



**CERTIFIED
CROP ADVISER**

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CCA CHATTER

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2020 Award of Excellence

The CCA Award of Excellence was given out during the online CCA Conference and Annual Meeting on January 14, 2021.

The Award is co-sponsored by CropLife Canada and Syngenta.



This year, there were five nominees:

Ryan Benjamins

Bill Gallaher

Rob Miller

John Snowe

Jonathan Zettler



The recipient of the award for 2020 was John Snowe.

John Snowe was nominated for the Ontario Certified Crop Advisor Award of Excellence by his peer, Brad Shantz.

John graduated from the University of Guelph with a Bachelor of Science

in Agriculture in 1976, and went on to obtain his CCA designation in 1999. With 44 years' experience in the industry, John is a well-seasoned CCA. In his current position with Rosendale Farms/Waterloo Crop Services, John works with growers on a large and small scale. He also assists customers with agronomic planning through crop scouting programs for IP beans, making fertilizer and herbicide recommendations, and managing weed control.

Over the years, John has developed strong relationships with his customers. He has been fortunate enough to mentor new hires and young sales agronomists. He finds it rewarding to watch them grow and mature in the agriculture industry.

John has a cash crop operation running 250 acres, which he works with his son. With retirement approaching soon, John feels it is important to pass along agriculture to the next generation.

Congratulations John!

Nominations for the award are taken throughout the year with a submission deadline of October 31st. Nomination forms can be obtained by visiting the website at www.ccaontario.com or by calling the office at (519) 669-3350. 🌱

20 Years Certified in Ontario

The following CCAs received their 20-year certificate this year. Congratulations on this milestone!

Clark Aitken
Scott Banks
Andrew Barrie
Deb Campbell
Gregory David Dewar
David Fink
John Gal
Brian Hall
Peter Earl Hodgins
Bruce Irons
James Jardine
David Kloppenburg
Donald Lunn
Bradley McAlpine

Donald McLean
Kevin Melady
Eric Metcalf
Rodney Ricker
Michael John Sharpe
Chris Snip
David Strickler
Brian Switzer
Ron Sys
Bob Thirlwall
Ricky Michael Vandewalle
Steve Wellein 🌱

2021 CCA Conference and Annual Meeting

The 2021 Conference and Annual Meeting was another success even though we could not meet in person. Over 200 people registered for the two-day event!

Thank you again to all our sponsors. Without your continued support we would not be able to maintain such an informative and collaborative event.

The 2021 CCA conference sponsors were as follows:

Gold Sponsors - \$2,500 Contribution

- Agronomy Company of Canada
- ALPINE

Silver Sponsors - \$1,500 Contribution

- BASF
- Bayer
- Mosaic
- NuFarm Agriculture Inc.
- SGS Agri-Food Labs
- Syngenta
- Yara Canada

Bronze Sponsors - \$500 Contribution

- A&L Laboratories
- C & M Seeds
- Corteva
- Grain Farmers of Ontario
- SeCan

Speaker Sponsor - \$500 Contribution

- BASF

2020 CCA Award of Excellence

Co-Sponsors - \$1,000 Contribution

- CropLife Canada
- Syngenta Canada

Save the date! The 19th CCA Conference and Annual Meeting has been set for January 12 and 13, 2022. With COVID-19 restrictions being so uncertain, the CCA Board has made the decision to plan for the Conference to be held virtually. The Board will be looking at possible networking opportunities for the summer of 2022. Potential ideas include a tour and a BBQ, so stay tuned for more details! 🌱

Conference Sponsorship Scavenger Hunt Winner

This year there was a sponsorship scavenger hunt held during the virtual CCA Conference. CCAs had to go onto sponsors websites and answer a question about that company. They were then entered in a randomized pool to win a \$500 Amazon gift card.

The winner was Leanne Freitag – congratulations Leanne! 🌱

Welcome New CCA's

Congratulations to all who passed the Ontario and International CCA exams this February! There were 21 individuals who passed the Ontario and 26 who passed the International.

Congratulations to the following Ontario CCAs who passed their 4R NMS exam in February!

Michael Dick
Jennifer Doelman
Cheryl Garniss

Allison Goetheyn
Stewart Hosford
Virginia Janssen

We are pleased to announce that in the past four months there were six newly certified Ontario CCAs. Congratulations to:

Kelsey Hill
Dylan Magnus
Vanessa Renaud

Alexander Richardson
Britt Robinson
Josh Vander Burgt 🌱

Peter Sikkema – Hall of Fame Inductee

In 2021, seven agricultural leaders will be inducted into Ontario Agricultural Hall of Fame.

One of these leaders is Dr. Peter Sikkema. Dr. Sikkema has made outstanding contributions to Ontario agriculture as a researcher, teacher and extension agronomist. His research on weed management has impacted many of Ontario's field crops including corn, soybeans, cereals and edible beans. He is a world leader in the field of surveillance and management of glyphosate and multiple resistant weeds. Through his work, he has made a major impact on the sustainability of crop production in Ontario, Canada, North America and around the globe.

Congratulations on this achievement Peter! 🌱

Save the Date!

In partnership with Mosaic, the Ontario CCA Association will be hosting the 5th Soil & Water Information Day on Wednesday, November 17, 2021. The event will take place at Springfield Golf & Country Club in Guelph assuming in-person events can resume.



Expected CEUs available for the day will be posted to the Ontario CCA website under "Current Events" shortly.

Once the agenda has been set, an email will be sent to all CCAs. 🌱

Accountability and Ethics within the CCA Program

Taken from the Standards and Ethics Committee Report in the CCA Annual Report

By: Keith Reid

One of the three pillars of the CCA program is commitment to high standards of behavior as laid out in the Code of Ethics. It would be easy to think that this applies mainly to the provision of honest and unbiased agronomic advice, but the truth is that it has just as much bearing on all aspects of our professional conduct. Failure on the part of any of our membership to behave ethically undermines the integrity and respect of the CCA designation for all of us, and has much broader policy implications if governments perceive that the advice given by our CCA board is tainted.

Every CCA has signed the Code of Ethics, indicating that they have accepted the individual responsibility to abide by it. This responsibility also extends to holding your peers to ethical conduct, which includes reporting any breaches in this conduct. The Standards and Ethics Committee has a duty to investigate unethical conduct, and to censure the individual(s) if it is merited. We cannot, however, initiate any such investigation on our own, but only in response to a signed complaint.

Accountability in the workplace means that all individuals are responsible for their actions, behaviors, performance and decisions. The CCA Program holds you to a personal standard of accountability. It is also assumed that you hold your peers to the same accountability you hold yourself. If you have first-hand knowledge of unethical conduct by any CCA, you should be prepared to submit such a complaint to the Standards and Ethics committee.

If a CCA is found to have violated the Code of Ethics, the Standards and Ethics Committee could:

- write a letter of warning;
- suspend the CCA: or,
- revoke the CCA's certification;

You can contact the CCA office if you have any questions. 🌱

Extended Medical Employment Leaves

If you are planning a long-term medical leave from your employment, please advise the Ontario CCA office. We will discuss options with you regarding maintaining your CCA status including accumulation of CEUs. A long-term leave is considered to be anything beyond six months and includes maternity and parental leave. For unplanned leaves, advise the Ontario CCA office as soon as possible. 🌱

ONFARM Program Highlights Successful First Year

The On-Farm Applied Research and Monitoring (ONFARM) program is a four-year, applied research initiative delivered by OSCIA on behalf of OMAFRA to support soil health and water quality research across farms in Ontario. This program is funded by the Canadian Agricultural Partnership, a federal-provincial-territorial initiative. The ONFARM program encompasses extensive soil health and water quality analysis on 33 sites on working farms across southern Ontario. This network of sites and established partnerships with ONFARM cooperators will help to build a stronger understanding of best management practices (BMPs) and their effects on soil health and water quality on Ontario agricultural lands. OSCIA is very excited with the progress made in the first year of the program.

ONFARM Soil Health Year 1 Summary

- 33 Cooperator site (8 EOF and 25 BMP Trial) agreements
- Representative soil landscape sampling benchmarks
- Baseline soil health sampling and assessment + native sites
- 8 EOF sites with 16 treatment sub basins
- 25 BMP Trial sites with 99 treatment field strips
 - BMPs: 24 sites with cover crop, 18 organic amendments
- Agronomic monitoring program



Photo Credit: The Soil Resource Group

OSCIA highlighted results and experiences from the first year of ONFARM at the 2021 ONFARM Forum, which took place on February 10, 2021. The presentations and discussions from the Forum were recorded and can be viewed on the ONFARM website. A Forum Summary Report, including points from each presentation, discussions and key takeaways is also available on the ONFARM website: <https://www.osciaresearch.org/onfarm-applied-research/onfarm-forum/>

Results reports from the first year of the program for the 25 soil health paired BMP trial sites and eight edge-of-field (EOF) water quality monitoring and modeling sites will be available on the ONFARM website in spring of 2021 to view and download.

Don King, Research Agronomist and Principal, The Soil Resource Group, manages activities at the soil health paired BMP trial sites, including visiting sites to prepare plots, collect samples and analyze information. Excited by the first year's results Don stated, "the cooperators bring a wealth of experience that has helped the team complete the first step of the project in establishing BMP comparison sites across the province to better understand the links between different landscapes and management, how they affect soil degradation and to enable us to track changes in soil health over time."

The eight EOF sites are managed by five conservation authorities, including Essex Region Conservation Authority, Lower Thames Valley Conservation Authority, Upper Thames River

Continued on page 4.



This T-shaped berm splits the field containing a cover crop (left) and no cover crop (right) at the edge-of-field site in the North Kettle subwatershed. Photo Credit: Upper Thames River Conservation Authority

Conservation Authority, Ausable Bayfield Conservation Authority and Maitland Valley Conservation Authority. Tatianna Lozier is the Agricultural Soil and Water Quality Technician with the Upper Thames River Conservation Authority, which has two sites implementing controlled drainage and cover crops respectively. Tatianna explained, "the amount of progress made this year under the ONFARM program has been excellent. With the set-up of the edge-of-field site and ongoing sampling at the subwatershed level, the collection of water quality data has been an integral part of the project. There were certainly some changes in how we interact with farmer cooperators and project partners this last year, but everyone's readiness to adapt is reassuring as we move forward with the project."

Ahead of the first year results reports being published, there is a wealth of information about the program and project sites on the ONFARM website available via an interactive map. Individual project site information such as soil health goals, BMPs, and photos can be viewed on the map: <https://www.osciaresearch.org/onfarm-applied-research/interactive-map/>. The website and map pages will be updated regularly with new photos, information

and media. Results reports will be published annually each spring. There are also many outreach and communications activities planned for 2021 to share project information and results fulsomely to the Ontario agricultural community and beyond.

Questions about ONFARM? Please contact onfarm@ontariosoilcrop.org. Follow OSCIA on Twitter (@OntarioSoilCrop) for updates on #ONFARM and all OSCIA programs. 🌱

Results of the CCA Research and Innovation Survey from Fall 2020

By: Ken Currah, CCA Research and Innovation Committee Chair

The Research and Innovation Committee put out a survey last Fall to learn about the members perceived needs in terms of the scope of agronomic research in the province and identify any gaps in availability of information or knowledge that we can transfer to our customers.

Just under 20% of Ontario CCAs completed the survey. One of the key findings from the survey was that the respondents identified the importance of statistically valid data points that are consistent and repeatable, and also identified a shortcoming in knowledge when it comes to understanding statistical analysis on the part of both themselves and their grower customers.

CCAs are aggressively seeking research information from various sources. These include: various data sources, including Ontario third-party (GFO, OSCIA) research, manufacturer data, Ontario research data (U of G, etc.) or Midwestern US data (Purdue, among others). The survey results identified that the respondents as a whole placed nearly equal importance on all these data sources in terms of contribution to their individual knowledge base and recommendation background.

When it comes to the various crops that were surveyed (corn, soybeans, wheat, dry beans, and alfalfa), the survey consistently identified CCAs need for fertility and nutrient management data for each crop. This is a positive outcome, as it identifies our membership as having a deep awareness of balancing economic returns of intensive fertility management with the social and environmental factors in mind.

The survey results also consistently identified disease management as a significant research and information need across all crops. Going further, weed control and managing weed resistance is also an important area of focus for CCAs in their continued learning process. 🌱



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Industry Updates

Conservation Authorities Update

Submitted by: Michael Dick

Conservation Ontario and Upper Thames River CA have collaborated with Grain Farmers of Ontario, Ontario Soil & Crop Improvement Association and others, to develop the Cover Crop Strategy. The Ontario Cover Crops Strategy was developed by the Ontario Cover Crops Steering Committee to generate momentum across the province for the adoption of cover crops, especially during the non-growing season. Outreach and education efforts outlined in this strategy will help promote cover crops as an important practice to build soil health and improve water quality, create awareness of the practice, and provide information that helps farmers understand how to use cover crops within their production system.

Many Conservation Authorities offer a cover crop incentive funding program to some degree, in at least a portion of their region. To find one in your area, visit the link - <https://conservationontario.ca/conservation-authorities/find-a-conservation-authority>

Soil Action Group

The Soil Action Group which has been established by the province to develop an implementation plan for the Ontario Soil Health Strategy. The Soil Action Group represents a partnership between government, industry stakeholders, conservation groups and academia.

Implementation of Great Lakes Initiatives

Conservation Ontario and the conservation authorities are actively involved in the delivery of implementation initiatives associated with the Canada Ontario Lake Erie Action Plan and Healthy Lake Huron partnership program. The focus of this work includes the reduction of nutrient loading and algal blooms and continues to involve collaboration with agriculture producers and industry.

Ontario Soil and Crop Improvement Association Report

Submitted by: Warren Schneckenburger

OSCIA has had a challenging year with COVID. The association commends their staff who have been working remotely for months. They are currently moving offices to Woodlawn Road in the old Guelph Tribune building.

OSICA is thrilled to see the public announcement of Living Labs. The formal agreement is off for signatures and they have a team of people to get the program up and running in the near future. They are hoping to have some field activity this year as well.

The Board recently developed an updated strategic plan that has four strategic directions:

1. Generate Multiple Revenue Streams
2. Cultivate Grassroots Engagement

3. Expand Impact of On-Farm Applied Research Initiatives

4. Foster a Culture of Continuous Improvement

There was a loss of a major funding grant this year, so currently OSCIA is looking for a grant in order to keep this year running smoothly. There is no official word on a grant being secured as of yet.

Due to COVID and the uncertainty of the vaccine rollout this year, their summer meeting and tour is going to be virtual this year.

Farm & Food Care Ontario

Submitted by: Les Nichols

Winter Speakers' Series

Farm & Food Care organizations in Ontario, Saskatchewan and Prince Edward Island are collectively hosting a national speakers' program this winter. The first of two sessions were held in February and March. The remaining session is scheduled for April 22nd at 1:00 p.m. with a presentation by Scott McDevitte of Gordon Food Services on "How has food service adapted during COVID: What does the future hold?"

The sessions are free to attend. Visit - <https://www.farmfoodcareon.org/speakersseries/> to register or to listen to a recording of the first presentation. More webinars will be planned for this fall.

Continued on page 6.

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Garden in a Box

Building upon the pandemic garden movement, Farm & Food Care is piloting a new program called Garden-in-a-Box, targeted at urban gardeners. A virtual garden club will launch in April and will make the most of opportunities to build common ground and dialogue around the differences between backyard gardening and large-scale growing by featuring experts from across food and farming.

Visit <https://www.shop.farmfoodcareon.org/> for more information on the program which will also raise funds for Feed Ontario.

The Real Dirt on Farming teachers' resource

The fifth edition of the Real Dirt on Farming booklet was released in November 2020. To date, 4.5 million copies of the prior editions have been distributed across Canada to libraries, doctors' office, registered dietitians, political leaders, educators, and through inserts in national publications. The booklet can be downloaded at www.RealDirtOnFarming.ca

The Real Dirt on Farming in the Classroom is a national classroom resource designed to give students and teachers an opportunity to dig deeper into the latest edition of the Real Dirt on Farming. It will be distributed digitally to classrooms across Canada.

Breakfast From the Farm

Three Breakfast From the Farm drive-through events are being planned in partnership with FFCO members in various parts of Ontario.

The first will be held at the Carp fairgrounds, in partnership with the Ottawa Valley Seed Growers' Association in June. The second will be held in August in partnership with the Lindsay Exhibition and the third, in October, in partnership with Western Fair. For more information, contact Alicia Becker alicia@farmfoodcare.org

Soil Health Project:

FFCO is completing a year-long project to produce an extensive array of soil health awareness resources. The project includes 10 written farmer profiles and 18 videos on strip tillage and issues in soil management from across Ontario. These videos document the challenges farmers face and solutions that they are adopting to manage their soils. Links to the profiles and videos can be found here: <https://www.farmfoodcareon.org/farming-and-the-environment/soil-health/>

Peer to Peer Winter Manure Education Project and Survey

The Timing Matters Peer-to-Peer Response Team is a coalition of farm organizations (including FFCO) representing the dairy, pork, beef, chicken, egg and sheep sectors, as well as general farm organizations, soil and crop specialists and agri-contractors. New this year, the Peer-to-Peer Working Group has helped develop the first province-wide livestock manure attitudes and use survey. This survey is being sent out through Ontario farm organizations to help better understand manure storage and application timing issues.

Winter Manure Animation Video

New this winter, FFCO has helped to develop a two-minute animation video about the inherent risks of winter manure application. It is believed to be the first of its kind to address the issue, and it is already being adopted as an education resource. The video is available on the Timing Matters web page: <https://www.farmfoodcareon.org/timing-matters/>

Agriculture and Agri-Food Canada

Submitted by: Keith Reid

AAFC staff continue to work remotely, with no immediate plans to return to offices. Limited analytical capacity has been restored in AAFC laboratories as plans evolve for safe return to workplaces while maintaining physical distancing. Plans are underway for more normal activities in field research, although with continued restrictions around maintaining safety protocols.

Dr. Eric Fedosejevs will be joining the Harrow Research and Development Centre as the new Seed Biology Scientist starting on May 3, 2021.

University of Guelph

Submitted by: Dave Hooker

- Significant work is continuing to support student enrollment for Fall 2021 as student numbers have declined in the past couple years.
- Dr. Art Schaafsma is retired but continues to work on projects, especially on the development of a new protocol for DON testing at grain elevators. They are collaborating with OMAFRA, OABA and GFO. Much of the project work on the entomology side has been taken over by Dr. Jocelyn Smith, and Dr. Victor Limay-Rios continues work in his mycotoxin lab. Albert Tenuta and Dave Hooker have assumed more pathology.
- Dr. Ivan O'Halloran has also retired officially but continues to work on projects. It is unknown at this time whether the School of Environmental Sciences (SES) will fill Ivan's position. SES has hired approx. seven new profs in the past five years (specializing in hydrology-watershed, soil biochemistry-organic matter, environmental microbiology-climate change, controlled environment agriculture, climate modeling, Indigenous knowledge systems, insect diversity-taxonomy) and two others that are currently assistant professors. SES is currently searching for a professor in Indigenous Environmental Stewardship.
- Dr. Bill Deen has officially retired as of last September 2020; a decision to fill his former position is likely.
- Construction of the new Field Crop Services Building on Ridgetown Campus is underway, with an anticipated completion date during late 2021. This is Phase One of the new construction planned for research buildings on campus valued at \$6.5 million.

- Fundraising is on-going for the Ontario Sustainable Crop Research and Innovation Centre, which is the Phase 2. This building will replace the old agronomy building on campus, which is highly outdated and not functional. The new building will equip researchers and attract scientists and post-docs to the campus. The total cost of Phase 2 will be \$20 million. The goal to raise 20% privately has been reached. The balance is currently being asked from province. We met with a few MPPs, provincial administrators, the OAC Dean, Rene VanAcker, and the UG VP of Research, Malcolm Campbell on Feb 4th.

OMAFRA Report

Submitted by: Christine Brown

Events:

- Ontario Agricultural Conference was well received and recordings are available to watch until the end of March
- Midwest Cover Crop Council Conference will be virtual this year
- Ag. Breakfast meetings will be virtual again starting April 6th
- Manure Expo is scheduled for August 25th and 26th with a virtual component and hopefully a field demonstration

AgriSuite will be releasing the next tool in their set of calculators; the manure storage and sizing tool. There will also be updates to the previously released tools based on comments received from users and general bug fixes.

The Soil Health Team has been working on a Soil Health Assessment Plan (SHAP) which will eventually be included in AgriSuite. It will go more in depth on field visuals and use color codes giving an indication of what areas need improvement (i.e. green = good, red = needs improvement). All the data that is collected does not store personal information. Instead, aggregated information will be used to figure out what the goals will be and what the best management practices solutions are to help with the soil health indicator.

Grain Farmers of Ontario

Submitted by: Marty Vermey

GFO is the chair of the Ontario Cover Crop Committee. Currently the steering team is working on the Cover Crop Farmer Feedback project which started February 7th and will close on March 31, 2021. Over 500 farms have responded to date. This study should also help reveal what research, extension and policy may be missing to help with the utilization of cover crops. The research is being conducted by researchers from the University of Manitoba.

GFO has produced a few Agronomy Alerts (GR waterhemp, tar spot, Bt CRW resistance) in the past year. These alerts are focused on key agronomic issues to draw farmer attention with a focus on Identification and solutions to the concern. Factsheets on other topics are also available on the GFO website under the Agronomy tab.

GFO produced 12 agronomy webinars last year with CEU credits available. Recorded sessions can be found on the GFO website. New webinars will be produced and recorded this coming year.

GFO and OMAFRA are working on a pilot winter wheat Yield Enhancement Project (YEN) in Ontario in cooperation with the Michigan Wheat Program and University of Michigan extension this spring/summer. The basis of YEN is to work with a network of farmers and crop experts looking at how to increase the crop's percent yield potential by understanding the crop development limitations and finding solutions for future improvements. 🌱

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Published by:

Patrick J. Lynch CCA-ON

Jonathan Zettler CPA, CMA, CCA-ON 4R-NMS

Resilient Fields: A BMP App for Ontario Farms

Submitted by: Mary Ferguson



One of the three pillars of the CCA program is commitment to high standards of behavior as laid out in the Code of Ethics. It would be easy to think that this applies mainly to the provision of honest and unbiased agronomic advice, but the truth is that it has just as much bearing on all aspects of our professional conduct. Failure on the part of any of our membership to behave ethically undermines the integrity and respect of the CCA designation for all of us, and has much broader policy implications if governments perceive that the advice given by our CCA board is tainted.

Using Best Management Practices (BMPs) on the farm is important, but it is a challenge for farmers to figure out what they can do for the environment without jeopardizing their livelihood. Added to that, field conditions are unique and often change from year to year.

An app was commissioned to help Ontario farmers work through specific field challenges and find sustainable solutions. The app, called Resilient Fields, has been designed in consultation with Certified Crop Advisors (CCAs) from across the province. CCAs can use it to assist growers who are looking for a range of options.

How It Works

The app offers a straightforward process, which can be applied to individual fields. Users can create a record of current field conditions and agronomic practices, then explore BMP options and solutions-oriented resources to help them resolve specific challenges.

First, growers can input specific field conditions, including soil type, crop and slope. They also record agronomic practices, such as tillage, cover crops, and soil testing. Thinking about and completing this information helps growers and their advisors articulate problem areas in order to identify workable solutions.

Once users have identified their key concerns, they can move on to finding practical solutions. The app identifies common field challenges according to four main categories:

1. Keeping your soils
2. Managing nutrient loss

3. Managing the growing season

4. Handling water and drainage issues

Within each category are a variety of field challenges, such as minimizing compaction, preventing nutrient loss, solving poor drainage and more. The app explains how to spot the problem and what factors may be causing it. It also offers carefully vetted resources, articles and videos, all with expert, up-to-date advice.

To help with decision-making, the app also offers a section on specific BMP considerations. This section highlights the interactions between commonly used BMPs, as well as the conditions in which they work best (or otherwise). Users can review the BMP conflicts associated with their field challenge to help determine their best course of action.


Farmers can download reports to save for future reference, enabling growers and their advisors to track the agronomic history of the fields they care for.

Users may choose to complete full field assessments, but they can also skip ahead to sections of interest. Tracking sustainability efforts is becoming more important, as farmers seek new market opportunities. Farmers may find Resilient Fields reports a useful tool for tracking their environmental efforts.

Project Background

The CFFO spearheaded this project in 2019 with the help of funding from the Canadian Agricultural Partnership.

In the second phase of the project, CFFO is pleased to be partnering with the Ontario Federation of Agriculture (OFA) and a broader group of CCAs, who are working with Ontario farmers to beta-test the app. These farmers have established baseline field conditions this summer and will continue using the app during their planning for the 2021 crop year.

Designers are looking for more CCA feedback before the app officially launches in late summer 2021, so if you'd like to try it out, visit www.resilientfields.ca. Please send questions and feedback to info@resilientfields.ca. 

This project is funded in part through the Canadian Agriculture Partnership (the Partnership), a federal-provincial-territorial initiative.



August Exam & Exam Registration

There will be an opportunity to write the CCA exams from August 4th to 11th.

The cost to write the International exam is \$165 US + \$53 proctor fee = \$218 US. The cost for the Ontario exam is \$100 US + \$41 proctor fee = \$141 U.S.

Registration for the exam can be done online and will be open from May 3rd to July 7th. You can cancel at any time up to the registration deadline. Note that you will only receive a refund for any amount over \$75.00 and that the exam fee is non-refundable after the registration deadline passes.

To register for the exam, visit the ICCA website at: <https://www.certifiedcropadviser.org/exams/registration>

Individuals with disabilities need to notify the Certification Department at (866)-359-9161 or certification@sciencesocieties.org 🌱

Updating your Personal Information

Note to all Ontario CCAs, please make sure that if your personal information changes (mailing address) that you update the information online.

Also don't forget to keep your email address updated! Email is the primary means of communication for CCAs, if you don't have your email updated you could miss important information. Please contact Laura at the CCA office to update your email: laura.tfio@bell.net. 🌱

Job Postings

If your company is looking to fill vacant positions within your organization, you can post those opportunities on the CCA website. <http://ccaontario.com/careers>

Please let your human resource department or the person within your organization who is responsible for hiring, know that this service is available. There are still many companies who post their ads on other recruiting websites. Why not use the CCA website as an avenue for finding the right fit for your company?




Rates are available upon request by contacting the CCA office. 🌱

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The CCA Mentorship Program Welcomes Two New Mentees!

This year the CCA Mentorship Committee welcomes two mentees to its program. The two mentees this year are Justin Brennan and Ashley Knapton. Justin is a Dairy Farm Consultant with Campbellford Farm Supply and Ashley is a Dairy Key Accounts Lead with Corteva Agriscience.

The next steps for these two applicants will be to identify a CCA program-related project they will complete during the term of their mentorship. A mentorship term runs for one year from April 1st to March 31st and the mentees get the opportunity to sit in on CCA Board meetings, and work closely with the Board on their decided project.

If you know of an individual who wants to participate in this program, applications are accepted throughout the year with a deadline of February 28th. To apply, you must be a CCA in good standing with preference given to CCAs who have been certified within the last five years. If you are interested in applying, you will be asked to complete a short application along with a telephone interview. Applications can be found on the CCA website or by contacting Laura at the CCA office. 🌱

Transitioning out of the CCA Program

There are various reasons why CCAs may choose to leave the program, however, here are some options for you to consider.

Voluntarily Withdrawing: If you no longer wish to maintain your CCA designation you have the option to voluntarily withdraw from the program. This means you leave the program in good standing, as opposed to being dropped. Those who voluntarily withdraw will also have the option to be reinstated without having to retest as long as they make up any required CEUs (within the next two-year cycle) and renewal fees. This only applies if requesting reinstatement within two years of withdrawal.

CCA-Retired Status (CCA-RET): Looking at retirement? A CCA may apply for "retired" status to their local board if they have met the following requirements:


1. To be eligible for "retired" status, a person had to be a CCA in good standing for 10 years or more and fully retired (not receiving compensation) in any field related to crop advising.
2. "CCA Retired" is exempt from CEU requirements.
3. If a "CCA Retired" decides to become an active CCA again, he/she has two years to do so without taking the International and local board exams again. After two years, they must take the exams again.
4. Application and approval for the "CCA Retired" status is completed through the local boards.
5. The current annual fee is \$25.00. A "CCA Retired" receives all normal correspondence from International and local programs including Crops and Soils Magazine.

If you are interested in voluntarily withdrawing or getting your CCA-RET please contact Laura at the CCA Office. 🌱

CCA Online Store

If you are looking to purchase CCA branded items, check out the CCA online store! An individual can purchase CCA t-shirts, mugs and window decals. The t-shirts are navy blue in color, and come in polo style. We have a wide range of sizes available from small to XXL. The mugs are a dark blue and brown colour and are made by Pavlo Pottery. We offer two different styles of decals – vehicle and office/business. Vehicle ones are circular and the office/business ones are rectangular and 6" in height and 4" in width. Order forms can be found on the CCA website under the "online store" section and can either be emailed to Laura at laura.tfio@bell.net or mailed to 39 William Street, Elmira, ON N3B 1P3. 🌱






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How Spot Spraying will Affect Sprayer Design

Submitted by: Tom Wolf, www.sprayers101.com

Some years ago, a friend recommended that I read *The Tipping Point* by Malcolm Gladwell. In this book, Gladwell tries to understand why some things catch on, and others don't. It's a compelling read full of Gladwell's trademark stories and his knack to deftly interpret scientific studies. He talks of connectors, mavens, and salesmen, as well as the "stickiness factor", a measure of how memorable something is, as keys to success of products and ideas. I think of the book often as I ponder the many good ideas in agriculture, many of which never see widespread adoption.

One of these good ideas is spot spraying. Green-on-brown detection was first introduced in the early 1990s. Anyone remember the Concord DetectSpray? It was great but had bad timing, as resistance wasn't a big issue and glyphosate prices were about to slide. Green-on-brown grew to the NTech (later Trimble) WeedSeeker a few years later. Rometron's WEEDit built on Trimble's success and found widespread adoption in Australia in the past ten years. Spot spraying did not gain any traction in North America during this time.

Australia is unique in many ways, not the least of which is their summer spraying practice. Summer is the hot, dry season where land is typically fallow and weeds are kept in check with herbicide sprays (aaaah, the serenity). Making several passes over a field, combined with the need to control some larger and hardy plants, is expensive, and a spot spray saves much of the cost. The savings can be put to use with more effective herbicide tank mixes that delay the onset of herbicide resistance. Spot sprays pay for themselves in short order Down Under.

It's more of a challenge in the northern plains of North America, where the fallow season involves snow cover and burnoff occurs in a short window before seeding and sometimes after harvest. But nonetheless, spot sprays have a fit for many of the same reasons.

WEEDit is the first system to make serious inroads in North America, with several dozen systems having been retrofitted to high-clearance sprayers. High detection accuracy and hardware reliability is proven in three seasons.

On March 2, 2021, John Deere entered the Green-on-brown spot spray area with See & Spray Select. This should not to be mistaken as competition. Instead, the entry of a major brand provides validation of the concept like only a large manufacturer can. Yes, we've reached a tipping point.

While the first Green-on-brown units are becoming established, Green-on-green, the ability to detect weeds within a crop, continues to be developed around the world. French startup Bilberry has made enough gains in Australia to bring its product to market with Agrifac, where it's called AIC Plus. In farmer field trials, they have achieved 90 per cent detection accuracy of wild radish in Western Australia, and claim that they are ready for broadleaf weed identification in wheat, barley and oats. Bilberry's technology will also be seen on Australia's Goldacres and France's Berthoud. Other startups, notably Israel's Greeneye Technology, plan to introduce a Green-on-green system in the U.S. in the near future. Amazone, the German farm equipment giant, partnering with Xarvio and Bosch, announced plans at Agritechnica to have a commercial unit for sale by 2021.

This technology will have significant impact on sprayer design philosophy. At present, productivity is synonymous with capacity, and large tanks with commensurate heavy and powerful tractor units dominate. Spot spraying savings will depend on weed density and hardware resolution, but 50 per cent to 90 per cent reductions in spray volume can be expected. A 1,600-gallon tank would no longer be necessary. The savings in frame weight and horsepower would be significant, as would the time savings from less intense

tendering demands. These savings would offset the lower driving speeds that accompany sensing technologies, and, overall, provide a lower bar for autonomous operation. We may see lighter specialty spot sprayers.

The savings in brute size will be countered by increased sophistication. Better boom height management is essential for spot spraying, not just for the sensor to properly see the target and estimate the time needed for the boom to reach that spot, but also for the spot spray itself to deliver the right dose. In any fan spray, band width at ground level changes with height, and that, of course, is related to dose. Trailed booms can address this issue easily.

But not everyone wants a specialty spot sprayer that would require an extra pass over the field. With growing utility of soil residual herbicides, dual tank sprayers—small tank for the spot spray, large tank for the broadcast residual—make sense. Large sprayer frames can accommodate an additional smaller tank, second pump, and plumbed boom easily.

Plant detection and identification bring other opportunities. Adjusting dose for plant size is one of the first, or for harder to control weed species.


Spot sprays rely on fast, precise response of the nozzle, and this provided by fast-reacting solenoids that are part of pulse-width modulation (PWM) systems. On a broadcast sprayer, these solenoids can change the emitted dose instantly, within a certain envelope, by altering the duty cycle of the pulse. This, however, works best in the context of a boom with overlapping spray patterns. A single band spray would not change dose with duty cycle as easily.

Higher dosing would be an opportunity for multiple nozzle bodies that are able to spray one, two or more nozzles in the same spot simultaneously. These are already widely available and popular in Europe.

This also brings direct injection into play. Current systems introduce the active ingredient into the boom upstream of the nozzles, affording it time to mix into the water. For true spot spray utility, though, direct injection ought to be at the nozzle. Only then can custom mixes and rates be applied on a spot basis. It's been done before, if only to show how difficult it would be to deliver uniform doses to a spot spray machine.

Spot spray sensors have agronomic benefits. By recording the location sprayed, weed patches can be mapped. As plant identification becomes possible, it's conceivable to obtain plant species and stage distribution maps from the spray pass. That would turn the sprayer into a high-resolution crop scouting tool. As machine learning and sensor sophistication grows, other plant and soil parameters can be mapped. The agronomic value of such maps, especially if created over the course of the growing season, is immense. Of course, data density, handling, storage, and analysis will constrain this.

If the past has taught us anything, it's that there seems to be an appetite for investment in farm equipment. Sprayers have been the most-used implement on the farm for some time, and their popularity continues despite sharp price increases. These new capabilities will only add value to these implements. Prepare for sticker shock, followed by acceptance and adoption.

What will a future spot sprayer look like? Although it will have tanks and booms, the level of electronic sophistication will make it so much more versatile we can't yet imagine all the ways in which it might be used. But it seems to me the situation has tipped and we're already accelerating toward that future. 

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