# Ecological Farming in Ontario

efao.ca

September - October 2019 • Volume 40 Number 5



**Q&A with Andrew Mefferd** 



**Black River Co-operative** 



**Seed Saving Workshop** 



### **Conference Details**

**Digital Technologies** for Farmers: Survey

EFAO Notice Board New Website & CRM

**EFAO Project for Northern Farmers** 

Changes to Membership Categories

Reseach Findings on No-Till Soybeans

# **Conference Spotlight**

### Andrew Mefferd's No-Till Revolution

We are very excited to invite you to this year's Ecological Farmers of Ontario Conference, taking place December 2 to 5 in Belleville, at the Ramada by Wyndham Hotel. Once again, this year will bring together over 400 attendees for four days of intensive learning, ideasharing, networking, and celebration of EFAO's 40th Anniversary. See page 6 of this issue for conference highlights.

As we craft workshops, invite speakers, and puzzle over menus, we inevitably reflect on last year's conference, and how it was received by those who attended. From our feedback surveys and informal chats with members, one big hit from last year's conference in London was the no-till vegetable production workshop offered by Elizabeth and Paul Kaiser.

As Kristine Hammel of Persephone Market Garden writes: "2016 to 2018 were challenging years for our farm -- extended periods of either very wet or very dry weather revealed serious vul-

nerabilities in our production processes. So I was ready to take a leap after attending the Kaiser's workshop at the 2018 conference and reading Andrew's no-till book. We've jumped right into no-till, using compost and straw mulch (which we had been using for several years), along with landscape fabric to supplement weed control (quack grass). A new transplant greenhouse has been pumping out big transplants since early spring to aid in the transition. There are a few bumps, but there has been a significant turn-around. It's actually fun (and far more productive) to market garden again!"

Interest in no-till vegetable production is also evident with the formation of EFAO's new No-till Vegetable Committee and from the enthusiasm for Brent Preston and Gillian Flies' "Minimum tillage for lettuce production" farmer-led research trial, which is continuing on three member-farms this year.

continued pg. 7

# ECOLOGICAL FARMING IN ONTARIO DISPLAY ADVERTISING

Display advertising space is available in six sizes, in many cases with the option of either horizontal or vertical orientation. We offer a 20% discounted rate to member advertisers who commit to, and prepay for, a year of advertising (six issues).

Submissions should be camera ready and high res digital files are much preferred in PDF, EPS, or TIFF format. When saving files please make sure to embed fonts, and save them as outlines. The image you provide should be the correct size, otherwise a set-up fee will be charged. Send electronic files to editor@efao.ca.

Don't have artwork, or need a current ad modified? We can create an ad for you from original photos, logos, etc. Production time is billed at \$45 per hour and can be estimated before ad work. Contact editor@efao.ca for details.

### **STOCK EXCHANGE - CLASSIFIEDS**

The Stock Exchange helps connect farmers and community members to sell and source livestock, seed & feed, land, equipment, and opportunities/services. Stock Exchange ads run in each issue of the newsletter and are posted on the EFAO website. Stock exchange postings cost \$10 for EFAO members, \$20 for non-members and \$15 for more than one issue. Deadlines are the same as for other newsletter content. Visit https://efao.ca/stock-exchange/or email editor@efao.ca to place an ad.

Disclaimer: EFAO is not able to verify details or claims made in Stock Exchange postings (e.g. regarding certified seed or registered stock). We encourage you to check these details yourself before buying!

### ABOUT THE ECOLOGICAL FARMERS OF ONTARIO

Established in 1979, the EFAO was formed by a small group of farmers around their shared commitment to sound farming practices like cover cropping, crop rotation, planting green manures, composting, soil conservation, timely and appropriate tillage, good livestock management, promoting biodiversity, and avoiding the use of synthetic fertilizers and pesticides. Our work remains rooted in the practical application of these same sustainable farming methods, which in turn remain at the centre of ecological or organic farming, and are the foundation of certified organic production standards today.

For more than 40 years, EFAO has provided essential mentorship and training for both new and established farmers. By promoting farmer-to-farmer knowledge sharing, learning opportunities, and creating supportive community around good food and farming, we strive to maintain and enhance the health of the soil, crops, livestock, the diversity of the environment, and our rural and urban communities.

EFAO is a registered charity with the Canada Revenue Agency. Tax receipts will be issued for donations of \$25 or more. Charitable registration # 88074-6532-RR001

For new memberships and renewals, to receive our events bulletins and e-news, to register for events, post a stock exchange or display ad, use the advisory service, or just get in touch with us about anything, visit www.efao.ca, or contact:

Ecological Farmers Association of Ontario 5420 Highway 6 North, RR5 Guelph, ON N1H 6J2 Tel: 519-822-8606 Toll-free: 1-877-822-8606

Email: info@efao.ca

# About Ecological Farming in Ontario

Ecological Farming in Ontario is published six times a year by the Ecological Farmers Association of Ontario. It is mailed under Canada Post Publications Mail Agreement No. 42230514. The newsletter is printed on Rolland Enviro-100 paper, which contains FSC certified 100% post-consumer recycled fibres. This paper is certified Eco-Logo and Processed Chlorine Free, and is manufactured using biogas energy.

**Printing: TF Graphics** 

Design: Caitlin Hill, Brown Dog Design

Tell us what you're doing, farming or otherwise. Write a letter to the Editor. Help make Ecological Farming in Ontario a farmer's journal! Submit articles, photos, opinions and news to editor@efao.ca.

Moving? Don't risk missing a single issue of Ecological Farming in Ontario – log in to your online profile at https://efao.ca/your-profile/ and update your address. Or contact us at info@efao.ca or 519-822-8606.

Deadline for November-December 2019 Issue: October 11, 2019

# Ecological Farming in Ontario

September - October 2019 • Volume 40 Number 5

og. 4	EDITOR'S MESSAGE
og. 5	BOARD PERSPECTIVE: Building resilience through Farmer-Led Research
og. 6	CONFERENCE SNEAK PEEK: Over 30 workshops!
og. 7	NO-TILL REVOLUTION: Q&A with conference speaker Andrew Mefferd
og. 8	THE BLACK RIVER CO-OPERATIVE: An innovative farming community in the North
og. 10	DIGITAL TECHNOLOGIES FOR FARMERS: Challenges and opportunities
og. 11	EFAO NOTICE BOARD: New CRM and website, plus project in the North
og. 12	NEW MEMBERSHIP CATEGORIES
og. 13	ADVANCED SEED BREEDING WORKSHOP: Notes from Wolfe Island
og. 16	NO-TILL FIELD DAY REPORT: Research on organic soybeans in Ontario

### **CONTRIBUTORS**

Annie Richard (pg. 5) is one of three who operate Kitchen Table Seed House on Wolfe Island, near Kingston. In addition to growing organic vegetable, herb and flower seeds of regionally-adapted varieties, Annie has a keen interest in research and plant breeding. She continues to learn as a Farmer Researcher by working to develop new sweet pepper varieties as part of the Southern Ontario Pepper Project, among other farm-based breeding endeavours.

Andrew Mefferd (pg. 7) spent seven years in the research department at Johnny's Selected Seeds, traveling around the world to consult with researchers and farmers on the best practices in greenhouse growing. He is the editor of *Growing for Market* magazine, and the author of *The Greenhouse and Hoophouse Grower's Handbook* and *The Organic No-Till Farming Revolution*. Previously, he worked on farms in six states across the United States before starting his own farm in Maine.

Theresa Schumilas (pg. 10) is an organic flower farmer, and has been active in Canada's ecological and organic agriculture communities for over 30 years. She is particularly interested in how emerging agro-ecological and 'new peasant' movements are constructing new on-line communities using open source technologies, such as Open Food Network.

**Jake Munroe (pg. 16)** is the Soil Fertility Specialist for Field Crops with OMA-FRA and the lead of the Heartland and Eastern Valley OSCIA Tier Two project: Maximizing Cereal Rye Cover Crop Management for Multiple Benefits.

### **EFAO STAFF**

Executive Director: Ali English (ali@efao.ca)

**Administrative Manager:** Martina Schaefer (martina@efao.ca)

Education Director: Katie Baikie (katie@efao.ca)

Research Director: Sarah Hargreaves (sarah@efao.ca)

Northern Program Director: Allison Muckle (allison@efao.ca)

Eastern Ontario Research Coordinator:

Heather Coffey (heather@efao.ca)

Research & Seed Program Coordinator:

Rebecca Ivanoff (rebecca@efao.ca)

Special Events & Newsletter Coordinator:

Ami Dehne (ami@efao.ca)

Editor: Fiona Campbell (editor@efao.ca)

### LEARN • FARM • SHARE

# Editor's Message

### by Fiona Campbell

Curiosity is an incredibly powerful driver of human advancement: it sparks creativity, helps with problem solving and is essentially the fuel that powers science. Kids are innately curious; anyone who has been around small children knows just how many times they ask the question, "Why?"

But curiosity isn't simply child's play: American astrophysicist Neil de-Grasse Tyson considers curiosity part of the very essence of being human: "I can't think of any more human activity than conducting science experiments. Think about it — what do kids do? ... They're turning over rocks, they're plucking petals off a rose — they're exploring their environment through experimentation," says Tyson. "That's what we do as human beings, and we do that more thoroughly and better than any other species on Earth... And so when I think of science, I think of a truly human activity - something fundamental to our DNA, something that drives curiosity."

While some (many?) adults have long since outgrown their curious nature, scientists (defined in this instance as both professionals and citizen scientists, or really anyone still drawn to the question "why") live in a near constant state of wonderment; fostering a love of questions about why things work the way they do and what variables might change certain outcomes.

Farming and science are inextricably linked, and whether you are involved in a formal EFAO Farmer-Led Research trial or are simply trying different methods for improving yields while reducing costs, curiosity is at the heart of discovery and innovation.

With this mind, I'm thrilled to share this issue containing news about the upcoming Ecological Farmers of Ontario Conference: Climate of Curiosity. Whether you're curious about transitioning to no-till, starting a land-based co-operative, or growing organic soybeans in Ontario, there are opportunities to learn something new within these pages. Then come to the conference this December for one of these, or 30 other workshops, and be like Albert Einstein: passionately curious.

cheers,





Welcome Ami Dehne as EFAO Special Events & Newsletter Coordinator! Ami will be organizing events and communications in celebration of the organization's 40th anniversary, and supporting the redesign of our print newsletter. Ami has a lifelong love of nature, animals, and growing things, whether showing cows and pigs in 4H to cultivating her own vegetable garden at the age of 10, to travelling throughout New Zealand working on all shapes and types of ecological farms. When not working with the team at the EFAO, Ami can be found collecting eggs from her five chickens, maintaining her backyard bee hive, mountain biking, practicing aerial silks, and her biggest love, spending time with her husband and two children.



STARTING JANUARY 2020

4 ISSUES/YEAR

WINTER | SPRING | SUMMER | FALL

# Board Perspective



by Annie Richard

It's been a tough season. As many have experienced, wet and cold spring weather kept us out of our saturated fields for much longer than usual. We've had to adjust by planting in areas unplanned for, planting fewer plants per crop than planned for, and keeping those plants alive through the stress of it all.

Now that the heat has kicked in, and the rain has stopped (although it's raining now as I write!) we have to prioritize our seed crops over our variety trials with our limited irrigation capacity this year. It's not a crop failure, but discouraging nonetheless.

We did manage to get our red peppers in, that of the Southern Ontario Pepper Project; a breeding project supported by EFAO's Farmer-led Research Program (FLRP). They were stressed going into the ground, of course, holding in their cells for weeks longer than scheduled, but they have adapted quite well given the circumstances.

I love watching them grow and walking through the beds and observing their differences. Especially this season,

this project, by being part of the FLRP, has been a source of encouragement for me.

I find it tremendously helpful and supportive to be part of the FLRP. At the Symposium at the start of the EFAO conference last December, I was so inspired and energized by the farmers in the room who shared with us all their research results and what they'd learned, what they were now curious about and the next phases of their experiments.

I've attended the Symposiums since they started a few conferences back, and last year there was a new energy in the room - one that seemed to me to be galvanizing for all of us there. It felt like the bud of our potential as farmers to develop answers ourselves to our own questions – with the amazing support of the FLRP staff – was beginning to bloom. Unleash the power of people science!

And so, as I walk through my beds of stressed, yet resilient, early-ripening, blocky, red bell peppers that are being bred for changing climates and conditions in organic systems, an almost renegade-type of energy comes back to me. I feel my perspective shift from the hardships of this season to the broader work this growing community of farmer researchers is doing and its extensive positive implications for regenerative agriculture as a whole. It gets me every time.

The Farmer-Led Research Program is a true asset to us all and hopefully, it's just the beginning. Wishing everyone a safe and energizing fall season. See you at the Symposium.

### **BOARD OF DIRECTORS**

Brent Preston, President Éric Blondin, Vice President Mike McGillivray, Treasurer Jessica Gale, Secretary Annie Richard Eric Payseur Brent Klassen Jennifer Seilern

### **COMMITTEES**

Collaborative Tool Building Committee

No-till Vegetable Committee

**Equity Committee** 

Membership Committee

New and Young Farmers Advisory

Northeast Region Committee

East Region Committee

Refugee Support Committee

Are you interested in being a part of one or more of these committees?

Don't see a committee that you're interested in being a part of?

Why not start your own?

Contact Katie Baikie at katie@efao.ca or 519-822-8606 to get involved or discuss your idea.

### Looking for ways to be involved in this year's conference?

- Consider making contributions of local and organic ingredients for conference meals
- Contribute to the Silent Auction where all proceeds go towards EFAO's programs and services
- Contribute to the Bursary Fund: \$350 provides a full conference pass for a new farmer

Email conference@efao.ca or call 519-822-8606 for more information

# 2019 Ecological Farmers of Ontario Conference

### **Climate of Curiosity**

# December 2 to 5, 2019 at the Ramada by Wyndham Hotel in Belleville, Ont.

### Here's what you won't want to miss at this year's conference!

Over 30 workshops featuring innovative and inspiring speakers including:

- Andrew Mefferd: editor of *Growing for Market* magazine, farmer, consultant, and author of *The Greenhouse and Hoophouse Grower's Handbook* and *The Organic No-Till Farming Revolution*
- Fred Provenza: award-winning professor of Behavioral Ecology at Utah State University, and author of Foraging Behavior and co-author of The Art & Science of Shepherding
- Javan Bernakevitch: brings regenerative enterprises and productive landscapes to life by integrating Keyline Design, Holistic Management, Permaculture, the Soil Food Web, and Myco-Integration
- **Finian Makepeace:** co-founder of Kiss the Ground and a presenter, media creator, and thought leader in the field of regenerative agriculture and soil health
- Heather Pritchard: leading land and farm co-op developer and mentor in Canada
- **Katrina McQuail:** second generation EFAO farmer with a commitment to sustainable, organic, environmentally conscious practices with respect and awe for all living things
- Vivian Kaloxilos: trained under Dr. Elaine Ingham and founder of DocTerre, among the first Soil Food Web inc. affiliated labs and consultants in Canada

### Other conference features including:

- Farmer-Led Research Symposium
- Full day intensive workshops with Andrew Mefferd, Fred Provenza, Javan Bernakevitch and Finian Makepeace
- Two-day Trade Show with over 25 ecological businesses and organizations
- Special Tuesday evening 40th Anniversary Celebration
- Wednesday evening Banquet Dinner and Daisy Award Ceremony followed by a night of dancing
- Community and EFAO Committee meetings, information sessions and networking opportunities
- Delicious, local, organic and ecological food and drinks

### Registration opens September 16. Early-bird pricing ends November 4

- Tuesday Intensive Workshop: \$100
- Full Conference Pass, includes all workshops and dinners: \$350 (EFAO member price)
- Farmer-Led Research Symposium: \$25 (EFAO member price)
- Tuesday 40th Anniversary Celebration: \$35
- Wednesday Banquet Dinner and Daisy Award Ceremony: \$45

More pricing options are available, including single day passes and non-member rates.

### Coming to the conference from out of town?

Book your hotel room as soon as possible to be guaranteed the negotiated group rate of \$119/night, including breakfast. Reservations can be made directly with the hotel at 613-968-3411.

Visit conference.efao.ca or call 1-877-822-8606 for more information or to register

# Transitioning to No-Till Production

### Improves soil health, farm profitability and the environment: Andrew Mefferd

By EFAO Staff

continued from pg. 1

It is with all this in mind, that we are thrilled to be hosting Andrew Mefferd at the conference this year!

Andrew is the editor of *Growing* for Market magazine, and the author of *The Greenhouse and Hoophouse* Grower's Handbook and The Organic No-Till Farming Revolution. He spent seven years in the research department at Johnny's Selected Seeds, traveling internationally consulting with researchers and farmers on the best practices in greenhouse growing. He puts what he learned to use on his own farm in Maine. Previously he worked on farms in Pennsylvania, California, Washington State, Virginia, New York State and Maine before starting his own farm.

Andrew is at this year's conference on December 3 and 4. He will be hosting a full-day intensive workshop about notill vegetable production and another workshop on hoophouse growing. We were very pleased to have the chance to ask him a few questions beforehand.

**EFAO:** You write in the introduction to your book that "no-till is as much about climate change as it is about soil health as it is about farm profitability." Can you elaborate on the latter: how can no-till practices contribute to farm profitability?

Andrew Mefferd: Soil health, climate change and small farm profitability are all linked to no-till because tillage burns-up the organic matter in the soil and oxidizes it into the atmosphere as carbon dioxide, which increases agriculture's contribution to climate change. You really want that carbon to stay in the soil, and build your organic matter level over time, instead of going into the atmosphere. So in that respect, not tilling increases the health of both the atmosphere and the soil by keeping the carbon in the latter. This contributes to farm profitability in that crops will grow better the more organic matter there is. And both better soil and using/owning less machinery will contribute to the efficiency and profitability of farms. This is one of the reasons no-till is important because people are more likely to do things that are good for the earth if they also have a positive impact on the bottom line.

**EFAO:** How did you decide on no-till for your own farm? And how did you decide on which method?

**AM:** When we realized that the roller/crimper method did not scale down small enough for us, and required more machinery than we wanted, we did what I hope growers will do after reading the book: used a combination of the methods described to come up with something that works for our climate and crops. Individual ideas in the book can be used as stand-alone methods, or they can be combined with others. So we ended up using a combination of occultation, solarization, deep compost mulch on the bed and deep straw mulch in the pathway for our first hemp crop this year on 1/4 acre, which I'll tell you more about at the conference!

**EFAO:** In your book you interview other farmers who are using no-till practices. Can you share some of the most common challenges they shared about their transition or establishment of no-till? And some of the most common benefits they shared or emphasized?

**AM:** Challenges to getting no-till systems established include getting over the hump with weeds, since weed pressure tends to go down over time once you stop tilling. Also, there can be increased populations of snails and slugs in systems that leave a lot of plant residue on the soil. Most common benefits include reduced/more efficient labor (from less weeding and time spent tilling), increasing soil organic matter, increased water infiltration and water holding capacity of the soil, and healthier soil.

**EFAO:** At last year's conference we heard from Paul and Elizabeth Kaiser from Singing Frogs Farm. Can you share some of the ways that your workshop might differ in content?

**AM:** While I interviewed the Kaisers for the book, and they are an excellent example of growers making no-till work, I also profiled 16 other growers with a variety of methods and talk about my own experience with no-till. So while they will be considered, this year's talk will draw from a variety of growers/locations/ methods etc to present a smorgasbord of no-till options to attendees, from which they can choose to customize their own systems.

**EFAO:** Based on your experience, would you recommend that new farmers dive immediately into using no-till practices?

**AM:** I would give growers wanting to try no-till the same advice I would give about wanting to try anything else agriculturally: don't plan to switch everything over at once. Try a small section- a few beds, a quarter acre or whatever amount would be a meaningful test- and work out the kinks before transitioning the whole farm.

**EFAO:** What additional resources would you recommend for a farmer wishing to learn more about no-till?

**AM:** *Dirt to Soil* by Gabe Brown is an excellent resource, especially for those wanting to scale no-till up and integrate animals into the system.

For more information about Andrew visit andrewmefferd.com, and for more information about his conference workshops visit conference.efao.ca.

# The Black River Co-operative

### Innovative Northern farming community centred around connection & cooperation

### by Katie Baikie

The Black River Co-operative is a workers' co-op made up of five local, land-based businesses working and living regeneratively in Northern Ontario. Mike Degagne, his wife Rachel Lachance and their three children, along with another farmer (Bill), who has been living and working on the land for decades, are the founding members. Together, they are working to create a community centered around family, connected to the land and working in cooperation with those who share a similar vision.

Based on 176 acres in Matheson, Ont., where the Black River and the Watabeag River meet and flow north to the Arctic Ocean, the Black River Co-op was born out of the need for a land ownership model that, in their words, "values stewardship over extraction."

After three years of research and community building, this not-for-profit community service cooperative has taken big steps in 2019. They have had a successful community stakeholder meeting and created a masterplan for the farm that is based in permaculture, equality and access.

The Black River Co-op is the coming together of five businesses with shared values and ideas and diverse outputs.

The Black River Foraging Company provides a range of homegrown and handcrafted herbal remedies, culinary herbs, vegetables, gourmet preserves and ethically wildcrafted products.

Big-Mike-Grow-Greens is a produce startup focused on providing local and sustainable food year round in northern Ontario using the combination of traditional growing techniques and modern innovations.

Tyynela Ent is the main farm business that has operated custom saw milling, eco-camping and vegetable sales for decades now.

The farm space was designed in partnership with Northbound Bloom: a permaculture design firm that will use the space to demonstrate green building techniques and permaculture design.



Black River Foraging Company (top); Installing solar panels (bottom)



One-third of the space in the new greenhouse will also be rented to Boreal Food Studios, a holistic nutritionist who will host workshops as well as grow nutrient dense foods for their nutritional and educational programs. Together, they say, "Our work aims to improve the health and wellness of our community through nutrient dense naturally grown foods, ethically harvested products, community access to land and environmental responsibility."

Living and working in northern Ontario is not without its weather challenges. To work with some of these challenges, the co-op has begun construction of a 2,000 sq.ft. structure which will include a greenhouse, food processing and packaging space, and a large cold storage unit. Funding for the structure was recently secured through the Fair Finance Fund. The building will be dug into the ground and built from predominantly green building materials. The plan is for it to have the thermal efficiency to reduce the farm's environmental impact and the entire facility will operate completely off-grid on solar (and soon, wind) power. Construction will be completed by October, when the greenhouse will be used to grow year-round, nutrient dense greens, microgreens, herbs and hot peppers as well as serve as a space to start plants, propagate fruit trees for the farm's "food forest" and host workshops of all kinds.

# The Black River Co-operative cont.

continued from pg. 8



Black River Co-operative has been involved with the Local Food and Farming Co-ops Network (LFFC) for the last three years. Through their involvement in the organization they have not only met other inspiring co-ops, but also learned of opportunities for mentorship within the Fair Finance Fund. They have been thrilled to be mentored by Heather Pritchard, co-op developer from the Fraser Valley in British Columbia.

When asked about the experience of working with Heather, they write: "One of the most challenging things for us as young farmers is convincing our small, rural municipalities and town council to see the value in co-operatives, especially in our case one that was focused on regenerative agriculture, regenerative economics and a triple bottom line. Having Heather's decades of lived experience standing beside us at our community stakeholder meeting lent such credibility and feasibility to our story. She really is an expert in the field. Our biggest take-away from her time here at our farm is to find the right balance between dreaming and doing and that successful co-operatives must be diverse in their membership, but unified in their vision."

In talking about the future of the Black River Co-operative, Degagne says, Photo source: M. Degagne

3D rendering of greenhouse (top); site preparation (botton)



"if living off the grid and homesteading with a young family has taught us anything over the past three years it's to expect the unexpected." They are committed to growing the co-operative in ways that add meaning, opportunity and value to the community, the environment and the co-op members. They are also committed to sharing their story and offering support and experience to other land-based co-ops in Ontario.

Follow the Black River Co-op's journey on Facebook (@blackrivercooperative) and hear from co-founder Mike Degagne at this year's EFAO Conference.

Heather Pritchard will be a keynote speaker at this year's EFAO Conference and hosting a workshop on starting a land-based co-op. If you are curious about land-based co-op models, you won't want to miss the opportunity to learn from this expert and visionary.

For more information about the Local Food and Farming Co-ops Network, visit localfoodandfarm.coop; for the Fair Finance Fund, visit fairfinancefund.org; and, for the Black River Foraging Company, visit Facebook (@blackriverforagingco).

# Digital Technologies and Farming

### Challenges and opportunities: survey from the Open Food Network

# By Theresa Schumilas & Alesandros Glaros

For the first time, in 2016, the Statistics Canada Census of Agriculture included a question regarding use of technology. The question was designed to generate a snapshot of the current proportion of farmers using digital tools such as computers, smartphones, and Geographic Information System (GIS) mapping, among other technologies, for farm management purposes.

Over 100,000 farms reported using computers/laptops for farm management, while nearly 16,000 reported using GIS mapping (Stats Canada). This survey did not even include use of digital retailing spaces. Clearly, diverse digital technologies are playing an increasing part in farm-management across the country.

But what do digital technologies mean for EFAO members and ecological farming, broadly? The Open Food Network-Canada wants to hear your perspective.

### Opportunities for digital technology

Why are some farmers using digital technologies? First, the data regarding soil and crop health acquired through soil sample testing, various sensors and mapping technologies provide farmers with site and time-specific knowledge to tailor their management strategies for better economic and ecological outcomes.

Second, automated farming equipment can save farmers time, energy and resources.

Third, online retailing platforms provide farmers with access to diverse distributors and consumers while handling marketing logistics. Computers, smartphones and tablets are increasingly used by farmers, as they support the data generated from these various farm management tools and retailing platforms.



### Challenges regarding use of digital technologies

The digital technology story isn't completely rosy. Concerns are had over the ownership of the technologies themselves as well as the data that they generate. For example, some of these tools are expensive and inaccessible to farmers with few resources. At the same time, the data generated by some of these tools may be owned by the tool manufacturer rather than the actual owner. Concerns are also had over the impact of these tools on farmers themselves and how they relate to the land, their traditions and their neighbours. Finally, concerns exist over the functionality of the tools themselves, as they may be designed inappropriately or ineffectively for different users.

### **OFN-Can Survey**

The Open Food Network (OFN) is an organization dedicated to leveling the playing field in agriculture. It levels the playing field by providing an open, global online marketplace: free to use and free to develop to meet your needs as a producer or consumer of food.

OFN-Can is a regional chapter of the OFN. We are interested in understanding digital technology trends and perceptions for EFAO members.

- What tools do you need?
- What don't you like about current tools?
- Why do you (or do you not) use digital tools?
- What do you see as the future of these tools for ecological farming practices in Ontario?

We will be distributing a survey in the fall with these themes in mind and sharing our findings with you at the annual EFAO conference in December.

### 2019 Carrot Cache Innovation Prize: Now's your time to show off!

Back for its 6th year, the \$1,000 Carrot Cache Innovation Prize is a peer-selected cash prize for tried-and-tested innovations on an Ontario organic farm.

Email submissions are due by Monday November 25, 2019 to conference@ efao.ca. Conference attendees can also bring two copies of a one-page print-out to submit at registration on the evening of December 3 or the morning of December 4. Carrot Cache is a small foundation that funds cooperatives, local organic food initiatives and community food strategies in Ontario.

Please note: The Innovation Prize is not a bursary, and you do not need to attend the conference to enter. It's a \$1,000 cash prize from The Carrot Cache that will be awarded at the conference.

# **EFAO** Notice Board

### **New CRM & Website**

Over the last five years, EFAO has been able to develop new programs and initiatives, with the launch of the annual EFAO conference in 2014 and the Farmer-Led Research Program in 2016.

Over the last few years it has become clear that we were ready to upgrade to a new Customer Relationship Management (CRM) system. A CRM lets us track the activity and information of members and potential members. While the custom built system we have been using for the last six years served us well, EFAO's audience and programs have outgrown the old system's capacity, and staff needed a more streamlined way to keep track of and connect with those in our community.

After a careful search, we are excited to have transitioned to NeonCRM. This new system will be more user friendly, address some of the technical issues that existed in our previous platform, and allow us to better understand who our members are and what they would like from EFAO.

But how will this switch affect you? It will be easier to check your membership status, renew your membership (with an auto-renew function!) and register for events. NeonCRM also has the ability to turn data into simple illustrations, which will help us better visualize and communicate EFAO members' stories.

Along with a new CRM, we have also launched a newly redesigned website. We have been working with Design for Good, a design firm based in Toronto that works exclusively with environmentally and socially responsible projects - last fall to develop a new logo, and this spring and summer on the new website. It has been very gratifying to take time to reflect on our work, language and messaging and to think about how to create a website that is useful for members while also being welcoming for newcomers to the organization.

The end result is a website we hope you will find easy to navigate, mobile friendly and full of useful information (and beautiful too!).

We hope you enjoy exploring the new site. Check out the new archive of old newsletters as well as the updated Research Library for the latest research reports. If you're looking for something specific and aren't able to find it - or have feedback, positive or negative you'd like to share - contact Martina at 519.822.8606 or admin@efao.ca.

### Strengthening Ecological Agriculture in Northern Ontario



We are pleased to announce that EFAO is undertaking a three-year project to support and grow ecological farming in Northern Ontario! From the northernmost District of Kenora all the way down to Muskoka, EFAO will be offering farmer-to-farmer training and mentorship through workshops, field days, kitchen table meetings and advisory consultations and will work to engage more Northern farmers in farmer-led research.

As part of this project, we will also be launching an exciting pilot program in 2020 to support and encourage new and young farmers in Northern Ontario through training and mentorship, as well as farm start-up grants of up to \$10,000 per farm.

Stay tuned for details about all our activities to come in the North, and please contact allison@efao.ca for more information.



Allison Muckle has recently rejoined the EFAO staff team as Northern Program Director, leading a new project that will support ecological agriculture in Northern Ontario. Allison has been farming and homesteading in Sudbury for 12 years and is excited to be taking on this new role!

Allison has worked with EFAO in the past as of Acting Executive Director and Director of Development and is beyond thrilled to be back working with the best group of people around.

# New & Updated EFAO Memberships

We are excited to announce the following membership categories, developed to support the needs of new and existing EFAO members. Starting September 1, the following membership rates and benefits will apply to all membership purchases and renewals. More info & renewals: efao.ca/membership

# NEW! New Farmer & Student Membership \$20/year

A membership for new EFAO members who have been farming for 5 years of less or who are currently students.

Provides access and discounts to all EFAO events and educational initiatives, and a digital subscription to EFAO's newsletter Ecological Farming in Ontario.

Benefits extend to 1 person. Available for a maximum of 3 years.

- · 1 vote at AGM
- Digital subscription to EFAO's newsletter Ecological Farming in Ontario
- Bi-monthly E-news
- Discounted rates on EFAO workshops and field days
- Discount on registration to annual EFAO Conference
- Support for farmer-led research trials
- Full access to Online Community Forum
- Access to Advisory Service
- Access to digital "Member of EFAO" logo
- Listing in online Member
   Directory
- 30% discount on advertising and classifieds in print newsletter

### Full Membership \$75/year \$65 with auto-renewal

A membership for anyone looking to connect with EFAO events, activities and resources. Whether you're a farmer, business, organization or engaged citizen. Provides access and discounts to all EFAO initiatives, and a print subscription to EFAO's newsletter Ecological Farming in Ontario.

Benefits extend to all (unlimited) members of your farm, business or household.

- · 2 votes at AGM
- Print subscription to EFAO's newsletter Ecological Farming in Ontario
- · Bi-monthly E-news
- Discounted rates on EFAO workshops and field days
- Discount on registration to annual EFAO Conference
- Support for farmer-led research trials
- Full access to Online Community Forum
- Access to Advisory Service
- Access to digital "Member of EFAO" logo
- Listing in online Member Directory
- 30% discount on advertising and classifieds in print newsletter

### NEW! Lifetime Membership \$1200

A membership for lifetime supporters of ecological farming in Ontario. Gives you the same benefits as the Full Membership, but is a one-time payment with no renewal notices and no membership rate increases.

- Recognition on website and in annual report (optional)
- · 2 votes at AGM
- Print subscription to EFAO's newsletter Ecological Farming in Ontario
- · Bi-monthly E-news
- Discounted rates on EFAO workshops and field days
- Discount on registration to annual EFAO Conference
- Support for farmer-led research trials
- Full access to Online Community Forum
- Access to Advisory Service
- Access to digital "Member of EFAO" logo
- Listing in online Member Directory
- 30% discount on advertising and classifieds in print newsletter

**To note:** The Full Membership remains \$75 and includes the same benefits as a 1-year Farm/Individual membership. While the 2-year membership is no longer available, a discounted \$65/year membership will be available if you sign-up for auto-renewal when you join or renew online.

# **Advanced Seed Breeding**

### Notes from the Kitchen Table Seed House workshop on Wolfe Island

### By Rebecca Ivanoff

On July 10, Kathy Rothermel, Frank Misek, and Annie Richard of Kitchen Table Seed House (kitchentableseedhouse.ca) on Wolfe Island hosted a small group on-farm plant breeders for a tour of their seed production plots followed by an in-depth discussion of some of the most pertinent questions around breeding for organic conditions. Many knowledgeable breeders were present, including our colleague Dr Michael Mazourek of Cornell University.

In the morning, Kathy, Frank, and Annie took us on a tour of their fields, where we could see some of their seed production work as well as some of the on-farm breeding projects they are working on.

Wolfe Island is a low lying island situated where Lake Ontario meets the St. Lawrence River, and is in hardiness zone 6a. The clay soil and wet spring meant a late start for Kitchen Table Seed House, but there was still plenty to see.

We spent a while in the squash block, where Annie showed us her two squash breeding projects and the processes she is using to do this work. One of the interesting aspects of this work is that she has been doing marker assisted selection, meaning that she has had a small leaf sample from each of the plants sent to a lab where they can tell her if the plant has a gene resistant to mildew. She has kept the progeny from plants that are both heterozygous and homozygous for a mildew resistant gene. This means she knows that the plants that she selects for structure, yield, and taste also have some resistance.

After lunch, we continued our indepth discussions and learning on the porch. We talked about how one makes decisions before and during a breeding project and some trajectories and tools one could use. We talked about breeding for a future we want, such as breeding for no-till ecological vegetables, and about breeding landraces with great diversity.



Annie Richard discussing her squash breeding projects in the fields (top); Michael Mazourek discussing plant breeding methods with his farmer-researcher colleagues (bottom)



We talked about how variation in a plant population is desirable in some cases, but other variation is not ideal, like different cooking times for beans.

We also started a discussion about how we share the outcomes from our breeding work and our seeds in ways that keeps with our ethics and protects these seeds for future generations. We like the sentiment of the Open Source Seed Initiative pledge, but we are aware the public plant breeders, like Dr. Mazourek, could not use our varieties in their work if we used this pledge. We also wondered what language we use when sharing even initial crosses in a breeding project with fellow farmers, and how we release varieties and through which seed companies.

Much more discussion is needed on these topics. Individuals, collectives like the SeedWorks plant breeding club, and others are all encouraged to breed new vegetable varieties suited for ecological growing conditions within Canada.

If you are interested in getting involved in on-farm breeding, contact Rebecca Ivanoff, EFAO's Research and Seed Program Coordinator.

# EFAO Events Listing

### **SEPTEMBER**

Sept 4: Webinar - Soil Health Benchmark Study: Training

for Sampling

12:30 pm - 1:30 pm OR 7:30 - 8:30

**Location: Online** 

This is a webinar for Soil Health Benchmark Study participants with key information about testing with an opportunity to ask questions.

Cost: Free

\* Sept 8: Field Day - Pasture Walk and In-depth Grazing Strategies + Celebrating 40 Years of EFAO

10:00 am - 3:00 pm

Location: Seilern Farm (1161 Conc. 7 RR#5), Hack Farm (965 Concesssion 7 RR 5) and Anbros Farms (2633 Sd. 10 R.R.#1), Kincardine (West Region)

In celebration of EFAO's 40th Anniversary, join us as we visit three neighbouring farms:

Anbros Farm: Lawrence and Mathilde Andres, co-founders and owners of Harmony Organic Dairy, became Canada's first organic dairy farmers in 1979. Officially launched in 2001, Harmony Organic now works with 13 family farms in southern Ontario. Lawrence and Mathilde are founding members of EFAO.

Hack Farm: Established by their father Bernhard Hack in 1982, brothers Martin and Ulrich run this biodynamic and organic farm with their families. They farm cash crops (cereals, hay, soybeans), graze beef cattle and sell bread from

their own grains. The Hacks are longtime members of EFAO and the ecological agricultural community in southwestern Ontario.

Seilern Farm: Run by Jen and Mathias Seilern and their team, Seilern Farm is certified organic and biodynamic. They sell healthy, organic, pastured beef from animals treated with integrity. Jen and Mathias have been members of EFAO since 2013 and Jen is now a member of EFAO's Board of Directors. Both farmers were mentored by the Hacks.

Each farm will provide a farm tour, an in-depth discussion of their grazing and pasture management practices and an overview of their own farm journey. Lunch included.

Cost: \$25/member; \$35/non-member

There are two pay-what-you-can spaces available for this event. Please contact admin@efao.ca

Sept 19: Appetite for Change: Building an Ecological Future 5:00 pm - 9:00 pm

Heartwood Farm & Cidery, 5438 2nd Line, Erin – West Region

Join us for an unforgettable night of good food and inspiring company as we dig into the importance and potential of ecological farming in Ontario and fundraise for the EFAO. Our hosts at Heartwood Farm & Cidery - a horse-powered, regenerative, family farm in the Halton Hills - will provide an inside look into the practices they use to maintain the healthiest soil, water systems, agriculture and livestock possible.

continued on pg. 15







CELEBRATING 40 YEARS OF EFAO

# PASTURE WALK & IN-DEPTH GRAZING STRATEGIES

Hack Farm, Seilern Farm, and Anbros Farm | Kincardine Sunday September 8th | 10am to 3pm | \$25 - \$35









# EFAO Events Listing

# Sept 19: Appetite for Change: Building an Ecological Future cont.

Chef Paula Navarrete of Momofuku Kojin will prepare a three-course meal featuring products from ecological farms in southwestern Ontario to be served in the outdoor dining room.

Cost: \$150/member and non-member

All proceeds from this event support EFAO's programs and services.

# \* Sept. 23: Field Day - Soil Health at a Co-Op Urban Farm 6:30 – 8:30 pm

### The BeetBox, 230 Davidson's Side Rd, Ottawa (East Region)

The BeetBox Co-operative Farm is a workers' cooperative growing a variety of tasty and wholesome vegetables in Ottawa's greenbelt for sale through local markets and CSA. Join worker-owners David, Lise-Anne and Jeremy as they share their story, tour their farm, learn about their soil health practices and discuss their experience as farmer-researchers with EFAO's Lettuce Variety Trial and breeders with Bauta's Participatory Potato Breeding Program.

Cost: \$10/member; \$15/non-member

There are two pay-what-you-can spaces available for this event. Please contact admin@efao.ca.

### Sept 25: Field Day - Ecological Cut Flower Production and Trials in No-till Vegetable Production

1:00 pm - 4:00 pm

# Earth to Table Farm and Sweet Gale Gardens, 250 Concession 4 W, Millgrove (West Region)

Join us for an afternoon spent walking through the fields at two farm operations - both at the same location!

Begin the afternoon at Sweet Gale Gardens where Jessica Gale has been growing ecological cut flowers for six seasons. Join her for a discussion about the farm's soil health practices and a look at how she and her team produce such beautiful blooms. Then, participants will have the

opportunity to tour Earth to Table Farm with Jon Gagnon

and Chris Bocz, who grow vegetables and fruits for Pearle Hospitality's restaurants in southwestern Ontario.

This season, Jon and Chris are EFAO farmer-researchers, working with three other farms as part of the trial "Minimizing tillage for greens with tarps and woven fabric." As part of the tour, participants will see this trial in action and hear about their results first-hand.

Cost: \$10/member; \$15/non-member

There are two pay-what-you-can spaces available for this event. Please contact admin@efao.ca

### \* Sept 28: Field Day - Innovation on a Vegetable Farm 2:00 pm - 5:00 pm

Cedar Down Farm, 222145 Concession 14 (West Region)

Jeff Boesch and Leslie Moskovits have been farming together for 15 years, 10 of which at Cedar Down Farm

where they grow six acres of certified organic vegetables for year-round CSAs. Join Jeff and Leslie for a close look at the ins and outs of what has made this farm successful. Jeff will share some of the tool innovations on the farm, including an electric tractor, and talk about the development of EFAO's new community building group. Learn about their no-till permanent beds, and their soil health practices. They will talk about their new irrigation plans, and their experience as farmer-researchers taking part in EFAO's Lettuce Variety Trial and see the trial in action.

Cost: \$10/member; \$15/non-member

There are two pay-what-you-can spaces available for this event. Please contact admin@efao.ca

### **OCTOBER**

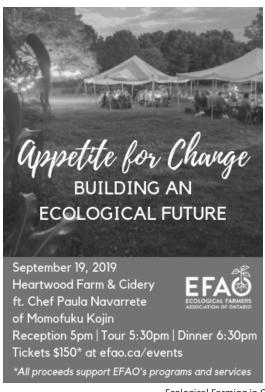
### \* Oct 2: Field Day - On-farm Seed Saving

2:00 pm - 5:00 pm

Ignatius Farm, 5420 Hwy 6 North, Guelph – West Region Join the Ontario Coordinator for the Bauta Seed Initiative to learn how to grow, save, clean and store garden grown seeds for future seasons and how to incorporate these processes into your farm or garden system. We will also discuss soil health practices for optimal seed production and learn about on farm seed stewardship that generates plants that fit the land where we grow and our community's tastes.

Cost: \$10/member; \$15/non-member

### \*These events qualify as part of the Soil Health Program.



# No-Till Field Day Report

### Cover crop-based organic no-till soybeans in Ontario

# by Jake Munroe, Soil Fertility Specialist (Field Crops), OMAFRA

In case you haven't heard of organic no-till soybean production before, here's how it works: A heavy cereal rye cover crop is seeded in the fall (no later than the end of September); it's crimped, using a roller crimper, while at full flower in late May to early June; and soybeans are seeded, using a drill or planter, into the rye mulch.

Soybeans grow through the mulch, which, if sufficient, provides season-long weed control. Researchers and farmers have had success with this system in several U.S. states; adoption in Ontario, however, has been limited to date.

Benefits include improved soil structure and organic matter, as well as reduced labour, but the system does have its challenges. Starting last fall and running through to 2020, Heartland Soil and Crop Improvement Association, with support from the Ecological Farmers Association of Ontario's Farmer-Led Research Program, is evaluating this system across multiple on-farm sites.

On July 24, EFAO hosted an onfarm tour at Vandeholm Farms near St. Marys. Participants toured a no-till organic soybean field, managed by brothers Jerry and Morris Van De Walle, that was seeded into roller crimped rye this spring. It was an excellent opportunity to get a first-hand look at innovative organic production practices. Participants also heard an overview on the Heartland Soil and Crop Improvement Association project.

Vandeholm Farms is one of six different project sites, which range from full field to small plot. At two sites, Drayton (Figure 1) and Elora, the cover crop-based no-till organic soybeans are being compared to traditional organic soybeans in replicated and randomized trials. The four other sites, all of which are organic, are fully no-till and are being monitored throughout the season.

The field toured on July 24th, managed by the Van De Walles who are in Ecological Farming in Ontario



**Figure 1.** Traditional tillage-based, 30-inch row soybeans (left) compared with notill soybeans drilled at 7.5-inch spacing, growing through cereal rye mulch (right) at an on-farm site near Drayton, Ontario. July 22, 2019

their third year raising no-till organic soybeans, is in the best shape of all six in the project (Figure 2). The rye was seeded last September after sweet corn harvest and developed a thick stand this spring. The Van De Walles crimped and seeded soybeans on June 8th. Although they have used a modified planter in the past, this year they opted for a John Deere no-till drill and a heavier soybean seeding rate than normal (350-400,000 seeds/acre). Regular rainfall following seeding was essential, as seed slots did not close well across most sites. Slow early-season growth is typical in this system, as seen in Figure 2, but later season growth can be rapid.



**Figure 2.** Organic no-till soybeans growing up through cereal rye mulch. St. Marys, Ontario. July 12, 2019

As part of the project, we have taken measurements of cereal rye biomass, soybean stands, soybean development, and will record yields at harvest. The target with organic no-till soybeans is to plant into a rye mulch that is at least 8,000 lbs/acre (dry), to achieve sufficient weed suppression. Perhaps due to the tough winter and cool spring, rye biomass across project sites was as low as 4,200 and topped out at 7,000 lbs/acre. Low rye biomass sites, such as this site (Figure 3) near New Hamburg (5,700 lbs/acre), had weeds coming through the mulch in late July. There are limited options to manage weed escapes in organic no-till – they include specialized high residue cultivators (30-inch spacing only) and weed clipping. Growing a thick rye stand is essential to making the system work well.

please turn to pg. 17

# No-Till Field Day Report cont.

### continued from pg. 16

Although we are only part way through the first year of this two-year project, several lessons have already been learned:

- Select fields for organic no-till carefully: choose fields with relatively low perennial weed pressure and decent background fertility. Avoid clay soils.
- Use higher soybean seeding rates: high rates help close canopy quicker. In cases with marginal rye biomass, higher rates may compete with weed escapes.
- Be adaptable: if your rye stand is not thick enough in spring, either till the rye in early or harvest it for forage

To learn more about the project, visit the cover crops page of fieldcropnews. com and EFAO's Farmer-Led Research page this winter, or look for the OSCIA Crop Advances report online at the end of the year.



**Figure 3.** An on-farm project site near New Hamburg with low rye biomass with weeds coming through the mulch. Soybeans were drilled at 15-inch spacing and had a final stand of 148,000 plants/acre. July 24, 2019.

The project would like to acknowledge generous donations of seed made to the project by Cribit Seeds and Thompsons Ltd.



# 2019 Farmer-led Research Symposium

Join us on Monday, December 2 in the afternoon to learn from fellow farmers about their research findings from 2019 and start planning projects for next year.

Registration includes the Research Social and pizza party at the hotel on Monday evening.

More information
@ conference.efao.ca

# Soil Health to Farm Wealth

Organic Consultant Inc Ruth Knight P.Ag. CCA-ON

### Helping You to Reach Your Goals

soil regeneration
whole farm systems design
organic transition and new farm plans
soil fertility, crop management, nutrient management

### **Knowledge, Integrity, Respect**

30 years organic sector
20 years mixed livestock farmer
10+ years servicing Ontario farmers and businesses



Certified crop advisor providing independent services to farmers and ag producers of all types and sizes. Experience backed by science and client knowledge, helping others in ways that Regenerate this Earth.

Contact:

519 - 357 - 5224 organicconsultantinc@gmail.com

# Stock Exchange

### **FOR SALE**

# SEED GARLIC, Certified Organic, 14 cultivars

Email for a current availability list and pick-up/ delivery options.

1 large bulb: \$3, 2/\$5, \$15/ 500g

Discounts on larger orders.

### Contact:

Swallow Haven Farm, Pelee Island, Ont 519-724-2174 or cercis@sentex.ca2 Print ads cost \$10 for members, but can be posted online for free on our website and monthly e-News.

Visit:
efao.ca/stock-exchange
for listings and
how to submit your
ad online.



# Bio-Ag Consultants & Distributors Inc.

Helping Farmers Produce Healthy Livestock & Quality Crops Since 1982



### Bio-Ag can help make a difference with:

- Natural and Organically Approved Premixes
- Nourishing, biological Soil Amendments
- On-staff Nutritionist
- Medication-Free Facility
- Free Shipping on qualified orders

1.800.363.5278

www.bio-ag.com

# Grow more than food Grow complete nutrition

Rebalance and replenish your soil in the Holistic Crop Nutrition Course

# **Course Topics Include**

- The complexities of soil and human health
- Nutrient uptake by plants
- Soil nutrient patterns and desired content
- Energetic solutions & more

### **Course Details**

Online
Nov 4, 2019 to Feb 16, 2020
\$745+tax (until Sep 30);
\$795+tax (after Sep 30)
www.cog.ca/holistic-crop-nutrition

### MEMBERSHIP APPLICATION

Name:				
Farm Name:				
Address:				
City/Town:				
,,				
Province:Postal Code:				
Telephone:				
Email:				
Farm Size:				
Farmer Status:	e part time educator			
media	other			
Main Farming Enterprises:	☐ field crops ☐ livestock ☐ fruit			
	vegetables specialty items			
List of Marketed Products:				
Organic Status: certified	│ │			
Organic Status.				



### 2019 Membership Rates \$20/yr New Farmer/Student

Membership	
\$75/ yr Full membership	\$65 auto-renewal
	auto-renewar
\$1,200	

Lifetime membership
Full member benefits with one-time payment: no rate increases, no renewal notices.

New rates as of September 1, 2019
For more detailed information on membership benfits please go to: efao.ca/new-membership-categories/

### Payment Options CHEQUE or CREDIT CARD

For credit card payments please visit efao.ca.
Or mail your

application and cheque to: Ecological Farmers Association of Ontario 5420 Hwy 6 North, RR5

Guelph, ON N1H 6J2





# Thank you to our supporters



An agency of the Government of Ontario Un organisme du gouvernement de l'Ontario





# Robert and Moira Sansom Ideas Foundation

A fund within the

