

Ecological Farming in Ontario

VOL. 42 | ISSUE 2 | SUMMER 2021



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Agroecology

Economics of Small
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Harvest at Harris Flower Farm. Photo credit: Jenn Eggelston Photography



What We Do

Established in 1979 by farmers for farmers, the Ecological Farmers Association of Ontario (EFAO) is a membership organization that focuses on farmer-led education, research and community building. EFAO brings farmers together so they can learn from each other and improve the health of their soils, crops, livestock and the environment, while running profitable farm businesses.

Vision

We envision an Ontario where thriving ecological farms are the foundation of our food system, and where agriculture protects our resources, increases biodiversity, mitigates climate change, and fosters healthy, vibrant communities.

Mission

EFAO support farmers to build resilient ecological farms and grow a strong knowledge sharing community.

Ecological Farming In Ontario

Ecological Farming in Ontario is published quarterly by EFAO as a benefit of membership to help keep farmers and supporters informed and in touch with one another through articles on relevant farming topics, current farmer-led research, upcoming events and other news of interest.

Ecological Farming in Ontario is printed on Rolland Enviro-100 paper, which contains FSC certified 100% post-consumer recycled fibres. Back issues can be found on EFAO's website (efao.ca) or are available upon request. Unless otherwise noted, articles may be reprinted or adapted if credit is given.

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By Ali English

A Message from the Executive Director

Dear members,

Imagine that when you receive this issue of the publication, you will be in the thick of your early summer season, watching your farm burst with life while juggling endless priorities. As you are ramping up, we at the EFAO “office” are coming to the end of our busy season and are entering a quieter time of reflection and planning. We will mine our notebooks for inspiring conversations from member meet-ups, and pour over feedback forms and member surveys to better understand how we can support you and your farms through our various programs and events. We’re also looking forward to taking a closer look at our equity work so that we can better represent and support all members, with a growing connection to Black and Indigenous, and other farmers of colour.

In this issue you will read the parting words of two staff members — Education & Outreach Director Katie Baikie and Outreach Coordinator Ami Dehne. Katie has been with EFAO since August 2015, leading EFAO’s educational programming including our beloved annual conference. Katie has had a major hand in helping EFAO become the organization it is today, and there’s no doubt that Ontario’s ecological farming community is stronger because of her work. Ami Dehne has been with EFAO for almost two years, launching EFAO’s merchandise sales, helping to revamp this publication, and organizing a host of engaging member events. We will miss them both greatly, and on behalf of the board and staff team, I would like to extend our heartfelt gratitude for their incredible contributions to EFAO.

As some of you may have heard at our November AGM, for the EFAO staff and board team the past year has been occupied by the development of a new five-year Strategic Plan. The process began with a memorable in-person board meeting in March 2020 (just before the pandemic hit). Through lively discussions, the board set a goal of doubling the number of ecological farmers and the acres under ecological management by 2025, and the three following strategies for getting there: **1) Supporting EFAO members to run profitable, resilient ecological farms; 2) Broadening adoption of ecological agriculture among other farmers; and 3) Achieving provincial and federal policies that support ecological agriculture.**

We had the pleasure of working with EFAO Board member and evaluation specialist Ricardo Ramírez to develop an in-depth “theory of change” as well as a comprehensive evaluation strategy, to ensure that our work is having the impact we desire, and that we are learning and improving as we go.



The staff team has worked hard to develop plans for our five main areas of work, some of which EFAO has been delivering for decades, and some that are new for the organization: **Education, Research, Outreach, Incentives, and Policy.** We gave much thought to how our various programs and activities (see diagram on page four) can best support EFAO members while also increasing the adoption of ecological farming practices. We are looking forward to bringing this strategic plan to life over the coming year, with relevant resources, exciting educational events, and practical ways for EFAO members to learn from and connect with each other.

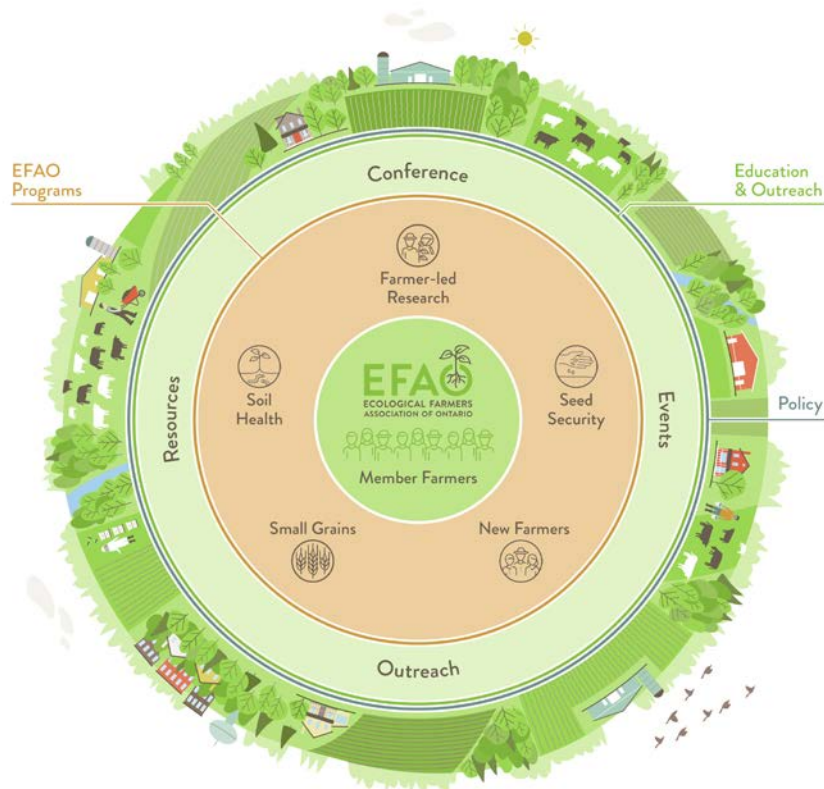
We will be sharing the new Strategic Plan through the E-news – so keep an eye out and don’t hesitate to reach out with any thoughts! In the meantime, we hope to see you out on a field day this summer, be it virtual or in-person. Above all else, hearing you speak about the realities, challenges and wonder on your farms is the fuel that energizes and inspires the EFAO staff team in our work over the coming season.

Yours,
Ali

p.s if you weren’t able to complete the member survey but would like to, please don’t hesitate to contact me at ali@efao.ca and I will send it your way!

EFAO Programs & Activities 2020 – 2025

The EFAO team has been hard at work over the past year to create an ambitious plan that will guide our work for the next five years. As part of that work, this “visual boilerplate” was created to show how the people, programs, and activities that define EFAO interact.



Climate Solutions in the 2021 Budget

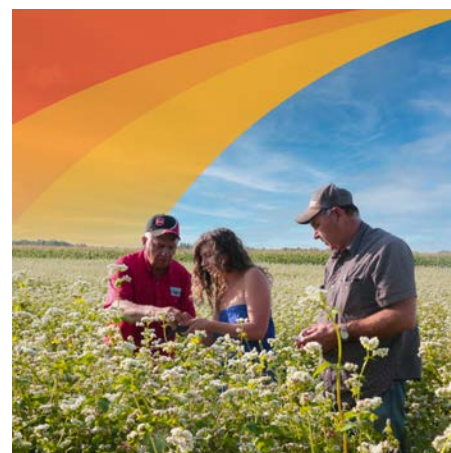
In her first federal budget in April, Canada's Minister of Finance Chrystia Freeland announced \$200 million in new funding for agriculture programs that will support farmers to reduce greenhouse gas emissions by improving nitrogen management, increasing adoption of cover cropping, and normalizing rotational grazing. Additionally, the government promised to spend \$60 million on programs that will protect on-farm ecological resources, such as wetlands and trees, and \$10 million supporting farmers to adopt clean energy technologies.

As a founding member of the Farmers for Climate Solutions (FCS) coalition, EFAO is happy to see the government respond to requests made by FCS earlier this spring, in their budget recommendations, which were informed and amplified by a farmer-led task force that included scientists and

sustainable development experts. The budget funds every one of the programs recommended by FCS, and borrows language from the report directly, illustrating the impact that FCS's work has had on government priorities.

In addition to these recommendations, the budget also included a promise that much of the carbon tax that farmers currently pay on natural gas and propane will be returned to them in the form of rebates.

Farmers for Climate Solutions, formed in 2019, is a farmer-led group of 19 farm organizations from across Canada that have united in their work to influence public policy on climate, with the goal of making the farming practices that have been championed by many EFAO members mainstream.



**FARMERS
FOR CLIMATE
SOLUTIONS**

EFAO is proud to be a part of this initiative, and we look forward to continuing to work with FCS to guide Agriculture and Agri-Food Canada in the implementation of this programming in the weeks and months ahead. We hope to see similar commitments to agricultural climate solutions from Ontario's provincial government in the future. ■



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1: Norm Lamothe of Woodleigh Farms Setting up AB lines and planting out plots for an oat variety trial.

2: Norm's oats have emerged! Apr 29, 2021.

3 and 4: Ann Slater's 2020 lettuce variety trials, which continue in 2021. Ann is part of a group of 10 EFAO farmers running trials to find out which varieties germinate and grow best in Ontario's hot summers.



5 to 7: Andrea Mastrosovs sourcing, prepping, and planting out willow cuttings for her Farmer-Led Research project looking at optimal spacing for weed control and yield in basket willow production.



8 and 9: Brett, Jamie, and Carl Israel talking about the benefits of regenerative farming on CBC's The National, Apr. 27, 2021.



Q&A With Ronaldo Lec

Ronaldo Lec is an advocate for food & seed sovereignty, ecological agriculture, and empowerment of the peoples of the Global South through his work with ECOSOL, the Ecology & Solidarity Council. In 2020, Rony and his partner Myriam Legault performed a grain amaranth variety trial as part of EFAO's Farmer-Led Research Program. You can find Rony & Myriam's trial results on the [EFAO website](#).

When and why did you start growing generally? What about amaranth?

As an Indigenous Maya from Guatemala, I come from an agricultural family and grew up in a land based culture. It was not until I was studying anthropology and started looking into the bridge between traditional knowledge and native plants that I discovered amaranth.

Why is amaranth a significant or important crop for you?

Amaranth was the basis of nutrition for millennia among cultures of Mesoamerica such as the Mexican and the Maya. Studies show that there were more tributes paid in amaranth than any other crop. Densely nutritious amaranth can become once again the backbone of our food system. Amaranth is so resilient that it is grown all over the world, from sea level to 5,000 meters above sea level, from the desert to the prairies of North America.

Please tell us a bit about where and how you grow.

Amaranth does not need so much fertility nor care, it can tolerate drought but not frost. It can be sown directly or transplanted after the soil has warmed up. Avoid growing where there is lots of

pigweed, since they can cross pollinate. Leaves can be harvested after 60 days, and seeds after 120 days.

You have conducted a research project for your farm in cooperation with EFAO's Farmer-Led Research Program. Can you describe your research trial?

My research with the EFAO was for screening varieties of amaranth to find an early-flowering variety for the short growing season in Ontario. We found a highly productive variety but it is not the best for popping seeds, and this is so important since it reflects the quality of the grain when processed.



Do you think you'd like to do a future, replicated trial to narrow down the results and find the best short season grain amaranth to grow in Ontario?

We have been approved for replicate trials in different farms with the best three varieties that were selected in the first trial. This will allow us not only to find a short season grain amaranth, but also give us an opportunity to see how it



behaves in different parts of Ontario and under different growing conditions.

What did you learn from your research trials, and how will it help you in future seasons?

The first research trial helped us to screen varieties and confirmed for me again that the most productive varieties are not always the best in the kitchen.

Also, I learned that there is a growing interest in growing amaranth in Canada as a resilient crop to climate change.

What advice would you give to other growers looking to produce amaranth this season?

The first 25 days are key to determine the health of the plant and after this period it can stand just about anything. Do not confuse them with pigweed or purslane when weeding.



What are your favourite ways to eat amaranth?

Popped amaranth bars and amaranth flour ground with pumpkin seeds, peanut and sesame seeds consumed as a hot drink, or indulging by mixing it with chocolate and milk. ■

An Economic Case for Small Grains with Cover Crops

By Maureen Balsillie

It is well known that extending field crop rotations by adding small grains, such as wheat, barley, oats, triticale, spelt, or rye, has many ecological benefits. For example, small grains help protect and build soil health, reduce pesticide fertilizer use and improve water quality.

As we've developed EFAO's Small Grains Program over the last year, a main concern from farmers was that wheat and other small grains are not profitable crops. Up against high yields and high market prices, it's hard to beat corn and soybeans.

As we dig deeper into the economics of small grains in rotation, we have some good news: small grains can lead to big gains, for both the ecology and profitability of your farm.

Small Grains, Big Gains

Studies on extended rotations from the University of Guelph's Ridgetown Campus show that — along with general benefits of diversifying your operation — the biggest gain from adding wheat into a corn-soybean rotation is seen in your corn and soybean years. This is because adding wheat to your rotation increases both corn and soybean yields with the same amount of nitrogen (N) fertilizer (Figure 1b). In fact, [the Ridgetown trials](#) have shown an increased yield up to 17 bushels/acre (bu/ac) of corn and 4-6 bu/ac of soybean in the years following. Those trials at Ridgetown are being expanded to other areas of the province including the New Liskeard Agricultural Research Station, which is home to much of the province's oat production.

Another big advantage to adding wheat and other small grains into a rotation is that they provide a valuable

temporal niche to include late-season legumes. Small grains, which are typically harvested in the summer months, provide an excellent window to establish a legume cover crop or legume forage. Similar to other types of cover crops, legumes like clover and vetch help control erosion, add organic matter to soil and can attract beneficial insects. Additionally, legumes act in symbiosis with nitrogen fixing bacteria. This symbiosis returns nitrogen to the soil through high N content in the leaf and root residue. The N in the cover crop residue leads to greater available N in the soil, which can be used as an N credit for the following year's corn (Figure 1c). In Ontario, the N credit for corn can be as much as 70 lbs of nitrogen per acre ([OMAFRA](#)); and some studies out of the mid-western US put that number at over 100 lbs per acre.

Legume cover crops can be used on their own but can also be used as a part of a mix or 'cocktail' which may include many other species such as oats, rye, peas, tithale, and brassicas. While the biggest nitrogen credit will be achieved with an 100 per cent legume, a mixed seed of 50 per cent or more legume will still give you the opportunity for net positive return and may give you the opportunity to see benefit from the other species such as reduction in compaction or greater weed control.

Show me the money

Putting pencil to paper for these claims, we worked in collaboration with Dr. Aaron Delaporte at University of Guelph. Using province-wide averages on yield from OMAFRA, we estimated total costs from seed, tillage, planting, and cover crop kill costs for a corn-

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Classifieds also appear on the Opportunities page of the EFAO website.



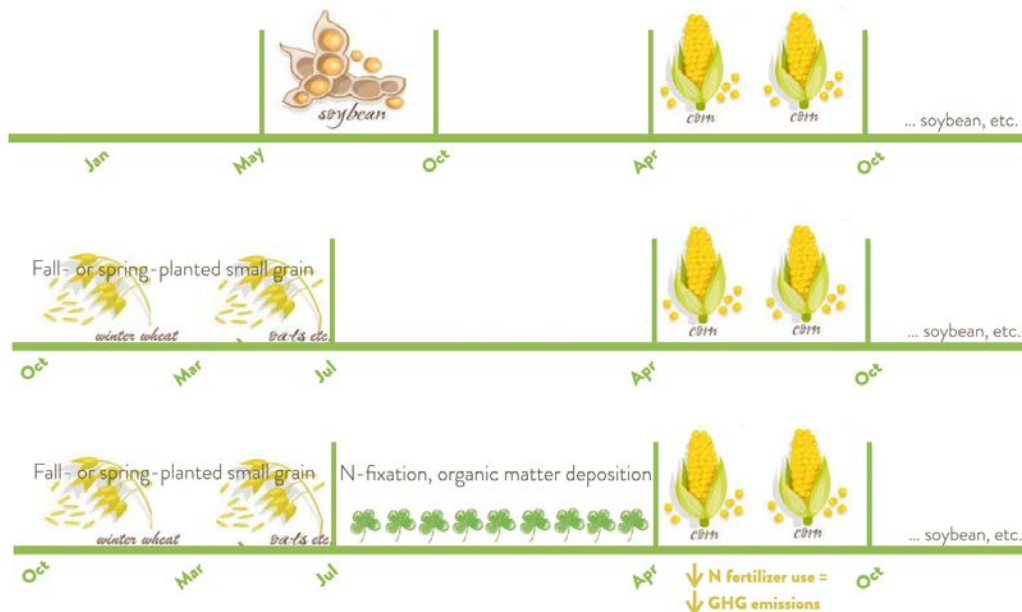


Figure 1a

Figure 1b

Figure 1c

Figure 1. A simple corn-soybean rotation (1a), a corn-soybean-wheat rotation (1b) and a corn-soybean-wheat rotation with a legume cover crop (1c). Adding wheat alone increases nitrogen use efficiency (NUE), meaning it increases yield for corn and soybeans without additional fertilizer. Incorporating a legume cover crop after wheat (bottom) provides an N credit for the corn crop, which reduces fertilizer requirements and concomitant greenhouse gas emissions.

Graphic courtesy of
[Practical Farmers of Iowa](#)

soybean rotation, and a corn-soybean-wheat+legume cover crop rotation.

For a simple corn-soybean rotation, we estimated an average net return of \$280/ac. Add wheat but no cover crop or yield advantage to corn and soybeans, and the average net return was \$263/ac — less than the simple corn-soybean rotation.

However, when we included the yield advantage from wheat to corn and soybeans and added a legume cover crop and associated N credit, we estimated an average net return at \$313/ac — **\$33/ac more than the simple corn-soybean rotation**. These calculations do not include the potential increase from sustainable straw harvest.

It's important to remember that we took these numbers from provincial averages and they may not reflect localized data. For this reason, it's important to calculate cost-of-production on your own farm, and even for individual fields. Regular soil tests can also play an important role in maximizing profits by providing evidence for precision nitrogen use. ■

Maureen Balsillie is EFAO's Small Grains Program Coordinator. She has previously worked with the Agricultural Adaptation Council, Holstein Canada, Ontario Apple Growers and the Green Party of Ontario.

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Flower Farming in Ontario: Pursuing the Dream

By Theresa Schumilas

The market for field-grown cut flowers in Ontario is estimated at \$6M and growing rapidly. This past spring I interviewed 10 established Ontario cut flower farmers about the opportunities and challenges they see in various marketing channels, and the impacts of COVID-19.

Bulk Flowers to Designers

Selling wholesale to designers can move a lot of flowers quickly, but it has its challenges and it's not usually the place to start. As Sas, of Floralora Flowers notes, "It takes a while for designers to trust you, and the biggest challenge is PERFECTION. Brenda from Flowers of the Field concurs, and stresses that you have to be prepared for "the fussy factor."

It can be difficult to find sufficient numbers of designers outside of the GTA who want locally grown cuts. As Kevin and Heidi from Edgebrook Farms explain, "The higher population there means some designers have four or five events in a given weekend. That's a lot of flowers."

Across Ontario, growers are working to form various types of collectives to sell cut flowers to designers in on-line marketplaces. The Local Flower Collective (TLFC) in Toronto was the first of these. By working together in collectives growers can 'cover each other' to ensure reliable supply over a long season. TLFC uses the Open Food Network platform to do this because of its affordability (free for the marketplace suppliers) and flexibility – growers can also have multiple online stores and marketplaces selling from the same inventory.



Small Stores, Hubs, Permanent Farmers' Markets

Market-type stores, especially in tourism areas, are a second wholesale channel pursued by farmers like Heidi of Edgebrook Farms and Janis of Harris Flower Farm. Flowers are a spontaneous purchase, and these kinds of stores cater to that. This sales channel has multiple benefits: grower choice, no consignment, weekly drop off, and they run all season long.

The challenge, as Heidi notes, is that you are surrendering your brand to someone else. She stresses that education about handling and storage is important, or your brand becomes associated with flowers that only last a few days.

Flower CSAs or Subscriptions

Flower CSAs (aka "subscriptions") are growing very fast and right now demand is greater than supply in most areas. They also couple nicely with other farm products, notes Susan from Hawthorn Ridge Heritage Farm.

These are typically pre-purchased subscriptions, where the farmer decides on the styles of bouquets offered, the price, and the delivery/pick-up options. Flower CSAs come in all sizes. The farms I interviewed offered anywhere between 30 and 300 subscriptions for 2021, and sold out before January.

The primary challenge with flower subscriptions is that demand for flowers falls off in the middle of summer when people are away at cottages. Those are the months with the most plentiful and easily grown flowers.

Farmers' Markets

Markets are a great channel if you are the only vendor with flowers and the weather is fair. But if there are other growers selling flowers as 'loss leaders' or it is stifling hot, farmers' markets are a challenging way to sell flowers. Some growers sell pre-made bouquets while others bring bulk flowers and invite customers to make their own bouquet. Regardless, as Hilde from Makkink Flower Farm notes, "It's all about the



display. You have to over-pick and over-supply to stay looking good all day and don't even bother taking things that will wilt in the heat." The only thing worse than bringing home a lot of flowers is bringing home a lot of *wilted* flowers.

Farmers' markets are a great way for a new flower farmer to build a following and get started. However, the number of non-flower vendors who offer bunches 'on the side' as a loss-leader results in serious flower farmers adding or shifting marketing channels.

Flower Tourism and PYO

Flower agritourism, including Pick-Your-Own (PYO) flowers, workshops and other events, is another fast growing cut flower marketing channel. At Garden Party we've found this to be the perfect companion to wholesale designer sales. People pick entirely different flowers from what designers order. This is also a very flexible and scalable channel. At Garden Party, we limit to six cars and five picking times per week. At the opposite end of the spectrum, at Edgebrook Farms, Heidi and Kevin

are developing a full-blown flower destination for hundreds of visitors.

If you are a creative person, there is lots of room to innovate in this channel. The main advantage (other than you get to stay on the farm) is the WOW factor. As Hilde notes, "people are definitely looking for flowers as an experience."

Weddings

Offering full service weddings, where the farmer not only supplies the flowers, but also makes the arrangements and does the installations on site, is a very profitable channel for a flower farm. But it also has the most challenges. Mention weddings to a group of flower farmers and you'll immediately see eyes roll.

More than any other marketing channel, weddings are affected by COVID. In 2020 there were postponements, followed by re-bookings. Those re-bookings are now becoming re-postponements, cancellations, and scaled down events. "I don't really even know how many weddings I have going on this season" confesses Janis. "There

are 50 booked right now, but that's not including the re-schedules. It's just chaos." Heather concurs. Feeder Flower Farm has had to hire someone just to do the COVID-related scheduling and re-scheduling.

Each time a wedding is re-scheduled, the farmer must re-plan the flowers. That August 2020 blush palette featuring dahlias is now happening in July 2021 – when focal flowers are sunflowers or hydrangeas. This requires an entirely new consultation with the bride.

Many weddings are now becoming elopements or small events, so the purchase is scaling down. When a wedding scales downward from \$2000 to \$500 or less, the farmer is still putting in the same planning time. Indeed, the flower revenue from elopement weddings is now approaching 'DIY' prices. At Garden Party, bulk flowers picked, cleaned and conditioned for a wedding party who will design their own arrangements average \$300 – without any of the design work or client hand holding.

Conclusion

All the farmers interviewed felt that in recent years flower farming has become rather romanticized on social media. This hype has led to a significant increase in new flower farms. "It's a happening thing" summarizes Harriet of White Creek Flower Farm. Heidi from Edgebrook Farms concurs: "In the past two years, on every side road, in every direction, there is a new flower farm."



It is exciting to see a new market for local farmers in formation. It reminds of the early days in the organic and local food movements. The key thing we learned then was that farmers had to collaborate to educate buyers and grow the demand. Without attention to both the supply and demand sides of the equation, we risk product sitting unsold in our fields. ■



Theresa Schumilas has farmed using ecological methods for over 30 years. Currently she grows cut flowers at Garden Party Flower Farm outside of Waterloo. In addition, she volunteers with Open Food Network Canada, a national not-for-profit that develops open source digital solutions for the local food movement.



Photo credit: Jenn Eggelston Photography

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The Growing Problem of Land Access

By Celeste Lopreiato

I've been involved with farming for about four years. After an inspiring summer working on my university campus's organic farm – I caught the bug. Over the past few years I've met and talked to hundreds of local ecological vegetable farmers. We've talked about many things, from marketing to pests and diseases, burnout, and labour, but one topic that doesn't seem to come up much is how these farmers bought their land. Usually it's by leveraging privilege . . . and it definitely was for me.

I realized I wanted to own/ live on some sort of farm after growing up in Toronto and loving city life less and less as I grew older. About a year ago, my partner and I decided we were going to start this journey. At the time, I was running a growing farm-to-table meal delivery business out of Guelph, and farming a quarter-acre with almost no infrastructure (the joys of rented land!). I also knew that my business was outgrowing my space, and that I would soon have to find a much more expensive rental, and I also wanted to expand the farming side of my business. We recognized that it would be a much better investment to build a commercial space on our own property, and we had a sizable off-farm household income to help fund this. We decided to move our dream of purchasing land to the forefront and start looking seriously, but we didn't know what kinds of sacrifices we would need to make.

We quickly realized we were priced out of Wellington County, and were likely going to be priced out of our second option (Grey County) in the next year. So we acted fast. We decided in less than a week that we were going to have to move 1.5 hours away from our community, friends and family, if we ever wanted



our dream to become reality. We are a young, Queer, mixed race couple – probably the only one in the rural area we were now thinking of calling home.

Even though we made a household income of \$90K, we only qualified for a mortgage of around \$300K because my self-employed income didn't count (I'd been in business for less than three years). We met with a mortgage broker and found a way to get qualified for a mortgage of up to \$650K, if my mom was willing to co-sign. We initially set out with a budget of \$500K and wanted at least 20 acres, a compromise for having to move so far. It had to have a house, because



vacant land requires a 50 per cent down payment, and most first time buyers won't even get a mortgage for it. We



looked for about a month, and nothing with more than one acre was available for under \$550K in the entirety of Grey County. In fact, anything with close to 20 acres was at least \$900k. Then we were hit with the realization that with any agricultural purchase, you need a 20% down payment. That was \$110k. We needed to somehow find more money, and were most certainly going to need help from our parents. We laid this all out to my parents-in-law, who were kind enough to give us a big chunk of that money (HUGE privilege), and we sold anything of value we had to make up the rest.

We ended up finding a mostly wooded property, with a half-acre of pasture. There was no farm infrastructure other than a barn, and we probably have more rocks than soil. Not only is our farm not “ideal” for farming, but we immediately realized we’d never be able to afford it through farming alone, and we honestly couldn’t even if we tried. My partner’s good-paying job is what got us a mortgage (and the ability to pay it!). Also, our mortgage payment, utilities, insurance, and property tax add up to about \$3000 a month – which would be nearly impossible to support on a small farm’s revenue. Most small-scale vegetable farmers I know aren’t even profiting \$3000 a month, so how would they be able to pay the property costs, let alone other personal expenses?

The crazy thing is that our farm sold for \$350K just six years ago. In six years, the price doubled. In the next town over, we have farming friends who bought 100-acre farms with houses & barns for under \$350K, just 10 years ago. Nowadays I see listings for 100-acre

pieces of vacant land for over \$1 million.

I didn’t know how others were doing it, but then it all started to make sense. Now when I see young southern Ontario farmers posting about buying land, I know that they

likely did not get a mortgage from their farm income alone, probably got help from their parents, and probably have someone working off farm. Most of them just so happened to buy their farms before the market shot up. If you’re a farmer that encourages others to get into the industry, think about sharing these realities with aspiring farmers, because sugar coating the farming life isn’t helpful. We need to tell young people that it’s not going to be possible for them to buy land through farming alone. That working as an unpaid intern might push them even further away from a future in farming. And if you don’t want to

tell them this, we need to start doing something about it.

As I look at our rural community I see more and more “vacation homes” on 50 acres of pasture, 6000 sq ft mansions being built on semi-affordable lots driving up the land cost by 200 per cent, and non-farming inheritors of land holding on to empty properties, waiting to sell to developers in 5-10 years. I see such a dire situation, perhaps the most pressing farming issue, and not many farmers discussing it. I want this to change. And I want more farmers to think about how their race, generational wealth, and the previous stabilized housing market impacted their land acquisition. Working hard growing lettuce isn’t what bought your farm. ■

If you are interested in learning more about our journey, you can follow us on Instagram: @slowgrowingfarm. Our aim is to provide representation for Queer & BIPOC farmers, and help new and aspiring farmers create and grow value-add farm businesses that financially empower them to build the life they want for themselves.

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Agroecology and the Future of our Mother Earth

By Bob Garthson

In her book, *Who Really Feeds the World*, Vandana Shiva emphasizes the central role of Agroecology: “the knowledge and science of the complex interactions that produce our food.” She refutes many widely-held beliefs regarding the global food crisis and articulates a powerful manifesto for agricultural justice and sustainability.

Growing up in the Brampton of the 1950s and 60s, I watched the elimination of some of the world’s best farmland, replaced by the seemingly endless construction of highways, factories, warehouses, malls, and subdivisions. At its peak, more than 100 acres of farmland were lost each day. Since the 1960s, farmland elimination and urbanization has snowballed. The family farm, on-farm income, and access to farmland, particularly for women and people of colour, have been the victims. Eco-destruction, pollution, and climate change have been the offspring. Covid-19 has brought to light the exploitation experienced by many migrant farm workers. Our current premier and his government appear to have learned nothing from our past, approving more superhighways, less conservation and the accompanying development, and trading local food security for profit, wealth and power.

While I have had the good fortune to be able to grow produce organically since 1956 on a number of different properties from urban to rural to



recreational, it was after I retired from teaching that I was able to combine organic, biodynamic, and permaculture principles on my 25-acre property in Northumberland County. I was able to provide food for my family, friends, local markets, and food banks. Serving on the EFAO Board of Directors, the local Agricultural Advisory Council, and the Food Policy Council, and reading numerous articles and reports on agriculture, I came to the realization that I needed a new framework to form the context for food and for the components that make food security possible.

About 10 years ago, I discovered a report prepared for the United Nations Food and Agriculture Organization (UNFAO). This UN agency became an advocate for **agroecology** as the necessary approach to meeting the challenges of food justice, loss of biodiversity, climate change, and rural devastation and poverty.

“Agroecology is based on applying ecological concepts and principles to optimize interactions between plants, animals, humans and the environment while taking into consideration the social aspects that need to be addressed for a sustainable and fair food system.”¹

In providing guidance to countries so that they can “transform their food and agricultural systems to mainstream sustainable agriculture on a large scale, and to achieve Zero Hunger and multiple other Social Development Goals,” the following 10 Elements of Agroecology, all interlinked and interdependent, were established and promoted:

DIVERSITY: diversification is key to agroecological transitions to ensure food security and nutrition while conserving, protecting and enhancing natural resources.

CO-CREATION AND SHARING OF KNOWLEDGE: agricultural innovations respond better to local challenges when they are co-created through participatory processes.

SYNERGIES: building synergies enhances key functions across food systems, supporting production and multiple ecosystem services.

EFFICIENCY: innovative agroecological practices produce more using less external resources.

RECYCLING: more recycling means agricultural production with lower economic and environmental costs.

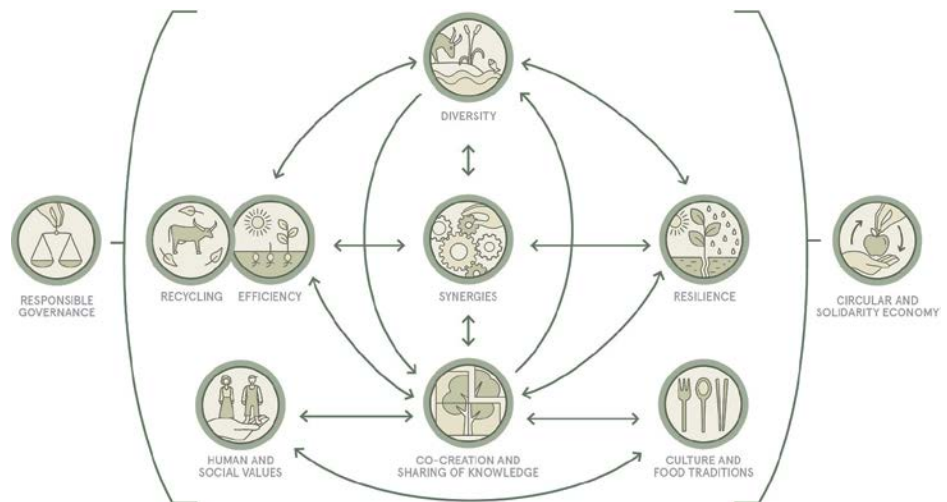
RESILIENCE: enhanced resilience of people, communities and ecosystems is key to sustainable food and agricultural systems.

HUMAN AND SOCIAL VALUES: protecting and improving rural livelihoods, equity and social well-being is essential for sustainable food and agricultural systems.

CULTURE AND FOOD TRADITIONS: by supporting healthy, diversified and culturally appropriate diets, agroecology contributes to food security and nutrition while maintaining the health of ecosystems.

RESPONSIBLE GOVERNANCE: sustainable food and agriculture requires responsible and effective governance mechanisms at different scales – from local to national to global.

CIRCULAR AND SOLIDARITY ECONOMY: circular and solidarity economies that reconnect producers and consumers provide innovative solutions for living within our planetary boundaries while ensuring the social foundation for inclusive and sustainable development.²



In Canada, where to my knowledge no government policy or program acknowledges agroecology, the National Farmers Union has adopted agroecology as their framework for the future of agriculture and food:

“Agroecology is a holistic approach to food production that uses—and creates—social, cultural, economic and environmental knowledge to promote food sovereignty, social justice, economic sustainability, and healthy agricultural ecosystems.”³

Based on La Via Campesina’s 2015 *Declaration of the International Forum on Agroecology*, the NFU presents eight Common Pillars of Agroecology, which include an increased emphasis on the political nature of agroecology, including the need “to transform the structures of power in society and the recognition of women and youth as leaders and controllers of land and resources.”³

Due to the growing prominence of agroecology, there is substantial academic research and writing examining its status and development. In the journal *Sustainability* (2018), a number of scholars and practitioners, including EFAO’s Director of Research Sarah Hargreaves, collaborated on an article entitled “Agroecology in Canada: Towards an Integration of

Agroecological Practice, Movement and Science.” The authors state, “Although the prevalence and prominence of agroecology is growing in Canada, its presence is still small and the support for its development is limited. We provide recommendations to achieve a more meaningful integration of agroecology in Canadian food policy and practice.”⁴

The article includes Canadian examples that serve to “highlight the opportunities and the challenges advocates encounter in their efforts to radically counter a history of policies, practices, and ideologies that have prioritized maximizing agricultural yield over other socioeconomic, environmental, and biocultural objectives.”⁴

“Agroecology offers both a practical and an aspirational approach to addressing issues – one that encompasses various aspects of alternative agricultural systems thinking and which aims to support local economies which strengthen biodiversity, resilience, and social justice.”⁴ While organic, permaculture and biodynamic approaches share much in common with agroecology, they do not reflect its scope. “Motivations for engaging with Agroecological practices are derived from a range of thematic and methodological approaches, including environmental and biological sciences, political economy, labour, food sovereignty, and justice.”⁴

In a recent article entitled “Realizing Resilient Food Systems,” Jennifer Blesh

and ten other academic researchers suggest that “applying resilience thinking to agriculture could help reduce system vulnerabilities . . . Agroecological approaches seek to ensure long-term productivity through the restoration of biodiversity and the full array of ecosystem functions that support food production and human well-being.”⁵

Connecting food policies with current economic practices, the authors emphasize that “Globalization poses complex tradeoffs for food system resilience . . . and it may also contribute to less healthy diets and overconsumption and . . . can push systems over planetary boundaries of resource use.”⁵

It is essential to recognize that, should governments in Canada at least balance their (local and global) policies in order to support the refocusing necessary for the establishment of agroecological production as a primary focus, this would “run counter to a long history of governmental support for an export-oriented agriculture that is based on economies of scale, mechanization, standardization, and the widespread and increasingly intense application of industrial style inputs.”⁴

Should the Federal Government continue on this path they would be contradicting the major changes that they are promoting in their “A Healthy Environment and A Healthy Economy” documents, including their expressed commitment to significantly reducing greenhouse gas emissions both within the economy as a whole and within the agricultural sector, where emissions continue to rise. And what about the promises to recognize Indigenous sovereignty and traditional knowledge? “Indigenous communities are denied the most important medicine people can receive: kindness . . . To live in peace, a person must learn the kindness of the Earth as directed toward all living things”.⁶

Further, in order to respond effectively to the actual crises that the world now



faces, the Government would have to be prepared to spend a great deal more on ecological practices and to acknowledge ecological leaders.

When it comes to agriculture, farmers must be recognized as the leading voice. In February, 2021, the Farmers for Climate Solutions (FCS), a national coalition of farmers campaigning to make agriculture part of the solution to climate change, released a comprehensive and well researched budget submission to the Government. Providing expert data related to every aspect of agriculture, their submission documents Canada’s severe underfunding of environmental programs in comparison with the EU and the USA. The solutions FCS provides are all compatible with the principles of agroecology.

“What we care for, we will grow to resemble.”

**Richard Powers,
The Overstory**

Many local farmers and millions of people across the globe are demanding climate action now. In Northumberland County, our local Blue Dot group prepared a document urging politicians to support our recommendations for strengthening and focusing government direction and policies in all areas that impact climate change. Specifically, there must be specific and immediate targets, action plans, timelines, public advisory committees, and comprehensive reviews. There must be

government accountability. I urge every community to take similar action.

The new imperatives, including the implementation of agroecological practices, should not be viewed as an imposition or economic impediment but as a path to a better future for all life, to a return to “the Commons” and as our responsibility to Mother Earth, as described by Vandana Shiva.⁷ ■

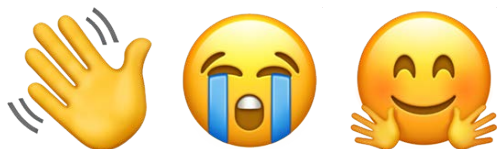
This is an abridged version of the original article. The full article can be found online, at efao.ca/agroecology-earth.

Bob Garthson (bgarthson@sympatico.ca) owned Valley Pines Organics, located in Northumberland County. He is a retired teacher, and has been growing a wide variety of organic produce for over 60 years. Bob retired from farming in 2021.

Bob served on the EFAO Board of Directors from 2007 to 2013 and on the EFAO Education, Personnel, Communications, GMO, and Refugee Relations Committees. Bob remains active on a range of ecological, economic, social and political issues, both locally and nationally.

1. “Overview,” Agroecology Knowledge Hub, fao.org (2021).
2. “The 10 Elements of Agroecology,” Agroecology Knowledge Hub, fao.org (2021).
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4. Marney E. Isaac, “Agroecology in Canada: Towards an Integration of Agroecological Practice, Movement, and Science,” *Sustainability* 10, no. 9 (2018).
5. Jennifer Blesh, “Realizing Resilient Food Systems,” *Bioscience* 66, no. 7 (2016).
6. James Maskalyk and Dave Courchene, “Indigenous communities are denied the most important medicine people can receive: Kindness,” *The Globe and Mail* (February 2021).
7. Vandana Shiva, “Reclaiming Our Common Home: Expand the Commons to Include Everything We Need,” *Yes* (Spring 2021).

Thank You



By Katie Baikie

My first introduction to the EFAO community was as a new farmer more than ten years ago. I met many of you as I visited your farms for tours or when I had a small market garden where I tried out a crazy idea I had to grow tiny vegetables (I swear this could be great!). But in my heart, I knew that life as a farmer was not really my calling. I knew that my true passion was in supporting this movement and asking this question often: how can I help?

After every EFAO event I attended (even as an organizer), I'd come home set on a new idea. One time I tried to convince my husband that we should find a herd of cattle to intensively graze. Another time, I dreamed of finding a way to have an on-farm store (without a farm, I might add). And once I even pitched that we move from Guelph to Thunder Bay to grow vegetables. Each time my retelling of the event would focus on the stories, your stories, and the connections. The way members shared so candidly and honestly with each other and the way people were invested in each other's success was moving and inspiring, even for my non-farmer heart. It really seemed like this was the way I could help – by bolstering the need and desire to gather, share, and learn together.

Whether it was scheming over the phone about a workshop idea, joining a farm tour, chatting about parenthood in a barn, or laughing together over a conference coffee, hearing your stories, perspectives, and dreams continually reminded me of the strength there is in this movement and how powerful community can be. I'm so grateful I had the chance to get to know and connect

with so many of you and, hopefully, found a way to help in some way.

As I step away from my work with EFAO, I want to thank you for living the true meaning of community and embracing me as part of it, for welcoming me to visit and taste and explore your farms and food with you, for sharing your ideas and questions and challenges, for humouring me by embracing bone broth (bo-bro) as a conference beverage, and for letting me try to find ways to help.

Even in these unsettling times, the weather is warming, the sun is shining, and I can hear the birds chirping away. I'm thinking of you and wishing you a season filled with joy, curiosity, and connection as I transition to my new role within the organization: as an enthusiastic and dedicated member,

cheering you on, buying your food, and sending so much love your way (an indirect kind of help, I hope). And I'll know who to call if

I do eventually find my way to that herd of cattle, on-farm store, or vegetables in Thunder Bay. ■



Katie Baikie worked with EFAO from August 2015 to March 2021. In her time, she served as Conference Coordinator, Training and Resources Program Manager, and finally Education & Outreach Director. You can now find her at 10C Shared Space – a hub for changemakers in Guelph. Katie is a strong advocate for emojis.



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A Leap into the Wild Unknown

By Ami Dehne

My beginnings with the EFAO couldn't have come at a better time. I had just stepped away from my own business, my children were old enough that I could put them both in childcare, and I needed to put my energy into something outside of our home. Doing purposeful work has always been important to me, in fact, I've only ever worked for non-profits with a purpose to change the world and working for an organization that supports a food system that I believe in so deeply was a job dream come true at a time when I needed it the most.

My time at the EFAO has been short (1.5 years) but also so wonderful. I was provided with the opportunity to bring my full self to an organization in all my quirkiness, and it has been such beautiful joy to find belonging among so many other quirky, wonderful, humble, community-centred people — and that's you! The farmers of EFAO are so special.

Some of my favourite highlights were sinking my teeth into EFAO's history for the 2020 40th Anniversary Timeline posted at last year's conference and telling every single person possible about our amazing history, launching the Farmers Write column in the quarterly



publication, coordinating and designing EFAO's merchandise, helping to organize two super successful conferences, and let's be honest — when Tony McQuail asked me to contra dance during the 2020 conference. I've truly loved my job.

New things are now pulling at my heartstrings and I've bravely made the decision to step down from my role as the Outreach Coordinator to leap into the wild unknown. The farmers at EFAO have taught me that it's OK to go after bigger dreams, and have inspired me to do so. I'm so grateful for the patient, kind, endlessly and always supportive team, the best manager anyone could ask for (Katie) who has been so patient in editing my terrible grammar, working with a team that holds a similar vision for our world as I do, and for the farmers who are brave and dedicated enough to take steps to create a holistic, authentic,

deeper, and more connected world for us all to live. ■

Ami Dehne worked with EFAO from September 2019 to April 2021. In her time, she served as Outreach Coordinator.



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The Value of Soil Testing for Ecological Farming

Reported Date:		Printed Date:May 10, 2020										SOIL TEST REPORT										Page: 1 / 2	
Sample Number	Lab Number	Organic Matter	Phosphorus - P ppm		Potassium K ppm	Magnesium Mg ppm	Calcium Ca ppm	Sodium Na ppm	pH	CEC	Percent Base Saturations												
			Bicarb	Bray-P1					Buffer	meq/100g	% K	% Mg	% Ca	% H	% Na								
UFTX60	86494	2.8	32 M	60 G	90 M	65 VL	4040 VH	13 VL	7.6	21.0	1.1	2.6	96.1		0.3								
UFBX40	86495	2.6	43 G	71 G	92 M	62 VL	3430 VH	14 VL	7.8	18.0	1.3	2.9	95.5		0.3								
LFX	86496	2.6	28 M	42 M	90 L	71 VL	4650 VH	16 VL	7.7	24.1	1.0	2.5	96.3		0.3								
FF/MXX	86497	3.0	11 L	18 VL	73 L	83 VL	4010 VH	38 M	7.5	21.1	0.9	3.3	95.1		0.8								
Sample Number	Sulfur S ppm	Zinc Zn ppm	Manganese Mn ppm	Iron Fe ppm	Copper Cu ppm	Boron B ppm	Soluble Salts ms/cm	Saturation %P	Aluminum Al ppm	Saturation %Al	Nitrate Nitrogen NO3-N ppm	K/Mg Ratio	ENR	Field ID									
UFTX60	6 VL	2.7 L	73 VH	59 VH	0.9 M	0.7 M		4 M	537	0.0 G		0.42	40										
UFBX40	6 VL	2.4 L	79 VH	71 VH	0.9 M	0.6 M		5 M	782	0.0 G		0.45	38										
LFX	6 VL	2.3 L	77 VH	74 VH	1.1 M	0.6 M		3 L	649	0.0 G		0.40	38										
FF/MXX	7 VL	2.3 L	58 VH	69 VH	1.0 M	0.5 L		1 VL	468	0.0 G		0.27	42										
OF VL = VERY LOW, L = LOW, M = MEDIUM, H = HIGH, VH = VERY HIGH, G = GOOD, MA = MARGINAL, MT = MODERATE PHYTO-TOXIC, T = PHYTO-TOXIC, ST = SEVERE PHYTO-TOXIC																							

OE VL = VERY LOW, L = LOW, M = MEDIUM, H = HIGH, VH = VERY HIGH, G = GOOD, MA = MARGINAL, MT = MODERATE PHYTO-TOXIC, T = PHYTO-TOXIC, ST = SEVERE PHYTO-TOXIC

By Ruth Knight, PAg, CCA

Soil is a complex living system supporting life and ecosystem functions. Our understanding of soil is incomplete, which is humbling and beautiful. I often hear questions like, “how relevant is a standard soil analysis for ecological farmers?” My response is, although the information is imperfect, soil tests have value. The standard chemistry analysis is one indicator that has been simplified, provides quantifiable metrics that correlate to crop productivity, is repeatable, and provides a good return on investment.

My approach to advising is farmer-learner centred. I use soil analysis in combination with applying intuition, benchmarking, cross referencing with other evaluations, and comparative trials, all shaped by three great questions:

WHERE ARE YOU AT? Trust your intuition and experience around what a good versus a poor crop looks like. Take a sample from each area and compare using a standard soil analysis. You now have a benchmark, numbers to work with, and have identified which minerals to adjust. Use the same technique to assess a new growing area. You can use an old fencerow as a comparison.

In one painful example, the first crop of vegetables in a new location were unmarketable. A soil test after the fact revealed that the pH was very acidic.

A simple soil test would have avoided the crop loss and stress.

ARE YOU GETTING TO WHERE YOU WANT TO GO? Monitoring progress is as important as the initial plan. Remember the iterative learning cycle – “Plan, Do, Evaluate, Replan.” Based on your benchmark, you may want an increase in minerals or pH changes, or to avoid negative factors such as elevated sodium levels. Alternatively, you may find improved production or quality or increased capacity and no change to mineral levels. This is the window where other soil factors may be at play, such as biology or physical qualities. To solve this mystery, you will need to track and compare other data points such as harvest weights, labour required for weeding, irrigation needs, etc.

I often find elevated sodium levels, especially in covered growing structures. Focusing only on adding fertility, without monitoring, can result in production challenges.

WHAT HELPED YOU GET TO WHERE YOU ARE? It's awesome when you get desirable results. Collecting information about your soil can help you continue to see results, or repeat your performance in another area.

For example, I saw improved mineral levels in a market garden that combined

the use of a high tunnel for seasonal pasture chicken, cover crops and soil amendments. The soil analysis showed remarkable differences from other areas of the garden. The soil analysis confirmed the management decision and illustrated how to repeat the results.

In summary, position your intuition in your centre and ask the three great questions. Cluster the monitoring and assessment methods around your centre. Use your benchmarks. Create different trials. Look for patterns and anomalies. Use your data, curiosity, and trust. Make the numbers meaningful to your context. Happy growing! ■



Ruth is an advisor and coach to farmers, land stewards, and communities for “soil first” solutions. Applying the nature-based principles of holistic management, permaculture, regenerative agriculture, and agroecology, Ruth will work with you to realize your goals for your farm, your community, and the planet.

Contact Ruth to boost your knowledge on soil fertility and crop management in line with the values for your farm.

Cell: 519 357 5224

Email: organicconsultantinc@gmail.com

The Rhythm of Farmer-Led Research

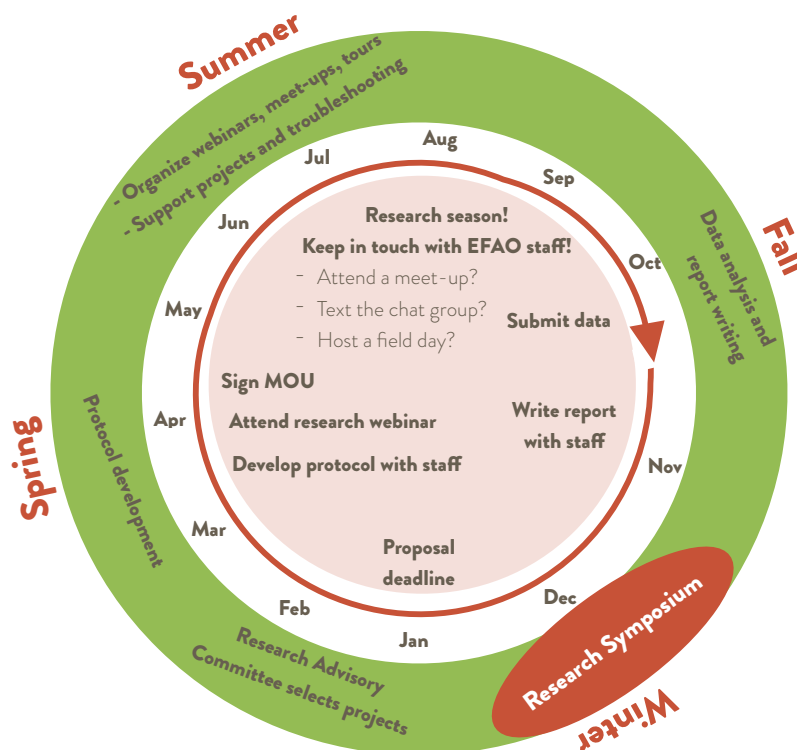
By Sarah Hargreaves

One of the gifts of farming is how it keeps us connected with the rhythm of the seasons. Similarly, the rhythm of farmer-led research is defined by the seasons – with fluidity and overlap throughout.

WINTER is the season for dreaming and planning.

The darker months bring you inside to plan for management changes, develop new ideas and ruminate on the results of a previous trial. Winter is also the time to consult with EFAO staff for feedback on your research ideas, and apply for funding before the January 31 deadline. In early February, EFAO's Research Advisory Committee, made up of EFAO member-farmers and academic researchers, meets to select trials for the upcoming research season. Selection is based on available funding, feasibility and practicality of the proposal, as well as equity, diversity and inclusion goals.

In recognition of your time and the space used for your research, financial support for farmer-led research includes a stipend. For most trials, the stipend is \$500; for multi-farm variety trials the stipend ranges from \$250-500 depending on the number of replicates and varieties you are trialing. In addition to the stipend, you can receive up to \$1,500 in research expenses such as seed, soil or tissue analyses, supplies (like extra harvest crates to keep replicates separate, etc.) and equipment (like scales, etc.).



Activities in the orange circle represent farmer-researcher responsibilities, and activities in the green circle represent EFAO staff activities.

For trials that overlap calendar years, EFAO commits to funding the trial throughout the duration of the trial. For trials that require an even longer commitment – breeding trials and trials on perennial crops, for example – EFAO will commit up to three years of stipends and expenses assessed on a year-by-year basis depending on available funding.

Along with financial support, EFAO's Farmer-Led Research Program provides farmer-researchers with technical assistance in experimental design, data collection, analysis and write-up, including EFAO events on farmer-led research like webinars and field days. You are also tapped into the Research Network of other farmer-researchers, for support and inspiration.

will you measure and exactly how will you measure it? This is also the time to finalize your list of approved research expenses so you can order supplies as needed. Once the protocol is written, we have a final chat to review the protocol and schedule check-ins throughout the season. At this time, you also review and sign the Memorandum of Understanding (MOU) that covers your responsibilities, EFAO's responsibilities, photo permission, data sharing and data ownership (in a nutshell: you own your data!)

SUMMER is the season for curiosity.

If you are currently tending a research trial on your farm, now is when your project is likely in full swing – and your curiosity meets rigour as you maintain your trial plots and collect data following

SPRING is the season to get ready to grow.

If your trial is selected for funding or is continuing from a previous year, you work with EFAO staff to develop a protocol that will guide your research season. This usually involves an initial chat for EFAO staff to gather information to develop a draft protocol, followed by several rounds of tweaking and refining the protocol. What design is both practical and robust? What

the protocol that you developed in the spring. This is also the time when, through observation, intuition, and experience you cultivate new curiosities and ideas for potential future trials. For current and ongoing projects, EFAO staff check in about your project, and you can reach out to fellow farmer-researchers through a text group and at meet-ups. When possible, you might host or attend a field day around a past or present farmer-led research trial.

It's a busy season, but you are prepared. And luckily, EFAO staff work to make farmer-led research a flexible tool that can adapt as needed to the demands, quirks and changes to your growing season.

FALL is the season for harvest.

This is when you finish collecting data and reap the benefits of your efforts.

The extra work that you've taken on as part of your research trial comes to fruition. After sending your data and photos to EFAO staff, we get to work organizing and analyzing your data using free online tools and R software, which is a free open source software and programming language for statistical computing and graphics. Working closely with you, EFAO staff interpret the data you collected — combining quantitative (e.g. harvest weights, etc.) and qualitative (i.e. observations, intuitions) data. This culminates in an accessible (and beautiful!) research report. You can find reports from the 2020 research season at efao.ca/research-2020.

The fall season is also when the research culminates with the Research Symposium, held in conjunction with EFAO's Annual Conference. This is a

space where you share your findings from the year, learn about the other research projects. Conversations with others about these results may create new questions, and the cycle begins again. ■

Sarah leads the Farmer-Led Research Program and Small Grains Programs for EFAO, and supports soil health components of EFAO's education programs. Sarah is Red River Métis and a non-racialized member of the Métis Nation of Ontario. She holds a Ph.D. in soil microbial ecology from Iowa State University. When she's not geeking out on research, you can find Sarah tending her farm, Three Ridges Ecological Farm, with her partner and daughter.

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Topic: Winging It

When I first saw EFAO's spring writing topic 'winging it,' my mind immediately jumped to 'birds.' For all of my life, my eyes often wander to their fluttering flashes. Being outdoors daily as a farmer, I got to know the feathered neighbours of our fields. The red-wing blackbirds who herald spring. The chattering aviators of the sky, our resident barn swallows. The perennially distressed killdeer who makes her nest in our rows. The blue-heron who fills me with glee as I think: "pterodactyl!". The ruby-throated hummingbirds who defend the farm's flowers with all of their tiny ferocity. Our farm, their nectar-fuelled pit stop on a journey of thousands of miles made by a bird weighing less than a nickel.

The more common meaning of 'winging it' is an act of improvisation. However, 'winging it' was first used to describe understudy actors, learning their potential roles from the theatre's 'wings'— implying a readiness to jump into a role when needed. I believe that we farmers are understudy naturalists and citizen scientists without recognizing it. We are some of the few people left in our society that derive their living from working with the land. Compared even to professional ornithologists, we likely spend more time on average 'in the field.' We observe and take part in the seasonal changes and note what is shifting due to climate change. When we observe our other kin — the birds, insects, plants, and animals — and learn about their lives, language, and names, we ground and situate ourselves in the greater cycle of life. This practice counters the media cycle dominating our lives that is placeless and outside of time/seasonality, which



demands our attention and with it, our anxiety. A redirection of focus brings us into relationship with our kin, allowing our love and curiosity to inspire action, whether it's contributing to citizen science data through iNaturalist, or creating habitat on our farms.

So this spring, I challenge my farming friends to lift your eyes, listen to their songs, and come to know and love your neighbouring winged ones. ■

Jessica Gale
Sweet Gale Gardens

Farmers Write is an opportunity for EFAO members and friends to share real-life short stories or poetry on topics inspired by life as a farmer.

Farmers Write topics are intentionally broad — please feel free to express in a way that makes sense for you and your story. We aren't as concerned about style and perfect writing as we are about great stories or ideas that others might find truth in.

We suggest 250 to 300 words but are happy to help edit, or consider a longer story. We are able to publish stories anonymously if that helps you to be freer in your writing.

To submit your story, please visit efao.ca/farmers-write or send your typed, double-spaced submission to: EFAO 5420 Hwy 6 North, Guelph Ontario, N1H 6J2.

Please include your email address and phone number. If you cannot type, please print clearly.

Upcoming Topics

Fall 2021 – Unlearning
Deadline July 7

Winter 2021 – Very Neighbourly
Deadline October 15

Spring 2022 – Transitions
Deadline Jan 15

Sacred Cow

By Thorsten Arnold

Nowadays, meat is vilified by some and glorified by others. Diana Rogers started looking for a balanced movie that she could propose to teachers when her children were exposed to one-sided anti-meat perspectives at school. She quickly became frustrated. Why are documentaries categorically for or against meat? Diana, a registered dietician, decided to become a film director and produce one herself.

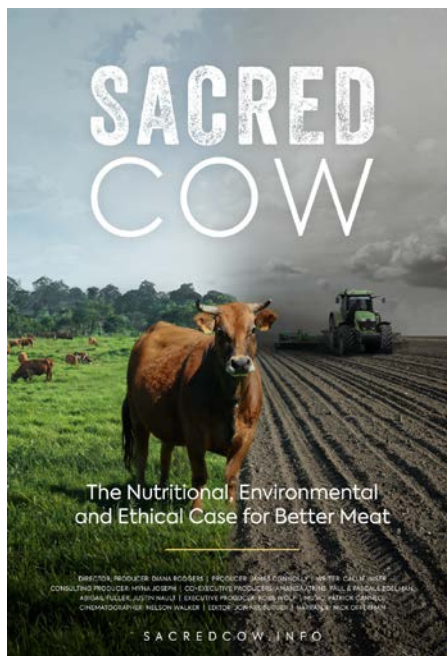
In her first documentary, *Sacred Cow*, Diana makes “a nutritional, environmental, and ethical case for better meat.” Her movie makes a critique of the industrial food system, a thoughtful investigation into veganism, and a celebration of artisanal mixed farming, the art of butchering, and meat as a valuable nutrient. The movie cascades quickly – the advent of chemical cash cropping and its environmental and socioeconomic outcomes; unethical and environmentally destructive livestock factories; a culture of convenience that leads to unprecedented obesity. Addictive designer food and dietary guidelines that foster sugary school lunches, and flawed science that categorizes meat to be as unhealthy as cigarettes. And again and again: the disconnection between urban eaters and food production.

For once, this movie is not “pro-meat” – it is an attempt to look for a new path for farming, landscape management, and our food culture. Diana presents mixed farming as the “old and modern” way of integrating crop and livestock, closing mineral cycles, and enhancing the health of soil, microbial diversity, and habitat for wildlife. She follows a variety of mixed farmers. A family in Iowa that transitioned from cash cropping to multi-species grazing. Farmer rockstar Joel Salatin explaining holistic grazing in his colourful language. On

Rhode Island, a community abattoir that offers an ethical option to local farmers.

Again and again, *Sacred Cow* raises concerns about the vegan movement. Why is it that this movement puts more focus on fighting ecological mixed farming and transparent local food chains, than on *Big Meat* with its negative outcomes? Global anti-meat propaganda is hurting rural dwellers in poor countries, who cannot access synthetic nutrient supplements that are so cheap in rich cities. In the US, obesity ravages, driven by processed grains and excessive sugars combined with a lack of nutrient-dense foods. Yet, politicians and educators shy away from tackling our high-processed food diets, and vilify ingredients instead.

Diana avoids one theme that is gaining relevance: the indigenous roots of nature-based agriculture. I cringed when Joel Salatin focused on the role of wild predators before first contact. In fact, First Nations had actively managed these herds and entire ecosystems, managing for abundance in food and wildlife simultaneously. The notion of regeneration is not a white invention: we are just modernizing a way of life that has formed North America’s landscapes for millennia, until indigenous cultures collapsed under waves of epidemics. Whether it is grasslands, Carolinian oak savanna orchards, or fields planted with the three sisters: I believe that it is time that we all start recognizing our land history and pay respect to its original stewards. All North Americans need to relearn our connection to food and the land. Recognition would be a good



starting point, wouldn't it?

What I most love about this movie is how Diana contextualizes death. She makes the strong and beautiful case that the opposite of death is not life, but the absence of biology. Death and life are just

two sides of the same coin: two stages of the same natural cycle. Diana contrasts this natural cycle where death leads to new life, with a technical system where animals are separated from plants in space and time. In these technical and segregated systems, death simply puts an end to nature's cycles: nutrients become waste. Diana asks how we can embrace death, and design our food system so that death supports new and diverse life?

Our culture seems so horrified by death that we prefer to denounce life itself – rather than designing systems where death leads to renewal. Can there be regeneration without death? And how can we relearn our stewardship of regenerative death? Diana Rogers took on the Herculean task of answering this question mostly with crowdfunding. Her movie provides powerful visuals and touching stories that are well-suited for school classrooms; it is accompanied by a well-referenced book that provides solid scientific underpinning. ■

Thorsten Arnold co-owns *Persephone Market Garden*. He educates about and advocates for regenerative food systems in all its facets, especially regenerative production systems, co-operative distribution, and restoration of climate-resilient landscapes.

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