Ecological Farming in Ontario

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EFAO
ECOLOGICAL FARMERS ASSOCIATION OF ONTARIO

A Look at the Artisanal Chicken Program

2020 Research Trials

Springtime Propagation of Fruit Trees and Shrubs

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Jeff Boesch of Cedar Down Farm in Neustadt, Ontario, was tilthing beds for early carrots in a caterpillar tunnel when his 5-year-old son Asher decided he too wanted to help.

EFAO
ECOLOGICAL FARMERS ASSOCIATION OF ONTARIO

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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Help make *Ecological Farming in Ontario* a farmer's journal! Submit articles, photos, opinions and news to editor@efao.ca. We reserve the right to edit submissions for space and/or clarity.

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Sowing Clover

> *In the dark of the moon,*
> *in flying snow,*
> *in the dead of winter,*
> *war spreading,*
> *families dying,*
> *the world in danger,*
> *I walk the rocky hillside,*
> *sowing clover.*
>
> *- Wendell Berry, 1968*

Berry's language is stark, brutally efficient. Written at the height of the Vietnam war, he frames this paradox: while the world is being unmade, the sower simply sows. It's not that he's ignorant or uncaring. The sower's mindset isn't revealed in words, but you can sense his stoic determination, his submission to the promise that life will always, against all odds, emerge from the seed.

The coronavirus pandemic arrived at almost exactly the same time as maple syrup season, and I've felt a resonance with this poem – oblivious to the tumult of the world, the trees draw their nourishment from the earth, as they do. Frogs and birds start singing again, as they do. Sunlight warms hands and heart, as it does. And as our world writhes in turmoil, "I walk the muddy pathway, collecting sap".

There's a grounding that comes from this – literally and spiritually. The simple rhythms of the farm in spring – collecting sap, starting seedlings, laying out the greenhouse – these activities connect us to the unflinching cadence of the seasons, and buffer the legitimate concerns we share about our markets, our customers, our suppliers, and whether our businesses will be able to operate this year. We walk the rocky hillside, sowing clover.

The poem also clearly frames the two sides of any crisis: that while the familiar is passing away, the future is emerging in the same moment. Against the tribulations of the world, the humble sower sets her intention to plant, to grow, to create.

The downside of a crisis is always apparent, this one no different. But what emerging future is sheltering in its shadow? What wants to be born in this moment? Will the disruption of global supply chains and industrial agriculture give way to newly localized food systems? And how will those new systems mitigate the food insecurity inherent in the old ones?

And how can we, whose lives and livelihoods derive from the graces of the land, share some of the experience of deep connection with our fellow citizens – isolated, sequestered, and increasingly cut off from the rich web of life?

I find it oddly invigorating to think about EFAO's position in the midst of this time of disruption to – or respite from – the machinery of business as usual. We are scientists and researchers, yes, but even more importantly, we are animators who dare to imagine a more beautiful agriculture and lead others to its embrace. The world needs us badly right now. It needs the insights gleaned from our research. It needs the community bred in our outreach. It needs the resilience and ingenuity forged by working with the caprice of nature and ageing machinery. Mostly, it needs us to be courageous and imaginative.

Yes, the world is in danger. But we choose to walk the rocky hillside, sowing clover. ■

Together with his wife Val and three sons, Brent Klassen runs Heartwood Farm and Cidery, a horse-powered, regenerative, family farm in the Hills of Headwaters. In addition to an on-farm craft cidery, they raise grass-fed livestock, produce maple syrup, and tend a fruit and nut orchard. Brent has been an EFAO Board Member since 2018

The world needs us badly right now. It needs the insights gleaned from our research. It needs the resilience and ingenuity forged by working with the caprice of nature and ageing machinery.

A Look at the Artisanal Chicken Program: Three Farmers Share Their Experiences

We interviewed three farmers who have been participating in the Chicken Farmers of Ontario's (CFO) Artisanal Chicken Program (ACP) with the goal of offering different perspectives to inform those who might be considering options for participation. The ACP is for those farmers who are interested in growing between 600 and 3,000 chickens annually for specialty off-farm markets such as local farmer markets and restaurants.

Chris Krucker of Manorun Farm

manorun.com | Instagram & Facebook: @manorunorganicfarm

Chris Krucker and Denise Trigatti have been farming organically for over 20 years. Along with their four children and a team of farm interns and local staff, they cultivate vegetables, manage livestock and bring in the grain and hay crop from their 25 acre farm.

Eric Blondin of Three Forks Farms

threeforksfarms.com | Instagram & Facebook: @threeforksfarms

Eric Blondin and Peggy Baillie operate Three Forks Farms on Manitoulin Island. They serve direct and wholesale markets in Sudbury and North Bay with certified organic mixed vegetables and pasture-raised chicken.

Drake Larsen of Three Ridges Ecological Farm (3R)

threeridges.farm | Instagram & Facebook: @threeridgesfarm

Drake runs Three Ridges Ecological Farm with his wife, Sarah Hargreaves, and their daughter on 50 acres in Elgin County. They produce pasture-raised meat including chicken, duck and pork, and 100% grass-fed beef and lamb.

EFAO: Can you describe your current operation under the program?

CHRIS: We started in 2016 which was the program's first year. Our first year we raised 1,000 birds. We now raise 2,000 birds a year. Our birds are raised organically.

We brood our chicks in our old barn on a wood floor covered with shavings. The chicks first feed is on cardboard trays and then we move them to feeding troughs that we made from plastic PVC piping. We use small chick waterers that are filled twice a day. I have made large 10 ft troughs from four inch PVC pipe for when they are older.

They first live in a constructed brooder, short three foot side walls with hinged plywood tops and multiple heat lamps. When the chicks are four weeks old, we put them out on the range. The range is approximately 200' x 100'. The space they sleep in is a dome – basically a hoop house – but with a tarp instead of clear plastic, and the sides are open. We enclose the range in electro netting and also hang electro netting at the ends to keep owls out at night.

Drake Larsen's chickens leaving behind their footprint and fertility at Three Ridges Ecological Farm.

When the birds are nine to ten weeks old, we begin to hold back their feed. Our target is an average weight of 5.5 lbs per bird. We take larger birds in for processing at nine weeks and then in the 10th week we take the remaining birds.

ERIC: Three Forks Farms has been part of the Artisanal Chicken Program since the first year and decided immediately to certify our chicken as organic. We started raising 1,000 White Rocks, then increased our flock to 1,400 for year three and four.

Chris Krucker's chickens at Manorun Farm.

Our chicks spend 21 days in brooders before moving out to pasture. We raise our chickens out on pasture, in chicken tractors that are 10 × 12 pens. We move our pens up the field every morning.

The first year we moved the pens in the evening, but we switched to mornings because the chickens got more time to enjoy the pasture before they bed down for the night. Our chickens eat only certified organic chicken feed that is trucked up north from Jones Feed Mills. We keep the chickens for eight weeks, at that age they are the perfect size for us. They'll dress out around 4.5 to 6lbs, with the average being 5lbs.

DRAKE: We've been raising meat chickens under the Artisanal Chicken Program since its inception in 2016, and we raise between 650-900 birds depending on the year.

Our meat chickens (primarily White Rocks) are grown on pasture. Young chicks are brooded in a barn until they are between 21-24 days old – then moved out to our open air pasture enclosures for the remainder of the eight week grow out period. On pasture, they are housed in floor-less hoop structures that are moved once or twice per day. Along with pasture goodies – grass, legumes, and insects – birds are provided with a diverse non-GMO feed mix, including 12 grains and seeds, sourced from a local Amish feed mill.

EFAO: What are your primary sales channels and markets for your chickens?

CHRIS: Close to half of our birds are sold to restaurants and the rest from our farm store. We promote through social media.

ERIC: We sell the majority of our chicken through a Thursday and Saturday Farmers Market. We do some pre-orders in the spring, which helps with cash flow and provides a discount when customers purchase five or more pre-ordered chickens to help push volume purchases.

In addition, we do some wholesale to an online retailer called Click Fork and a couple small independent specialty retailers. However we have made a conscious effort to keep our wholesale of chicken low. We just don't have enough margins to provide a good discount to the retailer.

DRAKE: The majority of our birds are sold on-farm; with half sold as fresh birds, others frozen for future sales, and perhaps 20% restaurant sales.

EFAO: From your experience, what challenges and opportunities do you see in the program?

CHRIS: Challenges are selling as many birds at a higher retail price. Also, we sell organic birds and many growers are selling conventionally fed birds but because they are pastured their price impacts ours. We are often selling our birds at the same price or lower than conventional pasture-raised birds.

Other challenges include mortalities and finished bird weights. We need lower mortalities and higher bird weights to make it profitable. A further challenge is affordable processing and accessing affordable organic feed. Opportunities to the program are the potential to make a good profit.

ERIC: We've really enjoyed being part of CFO's Artisanal Chicken program. The CFO has been easy to work with and they also provide some training to farmers, which we have found useful. We have improved our brooding through CFO led training. The program has lots of room for growth for producers. You can start at a minimum 600 birds and work your way to 3,000. For our farm, poultry has been a lucrative enterprise. In addition we're able to fill the niche for our region being the only certified organic producer.

There is some paperwork and administration but all of it is tracking that should be done anyways.

DRAKE: There is a wasteful amount of paperwork and hoop-jumping associated with this program. The screen time commitment needed, along with assorted expenses that compliance necessitates (one year an inspector may want a better humidity tester, the next year a different inspector will want a power outage monitor, and every year

Eric Blondin of Three Forks Farms gets a little help with his chicken operation.

something) might actually consume the margins a small farmer can achieve with a small number of chickens. A cohort of birds requires printing some two dozen pages of forms, additional online forms, as well as long-term storage of all feed and bedding tags. Growing four batches of birds in a season requires about 120 pages of printed forms. Add to this mandatory annual training videos (on slow rural internet, ugh) and quizzes, on-farm audits and associated preparation... let's just say I'd rather spend those resources improving my farm and marketing my chickens.

The opportunity that comes from the program is the ability to overcome roadblocks set up against small farmers by the CFO themselves; namely flock size limits, access to restaurant sales, and release from marketing restrictions. But what can one do — my customer community is hungry for nutrient-dense and flavorful chicken (it's the most popular meat in Canada) and so this program allows small farms like us to create a meat chicken enterprise at a viable scale. Whether it's worthy of the frustration will depend on the farmer.

EFAO: What advice do you have for a new grower considering or just getting started in the program?

CHRIS: Start with a manageable number of birds. Build your systems. Find your market. Make sure you have your processing dates one to three years booked in advance.

ERIC: My biggest piece of advice for a new grower wanting to get into the program is to do a cost of production analysis, which includes the time it takes to do chores, loading, unloading, and driving time to and from the processor in addition to the fixed costs like feed and abattoir fees. The purpose of the cost of production analysis is to ensure profitability and to set a good price. When we did our cost of production analysis, we came up with a game plan to reduce our labour cost and feed cost which were our top two costs.

DRAKE: Find more customers that will eat duck. ■

Farm Animals

In 2016, my husband Rob started his herd of Black Angus cattle. They are 100% grass-fed and rotationally grazed. This means that they are contained in relatively small paddocks using a single electric wire fence and moved to fresh pasture every few days. While this has proven to be an excellent method for regenerating the fertility of our fields, there have been some unexpected—and somewhat humorous—challenges.

In spring 2017, being inexperienced in this matter, we asked a farmer friend to show us how to castrate our first bull-calves. We used a very simple method: a small elastic band that cuts off blood flow to the testicles. In the end, our farmer friend told us not to worry. It's easy, he said. You don't need my help, he said.

That's how we ended up with a half-a-steer.

He was perfectly healthy and happy, but he'd retained a testicle. Because of this, he really thought he was a bull. He even looked like a bull, all muscular around the shoulders, although he wasn't fertile.

Rob knew that any bull he brought in would have to dominate the steer. So he looked for an older, larger animal. In August 2019, Tullamore Cole, a four-year-old Black Angus bull arrived. We nicknamed him Tully.

When Tully joined the herd, he and the half-a-steer immediately got into a head-butting contest. We watched nervously as these two 1600-pound animals pressed their foreheads together and *pushed* each other backwards and forwards. To our amazement, the sixteen-month-old steer pushed the bull right through the electric wire fence, taking it down completely. The whole herd immediately followed.

As we ran around staking in new fence posts and running another wire to enclose the herd, the battle of wills continued between bull and steer. By the time the enclosure was secure, the steer had clearly won.

The bull retreated to a far corner of the paddock where he stayed for two days alone. Meanwhile, the steer remained with the herd, loudly bellowing his victory about every half hour. Round the clock.

When Tully's owner learned about the fiasco, he laughed and assured Rob that Tully would still do his job. Fortunately, he was right. Tully rejoined the herd when Rob moved them to a smaller paddock a few days later. It seemed the bull and steer managed to settle their differences. The steer stopped bellowing, and Tully spent the rest of his time on our farm hanging out with the herd.

We've all heard the expression "head-butting contest." Thanks to a visiting bull and one of our own steers, we've been up close to the real thing. It was quite a sight! ■

Patricia Campbell
Better Together Farms

I had three jobs. Milking goats and making cheese were two of the tasks assigned to me, but they were trumped by my temporary and the most important job. I was to spread the love of a visiting billy goat to the nanny goats on the farm, but by all means necessary, I had to keep that goat from getting into the paddock of the young nanny, Houdina. I was WWOOFing in New Zealand on an intentional community/farm, and very inexperienced when it came to the sexual desires of goats in heat with a billy in the vicinity.

After his 'rounds', the billy and I began walking back to his paddock when he started sniffing the air and looking around. Then the pulling began. And more sniffing and more pulling and sniffing and pulling. My heart started racing. He was pulling towards Houdina's paddock. Before I even knew what was happening, I was being dragged by a large billy goat down a gravel laneway straight for Houdina's paddock. My strength to stop him was nothing compared to a billy goat on a mission.

As he got closer and closer to the paddock, I felt immense relief when I realized that everything would be fine because the gate was closed. There was no way he could get in. That was until he jumped clear over the gate. I somehow managed to clamour over, run ahead of him and put myself between the billy and Houdina. I felt like I was the mother of a teenage child. Houdina was not helping the cause as she instantly turned her buttock towards the billy and flicked her tail back and forth, in what I assumed was an attempt to spread her hormonal desires into the air.

Houdina The Goat

The sight of a billy goat conducting his 'mating dance' is one of the most fascinating and stomach-turning sights I've experienced. It's too pornographic to describe. As his 'dance' progressed and her tail twitching increased, it became clear I was going to lose this battle. As he moved in for his final act, I found myself lying in the dirt, futilely trying to stop a billy with one worldly task.

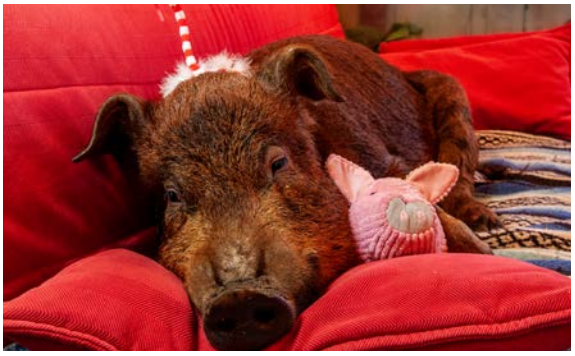
By the end of the ordeal, I was left sweaty, panting but unscathed except for the fact that I was covered from head to toe in goat semen. I found out five months later that the billy was successful in his life's mission when two baby goats arrived to the newest Momma goat on the farm.

To this day, even the scent of goat cheese makes my stomach churn. ■

Ami Dehne
EFAO Staff Member

Whoever thought I would have a pet pig, let alone a theatre pig. As an organic farmer who raises livestock for meat, some people might find it odd that I also have a pet pig who sleeps on my couch and lives the conventional pet life. I guess what I want to say is that you can love animals and know that their purpose is to be food, and you can love the same type of animal and keep it for a pet.

Pickle is a special pig. He came into our lives by accident. We saved his life as a tiny, super-runt of a piglet and in turn, he stole our hearts. It took three weeks to stabilize his health to the point that he could go back to the barn, and who knows whether it was spending three formative weeks with humans, or maybe he has a developmental delay from being chilled as a wee piglet, but Pickle never quite figured out how to be a piglet with the rest of his litter. They'd all be in a big, snuggled, piggy pile and he'd awkwardly be standing next to them. Whenever he heard a human come into the barn he'd come running toward the front of the pen. It just about broke my heart. To top it all off, Pickle was about a third of the size of the rest of the piglets. They were all around 60 lbs and he weighed under 20.



Pickle The Pig snuggled up for the holidays.

Then one day, he'd been bitten by another piglet. I'm sure it was just the rough and tumble play of a large litter of piglets, but I couldn't take it. I called the vet. I explained to him how little Pickle was compared to the rest of his litter and after having it explained to me that most farmers don't try and keep their tiniest runts alive because they won't amount to much, we decided that he likely wouldn't grow to past 200 lbs, and definitely not in a fiscally useful time frame... And so I decided that he would be our house pet.

We brought Pickle in from the barn and made him a nest under the stairs. We bought a book on training mini-pigs and attempted to find a food that he would like to use as a reward for his training. Pickle didn't like anything. After weeks of trial and error we found that Pickle had a particular taste for lamb and rice dog kibble which we used as his rewards. Thus we were able to train Pickle to use the bathroom outside, to sit and to give kisses (you're welcome world). So much for pigs that go crazy for human food and destroy your kitchen, ripping the door of the fridge or getting into your cupboards...

Fast forward. The local, nationally renowned, theatre sent out their company for a play about a pig farmer. We let them meet our pigs, talked to them about raising pigs and made friends with this incredible group of theatre folk. We went to opening night, which was amazing and we met up with some of the company afterwards. Jokingly I said the play was incredibly done, but that I noticed it was lacking any live pigs, and would they like one for the show... two weeks later I got a call from the theatre asking if I was serious about lending them a pig for a (different) show. Sure I was, what did they want it to do? Walk across the stage... Well, Pickle was the pig for the job. Pickle spent the rest of that summer as a theatre pig, living part-time in a cottage and doing matinee and evening performances three to four days a week and spending the rest of his time back on the farm, sleeping on the couch, playing in his pool and updating his Instagram account.

Despite Pickle's brush with fame, it hasn't gone to his head. He's still the sweet, slightly goofy pig, snoring and drooling on the couch, who stole our hearts in the first place. ■

Katrina McQuail
Meeting Place Organic Farm

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

The 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 that others might find truth in as well. We suggest a word limit of 250 to 450 words but are happy to help edit a story. We are able to publish stories anonymously if that allows you to be more free 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

Summer 2020 – Long Days
Deadline June 15

Fall 2020 – Breaking The Rules
Deadline September 15

Winter 2021 – Good Advice
Deadline December 15

Springtime Propagation of Fruit Trees and Shrubs

By Derick Greenly

Spring's rays of warmth lead to endless forms of new life surfing forth. Those who work with perennial woody plants to grow food and drink attune themselves acutely to the fluctuations and rhythms of this period, as one warm week or one late cold snap can be the difference between bounty and heartbreak; between golden opportunities and waiting until next year. Not the least subject to the ebb of phenology are propagators, both amateur and commercial, who see early spring as their last, best opportunity to bring new plants to life with a full growing season ahead of them. A few of the most formidable and accessible techniques follow, accessible to anyone who can sharpen a blade or save seeds.

Grafting dormant scions on dormant rootstock

My personal favourite, if I must pick one. To paraphrase Maslow, "If all you have is a grafting knife, everything looks like a rootstock."

THE RATIONALE: With grafting, we are attaching a tiny stick with a few buds of a preferred cultivar of tree to an already-existing root system, frequently a seedling from last year. This method is carried out to produce an identical copy – literally, a clone – of a favoured tree that is impractical to root from cuttings and does not come true from seed appreciably. A choice, delectable, disease-resistant pear or an early-ripening, easy-cracking heartnut will both need to be propagated in this manner. To establish orchards that can be tended and harvested easily and efficiently, uniformity of bloom time, care requirements and ripening time needs to be designed for carefully within a row or block. Seedling orchards have their place, but getting bountiful yields of produce (of a known quality which can be harvested in a timely manner by humans) is not it. While I'd always discourage large, pure monocultures of anything, the polar opposite of that is a completely variable seedling orchard, where chaos reigns and harvestable yields are labour-intensive and few.

THE WORK: The approaches to grafting carried out in this season alone are many. For scionwood and rootstock of matching diameter, I perform a whip-and tongue graft, consisting of a slanting cut across both pieces of wood with a tiny tongue to hold them together, bound and sealed with rubber bands and wax until planting time. When your scionwood and rootstock are of dramatically mismatched size (especially when field grafting large trees), we employ a cleft graft. This consists of splitting the rootstock across its diameter, whittling the scion into a chisel point and inserting it into the cleft with the green cambium layers matched. The whole works is then bound and waxed, ready to grow with the warmth of May. Humidity around the roots (packed in sawdust) and the graft union (dutifully waxed) are crucial during storage.

Hardwood cuttings

THE RATIONALE: When a plant will readily form a functioning root system from an existing piece of stem, this is the easiest and fastest way to propagate a selected variety with a minimum of tools and time.

THE WORK: The season for this type of propagation (now nearly past) is late winter when plants are still dormant, but medium is available and workable. If you have stored peat, sand, perlite etc, you can do this all winter. Currant, elderberry and willow are the simplest to root in this manner. A clean cut with sharp secateurs will callus in place over a few weeks, form root initials and leaf out (hopefully in unison). They can be stuck in well-drained soil with a single bud exposed or can be rooted in pots or flats in a 50:50 peat:perlite or peat:sand mix. Pure sand is better still, if you think you can manage all that watering.

More challenging species (pear and stone fruit rootstocks, for starters) require a little more finesse. I dip their ends in rooting hormone (commercially available everywhere; naturally occurring plant hormones, but now universally synthesized) and keep them on a bottom-heat table (24°C) with tops cool to promote callusing before leafing. Pots of 50:50 peat/sand or peat/perlite are the ticket again.

Seed propagation

THE RATIONALE: All aforementioned means of propagating trees are cloning and are thus an evolutionary dead end. If the act of sexual reproduction cannot transpire through pollen being exchanged between blooms and becoming a unique embryo held within a seed, biodiversity is short-circuited. New diseases, climactic quirks and pests cannot be adapted to; new and improved forms cannot express themselves; the species lose out on humans' intelligent breeding and selections, becoming a static remnant of what people once selected from nature and held in cultivation for ages. In addition to all this heady reasoning, seed is also freely (or very cheaply) available in great quantities and can produce a large, vigorous and variable population of something for very little work and with accessible skills. If grafting is in the cards for you, a monstrous supply of walnut, apple, pear or peach rootstocks can be generated from seed which is available (usually as a waste product) to all of us.

THE WORK: The vast majority of tree seeds from a cool temperate climate are deeply dormant at the time they are produced. This is to prevent trees from germinating right when they hit the soil in late autumn, whereupon the tiny, tender seedlings are immediately fried by Jack Frost.

This dormancy is relieved by a couple of months of cold, damp conditions that mimic a full winter. Some people mix seed and damp vermiculite in a baggie held in the fridge, but moulds and early sprouting can wreak havoc while the snow is flying. I prefer to carry out the process, called "cold stratification", in the forgiving venue of the Great Outdoors. Here, mind you, rodents become your fiercest adversary and it is up to your wit to protect your many potentially majestic trees-to-be from mouse incisors. If a critter gains entry to your seed cache, she has all winter to gorge upon the nutritious seeds without predator or competitor. A coffee can punched with holes on all sides, filled with 30:70 seed: sand, tightly lidded and buried in a well-drained spot is nearly foolproof. One ambitious autumn I pierced a 55-gallon drum on all sides with a pick-axe, filled it with black walnuts and buried the whole works. A little mulch on top is a fine insulator. Hard above ground freezes and stagnant air and water are the enemies here. You can get right to work inspecting your seeds and beginning to plant once the frost has left the ground and the soil can be worked. The discussion regarding container growing vs. field growing seedlings is fiery and lengthy, but for starters: smooth, circular pots and cruel, root-mutilating digging = bad; tall, open-bottom containers and deep digging of field-grown trees' whole root ball = good! You experienced horticulturalists can take it from there, providing rich, moist, weedless growing conditions until fall. ■

Derick Greenly is an orchardist and nurseryman at Summergreen Tree Crops & Mushrooms in Warkworth. This nursery propagates and ships thousands of fruit and nut trees annually for agroforestry installations throughout Canada. Derick has been raising food-producing trees for half a decade, plus managing the orchards at Fieldbird Cider for one full season.

1. EFAO staff meeting while the team works remotely from their homes during COVID-19 crisis.

2. For their farmer-led trial, Brittany Rantala-Sykes and Ivan Vincent are testing different ways of sterilizing substrate to grow chestnut (pictured) and shiitake mushrooms.

3. Member sporting new EFAO merchandise with a friendly helping hand.

4. This year there was a tie for first place in the EFAO Photo Contest. This photo, taken by Ryan Spence of Field Good Farms, is one of the winners. Ryan explains: "Nature is intricate, delicate, and ephemeral. That spider, it's web, and the buckwheat wouldn't have been the same the following day. If we pay attention, nature is always in a state of activity."

5. The other winning photo of this year's photo contest, taken by Paul Janicki of Belleville Photography. Paul explains: "I am always snapping photos around the farm of my girlfriend as I used to work in commercial photography in the city (Toronto) where she was a teacher. We decided to give up the city life two years ago to start up an organic farm but the love of the photography craft never died. Our property is so beautiful as well; I can't get over it. I'm always finding a new scene and an idea for a photo in it."

6. For his farmer-led research trial, Matt Jones is testing different mulches under landscape fabric for growing tomatoes. He set-up his randomized and replicated trial at the end of March, with the help of his daughter, Avaleen McParland Jones.

7. Group gathered at the Starting a Farm in Northern Ontario: Q&A for New Farmers meeting held at Field Good Farms in Cache Bay in early March.

EFAO HORTICULTURE 2019: Sweet potato selections

In search of short season northern sweet potato varieties: Selection and evaluation of new sweet potato (Ipomoea batatas) crosses

SEED PRODUCTION & BREEDING

Farmer-Researcher

Kate Garvie

Heartbeet Farm - East

Project timeline:
Spring 2018 - 2022

IN A NUTSHELL

As demand for sweet potatoes grows in Canada, breeders are working to create sweet potatoes that are adapted to eastern Ontario.

In the first year of the project, Kate selected sweet potatoes that are best suited for low input, organic systems in eastern Ontario.

Progress to Date

- Kate evaluated nearly 60 genetically unique and diverse sweet potato tubers.
- After final evaluations of taste and storability, Kate will choose 15 varieties and trial them in 2020.
- Kate collected seeds from the vines that produced seed, which is germplasm for future breeding.

BACKGROUND

Most varieties of sweet potatoes need a long growing season because they become 'injured' when temperatures are low, and thus are not suited for eastern Ontario. As hexaploids (i.e. six homologous sets of chromosomes) sweet potatoes are genetically diverse, which means there is potential for regional adaptation. But to get new genetic diversity, plants need to be grown out (vs cloned) and produce flowers followed by viable seeds. This is difficult because most varieties of sweet potato show self- and cross-incompatibility, low natural flowering ability and low seed fertility.

In 2016 - as the first step to breeding a regionally adapted variety - freelance breeder Telsing Andrews at Aster Lane Edibles planted Georgia Jet (the most reliable northern variety) and Purple sweet potato plants. Luckily, they produced flowers and some open pollinated seed! The next year, Telsing planted these seeds, as well as seeds from a Sweedish sweet potato (Nordic White X Purple) and some tropical sweet potatoes that she acquired from an enthusiast in Britain.

Kate Garvie has now taken on this project and was able to grow slips from the wide diversity of tubers produced in 2018 with the hopes of evaluating the nearly 60 unique crosses and finding something that is well suited to her farm.

METHODS

With 59 unique F1 varieties, there was not enough space or capacity to do a replicated variety trial to select the best. In 2019, therefore, Kate planted out one replication of 59 blocks containing 3-4 plants of each variety, with the goal of selecting 15 of the best to do a replicated variety trial in 2020.

Photo: Example of some of the diversity in the tubers.

RESULTS

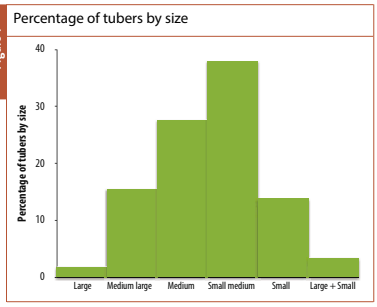
The slips that Kate planted produced incredibly diverse plots of sweet potatoes. Of the 59 plots planted, one plot had all slips fail to grow, one plot only had one plant and 49 of the plots had all three slips grow and produce tubers. On average each plant produced 13 tubers, with on average 5 marketable tubers.

Kate selected the top performers in terms of yield (number of tubers and number of marketable tubers), shape (round versus elongated), and ease of harvest. They range in colour from orange, purple, and white flesh, with red, purple, hot pink and yellow skin.

Marketable Yield

Only 25% of plots had 50% or more marketable tubers. Marketability, however, was based on size, meaning the cool season and the heavy clay at Kate's may have negatively affected marketable yield. Kate will cull all the varieties with small tubers, and select those with a high number of marketable tubers.

Figure 1



Ease of Harvest

Ease of harvest is an important trait for small market gardeners, especially for those like Kate with heavy clay soil. One quarter (25%) of the plots had dispersed roots that were challenging to find and harvest without damage. The optimal root formation is compact, but not tangled. Kate will select for optimal root formation in 2020.

Seed Production

Over three quarters (75%+) of the new crosses flowered and 61% produced new seed that can be used to grow more diversity in the future.

Table 1

Flowering and Seed Production Statistics from Year 1	
Plots with flowering plants	75.9%
Varieties that produced seed	61.4%
Varieties that produced over 20 seeds	21.1%
Varieties that produced over 100 seeds	1.8%

NEXT STEPS

Kate will conduct taste tests later this winter and evaluate storability. Using all of the data, Kate will select the 15 best sweet potatoes, which she will use to create slips in spring 2020. During the 2020 season, she will conduct a randomized, replicated trial to further evaluate these varieties.

Photos: Slips growing in the greenhouse prior to planting out in the field (*top*). Large white skinned tubers being harvested (*left*). Tuber with light purple and peach flesh *(right)*.

ACKNOWLEDGEMENTS

We thank Telsing Andrews for starting this process, for guidance along the way, and for helping with the harvest and initial evaluation.

EFAO ECOLOGICAL FARMERS ASSOCIATION OF ONTARIO

Read online: efao.ca/research-library

THANKS TO OUR PROJECT FUNDERS

Ontario Trillium Foundation / Fondation Trillium de l'Ontario

Robert and Moira Sansom Ideas Foundation / London Community Foundation

EFAO HORTICULTURE 2019: Comparing soil covers for greens

Do different soil covers differ in their efficacy for production of organic greens?

SOIL HEALTH

WEED CONTROL




Farmer-Researchers

Matt Jones
Jones Family Greens - West

Chris Bocz and Jon Gagnon
Earth to Table Farm - West

Brent Preston and Gillian Flies
The New Farm - West

Project timeline:
Spring - Fall 2019

IN A NUTSHELL

As a follow-up to Brent and Gillian's tarp trial last year, these growers evaluated the difference among tarp, landscape fabric and clear plastic for greens production.

Key Findings

- Occultation worked consistently for weed and residue management. Between tarp and landscape fabric, landscape fabric is much easier to manage.
- Clear plastic was not effective during shoulder seasons, when temperatures aren't warm enough
- The soil covers did not affect crop yield differently.
- Soil moisture retention was better with occultation, and soil moisture was highest under landscape fabric.
- Depending on farm and time of year, soil temperature peaked under all covers and uncovered soil, suggesting that occultation does not increase soil temperatures to a point that negatively affects soil biology.

BACKGROUND

With the benefits of minimum-till systems becoming well established, appropriate ecological methods for weed control that do not disturb the soil are needed. Results from Brent and Gillian's 2018 farmer-led research trial showed that using silage tarps resulted in an 82% reduction in tillage, faster growing crops, and reduced labour for lettuce and spinach crops (1).

As an iteration of the 2018 trial, these growers were curious to know how different soil covers perform.

- Covering with **clear plastic (i.e. solarization)** induces weeds to germinate and they die due to the high temperatures.
- Covering with dark opaque materials like **silage tarp and landscape fabric (i.e. occultation)** induces weeds to germinate and they die due to the absence of light.

METHODS

The growers compared different soil covers as outlined in Table 1. They recorded soil temperature using HOBO Pendant® MX Water Temperature Data Loggers w/Bluetooth, and made observational notes about management including handling the different covers; Matt, Chris and Jon recorded yield and labour; and Matt also recorded soil moisture. See Matt's experimental design on *page 2*.

Table 1

Experimental details for the three farms.

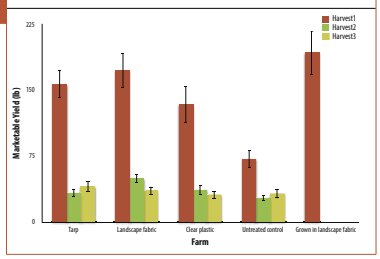
Farm	Treatments	Crops	Experimental Design
Jones Family Greens	1. Silage tarp 2. Clear plastic 3. Landscape fabric 4. Untreated; light cultivation to remove weeds	Lettuce mix Brassica greens Chenopodiaceae greens (spinach, chard, beets) Roots (carrots and beets	Two areas, each with: - 4x60'rows, one per crop group - Each row divided into 4x15' sections, which were randomly assigned to a treatment - 3 successions
The New Farm	1. Silage tarp 2. Landscape fabric 3. Control; tilling	Lettuce mix Brassica greens Arugula	Full beds randomly assigned to a treatment for each succession. - 4 successions
Earth to Table Farm	1. Silage tarp 2. Landscape fabric 3. Control; BCS power-harrow	Lettuce mix Baby kale Arugula	Full beds randomly assigned to a treatment for each succession. - 1 succession with full beds of lettuce and 1 with half beds of baby kale and arugula

RESULTS

Yield

Figure 1

Yield data from Jones Family Greens. Data from each treatment is the mean (+/- standard error) of 8 varieties of Salanova® lettuce divided, with 4 heads weighed per section. For the first succession, Matt had an additional plot where he measured yield for lettuce that was grown through holes in landscape fabric.



There was no consistent yield difference among lettuce grown after the three different soil covers at Jones Family Greens (Figure 1; $P>0.10$).

For the first succession, Matt also compared lettuce grown in holes of landscape fabric. Yield was the highest in this treatment ($P<0.01$), but we don't know if this result is consistent across the season.

Yield was lowest in the untreated sections ($P<0.01$), but these sections - which he left open for 3-9 weeks - are not representative of Matt's standard way of growing greens. For this reason, the yield deficit control plots should be interpreted with caution.

Weed and Residue Control

The New Farm: Tarps worked a little bit better than fabric in terms of decomposing stubble and residue. But weed control between beds was easier to control with landscape fabric, which can be overlapped.

Earth to Table: Both the landscape fabric and silage tarp dealt well with residue, but left enough on the surface to require some labour for removal. This was especially true for arugula and baby kale, which left substantial or stringy stems that gummed up the seeder.

Jones Family Greens: While clear plastic worked very poorly in shoulder seasons as it just enhanced the growth of some weeds, it was effective at weed control mid-summer (2).

Photo: Clear plastic working ineffectively during the shoulder season at Jones Family Greens.

Labour - *see page 2*

Soil Moisture and Temperature - *see page 2*

TAKE HOME MESSAGES

Occultation was a robust means of weed and residue elimination prior to planting throughout the trial, while solarization was only effective during the hotter part of the growing season. In this study, no method prevented subsequent weed growth.

For specific methods of occultation, there were no consistent or dramatic differences in residue management or crop yield between landscape fabric and silage plastic. Landscape fabric, however, was consistently easier to work with than silage tarp, making it the future cover of choice for these three farms. (If you do use tarps, Chris and Jon found that can be effectively held down with pallets.)

Soil moisture retention was better with occultation and soil moisture after cover removal was highest after landscape fabric.

Depending on the time of year and farm, soil temperature peaked under tarp, clear plastic and tilled soil. Consistent with other research, the greatest temperature increase relative to other treatments was via solarization. In contrast, occultation didn't necessarily increase soil temperature above uncovered soil. This suggests that concerns about its negative effect on soil biology may be unwarranted.

[Continued on page 2. Read the full report at efao.ca/ research library]]

EFAO
ECOLOGICAL FARMERS ASSOCIATION OF ONTARIO

REFERENCES

1. Preston and Flies. 2019. https://efao.ca/researchDocs/notilltarplettuce-preston-flies-efao2018-1548811141.pdf

2. Mefferd. 2019.The Organic No-Till Farming Revolution: High-Production Methods for Small-Scale Farmers.

Read online: efao.ca/research-library

THANKS TO OUR PROJECT FUNDERS

Ontario Trillium Foundation
Fondation Trillium de l'Ontario

Robert and Moira Sansom Ideas Foundation
LONDON COMMUNITY FOUNDATION

2020 Research Trials

This year, over 35 member-farmers are conducting research for their farms in cooperation with EFAO's Farmer-Led Research Program.

When EFAO staff checked with this year's cohort of farmer-researchers about whether or not COVID-19 changed their capacity or motivation to conduct research, we heard overwhelmingly that their research is "more important than ever... to make our farms more productive and resilient". How truly inspiring!

Here's a summary of this year's research trials.

Amaranth variety trial

SEED PRODUCTION & BREEDING

Rony Eleazar Lec Ajcot and Myriam Legault are conducting a randomized variety trial of grain amaranth *(Amaranthus spp)* in order to gain a greater understanding of the best varieties for cultivation in southern Ontario.

Spinach variety trial

Evalisa McIllfaterick and Janna van Blyderveen are evaluating 6 varieties of spinach over three planting dates to assess their performance for seed production in northwestern Ontario.

Heirloom dry bean variety trial

Shelley Spruit is evaluating different varieties of heirloom dry beans for production in eastern Ontario. This randomized and replicated variety trial is in collaboration with the Northern Organic Vegetable Improvement Collaborative's dry bean trials happening south of the border.

Tomato grafting

Nathan and Victor Klassen are continuing their work from 2019 looking at grafted tomatoes. This year, they are comparing the yield of Caiman, various heirlooms and cherry tomatoes when they are grafted on different rootstock varieties (Estanimo, DR0141TX, Fortanimo and Shin Cheong Gang) to when they are not grafted.

Lettuce variety trial

Angie Koch, Ann Slater, David Mazur-Goulet and Lise-Anne Léveillé, Harold Saunders, Jon Gagnon, Laurie and Corey Ahrens, Martina Schaefer, Norah Quast, Sarah Judd and Hilary Moore are evaluating the best leaf lettuce varieties for summer and fall plantings, through four randomized and replicated plantings of 9 lettuce varieties.

Isolation distance for cut flower production – *continuation*

Kim Delaney is continuing her project to see if she can reduce the isolation distance for *Cosmos* seed production. After growing white and pink Cosmos at isolation distances of 400 and 600 ft in 2019, she will grow out the seed produced and count the number of pink flowers (dominant) growing in the white flower (recessive) population.

Sweet potatoes for southern Ontario, Year 2

Kate Garvie, Erin Richan, Shelley Spruit, Jessica Gale and Manish Kushwah are continuing Kate's selection work from 2019 (page 13) to breed and identify the best performing varieties of sweet potato for organic farming systems in eastern Ontario.

Heat tolerant OP broccoli, Year 1

Greta Kryger, as part of the SeedWorks Plant Breeding Club, is continuing the work to breed a heat tolerant heading broccoli that is adapted for organic systems and resilience to climate variability. This year she will be making crosses between different varieties that most closely fit the criteria, with hopes to plant those crosses out next year for selection.

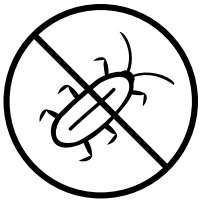
Seedless English cucumber, Year 2

Nathan Klassen is continuing his work to breed an open pollinated seedless English cucumber with excellent flavour that is adapted to organic greenhouse production. He has been saving seed from the old standard cucumber, which he is working to cross with the seedless fruit and flavour qualities of a modern hybrid dutch greenhouse type.

Southern Ontario Pepper Breeding Project, Year 5

Annie Richard, Kim Delaney, Rebecca Ivanoff, Greta Kryger and Kathy Rothermel continue to develop a diverse line of early ripening red blocky bell peppers as well as a uniform inbred line of both early blocky red and yellow peppers. Their mass selected red pepper is being trialed across Ontario as part of The Canadian Organic Vegetable Improvement Project (CANOVI) program. They are planning the first release this winter!

Efficacy of ozone sterilization for mushroom production

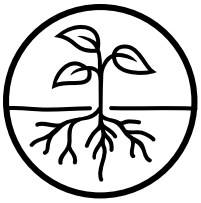


DISEASE & PEST CONTROL

Brittany Rantala-Sykes and Ivan Vincent are growing replicate batches of shiitake and chestnut mushrooms to compare production using two levels of ozone sterilization and their standard method of steam sterilization. Steam sterilization is expensive, produces excessive amounts of moisture and uses single-use plastic bags. They hypothesize that ozone sterilization is as effective and will

reduce their costs and use of single-use materials.

Reduced tillage for fall brassicas



COVER CROPS

Ryan Spence and Isabelle Spence-Legault are evaluating whether they can reduce soil tillage, cultivation, and irrigation for fall brassicas. To do this, they planted a fall cover crop in 2019, which they will crimp for mulch for late-season broccoli in 2020. They will evaluate broccoli yield, labour, and soil moisture in replicated plots with and without the cover crop.

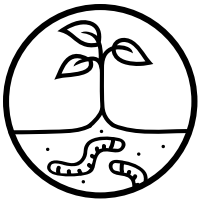
Amendments to hasten emergence of no-till planted spring cereals

Ken Laing is setting up replicate plots to test whether liquid amendments and/or biological seed amendments hasten the emergence and increase yields in oats no-till planted into a daikon radish winter-killed cover crop.

Regeneration of fallow fields

Eric Barnhorst is curious to know what the best method is to raise organic matter in a full year fallow, balancing regeneration and cost effectiveness. To research this, he is establishing replicated plots of a mowing (control); micronutrient application + mowing; micronutrient application + cover crop; micronutrients + cover crops + compost; and micronutrients + cover crops + wood chips.

No-till sunflowers in northern Ontario



SOIL HEALTH

Becky Porlier is evaluating different ways to establish beds on existing perennial pasture for no-till planted cut flower production. To do this, she will grow sunflowers in replicated plots to compare tilled control; tilled + cover crop; and deep mulch to smother the pasture.

Direct seeding into compost mulch

Jason Hayes and Kristine Hammel are comparing different compost mulches for deep bed no-till vegetable production to see which, if any, is better for direct seeding.

Weeding robots (Tertill) for greenhouse production

Jonathan Harris is evaluting whether an automated weeding robot, the Tertill, is feasible and cost-effective for commercial-scale greenhouse production, by comparing yield and weed pressure in randomized, replicated plots of vegetable crops that are weeded by hoe or by robot.

No-till tomato production

Matt Jones is comparing tomato yield, weed control and soil health in replicated plots of cardboard mulch under landscape fabric; a crimped cover crop under landscape fabric; and a layer of compost under landscape fabric.

Assessing methods for nutrient application for trees/woody shrub nutrition

Derick Greenly is comparing two application methods to reduce soil pH for growing chestnuts, which exhibit alkalinity-sensitivity. In replicated plots established in 2019, Derick is comparing typical broadacre application and incorporation of sulphur and chelated micronutrients to localized hand-installed amendments. He will measure plant response starting in 2020.

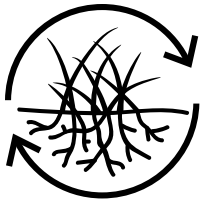
Efficacy of mycorrhizal inoculants on vegetable transplants

Dianne Kretschmar is comparing replicated sections of inoculated transplants and un-treated transplants to determine whether there is a benefit to using mycorrhizal inoculants on lettuce and onion in terms of yield and/or disease resistance.

Efficacy of different soil and foliar amendments for storability of kale

Kevin Hamilton is comparing replicated harvests of kale grown with compost; compost + bi-weekly application of vermicompost tea via soil watering; and compost + bi-weekly application of effective microorganisms tea via soil watering to determine whether these treatments affect storability.

Nutrient availability and age of pastures



PASTURE REGENERATION

Andy MacDonald is curious to see how the maturity of his pastures affects soil health and nutrient density of the forage for his rotationally grazed cattle.

Funding for the Farmer-led Research Program is currently provided by the Organic Farming Research Foundation, The Brian and Joannah Lawson Family Foundation, and the Robert and Moira Sansom Ideas Foundation, a fund within the London Community Foundation.

FarmLite App

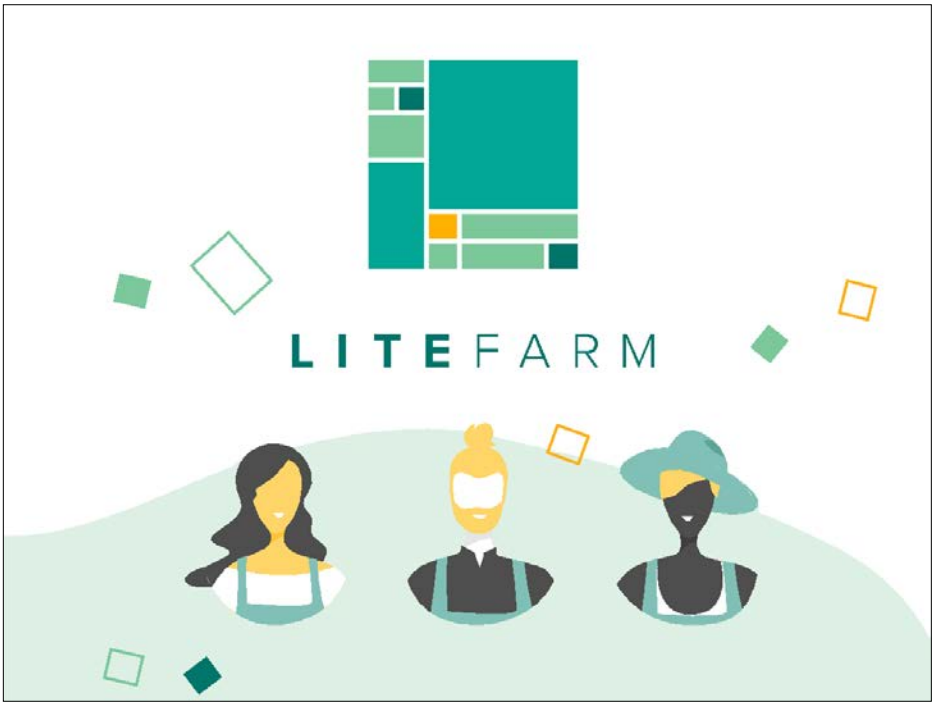
by Zia Mehrabi

Around two and a half years ago at an EFAO Conference in 2017, a group of farmers along with a couple of scientists from the University of British Columbia embarked on a project. The aim of this project was to identify the technology needs of our farming community and to work together to develop a solution to meet those needs.

Over the years to follow, this group continued to work together, to prototype, test and build mobile software to assist with sustainable farm management. This group has, together, built the world's first farm management application of its kind. One that not only helps with real-time, within season, cost of production by crops, but also reports on a wide number of innovative socio-ecological metrics to individual farms, such as the number of people fed, labour happiness, soil organic matter, nitrogen and water use, and biodiversity.

At the EFAO conference in 2019, a beta version of this application, called LiteFarm, was released to the EFAO community. This was the first of a number of 'soft' releases, which have been done in Canada and in Central America with communities like the EFAO who have helped develop this tool. In the months to come, a public release will be made to all farmers globally.

The key feature that separates LiteFarm from the many farm data management tools currently available is that it is a completely community-driven, not-for-profit, solution which joins scientists and farmers together to try and solve the problems of financial sustainability, climate change, biodiversity decline, and the production of healthy and nutritious food. LiteFarm has been created as a public good. The platform



is built to tackle the many socio-ecological dimensions of farming and has engagement across a wide spectrum of partners with a long-term interest in making the world a better place.

If you're a farmer or researcher and would like to learn more about this project please check out our project webpage https://ubcfarm.ubc.ca/litefarm/. You can check out the fruits of our labour here: www.litefarm.org/.

Zia Mehrabi is a Research Associate at the University of British Columbia, where he works on food systems, climate change, and agricultural technology. ■

Did you know that EFAO has a research library where you can access all of the reports from farmer-led research trials?

efao.ca/research-library

EFAO Events and Resources During COVID-19

Staying Connected

Because of COVID-19 and until further notice, all EFAO staff are working remotely from home. Most EFAO programming is able to continue in some capacity. 2020 farmer-led research trials will continue as planned with support being offered virtually, and educational events and opportunities will transition to virtual formats. We are monitoring the situation closely and will continue to make plans that align with social distancing protocols.

EFAO's community has always been its strength. This pandemic will impact us all in some way but please know that you are not alone.

How you can stay connected:

- EFAO staff will continue to be available by phone and email. We are monitoring our email and will be checking the office voicemail 2-3 times a week.
- All upcoming in-person meetings and events have been cancelled, postponed or moved online until it is deemed safe to reconvene in person.
- We are working on ways to bring our network together to learn, share knowledge and support one another through virtual events, meet-ups and other online forums – look for information about upcoming events at efao.ca/events
- Take advantage of EFAO's online resources at efao.ca

Please be in touch with any EFAO staff member or admin@efao.ca if you have any questions. We look forward to coming together again to enjoy the beauty of Ontario farms. ■

Resources for Farmers during COVID-19

EFAO is working diligently to compile practical information and resources for ecological farmers in Ontario. You can find this information at efao.ca/covid-19-resources. If you are unable to find information that you are looking for, please reach out to any member of the EFAO staff team and we will do our best to help! ■

Update on EFAO Events

With the current COVID-19 reality and social distancing protocols in place, we will be offering events in new formats this year. Here is some information about the types of events we are working on for 2020.

ONLINE MEET-UPS: An opportunity for EFAO members to gather online for community connection or discussion focused on specific topics.

WEBINARS: Offered in a more traditional workshop format, participants can expect to spend 60-90 minutes learning about a specific topic with some time for questions with expert speakers and farmers from Ontario and beyond.

VIRTUAL FIELD DAYS: Participants will view a recorded tour of a farm in Ontario, with a specific topic focus. Then the host farmer(s) will join participants for an hour-long discussion and opportunity for questions.

NEW FARMER ONLINE MEET-UPS: Offered weekly over the lunch hour, these meet-ups will offer an opportunity for beginning and aspiring farmers to take a break from work and virtually gather to socialize, share and connect during these times of uncertainty.

VIDEO TUTORIALS AND RECORDED WORKSHOPS: Watch for online videos and recorded workshops from farmers across the province as they share ideas, strategies and information about ecological agriculture. These will be offered both informally and in more of a recorded lecture format.

IN-PERSON EVENTS – FIELD DAYS, WORKSHOPS AND THE ANNUAL EFAO CONFERENCE: We will continue to monitor and reassess as protocols and recommendations change and look forward to gathering in person again, once it is safe to do so. We are continuing to plan for the 2020 EFAO Conference in London from November 30 to December 3, but will re-evaluate and communicate as the event draws closer.

While virtual events are best experienced through an internet connection, webinars and online meet-ups do have a phone-in option. Please be in touch for more information.

Please don't hesitate to be in touch with any questions, suggestions or ideas for events. You can reach Katie Baikie at katie@efao.ca or leave a voice message at 519-822-8606. ■

EFAO Member Directory

We're excited to announce that the EFAO Member Directory is now online!

The Directory allows EFAO members to connect with each other, and will also introduce your farm or business to new customers with the help of a searchable database.

The Directory will be accessible to the general public as of June 1st. Until then it is only visible to EFAO members.

Action Required by Members

Please ensure that your information is correct in the Member Directory. You can do this in one of three ways:

1. Login to your EFAO online account **before June 1st** to update your information. Check your email inbox for a link to the Directory where you can view your listing and change your information.

2. Mail your updated information to the office: 5420 Hwy 6 North, Guelph, Ontario, N1H 6J2.

3. Leave a voicemail on the office phone: 519-822-8606. Note that response time to phone messages will be delayed.

The Directory displays the following information – please review and update each field as needed:

- Farm or Business Name
- City
- Region
- Website
- Product List
- Marketing Methods
- Growing Practices
- Phone and Email Address (optional)

If you do not wish to have your information displayed in EFAO's Member Directory, you can opt-out through your EFAO online account or include this in your mail or voicemail to the office.

Thank you for your patience as we've worked to get this great tool back online. Contact admin@efao.ca or leave a message at 519-822-8606 with any questions. ■

Online Community Forum

The EFAO online Community Forum will be back online in May! Find it at forum.efao.ca. The Community Forum provides an online space for members to connect and share knowledge with one another in an informal, easy-to-access format. Have a question about a feed supplier, how to prune, or how to find a farm accountant? This is the place to ask other ecological farmers. ■

Membership Registration

Membership with EFAO includes a host of benefits that apply to all farm members, including employees and interns.

Including: subscription to print newsletter *Ecological Farming in Ontario* • discounted rates on workshops, field days, and annual conference • support for farmer-led research • access to farmer-to-farmer Advisory Service • reduced rates on advertising and classified in print newsletters.

Name: _____

Farm Name: _____

Address: _____

City/town: _____

County: _____

Province: _____ Postal Code: _____

Telephone: _____ Email: _____

EFAO
ECOLOGICAL FARMERS ASSOCIATION OF ONTARIO

Membership Type:

- ❑ $20/yr New Farmer & Student Membership
- ❑ $75/yr Full Membership
- ❑ $65/yr Full Membership with auto-renewal (credit card payment)
- ❑ $1,200 Lifetime Membership

Payment Options:

For credit card payments please visit efao.ca

Please make cheques payable to EFAO and mail, along with your application, to:

Ecological Farmers Association of Ontario,
5420 Hwy 6 North, Guelph, ON, N1H 6J2

MEMBER PROFILE

Q&A with Theresa Schumilas

From Veggies to Cut Flowers at Garden Party Flower Farm

Theresa Schumilas owns Garden Party Flower Farm, in St. Agatha. After growing vegetables for 30 years, Theresa began growing ecological cut flowers for sale to designers, DIY'ers and other flower lovers. Theresa is also the Founder of Open Food Network Canada.

Garden Party Flower Farm operates on four acres – two of which are for cut flowers (mix of bulbs, annuals, perennials, woodies) and two acres are forested where they are able to do sustainable wild harvesting.

EFAO: How and why did you begin farming?

THERESA: My parents were part-time vegetable farmers (tomatoes, asparagus and strawberries). They stopped in 1975, and I started taking bits over. They have passed now, and I purchased the farm from the estate. My first love was the flowers on plants but, for decades I thought it was somehow wasteful to build soil for beauty over food. So, I only allowed myself a few flowers. I ran a CSA on and off beginning in 1985. It was flexible and I needed that because my partner and I both worked off the farm. I retired (or so I thought) in 2014 and made sure my CSA members all found new 'homes'. But then, I just had to grow things. So, I thought maybe I would just do a little section in flowers, and maybe I'd sell a few bouquets at a market or something... I got re-hooked!

EFAO: Where and how do you sell your products?

THERESA: Cut flower sales are split into thirds: 1/3 of sales are wholesale to designers/florists (both in my region and in Toronto), 1/3 is direct to consumer and pick-your-own, and 1/3 is to weddings that we do in house. Plus, we also run some on-farm workshops and events. In addition, I've developed a business sourcing and selling inputs to other flower farmers (plugs, bulbs, tubers), and then that contributes nicely to local seedling and bulb sales focused on cutting gardens.

EFAO: Are you able to meet the financial goals for your farm?

THERESA: I am better able to meet my financial goals – on a very small acreage (two acres planted and two acres foraged from wild areas) – than I ever could with a CSA. It's not 'easier' – but now it is possible to do better than just breaking even. The work is just as hard – still long days. But I think a few things account for the difference.

1. The season for selling cut flowers is longer, so more weeks of sales are possible.

2. The margin on flowers sold directly to designers is higher than, for comparison, vegetables sold to chefs. (Mind you – this comes with an absolute priority on premium, high quality blooms – much more attention to quality than with food in my experience.)

3. We seem to be in a 'darling moment' with weddings, where the in-vogue designs are for that 'farm fresh', 'organic', 'bountiful' look. So the demand is high. (This could change!)

EFAO: Tell us a story of a pivotal time or moment on your farm:

THERESA: I started selling directly to consumers and to local flower shops. After three years, I was not even close to breaking even. Consumers don't buy that many flowers and most florists are accustomed to purchasing distant products off a truck. I talked with a group of fellow flower farmers who had been in business longer, and they said two things: first if your channel is wholesale to designers, you MUST get into the GTA market. Cities outside the GTA just can't sustain you. And second, you MUST do full-service weddings and capture some of that market rather than just wholesaling to the designers. I didn't want to do either of those things and was going to retire (again). But then I was invited to try out a season as a supplier in The Local Flower Collective (a collective of farmers and designers working together in Ontario). In addition, a freelance, semi-retired, high-end designer approached me about a partnership to offer full-service weddings. These two opportunities turned everything around for me.

EFAO: What are some of the future plans for your farm/business as you look ahead?

THERESA: I expect enough revenue this season to hire someone. My hips will be VERY happy about that. I hope to build up my cut flower business, and then rent it (the land, the equipment, all the production details, the network) to a younger, beginning flower farmer. ■

Garden Party
-FLOWER FARM-

Farmer-Owned Food Distribution

Turning a Potential Crisis into an Opportunity

A year ago, Wheelbarrow Farm embarked on a journey to start a farmer-owned food distribution channel. Our slow and methodical approach was supposed to take several years of research, consultations and group meetings. The end goal was to create a shared company so that farmers could more efficiently get their products into the hands of customers, using all of the tools in the 21st-century toolkit (delivery apps, logistics software, open-source sharing, clean energy and electric vehicles). In January, we began a collaboration with a York University student who agreed to complete her master's thesis on the topic. We were just about to start contacting farmers and producers to begin the consultations, and then... COVID-19.

They say that "necessity is the mother of invention" and we're about to find out if that cliché still applies. With farmers' markets temporarily closing and with our established sales channels disrupted, we find ourselves searching for alternatives. The plans we thought would take years, will still take years, we're just starting them a little ahead of schedule.

This season, Wheelbarrow Farm and Kendal Hills Farm (among others) will be coordinating the delivery of our products, and the products of other farms and food producers. These items will be distributed directly to customers through community food hubs or by door-to-door delivery. It's going to be messy and uncomfortable as we test new methods of distribution but it will allow us to figure out the logistics and best practices required to pull this off. Throughout the year we will be collecting data so that when we all come together to discuss this plan, we will have at least some information to guide us forward.

Now that farmers' markets are closed, it's given many of us some time to think about our relationship with them. For new farmers, the farmer's market is certainly a great way into the business, providing a very low barrier to sell to the public at retail prices. $30-$50 gets you a pop-up store-front with hundreds of customers – that's hard to beat! It's also a great way to network, learn, develop friendships, and meet the people you are producing for. On the other hand, farmers' market sales can be unpredictable. From personal experience, I have spent many rainy days at the market, huddled under a neighbour's tent, both wondering what to do with all the food we had hoped to sell and wondering if there wasn't a more efficient way. At the end of the day, many of us just want to feed people healthy food and get paid a living wage in the process.

For simplicity's sake, we've been referring to this idea as a farmer-owned distribution channel, but it could be so much more inclusive than that! All stakeholders could and maybe should be shareholders. If the recent COVID-19 pandemic has taught us anything, it is that we are all stakeholders in the local food economy. We all have so much to gain, and so much to lose.

If we can come together and create a shared company, if we can learn how to interact on a legal and material basis, it will open the doors to an endless number of collaborative possibilities. If there are 100 producers who join this new initiative, we can begin by strategizing the best way to distribute our goods. But more importantly, we can then ask: Why is it that each of us has a different accountant and a different accounting system? Couldn't we just hire our own in-house accountant, streamlining the process while saving time and money? Why is it that each of us has to navigate the spider's web of government funding avenues? Can we use our collective power to group-purchase supplies or

insurance at a discount? Can we have a shared HR or marketing department? We all know about the dual problem of land access for young farmers and the lack of succession planning for the ageing farming population. Wouldn't we be better able to solve this problem collectively? And so on.

A popular farming book was released several years ago entitled, "Lean Farm", based on the Japanese practice of "lean production". The idea is that we look to our farm's production methods and try to eliminate waste – wasted labour hours, wasted supplies, wasted products. Many of us have integrated these practices into our businesses and have become more financially sustainable because of it. What we ought to do now is to focus those principles on the entire small-scale farming industry. Rather than each farm searching for individual efficiency in an otherwise competitive and inefficient marketplace, we can instead collaborate with each other and transform the industry itself for the benefit of all.

While we are still just a small collection of small farms in a powerful sea of global supply chains, there are reasons to be hopeful. 1) We will have massive public support. If there were ever a time to launch a local food-security start-up run by and for farmers, it is now. 2) We are capable. Some of us are multi-generational farmers, some of us came up through the ranks, but we all have a tremendous amount of knowledge that the world needs right now. 3) Funding is coming. In the twelve years that we've been farming, "food security" has been an idea, a blog post, a politician's talking point, and a continuing-education certificate course. It's time to make it a reality, and that requires both political will and funding. Governmental stimulus packages are on the way but it's vitally important that those funds get into the hands of farmers.

> ***At the end of the day, many of us just want to feed people healthy food and get paid a living wage in the process.***

If you are a farmer currently in *triage mode* and considering wholesale purchases or sales from other food producers, reach out to Tony if you'd like to discuss best practices and share information: 647-335-3190, wheelbarrowfarm@gmail.com ■

Tony Neale is co-owner and operator of Wheelbarrow Farm (Uxbridge, On), where he grows mixed organic vegetables, fruit and nut crops.

MOVIE REVIEW

The Biggest Little Farm

By Thorsten Arnold

A new film about regenerative farming is making headlines: John Chester's documentary *The Biggest Little Farm*. For me, more interesting than the content of this movie was how it touched me emotionally, and how it helped me grow.

The Biggest Little Farm is the story of an urban couple: Molly is an avid foodie with farming dreams and John is in wildlife filmmaking. With the help of an investor, the couple purchases a run-down degraded 200 acre orchard around Los Angeles and rebuild it. They transform this orchard into a living paradise with the help of biodynamic expert and visionary Alan York. The movie showcases their journey of biodiversity regeneration complete with mixed animals and over 70 fruit tree varieties. As their ecological system improves over time toward the "perfect harmony" that Alan aspires to, they experience a sequence of new diseases or pests: "Because every step we take to improve our land seems to just create the perfect habitat for the next pest." With ingenuity, staff, and seemingly endless funds, the couple manages to set up nature against nature in a way that indeed creates balance, harmony, productivity, and beauty.

When viewing this movie, I first had to turn it off. The level of investment that enabled what I perceived as a fairytale struck me as painful – many of our customers watched that movie and I felt both admiration for the approach and dissatisfaction that our farm is not as pretty, diverse, and cool as Apricot Lane Farms. "$10 Million or so of financing, plus 70 km to the posh L.A. market would take us a long way too", I felt compelled to respond – but knew better. I coined the word "Small Farm pornography" – the stylized depiction of a fantasy world that satisfies urban dreams but also elevates expectations into the sky of delusion. How can that help farmers in real life?

Upon a second, complete viewing a few days later, I actually now love the movie. The story about nature in balance is told compellingly, beautifully, and in a way that is accessible to all ages and backgrounds. The Chesters did not center the film around themselves but around the balance of life – and around the re-adjustment pains when regenerating a degraded ecosystem, which many of us can relate to all too well. Tired of mowing your orchard? Utilize some grazing animals! Too many flies from the ruminant poo? Chicken tractors help. Coyotes eating your chickens? Get a friendly dog! Snails eating your crop? Release the ducks! And so, nature's wheels turn on and on, until wildlife re-establishes new harmony.

I believe that *The Biggest Little Farm* can be a powerful ambassador for a new, regenerative narrative that our world so desperately needs as it slips into chaos. Even though the metaphor of "Survival of the Fittest" was put into its place by Lynn Margulis' science of symbiogenesis, we remain trapped in the paradigm of scarcity and its out-dated storybook of "selfish genes" and "the freedom to compete one against another" trying to get to the top of the economic pyramid. Such a narrative has shaped the life of the boomers and my generation has absorbed it willfully. If humanity has a chance to survive the 21st century, I am convinced that this requires a new compass for our society, based on a new paradigm of abundance and with an inspiring counter-narrative of ecosystem regeneration, balance, qualitative growth, and collaboration. John Chester created an almost magical tale that speaks to far more than one farm's tale (made possible by a crazy investor). Thank you, John, for teaching me a lesson in my own fears of scarcity, and for telling this important story with such beauty. May more investors be inspired by your tale, and may your myth infiltrate our children's brains. ■

Thorsten Arnold holds degrees in environmental science, agricultural economics and watershed management. He co-owns Persephone Market Garden in Grey County with his wife Kristine and their three children while consulting, writing, and teaching about an agriculture that feeds people and simultaneously promotes rural economies and a healthy biosphere. He was the instigator and founding manager of Eat Local Grey Bruce online farmers market. He now consults on developing alternative food chains and educates about the role of agriculture in biosphere regeneration.

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