.S. mandate coming into force on January 22.

Winter months are the peak of produce movement from the southern states into Canada.

Source: Public Health Agency of Canada/Canadian Trucking Alliance January 13, 2022 news releases



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COVER STORY

Ground truthing robotic weeders starts now



The Dino Robot, France is battery-powered. Here, the underside reveals the tool carrier which has K.U.L.T. finger weeders and weeding hoes.



Nexus Robotics, La Chèvre from Canada.

“

There is just so much opportunity for robotics in the ag space, but we need to seize all opportunities now so we are not left behind.

~ KRISTEN OBEID, WEED MANAGEMENT SPECIALIST, OMAFRA

”

Continued from page 1

Opportunities

McDonald points out that Canadian company Nexus Robotics is working on a hybrid model now called La Chèvre that is operated by hybrid diesel-electric power.

Teric Greenan, COO, Nexus Robotics, agrees that his prototype is a much more ambitious model. “When it works, it will be the best way of removing weeds without hurting the plant. The bigger opportunity will be for the robot to do more than one function, such as thinning lettuce. This is a much more complicated feat of engineering requiring more dexterity.”

La Chèvre is an active weeder, using artificial intelligence and computer vision to identify the weed. When these functions are perfected, Greenan hopes that the photos can be downloaded and that the robot can be trained to distinguish different kinds of weeds or even disease. In this

sense, the robot would have the dual role of weeder and of crop scout.

One of the hurdles to overcome, says McDonald, is that changing light patterns affect the quality of the photos which impacts the correct identification of weeds versus plants. Carrots are an easy crop to test pilot because the foliage is so different from the weeds. But complexity is increased in a crop such as celery.

Originally based in Nova Scotia, Nexus Robotics has now moved to Montreal to be in closer proximity to the vegetable growing regions of Québec and Ontario. Greenan is looking forward to the 2022 growing season, working with Chuck Baresich, Haggerty Creek Inc, a precision agriculture company in Bothwell, Ontario who represents the Dino robot.

Together, they will have boots on the ground for research and demonstrations. Baresich reports that the Dino will be deployed on a fee-for-service basis in two commercial operations. One will be in root crops in the Holland

Marsh, Bradford and another in Brussels sprouts near Chatham, Ontario.

The growers are looking to reduce or eliminate the need for a roving weeding crew with Dino which will operate over six weeks on 50 acres. That’s 10 acres per day.

A third company, based out of Denmark, will be sending a solar-powered FarmDroid to be tested under Ontario conditions (www.FarmDroid.dk/en). The company’s website says it’s the first robot to seed and weed in a CO2-neutral and ecological way. Chuck Baresich anticipates that all three robots will be scheduled for public demonstrations likely in April, July and September 2022.

Future issues

“I see robotics as a future for Ontario agriculture,” says Kristen Obeid, weed management specialist, Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA). She’s chair of an Ag Robotics Working Group (WG) whose mandate is

to conduct on-farm demonstrations to “ground truth” the technology, build networks and brainstorm about the technologies.

The working group includes OMAFRA, university researchers and grower associations. Agribusiness and robotics companies, who are also members, are impressed with Ontario’s infrastructure and the diversity of agricultural production within short distances. They see the potential to create an Ag Robotics Hub or Network.

“There is just so much opportunity for robotics in the ag space, but we need to seize all opportunities now so we are not left behind,” she says.

Naïo’s Dino and Oz robotic weeders, Nexus Robotics’ La Chèvre and Korechi Innovations RoamIO were demonstrated at several field days in 2021. GPS signals could be inhibited in fields that were protected by forest or windbreaks on multiple sides. Access to the internet is required for safety and remote monitoring. That means rural internet service

needs to improve to accommodate the wave of technology that could ease labour issues.

This may be the decade for Dino. While he’s a teenager now, he’ll be an adult by 2030. And perhaps by then, he’ll be on the payroll.

The Grower is “Digging Deeper” with Chuck Baresich, Haggerty Creek Inc. The general manager of the precision agriculture company based in Bothwell, Ontario points the way to how robotic weeders may alleviate the labour crunch in field vegetables. This podcast is sponsored by UPL.



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CROSS COUNTRY DIGEST

BRITISH COLUMBIA

BC Tree Fruits Cooperative sells warehouse property

BC Tree Fruits Cooperative has sold its warehouse in Kelowna for \$23.8 million. The 858 Ellis Street address was purchased by local development company, Mission Group. The deal is expected to close in March 2022.

According to local news reports, this transaction brings the cooperative's real estate divestments to \$38.5 million since 2020. The headquarters in downtown

Kelowna sold for \$7.5 million. And its Osoyoos packing house brought \$7.5 million.

The sale came in nearly \$4 million over the listing price of \$20 million, reflecting the dynamic real estate market in Kelowna which is undergoing redevelopment. The prime, industrial location is expected to be part of an eventual makeover of that area of Kelowna.



MANITOBA

Peak of the Market commemorates, celebrates and contributestitle

The Winnipeg-based company is commemorating 80 years in business.

“We’re proud to be an inclusive and diverse company driven by a dedicated group of growers and staff that markets many different varieties of fresh, quality vegetables across Canada and throughout the United States,” said Peak of the Market CEO, Pam Kolochuk. “Peak of the Market, along with growers, employs more than a thousand Manitobans and injects more than \$130 million into the economy each year. We have earned the reputation for, not only ensuring the produce grown exceeds the national standard for safety and quality, but that customers receive the same attention and superior service. Everyone at Peak of the Market takes pride in working toward a collective commitment to excellence, in everything we do, all year long,” said Kolochuk.

In 2021, 30 per cent of all sales were in Manitoba while 40 per cent of sales went to the United States. The remainder flowed to other parts of Canada, east and west of Manitoba.

Potato Week will be celebrated from February 4-14, 2022, showcasing Manitoba potatoes and encouraging locals to visit restaurants to try unique potato dishes. There is no cost for restaurants to participate and they will be given 100 lbs. of free potatoes as thanks for their involvement. Come February, diners will be able to try the dishes and vote for their favourite at potatoweek.com.

“Restaurants have had a hard go of it lately and we’re happy to help shine the spotlight on this important industry,” says Kolochuk.

Peak of the Market’s growers have contributed almost \$4 million to schools and daycares across western Canada since “Farm to School,” (a healthy and profitable fundraising program) began 10 years ago. In 2021 alone, Peak of the Market growers donated almost \$210,000 to these important community groups.

“Our growers know the importance of giving back to the communities that support their farm operations,” said Peter Loewen, Peak of the Market chair and owner of Garden Valley Vegetable Growers. “By providing

important funds to schools and daycares, we not only support these important groups with much needed funds but we’re also teaching the grocery shoppers of tomorrow the importance of eating well, how to identify fresh ingredients and the benefits of supporting the Canadian agricultural industry. It’s a win-win program.”



QUÉBEC

Québec Parmentier acquires seed producer

Québec Parmentier has announced the acquisition of Ferme G. G. & A. Montminy, a renowned and large-scale seed potato producer located in the Péribonka region of Québec. It’s about 300 kilometres north of the provincial capital, located on the north shore of Lac Saint-Jean.

Being located in a Protected Cultivation Zone gives it an undeniable advantage in terms of quality of the seed potatoes produced.

“Today’s announcement marks a turning point in the history of Québec Parmentier,” declared Pierre Chouinard, CEO. “This transaction makes it possible, through our subsidiary SEQ Marketing, to meet the growing demand of our customers in terms of volume, quality and varieties of seed potatoes, thereby strengthening our position as a leader in the seed potato industry in Canada.”

“It is with great pride,” stated Québec Parmentier president, Kevin Rivard, "that we welcome



the employees of Ferme G. G. & A. Montminy. We are convinced that their experience, their know-how and their commitment to success will be highly valued within our organization.”

The importance of having a healthy seed production industry is essential to sustaining the production of table potatoes. “Considering that the seed potato industry is constantly changing, this acquisition allows us to continue to serve our customers and meet their needs,” added Rivard.

Source: Québec Parmentier January 13, 2022 news release



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CROSS COUNTRY DIGEST

PRINCE EDWARD ISLAND

A bumper potato crop sits in storage, still banned from exports to the U.S.

KAREN DAVIDSON

No substantial progress has been made in the first month of 2022 to lift the ban on exports of Prince Edward Island potatoes to the U.S. At least, no milestones have been publicized by the Canadian Food Inspection Agency (CFIA) which is now working with its counterpart, the United States Department of Agriculture-APHIS.

Despite a long-term potato wart management plan that’s been in force for 20 years, the Americans have requested their own pest risk assessment of potato wart due to detections in two PEI fields. Part of their concern is that the CFIA cancelled certificates for PEI seed exports to Uruguay in October 2021, a month before banning exports to the U.S.

The frustration with Canadian public officials is palpable in a letter to the editor of the Charlottetown Guardian authored by Boyd Rose, a past chair of the PEI Potato Board. “How about you come pull with us on our end of the rope instead of at the very best, standing and watching us pull,” he wrote on January 8.

“There is no credible science on God’s green earth that would tell us there is any risk to shipping washed, sprout-inhibited potatoes to anywhere in the world from non-restricted PEI fields as we have done for the last 20 years,” he continued.

In his letter, Rose pointed out that the U.S. is trying to get full access for fresh potatoes in Mexico, a process that would require washing and “sprout nipping” potatoes. In coincidental timing, that’s exactly the news announced at the National Potato Council’s annual expo in California. Kam Quarles, CEO of NPC announced a breakthrough in shipping to Mexico in a convention podcast. He was joined by Matt Lantz, vice president of global access, Bryant Christie Inc and John Toasperm, vice-president of international marketing, Potatoes USA. (Link here: <https://bit.ly/3IrUOKc>).

To gain access and deeper understanding of the U.S. perspective, the PEI Potato Board has hired lobbyist Maryscott (Scotty) Greenwood, Creative Strategy, in Washington. She brings a deep well of experience, including a four-year stint in the early 2000’s as chief of staff at the U.S. Embassy in Canada. One potential opportunity is to explore resuming shipments to Puerto Rico, a destination that is used to receiving about 20 per cent of all PEI potato exports to the U.S. That market is worth \$18 to \$20 million annually.

A social media campaign called Papas para Puerto Rico (Potatoes for Puerto Rico) has garnered 75,000 views of a short video explaining why potatoes are becoming scarce and more expensive. In turn, 4,000 Puerto Ricans have emailed their congresswoman to explain the central role that potatoes play in their diet on a food-insecure island.

Back in Canada, potato growers are anxious about the window narrowing for the disposal of sur-

plus potatoes in cold winter temperatures. As of January 22, no potatoes had been destroyed.

“PEI growers are waiting for a better deal than the federal compensation offer of 4.25 cents/pound to destroy potatoes that would have been exported to the U.S,” says Greg Donald, general manager, PEI Potato Board. “We’re going to snowblow potatoes back on the fields so that the potatoes can decompose in an environmentally-responsible way,

but we’re loathe to do that at such a depressed price.”

As Rose concludes, “Most Island potato farms have no physical or other connection to the two infected farms, our potatoes do not have wart, but we are all suffering.”



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ONTARIO FRUIT & VEGETABLE GROWERS' ASSOCIATION AGM REPORTS

A key initiative “More than a Migrant Worker” is off the ground



An Ontario grower held an on-farm vaccine clinic for Mexican workers in the summer of 2021. This is another example of the positive stories of farm employer-worker relationships that was portrayed in the “More than a Migrant Worker” program. Photos by Glenn Lowson.

Editor's note: Sadly, another year's annual general meeting will not be held in person, but rather virtually by the Ontario Fruit and Vegetable Growers' Association (OFVGA). No worries.

The following pages contain the summarized reports from the various section chairs.

ALISON ROBERTSON

Another year of the COVID-19 pandemic and all that it entails for our industry has come and gone. Unfortunately, it looks like

There are things that I've been hoping we would collectively learn as a result of the pandemic, but I'm not sure that's happening – or if it is, that it will last.

we will be on this wild ride for a while longer, and as much as things feel like more of the same, it's important to take stock of what we have gained in both ground and experience.

This past year was the year of vaccinations, and more recently, of booster shots. A seasonal and successful clinic was staffed at the Pearson International Airport in Toronto, partnering with the Ontario Ministry of Health, Ontario Ministry of Agriculture, Food and Rural Affairs and F.A.R.M.S/CanAg Travel. Together, our respective staffs helped get temporary foreign workers protected against COVID-19 as they arrived in Canada. And the program will be repeated again for 2022.

Similarly, prioritized dose access and regional community efforts also played a key role in getting workers and growers vaccinated. Strategic improvements to housing and workplaces have helped make farm families and workers safer, and those efforts are continuing.

At the same time, the pandemic has piqued public and media interest in farms and migrant labour which has led to coverage which doesn't accurately depict the true situation on Ontario farms. At OFVGA, we know this is an increasing irritant for growers who feel unfairly targeted and maligned and frustrated that their side of the story isn't being told.

That's what led to the launch of the More than a Migrant Worker program, a proactive communications initiative focused on ensuring horticulture's voice is part of the broader public narrative around farm labour and seasonal workers. That includes promoting the vital role of foreign workers in Ontario horticulture, addressing misconceptions and providing current, factual information about seasonal labour.

A website and social media accounts on Facebook, Instagram and Twitter were launched in early summer 2021 and a targeted online media campaign was built around social media. Campaigns

with the National Post and the Toronto Star began rolling out in November and will continue throughout 2022.

OFVGA is leading the initiative with project partner Farm & Food Care Ontario (FFCO) along with input and support from our member organizations. Working group members include staff from OFVGA, FFCO, Ontario Greenhouse Vegetable Growers and Ontario Apple Growers.

There are things that I've been hoping we would collectively learn as a result of the pandemic, but I'm not sure that's happening - or if it is, that it will last.

At OFVGA, we've long been pushing for government to see the value of domestic food production and enhance it through sound public policy. We've also been hoping that society as a whole would reach a new awareness and understanding of the importance of food production and the necessity of temporary foreign workers.

If government made domestic food production a priority, we would have a strategic and balanced approach that integrates the three levels of government and a diverse collection of ministries from agriculture and environment to labour, health and more.

Bringing together sustainability with food policy would ensure growers have the tools they need to remain competitive - such as sufficient funding for the Pest Management Regulatory Agency to give growers access to the latest pest control tools or practical, robust safety net programming.

Instead, we run the risk of growers exiting the industry and Canadians being at the mercy of foreign suppliers and the havoc that global supply chain disruptions can bring. The challenge is that society never learns and soon forgets. And so, our work will continue.

Alison Robertson is executive director of the Ontario Fruit and Vegetable Growers' Association.



POTATO STOCKS

A peak at the potato pile

KEVIN MacISAAC

On January 31, a lot of potato growers in the country will take a moment to step back, look at their potato bins, and ask themselves: how does this pile compare to other years?

One thing we know for certain; growers in the four eastern provinces (and Maine) dug a big crop in 2021 – a record-breaking one for some. On the other hand, growers in the two big prairie provinces of Manitoba and Alberta were challenged by the hot dry growing season and came up shorter than they would have liked.

Our January stocks on hand tell us we have about 80 million hundred weight of raw potatoes in warehouses across the country. This is about 20 per cent more than what we would see in a three-year average. In addition to the large crop brought into storages last fall, the inventory increase is compounded by an embargo placed on potatoes moving from Prince Edward Island to the United States and the territory of Puerto Rico since November 22. Consequently, the Canadian market is having difficulty absorbing these extra potatoes from the largest player in the country.

Consumer demand

Growers, specifically in Ontario, are looking at a pile in January, which is 32 per cent above three-yr. average levels (5.4 million cwt. vs 4.0 million cwt). Although the pile is large, there is optimism from great consumer demand and resulting usage during the previous month of December. Disappearance was high in the provinces of New Brunswick, Manitoba, Quebec, and PEI. Disappearance in Ontario was phenomenal, with levels 60 per cent above year ago levels, and the highest since the year 2009. Disappearance levels in the country, as a whole, were up 20 per cent in December compared to a year ago.

Breaking it down, the pile of potatoes intended for table usage, currently presents the biggest challenge. Stocks on hand of table potatoes in the country are up 50 per cent above three-year averages (19.4 million cwt. vs. 12.9 million cwt.).

Consumption and movement have been good, but again with PEI being shut out of the U.S. market, it has doubled their stocks of table potatoes backing all the way up the supply chain. When Ontario table producers look in their bins, they see a 26 per cent increase over a three-year average for this time of year and hope for continued strong movement.

Manitoba is the one province

in the country showing a decline in their January fresh stocks. British Columbia could have some import needs as well, as their highway infrastructure was damaged in recent floods.

Processing demand

The other major category of potatoes, those intended for processing, finds itself in a very secure position this year for the eastern region, but in a deficit position for the western region. Canadian stocks are 15 per cent above three year averages, at 50,000,000 cwt. Fryers in the east finally have an adequate supply of raw to run their factories 24/7 to meet demand.

Recent fry plant expansions in Manitoba and Alberta, however, will need more product, which currently is travelling west from PEI and New Brunswick with lots of freight on board. Fryers are running hard to keep up with export demand. December usage, for example, was up almost 40 per cent above year ago levels.

Chip growers in Ontario report January holdings that are 33 per cent above three-year averages at 3.9 million hundred weight, which is the largest on record for the province. Chip schedulers have worked hard to take some buildings with storage issues ahead of time, while delaying others to accommodate them. Chip inventories are also larger than a year ago in Quebec, New Brunswick and PEI. The sector continues to see strong demand for its product.

Seed availability

Finally, the January 1 seed inventory is estimated at 10,000,000 hundred weight, five per cent higher than three-year averages. Alberta has the largest supply at 3.6 million cwt., or 12 per cent above average. Seed growers in PEI, faced with the probability of destroying their inventory destined for export, converted some of their stocks into the process category, so their seed inventory is 23 per cent below three-year average levels. The Ontario seed inventory is almost double three-year averages, with some new production adding to the pile.

Growers have a few months to go yet before they see “end walls” and start this process all over again. Hope you have a great marketing season!

Kevin MacIsaac is general manager, United Potato Growers of Canada.



These Lamoka potatoes were photographed at Tupling Farms near Shelburne, Ontario by Eugenia Banks.

Canadian Potato Storage Holdings (All Sectors) by Province
January 11, 2022 Infohort: AAFC (000 cwt)

Province	2018-19	2019-20	2020-21	3-yr. Average	2021-22	2022 vs. 3-yr. avg
Prince Edward I	16,650	17,550	15,020	16,406	22,695	+38%
New Brunswick	10,309	10,294	7,061	9,221	11,367	+23%
Quebec	7,440	7,986	7,603	7,676	9,548	+24%
Ontario	3,777	4,016	4,472	4,088	5,400	+32%
Eastern Canada	38,176	39,846	34,156	37,393	49,010	+31%
Manitoba	12,160	12,240	14,568	12,989	14,843	+14%
Alberta	15,335	16,022	14,711	15,356	15,296	0%
British Columbia	813	675	747	745	735	-1%
Western Canada	28,308	28,937	30,026	29,090	30,874	+6%
Total Canada	66,484	68,782	64,182	66,483	79,885	+20%

Total Canadian Potato Storage Holdings on January 1, 2022 are at almost 80 million hundred weight, which is 20% above 3-yr. average levels of 66.5 million hundred weight. Eastern Canada is the biggest contributor as a result of the large crop dug in the 4 Eastern Provinces. Also compounding the stocks increase is an Embargo on PEI Potatoes preventing them from being shipped to the United States since November 22nd. The Canadian market has not been able to handle the additional volume domestically.

Canadian (Fresh) Potato Storage Holdings by Province
January 11, 2022 Infohort: AAFC (000 cwt)

Province	2018-19	2019-20	2020-21	3-yr. Average	2021-22	2022 vs. 3-yr. avg
Prince Edward I	3,984	5,104	4,197	4,428	8,499	+92%
New Brunswick	1,288	1,433	1,515	1,412	2,404	+70%
Quebec	3,233	3,691	3,566	3,497	4,464	+28%
Ontario	952	1,108	1,221	1,094	1,383	+26%
Eastern Canada	9,457	11,336	10,499	10,431	16,750	+63%
Manitoba	863	1,123	1,364	1,117	1,084	-3%
Alberta	785	595	932	771	979	+27%
British Columbia	616	537	591	581	592	+2%
Western Canada	2,264	2,255	2,887	2,469	2,655	+8%
Total Canada	11,722	13,591	13,386	12,900	19,405	+50%

Fresh Holdings in Canada on January 1, 2022 are 50% above 3-yr. average levels with 19,405,000 cwt. intended for use in the table market. All provinces except Manitoba (affected by hot, dry weather) have increases in fresh stocks. Eastern Canada which produces a large portion of the fresh potatoes leads with a 63% increase in stocks. Prince Edward Island fresh stocks are almost double historical levels with an additional 4,000,000 hundred weight in storage. The United States closed their border (and that of Puerto Rico) to PEI Potatoes on November 22 creating a large back up in the supply chain.

ONTARIO FRUIT & VEGETABLE GROWERS' ASSOCIATION AGM REPORTS

Energy prices, consistent energy supplies and carbon taxes top the list of worries

BRIAN GILROY

We continued to follow the cost and availability of energy for the sector in 2021. Even with the 80 per cent carbon tax relief on greenhouse heating fuels, the quickly escalating carbon tax (which will be up to \$170/tonne by 2030) will have severe impacts on the sector's competitiveness. OFVGA will be closely monitoring the roll-out of the federal government's commitment to return a portion of the carbon tax proceeds to the agricultural sector. It is anticipated that these funds will be directed toward lower-emission technologies given the federal government's significant push to reduce emissions and reduce fossil fuel use. It is frustrating that the target is placed on agriculture emissions despite its small contribution compared to other sectors such as air travel. We were disappointed that the federal government was prorogued for the fall election before the senate could pass Bill C206 (An Act to amend the Greenhouse Gas Pollution Pricing Act) to exempt the carbon tax on all fuels used

for food production. On the supply side, we closely monitored the dispute with the State of Michigan surrounding Enbridge Line 5. Along with our industry colleague, the Ontario Federation of Agriculture (OFA), OFVGA submitted a letter to the federal government encouraging decisive action to ensure the line remains operational given the dire impacts that its shutdown could have on the sector. As of January 2022, the existing Line 5 remains operational and there is an environmental study underway on a new line; however this process could take up to two years. Provincially, OFVGA submitted comments on Ontario's natural gas infrastructure expansion plans in April 2021. We encouraged the government to take a longer-term view on expansion projects, and to account for future needs and the economic benefits that come along with supporting this expansion in rural areas. OFA has taken the lead on speaking against the use of Ministerial Zoning Orders which have increased during this provincial government's mandate. Concern about preserving land for

food production has increased over the past year. As such, OFVGA has been monitoring provincial highway expansions and the expansion of the Greenbelt in certain regions, and the impact of these initiatives on the sector. Following a previous consultation early in 2021, changes to Ontario's Drainage Act took effect in June 2021. Changes are an attempt to simplify the process for eligible minor improvements to municipal drains which hopefully means a simplified process for agricultural tile drainage projects. In support of water supply needs, OFVGA signed a letter in support of expanding the Leamington and Area Drip Irrigation system, which was being held up by approval of the necessary road allowances from Leamington municipal council. The system supports water access for field irrigation as well as local processing and greenhouse facilities. At the last annual meeting, the OFVGA membership passed a resolution for us to support the Ontario Greenhouse Vegetable Growers (OGVG) in their efforts



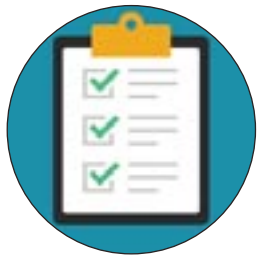
Food safety and worker safety are demonstrated on this peach packing line. Photo by Glenn Lowson.

to protect greenhouse lighting as a normal farm practice. OGVG has been supporting their individual growers who are appealing to the Normal Farm Practices Board, and OFVGA has been following the issue to ensure there is not a problematic outcome for the sector. Although a national issue, we have been keeping an eye on food safety requirements. Growers are under a great deal of stress in general when it comes to various audits and inspections and food safety is no different. Global

Food Safety Initiative (GFSI) is requiring 100 per cent compliance but is allowing corrective actions by the grower to get up to 100 per cent if not at that level at the time of the audit. It is important to understand that these changes were necessary for CanadaGAP to maintain its GFSI certification, a requirement demanded by a number of retailers. Brian Gilroy is chair of the OFVGA Property, Infrastructure, Energy and Food Safety Section

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ONTARIO FRUIT & VEGETABLE GROWERS' ASSOCIATION AGM REPORTS

Climate change, soil health dominate the environmental agenda

JAN VANDERHOUT

Although much of the world’s energy continues to be focused on COVID response, the environment file is still significant for both the provincial and federal governments. At the federal level, the recently re-elected Liberal government is taking a strong environmental stance – something we along with the Canadian Horticultural Council and the Canadian Federation of Agriculture will need to watch as they roll out plans for emission reduction. At the provincial level, the government is eyeing the 2022 election and has been working towards completing a number of policy commitments from their election in 2018. Regardless of which level of government or their intent, it continues to be vital that OFVGA follow and respond to proposed changes to ensure that growers are not unnecessarily impacted by impractical, new or more complex environmental regulations.

The importance of the environment file to the provincial and federal governments was highlighted by the 2021 Federal-Provincial-Territorial meetings in November, which ended with the culmination of the “Guelph Statement” and included the following:

“As climate change directly impacts the quality of our soils and water supply, and consequently our productivity, protecting our environment and ensuring the resilience of the sector are priority issues for the next agricultural policy framework. In addition, our ability to meet the expectations of consumers here and abroad is key to maintaining our competitiveness and accessing new markets. Canada’s agriculture and agri-food sector can play a leading role in feeding the world through innovative and sustainable agriculture.

Ministers underlined the urgency of addressing climate change for the sector. They discussed shared priority areas where progress could be achieved through the next policy framework, and agreed that more needs to be done to support the long-term viability of the sector. Sustainable growth also needs to be inclusive, to continue to provide equitable opportunities to all who want to participate in this vital part of the Canadian economy.”

From this, it is clear that we can only expect an increase in activity on this file. It will be important that the industry remain engaged and where possible provide leadership and direction.

Along these lines, one aspect of the environment file has been the desire (and need) to work closely with other organizations to ensure that the sector is all rowing in the same direction and collaborating in their response to government. In recent years that has been through EcoAg and is now being led by the Ontario Federation of Agriculture (OFA). With OFA’s leadership, several meetings of sector organizations have occurred, including with OMAFRA deputy minister John Kelly, all with the intent of learning about and driving the government’s environmental agenda in agriculture. One specific initiative of concern has been OMAFRA’s soil strategy implementation plan, which is now getting strong feedback from the collaboration through OFA.

We hope this collaboration will continue into the future as we anticipate further collective responses on various environmental issues will be needed.

From a regulatory perspective, the Ontario government completed a number of policy initiatives, including refocusing Conservation Authorities to a more limited mandate, modernizing some environmental permissions, revising the water quantity management framework and revising the blue box program. OFVGA submitted comments on all of these consultations, aiming to prevent any unintended consequences from finalized regulatory amendments.

On the carbon tax front, we will be looking to influence how the federal government returns some of the proceeds from the carbon tax collected – to ensure



Onions in Grand Bend, Ontario thrive in muck soils. Photo by Glenn Lawson.

that it is allocated appropriately to the agriculture sectors that paid the fees, and to those that are disproportionately impacted by the increased energy costs due to the nature of our markets (i.e. growers are price takers). Ideally


these funds will be easily accessible to our sector and can be invested back into our operations.

Jan VanderHout is chair of the OFVGA Environment and Conservation Section.

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Advocating for improved farm safety nets

One of my jobs is to help government understand and recognize these challenges so they can come up with actions and solutions that help growers.

MIKE CHROMCZAK

It certainly has been a challenging 12 months since our last annual general meeting and 24 months of pandemic existence. Over the past year there have been added expenses for all of us, whether related directly to COVID or indirectly through supply chain issues and inflation. And Mother Nature hasn't taken a break from throwing curve balls just because people have their hands full with managing COVID issues.

I've talked to growers over the past year who are near their breaking point. It's not pretty out there.

I think some of the frustration

is that many folks involved in making decisions about programs and policies these days don't seem to have an understanding or appreciation of farming and what growers are going through. One of my jobs as safety nets section chair is to help government understand and recognize these challenges so they can come up with actions and solutions that help growers.

I know our work isn't done and I will continue to push for stronger AgriStability and Self-Directed Risk Management (SDRM) programs. But in the meantime, here are a few things we were able to achieve or contribute to over the past 12 months.

In March 2021, the

AgriStability Reference Margin Limit was permanently removed nationally, and this was also retroactively applied to the 2020 program.

At that time, the federal government also put the offer on the table to increase AgriStability's payment (or compensation) rate from 70 to 80 cents on the dollar when a farm falls below their reference margin.

However, not enough provinces agreed to this proposal, and it effectively died at the national level. OFVGA worked with other commodity organizations such as grain farmers and beef farmers through a coalition called OASC (Ontario Agricultural Sustainability Coalition) to successfully advocate for a



provincial-only boost to the payment rate. Ontario was the only province to do this in the aftermath of the stalled national negotiations, in June 2021. This increase also applied retroactively to the 2020 program.

Farmers with crop insurance from Agricorp have seen their coverage expanded to include the peril of labour loss due to COVID since the pandemic started. OFVGA has worked with Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA) to document the continued importance and value of this coverage, and in December 2021 the government announced it will extend the labour peril coverage for the 2022 crop season. Ontario continues to be the only province to offer this coverage.

Looking forward, OFVGA continues to push for a higher AgriStability trigger level. Even with the recent enhancements, many growers find the program unresponsive at the current 70 per cent trigger level. Raising this will continue to be a priority ask in the coming year.

We also continue the work with our commodity partners in the OASC coalition to remind the Ontario government and MPPs of the importance and value of our provincial Risk Management Program (RMP) and SDRM program. It's not just important to growers but also to our domestic food security and the value chain that is built around the farming sector. With the ongoing challenges caused by COVID and the rising costs growers have experienced over the past year, we will remind all parties of this program going into the upcoming election and will seek their commitment to

continue and strengthen the program for growers.

On the topic of SDRM, it's easy to forget that before the pandemic started, the government had started to engage with all commodities in the RMP and SDRM program to evaluate the program design and look at changes that would make it more insurance-based. These discussions have mostly been put on hold over the past two years, but we may have more to report over the coming year depending on if and when discussions with OMAFRA resume.

Many growers have been waiting for a national solution for persistent issues such as terms of payment or non-payment from some buyers – something along the lines of a PACA-like trust. While this work continues at the Canadian Horticultural Council at the national level, OFVGA is using the ongoing review of OMAFRA's financial protection programs for grains and livestock to at least open the door to a possible Ontario solution for edible horticulture in the event that a national solution doesn't materialize. We're still in the very early stages of this provincial concept, and honestly, I hope the sector is able to achieve the national PACA solution that folks are looking for, so we don't need to pursue a provincial stop-gap.

Mike Chromczak is chair of the OFVGA Safety Nets Section.

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PARTNERSHIPS

Farm & Food Care Ontario year in review

AMBER ANDERSON

Farm & Food Care Ontario (FFCO) appreciates the exceptional support of the Ontario Fruit and Vegetable Growers’ Association. As a platinum member with many affiliate organizations, your collective memberships enable FFCO to continue and expand upon the important work of building public trust in Ontario agriculture.

With the ongoing COVID-19 realities of 2021, Farm & Food Care Ontario (FFCO) continued to reimagine many of its traditional outreach programs and create new opportunities to engage with consumers both online and through in-person events with pandemic protocols in place. With large followings on social media and strong website platforms, FFCO was able to extend its outreach programming, making 2021 a remarkably successful year, despite the complicated circumstances.

COMMUNICATIONS & OUTREACH

The Real Dirt on Farming
The fifth edition of The Real Dirt on Farming received numerous industry communications awards in 2021 from the Canadian Agricultural Marketing Awards and the Canadian Farm Writers Federation.

The Real Dirt on Farming was supported by commodity groups and agribusinesses across Canada and covers topics such as fruit and vegetable production, farming and the environment and careers in the agri-food sector. Thirty-two career profiles are featured including seasonal agricultural workers, an organic grape grower and a fruit and vegetable grower. A new, interactive website (www.RealDirtOnFarming.ca) provides opportunities for digital learning and content sharing.

A supplementary Teachers’ Guide created in partnership with Agriculture in the Classroom Canada (AITC) was also produced to meet growing educator requests for assets to help them use the Real Dirt on Farming in their classrooms.

In addition, the magazine has been distributed to Canadian registered dietitians, Ontario MPPs and municipal leaders, MPs and Senators from across the country, and was distributed through 200,000 Post Media newspapers across the country.

Breakfast From the Farm

Working with partners in Ottawa, Lindsay and London, three drive-through Breakfast on the Farm events gave 1,000 carloads of families the chance to meet farmers and see livestock,

crop and equipment displays up close.

At the end of each event, they received a breakfast bag full of local, Ontario products such as fresh onions, greenhouse vegetables and fruit, eggs, milk, cheese, bacon or sausage, pancake mix and maple syrup to make their own breakfasts at home.

Virtual Food & Farm Field Trips

FFCO and AgScape continued a successful partnership in 2021, offering a record 26 livestreamed

real-time farm tours which reached a staggering audience of 269,000. Three of this year’s virtual field trips included apple, strawberry, asparagus and potato operations.

These field trips gave viewers, including students and teachers, an opportunity to connect with farmers in real-time. FFCO and AgScape will continue to offer these tours throughout 2022.

Faces Behind Food / More than a Migrant Worker

Faces Behind Food social media campaign continues to

highlight the diversity of people and career opportunities within the Canadian agri-food system. A total of 104 people were profiled in 2021 including 20 profiles featuring growers and seasonal workers.

FFCO is delighted that the work started through Faces Behind Food has expanded into the OFVGA-led More than a Migrant Worker initiative. Since the fall of 2020, staff from Farm & Food Care Ontario, as a partner on the project, have been out photographing and interviewing Seasonal

Agricultural Workers on a variety of farms and greenhouses in the Leamington, Chatham, Niagara, Norfolk and Holland Marsh areas.

To date, more than 50 workers through the SAWP program have participated in the project. Numerous emails have come back from these workers, after they’ve been profiled in the project, thanking us for finding their stories interesting and their work important.

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CHAIR’S PERSPECTIVE

It’s time to pass the torch



BILL GEORGE
CHAIR, OFVGA

This is my last column as chair of the Ontario Fruit and Vegetable Growers’ Association (OFVGA) as I’ll be stepping down from that position – and as director representing the Grape Growers of Ontario – this month. I first joined the OFVGA board as a director for a short tenure in the mid-1990s. In 2015, I returned, became vice-chair two years later, and in February 2019, was elected chair of this organization. My first year as chair was fairly

calm and just as I was starting to feel settled into my new role, COVID-19 hit and turned everything upside down. Since March 2020, the pandemic has continued to dominate everything we do as an organization and it looks like it will be with us for a while longer yet. Even before the pandemic, though, labour was the dominant issue in our portfolio. When I was vice chair, we dealt with the sudden increase to minimum wage and spent a lot of time helping government to understand why a sector like ours, that competes in a global marketplace, needs stability and predictability to plan for increases. But COVID-19 and all of its associated issues has been by far the most challenging thing I’ve ever worked on in my almost 30 years in farm politics. It started with those scary early weeks when the closed international border made it uncertain whether our workers could get here for the season, but together with partner organizations such as the

Canadian Federation of Agriculture, Canadian Horticultural Council, Ontario Federation of Agriculture, F.A.R.M.S/CanAg Travel and others, we were able to arrive at a solution. Throughout the rest of 2020 and into winter 2021, we worked closely with government and other partners to put policies in place to keep workers and growers safe, and once vaccines became available, it was all hands on deck to get people vaccinated and protected. I’ve never seen that level of collaboration before, bringing farm and commodity organizations, government and other stakeholders to the same table. I hope this will continue. Former Ontario Minister of Agriculture, Food and Rural Affairs Ernie Hardeman was very supportive; we had weekly scheduled calls once COVID hit and I always found him very approachable and very helpful. It’s hard to know what Omicron will bring as we head into 2022, but I’m really proud of

how our sector responded to this crisis and how everyone has stepped up under difficult circumstances to keep fruit and vegetable production going and workers as safe as possible. There’s no doubt the pandemic has brought a lot of added stress and extra costs, but as an organization working for growers, I’m also proud that we were able to achieve government public health and safety policy that, by and large, was workable for our sector. A lot of the credit for making that happen goes to the team at OFVGA with whom I’ve had the privilege of working during my time as chair. Executive director Alison Robertson guides a very strong complement of staff, and the policy team in particular does an incredible amount of work behind the scenes to prepare us for the many meetings we attend. I will definitely miss the daily interaction with the staff and fellow directors, and the excitement that comes from being deeply involved in the issues and working to solve problems. One

thing I won’t miss, though, are Zoom calls. The pandemic made them a necessity, but one of the things I’ve always enjoyed is the face-to-face interactions with people. That includes going to meetings at Queen’s Park and Parliament Hill, and it would have been nice to do more of that. I appreciate the opportunity I’ve had to serve this industry, and I encourage younger growers with an interest in our sector to consider getting involved. Between farm and family, it can be tough to find the time, but it can be as low key as joining a committee or becoming a director to get a feel for what it is like. The world is changing rapidly and our industry needs your perspectives and your passion. So what’s next? When I ended my time as chair of Grape Growers of Ontario in 2016, I bought a convertible and now that I’m stepping away from the OFVGA board, I’m hoping to finally have time to use it as well as do more travelling.

WEATHER VANE



Southern Ontario’s soft winter hardened with -11°C temperatures on January 10. That’s when Glen Elgin Vineyards pulled out two Pellenc Selectiv’ Process grape harvesters to pick Riesling grapes for Icewine for a customer near Beamsville, Ontario. “These machines are the first of their kind in Canada, and they have a unique sorting system,” says Craig Wismer, president. “I began importing these machines as we were looking for the quality of sorting only these machines provide, as an alternative to hand picking for our customers. Furthermore, they allow us to harvest Icewine grapes without heating the rubber conveyor belts, unlike other machines on the market. This is a huge advantage when harvesting in these cold temperatures.”

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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:

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THE GROWER

URBAN COWBOY

Going behind the headlines of Mexico’s latest labour woes



OWEN ROBERTS

Even under the best field conditions, labour can be a target for those who claim agriculture exploits workers.

Planting, maintenance and harvest can look, and be, heavy, hot and sweaty, even when nothing’s amiss. That’s just the way field work is.

And that reality puts image-conscious exporters in countries such as Mexico in a delicate position.

On one hand, the harsh reality of field labour can’t be sugar coated. Doing so would draw suspicion that something is being hidden.

But at the same time, exporters don’t want to risk losing valuable markets if consumers misinterpret non-threatening situations. Consumers are driven by values, and fair-wage labour is a big one.

That’s why Mexico’s recent farm labour-related brouhaha with its northern neighbor is so critical to sort out.

On December, 31, 2021, the *Los Angeles Times* reported that tomato shipments from two agribusinesses in the Mexican state of San Louis Potosi were being blocked from entering the US, because of alleged forced labour abuse.

The allegations include withholding workers’ wages and subjecting them to abusive working and living conditions, described by one U.S. official as “horrible.”

The *Times* also claimed there was a Canadian angle to the story, with some of the tomatoes being handled in Ontario for distribution domestically and internationally, to huge supermarkets including Walmart.

Some industry observers questioned the validity of the allegations, saying they might be politically motivated by the U.S. tomato industry which competes with Mexican imports.

But in any event, Mexico has a legal problem on its hands, not to mention the public relations challenges that accompany it.

Now for the ironic twist.

At about the same time this story broke, up in Guadalajara, almost seven hours northwest of Mexico City, discussions were underway at the highest levels –

involving representatives from the U.S. embassy and the United Nations Food and Agriculture Organization (FAO) – to ensure agricultural worker safety.

Guadalajara is the fast-paced business centre of Mexico’s Jalisco state, a huge producer of berries that are exported to the rest of North America, as well as agave (the latter of which is used to produce tequila and agave spirits).

I wrote about Jalisco for *The Grower* in 2020 when I visited berry farms in the region, as part of an International Federation of Agricultural Journalists’ study tour.

Mexican agricultural journalist Hugo Castellano reported on the Guadalajara meeting, hosted by the Council for Agricultural and Agroindustrial Development of Jalisco.

“Issues related to the integral

connection between agri-food production and working conditions related to it have not stopped being reviewed and defined, based on new standards that are arising from international demand, along with new visions of individual and social responsibility,” he said.

He told *The Grower* that at the meeting, an initiative was presented called the Pilot Project of Labour Welfare for Agricultural Day Labourers and Day Labourers of Jalisco. Aldo Mares Benavides, vice president of the council’s labour welfare affairs, said the model is intended to be used throughout Mexico.

“We want to set an example,” he said. “We focus on the issue of identity, equal conditions of women and men, getting day labourers seen from the importance of what they do.”

According to Castellano, meeting participant Mary Ellison, a labour attaché with the U.S. Embassy in Mexico, underlined America’s interests and its displeasure with her host country’s track record.

“Our approach is to promote equal working conditions around the world, strengthen labour standards and fight child labour,” Ellison is reported to have said. She claimed that during the pandemic, child labour increased globally.

FAO representative Lina Pohl Alfaro reminded meeting participants that social issues affect the potential of a country’s agricultural economy – especially when exports hold such promise. Castellano noted Pohl Alfaro’s insistence that safe conditions must be created for the “comprehensive protection” of all

labourers in Mexico.

“It’s not just a matter of justice,” said Pohl Alfaro, “it’s a matter of competitiveness.”

Agricultural journalist Hugo Castellano is originally from Argentina. He has lived in Jalisco since 2009 and contributes to a variety of publications as well as radio there. He is a member of the Mexican Guild of Agricultural Journalists. Owen Roberts is a past-president of the International Federation of Agricultural Journalists and a communications instructor at the University of Illinois.



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OFVGA AGM goes virtual

The Ontario Fruit and Vegetable Growers’ Association has made the difficult decision to hold the February 22, 2022 Annual General Meeting (AGM) virtually.

The health and safety of our members are of utmost importance.

A Zoom meeting will be set up and a link will be provided at a later date. In similar fashion to last year’s AGM, everyone is welcome to attend and only registered and confirmed voting delegates/directors will be able to vote on resolutions and elections.

Ontario Premier Doug Ford and Minister of Agriculture Lisa Thompson will be joining virtually on February 22nd, 2022.

Section chairs and staff look forward to providing up-to-date information on what is and has been happening at the OFVGA and the industry. You will have the opportunity to participate during the meeting and have your questions answered. A draft agenda can be viewed at <https://www.ofvga.org/agm>

FREE REGISTRATION is available now through Eventbrite. Link here: <https://bit.ly/3KjFea9>

If you paid to register for the annual general meeting previously you will receive a full refund in the next five to seven days. You will continue to be registered for the VIRTUAL AGM.

If you have any questions, please do not hesitate to contact Deanna Hutton at dhutton@ofvga.org

MEETINGS



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COMING EVENTS 2022

- | | |
|---------------|--|
| Feb 1-2 | Nova Scotia Ministers Conference for Agriculture, Prince George Hotel, Halifax, NS |
| Feb 1-3 | Mid-Atlantic Fruit and Vegetable Convention, Hershey, PA |
| Feb 8-9 | Pest Management Centre Priority Setting Workshop C VIRTUAL |
| Feb 9 | Fresh Grape Growers of Ontario Annual General Meeting, board office, St. Catharines, ON |
| Feb 13-15 | International Fruit Tree Association 2022 Annual Conference, Hershey, PA |
| Feb 16-17 | Pest Management Centre Priority Setting Workshop B VIRTUAL |
| Feb 16-17 | Pacific Northwest Cranberry Congress, VIRTUAL |
| Feb 21-24 | North American Raspberry and Blackberry Conference, Gaithersburg, MD |
| Feb 22 | Canada’s Agriculture Day |
| Feb 22 | Berry Growers of Ontario Annual General Meeting, Embassy Suites, Niagara Falls, ON |
| Feb 22 | Ontario Fruit and Vegetable Growers’ Association Annual General Meeting, VIRTUAL |
| Feb 23-24 | Ontario Fruit and Vegetable Convention, Scotiabank Centre, Niagara Falls, ON |
| Feb 24-25 | International Potato Technology Expo, Eastlink Centre, Charlottetown, PE |
| Mar 2 | Ontario Potato Conference, Delta Hotel, Guelph, ON VIRTUAL |
| Mar 8 – 10 | Canadian Horticultural Council 100th Annual General Meeting, Westin Ottawa Hotel, Ottawa, ON |
| Mar 22-24 | Pest Management Centre Priority Setting Workshop A VIRTUAL |
| Mar 29 | Ontario Tender Fruit Growers Association Annual General Meeting, District 3 & 4, VIRTUAL |
| Mar 30 | Ontario Processing Vegetable Growers Annual General Meeting, Four Points by Sheraton, London, ON 8 am – 1pm |
| Mar 30 | Ontario Tender Fruit Growers Association Annual General Meeting, District 5 VIRTUAL |
| Mar 31 | Ontario Tender Fruit Growers Association Annual General Meeting, Districts 1 & 2, HYBRID |
| April 5-7 | Canadian Produce Marketing Association Convention & Trade Show, Palais des congrès de Montreal, Montreal, QC |
| April 5-7 | Fruit Logistica, Berlin, Germany |
| April 6-7 | Muck Vegetable Growers’ Conference, Bradford, ON |
| April 13 | Farm & Food Care Ontario Conference |
| May 11 | Census of Agriculture results |
| May 30-June 2 | 11th World Potato Congress, Ireland |
| June 12 | Ontario Agricultural Hall of Fame Induction Ceremony |
| July 17-21 | International Cool Climate Wine Symposium, St. Catharines, ON |

RETAIL NAVIGATOR

Maximizing your opportunity in 2022



PETER CHAPMAN

The challenges facing the food and beverage industry in 2022 continue to add up. The cost of inputs are rising to unprecedented levels, labour is a question mark in many sectors and regions. Predicting volume of every item is not for the faint of heart.

We know people have to eat and that retailers are looking for reliable supply of products and they would prefer that they are produced in Canada. It is a positive when there is demand so we need to determine how to satisfy the demand and position producers for a strong future. As we look forward to the 2022 growing season here are five ideas to help you maximize the opportunity with your customers.

1) Determine what you can do and what you want to do

If you are finding it difficult to find people to work in your business, chances are retailers are facing the same challenges. As you build your plan for this year use the facts you do know to build a realistic plan. This should be a balance between what you can do and what you want to do. The strain of the pandemic seems to be wearing people down and you are more likely to accomplish what you want to do.

Every year is different, but this seems to be shaping up like no other. Assess your ability to get the inputs you need from seed to the final shipping carton.

2) Figure out what it will cost

It is not only difficult to get inputs and labour, but they also both cost more. Your customers will need to understand the position you are in and what items will cost.

Often, we would look to the previous year and history to figure out product costs. You really have to go back to the drawing board right now to understand the true impact of increased costs of inputs. Wherever possible, push back on cost increases and consider options. I am sure you are doing this but remember to share your efforts and findings with your customers. When they know you are trying to keep costs in line, the tone of the

conversation should change.

3) Consider pricing options

This might be a year to consider a different pricing model. Your customers will always negotiate price, but they are also in a position they are not familiar with. They need suppliers who have a dependable supply of product. Retailers are not used to having empty shelves and if there is one thing they would all agree on, it would be that no inventory results in no sales. In many stores, produce is the first department consumers see and if the shelves are empty, it sets the tone for a bad shop.

One option to consider is contract pricing. You determine in advance what you need to produce and pack your crop and agree on the price with your customers before the season. This will give you peace of mind to enter the season knowing if you can get the crop produced, within specs and standards, that you will be paid enough to have a successful year. There are enough uncertainties right now so a price that works can reduce some of the stress.

Another option is to propose some form of reduced rebate with your customers when you are able to produce the amount of product they are looking for. Obviously, this is not something they would have considered in the past, but they need product in their stores. A slight reduction in rebate is a small price to pay for the efforts growers need to put in to produce

crops in these challenging times. Once you assess your options for pricing, you will need to have a plan to discuss pricing with your customers.

4) Meet with your customers

We know there is a lot of uncertainty and retailers are feeling this too. They do need to have a plan for the season and they want to work with suppliers who have a plan. During my years working on the retail side I would always have much more respect for suppliers who came in with a plan.

Yes, it is the retailer's store, but they want to see your vision for the year and how you will deliver. Your plan should start with volume and what you see for the season. For some crops this will need to be broken down by week and others by month. This really depends on the volatility of the product and the length of the season.

When you do review volume, ask them if the numbers you have are what they see for the year. This is when you need to stop talking and let them answer the question. Too often I hear suppliers share a number then just keep on going. It is one of the most important numbers in your relationship so take the time to ensure you agree. If there is a gap, work through it to get to a number you can agree on.

Discuss any other opportunities or obstacles you see when you were building the plan. Given all of the challenges in the



market it can be refreshing to consider opportunities right now. We do see people moving ahead and introducing new items or packaging.

5) Communicate during the season

news is not good news. Regular communication is a good thing and should lead to strong, prosperous relationships. Plan the communication with your customers and do not leave it on their schedule. They are busy and they will gravitate to the problems, which is natural. If you are delivering your plan, you still need to communicate with them.

As you build the plan, start early. Seasonal transitions are always important in the retail business to ensure the right amount of stock is available at the right time. Your customers need to know what is happening, even if it is just going according to plan.

As you get into your season, find the most effective forms of communication. This can be phone, email, text or any other

form of communication that works! It might be a combination of options and perhaps even time of day. It is part of your job to make sure they know what is happening. A strategy of no surprises is a good one. You might also find other people within the retailer's organization to communicate with. Category managers are busy and there are other people to talk to.

Maximizing your opportunity requires more than just producing great products. Putting the work in ahead of the season and during the season to communicate should pay dividends with your customers. Suppliers who are able to do what they say they will do are more valuable than ever.

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.

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ONTARIO FRUIT & VEGETABLE CONVENTION

FEBRUARY 23 - 24

What’s happening at the 2022 show

At press time, the Ontario Fruit & Vegetable Convention planned an in-person show. All attendees must be fully vaccinated with a federally-approved COVID-19 vaccine at least 14 days prior to the show – February 8, 2022. Proof of vaccination is required.

The Ontario government has eased public health restrictions effective February 21, including removing capacity limits in indoor public settings as long as proof of vaccination requirements are met. Masks are required.

TRADE SHOW



For the early birds, trade show and convention hours run from 8 am to 5 pm. Show closes at 4 pm on the second day. Note: free parking! For those on social media, use the hash tag #ofvc2022 or Tweet @ofvc1.

TASTING COMPETITIONS



Winners of the Sweet Cider and Hard Cider Competitions will be announced opening day, February 23.

EDUCATIONAL SEMINARS



More than 120 sessions have been scheduled with provincial, out-of-province, and American speakers. All sessions and speakers are subject to change. Some presentations may be live-streamed or pre-recorded due to COVID-19 travel restrictions.

YOUNG FARMER FORUM



For the 40 and under crowd, come and listen to Dave Kranenburg, part of Kendal Hills Farm near Orono, Ontario. Two years ago, he and his partner started the Virtual Farmers’ market and built it into Graze and Gather, a sales and distribution channel for small farms. To be inspired by this innovator, reserve your lunch-time seat for February 24 along with your on-line registration.

WOMEN IN AGRICULTURE BREAKFAST



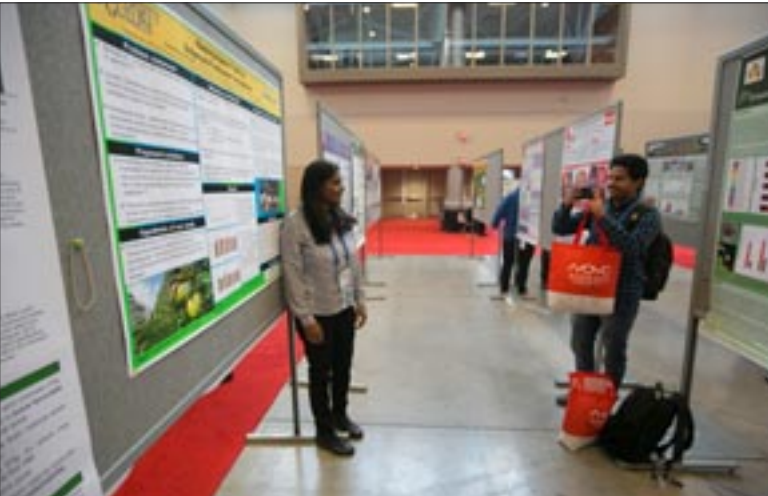
OFVC acknowledges the important role that women play in horticulture with a free breakfast on February 24 from 8 am to 9:15 am. This year’s featured speaker is Hollis English speaking about “Made from Scratch: Growing a Successful Business From a Family Dream.” She’s the co-owner and creative director at Murphy’s Farm Market & Bakery near Alliston, Ontario. English oversees the retail store and customer experience while managing brand marketing, company culture, business development, and bakery production. Though she has a degree in landscape architecture from the University of Guelph, her adventures in baking and business are all self-taught and have resulted in more learning and growth than she ever thought possible. She believes kindness and empathy are superpowers and that building genuine connections with others is what life is all about. She is a mother to four children. She gravitates to anything polka dot or floral, can never find her phone or keys, and loves that her husband makes her laugh daily. While pre-registration is required, there is no cost to attend the event. The Lounge (second floor) will seat 100 guests.

ONHops BREW OFF



It’s been a decade since the Ontario Hop Growers’ Association was launched for both organic and conventional growers. Together, members have created long-lasting relationships with microbreweries in promoting unique brews such as harvest ales. Niagara College’s Brewmaster course is another sign of growth and interest in Ontario hops. The ONHops Brew Off (formally The Great Ontario-Hopped Craft Beer Competition) brings together hop producers and the Ontario brewing industry. Celebrate the winners on February 23. The style to be judged is American pale ale.

RESEARCH POSTER COMPETITION








This popular display, co-chaired by Andrew Wylie and Denise Beaton, features the research of the best minds in horticulture. The OFVC Poster Session is an effective venue for researchers, industry and extension specialists to present new information pertinent to Ontario’s horticultural industry. Posters that present results from research trials, including pest management, crop production, new cultivars, and opportunities for marketing Ontario horticulture are welcomed. To submit a poster in the Regular Poster Session, contact poster session chair prior to January 31, 2022.

NETWORKING



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ONTARIO FRUIT & VEGETABLE CONVENTION

FEBRUARY 23 - 24

What’s happening at the 2022 show

FARMERS’ MARKETS ONTARIO



Executive director Catherine Clark is chairing sessions on both February 23 and 24. The annual general meeting will be held February 23 as will the announcement for the Farmers’ Market of the Year Award.

Some of the topics to be covered include:

- Your Market, Your Vendors, Your Risk by Paul Moran, Cooperators and Sunni Shannon, Duo Insurance
- Farmers’ Market Selling Online by Huron Farmers’ Market Network
- Local Food Connections

FARM FRESH ONTARIO



Founded in 1973, this organization is undergoing a refreshment under the leadership of executive director Kevin Vallier. Its 300-plus members have a common interest in direct farm sales. They used to gather under the umbrella name of Ontario Farm Fresh Marketing Association. Now called Farm Fresh Ontario, members will be treated to an educational program reflecting the overall goals of how to use technology to improve business; best practices for customer experience; event management; how to use social media to improve business; and compliance/best practices for human resources.

One of the topics to be presented is “The Secret Relationships between Music and Food” by Allan Cross, author of A Journal of Musical Things. Another topic is “Navigating the

Process of Serving Alcohol on the Farm.”

This group meets February 23 and 24 at the Niagara Falls Convention Centre.

GENERAL LABOUR SECTION

This is the number one issue for growers. Chaired by Stefan Larrass, senior policy advisor, Ontario Fruit and Vegetable Growers’ Association, this February 24 session will include the following talks:

- Connecting the Ontario Agri-Food Workforce by Janice Janiec, Ontario Federation of Agriculture
- Cultivating Non-Traditional

Talent by Ann George, Jessica Stevens, Maggie Elliott, Hop Association of the Americas

- Tools to Manage the People Part of your Farm by Jennifer Wright, Canadian Agricultural Human Resources Council
- SAWP/TWP Ag Stream Update for 2022 by Ken Forth
- Taking Advantage of your Health and Safety Partnership to Maximize Profits and Lower Risk by Jeff Pedlow and Pamela Resvich, Workplace Safety and Prevention Services



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FOCUS: INPUTS AND SERVICES

Cool tools for managing vineyards

KAREN DAVIDSON

Over the years, a labour management software package has paid its weight in gold...well, certainly in Ice wine. That's according to Aaron Oppenlaender, vineyard manager for Huebel Grapes Estates near Niagara-on-the-Lake, Ontario.

The grape grower manages several hundred acres of vineyards, including custom work for about 25 properties. Software company T3 Technologies, based in Michigan, can track worker hours by block, by row, by job function.

"It's a very user-friendly program," says Oppenlaender, who cites a range of tasks from pruning, tying and hedging to suckering and cultivating. Since 2008, this subscription-based program has evolved with the farm and is now tracking about 100 tasks. Truck rates, for example, are part of the list.

When minimum wage rates change, as they did in Ontario to \$15 per hour on January 1, 2022, it's easy to input the change and then calculate the immediate impact on the operations.

In the last two years, all workers are provided with an upgraded smartphone so that they can input their hours and tasks right in the vineyard. There's no lag in the timeliness of information so that analysis can be done at the end of a work day. If it's taking too long to prune a block, then Oppenlaender can check back to the established range of time



Pruning

expected and then pinpoint why the work crew is taking longer. It may be the case that the trellis system needs to be repaired or updated. Then that adjustment can be suggested.

Better training can be given to temporary foreign workers (TFWs) when these vineyard observations are made. About 35 TFWs are currently pruning, but that work force will almost double in peak season.

Oppenlaender points out, "Sometimes I move a worker to his strength. He might be stronger at suckering than tucking."

Another improvement is lessening the stress that workers might feel with repetitive movements. Electric pruners and

spring-loaded tying guns have improved time efficiencies.

The "pocket payroll" system is an aid in tracking workers, but it's also a time-saver for the manager.

"It alleviates the office time and allows me to spend more time in the vineyard with the work crew," explains Oppenlaender. "This is where the finetuning happens to meet quality standards."

In 2022, the plan is to complete the GPS mapping of remaining vineyards. This will help identify where equipment is at any moment and reduce time that workers spend travelling to the equipment.

Aaron Oppenlaender is one of the speakers scheduled for the Ontario Fruit & Vegetable



Aaron Oppenlaender



Hand harvesting

Convention (OFVC) for Wednesday, February 23, 2022. He's to be joined by Dr. Justine Vanden Heuval, Cornell, U.S.; Kevin Buis, Glen Lake Vineyards; and Dan Stouck, Malivoire Winery.

Editor's note: All OFVC sessions and speakers are subject to change. Some presentations may be live-streamed or pre-recorded due to COVID-19 travel restrictions.



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FOCUS: INPUTS AND SERVICES

Koppert reveals new branding

After nearly 30 years, the biological crop control company has changed its logo and visual identity.

“Our mission to contribute to the health of people and the planet by partnering with nature has led us to where we are today: a solid purpose-driven organization with strong core values. Our new branding reflects that mission and values. This will ensure that what we stand for is reflected consistently in how we communicate,” says chief strategy officer (CSO), Peter Maes.

With offices in 30 countries, the company’s biological solutions are being used in 100 countries all over the world. Over the years, the family company has evolved from a pioneering concern with four employees into a global market leader. According to Martin Koppert, chief business officer (CBO), it was time the branding evolves as well: “To make our world more sustainable, we need ways of growing that are both safe and healthy. Our goal is 100% sustainable agriculture. We work together with growers and farmers towards this goal. Our new branding will ensure a powerful image across all global markets and confirms Koppert’s unique dedication and commitment in providing a comprehensive range of biological solutions in a wide range of crops.”

It was essential that the new branding shows the connection of Koppert with nature. “Nature is where we draw all of our inspiration from, where our solutions find their origin. Obviously, our new identity is

Berry program

At the OFVC on February 23, the berry program includes a presentation on Macro Biologicals – beneficial insects, mites and nematodes. Representatives from Natural Insect Control, Koppert Canada, Plant Products and Biobest will attend.

Adam Hendriksen, commercial manager, for Koppert Canada will be touching on the Spical Ulti-Mite Sachet (*N. californicus*) for spider mite control. For more on the certified compostable sachet, link here: www.koppert.ca/spical-ulti-mite/

Also in the Koppert portfolio is Chrysopa-E (*C. carnea*) for aphid control. For more on the egg stage of the predator which allows for lower cost of introduction in larger outdoor acreages, link here: www.koppert.ca/2749/

Koppert is spending a lot of energy on different methods – drones and tractors -- for applying biologicals on outdoor crops. For more on the Natutec Drive, link here: <https://bit.ly/3FQ8fqe>

rooted in nature,” says Maes.

The Koppert ‘K’ is designed to aim forward, always looking ahead for new sustainable solutions. In addition, the symmetry symbolises the equal importance of plant protection above and underground. The natural shapes and colours of the new Koppert brand express the connectivity with nature, and the unlimited solutions which can be found in it.

Source: Koppert January 13, 2022 news release



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FOCUS: INPUTS AND SERVICES

Inflation and labour issues dominate trends going forward

A wild ride in 2021 is throwing us into 2022 off-balance and uncertain. Last year wasn't the year of recovery and respite we thought was imminent after the horror story that was 2020. Instead, we're left with trends increasingly difficult to forecast. COVID-19 continues to wind itself around virtually every global and domestic economic development, complicating things outright. Weather disasters have wreaked havoc with the transportation of manufacturing inputs and outputs. The world seemingly cannot (or will not) stop demanding rapidly disappearing goods and services. Inflation is unusually high. Canada's labour market has perhaps sorted itself out overall, but pockets of great uncertainty remain.

For these reasons, we're suggesting those in Canada's agriculture and food sectors monitor the following trends in 2022. We've suggested charts to make that easier: inflation and future interest rate changes (the yield curve), ongoing supply chain woes (Baltic Dry Index), labour shortages (Beveridge Curve in food processing), supply-demand imbalances (stocks-to-use ratios), and strength in demand for meat amid inflation (the FCC Meat Demand Index).

Inflation, inflation, inflation

Inflation is our first trend to monitor in 2022. Because the bond market conveys expectations about future inflation, we're monitoring changes in the yield curve to

assess inflationary pressures.

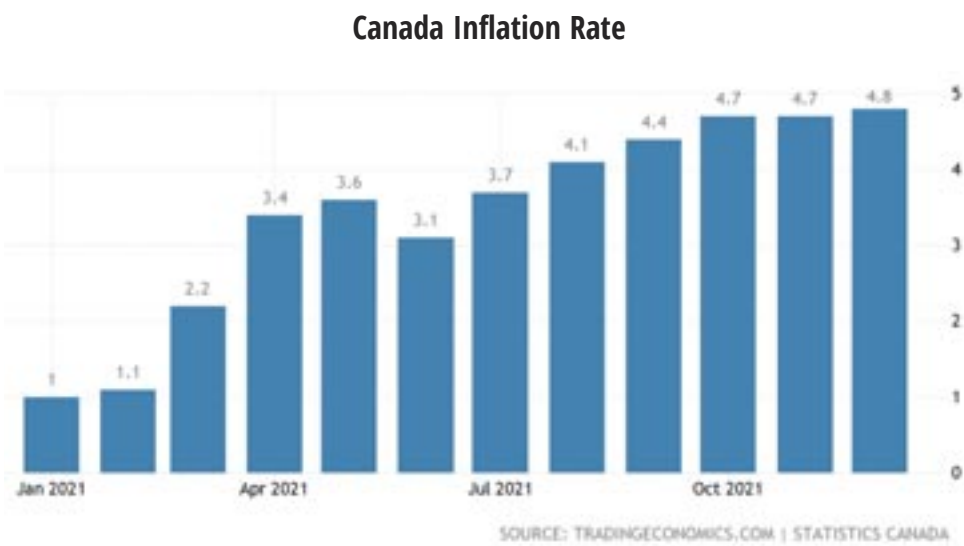
Pre-pandemic, the yield curve suggested Canada was headed for weak economic growth, then COVID-19 triggered the worst Canadian recession since the Great Depression. The Bank of Canada (BoC) cut its prime rate and began a program of quantitative easing.

One result of the economy ramping up from the initial shock in 2020 was rising inflation. That was a good thing: prices had fallen but then recovered. They've continued rising, with inflation now expected to be above the Bank's target rate for most of 2022.

Short-term bond yields have climbed in line with expectations for the BoC to increase its policy rate by at least 100 basis points in 2022. But long-term bond yields have retreated from the highs of late November, suggesting markets aren't overly concerned about inflation accelerating and requiring further rate hikes. And while persistent supply chain disruptions and global demand will prompt higher prices of virtually everything and supply shortages may continue for some key commodities, pressures on oil, gas and global ag commodity supplies are expected to weaken. Of course, the biggest unknown right now is Omicron threatening the progress in unlocking supply chains.

Risk to manage: Financial

Interest rates are likely to rise in 2022. Now's the time to prepare by locking in



rates to take advantage of an historically low interest rate environment.

Time, the tides and shipping costs wait for nobody

Throughout the pandemic, supply chain disruptions caused by shortages and backlogs in global transport networks have only added to increasing inflationary pressures.

There's no better indicator of shipping constraints and costs than the Baltic Dry Index (BDI). The index records average prices paid for the transport of dry bulk materials across more than 20 global routes. It's often viewed as a leading indicator of economic activity as index

movements reflect supply and demand for important materials used in manufacturing.

Figure 2 shows the constraints imposed shortly after the pandemic was declared. Average monthly costs rose 5.8% month-over-month (MoM) in 2019 and 7.3% in 2020. Then, in 2021, an average 15.3% MoM increase signalled the sharp rise in the number of constraints and the depth of the supply/demand imbalance each constraint suggested.

We'll monitor the index's return to pre-covid levels, although there may be little relief until the second half of 2022.

Continued on next page

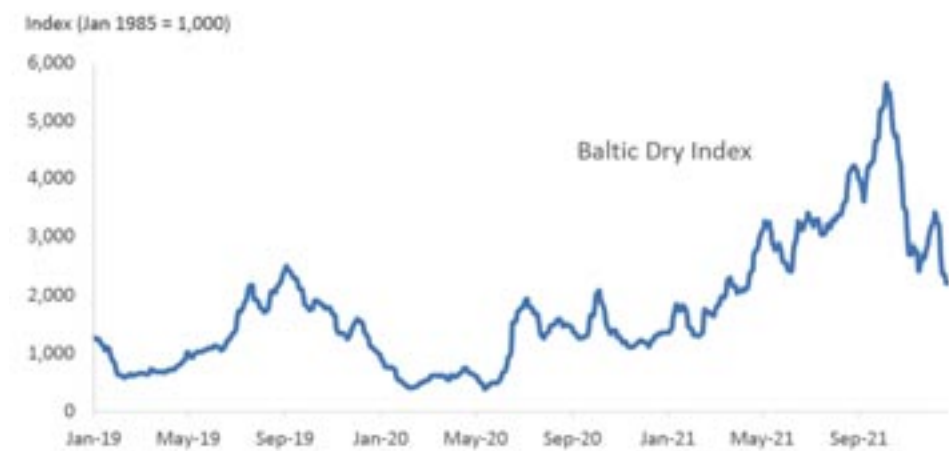
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FOCUS: INPUTS AND SERVICES

Inflation and labour issues dominate trends going forward

BDI records meteoric rise in 2021 but has fallen recently



A shortage of shipping containers and truckers and the infamous semiconductor chip crunch limiting new truck production are all expected to limit supply growth. At the same time, importers' demand for raw agricultural commodities and other manufacturing inputs is expected to remain high.

COVID further complicates food processors' labour challenges

Food processing's labour challenges are now chronic. At the start of 2022, more workers are employed in food manufacturing than before COVID, but businesses still can't keep up with demand. Unfilled orders are trending up 50% YoY. The latest job vacancy report (from 2021

Q3) was at 6.0%, up from 3.9% during the same period in 2019 and up from 2.7% in 2016. Year-to-date average wages excluding overtime are up 4.4%. Even record-high production per employee hasn't offset higher costs.

The Beveridge Curve illustrates the gaps between unemployment and job vacancies (Figure 4). Its typical slope is based on the hypothesis that, with fewer jobs available, more people will be out of work (and vice versa).

Major market interruptions such as COVID are expected to shift the curve right, indicating the start of a new business cycle with a noticeable jump in the unemployment rate (as shown in Figure 4 for overall manufacturing and food processing). Economic crises disrupt the



The Ontario Food Terminal Board has proactively organized a number of vaccine clinics, most recently January 6 and 8, to protect workers and their families. OFT operations manager Gary da Silva reports that a total of 10,600 people have been vaccinated at the terminal during the last year with the help of the Ontario government.

labour market resulting in structural mismatches between available jobs and unemployed workers.

The two splits indicate the labour market for food processing firms is tighter than in the overall economy: the vacancy rate at any level of unemployment is higher in food processing than for all industries. We'll be watching if the vacancy rate in food processing grows or shrinks and if the labour market can match workers with employers (i.e., a shift of the Beveridge curve back to the left) in 2022.

Risk to manage: Human Resources

A labour strategy is key for food processors right now. How can you recruit, onboard and train, and importantly, retain employees in a period of scarcity and high competition for workers?

Source: Farm Credit Canada

2022 ONTARIO FRUIT AND VEGETABLE CONVENTION

February 23–24, 2022
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FOCUS: INPUTS AND SERVICES

OMAFRA sets up voluntary employer registry

During the pandemic, Ontario farmers have altered operating protocols to keep all employees safe, including those from the temporary foreign worker (TFW) program.

OMAFRA is looking to strengthen its coordinating role to the benefit of both international agricultural workers and their employers. A critical next step is to create a registry of employers, which is funded by the governments of Canada and Ontario through the Canadian

Agricultural Partnership.

This voluntary registry will help the province to better coordinate its response and develop programming and policies. It will also allow for timely and targeted information including TFW updates, rights and responsibilities as well as programming opportunities.

If you employ international workers under the agricultural streams of the federal Temporary Foreign Worker Program in your farm or agri-food business, please

log onto the Registry and take a few minutes to enter your business and aggregate information. OMAFRA suggests updating this information at least once a year.

There are many reasons to join other farm employers who entered their business information in the registry:

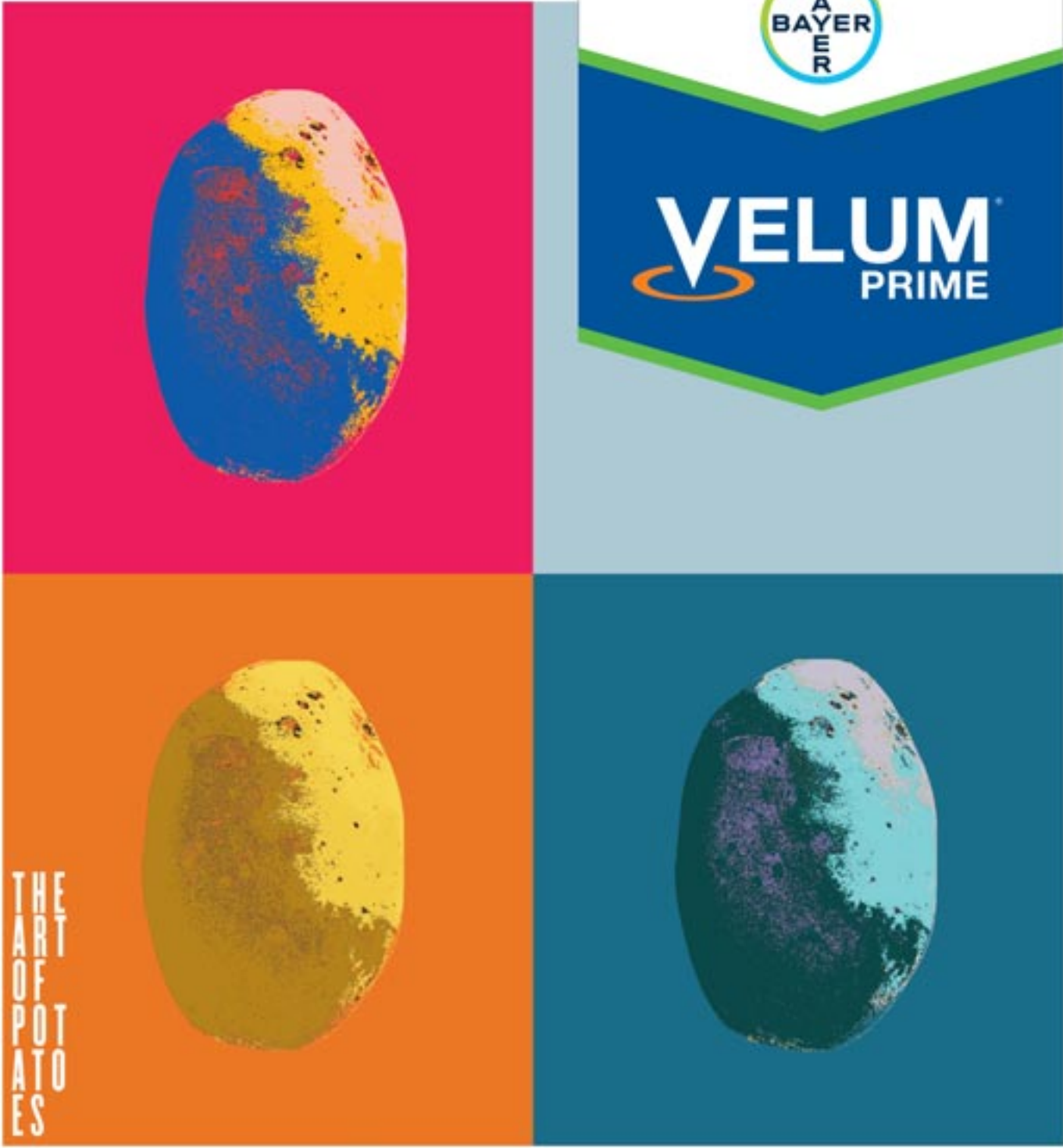
- help the province better support you and your IAWs during the arrival for the 2022 growing season and beyond
- enhance support for your

workers' health and safety, for example with COVID-19 vaccination and testing

- facilitate the coordination of prevention and control measures, and general health and safety activities with all municipal, provincial, federal and agri-food sector partners
- allow the province to better identify needed welfare, health and safety resources for your agricultural workforce
- ensure you receive important information tailored to your

needs, such as notification about new programs and services, upcoming events or deadlines, or changes to legislation or housing standards

To register, link here: <https://iawemployerregistry.omafra.gov.on.ca/>



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Vineland launches research service



Vineland's new Biological Crop Protection research service can support the introduction and use of new products and IPM solutions to improve production efficiency while promoting horticulture crop quality, environmental performance and safe working conditions.

Services include:

- Discovery and development of new bioprotectants
 - Evaluation of bioprotectants, biostimulants, biosecurity practices, plant resistance traits and other IPM tools
 - Process analysis to develop recommendations for implementing and optimizing biological plant protection tools
- For more information, email Rose Buitenhuis, program leader, biological crop protection at rose.buitenhuis@vinelandresearch.com

Source: Vineland Research and Innovation Centre January 5, 2022 news release

FOCUS: INPUTS AND SERVICES

John Deere revealed fully autonomous 8R tractor in Las Vegas

John Deere launched its autonomous tractor at the Consumer Electronics Show in Las Vegas, the biggest show in the globe for technology in early January 2022.

The machine combines Deere's 8R tractor, TruSet-enabled chisel plow, GPS guidance system, and new advanced technologies. The tractor will be available in 2022.

The machine has six pairs of stereo cameras, which enables 360-degree obstacle detection and the calculation of distance. Images captured by the cameras are passed through a deep neural network that classifies each pixel in approximately 100 milliseconds and determines if the machine continues to move or stops, depending on if an obstacle is detected. The autonomous tractor is also continuously checking its position relative to a geofence, ensuring it is operating where it is supposed to, and is within less than an inch of accuracy.

To use the autonomous tractor, farmers need to transport the machine to a field and configure it for autonomous operation. Using John Deere Operations Center Mobile, they can swipe from left to right to start the machine. While the machine is working, the farmer can leave the field to focus on other tasks, while monitoring the machine's status from their mobile device.

John Deere Operations Center Mobile provides access to live video, images, data and metrics, and allows a farmer to adjust speed, depth and more. In the event of any job quality anomalies or machine health issues, farmers will be notified remotely and can make adjustments to optimize machine performance.

"Pretty nice technology!" says Nick Ploeg, an early adopter of technology and potato grower, Sunrise Potato Storage, Alliston, Ontario. "I do believe you will see this on potato farms in Canada. But it will depend on the farm operation and if they are able to see the return on investment on this technology. This is no different than what GPS was 20 years ago. The technology will become cheaper as the years progress."

"Of course there will be challenges just like any other new technology. But it will start being used on tillage and progress to more complicated tasks as the years go on. Really this is the next step for technology in agriculture. We were actually discussing last week running two shifts on our planting tillage and said: 'an automated self-driving tractor would be great!'"

For more information, go to John Deere's CES microsite: www.JohnDeere.com/CES.

“

I do believe you will see this on potato farms in Canada.


”


~ NICK PLOEG



RAISING THE BAR


Icon XR has exceptional eating quality and is part of IFSI's Reserve quality class. It is a 72 day, yellow version of Signature XR. Icon provides excellent husk protection, ear length, and tip fill under stress. It is a perfect choice for high quality fresh markets and roadside stands.






BANNACK GOLD

Bannack Gold has a unique look with dark flecking and shadowed warts. The 16-22 lb. fruit of this Rupp pumpkin have a slightly elevated shape with a well attached handles. Bannack Gold has intermediate resistance to powdery mildew.



AUTUMN FROST

Autumn Frost is a uniquely ribbed, round fruit that ripens to dark tan with a frosted overlay. This PanAmerican Seed variety provides a similar taste to a butternut, with superior quality, rich flavor and a shelf life of up to 4 months.



EL CAPITAN


El Capitan has shown excellent yield potential of uniform, blocky fruit as well as extended shipping and field holding ability. This new Sakata triploid watermelon has deep red, firm flesh, small pip size and excellent flavor.

RAISING THE BAR

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Stored garlic might have mites

Avoid using garlic infested with bulb mites for planting stock. There are no miticides or insecticides registered for control of mites on garlic.

HANNAH FRASER AND
TRAVIS CRANMER

Ontario garlic was harvested back in July and over the past five months bulbs have either been cracked for planting, sold for consumption, or stored for later sales. This year, many bulbs coming out of storage have very small brown spots visible on the garlic cloves once the bulb wrapper and paper layers around the clove are removed. At first glance, these spots may look like small fungal lesions starting, but if you have a hand lens or magnifying glass you will likely find bulb mites living between the paper wrappers of the clove. These spots are actually scars left behind from past feeding damage from a tiny bulb mite.

The raised scars are from mites known as Acarid bulb mites (*Rhyzoglyphyphus spp.*, *Tyrophagus spp.*) (Figures 1 & 2). While cloves with bulb mite scars are still okay to eat, these cloves often dry out or desiccate quickly in storage. The bulbs can also quickly become unmarketable as these mites can move pathogens such as blue mould and fusarium around storage. There are also tulip dry bulb mites (*Aceria tulipae*), which are tiny, white, carrot-shaped (0.2-0.3 mm in length), and live in colonies containing several hundred to thousands of individuals. These mites feed on all parts of the plant, and, cause sunken brown spots on infested cloves (Figure 3). Plants infested with tulip dry bulb mites often develop curling and yellowing leaves that can resemble symptoms of a virus. The colonies themselves can appear as white spots or patches on garlic leaves (Figure 4).

The majority of mite damage observed in storage this year is from Acarid bulb mites. These mites overwinter on fall-planted garlic cloves or in crop debris that have yet to break down. Throughout the growing season, these mites survive on other crops besides garlic including corn, grains, *Brassicas*, or grass cover crops. If bulb mites have been an issue in the past, garlic can be followed by legumes, carrots, beets, leafy greens or *Solanaceae* crops such as tomatoes, potatoes, peppers or eggplant.

Avoid using garlic infested with bulb mites for planting stock. There are no miticides or insecticides registered for control of mites on garlic. The University of California Agriculture and Natural Resources IPM Program suggests that a hot water bath of 53°C for 10-20 minutes may kill the mites and their eggs, but this is a risky technique that can damage the germination rate of the cloves. If a hot water bath is used, water should remain at a uniform temperature throughout the vat, and cloves should be planted immediately after the treatment.

Bulb mites are a common issue across regions that experienced a high ambient relative humidity around the time that garlic was harvested this year.

The most effective way to control bulb mite infestations is to cure the crop quickly after harvest. Lower levels of bulb mites are seen when bulbs are cured quickly (48-72 hours), as opposed to a passive air system that takes seven or more days.

Curing / drying is often associated with an increase in temperature, however, when it comes to curing garlic, relative humidity should be the primary focus. Heating air increases the amount of moisture that the air can hold per cubic metre. A cubic meter of air can hold ~17 grams of water vapour at 20°C, while at 30°C it can hold ~30 grams. In most years, when the ambient air's relative humidity is low, increasing the temperature greatly increases the water-holding capacity of the air. This year, the air was humid, and already close to being saturated. Therefore, increasing the temperature of the air did not add much more water-holding capacity. As a result, it took a longer amount of time to remove excess moisture from the crop.

Bulb mites are better able to survive a slowly changing environment where the moisture is slowly pulled from the crop, so they have difficulty surviving a rapid cure. To achieve a rapid cure, dehumidifiers or even air conditioners can be used to quickly remove moisture from the air. A quicker cure should reduce mite populations, and a spike in temperature for an hour during a cure may be able to completely control them. Work conducted by Courtin et al., (2000) showed that a survival of *A. tulipae* eggs increased as relative humidity increased. They found that *A. tulipae* eggs were killed by heating the garlic for one hour at 45°C. It is likely that this would also hold true for Acarid bulb mites, but it is important to ensure that the crop always remains under 49°C as high temperatures combined with poor air circulation or low oxygen levels can result in a waxy breakdown in storage.

Good air circulation through totes, pallet boxes or baskets that reach all bulbs evenly will help to reduce over-curing some bulbs or under-curing others. Curing is complete when the bulb wrappers are crispy, the middle of the cut stem is hard, and the base of the stem is dry when cloves are removed. A shorter cure period focusing on reducing the relative humidity is key to avoiding bulb mites in the future.

Courtin, O., Fauvel, G., and Leclant, F. Temperature and relative humidity effects on egg and nymphal development of *Aceria tulipae* on garlic leaves. *Ann. Of Appl. Biology*, 137: 207-211. 2000.

Dara, S.K. Natwick, E.T., and Orloff, S.B. UC IPM Pest Management Guidelines: Onion and Garlic. UC ANR Publication 3453. 2018.

Hannah Fraser is horticulture entomologist and Travis Cranmer is a vegetable crops specialist for OMAFRA.



Figure 1. Acarid bulb mite with a bulbous body. These mites are 0.5-1 mm long.



Figure 2. Acarid bulb mite damage on cloves is prevalent in many regions this year.

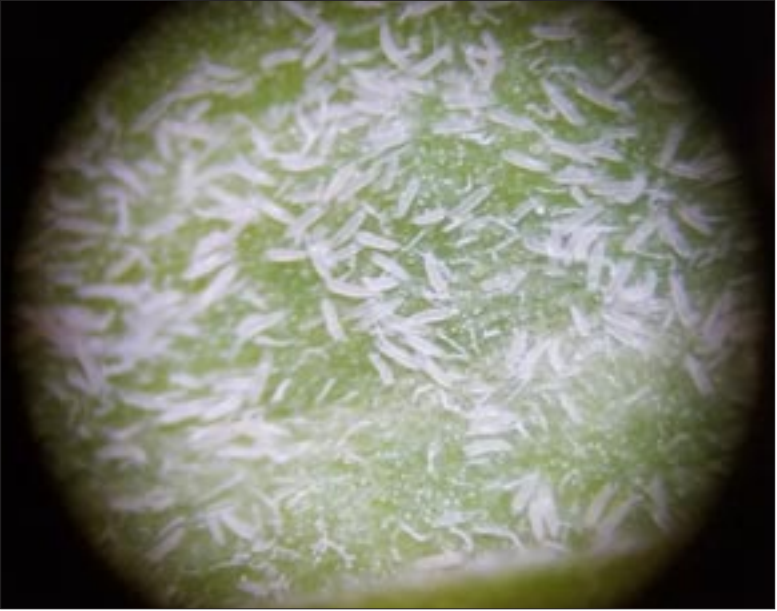


Figure 3. Tulip dry bulb mites are white, canoe-shaped, and attack almost all parts of the plant.



Figure 4. Virus-like leaf distortion and colonies of tulip dry bulb mites can resemble fungal hyphae on the leaf surface.

PLANT BREEDING

Gene discovered crucial to making crop plants produce clonal seeds

Researchers from KeyGene and Wageningen University & Research (WUR), in collaboration with colleagues from Japan and New Zealand, have discovered a gene that will make it possible to produce seeds from crops that are genetically identical to the mother plant and that do not need pollination.

This phenomenon, called apomixis, enables plants with a desirable combination of traits to produce many offspring with the same desirable combination of genes as the mother plant.

Together with researchers from the Japanese breeding company Takii and New Zealand's Plant & Food Research and Lincoln University, the KeyGene and WUR researchers explain in Nature Genetics magazine how the gene works and the way it influenced the work of the 'father of genetics' Gregor Mendel. The discovery is expected to lead to major innovations in plant breeding over the coming years.

The discovered gene has been given the name PAR, shortened from parthenogenesis, the process whereby egg cells grow into plant embryos without fertilization of the egg cells. The discovery marks a definitive breakthrough and crowns the research team's work that started at KeyGene more than 15 years ago.

Innovation in agriculture

Apomixis is seen as the holy grail of agriculture. Because apomictic plants produce 'clonal' seeds from the mother plant, the process allows uniquely superior combinations of a plant's traits to be captured in one fell swoop. Apomixis can therefore accelerate the breeding of innovative crops, make seed production less costly and bring the advantages of hybrid breeding to a lot more of the world's crop species.

While the importance of apomixis for agriculture has long been recognized, it has yet to be successfully introduced in plant breeding practice. In 2018, however, a gene was discovered that can be used for parthenogenesis in rice. Scientists now know that the gene does not, unfortunately, work outside the grasses.

Fifteen years of research

A team of scientists from research company KeyGene in the Netherlands started to unravel the genetics behind apomixis in the early-2000s. From the outset, the idea was that finding the genes could mean a breakthrough for the use of apomixis in crops. In 2016, the KeyGene team became the first to discover the DIP gene, the gene for diplospory, which is one of the

two steps involved in apomixis.

The DIP gene ensures that the number of chromosomes is not halved during the formation of egg cells. The other crucial step in apomixis is that this egg cell with this normal number of chromosomes starts dividing without fertilization and grows into an embryo. This process is called parthenogenesis. The KeyGene researchers, therefore, started looking for the PAR gene and involved the Biosystematics group of Wageningen University & Research in this research.

Dandelion

The team used the dandelion in their research, one of around 400 wild plant species known to reproduce by apomixis. The PAR gene ensures that egg cells develop into a plant embryo without fertilization taking place. The KeyGene researchers proved that the PAR gene is active in the pollen.

Egg cell fooled

At the Biosystematics group of Wageningen University & Research, it was discovered that the PAR gene is normally inactive in egg cells. The PAR gene normally only becomes active in the egg cell after fertilization, then it divides to create a plant embryo. In the egg cells of dandelion plants that form seeds via apomixis, the PAR gene proved to be switched 'on' prior to fertilization. In other words, these egg cells 'think' they are fertilized and start dividing without fertilization having taken place.

Hawkweed

In New Zealand, parthenogenesis genes are also being studied by researchers at Lincoln University and at Plant & Food Research. Their research focuses on hawkweed, a plant genus that Gregor Mendel studied extensively. In the mid-1800s, Mendel noted that plant characters were inherited differently in peas and hawkweed but he was not able to explain why. We now know that this is because peas reproduce sexually while hawkweeds reproduce by apomixis.

Hawkweeds and dandelion belong to the same plant family so the New Zealand researchers compared the PAR gene with the genes of hawkweed and discovered something that the KeyGene researchers had also observed in dandelions: while all plants contain PAR genes, the plants with apomixis had an extra piece of DNA in the gene. This extra piece of DNA appeared to

be in almost the same place in the hawkweed as in dandelion, even though the plants are believed to have separated from a common ancestor more than 13 million years ago.

Jumping genes

Further analysis revealed that the extra piece of DNA was a so-called transposon: a piece of DNA that can 'jump' within the plant DNA. In hawkweed and in dandelion the transposon is positioned in the promotor, the region of the PAR gene that regulates the gene's activity. The researchers now suppose that these jumping genes ended up in the promotor of the PAR gene independently in both plant species and that this is a case of parallel evolution.

Now to crops

A significant follow-up question is whether the PAR gene from dandelion and the new knowledge about the genetics behind apomixis can be used to breed crops with genetically superior seeds.

Although most plants do not use apomixis, most do have genes that are strikingly similar to the PAR gene as well as the earlier found DIP gene of dandelion. This suggests that apomixis naturally acts as a modification of normal sexual reproduction and, therefore, potentially also that



Peter van Dijk, KeyGene researcher.

apomixis could be widely applicable for innovative agriculture by using modern tools such as gene editing.

KeyGene researchers have started this work already. In recent research, together with scientists of Takii Seed, they succeeded in showing that the PAR gene can cause parthenogenesis in both lettuce and sunflower, bringing the prospect of apomixis in crops yet another step forward.

Link to the paper in Nature Genetics: go.nature.com/3tqKvGA

Source: Wageningen University & Research January 6, 2022 news

release
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2022-2023 ONTARIO TENDER FRUIT TREE AND FRESH GRAPE VINE GRANT

The Ontario Tender Fruit and Fresh Grape Growers, in partnership with the Greenbelt Foundation, are pleased to announce funding for cost share assistance for fruit tree and Jupiter grape vines for spring 2022 and 2023 plantings.

General Program Parameters

1. Applications will be accepted in one intake from December 1st 2021 to March 31st, 2022 for spring 2022 and spring 2023 plantings.
2. Completed applications will be reviewed and growers will be notified of the conditional approval for funding by April 15, 2022.
3. Growers must be members of the applicable grower organization to apply

For additional information, please send an inquiry to info@ontariotenderfruit.ca



Ontario
Tender Fruit
Growers



GREENHOUSE GROWER

Mastronardi Produce sees growth in Central America



Controlled environment agriculture holds promise in a new Agropark in Panama according to Mastronardi Produce. Headquartered in Kingsville, Ontario, the grower and marketer of greenhouse produce is working with investment firm AgriCapital Holdings Corporation to build the first 100 per cent clean-energy agrologistics park in the world. “There is no question that we need to address the growing concern of food insecurity, and Controlled Environment Agriculture is a prime solution that is poised for rapid growth,” says Dean Taylor, vice president of business development for

Mastronardi Produce. “As leaders in the industry, we are continuously looking for opportunities to deliver more, sustainably-grown produce to people in an efficient way. That includes finding new markets and helping them develop with our support.” The goal of the agropark is to provide state-of-the-art infrastructure for North American, Mexican and Canadian farms that need to expand their growing operations but are confronting increasing limitations in the availability of labour. The project also will help expand job creation in the rural areas of Panama and Central America.

The company believes Panama is a market that is well set up to deliver on growth expectations. Its geographic location, including the Panama Canal’s Connectivity platform, means that goods can reach major markets within four days by sea, and as one of the fastest growing economies in Latin America, it is already moving a large number of goods to the U.S. including bananas and pineapples.

More greenhouse-grown strawberries coming on stream

Ontario-based Ever Tru Farms is launching its “Forever Delicious” brand of greenhouse-grown strawberries in March 2022. The leadership team, with decades of experience in the greenhouse and hydroponic growing industries, consists of Paul J. Mastronardi, head of sales and marketing, Guido van het Hof, president of Great Northern Hydroponics, as well as

participation from Jim DiMenna, president of Red Sun Farms. “We are moving into the strawberry category as a united front,” said Guido van het Hof, president of Great Northern Hydroponics. “Through reconstructing and adapting the approach that brought us so much success with other produce, we have developed a growing strategy for strawberries that achieves

unparalleled taste and consistency.” Together, they have spent six years refining the growing process and creating the perfect formula under their greenhouse conditions. From propagation to distribution, having the entire operation under one team allows them complete control of the growing process, ensuring that only the best strawberries are



being produced and brought to market. Greenhouse-grown under a hydroponics system, these strawberries are locally cultivated year-round in a controlled environment with optimum growing conditions under LED supplemental lighting and no pesticides. Ever Tru Farms is targeting an aggressive expansion plan, with one million square feet of

hydroponic growing space online in January 2022 and an additional one million square feet planned for fall. They will be producing 30,000 cases of strawberries a week to start, with expected growth of up to 45,000 cases in the near future. Source: Ever Tru Farms January 18, 2022 news release

NOTICE OF MEETING

NOW VIRTUAL



NOTICE IS HEREBY GIVEN THAT THE
163rd Annual Members and Directors’ Meeting of the
Ontario Fruit and Vegetable Growers’ Association
WILL NOW BE VIRTUAL ON FEBRUARY 22ND, 2022

The Ontario Fruit and Vegetable Growers’ Association
has made the difficult decision to hold the February 22, 2022
Annual General Meeting VIRTUALLY. The health and safety
of our members are of utmost importance.

A zoom meeting will be set up and a link
will be provided at a later date.

FREE REGISTRATION IS AVAILABLE NOW
VISIT WWW.OFVGA.ORG.AGM
FOR THE LINK TO REGISTER.

BITS AND BITES

Canadian tractor sales were up 11% in December 2021

According to the Association of Equipment Manufacturer's monthly "Flash Report," the sale of all tractors in Canada during December 2021 were up 11 per cent compared to the same month last year. For the 12 months in 2021, a total of 33,463 tractors were sold which compares to 28,032 sold thru December 2020 representing a 19 per cent increase for the year. In December, two-wheel drive smaller tractors (under 40 HP) were up (+8%) from last year, while 40 & under 100 HP were up (+2%). Sales of two-wheel drive 100+ HP were up (+63%) while four-wheel drive tractors were down (-47%). For the twelve months, two-wheel drive smaller tractors (under 40 HP) are up (+19%) from last year, while 40 & under 100 HP are up (+14%).. Sales of two-wheel drive 100+ HP are up (+34%) while four-wheel drive tractors are up (+33%).



Source: AgriMarketing Magazine

BITS & BITES

Fourth edition of Produce Almanac released

Execulytics Consulting has released its fourth edition of Produce Almanac. This edition adds a five-year rate history for the key U.S. produce freight lanes.

2021 was a year like no other,” said Mike Mauti, managing partner of Execulytics. “Freight has become such a big part of the overall produce cost structure that the Produce Almanac had to include it. And it wouldn’t be the Produce Almanac if it didn’t include weekly predictions for those costs.”

Some of the key features of the 2022 Produce Almanac are:

- Exclusive 52-week product cost and freight rate predictions for 2022/23
- Five-year weekly cost and freight rate histories
- Organic premium costs relative to conventional
- Year over year retail prices by week
- More than 1,000 colourful graphs and charts
- Easy to read sourcing details
- Useful tips to drive sales and consumption

With logistics costs being one of the hot button issues for 2021, the Produce Almanac has

responded by including weekly rate histories spanning five years for big U.S. market destinations on loads originating in California, Texas and Florida. The Produce Moneyball algorithm then determines 52 weekly projections for each of the 18 focus freight lanes.

“People often ask me how they can use the Almanac to up their game”, said Mauti. “My answer is always - use it to gain an information and planning advantage on your competitors. Take strawberries for example,

costs have been on an upward trajectory for the last five years. Not only is that immediately evident by reading the Almanac, one can also obtain a week 20 cost prediction of \$10.90 FOB. Advanced knowledge of this information for the May long weekend business can be vital in getting an edge on your competitors. Plus, the rate for a California truck to New York is predicted to be approximately \$9,500 that week, knowing this allows professionals from all walks of the produce industry to plan

their programs weeks or months in advance. Talk about taking it to your competitors.”

Analytics-savvy organizations can purchase the 2022 Produce Almanac by visiting

www.execulytics.ca/Produce-Almanac.

Source: Execulytics Consulting January 24, 2022 news release



Understanding the CanadaGAP program

A number of CanadaGAP program workshops will be held throughout the upcoming months. These courses are being promoted, held and instructed by Cameron Korpan, an independent consultant and owner of Essential Food Safety.

“These workshops are excellent opportunities for growers who are CanadaGAP-certified operations (or wanting to be) to gain a deeper understanding of the CanadaGAP technical requirements. Growers can learn how to increase their overall audit score, reducing the amount of time they need to spend on corrective actions. This is especially important now with the 100% compliance requirement.”

CanadaGAP Grower Training: "Understanding the CanadaGAP Program"

March 7 & 8 - 8:30am-4:30pm EST
April 11 &12 - 9:00am-5:00pm EST
May 2 & 3 - 8:00am - 4:00pm PST
Register: www.essentialfood.safety.ca
For more information email: ckorpan@essentialfoodsafety



Ontario
Federation of
Agriculture

Agricultural training program expands to include mental health and hand-tool safety

Online Safety and Awareness Training Certificate for Ontario Agricultural Workers

OFA has partnered with the University of Guelph Ridgetown Campus Business Development Centre to deliver an enhanced training experience for job seekers looking to become more familiar with on-farm safety, while making it easier for employers to train new hires.

In addition to the seven existing modules, the certificate program has added two new modules featuring mental health and wellness in agriculture, farm safety with small hand tools safety, as well as additional information that highlights road safety and personal protective equipment.

FULL LIST OF MODULES INCLUDE:

Module 1: Careers in Agriculture

Module 2: Introduction to Agriculture Worker Health & Safety Regulations

Module 3: Introduction to Workplace to Agricultural Workplace Hazards

Module 4: Farm Equipment Operation & Safety

Module 5: Introduction to Livestock Operations

Module 6: Introduction to Crop Operations

Module 7: Introduction to Personal Protective Equipment (PPE)

Module 8: Introduction to Mental Health and Wellness in Agriculture

Module 9: Introduction to Small Hand Tools



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CROP PROTECTION

Headwinds ahead for crop protection in edible horticulture



CHRIS DUYVELSHOFF
CROP PROTECTION ADVISOR,
OFVGA

Editor's note: This is the crop protection section report to be presented at the 2022 annual general meeting of the Ontario Fruit & Vegetable Growers' Association.

Some positive steps forward were made in crop protection in 2021 including new federal funding directed at pest management and conclusions on some of the prominent neonicotinoid reviews. However, there are known headwinds and some notable uncertainties going into 2022 that will need to be addressed.

August 2021 funding announcement

A joint announcement was made by the sitting Ministers of Health, Agriculture and Agri-Food, and Environment and Climate Change on August 4, 2021, just prior to the start of the 2021 federal election campaign. On the positive side, an additional \$50 million in pest management activities was promised by the Ministers. Of the total, \$42 million was earmarked for the Pest Management Regulatory Agency (PMRA). A further \$7 million will be allocated to Agriculture and Agri-Food Canada (AAFC), and \$1 million to Environment and Climate Change Canada in supporting work to accelerate the research, development and adoption of alternative pest management solutions. This has been confirmed to be proceeding following the election of the new federal government in September 2021.

Additional funding for these organizations is essential and is allowing activities such as

improving PMRA's data collection in water monitoring and crop protection use information to proceed. However, the announcement came with some political strings attached. Firstly, it announced another review of the Pest Control Products Act, which as recently as 2020 was determined fit for purpose by the federal Pest Management Advisory Council. Secondly, the Minister of Health announced a pause on MRL increases, notably glyphosate, until spring 2022 without any scientific reasoning whatsoever. Third was the creation of a new expert panel to provide advice to PMRA on their decision-making despite the agency being already well equipped with expert staff and widely regarded as a world-class regulator. What seems to be clear from the previous six months is that we can expect more political oversight at PMRA than we might have seen in the past.

2021 Minister's mandate letters

The December 2021 Minister's Mandate letters presented a stark contrast for crop protection compared to those issued in December 2019. In 2019, the Minister of Health was asked to "ensure that the PMRA makes timely science-based decisions to support the safe and sustainable use of effective pesticide products in Canada," Note that the Minister of Agriculture and Agri-Food was directed to "support the Minister of Health to ensure that the PMRA is making science-based decisions that lead to the safe and sustainable use of crop protection products in Canada."

In 2021, the Minister of Health was asked to "ensure Canadians are protected from risks associated with the use of pesticides and to better protect human health, wildlife and the environment, modernize and strengthen the Pest Control Products Act to ensure it supports transparency, use of independent scientific evidence and input to the decision-making process." Note that the Minister of Agriculture and Agri-Food has been asked to "support food producers who choose alternative pest management approaches that reduce the need for chemical



pesticides." While the outcomes of these statements are still playing out, there's no denying that there has been a shift in the lens through which crop protection is viewed, at least in Canadian federal politics.

Minor Use Program funding

The single most important crop protection challenge facing edible horticulture currently is the lack of capacity in minor use. The Minor Use Pesticides Program (MUPP) of the Pest Management Centre (PMC) is a key source of data for new crop protection registrations for horticulture crops. Many of these registrations would not otherwise occur without the help of PMC as the market size is too small to justify the registration costs for these crops. As recently as 2019, PMC has taken on approximately 40 projects annually to generate efficacy/crop safety and/or crop residue data in support of new registrations. This has fallen off dramatically in recent years – down to just 22 projects expected for 2022.

The PMC budget has been flat for a decade with inflation eating more and more into project funds each year. Furthermore, the budget for the alternative pest management strategies work was most recently a meager \$210,000 down from more than \$2 million a decade ago. While it's been indicated that a portion of the \$7 million in new funding

announced in August 2021 for AAFC will be directed towards the PMC, details haven't been confirmed. Any temporary funding also doesn't fix the longer-term budget limitations and lack of a permanent funding source faced by the organization. This will no doubt impact new registration capacity for edible horticulture crops. Obtaining new stable funding for PMC remains a top priority for 2022.

PMRA – re-evaluations

On the re-evaluation side, probably the biggest story of the year was the completion of some of the neonicotinoid insecticide reviews. The full re-evaluation for imidacloprid (Admire) is now complete with all outstanding special reviews (including pollinators, aquatic invertebrates, and squash bees) completed for both thiamethoxam (Actara, Cruiser) and clothianidin (Clutch, Titan). Final re-evaluations for the latter two are currently underway and are expected to be completed in 2023. However, it is believed that major mitigation requirements have likely already been addressed by the special reviews. PMRA released its review decisions for these products and their risks to pollinators after reviewing more than 500 scientific studies. These important tools are expected to remain registered for some critical uses in edible horticulture.

Re-evaluations were also

completed for tebufenozide (Confirm), fenhexamid (Elevate), pyriproxyfen (Distance), lambda-cyhalothrin (Matador), kresoxim-methyl (Sovran), cyromazine (Citation), and cymoxanil (Curzate). All remain registered for some uses with additional mitigation requirements needed. Finally, no re-evaluations were completed in 2021 where all uses of a product were cancelled.

OFVGA Crop Protection Committee

The Crop Protection Committee met twice in 2021 with a virtual meeting in April and hybrid meeting in November. The OFVGA would like to thank all the committee members who contributed to crop protection efforts this past year. Collaboration

The OFVGA collaborates with numerous organizations in order to advocate for crop protection on behalf of edible horticulture in Ontario. We wish to thank our member organizations, CHC, PMRA, AAFC, OMAFRA, and CropLife Canada who continue to work towards making crop protection in Canada better for growers and ensure safe and abundant food for consumers.

Charles Stevens is chair, OFVGA crop protection section. Chris Duyvelshoff is OFVGA crop protection advisor.

CROP PROTECTION

Entomologists rank Cormoran insecticide as top choice in fighting against SWD

A new survey shows ADAMA Canada’s Cormoran insecticide to be the preferred choice against spotted wing drosophila (SWD), an invasive and prevalent pest that has plagued Canadian berry growers over the last decade.

American entomologists in 10 states ranked available insecticides to control SWD. The recently released survey was funded by the USDA National Institute for Food and Agriculture through the Specialty Crop Research Initiative. The states included: California, Oregon, Washington, Michigan, Maine, New Jersey, New York, North Carolina, Georgia and Florida, ranking SWD insecticide performance from 0 (ineffective) to 4 (excellent).

Researchers predicated survey results on their own research as well as the experience of growers from their regions, then ranked the insecticides for their combined control of SWD adults and larvae.

Based on the survey, ADAMA’s Cormoran is the preferred SWD insecticide available to berry growers. Since its introduction to Canada in 2020, Cormoran, a broad-spectrum insecticide with multiple modes of action, has demonstrated valuable insect protection, including its control of SWD in the bushberry crop group. Cormoran’s chemical makeup includes novaluron and acetamiprid.

Cormoran delivers two modes of action for resistance management and rapid knockdown of all damaging stages of target insects as well as extended residual control. Cormoran is registered for use on apples, bushberries, including blueberries, Brassica vegetables, peppers, potatoes, stone fruit, strawberries, alfalfa and sweet corn.

“As an insecticide, Cormoran controls many insect pests but does not harm plants,” said

Cornie Thiessen, general manager at ADAMA Agricultural Solutions Canada. “It controls all stages of the SWD lifecycle. It’s a combination of two modes of action that work well together by providing fast knockdown and control of adults, larvae and eggs.”

With insecticides being a key management tool for SWD control, entomologists conduct research trials every year to help provide growers with the best possible insecticide recommendations.

ADAMA’s research and development team in Israel created Cormoran’s formulation and produced the product in Georgia (U.S). It then tested it across Canada to develop proof points and customize the label for Canadian use.

ADAMA does not expect supply chain interruptions to affect Cormoran production as the company produced the insecticide in the U.S. ahead of the 2022 season.



The spotted-wing drosophila (SWD) is a vinegar fly of East Asian origin causing damage to many soft skinned fruit crops. SWD pierces seemingly healthy fruit and lays its eggs. The eggs hatch in about three days. The larvae feed on the fruit and emerge as adults after as few as six days or as many as 28. Photo by T. Martinson.

To learn more about Cormoran, visit ADAMA.com or contact your local crop input retailer. Cohort Wholesale provides technical and sales support for ADAMA’s Cormoran

product. Always read and follow label directions.

Source: ADAMA Canada January 17, 2022 news release

Reduced supplies of linuron expected for 2022

The Pest Management Regulatory Agency (PMRA) communicated on December 24, 2021 that a path forward has been reached with the manufacturer of Lorox L (linuron). This will allow the distribution of the crop protection product for 2022.

“This is not a temporary solution but full approval of this product for distribution,” says Chris Duyvelshoff, crop protection advisor, Ontario Fruit & Vegetable Growers’ Association. “At this point TKI/NovaSource is confident that a portion of the normal supply will be available, but they do not know yet exactly what it will be. The only certainty is that it will be less than 100 per cent of the

volumes used in past years.”

The company will know more in two to four weeks. Some of the product may be available in 10 L containers, while the remainder may be in bulk totes.

“This is only expected to be a 2022 issue with normal supply anticipated in 2023 – aside from the impacts of any other global supply chain problems happening right now,” says Duyvelshoff.

Source: Ontario Fruit and Vegetable Growers’ Association, January 5, 2022



Agro-100 and Axter Agrosience have merged

Joliette Québec, September 8, 2021 – Confirming the vision of synergistic growth, Agro- 100 Ltd of Joliette Québec has announced a merger with Axter Agrosience Inc. of Saint-Hilaire Québec. This follows the acquisition by Agro-100 of a majority of Axter Agrosience shares in December 2020.

Axter Agrosience brings world-class expertise in liquid fertilizer products that integrate biostimulants which promote growth in plants via natural physiological processes.

“This merger is a most natural and synergistic fit,” said Stéphane Beaucage, president of Agro-100. “The unified product range will have a great impact on the market as will our combined R&D efforts. These synergies will promote an agile and efficient business environment that

will further enhance our product offerings.”

Axter Agrosience will operate under the Agro-100 banner and all employees will be retained. Agro-100 looks forward to expanding its footprint in the North American market as it creates additional jobs, in the medium and in the long term, in the agricultural ecosystems of Canada, the United States and Mexico.

Agro-100’s eco-responsible technologies increase yield and crop quality by maximizing the productive capacity of plants and the soil in which they grow. Field crops, as well as vegetable, fruit and potato crops benefit greatly, especially in high-density production environments. The value-added foliar products in the product range will be marketed under the Agro-100 brand. Axter Bioscience will operate as a wholly owned subsidiary.

“The Agro-100 family is growing, and we are most pleased with the prospect of a Québec company enhancing its standing in the Canadian and world markets,” said Stéphane Beaucage.



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