

Prince Edward Island

July/August 2022

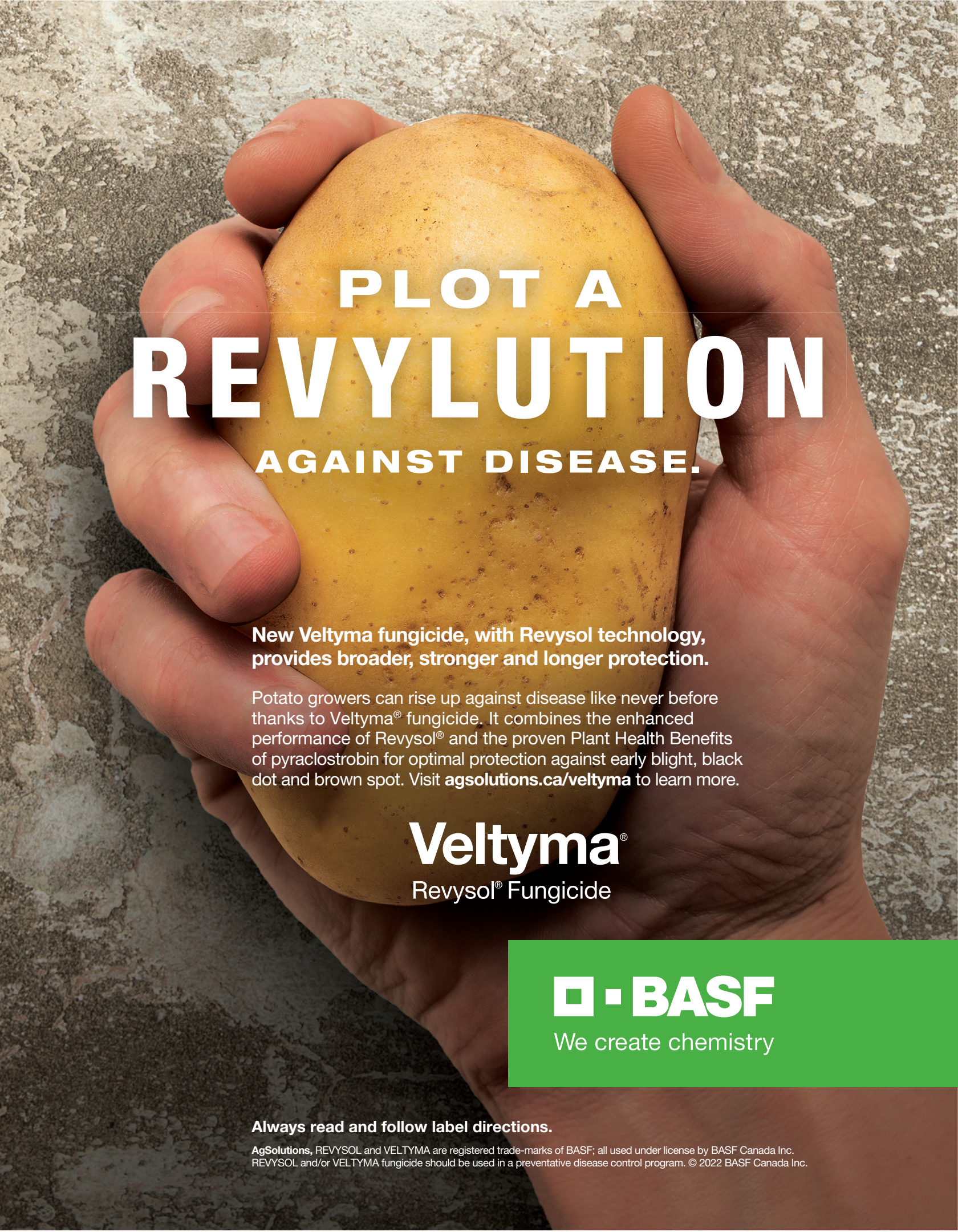
Volume 23 Issue 4

POTATO NEWS

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- Acreage Estimates
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POTATO NEWS

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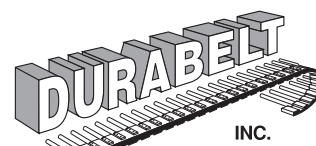
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Cover: The third weekend in July in Rollo Bay on the eastern end of Prince Edward Island.



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Chairman's Comments

by John Visser, PEI Potato Board Chairman



Not surprisingly we have seen a drop in planted acres in PEI in 2022. We know that seed acres are down slightly as a result of Ministerial Order restrictions on seed movement out of province and fresh production is likely down as a result of a combination of factors - high input costs, uncertainty due to potato wart and some growers leaving the potato industry. To date, the season has been very favourable for potato growth and plants have filled the drill and are in flower. However, we are a long way from the warehouse yet, so it is too early to speculate on what the 2022 crop will be like when all is said and done

Canadian acreage estimates can be found in the United Potato Growers of Canada report on page 8. Reductions in acreage in Atlantic Canada and Ontario are balanced by increases in Quebec and the western provinces leaving the estimate of Canadian acreage relatively flat. American acreage estimates were a bit surprising with a significant reduction in Idaho and an overall decrease of 3.5%. These cuts seem to be a reflection of high input costs and the attractive pricing of alternative crops.

There are several activities moving head on the Potato Wart front. A steering committee with representatives from AAFC, CFIA, the PEI Potato Board and the PEI Department of Agriculture and Land are overseeing several areas of work:

- Evaluation of need in the area of science and research - looking at items such as screening new varieties for resistance, pathotyping, determining the viability of spores found through soil testing, and other research needs.
- A review of the Long Term Management Plan.
- The visit of an International panel to review the potato wart situation and actions taken to date. The goal is for the panel to provide an objective view on the potential

for pest free designations of areas within PEI.

A consulting firm has been engaged by the PEI government to undertake a study that examines the impact of potato wart on the PEI economy and aims to develop potential adaptation strategies for the industry. This project was reviewed and fully endorsed by the Potato Board of Directors. We will be working together with the consultants to get the most from this project. We encourage you to be involved and informed throughout the process.

The Potato Board has worked closely with our Provincial government right from the start of the wart crisis. Bloyce Thompson was an excellent Agriculture Minister and a great support for farmers. On July 15, 2022 Minister Thompson was moved from being Minister of Agriculture and Land; Justice and Public Safety to Minister of Economic Growth, Tourism and Culture. We will miss working with him. The Potato Board is looking forward to getting to know our new Minister of Agriculture and Land; Justice and Public Safety Darlene Compton and working with her in her new role.

Other industry activities that are ongoing:

- Consultations in preparation for the next National Research Cluster application for potato research projects to take place from 2023 to 2028.
- Seed Regulation Modernization process - a certification task team has completed its work and will be submitting recommendations to the Seed Potato Modernization Working Group. Other task teams on topics including Variety Registration, Field Inspection, Grade standards, etc. will be moving ahead beginning in August and over the fall and winter of 2022-2023.
- 2022 field days - watch your email for updates on several field days that will be taking place in late August and early September.

I hope that you take time to enjoy the PEI summer with family and friends before we get ready for the 2022 harvest. Stay safe.



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PEI Potato Board News

Kevin MacIsaac Honoured as He Retires from the United Potato Growers of Canada After 10 Years of Service

Kevin MacIsaac, who has been General Manager of the United Potato Growers of Canada since October 1, 2011 retired in June 2022. MacIsaac's diversified career over a 42 year timespan includes dedicated service as an extension agronomist, farmer, industry organizer and a knowledgeable and eloquent advocate.

The General Manager's work over the past decade leaves the United Potato Growers of Canada in good shape



A presentation was made to Kevin MacIsaac (right), retiring General Manager of UPGC, by Ray Keenan, Chair of UPGC, at the United Potato Growers of Canada meeting at the Transition Conference in Minneapolis in early June 2022.

- a strong credible organization, with members across the country. UPGC was founded in 2006 with the mission of providing timely information allowing growers to make informed production and marketing decisions. It works with its sister organization, United Potato Growers of America, which has similar goals.

MacIsaac was hired by the organization ten years ago to increase its capacity for determining the available supply of potatoes for fresh, seed and processing markets. Kevin was also a well-known participant on national and international potato organizations, and spoke at grower meetings across the country. One of the highlights of his job was the development of a strong, mutually respectful working relationship with counterparts in the United Potato Growers of America and their grower membership.

Kevin began his profession after graduating from the Nova Scotia Agricultural College and the University of Guelph, becoming an extension agronomist with the New Brunswick Department of Agriculture. Subsequently, he and his brother Blair operated Lily Pond Farms Ltd., a family farm business in Bear River, Prince Edward Island. He has been involved with many farm organizations including Chair of the PEI Potato Board, Chair of the PEI Soil and Crop Improvement Association, and Director of the PEI Potato Processing Committee.

Ray Keenan, Chair of the United Potato Growers of Canada said, "We always appreciated the experience Kevin brought to the table. His knowledge of our industry and his ability to communicate with growers across the country were very strong attributes. We thank him for all his work, and wish him well in his future endeavors." With some additional free time, Kevin hopes to spend some more time with his 6 grandchildren and continue his hobby of being a runner, having run in his first Boston Marathon last spring.

Summer Visitors to PEI

Prince Edward island is an especially beautiful place in the summer months and attracts many tourists as well as business visitors.

So far in 2022, potato industry reps have had a chance to meet with a variety of visitors to our province.

Both Pierre Poilievre and Jean Charest, Conservative Party of Canada leadership candidates visited the province this spring and met with potato industry representatives to talk about the industry in general and current concerns.

Victoria Stamper, the new General Manager of the



Conservative Party of Canada Leadership candidate Jean Charest (left) and his wife Michèle Dionne (right), meet with Potato Board Chairman John Visser and General Manager Greg Donald during an early summer visit to PEI.

United Potato Growers of Canada spent several days in PEI to meet with people in various sectors of the PEI industry.

AAFC and CFIA hosted a visit from Jenny Moffitt, Under Secretary of Agriculture for Marketing and Regulatory Programs, USDA. She was accompanied by Dr. Mark Davidson the new Deputy Administrator for Plant Protection and Quarantine (PPQ) who was appointed on May 10, 2022. He had been acting in this position since Dr. Osama El Lissy retired in January 2022. Potato industry reps had an opportunity to meet the delegation while they toured Vanco Farms, a potato growing and packing operation in Pownal, PEI.

Thank You to Islanders

To thank Islanders for their tremendous support this winter, we have undertaken a campaign to show our thanks this spring and summer. In partnership with the Province and ADL, we gave away free food in giveaway events in Charlottetown, Stratford, Montague, Elmsdale, and Summerside in late-May. Participating Islanders received a free 10 lb bag of potatoes, milk, and cheese at all of these locations. We've continued our partnership with Stingray radio and sponsored the Stingray Farm Crew summer promotion this summer. Through this promotion we have been running radio ads throughout the summer on Stingray channels Ocean 100 and Hot 105.5 featuring our Chairman



All kinds of folks picked up potatoes, milk, and cheese at the food give away events in late May 2022.

John Visser thanking Islanders for their support this winter. In July, we took out full page thank you ads in the Journal Pioneer and Guardian. We also took out half-page ads in the Island Farmer, West Prince Graphic, and East Prince Graphic. Our sponsorships of Tell Tale Harbour, Inside American Pie, the Under the Spire Festival, and others have also helped us give back to Islanders and share our thanks for the support we have received. We have plans for a social media video with growers thanking Islanders, and we are still waiting on more submissions from growers. If you are interested in participating please contact Mark Phillips at the Board Office.

CanadaGAP Program Fee Increase

July 29, 2022 - Effective September 1, 2022, the annual program fee for program participants enrolled in all certification options will increase by 5%, rounded to the nearest \$5.

The increase will be reflected the next time program participants are invoiced by CanadaGAP on the anniversary of their enrolment.

The increase in the annual program fee is necessary to cover growing costs related to program delivery, including rising insurance premiums, administration and staffing, self-assessment and random audit fees, etc.

The fee increase will take effect on September 1, 2022. Invoices generated on or after September 1, 2022, will be as per the new rates. Please note that program participants not due to be invoiced until September 1 or later, cannot prepay the annual program fee at the rate in effect prior to September 1, 2022.

If you have any questions or require additional information, please contact the CanadaGAP office at 613-829-4711 or info@canadagap.ca.

Canadian Potato Council and Seed Potato Subcommittee Summer Meetings

PEI Potato Board representatives travelled to Toronto in July to attend Canadian Potato Council Meetings on July 25 and 26, 2022. Travelling went smoothly and it was good to meet with provincial counterparts in person rather than through virtual means.

The Seed Potato Subcommittee met on Tuesday evening. During provincial updates a key concern highlighted by every province was the increase in input costs. Consensus across areas was that seed growers will need to see price increases similar to those realized by process growers in 2022 processing contract settlements. Other topics reviewed during the the meeting included:

- An update on the progress of the Seed Potato Regulation Modernization Initiative.
- BRR testing requirements for seed growers.
- Updates on PCN and Potato Wart programs.
- A new commercialization proposal from the AAFC breeding program for the fresh sector.

The Canadian Potato Council Meeting took place on Wednesday, July 26. Some key items on the agenda included:

- Progress and current status of the Potato Grade Standards Modernization Process.
- An update from the Research Working Group on the selection process for projects that will be included in the application for the next cluster for potato research from 2023-2028.
- A report from the Crop Protection Committee on the status of several product re-evaluations in progress.
- Updates on APRE and the Potato Sustainability Alliance.
- Updates from CFIA on several topics including the Potato Wart Investigation, the International Panel that will be visiting PEI in August and the plans for the 2022 National Potato Wart Survey.

The next CPC meeting will be held in late November 2022.

Fresh Faces

Fox Island Elite Seed Potato Farm is fortunate this year to have several young people working with our more experienced staff for the summer. We benefit from their enthusiasm and tech skills and they have the opportunity to learn skills associated with elite seed potato production and all the attention to detail that it requires.

Pictured below left to right: Sarah Slater, recent UPEI science grad; Jake Adams, second year on our farm crew; Flora Jane Gallant, recent grad of the Holland College BioScience Program; and Mitchell Perry another second year farm crew member.



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2022 Estimated Canadian Potato Plantings (Acres)

Source: Statistics Canada Table 32-10-0358-01

Province	2016	2017	2018	2019	2020	2021	2022	Change
Newfound land	350	350	350	325	325	325	300	-8%
Prince Edward Is.	87,000	84,200	86,000	85,500	83,600	86,000	80,500	-6.4%
Nova Scotia	1,774	1,700	1,600	1,600	1,200	1,200	800	-33.4%
New Brunswick	47,630	51,700	52,000	52,900	48,540	53,000	51,800	-2.3%
Quebec	41,761	42,255	41,956	43,508	45,924	46,886	50,748	8.2%
Ontario	34,800	35,400	34,000	34,027	36,500	38,325	37,180	-3.0%
Manitoba	65,914	62,900	64,100	70,000	71,500	78,000	79,500	1.9%
Sask.	6,900	6,500	6,300	6,300	6,000	6,200	6,000	-3.2%
Alberta	52,986	52,483	55,645	61,235	59,677	68,450	72,300	5.6%
British Columbia	7,250	6,500	6,600	6,700	6,500	6,500	6,000	-7.7%
Total Canada	346,415	343,988	348,551	362,095	359,766	384,886	385,128	0.06%

July 15, 2022 - Statistics Canada released their first estimate of potato acreage in Canada as a result of data obtained from their survey of potato growers in Canada.

The 2022 potato acreage is estimated at 385,128 acres. This is almost flat compared to 2021, only 242 acres more than last year. In 2021 acreage had seen a big increase over 2020, and even the pre-COVID year 2019, predominantly in the major processing provinces, bringing supply back to meet demand increases in the industry that began pre-COVID. However, due to significant rises in input costs, fertilizer and fuel predominantly, coupled with increased holding levels in some of the Eastern provinces, we have seen reduced seeded acreage in 2022.

The largest acreage increase in 2022 was reported in Quebec, planting an additional 3,862 acres representing an 8.2% increase over last year. However, due to an overabundance of rain combined with cool temperatures throughout the planting season, Quebec has advised that this number may not likely be realized as harvested acres, similar to certain other regions across Canada.

The only other increases in acreage in Canada this year, although not as significant as in 2021, still occurred in the western provinces of Alberta and Manitoba. Alberta producers planted an additional 3,850 acres or an increase of 5.6%, not quite as high as the additional 7,823 acres in 2021. Manitoba growers planted an additional 1,500 acres or 1.9% above 2021.

The largest decrease in acreage in 2022 was not surprisingly found in PEI, a reduction of 5,500 acres, a drop of 6.4%. With seed movement to other provinces still blocked by CFIA, and greatly increased production costs, many farmers either moved to other crops where pricing and demand was more certain, or were simply not able, or not willing, to plant in 2022.

There were other decreases more significant in percentage, but not in actual acres, as the PEI decrease, namely a 33.4% drop in Nova Scotia equaling 400

acres; a decrease of only 25 acres in Newfoundland but that was an 8% decline in this region; and BC saw their seeded acres go down by 500 acres equating to a 7.7% drop over 2021. If we look at the data back to 2016, Nova Scotia and Newfoundland have been in a slight but steady decline, but BC has remained fairly steady with their decrease this year more related to heavy rains and cold temperatures during planting. With the added pressures of steep increases in costs this year and variable weather with climate change, and even generational changeovers, the reductions in these areas with smaller overall acreage may not be surprising, and do not have a large impact on the overall production of potatoes in Canada.

Acreage in Saskatchewan, Ontario and New Brunswick all saw slight decreases in overall acreage compared to 2021, but were all still higher or at least equal to 2020 levels during COVID and still well in line with levels going back to 2016.

It is important to note that the acreage levels in the 2022 Canadian Potato Crop are not unexpected due to

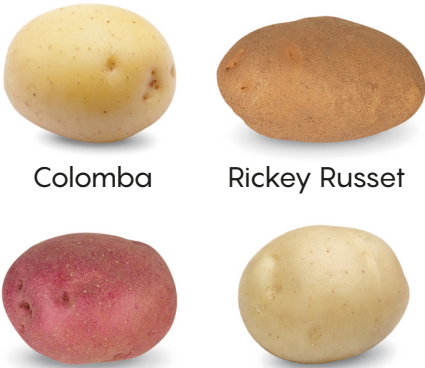
the current challenges in the industry including the sharp inclines in cost of production and the availability and cost of freight, and are reflected in areas that did have higher holdings from last season's good crop.

The UPGC relies on this data to provide further statistics on production, harvested acres, holding reports, etc. important to our industry, the continued diligence of both Statistics Canada to conduct the survey, and the growers who took the time to respond to it, is very much appreciated.

Our next opportunity for revision of these figures will be in December when the Canadian Potato Production Estimates are released by Stats Canada.

For more information please contact: Victoria Stamper, General Manager, United Potato Growers of Canada, victoria@unitedpotatocanada.com

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Recent Report from the Alliance for Potato Research and Education

New study illustrates that potato protein ingestion strongly increases muscle protein synthesis rates at rest and during recovery from exercise

The latest findings challenge outdated assumptions about the anabolic effects of plant-derived proteins

Exercise enthusiasts have long presumed animal protein to be superior to plant-derived options for muscle protein synthesis due to its essential amino acid profile. While many plant proteins are deficient in one or more essential amino acids necessary for optimal muscle growth and repair, a new randomized controlled study published in *Medicine & Science in Sports & Exercise* shows that plant-derived proteins can still induce strong anabolic responses. Researchers at Maastricht University, The Netherlands, found that consuming 30 grams of potato-derived protein concentrate following resistance exercise strongly increased muscle protein synthesis rates to levels that did not differ from the response following the ingestion of an equivalent amount of milk protein concentrate.

“The anabolic response to exercise depends on the exercise stimulus and the postprandial increases in circulating amino acids,” said lead study investigator Luc J.C. van Loon, PhD, a professor of physiology of exercise and nutrition at Maastricht University Medical Centre. “In general, plant-derived proteins are considered to have lesser anabolic properties, due to their lower digestibility and incomplete amino acid profile. Our results show that ingestion of 30 g potato-derived protein will support muscle growth and repair at rest and during recovery from exercise.”

The findings from van Loon’s research group demonstrate that potato-derived protein concentrate powder can be used to increase muscle protein synthesis rates both at rest and during post-exercise recovery in healthy, young men, at rates that do not differ from the ingestion of an equivalent amount of milk protein.

“The potato’s amino acid profile has no apparent deficiencies and ingestion of 30 g protein was shown to strongly stimulate muscle protein synthesis during recovery from exercise,” explained van Loon.

These study results are part of a growing body of literature that demonstrate the benefits of potatoes in physical activity and exercise recovery.¹⁻³ As van Loon explained, “Although further dose-response studies in

broader populations are undoubtedly necessary, these data seem to support the use of potato-derived protein concentrate as an effective means to support muscle conditioning.”

Study Design, Strengths, and Limitations

Twenty-four young, healthy males between the ages of 20-28 years volunteered to participate in this randomized, double blind, parallel group study.

Participants completed resistance exercise on a seated knee-extension machine (randomized to complete with either their dominant or non-dominant leg) following a warm-up on a supine leg press machine.

Participants rested for 10 minutes following their exercise session. Blood samples were drawn, and muscle biopsies were taken from each leg.

Immediately after the biopsies, 12 participants ingested 30 grams potato-derived protein while the other 12 ingested an equivalent amount of milk-derived protein.

Blood samples were collected over a 5-hour period following ingestion to determine blood amino acid, glucose, and insulin concentrations.

Second and third muscle biopsies were taken to determine muscle protein synthesis rates at rest and during recovery from exercise.

The strategic use of a randomized double-blind study design with a unilateral exercise protocol allowed for assessment of postprandial muscle protein synthesis in both exercised and non-exercised muscle. Further studies will need to assess dose-response relationships between smaller and larger doses of protein on muscle protein synthesis. Future studies will also benefit from assessing the effects of plant-derived protein concentrates on muscle conditioning after repeated bouts of exercise in larger and more diverse populations.

Nonetheless, the current data show “there is ample room for high quality plant-derived proteins in sports nutrition, such as protein from nutrient-dense sources like potatoes,” stated van Loon.

This research was supported by the Alliance for Potato Research and Education (APRE). APRE had no influence on the study design, conduct, execution, or data analysis after approving the initial proposal for funding.

The article "Potato Protein Ingestion Increases Muscle Protein Synthesis Rates at Rest and during Recovery from Exercise in Humans" is published in Medicine & Science in Sports & Exercise (10.1249/MSS.0000000000002937).

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Fall Promotions for PEI Potatoes

by Mark Phillips,

Our summer promotion line up is currently in motion with Tell Tale Harbour, Inside American Pie, Under the Spire Festival, and the Stingray Farm Crew Sponsorship underway among other summer events.

Tell Tale Harbour has been the fastest-selling show in Charlottetown Festival history and has been getting glowing reviews. We thank the folks at the Confederation Centre for featuring us prominently in the premiere and taking the time to give a sincere shout out to our growers at every performance. If you have not seen the show, we highly encourage you to go!

With the summer's successes already underway, more exciting things will be happening this fall. Firstly, we will celebrate the launch of Canada's Food Island Cookbook on September 8th with a Fall Flavours event hosted by renowned Island Chef, Michael Smith. Through collaboration with the Food Island Partnership marketing group, we helped create an exciting new book highlighting all things culinary on Prince Edward Island. The event will take place at the Carriage House in New London, and all visitors will receive

a copy of the cookbook in hardcover. The book features nearly 100 inspired seasonal recipes alongside homegrown stories and beautiful photographs of the Island; it is bound to become a staple in your kitchen and a cherished reminder of PEI's unique food culture.

Recipes from the book will be featured in the outdoor action stations. Key Island products will be featured during the evening, including oysters, mussels, lobsters, Island beef, and PEI Potatoes. We will feature the one-of-a-kind PEI Potato Charcuterie Board. Guests will also have a chance to get their cookbook signed by Chef Michael Smith and any other guests who may appear. A portion of ticket sales for the cookbook launch will go to PEI Food Banks, and all royalties from cookbook sales will also be donated to PEI Food Banks.

In September we are also excited to welcome back the PEI International Shellfish Festival for its 25th anniversary. The festival will feature a variety of celebrity and local chefs, oyster shuckers, fishers, junior chefs and bartenders competing for over \$22,000 in cash prizes. Festival-goers will experience the largest shellfish celebration in the smallest

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Canadian Province. The three day festival is jam-packed with live competitions, Eastlink kitchen parties, celebrity chef culinary demonstrations, and a chance to indulge in the world's best shellfish. We will return as the PEI Potato Chowder Championship sponsor on September 17th and 18th.

Toe Taps and Taters, another Fall Flavours event, will return on September 24th after a 2-year hiatus. We are returning to Sherwood Produce's Canoe Cove location to offer attendees a full on-the-farm experience. The potato gets center stage at this spud-centric celebration hosted by guest Chef Michael Hunter and catered by local Chef

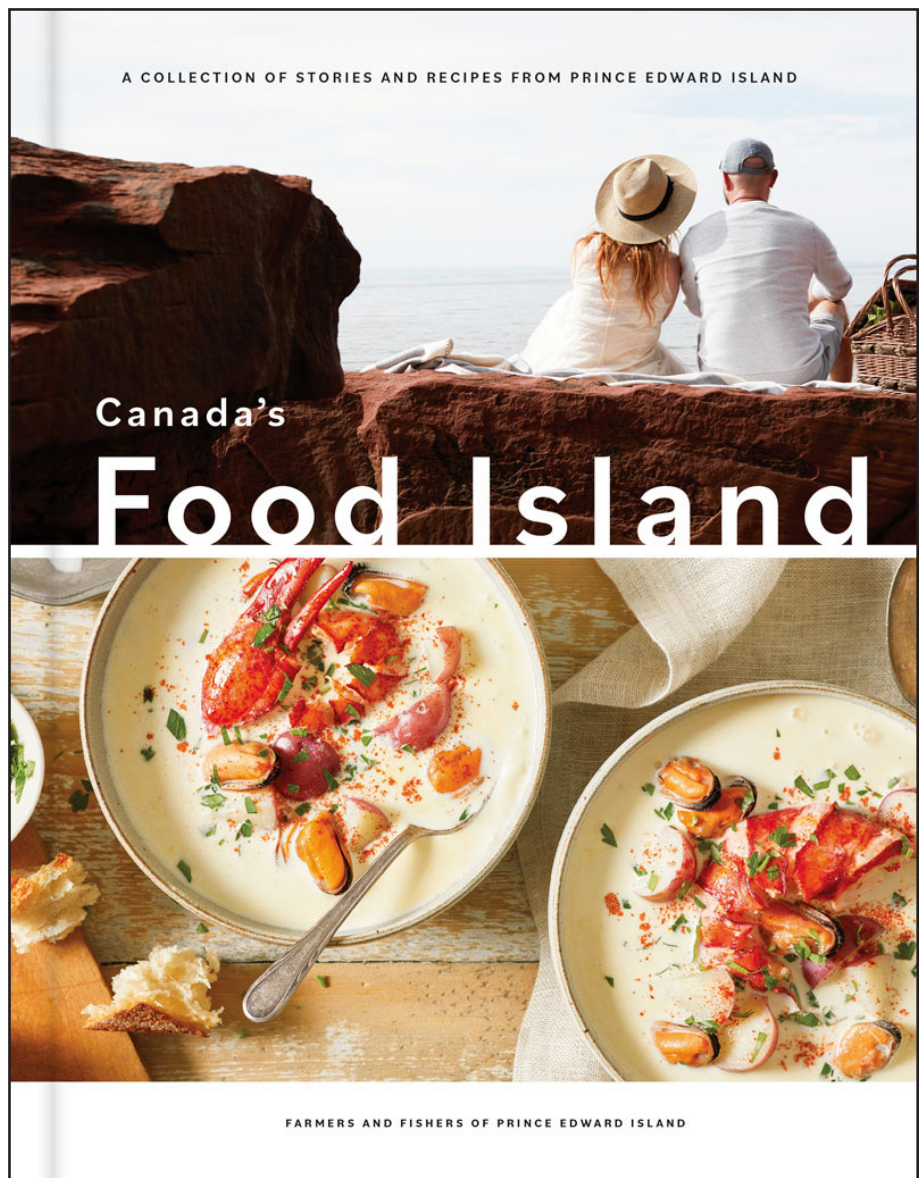


Terry Nabuurs. Host Chef Michael Hunter is a well-known hunter and respected wild-game chef. Hunter grew up in the great outdoors and was inspired by the endless bounty of the land, hunting, fishing, foraging, and considers cooking a way of life. He produced the Hunter Chef Cookbook in October of 2020. He is also the owner of the Antler Kitchen and Bar, which celebrates the wild, culinary delights of Canada. Filled with delicious food and local live music, Toe Taps & Taters is a 'must' for anyone who loves PEI Potatoes.

With the success of the Fill Your Boots Giveaway this winter, initiated by local potato growers across the Island, we are planning a pilot of a "Fill Your Boots – Field Edition" where Islanders are welcome to come to a predetermined field and pick their own bag of potatoes. We currently have a time-lapse camera keeping an eye on the progress of the field and if all goes well, we will present the video during the event. More details will be available as they come together. We thank Randy Visser and the folks at Gerrit Visser and Sons for collaborating on this project. This will take place in conjunction with Open Farm Day on September 19th. Approximately 20 Island farms will be opening their doors to the public to help them better understand what happens at the farm gate.

The fall season concludes with a warm welcome back to Farm Day in the City for its 13th year on October 2nd. This celebration of farming could not be held for the past two years due to COVID restrictions. The fan favourite event is a great way to interact with Islanders and inform them about the how and why of our farming practices. The 2019 event welcomed over 15,000 visitors. We will have the Cavendish Farms Fry Truck, interactive displays, photo booths, and more. If you are able to volunteer, it is a great way to promote our industry to the general public.

Our 2022 marketing plan will be underway beginning this fall after plans were interrupted in 2021. We plan to continue to promote our Virtual Reality videos, upgrade some of our digital media and website, and continue to build on relationships with retailers and brand placement. We also plan to give another boost to our successful Made to Enjoy video and get our eyes back in front of consumers. Exciting things to come!



Irrigation Management

Agricultural irrigation use is slowly increasing in a managed way on PEI and as use increases growers are learning to use some of the tools that contribute to irrigation use efficiency. In 2020, an article by Stephanie Arnold and Dr. Xander Wang of the UPEI Climate Lab (*PEI Potato News* Vol 21, Issue 5) explained how the use of drones and remote sensing technology can contribute to irrigation efficiency using precision agriculture maps.

The East Prince Environmental Association has also been very active at evaluating tools that will help their growers in this area. The climate and rainfall in PEI can vary considerably from one community to another and even within a field. The East Prince Group has been monitoring soil moisture for several years and the project described below is helping them to put this data to use in real time.

NEWSLETTER A Soil Health Moment



To Irrigate or Not To Irrigate



Weather stations that reach out to potato growers in real time!

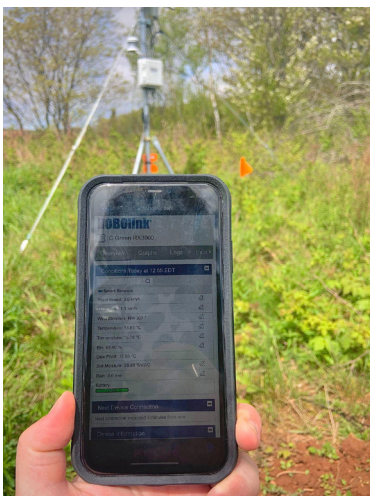
With the ongoing question of when to irrigate and when not to irrigate and with so many little climatic areas, the potato growers from the East Prince Agri-Environment Association took it upon themselves to install four weather stations in pre-established locations. There has been a history of unpredictable and varying amounts of accumulated rainfall in different locations. As a result, there's an ongoing question of when to irrigate.

To try and deal with this issue, a new pilot project was started across two adjacent potato fields. In this project, four HOBO RX3000 weather stations with cellular capability were installed. Powered by solar panels, these HOBO RX3000s are equipped with ten ports that allow the potato growers to monitor different parameters. They are able to closely follow soil moisture and rainfall, two high priority data points for potato growers. In addition, wind speed, gust and direction probes were also installed, along with air and soil temperature and humidity probes.

With everything in place, the growers were given a website, where they could communicate with the RX3000 and receive real time data. The data can be compiled to show daily, weekly or even monthly trends, and is available in either graph or text format. The growers can also receive the information via email.

This technology has proved to be very useful; it's allowed growers to make quick decisions on how best to change their farming practices to match the weather patterns: for example, whether To Irrigate or Not To Irrigate their crop.

In addition to more information on the crops themselves, the RX3000 enables the growers to be more efficient, both by cutting down travel time to their fields, but also on the amount of resources used in their Irrigation program.



Brian J. Murray
Environmental Technician

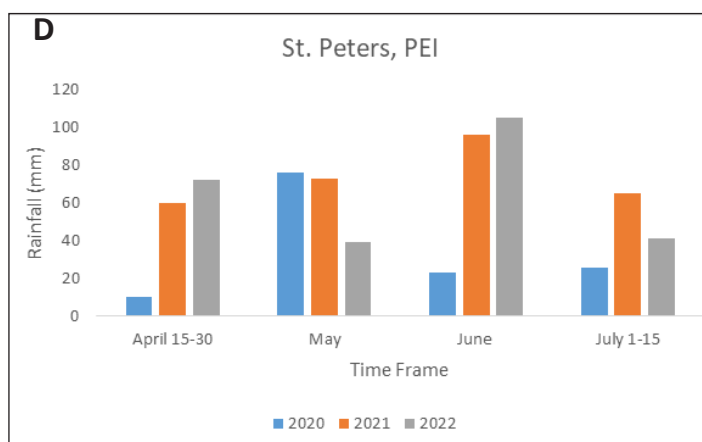
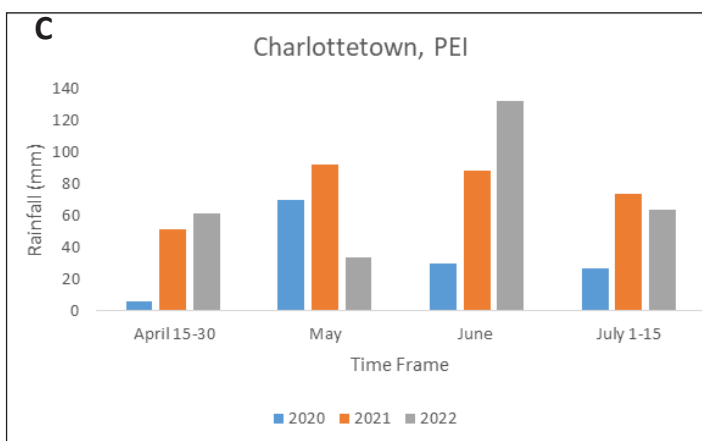
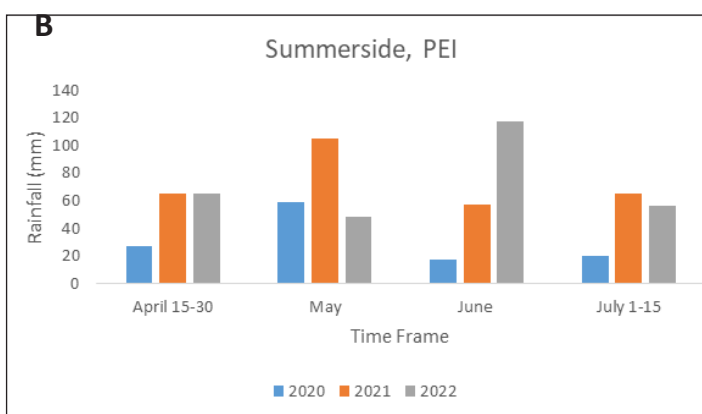
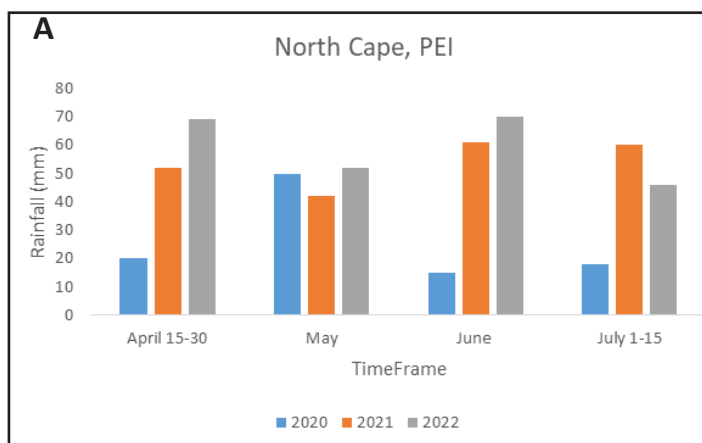
Rainfall Summary: April 15 - July 15

Weather Report Spanning April 15- July 15 for Three Consecutive Growing Seasons

by Morgan McNeil, Junior Agronomist, AIM

Figures A to D (right) show the rainfall accumulations from April 15- July 15 for each of three consecutive growing seasons at four locations across PEI. This time-span in the 2020 growing season was generally the driest (particularly during June and July) compared to the same timeframe in 2021 and 2022. The province of PEI experienced drought conditions during the 2020 growing season. This was followed by an excellent growing season in 2021 with plentiful rainfall to grow a crop of potatoes. Much of PEI experienced lower rainfall in May this year allowing timely planting. The growing season is off to a great start so far, with sufficient rainfall amounts, in June and early July which has helped the crop grow well to date. The 2022 potato fields look very healthy, with thick green canopies, low weed and low pest pressure. We will see what August and September have in store.

Reference: Government of Canada. 2022. Daily Data Report. Available Online: https://climate.weather.gc.ca/climate_data/daily_data_e.html?StationID=10800 [15 July 2022].



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**WORLD POTATO
CONGRESS**

by Mary Kay Sonier

The PEI Potato Board, with the support of the AAFC AgriMarketing Potatoes Canada project, was pleased to have a booth at the 2022 World Potato Congress in Dublin, Ireland.

As we all know, Ireland has a long history with the potato and the potato famine or 'Great Hunger' was a pivotal moment in the history of the country. Although potato acreage in Ireland now is well below what it was in the early 1800's, they currently have a very diverse industry with seed potatoes, crisp manufacturing, starch production, fresh production and fresh packers. The industry came together and put on an impressive Congress agenda for their international visitors.

The Congress kicked off on May 30 with a opening plenary session. Topics covered included "The Potato in a Changing World" by HE Qu Dongyu, DG FAO, United Nations, "Ireland - The Green Island" by Tara McCarthy, Bord Bia- Irish Food Board, Dublin, Ireland and "Poland as a coordinator in the reconstruction of the Ukrainian potato industry" by Tomasz Bienkowski Polish Potato Federation, Warsaw, Poland.



One of the Congress tours took participants down to Johnstown Castle Estate, Museum & Gardens in County Wexford south of Dublin. The estate is also home to a Teagasc Agriculture and Food Development Authority agricultural research station and an Agriculture Museum.

Technical and focus sessions covered a wide range of topics including Business, Health and Nutrition, Plant Health, Promotion and Education, Innovation, Technology, Sustainability, Potato Storage, Seed and hybrid potatoes, Potato Breeding, Agronomy, and Rural Development and the Potato.

Evan MacDonald, a graduate student at the University of Prince Edward Island, gave a presentation at the focus session on technology on "Soil, water and topography maps as a management tool to improve profitability and sustainability within the potato industry."

The global nature of the World Potato Congress takes participants away from our usual focus on local potato issues to increase awareness and learning about international concerns and potato activities in both developed and developing areas of the world.



(Left to right) Greg Donald, Manager, PEI Potato Board; Bloyce Thompson, PEI Minister of Agriculture and Land; and PEI Premier Dennis King at the World Potato Congress.

World Potato Congress Awards 2022

The World Potato Congress Industry Awards were presented during the 11th World Potato Congress in Dublin, Ireland.

Dr. John J. Burke

Dr. Burke is one of Ireland's foremost experts in the area of potato agronomy. In the 1990s, John returned to study to undertake a Ph.D. entitled "The effect of seed source, physiological age and desiccation date on yield and chip color in a range of potato cultivars."

Dr. Burke retired from Teagasc (Ireland's Agriculture and Food Development Authority), in 2007 having worked also on cereal disease control. In retirement, he returned to his favorite crop to volunteer with Vita, an Irish NGO, working primarily in Ethiopia and Eritrea on potato development projects. He worked tirelessly to maximize the impact of potato, always with a focus on developing farmers' capabilities and knowledge. He spearheaded local seed production on virgin community land in Chenchu, Ethiopia to prevent the spread of bacterial wilt, and pioneered the production of seed potatoes in mountainous regions in Eritrea to prevent viral degeneration.

During extensive visits providing seminars and workshops with farmers and extension personnel, John became acutely aware of the lack of quality teaching material. He wrote a book in 2017 entitled "Growing the Potato Crop" targeted as a frontline resource for extension

personnel in developing countries. The book was published with sponsorship from the Irish potato industry and made available free of charge to all in developing countries.

"Growing the Potato Crop" has since been translated into several languages, and an abridged handbook has also been developed. The book is also available as a free online resource and as a pdf.

Paul C. Struik

Paul C. Struik has been a Professor of Crop Physiology at Wageningen University since 1986. He was the youngest ever appointed Professor in Wageningen at that time and potato has been the main focus crop over his career. He has conducted research on physiology, seed production, QTL-based modelling of crop growth and quality, seed system and chain management of agricultural produce in Africa, and sustainable intensification.

Many of his research projects are interdisciplinary in nature and in close collaboration with social scientists, bridging the gap between potato agronomy and development outcomes. Paul has been editor in chief of Potato Research, the journal of the European Association for Potato Research, since 1990 and a member of the EAPR board in various roles over the same period. In 2019, Professor Struik received the International Crop Science Award from the Crop Science Society of America for his contributions to crop science. He is also Programme Committee Chair

and Vice-Chair of the Board of Trustees of the Consultative Group on International Agricultural Research institute ICARDA, the International Center for Agriculture Research in the Dry Areas. In addition he maintains a busy teaching schedule in Wageningen with many modules related to potato agronomy for the next generation of potato professionals.

Antoon Wallays

After his studies as a civil engineer, Antoon Wallays, together with his business companion and agronomist Luc Raes, created the Belgian potato processing factory, Agristo, in Hulste/Harelbeke. Both Antoon and Luc were sons of farmers and their spouses were active in the administration department of the company making it a real family business.

Since the beginning of his career, he



(Left to right) WPC President Romain Cools, Mark Finnessey standing in for Dick Okray, Antoon Wallays, Paul C. Struik, John J. Burke and Tamas Houlihan, Chairman of the Industry Awards Committee. Photo courtesy of World Potato Congress and Jaap Delleman, Potato World magazine.

has been active in the Belgian potato trade & processing association, Belgapom. As chairman of the environment group, his role in the development of the Belgian potato industry was one of the most progressive regarding new water purification and re-use technology. He was responsible for the creation of the Flemish guideline for best available technologies, which became a reference document for the EU potato & vegetable processing industry.

As President of Belgapom (2006-2012), he played a crucial role in the development of the Belgian industry federation and the professionalisation of the European Potato Processors Association. Antoon was also the first President of Vegaplan, the Belgian food and plant safety scheme, which has over 10.000 farmers certified.

In 2018, the children of Antoon and Luc took over all the management functions to become the second generation to lead this unique potato processing company into new times.

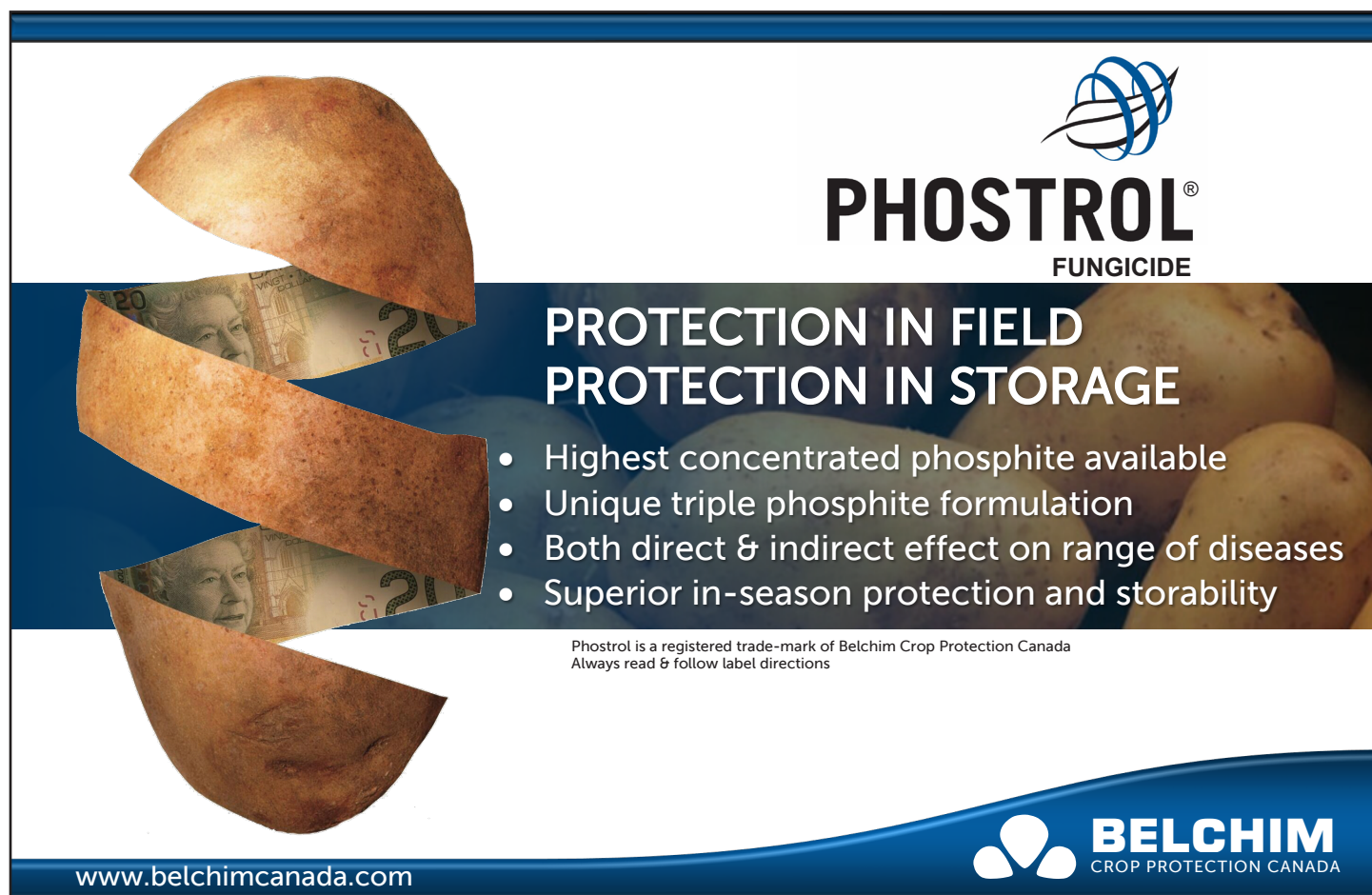
Richard W. “Dick” Okray

Richard W. “Dick” Okray was born in Stevens Point, Wisconsin. The son of Joseph and Patricia Okray. In 1981, he taught English in Cali, Colombia and in 1982 he graduated from the University of Wisconsin-Stevens Point with B.A. degrees in Economics and Spanish.

He was employed from 1982-2020 at Okray Family Farms in Plover, growing 7,750 acres of quality row crops in Central Wisconsin, specializing in fresh chanel potatoes. The farm was started by his family over 110 years ago. His most recent position title was President and Sales. Following his retirement in 2020 he remains a co-owner of the family farm, which won a national environmental stewardship award for its outstanding achievement in the area of pesticide risk reduction.

The international potato industry has benefited greatly from the leadership of Dick Okray. He served on the Executive Committee of the US Potato Board (now known as Potatoes USA) and has served as a potato industry ambassador from the United States, attending multiple World Potato Congress events in China, Scotland, New Zealand and Peru. Dick served two terms, including one as Chairman of the International Committee, for the U.S. Potato Board. He also served on the Wisconsin Potato Industry Board from 2015-2020, and held the position of Vice President.

He received the WPVGA Agri-Communicator Award; the Portage County Business Council’s Outstanding Contribution to Agriculture Award; and the prestigious University of Wisconsin-Stevens Point Distinguished Alumni Award. In 2019, he was inducted into the Wisconsin Potato & Vegetable Growers Association Hall of Fame.




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Fall Hilling: An Option for PEI Growers?

Results from local research trials

By Ryan Barrett, P. Ag., CCA

In the autumn of 2017, the Agronomy Initiative for Marketable yield (AIM) Science & Technology Working Group began work on a series of on-farm field trials to investigate the practice of creating hills in potato fields in the early fall in advance of those fields being planted to potatoes the following year.

The inspiration for this research came after coming across some research reports from Maine a couple of years earlier, where fields were hilled as part of the process to apply a chemical fumigant in the fall. In one of these fields, the hilling took place but the fumigant was not applied; however, there was still an increase in yield for the non-fumigated hilled acres compared with the conventionally managed part of the field.

Other parts of North America have experience with hilling (or “ridging”) in the fall ahead of potato planting. This is sometimes accompanied by fumigation, but not always. The theory from some producers is that by increasing soil surface area, that soil will dry out and warm up a bit faster in the spring, enabling earlier planting, particularly on heavy soils.

In addition, getting fields prepared in late summer/early fall by completion of primary tillage followed by hilling and establishment of a cover crop has the benefit of

getting that work done ahead of the busy potato harvest season, while also maximizing the time for cover crop establishment. This cover crop then either dies over winter or is terminated early in the spring, followed by potato planting. Depending on field conditions and the equipment available, growers can then plant directly into those hills made the fall before (with GPS) or following a pass with a “freshener” tool.

As noted, work began through AIM starting with set up of three fields in the fall of 2017 to compare fall hilling with establishment of a cover crop versus conventional land preparation on each farm, with establishment of a cover crop. These fields then had potato harvest samples evaluated for yield and quality in the fall of 2018. A further three fields were set up in 2018, followed by one field in 2019 and three fields in 2020.

In 2018, two fields had data loggers installed to track soil moisture and soil temperature in both the hilled treatment and the conventionally-planted control. At both sites, soil temperature in the fall hilled part of the field appeared to be 0.5 - 1.0 C higher than in the control section until early July. In addition, there was a trend for hilled treatment to retain more moisture after planting for approximately the first month than the conventionally planted area. This may be due to a reduction in tillage or moving the tillage further away from planting in order to improve soil structure and improve soil aggregate stability. Follow up testing by both AIM staff and individual growers have shown similar observations in the following years.

Cover crops did not establish uniformly well in each field. In some years, the cover established very well; in others, the cover crop was sparse due to either late establishment or poor growing conditions. Nonetheless, the cover crop establishment was similar for both the treatment and control in each field.



Example of a row freshener tool. Photo by Ryan Barrett.

Table 1. Differences in yield and quality parameters between the fall-hilled treatment and conventionally planted control for 10 site-years between 2018 and 2021.

Variety/Year	Total Yield cwt/ac	% Smalls	% > 10 oz	% Defects	Spec. Gravity	M. Yield cwt/ac	Crop Value \$/acre
R. Burbank 2018	-4	-3	0	-2	0.001	15	222
Prospect 2018	-2	-1	-5	-6	0.003	20	203
Ranger Russet 2018	-30	-8	8	-3	0.001	11	77
R. Burbank 2019	26	-1	5	-2	-0.001	32	438
R. Burbank 2019	-1	4	-2	1	0.000	-16	-256
Prospect 2019	29	2	0	-9	0.002	45*	603*
R. Burbank 2020	21	-1	10	1	0.004	18	334
Dakota Russet 2021	-36	-5	5	-4	0.000	-3	-110
Dakota Russet 2021	8	-1	-12	-2	0.001	15	189
Dakota Russet 2021	28	0	3	0	0.002	28	463
Average (10 site-years)	+4	-1.5	+1.2	-2.6	+0.0013	+16.5	+216

* indicates statistically significant differences at $p < 0.05$.

Positive values indicate that the mean values were higher in the fall hilled treatment than the conventionally-managed control.

Key Observations:

- While only one of the individual trials showed significance at $p=0.05$, there does appear to be a slight trend over time favouring fall hilling for marketable yield and crop value.
- Only two out of ten site-years showed a reduction in marketable yield and crop value.
- While total yields were not often largely different, improvements in quality parameters generally resulted in greater marketable yields and crop value favouring the fall hilled treatments.
- Seven out of ten site-years demonstrated a slight decrease in total defects favouring the fall hilled treatment.
- It is entirely possible that none of these differences trends are in reality much different than zero. Nonetheless, there could still be some agronomic and economic advantages favouring fall hilling.
- Fall hilled fields with tillage performed in late summer/early fall have a better opportunity for strong cover crop establishment before winter. Cover crops are associated with reducing soil erosion and building soil organic matter.
- A fall hilling tillage program also has the potential for reduced tillage as well as performing primary tillage under drier soil conditions, reducing the potential to worsen soil compaction.
- At the least, it appears that there is no agronomic or economic disadvantage to fall hilling in Prince Edward Island potato production. Growers should assess whether there is value in adopting this practice on their farms.

Thank You to the participating growers, members of the AIM Soil & Tech Working Group, our AIM funding partners, and to Cavendish Farms for their assistance with sample grading. A full report on this trial can be found on the PEI Potato Agronomy website at peipotatoagronomy.com.



An Update From the:

PEI Department of Agriculture and Land

It is my pleasure to introduce myself as your new Minister of Agriculture and Land! Potatoes are the crown jewel of Prince Edward Island, and I want you to know that our government remains committed to supporting your industry, as we look to continue to showcase our high quality, safe Island potatoes to trading partners around the world. On PEI, we are all very proud of how our world class agricultural products are enjoyed by consumers, and I look forward to conveying this message in my new role with colleagues across our nation, and across the world.

I look forward to building upon the already strong relationship that the PEI Potato Board has with our provincial government. Please know that my department is here to help, and do not hesitate to reach out if you need any assistance whether it be through program delivery or additional support from one of our departmental professionals.

I want to wish you a safe and healthy summer, and I look forward to working with all of you to ensure that your industry along with the rest of agriculture continues to be one of the largest economic drivers and the pride of Prince Edward Island.

Sincerely,

Hon. Darlene Compton

Deputy Premier and Minister of Agriculture and Land



Research Corner

A new take on an old invention could help potato farmers crush the weed competition

by Brett van Heyningen, Communications Advisor, Atlantic Region, Agriculture and Agri-Food Canada

Every so often, an invention intended for one use evolves into something different and the resulting impact is far greater than its original purpose. Before becoming the ground-breaking medical invention to control one's heartbeat, the pacemaker was developed as a device intended to help record faster heart sounds.

In 2011, Agriculture and Agri-Food Canada (AAFC) scientists, were researching ways to control European corn borer populations, a common pest in potato crops that lay their eggs in potato vines after harvest and then mature the following year. As a way to target the pest at its source, Dr. Christine Noronha and colleagues, developed a piece of equipment dubbed: the potato vine crusher. The novel equipment included two metal rollers, each attached to a motor, hooked up to a speed regulator running from a 10 horsepower generator. It was designed to attach to the back of a potato harvester and as potatoes were being harvested the machine would crush the vines, killing the corn borer larvae.

The potato vine crusher successfully reduced corn borer populations. However, mature corn borer have wings that allow them to fly from one potato field to another. In order to control populations in a given region, the majority, if not all farmers would have to adopt use of this new equipment. Unfortunately, this “all or nothing” approach caused the

demise of the potato vine crusher.

The equipment would lie dormant for 10 years until Charlottetown-based AAFC research scientist, Dr. Andrew McKenzie-Gopsill, would begin working on a new idea in weed science called harvest weed seed control. “Harvest weed seed control is when during harvest, instead of returning weed seeds back to the field so they grow to become weeds, the weed seeds are harvested by removing them from the field completely or destroying them directly in the field.” explains Dr. Andrew McKenzie-Gopsill, Research Scientist at Agriculture and Agri-Food Canada Charlottetown Research Station.

Going Against the Grain

Dr. McKenzie-Gopsill learned of the “Harrington weed destructor” developed by Ray Harrington in Australia – a tow behind unit on a combine that destroys weed seeds when grain crops are being harvested. In order to adopt the harvest weed seed control concept to horticulture crops, like potatoes that are harvested differently than grains, he would have to think outside the box.

While presenting at a local university, Dr. McKenzie-Gopsill was approached by an AAFC research technician that helped develop the potato vine crusher. They suggested that it could be used to crush weed seeds to reduce weed populations instead of its original intended use of crushing potato vines. Intrigued, Dr. McKenzie-Gopsill set out to test the idea.

Without making any modifications to the potato vine



Dr. Andrew McKenzie-Gopsill stands with the potato vine crusher equipment at the AAFC Harrington Research Farm.



Weed seeds after running through the potato vine crusher that were planted in soil and petri dishes to determine weed population.

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crusher, Dr. McKenzie-Gopsill chose to test the equipment in a simulated potato harvest taking potato biomass from the field, adding weed seeds to the mixture and sending it through the vine crusher. He then placed the crushed weed seeds into petri dishes and soil to see how they grew.

Dr. McKenzie-Gopsill tested the equipment first on common lambsquarter weed seeds as this weed is the most economically important weed in Canadian potato production. He discovered that the vine crusher was very effective in crushing lambsquarter seeds resulting in their inability to germinate and mature into fully grown weeds. Other weed species that affect potato crops were tested and they also did not germinate. These included redroot pigweed, barnyard grass, yellow foxtail and volunteer canola.

The results of the potato vine crusher's ability to reduce weed pressure was impressive for Dr. McKenzie-Gopsill and his team. In a controlled petri dish environment, seed germination, or the ability of the crushed weed seeds to develop into a weed plant, was reduced by 60 to 95 per cent. The simulated harvest approach resulted in 50 per cent reduction in lambsquarter and pigweed germination while other larger weed seed species reduced by 50 to 75 per cent. Therefore, the potato vine crusher could also reduce the amount of herbicide that farmers use.

"We've developed the first ever adaptation of harvest weed seed control for a horticulture crop like potatoes. It's an exciting first step and potential for a huge breakthrough for weed management for farmers." says McKenzie-Gopsill.

A cost-effective solution continues to take shape

The simple custom design of the potato vine crusher makes it fairly cost effective for farmers and Dr. McKenzie-Gopsill estimates it can be built for well under \$10,000. He explains that while farmers can build and use this now, he intends to continue testing this summer to see how the equipment fares in actual field settings. He will then make modifications to the equipment to increase its effectiveness on reducing weed seed germination or sprouting.

Dr. McKenzie-Gopsill highlights the significance of his discovery by comparing his initial results to data published within the last two years by American researchers. They performed simulations with Palmer amaranth, similar to pigweed, on how effective this type of equipment would need to be in order to have a long-term impact. They estimated it would need to reduce weed seed germination by 20 per cent to stabilize weed populations – the amount of weeds will neither increase nor decrease.

"Our data shows in the simulated harvest that we are having a much greater effect than 20 per cent reduction on species that are not as invasive as palmer amaranth," says Dr. McKenzie-Gopsill.

Beneficial Management Practices for Agricultural Cropping Within 200 M of a Watercourse

- Utilize strategies to minimize runoff. This is critical to maintaining the health of the soil and preventing sedimentation in waterways. When soil conservation measures include erosion control structures, seek the advice of a Soil & Water Conservation Engineer.
- Control runoff more effectively by maintaining soil conservation structures, natural grassed waterways, and filter strips in good working order.
- In fields that border on the 15 m buffer zone, with significant overland flow, improve the protection provided by the buffer by increasing the width.
- Permanently establish grass headlands to provide the best protection for end-of-row runoff in regulated fields.
- Consider removing from row crop production areas identified as high risk despite significant investment in soil conservation structures or other BMP's.
- Take measures to minimize protective fungicide contact with exposed soils to reduce the risk of contamination to near-by watercourses.
- Utilize tillage systems that increase the percentage of crop residues left on the surface to protect soil from the erosive effects of extreme rainfall events, improve soil moisture retention and soil health.
- Reduce runoff velocities and improve water infiltration by increasing surface roughness on row formed crops.
- Whenever possible, soil should have cover over the winter months.
- Utilize technologies to improve the timing and efficiency of pesticide application aimed at reducing the number of pesticide sprays per season.
- Improve the structure and nature of existing hedgerows to increase biodiversity and protect soil from wind erosion.



The Best Management Practices above were developed by a technical working group of the AgriWatershed Partnership of Prince Edward Island. This is an initiative of the PEI Federation of Agriculture, the PEI Watershed Alliance, the PEI Potato Board and the Departments of the Agriculture & Land and Environment, Water and Climate Change, supported by funding from the Province of Prince Edward Island. The BMP's were finalized in 2020 and are provided here as a reminder of items to consider as growers move through the 2022 growing season. All groups are working together to protect our waters.

Industry Updates

PEI Potato Blossom Festival Farmers' Awards

The PEI Potato Blossom Festival in O'Leary honoured two long-standing members of the PEI Potato Industry at the Festival this year.

Winburn Harris grew up on the O'Leary road where he farmed with his father on a small mixed farm into the mid 60's. Over the years Winburn with the help of his family and most of all his always supportive wife, expanded into different sectors of the farming industry.

One of Winburn's more passionate interests was seed potatoes. Growing clean virus free seed was a challenge he loved to take on. P.E.I. Growers were return customers for the quality seed they grew to expect. An acknowledgement of his efforts is that there is still a cloned version of what is known as the Russet Burbank Harris strain held at the Fox Island seed farm.

Winburn saw the need to be involved, to build a strong community. He also saw the importance of strong farm organization's like the P.E.I. Potato Board where he was a director and involved with working groups over the years.

In the early 80's Winburn saw the need to move to more security in a processing contract with it's volume and price guarantee. Winburn's legacy lives on with his two sons David and Bobby who now run the processing potato operation.

Orville Willis was born in Kingston, PEI on April 22, 1935. In 1936 the family moved to Covehead where his parents, Charlie and Nellie bought a small farm and also operated a grocery store until 1949. In 1949, Charlie came to O'Leary to join his brother H.B. Willis. Orville later joined his father in operating the H.B. Willis operation and in 1954, Charlie and Orville purchased their own potato business called C.F. Willis and Sons. They grew 400 acres of potatoes and were buyers and packers for other potato growers in the area. They continued to build their operation and became one of the major employers in the community of O'Leary.

In 1987, C.F. Willis and Sons took in ten shareholders and the business was renamed



Top (left to right) Muncey Harris, friend of the PEI Potato Blossom Festival, grandson Camden Harris, Isabel Harris, Winburn Harris and Greg Donald, General Manager of the PEI Potato Board.

Bottom (left to right): Greg Donald, General Manager of the PEI Potato Board, Greta Willis, Orville Willis and Muncey Harris friend of the PEI Potato Blossom Festival.



O’Leary Potato Packers. Orville continued to operate this business until his retirement in 2010.

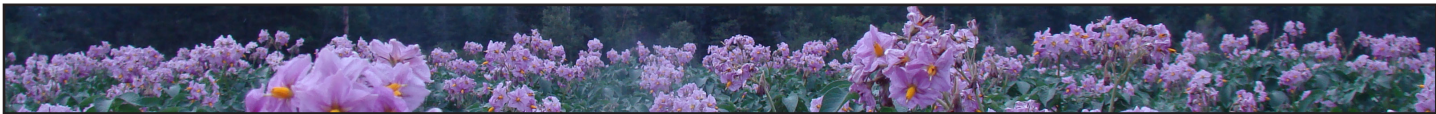
Orville was always a strong community leader and volunteer. He was involved in a leadership capacity in many community organizations from the hockey rink to the

curling club to harness racing.

Both Winburn Harris and Orville Willis received Industry Achievement awards at the Festival Farmers’ Awards Mixer on Friday July 22, 2022 held at the Canadian Potato Museum in O’Leary.



Top (left to right): David Sweet, Donna Lewis and John Sweet. Donna is employed by the Sweets and won the Farm Hand of the Year Award. Centre (left to right) The Kent Philips Memorial Award was awarded to xxxxx Left (left to right) xxxx presents the Young Farmer of the Year Award to Corey MacLean.



Upcoming Events & Program Deadlines

Please call the Board at (902) 892-6551 for further information on any of these events.

August 2022

- August 18 PEI Potato Board monthly meeting.
- Aug 23 West Prince AIM Tour & BBQ.
- Aug 24 East Prince AIM Tour & BBQ.
- Aug 25 Eastern Kings AIM Tour & BBQ.

September 2022

- Sept 14 PEI Potato Board monthly meeting.

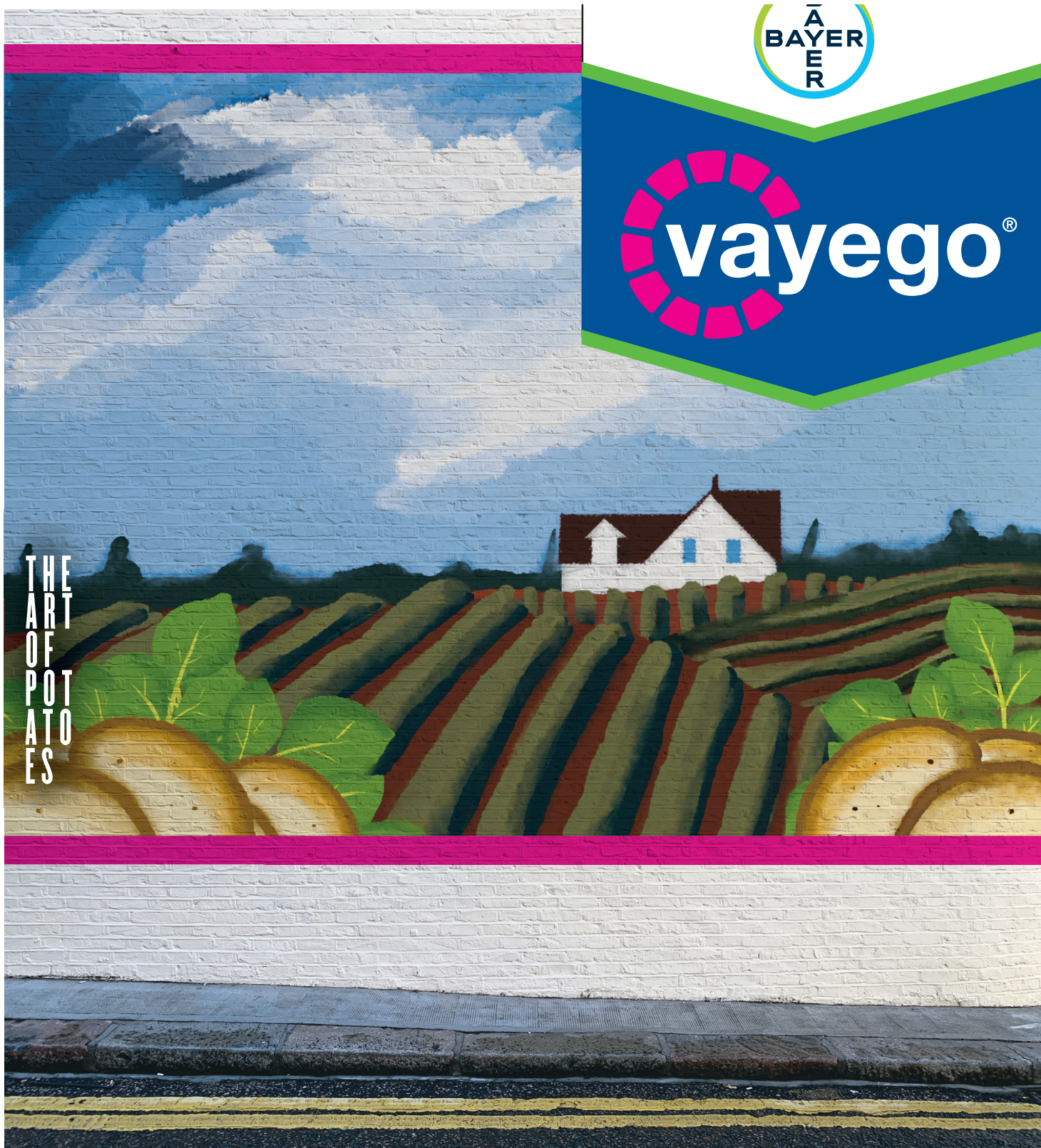
- Sept 15-18 PEI Shellfish Festival. Charlottetown, PEI.
- Sept 18 PEI Open Farm Day. Various locations around the Island.

October 2022

- Oct 2 Farm Day in the City. Queen Street, Charlottetown.

November 2022

- Nov 17 PEI Potato Board monthly meeting.
- Nov 24 PEI Potato Board Annual General Meeting and Awards Banquet Charlottetown.



Make your mark.

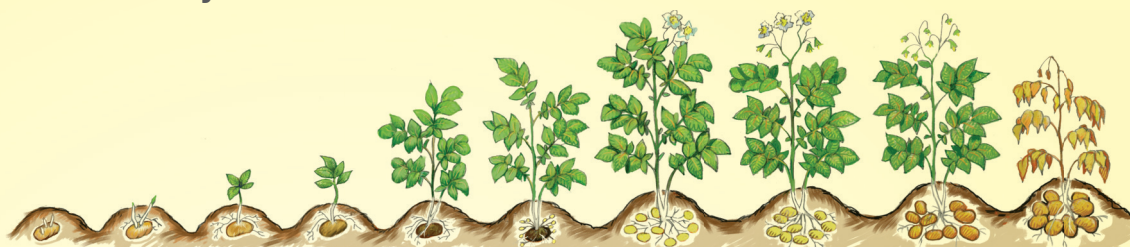
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	Fast uptake for superior in-furrow control of CPB and potato flea beetle.				
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				Consistent, systemic control of leafhoppers. Short 7-day PHI.	
				Systemic, residual control of sucking and chewing pests, including Colorado potato beetle, European corn borer, armyworms, flea beetles and aphids. Short 7-day PHI.	

*When applied at label rates. In line with Integrated Pest Management and Good Agricultural Practices, insecticide applications should be made when pollinators are not foraging to avoid unnecessary exposure.

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