

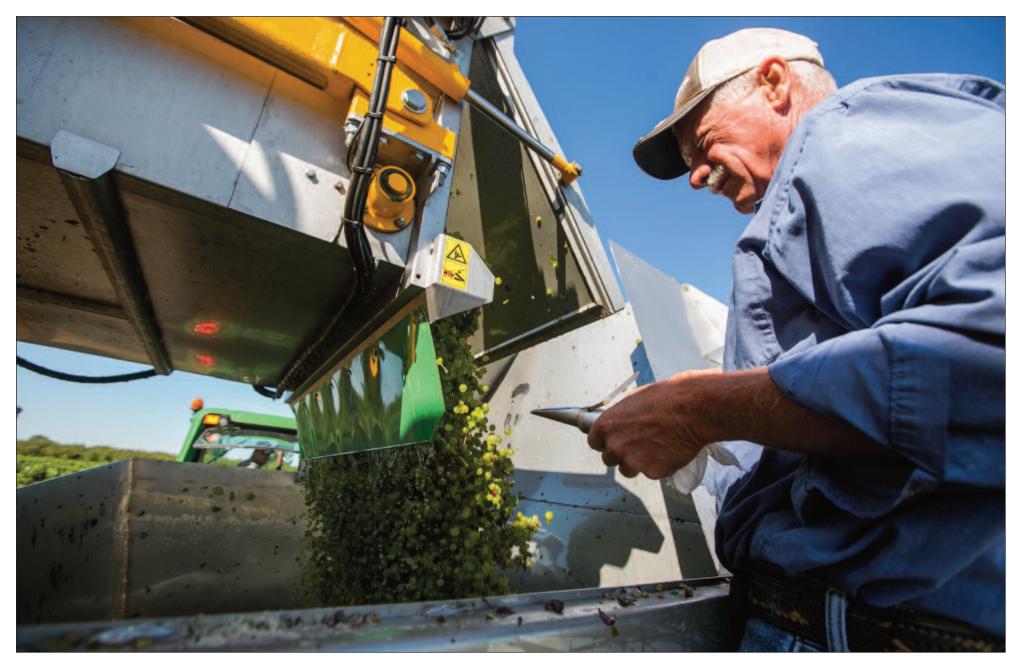
**OCTOBER 2020** 

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#### GROWING FORWARD

## **Grape expectations: up and down**



After 45 years of farming, it's safe to say 2020 has been a year like no other for Ernie Wiens. Due to scant rainfall and high temperatures, grape tonnage volumes are expected to be down by 20 per cent. Barring any weather surprises, he expects quality will be "exceptional." He's poised to take a brix test of Chardonnay grapes, one of many varieties grown at the family's 400 acres of vineyards near Niagara-on-the-Lake, Ontario. Photos by Glenn Lowson.

#### KAREN DAVIDSON

The Old Farmer's Almanac adroitly predicted a hot, dry summer for eastern Canada but failed to forecast a once-in-acentury phenomenon: a global pandemic. No matter, says Ernie Wiens who's taking baseline brix tests in his 400 acres of Niagara-on-the-Lake, Ontario vineyards. This is his 45th year of growing grapes and he has yet to see one year mimic another.

"The quality is expected to be exceptional, but with many days of plus 30°C temperatures, volumes will be

down about 20 per cent," says Wiens.

Wiens and his three sons – James, Daniel and Tim – have adjusted to a business environment with fewer workers. There is no alternative for hand pruning or tying vines in the spring, so already, applications have been filed for 24 seasonal workers in 2021 with the assumption that a 14-day quarantine will be required. He is thankful for government funding so far that has supported housing and personal protective equipment.

As of October 1, 2020, Ontario's minimum wage rises to \$14.25 per hour. Ever-rising labour costs and uncertain

access to qualified labour are driving grape growers to mechanize where possible.

"Labour is an ongoing global issue," says Joe Pillitteri, owner of Lakeview Vineyard Equipment, Niagara-on-the-Lake, Ontario. "Growers are looking at the costs of production per tonne and per acre. And they're pushing towards more mechanization."

The newest technology in Gregoire grape harvesters, for example, offers on-board sorting and weighing and onthe-go, yield-mapping technology. Like grain harvesters, these machines offer live read-outs on yield in the field.

What has changed during the summer months is how Lakeview Vineyard Equipment is servicing new customers. Pillitteri explains that they are taking videos of specific environments so that there's a record of how machines perform by grape varietal, trellis type, crop load and weather conditions.

"There is no blanket approach when it comes to grapes," says Pillitteri.

Videos as well as invitation-only demonstrations are the new way of technology transfer. These are intimate gatherings of six to 10 qualified buyers – no entertainment on offer.

Continued on page 3

**Retailer bullying** 

Storage, containers & packaging PG 12



P.M. 40012319

### AT PRESS TIME...

#### **Wage rates increase**

On October 1, wage rates go up in four provinces. Employers in Newfoundland, Ontario, Manitoba and Saskatchewan must pay increases in minimum wage rates.



#### Minimum wage rates from the highest to the lowest

Province	Minimum wage rate/hr	Effective date
Alberta	\$15.00	October 1, 2018
British Columbia	\$14.60	June 1, 2020
Ontario	\$14.25	October 1, 2020
Quebec	\$13.10	May 1, 2020
Prince Edward Island	\$12.85	April 1, 2020
Nova Scotia	\$12.55	April 1, 2020
Newfoundland	\$12.15	October 1, 2020
Manitoba	\$11.90	October 1, 2020
New Brunswick	\$11.70	April 1, 2020
Saskatchewan	\$11.45	October 1, 2020

#### Dec 15 is registry deadline for BC employers of seasonal workers

Managing the arrival and housing of foreign workers has been challenging in British Columbia in the era of COVID-19. Looking ahead to next year, BC's ministry of labour has announced that all employers of foreign workers must register with the government by December 15, 2020.

"Temporary foreign workers are integral to our agricultural sector and B.C. relies on them for important jobs like harvesting the crops we depend on for our daily meals and to build our province's food security," said Lana Popham, agriculture minister. "The new

registration requirement for employers will help ensure foreign workers are fairly treated."

This employer registry is the final step in implementing the Temporary Foreign Worker Protection Act, passed in fall 2018. Last year, B.C. established a licensing requirement for recruiters of foreign workers and launched the recruiter registry. Approximately 150 recruiters in B.C. are licensed and in good standing.

These actions, like the Temporary Foreign Worker Protection Act, the recruiter registry and the employer registry provide transparency into recruiting, hiring and employing foreign nationals. These changes strengthen the protections government has put in place, make it easier to find

employers who mistreat workers and level the playing field for law-abiding employers.

With this new process, BC joins the provinces of Manitoba, Saskatchewan and Nova Scotia that have registration requirements for employers of foreign workers.

The Mexican consulate in Vancouver anticipates that 6,000 workers will have worked in the province by the end of the year.

A difficult year will be capped by an unexpected provincial election called for October 24. The minority NDP government led by John Horgan will face voters on how his government has managed the pandemic.

### **NEWSMAKERS**

Congratulations to Mike Ecker, president of the Vineland Growers' Co-operative, based in Jordan Station, Ontario. He's the 2020 Lifetime Achievement Award winner honoured by the Canadian Produce Marketing Association. His entire 45-year career has been pledged to the longest continually running co-operative in Ontario. In his role, he manages relationships with more than 300 grower members and has inspired many marketing innovations of tender fruit, and more recently, apples to retail chains.



Erin O'Toole, the new leader of the federal Conservative party, has named his shadow cabinet. Ontario MP Lianne Rood (Lambton-Kent-Middlesex) becomes shadow minister for agriculture and agri-food. She grew up on a vegetable farm near Grand Bend, and still grows potatoes today. Peter Kent (Thornhill) becomes shadow minister for employment, workforce development and disability inclusion. Raquel Dancho (Kildonan-St. Paul Manitoba) is responsible for following the file on immigration, refugees and citizenship. James Cumming (Edmonton Centre, Alberta) will be shadowing innovation, science and industry. **Luc Berthold** (Mégantic-L'Érable, Quebec) is on the treasury board file.

Bill George Jr, chair of the Ontario Fruit and Vegetable Growers' Association, becomes chair of Ontario's President's Council, effective October 1. The position is a one-year term with the option for re-election. Formed in 2004, the President's Council is a venue for the chairs and presidents of Ontario's agricultural organizations to discuss the broad issues and challenges facing the provincial sector. Membership currently represents 43 Ontario agricultural groups, the most recent addition being the Berry Growers of Ontario.

The Ontario Food Terminal has two new appointees to its board. Christy McMullen, co-owner Summerhill Market and a former chair of the Canadian Federation of Independent Grocers, has been appointed vice-chair. She replaces outgoing Mark Pearlman. John Den Boer, an Otterville grower and president of the Toronto Farmers' Association, becomes a new director. He replaces Margaret Appleby. The terms are for three years. Ken **Knox** resigned his role as chair on August 31, several months short of the expiry of his term on January 16, 2021.

Dr. Nancy Tout, most recently head of research and development, Syngenta Canada has left after a 21-year career. She is taking on the role of interim executive director at AgScapeOntario.

The Ontario Produce Marketing Association elected two new board members at its September 2 virtual annual general meeting. Elected for three-year terms are Fiona McLean, marketing manager at Del Fresco Produce and Michael Wexler, sales representative at the Oppenheimer Group. Houman Madani, Metro Ontario Inc., remains chair of the board.

Congrats to **Dr. Jim Willwerth** on his new position at Brock University. He has joined the faculty of mathematics and science as an assistant professor, specializing in grapevine physiology. While he's no longer working with the Cool Climate Oenology and Viticulture Institute, he will continue with his critical research in grapevine cold hardiness.

Best wishes to Amanda Green, OMAFRA tree fruit specialist, who left her position in early September. Since July 2015, she made many contributions to the Ontario apple industry on labour efficiency, podcasts and other outreach programs. For the next six months, Cassandra Russell will be acting tree fruit specialist while a permanent replacement is found.

St. David's grape grower John Fedorkow has graciously accepted a second year as Grape King due to the pandemic. The Grape Growers of Ontario have held the ceremony since 1956.

Jan VanderHout is the new chair of Ontario's ECO-Ag coalition. He is a past chair of the Ontario Fruit and Vegetable Growers' Association. The initiative has been on hold since COVID-19.





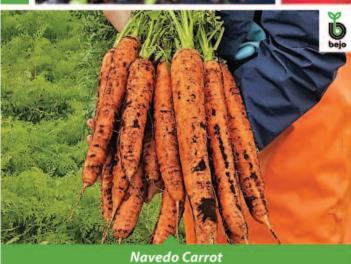












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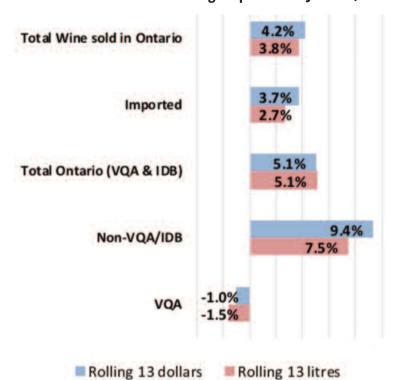
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#### **COVER STORY**

## Grape expectations: up and down

Growth in Ontario sales rolling 13 periods to June 20, 2020



This is the first quarter (Q1) report for the 2020-2021 fiscal year end. All statistics are reported for the 12 months (13 rolling periods) ending June 20, 2020, unless otherwise noted.

Total sales of wine in Ontario, including imports increased +3.8% in volume (litres) and increased at +4.2% in value (dol- lars) in the rolling 13 periods.

VQA sales were down -1.5% by volume and -1.0% in value. Non-VQA/IDB sales are up +5.1% in volume (litres) and value (dollars).

Quarter 1 is from April 1 to June 20, 2020 and includes the COVID lock-down. Wine sales overall are up +5.1% litres with non-VQA/IDB leading the way at +18.4%, imports are down -0.7% and VQA -6.5% in litres.

#### Continued from page 1

Lakeview Vineyard
Equipment has had an
extremely busy summer, says
Pillitteri who has logged
thousands of kilometres visiting
customers on both Canadian
and American sides of the
border. So busy, in fact, that
he's looking to hire service
technicians.

His customer Ernie Wiens totally understands that equipment breakdowns require parts from out-of-country suppliers. That's why Wiens is evaluating improvements and upgrades to equipment for the 2021 season because some factories are behind in production.

All of this to say that growers are facing hitches in both mechanical and hand labour. No one understands that conundrum better than Matthias Oppenlaender, chair, Grape Growers of Ontario. He manages 250 acres of his own Huebel Estates vineyards with mechanical harvesters and does custom work for another 500 acres – a size that employs 10 full-time workers, 23 seasonal

workers and 50 domestic workers. During the chaotic COVID-spring, his team created family units, keeping workers separate in housing and physically distanced in vineyards.

"One thing I learned from our Mexican workers was how sensitive they were to the negative publicity in mainstream media about COVID outbreaks amongst seasonal workers," recounts Oppenlaender. "They highly value and cherish their work and contributions to the community. They felt blamed."

The pandemic revealed other fault lines. With the collapse of international tourism and in-house tastings, wineries have turned to the domestic market. For those wineries without an online presence and pre-COVID database of loyal customers, it's been a struggle. But for those wineries which could reallocate resources to fulfilling online orders, the results have been heartwarming.

During the COVID lockdown, Ontario wine sales were up 5.1 per cent in volume and value. Consumers have demonstrated a willingness to



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Growers are looking at the costs of production per tonne and per acre. And they're pushing towards more mechanization."

~ JOE PILLITTERI, OWNER OF LAKEVIEW VINEYARD EQUIPMENT AND SUPPLIER TO WIENS VINEYARDS.

"



Brothers Tim and Daniel Wiens operate twin grape harvesters in this Chardonnay block.

buy local. The caveat is that premium reserve varietals and ice wine are not enjoying the same level of devotion. In fact, wineries have cancelled orders for the ice wine harvest for 2020/2021.

Most of these issues were crystallized in the fifth year of a benchmarking study conducted by VQA and Deloitte. Released in March 2020, the Ontario Wine and Grape Industry Performance Study reported that the province's 500 growers had five major challenges: rising costs of inputs/labour/land; grape pricing; access to virus-free grape vines; government regulations and cost of compliance; and lack of long-term grape contracts.

It's certain that these issues will dominate in the years ahead, as the grape sector grapples with a quickly changing business environment domestically along with the buffeting winds of foreign

jurisdictions. Australia, for example, sells \$176 million worth of wine to Canada every year, but accused British Columbia and Ontario governments of favouring local wines through licensed grocers. Its World Trade Organization challenge was partially resolved this past summer when the Canadian government announced a repeal of the current excise tax of \$0.665 per litre on any wine that has as little as one per cent of its juice from foreign grapes. All the more reason for Canadian wines to be derived from 100% locally grown grapes when that tax structure changes in June, 2022.

As a seasoned hand in the grape business, Ernie Wiens dips his refractometer into a bin of Chardonnay grapes. It's from the first row of a block that's just been opened up. He's an optimist by nature, but says, "There's still a lot of weather ahead of us."

Bets are that he's referring to more than the weather specifically but also the business climate generally.

The Grower goes "Behind the Scenes" with Joe Pillitteri, Lakeview Vineyard Equipment, for his experience in servicing the grape sector and how technology transfer is changing in the short term. This series is sponsored by BASF Agricultural Solutions.



#### CROSS COUNTRY DIGEST

#### **BRITISH COLUMBIA**

### BC tree fruit growers need pickers

British Columbia's cherry season was tough due to a dearth of workers. That same scenario is playing out for the apple industry in the Okanagan Valley.

The Kelowna Daily Courier reports that challenges are ongoing for the valuable apple sector which harvested 104,000 tonnes a year ago. Traditionally, about 1,500 to 2,000 young Quebeckers journey to the picturesque area each year, but only about half that number came in 2020. Compounding

the situation, only 6,400 temporary foreign workers arrived in the province from Mexico and the Caribbean this year compared to about 10,000 a year ago.

The BC Tree Fruits Cooperative has 350 grower members, explains Laurel Van Dam, director of sales. "Each farm employs their own labour, so it's hard to say how short things are. Some farms are better off than others."

The cooperative is encouraging its members to

begin picking as soon as apples and pears are ready. With less labour, there won't be much opportunity to catch up on s econd picks as each variety matures.

"Overall, apple tonnage is in a good spot, though the average size of each piece of fruit looks to be smaller than normal years," adds Van Dam.

Source: Kelowna Daily Courier September 2, 2020



#### **NEW BRUNSWICK**

## New Brunswick farmers oppose proposed ban on glyphosate

In advance of the New Brunswick September 14 election, the Agricultural Alliance of New Brunswick (AANB) stated that it supports the science behind responsible glyphosate use. There are 200 wild blueberry growers, for example, who need the herbicide.

In a September 2 news release of the Bluets New Brunswick Blueberries, chair René Chiasson said that a ban on the use of glyphosate on crown land and eventually the entire province would greatly harm the wild blueberry industry which uses the herbicide to manage production.

To add context, Chiasson explained that in 2019, about 35,000 acres of New Brunswick land was used to grow wild blueberries of which 24,000 acres are on crown land. Most of the sector's expansion is on

crown land. The sector has a farmgate value of more than \$38 million and supports 700 jobs in the province.

AANB also buttressed that position, opposing the Liberal party, Green party, and People's Alliance of NB's stance on banning glyphosate usage. Future restrictions on use of the herbicide had appeared in campaign literature.

An AANB September 2 news release stated: If the next elected government takes the course toward banning glyphosate, this decision will deeply affect a wide variety of New Brunswick farmers who grow crops such as fruits, vegetables, cereals, pulse, corn, canola and soybeans.

Products such as glyphosate are some of the most important and safest tools available to growers today for crop management. The Canadian Pest Management Regulatory (PMRA), along with other regulatory authorities such as the U.S. Environmental Protection Agency, the European Food Safety Authority have all thoroughly studied glyphosate and come to the same conclusion: glyphosate use does not increase cancer risk, when used according to label specifications.

"We urge government to use a science-based decision approach when considering any changes to the use of glyphosate in the province," wrote Lisa Ashworth, president, AANB.

She noted that any individual handling a non-domestic pesticide must obtain a Pesticide Applicator Certificate through a comprehensive course and exam that covers pesticide legislation, pest management, environmental impacts, application technology, safety, emergency responses and



labelling.

For farmers to remain competitive in the world market and support the local economy, Ashworth said that access is needed for the most effective tools to manage weed, insect, and disease problems that can threaten the quality, value, and quantity of crops.

"Now that the election is done and we have a

Conservative majority government in place for four years, we are looking forward to working on many of the issues brought forth by our membership," says Lisa Ashworth, executive director, AANB.

Source: Bluets NB Blueberries/ Agricultural Alliance of New Brunswick September 2, 2020 news release

#### PRINCE EDWARD ISLAND

## Cavendish Farms has opened new research centre in New Annan

Cavendish Farms' new Research Centre in New Annan, Prince Edward Island, officially opened September 17 with the province's premier, Dennis King, in attendance. The \$12.5 million facility is a commitment to the long-term sustainability of the potato industry.

"This is another step to help support potato growers and the potato industry on the Island," said Robert K. Irving, president of Cavendish Farms. "Our goal is to help address the specific challenges faced by growers here on Prince Edward Island." The new research facility will have six state-of-the-art greenhouses and will allow Cavendish Farms to conduct important research year-round. Different lines of potatoes with promising traits such as superior yields, size characteristics, and a reduced environmental footprint specific to soil, climatic and seasonal conditions on Prince Edward Island will be evaluated.

"Island farmers and producers have always been at the forefront of innovation and research, developing new practices to ensure they can continue to grow high-quality products that Prince Edward Island is known for. I commend Cavendish Farms for not only working with Island farmers towards a common goal, but for also taking on a project that brings jobs to the agriculture industry and contributes to the Island economy," said Premier Dennis King.

As witnessed over the last several summers, the growing season is changing with hotter temperatures and less precipitation at critical times. This is a real challenge for PEI growers and places the potato



crops at risk. The Cavendish Farms Research Centre will study different potato varieties. The Plant Breeding Program will cross various combinations to breed and select a variety that is suitable to the challenging conditions currently faced on PEI.

"Cavendish Farms' investment in this important research will benefit all potato growers and the entire industry. It will help ensure the sustainability of our potato crops," said Greg Donald, general manager of the Prince Edward Island Potato Board.

#### **CROSS COUNTRY DIGEST**

#### **CANADA**

## Farmland values increase modestly

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Given the global economic situation during the first half of 2020, Canada's farmland market is showing remarkable resilience in the face of adversity and uncertain times.

~ I.P. GERVAIS

"

Average farmland values in Canada are once again showing modest increases for the first half of 2020, although the full impact of the COVID-19 pandemic has yet to be weighed, according to Farm Credit Canada.

The national average for farmland values increased an average of 3.7 per cent for the first half this year. This increase is in line with mid-year results over the past five years, which showed single-digit increases for the full year.

"Given the global economic situation during the first half of 2020, Canada's farmland market is showing remarkable resilience in the face of adversity and uncertain times," said J.P. Gervais, FCC's chief

agricultural economist.
"Changes to production and

marketing plans induced by the pandemic have had a definite influence on profitability, yet the demand for farmland remained robust."

FCC's review showed lower 12-month increases in average farmland values for most provinces over the last 12 months compared to last year's average, with the exception being in Alberta (8.5 per cent compared to 3.3 per cent) and Saskatchewan (7.9 per cent compared to 6.2 per cent). In general, the pace of farmland value increases over the past six months was slightly higher in western provinces and slightly lower in central and eastern parts of the country, with the

exception being New Brunswick.

Low interest rates, the limited supply of farmland in the market and confidence among producers in the farmland market appear to be the main drivers behind the 2020 mid-year increase.

Farm operators should continue to exercise caution, says Gervais, especially in regions where the growth rate of farmland values significantly exceeded that of farm income in recent years. He also recommends operators maintain a risk management plan to protect their business from unpredictable circumstances.

Source: Farm Credit Canada September 14, 2020 news release



#### Average increase in farmland values

	January 2020 - June 2020 (six months)	July 2019 - June 2020 (12 months)	January 2019 - December 2019 (12 months)
BC	3.0%	3.2%	5.4%
AB	4.9%	8.5%	3.3%
SK	4.2%	7.9%	6.2%
MN	2.3%	3.6%	4.0%
ON	0.4%	3.7%	6.7%
QC	2.6%	6.3%	6.4%
NB	6.5%	8.3%	17.2%
NS	0.0%	0.3%	1.2%
PEI	0.4%	22.1%	22.6%
NL	N/A	N/A	N/A
Canada	3.7%	7.1%	5.2%

#### **CANADA**

## Processing potato crop could be smallest since 2011

As of September 21, the Canadian potato crop is in varying stages of growth and/or harvest says Kevin MacIsaac, general manager of the United Potato Growers of Canada. He reports that the production outlook is mixed after parts of eastern Canada experienced one of their driest seasons on record while growers in western Canada work feverishly to harvest their crop.

Based on current information, it is expected that Canadian production could be off by at least six million hundred weight. If yields do not continue to add weight in late-maturing varieties and the last harvested fields, production decreases could approach 8,500,000 hundred weight below last year's crop. These estimates assume and hope that all of Canada's 363,470 planted acres will get harvested. In 2019, growers were unable to harvest 20,230 acres in the country due to cold and wet weather.

Nothing is for certain until the last potato is in the bin, however this growing season may have changed supply availability in at least two sectors of the industry representing table and processing.

Table production is prominent in the four eastern provinces of Canada. Promising crops in the central region of Quebec and Ontario will not likely be able to cover off the expected decreases out of Prince Edward Island and New Brunswick.

Processors also will likely see tightened supply to meet their needs of recently expanded plants in Alberta and Manitoba, with an overall crop projected to be one of the lowest going back to 2011. In addition, fryers were already playing catch up to a market demand radically reduced by COVID-19 in the spring and then coming back sooner than expected this summer. Unfortunately, this occurred after raw product had moved to other channels and contracted volume for the 2020 crop was reduced across North America.

Province-by-province details are here: https://bit.ly/2FNmuDo

Source: United Potato Growers of Canada September 21, 2020 news release







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#### ONTARIO FRUIT AND VEGETABLE GROWERS' ASSOCIATION

## Ontario's Farm Products Containers Act benefits the fruit and vegetable industry

DAN TUKENDORF

The Ontario Farm Products Containers Act (FPCA) is managed by the Ontario Fruit and Vegetable Growers' Association (OFVGA) on behalf of the fruit and vegetable industry. It's a vital funding mechanism that allows the industry to address major issues, policies and programs to ensure its viability. The COVID-19 pandemic has highlighted more than ever how vital is the advocacy work of the OFVGA and its member organizations on behalf of growers and the industry. Recent advocacy work during the pandemic has resulted in the continued safe access to seasonal agricultural workers, multi-million dollar enhancements of key safety net programs and the establishment of COVID-related funding programs that are critical for growers.

The container fees collected through the FPCA allows the

OFVGA to advocate for the industry in several key areas such as crop protection, safety net programs and labour to ensure farmers have the tools and programs they need to remain competitive and sustainable. The work the OFVGA does on crop protection and labour not only benefits Ontario farmers but also makes an impact across Canada. OFVGA board members and staff are leaders in the industry and sit on national crop protection and labour committees that engage with key government policy makers.

The FPCA also directly benefits each Ontario fruit and vegetable commodity marketing organization for apples, berries, grapes, tender fruit, asparagus, field and greenhouse vegetables, potatoes, ginseng and processing vegetables by financially supporting research priorities and promotional activities as a direct result of their grower's support of the FPCA.



The FPCA applies to most packaging from both domestic and international suppliers that is used to market Ontario-grown fruits and vegetables.

Applicable packaging includes items such as master shipping cartons, baskets and containers used for product sold through wholesale or direct to consumer. A few exemptions apply such as field boxes or hampers, bulk bins, reusable plastic containers, shopping bags or any containers that are only for on-farm use

and would not be sent to market or sold directly to consumers.

If packaging buyers are not being charged the FPCA container fee directly on invoices for domestically or internationally sourced packaging they must self-remit the applicable container fee to the OFVGA directly. To ensure all stakeholders in the industry are following their responsibilities under the FPCA, the OFVGA coordinates

annual third-party audits to ensure the regulations are being adhered to and applied equitably across the industry.

For more detailed information about the FPCA please visit www.ofvga.org/container-tolls or contact Dan Tukendorf at 519-763-6160 extension 121 or dtukendorf@ofvga.org org

Dan Tukendorf is program manager, OFVGA.

## **The First Canadian Honeycrisp Apple Contest**

We're taking up the challenge from Gail Ardiel, Apple Springs Orchard, Clarksburg, Ontario. Who's got the biggest Honeycrisp apple in Canada? Her entry is 4.25 inches in diameter with a 13-inch circumference.

To enter, post your Honeycrisp photo to Twitter showing the apple size and tag **The Grower's** Twitter handle @growernews.

Also email us at editor@thegrower.org with your mailing address. Everyone is a winner! Each entrant will be mailed a Grower cap.

The contest ends October 22. We'll publish photos of provincial winners of the biggest diameter Honeycrisp apple in the November issue of **The Grower**.

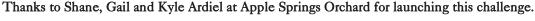
Gail Ardiel @Gail Ardiel - Sep 20

Wishing everyone a safe apple harvest!







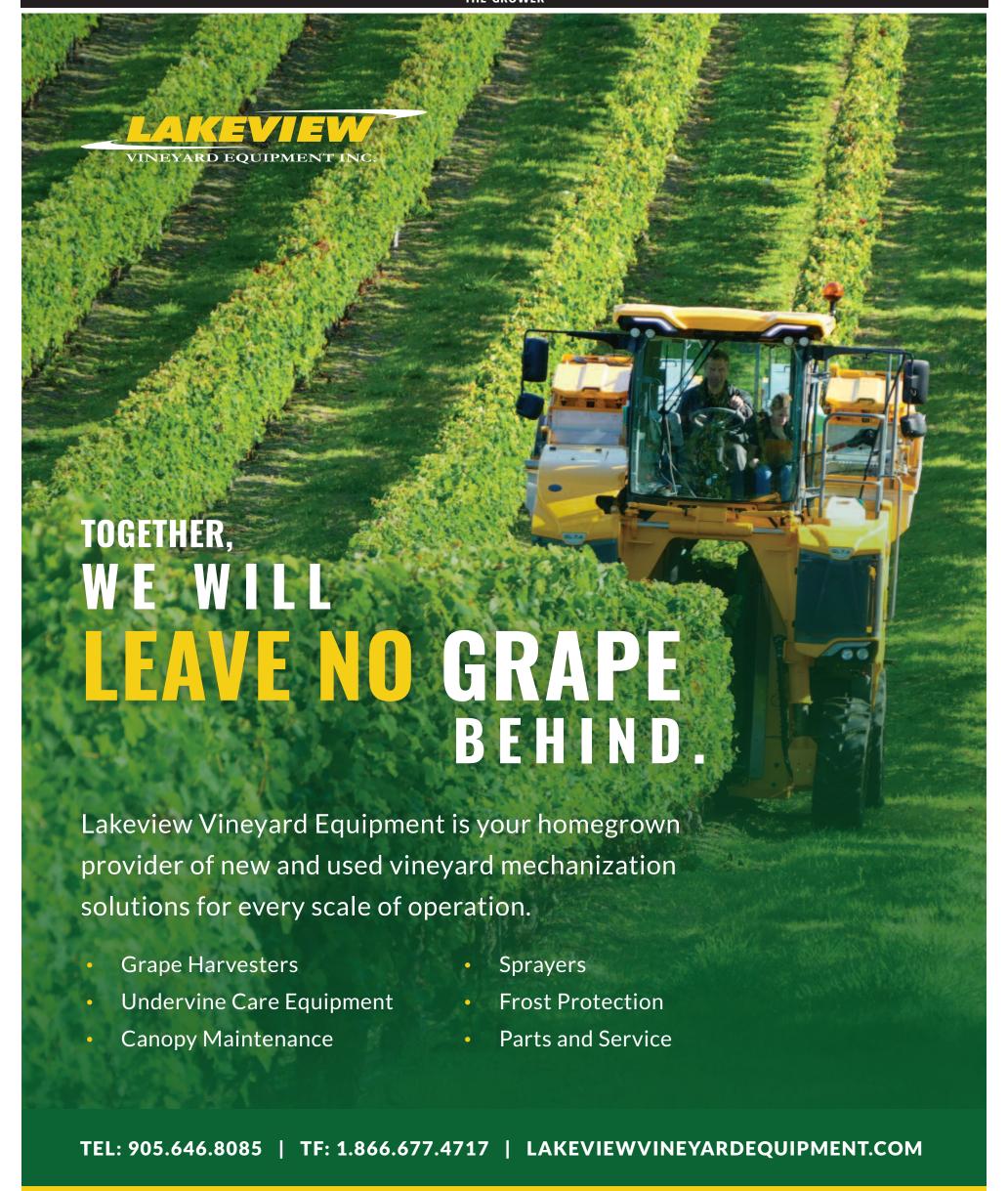






## Planting the seed for November edition

The November edition of **The Grower** will feature our focus on Seed and Rootstock. Stay tuned for our new variety showcase.



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#### **CHAIR'S PERSPECTIVE**

## Fighting back against retailer bullying



BILL GEORGE JR. CHAIR, OFVGA

Since the middle of March, our organization has primarily been focused on dealing with the COVID-19 pandemic and all of its impacts on fruit and vegetable growers and our wider supply chain.

This fall, we're now faced with an issue that is not related to the pandemic and although some might see that as a positive sign of a return to normalcy, it's anything but.

Several large retailers, led by Walmart, have announced plans to move ahead with new fees of up to 6.25 per cent that they are going to levy on all of their

suppliers. Walmart specifically announced a 1.25 per cent fee for products sold in-store to help pay for their investments into distribution centres and store renovations, as well as a further five per cent for products sold on-line.

Their argument is financial need to help them fund improvements to their operations caused by pandemicrelated changes in consumer buying habits, such as enhanced online services. This is despite record revenues during COVID-19, which has taken an economic toll on virtually all sectors of the economy but has overall been a boon to retailers' bottom lines.

I should note that these new fees are on top of the existing marketing fees we already have to pay to retailers just for the ability to market our products, fees that many fruit and vegetable growers feel are set in an arbitrary and predatory way.

As well, large retailers are increasingly taking advantage of growers - small or at best medium-sized businesses and mostly family-owned and run with a series of other actions,

such as extending payment terms to more than 60 days and charging fines for shipping delays while forcing trucks to sit idle for hours waiting to unload.

Fruit and vegetable growers are particularly vulnerable to the impacts of the pending additional fees as they already operate on very slim margins, in some cases less or not much more than the announced fee increases.

In fact, according to the Ontario Ministry of Agriculture, Food and Rural Affairs, Ontario agriculture recorded an average net profit margin of just over three per cent in 2019 - so it quickly becomes clear that a fee hike of 6.25 per cent will spell disaster for growers, especially in a year where the pandemic has already hit the sector hard.

Although these fees apply to all suppliers not just farmers, this issue is a real and growing threat to the agriculture sector in particular, a key driver of Ontario's economic engine.

Growers need the large retail outlets in order to market crops to a large segment of Ontario's consumers. If we can no longer viably grow fruits and

vegetables, retailers will simply replace local produce with imported products. What that means for Ontario is lost tax revenue, fewer jobs, and decline of our rural economy.

OFVGA has raised this issue with the provincial government, including OMAFRA's agriculture minister Ernie Hardeman and the minister of government and consumer services Lisa Thompson to make them aware of the significant negative economic impact this will have on our sector.

It was also one of the main topics of conversation during a meeting OFVGA and some of its member organizations had with Premier Doug Ford in early September. Minister Hardeman and new OMAFRA deputy minister John Kelly were also part of that meeting.

We made it clear that fruit and vegetable growers - and indeed other food and beverage suppliers - need protection against bully tactics by large retailers. This includes supporting the implementation of a supplier code of practice for retailers, similar to the Groceries Supply Code of Practice in the United Kingdom that would extend that kind of protection to growers.

Our industry is incredibly vulnerable to the devastating impacts industry consolidation can have, leaving growers with few alternatives when the marketplace consists of only a few buyers.

Throughout this pandemic, Ontario fruit and vegetable growers have taken their responsibility to produce food seriously and have worked hard to keep their families and workers safe and their businesses viable. And we've consistently invested in our own businesses and our own industry to meet changing consumer demands and respond to new challenges, such as COVID-19.

Now, we need our provincial government to take action to help ensure domestic food security and to protect the almost 100,000 jobs associated with our sector by safeguarding the sustainability and competitiveness of Ontario's edible horticulture growers and offering protection against unfair, predatory retailer practices.

#### WEATHER VANE



The Ontario Food Terminal has operated under extreme pressures for the 2020 season, fulfilling its critical role in handling fresh produce. At Thanksgiving time, the industry is appreciative of those extraordinary efforts to keep employees, farmers, truckers, buyers and sellers safe. Here, operations manager Gary DaSilva (R) visits with a grower when times were less stressful. Photo by Glenn Lowson.

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#### **URBAN COWBOY**

## Growers deserve special credit for their disease prevention role



OWEN ROBERTS U OF GUELPH

Whenever you see or hear a government voicing concern about the health of its citizens – and vowing to do something about it – it's usually some kind of reactive measure related to problems with human resources.

Doctor shortages, for example. Or hospital staffing issues. Or burnout among personal service workers. Chronic and severe problems, for sure.

And indeed, when the Ontario government returned to the legislature on September 14, saying it was ready to continue implementing its made-in-Ontario plan for growth, renewal and long-term recovery, it stated its fall agenda would "build on the work undertaken over the summer, focusing on job creation, skills

training, attracting investment, strengthening communities, and fortifying the front lines of the province's health care system."

That's right-headed. By all means, let's do all we can to support front-line workers.

And let's start by doing all we can to stay healthy, so these workers have the time and space to deal with the second wave of COVID-19 virus victims that are now starting to appear.

It's a fact that healthy people are better equipped to fight disease. But the government's plan doesn't include efforts to help people eat better. So, we'd better do it ourselves.

Encouraging signs exist.
Registered dietitian Jane
Dummer of Kitchener says the
first round of COVID-19 drove
consumers towards so-called
comfort food. Suddenly, they
were home all day. They could
bake and cook (and eat) like
they hadn't in years.

And with the second wave knocking on the door, they're still at home. Except now, they're saddled with the weight they've added because of too many poor food choices.

So, they've started shopping with health in mind. A new report from the International Food Information Council says that as a result of the pandemic,



This mother and two children are enjoying their fruit picks at The Red Barn market near Jordan, Ontario. Photo by Glenn Lowson.

as many as 20 per cent of consumers say they are eating healthier.

"I believe anybody in the food space who is not identifying health as an emerging key investment is losing opportunities," she says.

Fruit and vegetable producers, take note. For ages, it's been nearly impossible to get Canadians to eat the recommended amount of healthy fruit and vegetables. Even Canada's food guide tried, suggesting more "green" be on consumers' plates than ever before.

Maybe now it won't be so tough to sell the idea. And the focus should be much easier – stay healthy and stay out of the hospital.

It's also a great time to reach kids, via their parents.

Listening to the news of the second wave's arrival, my wife wondered aloud if the pandemic will likely turn the next generation into germophobes.

I wouldn't be surprised. And if their fear of disease is accompanied by an elevated awareness of their personal health and the advantages of eating well, then once again, fruit and vegetable growers have an opportunity to reach new consumers and help them in their lifelong quest to stay healthy.

Kids will – or can -- learn good food habits at home from their parents. And that's where efforts such as the University of Guelph's 20-year Guelph Family Health Study come in.

Started back in 2014, it's one of the longest-term studies ever undertaken by the institution,

designed to help families improve their health through better food, activity, leisure and sleep.

It's making progress.
Working with families,
researchers have determined
that those who received inhome health education and
keep food intake records had a
significantly higher fruit and
fibre intake than those receiving
only monthly email topics about
the topic. And that supports
better health.

Such findings point to the fact that fruit and vegetables have a new place of prominence in our lives, and that growers deserve recognition and support for their vital role in producing them.

This kind of healthcare is worth investing in too.

## Canada's Ecoation wins World in 2050's Olympics of Innovation

After receiving 100-plus nominations and applications, Diplomatic Courier has announced the World in 2050 Olympics of Innovation winners, naming Ecoation Innovative Solutions Inc. as a Society category winner in response to the company's commitment to supporting growers through Artificial Intelligence (AI) advancements. Ecoation shares the stage with 34 prestigious innovators across seven categories in the first cohort of 2020 challenge winners.

"Winning this award puts us on the global stage next to well-known innovators such as Elon Musk, founder of SpaceX and Anousheh Ansari, founder of XPrize," says Dr. Saber Miresmailli, CEO and founder of Ecoation. "We are incredibly proud of being one of the few Canadian companies who are acknowledged for their work and the difference their innovations can make in future."

Looking decades into the future, the Olympics of Innovation is an annual challenge established in Davos, Switzerland, and presented by the Diplomatic Courier's digital think tank, World in 2050. The challenge aims to champion the best innovative solutions to change our collective future with each award cluster representing a major trend that forecasts the future for our world:



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We are incredibly proud of being one of the few Canadian companies who are acknowledged for their work and the difference their innovations can make in future.

~ DR. SABER MIRESMAILLI, CEO & FOUNDER OF ECOATION

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Society, Humanity, Energy, Health, Travel, Off-World, and Artistic Visions. Ecoation is honoured to be recognized

for its Human Knowledge + Machine Precision approach to food production. **The Grower** recorded a podcast with CEO and founder, Dr. Saber Miresmailli in August 2020. Go here: https://bit.ly/2FCsGhh

#### **OPINION EDITORIAL**

### Workers just like all others



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## No one will be sent home if they have COVID-19. If you have to self-isolate, you will be eligible for WSIB benefits.

~ PREMIER DOUG FORD

"

#### KEN FORTH

"Temporary foreign workers are entitled to the same benefits and protections as any other worker in Ontario."

Those aren't my words, although they are 100 per cent true. They were pulled from a Government of Ontario media release dated June 24, 2020. To be clear, these benefits include health care, worker's compensation, protection under the Employment Standards Act, the provincial minimum wage and, like every other worker in Ontario during the pandemic, job protection if they have to take an unpaid leave because of COVID-19.

Supporting the media release from his government, Premier Doug Ford, during his June 24 daily media briefing, stated: "No one will lose their job if they have COVID-19. No one will be sent home if they have COVID-19. If you have to self-isolate, you will be eligible for WSIB benefits and if you have a Social Insurance Number, you may be eligible for the CERB. We are here to support essential workers who help put food on all of our tables."

It shouldn't be necessary to point this out.

It is common sense to understand that if you are coming to Ontario, to Canada, to work, you are protected just like every other worker in the province and country.

But one of the most common misconceptions—or, as they are, outright lies—being spread by opponents to the Seasonal Agricultural Worker Program is that our workers are somehow treated as less than what they are: Important members of our community who are doing the hard and necessary tasks to protect and preserve Canada's food security.

What is important to understand is the underlying motivation behind those who are frequently criticizing the seasonal worker program. One of the most vocal critics of the program is the Migrant Workers Alliance for Change. Among the long list of groups it cites as its members or supporters, two stand out: UNIFOR and the United Food and Commercial Workers (UFCW).

Without question, these are powerful unions. And they are anxious to unionize agricultural labour — UFCW in particular.

In an effort to organize workers at a medical cannabis farm, UFCW launched a constitutional challenge against the Agricultural Employees Protection Act (AEPA) to the Agriculture, Food and Rural Affairs Appeal Tribunal amid a claim of unfair labour practices against the parent company.

After hearings last fall, the Tribunal issued a two-part ruling this spring. The Tribunal first outright dismissed union claims on intimidation and unfair terminations while also noting that the union's own actions had played a part in derailing their organizational efforts. Second, the Tribunal dismissed the Charter of Rights and Freedoms challenge against the AEPA, noting that the AEPA does not prevent agricultural workers from engaging in a union.

We see the UFCW use similar tactics — spreading misconceptions and mistruths — to further its own objectives with seasonal workers. They rail against the living conditions of the workers. But they ignore the rigorous inspections of bunkhouses from agencies such as Service Canada, the Ontario Ministry of Labour and local public health departments.

They erroneously claim workers are paid less than minimum wage, do not have access to Employment Insurance or WSIB benefits. It cannot be made more clear that it is not in a farmer's interests to abuse its labour supply. Farmers depend on these workers to first keep crops healthy and growing, and then to get them off the land and to market.

The latest salvo from critics is to question the residency status of seasonal workers. Again, this is a diversion in an effort to paint farmers as the enemy. Farmers are not denying citizenship or permanent residency to seasonal workers.

Without question, there isn't a worker in this program who wouldn't make a great Canadian citizen. They have a strong work ethic, value their families and broader community and are upstanding individuals. But that is a question for Immigration Canada, not a farmer.

The motivation in all of this is money. The unions want the dues they would get from seasonal agricultural workers. They want control of family farms and, to be blunt, this will jeopardize Canada's food supply.

And there is little they won't say to get it, truth be damned.

Ken Forth is president of the Foreign Agricultural Resource Management Services, which administers the Seasonal Agricultural Workers Program in Ontario. He is also a broccoli farmer in Flamborough, Ont.

#### **2021 OFVC CANCELLED**

The Ontario Fruit and Vegetable Convention, traditionally held in Niagara Falls in February, has been cancelled for 2021 due to COVID-19 concerns. Save your seat for February 23 and 24, 2022.

#### **COMING EVENTS 2020**

- Oct 5 8 International Plant Health Conference, Helsinki, Finland **POSTPONED** until June 28-July 1, 2021
- Oct 7-8 Canadian Greenhouse Conference, Scotiabank Conference Centre, Niagara Falls, ON VIRTUAL
- Oct 14-17 International Plowing Match, Lindsay ON CANCELLED (Oct 13-16, 2021, Lindsay, ON
- Oct 13-15 Produce Marketing Association Fresh Summit, Dallas, TX **VIRTUAL**
- Oct 27- 29 Canadian Federation of Independent Grocers GIC LIVE@HOME event
- Oct 29 Food & Beverage Ontario 2020 Conference, Steam Whistle Brewery, Toronto, ON (CHECK WEBSITE)
- Nov 2-4 Fall Harvest Meetings on Parliament Hill, Ottawa, ON **VIRTUAL**
- Nov 6-15 Royal Agricultural Winter Fair, Toronto, ON CANCELLED
- Nov 13 Ontario Produce Marketing Association Annual Gala, Universal Event Space, Vaughan, ON CANCELLED
- Nov 14 Farm and Food Care Ontario Annual Harvest Gala **VIRTUAL**
- Nov 17-19 Alberta Potato Conference and Trade Show, Cambridge Hotel and Conference Centre Red Deer, AB **CANCELLED**
- Nov 18 Potato Growers of Alberta Annual General Meeting **VIRTUAL**
- Nov 18-20 Asia Fruit Logistica ON VIRTUAL
- Nov 18-20 Arrell Food Summit VIRTUAL
- Nov 19-20 Wild Blueberry Producers' Association of Nova Scotia Annual General Meeting, Best Western Glengarry Hotel and Convention Centre, Truro, NS
- Nov 19-21 Interpoma, Bolzano, Italy VIRTUAL
- Nov 22-24 Interpom, Kortrijk, Belgium CHECK WEBSITE
- Dec 1-3 Grow Canada Conference, Westin Hotel, Ottawa, ON CANCELLED
- Dec 2-6 Outstanding Young Farmer National Event,
  Delta Bessborough Hotel, Saskatoon, SK
  CANCELLED
- Dec 8-10 Great Lakes Expo, DeVos Place, Grand Rapids, MI VIRTUAL

2021

- Jan 6-7 Ontario Agricultural Conference (SouthWest Agricultural Conference, Guelph and Eastern Ontario Crop Conferences combined)
- Jan 6-7 Potato Expo, Gaylord Texan hotel, Grapevine, TX

## Manage your costs, your selling price and your customer



**PETER CHAPMAN** 

There have been so many changes for producers in 2020; it is a real challenge to find the time to focus on your costs, your selling price and your customers. You have had to manage inconsistent supply of inputs, labour disruptions and challenging weather just to get products produced and delivered to your customers. One of the realities of the food industry is in a year like this it is more important than ever to focus on the numbers and your customers.

There is no doubt your customers were more focused on their in-stock position than they have been for a long time. Consumers want to visit stores where there is inventory and in many categories demand was high. Service level has been

critical, however you need to understand what it is costing you to produce all these cases you are moving.

Challenge the financial part of your business to compare costs in 2020 to previous years. You need this information to have fact-based conversations with your customers. Many things have changed in 2020 and retailers are experiencing this in their operations as well. Focus on the facts. For example, if your productivity decreased 10 per cent due to public health guidelines and average hourly rates increased four per cent, your cost of goods changed. You can focus on percentages without sharing too many details.

The cost of doing business with each retailer can change and you need to understand these. If possible, review your margin by customer to assess where you need to find opportunities.

Remember your customers will also be watching inputs such as fuel that might be down year over year. There are many other changes to cost of goods in 2020. Retailers should understand this is a challenging year. The market has been volatile and you should understand the positive and negative fluctuations to your

cost of goods.

#### Manage your selling price

You should stay closer to market pricing than ever, as fluctuations seem to happen quicker. This pandemic is impacting almost every country in the world; supply can be interrupted, which impacts pricing.

Unfortunately, your selling price does not always have a direct correlation to your cost of goods. When you see your costs changing you have to be proactive with your customers. You might not always get what you want the first time, but you have to stay focused on where you need to be.

You should consider adding a comment about cost of goods in any communication you have. This does not have to be a cost increase but you are sending a message it will have to change.

#### Manage your customers

Communication during challenging times is more valuable than when everything is working well. This is the best time to build relationships. When you deliver solutions they will remember.

Whenever possible be proactive and communicate

with your customers about changes before they need to happen. The best price change is when your customer already understands it and accepts it. That happens when you communicate what is happening in your business and tell them you anticipate packaging to be up a certain percentage or the fact you had to quarantine your entire workforce of temporary foreign workers. When you understand your cost of goods you are in a better position to manage your selling price.

Communicate about more than price. Share your service level results, upcoming marketing programs to continue sales initiatives. Illustrate to them you are being proactive and focused on driving sales in their stores.

### Generate the return for your hard work

When you manage your costs, you can manage your selling price better and incorporate that into managing your customers. 2020 has been a challenging year on many fronts. Make sure you divide your focus across your business to get the job done in producing great products to sell and selling the great products you produce.

If you would like some help

to manage your customers please give me a call at (902) 489-2900 or send me an email at peter@skufood.com.

#### WHAT'S IN STORE?

### Plant-based milk alternatives in the baking aisle

In a local store, I discovered a four-foot section of plant-based milk right in the middle of the baking aisle. In the past, canned milk was a fixture in the baking aisle and it is still there but likely it does not have as much space as it used to. These products were perceived to be 'specialty items' and merchandised in the natural food section.

Now, we see them in the grocery department. Retailers are very territorial about their space so there must be significant sales to double merchandise the items.

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, Nova Scotia 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.

### Walmart Canada announces new vendor fees



When this next-generation distribution centre becomes operational in 2024, the Vaughan, Ontario site will handle the highest volume of any Walmart facility in Canada.

#### KAREN DAVIDSON

The Toronto Star's August 4 headline pulled no punches: Walmart Canada puts nation's food supply at risk with new fees. The guest opinion editorial was authored by Michael Graydon, CEO for Food and Consumer Products of Canada. He said that Walmart has set a precedent with its letter to 3,000 suppliers that as of September 14, new vendor fees will offset \$3.5 billion in investments, including an

expanded website platform for e-commerce.

The retailer is instituting a 1.25 per cent "infrastructure development fee" to the cost of goods that it purchases and a 5.0 per cent "e-commerce development fee" for products sold through its website. These fees are over and above existing fees that cover the costs of in-store promotions or shelf placement.

Michael Graydon wrote:

"Walmart's mandatory fees could exceed typical margins and eat up as much as one-third of suppliers' profits, at a time when many are still struggling with the profound impacts of the pandemic. Neither suppliers nor consumers will see tangible benefits from the fees Walmart extracts.

As a chorus of farmers, processors, and manufacturers immediately warned, other grocery retail giants are already beginning to follow Walmart's bad example. United Grocers came knocking less than a week after Walmart issued its fiat, signalling the likely avalanche of similar demands to come. If

other grocery retailers pass their bills onto suppliers, too, food and consumer goods manufacturers will be in a truly impossible situation."

Walmart Canada, for its part, was undaunted by the negative publicity. A week later, August 12, executives turned the soil on a state-of-the-art, 550,000 square-foot distribution centre in Vaughan, Ontario. When the facility is operational in 2024,

the site will handle general merchandise and food products. CEO Horacio Barbeito says this centre will handle the highest volume of any Walmart facility in Canada.

A new 300,000 square-foot distribution centre is currently under construction in Surrey, British Columbia. And an existing distribution centre in Cornwall, Ontario is getting a makeover.



#### STORAGE, CONTAINERS & PACKAGING

### **Potatoes meet Paris**

A pink purse of potatoes appeals to savvy women shoppers



The initial advertising campaign appealed to young women with the theme of "ready-to-wear, ready-to-cook."



Floral-tasting potatoes are perfect with lamb, chicken, seafood and pork.



Visual cues communicate the end uses of each of the Mamzells product line.

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#### The original briefing was to create a brand specific to the young female demographic, aged 25-55 years old.

~ LAURENCE CÔTÉ

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#### KAREN DAVIDSON

Say bonjour to Mamzells! These Quebec-grown potatoes are a clever take on Mademoiselle, a tongue-incheek appeal to young women who might otherwise give a "pass" to their mothers' staple.



The product line was developed with painstaking care, mindful of consumer trends and changing demographics. Hello, millennials. The product line of smaller-sized potatoes was targeted at solo households, consumers who didn't want to tote a 10-pound bag out of the grocery store.

"The original briefing was to create a brand specific to the young female demographic, aged 25 to 55 years old," explains Laurence Côté, sales and business development manager, Québec Parmentier.

The grower-owned company develops exclusive potato varieties such as Ella and Sofia and then differentiates from the competition with flavour profiles and clear usage icons.

Months of brainstorming took place with brand design agency Pigeon and then communications agency, Gendron, both located in Montréal. For the first ad campaign, the result was a stand-up pouch, designed expressly to look like a purse and to poke gentle fun at readyto-wear clothes from the runway but more practically, to speak to the consumer's current need for ready-to-cook. Even the enduse icons for mashing, baking, roasting and frying are in keeping with the retro vibe.

Finally, the physical launch

took place in October 2016 at Ricardo's Boutique, with invited food bloggers and supported by a full-page advertisement in his eponymous magazine. Ricardo Larrivée is a well-known bilingual chef with his own show on Food Network TV.

Did the out-of-the-box, sophisticated strategy sell more spuds? The simple answer is oui! Year-over-year, sales growth has averaged 30 per cent says Audrey Boulianne, general manager, Québec Parmentier. Today, the Mamzells brand represents 10 per cent of the company's tonnage and 21 per cent of sales revenue. The creativity of the product campaign won the DUX Eat Better, Live Better award in 2017 as best agricultural product.

The brand has evolved to reflect key learnings from the initial launch. "We wondered if the campaign positioned our product as too fancy and whether we had missed on parts of the target audience," says Côté. "We didn't want to communicate that this was a luxury product that a single mom couldn't afford."

Listening to customers such as Sobeys, a champion of the brand, the company converted to light-blocking, 100% recyclable packaging in March 2020. Some of the bulk, washed

potatoes are trucked from the Propur packing facility in St. Ambroise, north of Québec City, to a repacking facility near Montréal. This is a deliberate move to be close to retailers, for just-in-time delivery and the ability to make last-minute changes on orders.

Mamzells are also available in distinct flavours – floral and nutty, for example. Icons are clear on the packaging for suggested pairings. Floraltasting potatoes are perfect with lamb, chicken, seafood and pork whereas nutty-flavoured potatoes are tasty sides with beef, charcuterie or pork.

Bite-sized television ads of about six-second duration have aired in Québec in 2018 and 2019 to build broader brand awareness. And since February 2020, Mamzells now have an audience in Ontario where they are featured at 32 Farm Boy stores. Expect retail pricing to range from \$3.99 to \$5.49 for a one-pound to five-pound purchase. More growth is expected in the Ontario market as the Farm Boy chain expands with another half dozen stores in 2021.

A November 2020 launch will unveil more of the Mamzells' personality. To date, she's the best dressed side at the table. For her recipe, go to mamzells.com.

#### STORAGE, CONTAINERS & PACKAGING

## Home compostable cucumber wrap is launched by Nature Fresh Farms



Nature Fresh Farms continue their sustainable initiatives by releasing a new, 100 per cent home compostable wrap for their long English Cucumbers, a first in the North American market.

An alternative to traditional polyethylene plastic, this film is an environmentally friendly compostable wrap that breaks down in a household compost without leaving behind microplastics. The compostable film will prolong the shelf life of the product; however, it will do so without adding to long-term landfill waste. Made from a starchbased PLA that is derived from plant-based resources including non-GMO corn starch, it is 100 per cent compostable, breaking down naturally into CO2 and water.

In addition, the wrap includes a PLU pre-printed on the film in compostable ink. It took two years of research and development to perfect. Luci Fass, product development specialist, explains that this feature allows the entire wrap to be discarded with backyard compost or in landfills without harming the environment. PLU stickers are commonly made of vinyl and plastic. This new wrap eliminates the need for the additional application.

Each cucumber wrap contains 0.00436 lbs of plastic; this translates to the equivalent of 23-million plastic straws saved from landfill for every five million cucumbers wrapped in the compostable film. Cucumbers are packed in shrink wrap to significantly extend their life by minimizing evaporation. Through the compostable film, Nature Fresh Farms has found a packaging solution that can maintain the shelf life of the cucumber, while meeting the demands of more sustainable packaging alternatives.

"The launch of the compostable wrap is a demonstration of our commitment to our consumers wants of reducing plastic usage," says Matt Quiring, director of sales. "We are excited to be first to market with this initiative in North America and are hopeful this will start a trend with the

industry while we continue to lead in sustainable packaging solutions."





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## What's new and next in eco-friendly packaging



The backyard compostable strawberry containers have been trialed at the farm of Kevin Howe, Alymer, Ontario. Photo by Glenn Lowson.

#### KAREN DAVIDSON

Wellington Produce Packaging is keeping up with the environmentally-conscious times with a backyardcompostable quart container.

"This is an extension of the original wood pulp containers," explains Adam Hincks, sales and purchasing, Wellington Produce Packaging, Mount Forest, Ontario. "These are made from biomass, for example, corn husks. When the

con-

sumer is finished, the carton is backyard compostable. There are no dyes in the materials."

Hincks has been working with BioOrigins, an India-based company with links to University of Guelph researchers. Hincks is helping to bring the manufacturing technology from India to Ontario for 2021. He brought in a small shipment of 60,000 containers for 2020.

The challenge with biobased containers is to make sure



there is enough strength in the construction and enough water resistance so that the container does not become soggy with berry juice, for example.

Another innovation is a returnable, one-litre plastic container.

"We are the first, according to our research, to offer a full-solution, reusable and washable container for produce," says Hincks. "Starting with the strawberry quart, we will sell to farms, purchase used containers back, pick them up and wash them in our facility before reincorporating into the regular supply. This is similar to how the beer store program

runs.'

As the manufacturer, Wellington Produce Packaging can purchase back broken containers, chip them into pellets and re-run through the injection moulding process. This is a zero-waste solution.

This container is best for strawberries because there are air vents. It's important to get heat out of the berries as they come out of the field. Put them in the cooler right away and they will have longer shelf life."

"We're already making deliveries to farms with packaging materials and then coming home empty," says Hincks. "We think it's a better idea to bring back your pink returnable containers, sanitize them and put them back into the circuit."

The bonus is that farms save money, as they are getting money back from their used packaging along with the added environmental messaging to their customers.

The pink returnable container was launched at the Ontario Fruit and Vegetable Convention. However, COVID-19 interrupted the roll-out in 2020 and the idea is now on ice.

The concept is still alive for the future as on-farm markets and pick-your-own operations experienced heavy traffic during the summer of 2020. Consumers want to buy local and they're aware of the packaging that wraps around fruit and vegetables.

"Some of our customers ran out of packaging and containers this summer and had to reorder due to unexpectedly increased sales," says Hincks. "They told me that every day felt like a normal Saturday."

As the season winds down, farm operators will be assessing their needs for 2021 with a view to consumer-friendly packaging.





Canadian Corrugated and Containerboard Association

Association canadienne du cartonnage ondulé et du carton-caisse

Proud supporter of the Paper & Paperboard Packaging Environmental Council (PPEC) www.ppec-paper.com



#### STORAGE, CONTAINERS & PACKAGING

## **CPMA releases Packaging Materials Selector** to support Preferred Plastics Guide

These elements include recommended uses and applications for each type of packaging, characteristics of the materials, and end-of-life options, such as recyclability, compostability, reusability, or other.

~ RON LEMAIRE



#### RON LEMAIRE

The produce industry has navigated its way through the COVID-19 pandemic in spectacular fashion. Despite the numerous obstacles the coronavirus has presented, the produce industry and the Canadian Produce Marketing Association (CPMA) Plastics Packaging Working Group have not lost sight of our objective to drive our sector towards safe, healthy, and viable packaging solutions.

While there was an initial spike in demand for increased produce packaging at the beginning of quarantine, these worries eventually lessened as the Government of Canada was able to reassure us that there is "no evidence to suggest that food is a likely source or route of transmission of the virus and there are currently no reported cases of COVID-19 transmission through food."

In keeping on our course, the Plastics Packaging Working Group published the CPMA Preferred Plastics Guide on June 1, 2020. This guide was intended to help inform and support CPMA members in

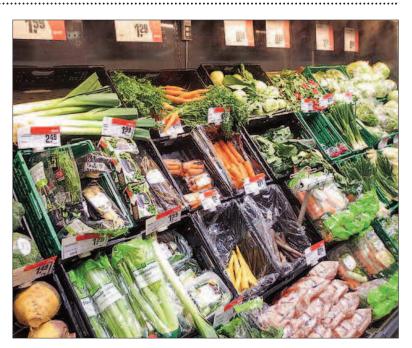
their packaging decision making.

To further aid in industry companies' decision-making processes, the Working Group has now created a Packaging Materials Selector, in support of the Preferred Plastics Guide. This resource, scheduled to be released in early October, directs users through a method that helps to define needs and outcomes required from packaging, identify material alternatives and options, and assess and prioritize packaging materials, in order to make a judicious selection.

The packing material reference table included within the Materials Selector displays clear and comparable attributes of the different types of packaging found in the Preferred Plastics Guide. These elements include recommended uses and applications for each type of packaging, characteristics of the materials, and end-oflife options, such as recyclability, compostability, reusability, or other. With these considerations in mind, we believe our members and industry will be well suited to manage packaging decisions.

CPMA, the Working Group, and countless stakeholders continue to strive forward to reduce our environmental footprint, while maintaining food safety and food security throughout the supply chain. As we look to the future, the focus of the Working Group begins to shift towards our strategic initiatives including harmonization of policies and regulations within different systems, and education of consumers and industry.

Ron Lemaire is president, CPMA.







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#### STORAGE, CONTAINERS & PACKAGING

## Internal browning in 'Gala' apples during storage

JENNIFER DeELL

Advancements in controlled atmosphere storage technology and the advent of postharvest treatments with 1 methylcyclopropene (1 MCP) have enabled apples to be stored longer than ever before. Unfortunately keeping apples longer has also allowed for certain storage disorders to become more problematic. Internal browning is one such problem for 'Gala' apples.

Radial flesh browning near the stem-end (shoulder) of the apple is usually the first sign of internal browning (Figure 1). This can progress towards the calyx end of the fruit, becoming the more common internal browning that can be found when cutting the apple horizontally across the equator (Figure 2). The following is a summary of research results found during our many years of study.

High incidence of internal browning is usually found when apples are harvested late, at advanced maturity stages. For example, research showed a main effect of harvest time, with 4 and 12% incidence in 'Gala' from first and second harvests, respectively. However, late harvesting in some seasons can be a very large contributor to much higher percentages of internal browning. 'Gala' strain further affects browning development, with some newer strains showing less susceptibility.

Internal browning increases with longer storage durations, as well as increased time at room temperature following removal from storage. For example,

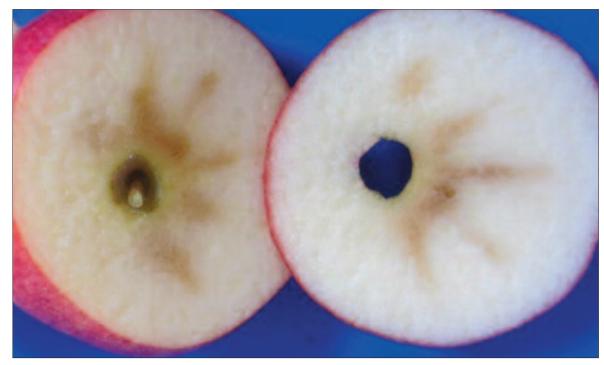


Figure 1: Internal stem-end (shoulder) browning in 'Gala' apple.

'Gala' stored in air at 0.5°C had no internal browning after two months, 12% after four months, and 18% after six months. Similarly, 'Gala' held in controlled atmosphere of 2.5%  $O_2 + 2.0\%$   $CO_2$  at 1°C had little internal browning through five months of storage, but then the disorder increased significantly with storage time thereafter (up to 59% after nine months). Furthermore, internal browning increased with subsequent holding at room temperature.

Postharvest 1-MCP treatment does not have consistent effects on internal browning. For example, 'Gala' stored in air at 0.5°C had significantly lower incidence of browning with 1-MCP treatment than without, but only in some years and not consistently. Significant reduction in internal browning due to 1-MCP was only found in CA-stored 'Gala' after nine months of storage when incidence was extremely high. In contrast, other results in certain years showed significant



Figure 2: Internal browning (at equator) in 'Gala' apple.

increases in browning when 1-MCP was applied to 'Gala'.

Rapid cooling (to 3°C within 24 hours) right after harvest resulted in more internal browning in 'Gala' apples, compared to slow cooling during seven days (DeEll, The Grower, May 2017). 'Gala' that were cooled rapidly and stored in CA for eight months at 1°C had 23-32% and 52-59% browning incidence after one and seven days at room temperature, respectively, compared to 0-5% and 6-11% in fruit cooled slowly.

Low oxygen storage of 1-2% or dynamic CA with less than 1% oxygen reduces the development of internal browning. 'Gala' held in oxygen as low as 0.4% using SafePod technology to monitor fruit respiration (Storage Control Systems Inc., Michigan) had zero internal or stem-end browning, compared to 17% incidence of stem-end browning in standard CA (2.5%  $O_2$  + 2% CO<sub>2</sub>) and 6% incidence in low oxygen of 1.5%  $O_2 + 1.1\% CO_2$ .

Overall, it is important to remember that there are many factors that influence the development of internal browning in apples. These can range from orchard management, fruit maturity at harvest time, postharvest treatments, to storage conditions and duration.

Acknowledgements: Thanks to the Ontario Apple Growers, Norfolk Fruit Growers' Association, Apple Marketers' Association of Ontario, AgroFresh Inc., Pommes Philip Cassidy Inc., GRB Ag. Technologies Inc., Storage Control Systems Inc., Decco US Post-Harvest Inc., and the Canadian Horticultural Council (BC, ON, QC, and NB apple growers) for their continuous support, as well as Sky Lesage, Geoff Lum, and Younes Mostofi for their technical assistance. Recent work was funded in part through the Canadian Horticultural Council's Canadian Agri-Science Cluster for Horticulture 3.

Dr. Jennifer DeEll is fresh market quality specialist for horticultural crops, Ontario Ministry of Agriculture, Food and Rural Affairs, Simcoe, Ontario.







#### **STORAGE, CONTAINERS & PACKAGING**

## Tips to manage potato diseases in storage

First, correctly identify the top five storage diseases -- late blight, pink rot, Pythium leak, Fusarium dry rot, and soft rots

### EUGENIA BANKS & MARK VANOOSTRUM

An essential requirement for a long storage period is that the storage conditions match the needs and the end use of the crop.

The storage requirements of the crop can be assessed before harvest by doing several test digs which allow to determine-if present--the distribution and level of tuber infection. If there are risky areas in a field such as low spots that have blighted potatoes, skip those areas. Do not harvest them.

If you find about two per cent of blighted potatoes scattered throughout the field, try to market the crop straight from the field. If this is not feasible, store the crop near the storage door and move it at the earliest opportunity.

Fields with soft rots such as Dickeya and blackleg, can benefit from harvesting later in the storage season, allowing time for the diseased tubers to break down completely or enough so they are easily identified for grading. In many cases opening up a field and seeing a lot of soft rots can be very scary but moving on and returning in two weeks will allow enough time for rots to break down completely and for the crop to store well.

The top five storage diseases that require continuous vigilance during the storage period are: late blight, pink rot, Pythium leak, Fusarium dry rot, and soft rots. Correct identification is critical to apply a post-harvest treatment and to implement specific storagemanagement practices. Applying a post- harvest fungicide to a crop that is only showing bacterial soft rots can be a waste of time and money. Harvesting, handling, and storing problem potatoes require continuous attention.

#### Harvest

Harvest should start as soon as the tuber skin is set but be mindful that some varieties are taking three to four weeks post-topkill to set up enough for long term storage success. Do not harvest under wet conditions, especially at higher pulp temps. At even above 18°C, disease spreads rapidly. Ensure you have a bruise-free program setup and all equipment is set to avoid drops, reduce conveyors speeds and full flow to reduce bruising. Wounded and bruised tubers are readily attacked by soft rot

bacteria. Tuber pulp temperature should be between 11°C and 18°C when digging the crop.

#### Post-harvest treatment

Phosphorous acid products (Rampart, Confine\*, Phostrol) applied as post-harvest treatments reduce the incidence of late blight and pink rot in storage. Tubers should be rolling when they pass under the spray bar to ensure uniform coverage.

Storage management: curing period - cooling period - holding period

A clean, sanitized storage is a must before storing potatoes. Grade out suspicious tubers and remove debris, clods, and dirt before putting the potatoes into storage. The three basic storage management tools available are temperature, humidity and airflow. One of the toughest situations that potato storage managers face is when they realize that a potato crop in storage is at risk of deteriorating due to diseases. The critical point is to limit pathogen spread from diseased to healthy potatoes and to keep the problem from getting worse.

#### Curing period

Proper curing is necessary to heal cuts and bruises produced during harvest, to reduce pathogen spread, and to keep shrinkage losses at a minimum. The recommended storage temperature for curing potatoes at risk of wet rots is 10°C for two to three weeks with continuous ventilation to dry out wet tubers. The pile should be ventilated with dry air (humidifier off) until there is no further risk of breakdown. In some cases, this may take several weeks. If "hot spots" begin to develop during curing, supply higher airflow to the area to help prevent additional pathogen spread. Supplemental ventilation can be added by auxiliary fans on top of the pile or in the ducts below trouble spots. Some storage treatments are available to apply through the humidification that could help reduce disease spread.

#### Cooling period

After the required curing period, adjust the storage temperature to the holding temperature. Slow and steady rates of 0.3°F per day.

44

Storage management is not just following general guidelines and recommendations. Every storage manager will be faced with situations requiring special management techniques and corrective measures. This is the art of potato storage management.

~ STEVEN JOHNSON, UNIVERSITY OF MAINE

- > >

#### Holding period

Lower holding temperatures decrease the rate of disease progression. Any storage decision involving temperature adjustments must take into consideration the end use of the potatoes. Processing potatoes need to be stored at higher temperatures than the seed and fresh-market crop; therefore, the option of low storage temperatures is not available.

Depending upon the nature and percentage of wet rot in the storage, the pile may need additional drying ventilation with reduced-humidity air during this period. However, reduced humidity results in additional shrinkage and delays wound healing, which can increase the incidence of Fusarium dry rot. Decreasing relative humidity in storage to 85 per cent or less can also decrease the secondary spread of the silver scurf pathogen. Still, evaluate other management strategies before reducing relative humidity.

Monitor the storages daily. Thermometers suspended at various depths in the pile provide a good indication of the average temperature.

Infrared guns are helpful in locating hot spots before they begin to sink and spread. Processing growers may want to measure carbon dioxide levels. If carbon dioxide builds up in storage, fry colour can be variable. Carbon dioxide sensors

#### **Pythium leak**



Late blight



**Blackleg** 



help to maintain desired CO2 levels.

Eugenia Banks is a consultant to





**Fusarium dry rot** 



Soft rot



the Ontario Potato Board. Mark VanOostrum is with WD Potato Ltd.



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## Pumpkin creep is here to stay: producing an extended pumpkin crop

ANDREW WYLIE

Fall colours are here, and none arrived sooner this year than the vibrant orange of pumpkin. Pumpkins are an autumn favourite, and have been making serious inroads into late summer. Pumpkinthemed beverages have been creeping ever closer to Canada Day as consumers demand a taste of Fall earlier every year, and this trend has spilled over from lattes into actual pumpkin production, with real agronomic consequences.

It wasn't long ago that pumpkins would hit stores starting in October, but more recently our Ontario pumpkin growers are working hard in the heat of mid-August to get fruit harvested and ready for Fall displays assembled around Labour Day. Public interest and spending at Halloween are ever increasing. Enthusiasm in pumpkins for a longer duration is a boon to Ontario producers, who grow most of Canada's approximately 3300 hectares (8150 acres) of pumpkins (Stats Canada, 2017), and ship pumpkins as far south as Florida.

Ontario produces a cornucopia of pumpkin varieties, from large carving pumpkins like Howden and the popular powdery mildew-resistant Gladiator with conventional orange rinds and sturdy handles, to saccharine pie pumpkins, flat varieties like Cinderella's Carriage, striking pink and blue varieties such as Porcelain Princess and Jarrahdales, perfectly kid-sized Cannonball, and increasingly popular spooky varieties like Warty Goblin, not to mention a huge variety of decorative gourds to complete Fall displays.

Extended demand for pumpkins means that growers plant early and late crops to have fruit available September through October. An extra month or more in the field means added exposure to disease organisms and pests, and the conditions that favour them. Spring frosts are also a consideration. Agricorp puts the earliest insurable planting date for pumpkins at May 10th for Ontario's hottest areas.

Most pumpkins mature in about 100 days, so with 98 days from May 10th until August 15th, this is a tight timeframe. The traditional favourite Howden variety requires 115 days, and even precocious pumpkins such as Early Giant or Orange Sunrise usually require around 88-95 days to mature. All cucurbits are warm-season crops, and are easily killed by frost, and cold temperatures result in a greater proportion of male flowers which do not yield fruit. Row covers and mulch can help mitigate frost risk, and row covers have the advantage of fending off emerging cucumber beetles. Having more plant tissue in the field for longer periods means that pests and diseases can build in an early crop, and these will increase pressure on an adjacent later crop, so any separation possible between crops at different stages can be an advantage. This year striped cucumber beetles emerged first thing in the spring, and multiple flushes kept pressure high throughout the season without any lulls. This pest is a perennial concern because it vectors bacterial wilt, and can cause direct damage to mature pumpkin fruits. Producers faced a constant battle against this pest in 2020.

The final few weeks of pumpkin production are crucial to achieve high yields. Having fended off beetles and borers, wilt and drought, diseases affecting pumpkin harvest are causing problems in the field as this issue comes out. Rots caused by *Phytophthora*, *Pythium*, *Didymella*, and even *Sclerotinia* can have a huge impact on yields, and wet conditions in some areas in Fall 2020 saw entire fields wiped out by fungi and oomycetes.

Phytophthora capsici is difficult to manage because it persists very well in soil for long durations, and standard threeyear rotations are not sufficient to manage this pathogen. Superficial fruit infections by Septoria or Cladosporium fungi, and the disorder oedema can cause warty lesions on pumpkins, which can variously affect marketability. The good news about these lesions is that if they are allowed to heal, they will not lead to rots. If pumpkins with unhealed lesions are packed, however, secondary infections by bacteria and fungi can cause messy rots which will lead to bins being rejected. Pumpkins should be inspected for these if they are shipped in bulk: markets and roadside sales are good outlets for "ugly" pumpkins which are sought out by some consumers.

An emerging issue that may be directly linked to pumpkin creep is loss of colour during curing. Planting for Labour Day markets means that pumpkins are harvested much further in advance of the autumnal equinox than they would have been in the past, when the sun is still higher in the sky. Pumpkins are often left to cure in the field after being removed from the vine, and the extra radiation of late summer might present a novel challenge. Field-curing is very practical: covered or conditioned curing space is costly, and field curing in windrows makes final harvest easier. Severing the pumpkin's handle from the vine early stops powdery mildew, Phytophthora, and Didymella from moving into the handle and the fruit; the handle is important for



Figure 1[Path]. Late season diseases of pumpkin. Clockwise from left: *Phytophthora* rot caused by *Phytophthora capsici*, powdery mildew infection of pumpkin petiole, powdery mildew on pumpkin leaf, black rot of pumpkin caused by *Didymella bryoniae*, *Phytophthora* rot.

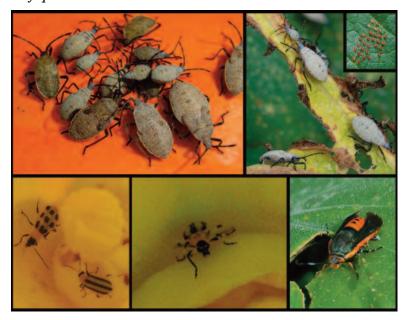


Figure 2[Entom]. Pests of pumpkin. Clockwise from top: Squash bugs (*Anasa tristis*) and eggs (inset), Squash vine borer (*Melittia curcurbitae*), Striped cucumber beetle (*Acalymma vittatum*), Striped and spotted (*Diabrotica undecimpunctata*) cucumber beetles.

pumpkin marketability, and field curing allows the vine scar to heal before pumpkins are put into bins, although indoor curing and storage will reduce rot compared to field curing.

One measure that can help reduce colour loss is to store and display pumpkins in a north-facing aspect (as long as humidity is low), and to provide shade cover for pumpkins in south-facing displays or storage so that they retain their colour. We don't know for sure why bleaching of pumpkins appears to be on the rise -- this a potential avenue for future research. If this phenomenon is indeed linked to pumpkin creep, the

development of early varieties that hold their colour better under summer skies might be warranted.

Pumpkin patches might look a bit different this year, with socially-distanced pumpkin picking and one-way corn mazes, but with safety in mind, there is still an opportunity for great Fall photo-ops. One thing is for sure: late-summer pumpkins are here to stay, and with a few agronomic factors taken into consideration, we can enjoy these charismatic cucurbits from a taste of pumpkin spice in August, all the way through to Halloween clean-up on the first of November.

## **OUR EXPERTS ARE HERE TO HELP!**



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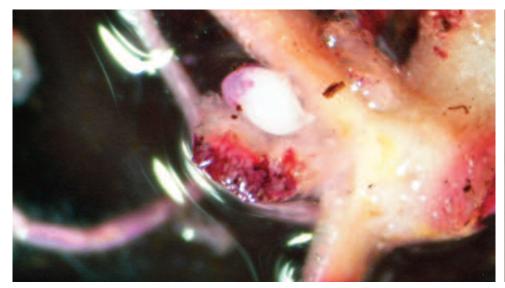
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## **Vegetable nematodes 101**



Root-knot nematode female (white) with hundreds of eggs in a gelatinous matrix (red) outside of a root gall.



Root lesion nematode under a microscope. Notice the darker head region and stylet (feeding needle to penetrate and feed on plant cells).



Garlic infected with stem and bulb nematode. Photo credit - Tyler Blauel.



Carrots infected with carrot cyst nematode. Notice the forking and small galls on the secondary roots.

#### DENNIS VAN DYK

Nematodes are microscopic roundworms that feed on bacteria, fungi, plants, insects or even humans. There are so many of them that it's been said if you removed everything in the world except for nematodes, you would still see the shape of hills, lakes, plants and animals. Not a great picture if worms gross you out.

There is a small sub-section of these nematodes that all vegetables growers should know about: plant parasitic nematodes. Plant parasitic nematodes are sneaky, under-appreciated pests which rob yield and reduce quality in vegetable crops. They often fly under the radar because their patchy symptoms can be tough to diagnose and easily written off as stress, disease or soil issues such as fertility, pH or soil moisture. Taking a nematode soil test is key to proper ID.

Nearly all vegetables are impacted by nematodes. In the U.S. alone, studies estimate that nematodes account for \$10 billion in vegetable losses per year. That's a huge impact which shouldn't be ignored. So, what are you looking for in your fields and what kind of nematodes are out there? Here

are four types of nematodes that could be hiding out and costing you yield.

#### 1. Root-knot nematodes

- Main species in Ontario: Northern root-knot nematode (Meloidogyne hapla)
- Host Range: Very wide host range. Beans, carrots, celery, lettuce, onions, potatoes and tomatoes are considered very susceptible, but most vegetables are hosts.

  Cereal/grain crops seem to be poor or non-hosts.
- Life Cycle: Juvenile nematodes infect the roots and establish a feeding site to suck out all the nutrients. This feeding site causes the root to swell into a gall. Females swell up and can release hundreds of eggs.
- Symptoms: Typical galling on the roots, causing multiple secondary roots and a hairy root appearance leaving some vegetables unmarketable. Tops may be weak or stunted, reduced yield.
- Management: Most of the eggs only survive one to two years so crop rotation with more than two years of a grain crop (corn, wheat, rye, barley, oats, sorghum, millet) helps reduce numbers. Eggs are protected by a gelatinous matrix so fumigation has limited effect.

#### 2. Lesion nematodes

- Main species in Ontario: Root lesion nematode (*Pratylenchus penetrans*)
- Host Range: Very wide host range. Unlike root-knot nematode, root lesion nematodes will feed on cereals and in particular corn. Potatoes, carrots, tomatoes and soybeans are considered very susceptible but most vegetables can be infected.
- Life Cycle: Migratory nematode which feeds extensively through the roots and lays eggs as it goes. Re-enforced blunt head and strong stylet (feeding needle to poke and feed on plant cells) allow it to enter and feed on most plant roots.
- Symptoms: Stunted roots with brown lesions and black areas that pinch off. Stunted, stressed plants which can die early. The root lesion nematode is often involved in disease complexes such as Potato Early Dying (*Verticillium spp.* and root lesion). Root lesion feeding damage provides an entry for disease in a synergistic relationship.
- Management: Fumigation can be used to reduce numbers. Crop rotation is important although host range is wide. Sorghum sudangrass and pearl millet have been shown to reduce populations as have Brassicas grown for

biofumigation.

#### 3. Cyst nematodes

(Heterodera carotae)

- Main species in Ontario:
  i. Soybean cyst nematode
  (Heterodera glycines)
  ii. Sugarbeet cyst nematode
  (Heterodera schachtii)
  iii. Carrot cyst nematode
- Host Range: very specific to the species
- i. Soybean cyst nematode:beans and some weedsii. Sugarbeet cyst nematode:sugarbeet, table beet, spinach,swiss chard, Brassica crops.iii. Carrot cyst nematode: carrots
- Life Cycle: Generally, females feed on roots and swell into an enlarged cyst filled with hundreds of eggs. The cyst hardens and protects the eggs. Eggs can stay dormant for years until they hatch in response to host plant root exudates.
- Symptoms: Similar to rootknot nematode damage except instead of galls, there are cysts. Hairy root appearance from multiple secondary roots. Above-ground symptoms are stunted plants.
- Management: Since cyst nematodes generally have a specific host range, breeding genetic resistance is the key management tool for these nematodes. This also means crop rotation is generally

effective if the rotation is long enough. Eggs are protected by the female cyst so fumigation has limited effect.

#### 4. Stem and Bulb nematode

- Main species in Ontario: Stem and bulb nematode (*Ditylenchus dipsaci*)
- Host Range: Alliums (onions, garlic, leeks, chives), carrots, peas, beans
- Life Cycle: This nematode is usually found in the above-ground parts of the plant. Even when the nematode is in the soil, it is usually found in the top one to two inches of soil.
- Symptoms: Sometimes called the bloat nematode, this nematode feeds on the basal plate causing plants to split and grow erratically.
- Management: Using clean seed is crucial to prevent introduction into the field. For garlic this is critical as infested cloves used for planting stock allow numbers to build exponentially. Fumigation can be used to reduce numbers.

Dennis Van Dyk is a vegetable crop specialist for the Ontario Ministry of Agriculture, Food and Rural Affairs.

#### **BITS AND BITES**

## Nexus Robotics receives funding

Halifax-based Nexus Robotics has received \$550,000 in federal funding to commercialize the startup's weed-picking robot called "La Chevre." Translation: the goat!

The autonomous weeding robot can weed farmers' fields 24 hours a day, seven days a week. Since the robot can accurately weed all day without harming crops, it may eliminate the need to use pesticides or seasonal labour to get rid of unwanted plants. The startup was founded in 2017.

A new prototype named "La Chevre" is able to navigate and remove weeds autonomously. It uses cameras and a neural network to differentiate between

weeds and crops.

The investment was provided through the Atlantic Canada Opportunities Agency's Regional Economic Growth through Innovation program, which helps businesses adopt innovative technologies that support scale-up, productivity, and competitiveness. Funds from the investment will be used to make additional hires and undertake field trials of Nexus Robotics' technology.

"This funding will accelerate the growth of the company and allow farmers to see the benefits of this technology sooner," said Teric Greenan, COO of Nexus Robotics.



### **Bayer launches trials to address ToBRFV**

Bayer is launching the final largescale, pre-launch trials of Roma-type tomatoes to help growers address Tomato Brown Rugose Fruit Virus (ToBRFV). The trials in Mexico will include two varieties of Roma-type tomato that claim Intermediate Resistance (IR) to ToBRFV. The type of IR Bayer has seen in these varieties is commonly referred to as the "symptomless carrier," where, despite the presence of virus particles, the crop can show little or no symptoms of the virus in the leaf and/or fruit should the crop become infected by the virus. Adding ToBRFV in the pathogen list for tomato was discussed during a

September meeting of the International Seed Federation.

ToBRFV was first observed in 2014 and spread rapidly to different world areas. This viral disease impacting tomato plants represents a challenge for the industry as it can be transmitted very easily through many vectors including farming tools and equipment, workers' hands, plants, water, soil, and people.

"ToBRFV can quickly devastate tomato crops, so Bayer worked to develop a product to help growers combat it," said JD Rossouw, head of Bayer's Vegetable Seeds R&D. "Bayer leveraged global crossfunctional teams and extensive

research and development pipeline to offer a solution designed to ease the day-to-day challenges faced by growers. Our research continues across several tomato species with the goal of bringing further innovative resistance to growers as quickly as possible."

Following the trials, Bayer anticipates the products will be available for commercial sale in Mexico in 2021, to later be followed by offerings in other important markets around the world.

Source: Bayer September 15, 2020 news release



## All boots on deck for BC cranberry harvest

September 15 kicked off the BC cranberry harvest for the fresh market. During the next few weeks, BC's cranberries will be seen floating in the bogs around the Lower Mainland and Vancouver Island.

"It's great to see another harvest underway, knowing our producers have put in lots of hard work to grow another excellent crop," says Jack Brown, chair of the BC Cranberry Marketing Commission.

He suggests that farm-fresh cranberries can be purchased from local grower vendors: Riverside Cranberries, Glen Valley, YellowPoint Cranberries, Coast Cranberries, Bremner Cranberries, Pacific Cranberry or Maybog Farms.

Pacific Canadian Fruit Packers has 25 lb packages that you can freeze or can. Another option is to buy BC-grown Ocean Spray brand cranberries in the local supermarket just in time for Thanksgiving. Cranberries are available year-round and are used in both sweet and savoury foods, snacks, beverages and more.

Look for new recipes at www.bccranberries.com.

This year the Commission is hosting an Online Cranberry Recipe contest. Submit your favourite recipe by the deadline of September 30th.

Contest link is below: https://black-pressdeals.secondstreetapp.com/Cran berries-BC-Culinary-Contest-2/
The BC Cranberry Marketing
Commission (BCCMC) has been a part of BC cranberry farming since
1968. The BCCMC regulates in any and all respects, the transportation, processing, packing, storage and marketing of any variety of cranberries grown in the province of British Columbia.

Source: BC Cranberry Marketing Commission September 16, 2020 news release



## Biological control to be used in potatoes, garlic

Sylvar Technologies Inc. is introducing a new biological control to manage common scab in potatoes and basal root rot in garlic.

AMYPROTEC 42 is a Bacillus amyloliquefaciens soil-based fungicidal product. AMYPROTEC 42 develops a zone of root health around the emerging plant protecting it from pathogens such as common scab or basal rot. This zone is referred to as the "rhizosphere" and is the area into which new roots are actively growing.

Laura Forbes, product manager for Sylvar Technologies states: "I have been working with AMYPROTEC for three years in trials and have been impressed with the consistency in performance, especially during stressed periods of plant growth."

AMYPROTEC 42 is a liquid formulation, compatible with most common fertilizers and fungicides to provide for convenient application through the plant growth period.

Sylvar Technologies Inc. is a member of Andermatt BioControl, a leading global developer of biological solutions for growers. Based in New Brunswick, Sylvar is actively developing biological products for insect and disease control in agriculture and forestry markets.

For additional information, contact: Sylvar Technologies Inc. 1350 Regent Street Fredericton, NB 506-444-5690 or Market Director Colin Smith Csmith@sylvar.ca 519-373-6520

Source: Sylvar Technologies September 15, 2020 news release



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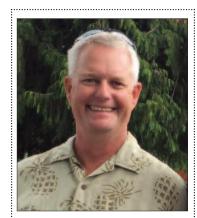
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#### **CROP PROTECTION**

### Apple scab, again



**HANK MARKGRAF** 

Apple scab! Something you would not expect someone from British Columbia to write about. You often hear us brag about how warm we are, how dry we are, and how apple scab is not something we even worry about. Sure, we put on the odd spray here and there, but scab? No, that is an eastern problem.

Well, 2020 seems to have different ideas on how we now farm. 2020 has turned everything upside down for apple growers across the country. From sales and marketing, acquiring and retaining labour and pest and disease management.

For apple growers out west, a normal apple scab and powdery mildew program consists of pink and petal fall cover sprays, followed by watching the weather and spraying if required for the occasional scab infection period. The southern regions may have one additional spray and the northern regions may put on two or three following their petal fall spray.

This year, out west, there were scab infection periods on top of scab infection periods. June was one of the wettest months on record!

Growers were not prepared for the onslaught of rain after rain. And, when you are not prepared, you miss a spray and then you run out of effective control days. SCAB!

The apple scab disease has been well studied over the years. Weather monitoring along with well designed models have been used for years to predict when a scab infection period has occurred. These models have now become standard for apple growers to observe. Several agricultural monitoring

machines have been developed, from the old horse hair time clock with a maximum and minimum thermometer beside to sophisticated electronic weather monitoring machines, complete with electronic temperature recorders, digital leaves, wind speed and direction, etc., taking measurements every minute, cellularly connected to the world. Growers have no excuse to say they did not know there was a scab infection period. What you do with this information is, however, the difference in having apple scab

Growers out west have not seen this much scab on their apples since the loss of dodine. Yes, that was a long time ago! Lessons learned about keeping up with scab sprays and monitoring weather have been lost by the long-time farmers, newer growers have never been through a situation like this and must now learn to be mindful of changing weather conditions. Knowing what the models are predicting in or near your orchard has never been so easy.

Here in British Columbia, the BC-Decision Aid System (BC-DAS) has several weather monitoring stations up and down the valley(s), running all sorts of models including Apple Scab. Growers have the ability to log in anytime of the day or night from their computer or smart phones and get up-to-date information on what is happening.

Is there or was there a scab infection period, how many hours ago was the infection or how many hours until a scab infection period occurs, are only a matter of a few keystrokes or swipes of the fingers to find. Heck, while you are online, might as well see what the leafroller model is saying too!!

Armed with knowledge is one thing, spraying and controlling are another. When we lost dodine all those years ago, growers had to relearn how to control apple scab with a protectant model approach instead of just using an eradicant approach. Back then there was a long list of protectant scab sprays that could be used, re-applied every

seven days, kept you covered and within a year or two, you had cleaned up your scab problem.

Time and re-evaluations have moved along. Many of those broad-spectrum protectant sprays are now gone, leaving growers with very targeted scab control products.

These products work well, however, without proper rotation, resistance builds and could render the product ineffective. Switching from one chemical class to another is not as easy as one thinks when controlling apple scab. A few sprays are now formulated containing two chemicals in two different chemical classes, making it even harder to switch between classes.

So, as we go into 2021, full of hope, we will have to reeducate ourselves on how our current list of apple scab sprays work. Is the spray I am wanting to apply a protectant or an eradicant spray? How long will it last? Is it compatible with whatever else I am applying today? What Fungicide Resistance Action Committee (FRAC) number is it and is the next one I plan to spray different from this one? How many applications per season can I use this? What are the restrictions or limitations to this spray?

Lots to think about, lots to learn about. Armed with this knowledge, I find writing out (usually done on spreadsheet) a basic control program from ½" green to four weeks past petal fall is a good starting point.

Changing up FRAC numbers and seeing how many days you can go between sprays is easily done on paper. You can even add in your other control products for insects at this time giving you a complete spray program for the season.

Review this program with your trusted crop advisor, adjust the plan if required and know you will be ready for the upcoming season. Plans change all the time, but having a starting point is always reassuring.

And finally, we will continue to have products re-evaluated. Some apple scab sprays will remain, and we will lose some.





These Gala apples were identified with scab in July – nasty looking on the apples and leaves.

This will make controlling apple scab in the future more difficult. Your local minor use representatives work hard every year, keeping apple scab front and center.

As new chemicals, especially those with new novel ways of controlling scab are introduced, the chemical companies along with the minor use representatives from across the country work hard to get them into the registration stream.

Give the thumbs up next

time you see them!

Hank Markgraf, P. Ag, is a 35year veteran in the tree fruit business. He is a director on the board of the International Tree Fruit Association and operates Hank's Horticulture consulting business based in Kelowna, British Columbia.



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## **Cohort Wholesale enters Canadian marketplace**

There's a new player in the distribution of crop protection products: Cohort Wholesale. Based in Ancaster, Ontario, the company aspires to be a trusted Canadian wholesaler of preferred-position outdoor fruit and vegetable crop protection products.

Scott Hodgins, a 20-year veteran of the crop protection business, is heading up the new company.

"We are working with manufacturer partners to connect them with farmers where their products can improve fruit and vegetable quality," explains Hodgins. "Growers will already recognize many of the products we represent, and our partners have a number of new products in development as well."

Cohort Wholesale-represented products

currently include MilStop fungicide from BioWorks, OxiDate fungicide / bactericide from BioSafe Systems and Regalia Maxx and Stargus fungicides from Marrone Bio Innovations. Cohort Wholesale and its suppliers will be announcing additional wholesale agreements in the near future.

Hodgins explains that the company will be working with established distribution and retail channels to service all key horticultural markets, creating demand for and maximizing the in-field performance of suppliers' products to help farmers grow the best crops possible.

Image right: Scott Hodgins, Cohort Wholesale, introduces the company to a small group in the Ontario grape industry.



## Prism SG herbicide label expanded for grapes

JIM CHAPUT

The Pest Management Regulatory Agency (PMRA) recently announced the approval of a minor use label expansion registration for Prism herbicide for control of labeled weeds on grapes in Canada. Prism herbicide was already labeled for use on a number of crops in Canada for control of several weeds.

This minor use project was submitted by British Columbia as a result of minor use priorities established by growers

Crop(s)	Target	Rate (g/ha)	Application Information	PHI (days)
Grapes	Labeled weeds	60	Apply once as an early post-emergence to actively growing weeds. Use a recommended non-ionic surfactant. If banded, two applications per year can be made	21

and extension personnel.

The following is provided as an abbreviated, general outline only. Users should be making weed management decisions within a robust integrated weed management program and should consult the complete label before using Prism herbicide.

Prism herbicide is toxic to aquatic organisms and non-target terrestrial plants. Do not apply this product or allow drift to other crops or non-target areas. The use of this chemical may result in contamination of groundwater particularly in areas where soils are permeable and/or the depth

to the water table is shallow. Do not contaminate off-target areas or aquatic habitats when spraying or when cleaning and rinsing spray equipment or containers.

Follow all other precautions, restrictions and directions for use on the Prism herbicide label carefully.

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

Source: Jim Chaput, OMAFRA minor use coordinator, September 9, 2020

## Poast Ultra herbicide label extended for green onions

The Pest Management Regulatory Agency (PMRA) recently announced the approval of a minor use label expansion registration for Poast Ultra herbicide for control of labeled weeds on green onions in Canada. Poast Ultra herbicide was already labeled for management of grassy weeds on a wide range of crops in Canada.

This minor use proposal was submitted by Agriculture & Agri-Food Canada, Pest Management Centre (AAFC-PMC) as a result of

Crop(s)	Target	Rate (g/ha)	Application Information	PHI (days)
Green onions	Labeled grassy weeds	Maximum of 1.1	Apply up to 2 applications per year not exceeding a total maximum application rate of 1.1 L/ha per season. Allow a minimum of 14 days between applications	30

minor use priorities established by growers and extension personnel.

The following is provided as an abbreviated, general outline only. Users should be making weed management decisions within a robust integrated weed management program and should consult the complete label before using Poast Ultra herbicide.

Poast Ultra herbicide is toxic to aquatic organisms and non-target terrestrial plants. Do not apply this product or allow drift to other crops or non-target areas. Do not contaminate off-target areas or aquatic habitats when spraying or when cleaning and rinsing spray equipment or containers.

Follow all other precautions, restrictions and directions for

use on the Poast Ultra herbicide label carefully.

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

## Gowan acquires new active ingredient from Bayer AG

Gowan Crop Protection Limited has acquired global rights to the new active ingredient spirodiclofen from Bayer AG. The insecticide is registered in many countries for controlling mites in apples, grapes, pears, as well as other fruits, vegetables and tree nuts.

The acquisition includes product registrations and trademarks, including Envidor,

Envidor Speed, Ecomite, and related intellectual property and labels. The transaction closed September 1, 2020, although Bayer and Gowan will work together over the next several months to facilitate an orderly transition to maintain quality customer service in all geographies. The financial terms of the transaction were not disclosed.

Spirodiclofen is an IRAC Group 23 acaricide, which inhibits lipid biosynthesis in a wide spectrum of mites, including the Tetranychidae, Eriophyidae, Tenuipalpidae and Tarsonemidae families. It is active against all life stages of mites, including eggs, nymphs, and female adults, providing both an initial "knockdown" effect as well as excellent



residual control. In addition, the product also controls some insect pests such as psylla (*Cacopsylla pyri*), scale (*Lepidosaphes ulmi*) and some leafhopper species. Spirodiclofen has active registrations in many markets

around the globe, primarily in horticultural crops such as citrus, apples, avocados, grapes, pears, as well as other fruit, vegetables and tree nuts.

Source: Gowan Company September 1, 2020 news release

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