British Columbia Organic Grower

FUTURE OF ORGANIC: Continuous Improvement

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Certified Organic Associations of BC

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New Tools for Public Education about Food Choices from CBAN

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BC Organic Grower

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On the Cover: Pollintator insect visitng a flax flower. Credit: S.K. Basu.

Editor's Note

By Darcy Smith

What does the future of organic look like? That's the question we're asking in our BC Organic Grower 2020 series. And while our winter issue looked back at what should be preserved—namely, organic integrity—our spring issue looks forward. What does innovation and improvement look like in organic systems, and in the organic community? In a system that is founded on the principle of improving the soil, continuous improvement is at the heart of what organic farmers do every day.

This issue is appropriately timed, as the current pandemic has forced organic farmers and food producers to adapt to a rapidly changing marketplace. Innovation and improvement can happen overnight, or over decades. And while we often think of innovation in terms of new technology, over the last weeks I have seen incredible social and community innovation.

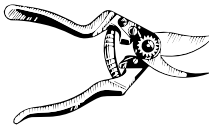
For Rebecca Kneen at Crannóg Ales, featured in our Organic Story by Michelle Tsutsumi, innovation has taken the shape of finding ways to "extend deeply rather than widely" (page 8). Congrats on 20 years!

On page 6, Anna Helmer takes a break from unpacking the mysteries of biodynamic farming systems—what's on her mind instead? Two issues pulling the ecological agriculture community in different directions: the "regenerative" buzzword and plastic's controversial, yet undeniable, usefulness.

We recap the 2020 BC Organic Conference on page 12—gratitude to everyone who gathered together to dream and plan for the future of organic. As this year's keynote speaker, Dag Falck showed how far organic farming has come over the last 100 years, and where we'll need to go next for an organic future. Page 18 features an article on what it means to be organic AND regenerative by Dag and Arran Stephens, Nature's Path founder.

In this issue's Footnotes column, Marjorie Harris tackles improving poultry rations, from the farm to the supply chain (page 15), and Saikat Basu highlights pollinator conservation research from Southern Alberta (page 24). Page 16 features Makoha Farm, and their experience using iCertify, COABC's new online organic certification system.

Visit page 20 for an update on FarmFolk CityFolk's recent report on mitigating climate change through agriculture from Julia Zado, and on page 27, read up on CBAN's new public education tool.



If you have a story to tell about organic food and farming, please get in touch. We introduced a new segment this issue: Cool Tools.

We'd love to see your helpful farm implements! Reach out with your thoughts, letters, and story ideas to editor@certifiedorganic.bc.ca—and be sure to visit us online at:

bcorganicgrower.ca

A Message from Eva-Lena Lang

This is my first entry since starting as executive director at the beginning of March, and what a time it has been to start! As I write this on March 25, it's been just one month since I saw some of you at the annual conference. Many things have changed since then due to COVID-19, and the COABC team has been working from home for the past week. I've been contemplating what to say during this time of increased concerns, questions, and unknowns. Lots of information has been shared, although many questions still remain unanswered.

Some of you are my mentors, farmers I've worked with, friends, and family. Many of you I don't know but hope to connect with. As I learn more about the COABC community I continue to be impressed by this grassroots organization, the hubs of support within it, and the desire that so many have to produce food guided by IFOAM's four basic principles (health, ecology, fairness, and care). As we face various stressors and contemplate the many unknowns in our personal and collective futures, I hope you continue to engage in your communities, connect with each other, share knowledge, and continue to be innovative.

I was pleased to welcome the addition of two highly capable, organized, and kind staff to our team recently. After only one day into their new positions, Sonya McMahon and Mary Paradis joined me and countless people around the world in working from home, patiently navigating new systems through the chaos. I am so pleased to welcome them and look forward to working with them.

I am inspired by how quickly change can happen when it needs to. The three of us are new to our roles and somewhat strangers to each other. However, every morning we meet online from our homes, check in and plan for the day/week, and coordinate with an incredible accreditation team, board of directors, contractors, and partners around the province and country. I am so grateful to be working with, and for, such flexible, dedicated people.

We want to continue to keep you informed about what our industry partners are doing and help answer questions as the pandemic situation evolves. As we all move forward together into an uncertain future, I believe we will see an even greater need for healthy local food systems.

This is a time to actively create new synergies and catalyze connections, help each other, and ask for help when it's needed. Let's hold close COABC's guiding principles (supportive, transparent, respectful, forward-looking, innovative, collaborative), and take a moment to reflect on the incredible skills, knowledge, passion, and values within the organic sector, while we continue to work in supporting a food system that aligns with our values.

COVID-19 Response

COABC is closely monitoring the COVID-19 situation in BC and is working hard to determine the impacts, stay on top of the latest information, and keep the organic sector informed. For a list of resources that will be updated frequently, please visit:

bcorganicgrower.ca/2020/03/covid-19-resources-for-organic-farmers-and-producers

If you have a resource, please get in touch with: communications@certifiedorganic.bc.ca.

The COABC office has moved to a remote work scenario. We don't anticipate our work being affected substantially—we will still be available to respond to your enquiries and provide support to BC's organic sector. During this time, we ask that you contact us by email rather than phone.

Our contact information can be found on the Contacts page on our website:

certifiedorganic.bc.ca/contacts/contacts.php

And now, more than ever, we also ask that you continue to support our local food system. Organic farmers and producers across the province are working hard behind the scenes to ensure communities have access to fresh, healthy food. Many are implementing online ordering systems, home deliveries and other creative methods of making their food more accessible during these uncertain times.

As the COVID-19 situation evolves, we are receiving updates from the BC Ministry of Agriculture (AGRI), BC Agriculture Council (BCAC), BC Association of Farmers' Markets (BCAFM) and other organizations. The COABC is in regular contact with AGRI's Organic Specialist, Karina Sakalauskas, and is receiving updates when available. Karina is summarizing and sending updates to the AGRI executive every day, while working diligently to help and find answers. During this time, the AGRI is also working with the organic sector to determine what the anticipated impacts are.

We've always been inspired by the resilience of BC's organic sec-

tor and the strength of our community and we know that together we will come out stronger than ever.

Have You Heard of the BC Food Web?

The BC Food Web aims to improve access to research results and other resources to help improve the sustainability and resilience of food systems.

The BC Food Web is a free online portal offering high-quality, cutting-edge research in digestible briefs, giving farmers access to the latest results and helping them make informed decisions on their farm. Launched in 2018, the BC Food Web is a searchable database of clear, concise research summaries or briefs, as well as resources from the provincial government and BC universities.

Research briefs on the BC Food Web focus on the implications and applications of new food systems research, and are geared for food producers, processors, policy-makers, and educators. The BC Food Web also hosts webinars, decision tools, and longer-format reports and guides, and links to food systems resources.

BC Food Web is dynamic and constantly growing, and the team is looking for input! Do you have a research idea or a need for a resource that is not available yet? Contact the BC Food Web team! To find out about new research briefs, events, webinars, and resources. Sign up for the quarterly newsletter at:

bcfoodweb.ca

You can also follow BC Food Web on Twitter, Facebook, and Instagram: @BCFoodWeb.

The BC Food Web is a partnership between BC universities, government and industry, and is funded in part by Vancity and by the Governments of Canada and British Columbia through programs delivered by the Investment Agriculture Foundation of BC and is hosted by UBC's Centre for Sustainable Food Systems.

Standards Review Fundraising Campaign

Revision work on the Canadian Organic Standards is ongoing and has become a source of passion for many, but funding provided by Agriculture and Agri-Food Canada only covered the review activities planned before March 31, 2019. The Organic Federation of Canada has launched a fundraising campaign for the continuation of the revision work—it's one small way you can participate in building a strong organic sector in Canada!

organicfederation.ca/sites/documents/191029%20Info-Bio%20COS%20reveiw%20.pdf

biodynamic farm story: Unfinished Conversations

Potatoes in plastic bags just sell better. Credit: Anna Helmer

By Anna Helmer

At the recent COABC conference I enjoyed an unfinished conversation with a peerless organic industry leader about how certain words traditionally associated with our alternative/organic farming movement are being co-opted by mainstream agriculture. Case in point: General Mills using the word "regenerative" to describe some decidedly non-organic, chemically supported farming practices. Some consumers don't give a hoot one way or another of course, but a certain segment really wants to do the right thing and have previously associated the word "regenerative" with good farming. Using that word is an obvious ruse intended to reassure a large conscientious consumer group: General Mills wants to keep their business.

The galling thing, as far as being an organic farmer goes, is that we might feel "regenerative" is our word. For starters, we used it first; furthermore, we practice it; bottom line, we believe in it. We are using it to heal the earth. General Mills is using it to sell more sugar-cereal. It's quite irritating.

And what are we to do about it? Cue the unfinished conversation.

Well, we can keep talking about it, amongst ourselves and in our marketplaces. Preaching to the choir ensures that everyone is on the same page, singing the same song. Very important that, but pretty much paves the way if not to rebellion, then certainly outbursts of inappropriate and/or unwelcome individuality, complicating the issue.

Private enterprise has thusly spawned several certifiers, with standards ranging from whimsical to fanatical, offering farms a chance to formalize their relationship with the word. This will remind the older set of the early years of the organic business and send shivers down a few spines.

The next obvious thing is to fight for it at the government level. Get some public policy developed around it. Some standards. We could be fighting for the use of that word like we have for "organic".

Basically, the fight for "organic" is far from over and it's not yet clear who is winning, despite all the hard campaigning. I think you can still have the word "organic" in your farm name even without certification. We are very lucky to have people fighting for this word and they do not need the burden of another word. Allow them to focus.

It is possible, left to their own devices whilst organic gets sorted, that these big companies will publicly stumble over the banana peels they will find littering the road to "regenerative" and all the rest of those words: "natural," "whole grain," "plant-based," and of course "sustainable." A lot of consumers are not stupid and will recognize marketing when they see it; and having done so, won't buy it. Our fingers are crossed.

It's a difficult conversation to complete, isn't it?

Complete it I will, however, by simply moving on to another topic. And this one is affecting me very directly.

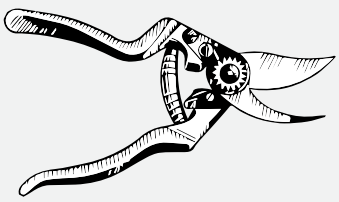
Any produce market vendor who understands retail will tell you that the surest way to sell something is to whack it into a plastic bag and put a price sticker on it. Just today at market, one of my staff spent the entire four hours making tidy little plastic bags of potatoes. Probably about 70% of sales today came from $6 bags of Sieglinde potatoes.

These are the bags the Vancouver Farmers' Market management wants to ban. I have been moaning about this coming ban to anyone who would listen (and some who would not) for months now. And I will just stop you there as you come up with suggestions on how to replace them. You can't replace them. It's plastic: it doesn't break down and there is no replacement.

Plastic is amazing. It has changed our lives in dramatic and important and lasting ways.

Unless I hear a little more celebration of plastic, I am not going down without a fight.

Anna Helmer farms in Pemberton where there are a surprising number of rules, policies, and standards for such a population of keenly individualistic farmers.



COOL TOOLS

Are there useful tools you swear by? DIY hybrids you couldn't do without? Mysterious implements that came with the farm? Share them with the organic community! Send a brief paragraph and a photo to Darcy at: editor@certifiedorganic.bc.ca

Just in time for tomato season, our Spring issue featured tool comes from Andrew Adams at Hope Farm Organics. Happy pruning!

TOMATO PRUNERS

Smart purchases for farming can be inexpensive but are priceless in their return. These small tomato pruners will save a lot of time in the end from the 20+ hours a week I spend pruning our trellised crops. The saved time is the removal of motions. Lean farming. With these pruners I don't have to put them down while arranging plants as they don't hinder my hands from other tasks.

~ Andrew Adams, Hope Farm Organics

facebook.com/hopefarmorganic

CRANNÓG ALES

Rest is Key to Innovate (and Survive a Pandemic)

Lambs role modeling rest. Credit: Crannóg Ales

By Michelle Tsutsumi and Rebecca Kneen

Starting this piece during the onset of COVID-19 in BC created a curious opening for Rebecca and I to delve deeply into what improvement means for organics (both of us speaking from a smaller scale perspective, with the need to hear more from our larger scale colleagues). The presence of a pandemic spotlighted the precarity of our food system, the inequity within it, and the need to shift the system. We had no idea where things would be two weeks later.

Over the span of two weeks, there were significant pivots so that farmers and processors could continue to get their food and beverages to people (with a pinch of panic as the future of farmers' markets became more uncertain). After several communities closed their farmers' markets (or contemplated closing them), it was a relief to hear the provincial government declare farmers' markets as an essential service on March 26.

Throughout the two weeks, I have witnessed the (direct market) organic community coming together to mobilize online platforms, change their CSA delivery methods, and coordinate new distribution channels, all from a foundational value of helping each other in hopes that we will all be okay through this. This deserves acknowledgement as a core part of organics that needs no improvement. The organic movement and community formed from a belief in interconnectivity and this will

Above: Crannóg Ales 20th anniversary glassware.
Right: snake napping on a compost pile. Credit: Crannóg Ales

Sheep doing early season pruning for pest and disease control. Credit: Crannóg Ales

continue to serve us well as we adapt to a world, a way of being, that could be permanently altered by COVID-19.

I am honoured to profile Rebecca Kneen in this issue to discuss how she, Brian MacIsaac, and Crannóg Ales have been improving their practices in ways that "extend deeply rather than extend widely." Crannóg Ales is celebrating 20 years this year (let's all raise a glass in congratulations to them!), so there is much to reflect on in terms of where they have been extending deeply. It is important to keep in mind that there is a long history of involvement with the North Okanagan Organic Association, COABC, and the Organic Federation of Canada, so Rebecca can also speak to what she has witnessed in terms of improvements in organics over time.

Let's set the stage. Picture this interview taking place on our front south-facing porch (somewhat socially distanced), warmed by the afternoon sun, with Dropkick Murphys playing a spirit-raising St. Paddy's Day gig on YouTube in the background. Even with a pandemic looming, it was a dream way to spend an early spring afternoon.

Where have you seen the greatest change in terms of improved processes at Crannóg Ales?

It took the first 10 years to get to know the land, mostly based on theory, and the next 10 years figuring out what that means with practices on the land. Coming to land as an adult means that a lot of observation is occluded, so it

was a lot of trying stuff and then trying new stuff. In the beginning, our practices were what was financially viable, which equalled "the hard way." Twenty years later, we are better rested, which leads to better thinking. One of our key principles has always been to limit our market expansion to fit the ecological carrying capacity of our land. Because of this, we have been forced to extend deeply rather than extend widely.

What does extending deeply mean to you?

Finding efficiencies and working in increased harmony with the land, letting permaculture principles guide us and making do with less in all ways. There is a balance point in having a growth cap, because the question remains about what scale the brewery, in particular, needs to be at to make a sufficient amount to take care of and support employees. One way we do this is providing extended health care to employees. Another way is to intermingle the farm with the brewery to supply good food for employees.

"Rest looks like laying down your protective armor
because it is far heavier and burdensome
than it once looked, and seemed.

Rest looks like staring at the moon a bit longer
until you feel it wrap itself around you. The
glowing knowing. The soft light.

Rest looks like music flowing from everything
because you're open enough to notice.

Rest looks like boundaries against what burns
even if it never meant to.
Even if it wanted everything good.

Rest looks like saying 'it's ok if I can't.
Because can isn't always possible.'

Rest looks like what the ground feels like.
Standing on something strong and steady.
That it's ok to give your weight
to the rhythm of
quiet, unshakable cycles.

And brilliant simplicity
in routine."

Victoria Erickson
Author, Rhythms & Roads

Extending deeply also interconnects with the way we are being in, and understanding, our relationships to land, water, workers, wild things, the whole around us. Are our relationships exploitative or mutually beneficial? We have been deepening relationships in terms of responsible stewardship, which sees (non-hierarchical) interrelationships rather than partaking in caretaking behaviours, which can involve power dynamics or someone making decisions for someone else.

How else does seeing things as being interrelated play a role in how you have deepened your way of being in the world?

Looking at things in terms of relationships has helped us to see a responsibility to, rather than for, employees. Interrelationships also seem to be part of organics as a movement, which, 20 years ago, focused on social and agricultural change. Making a living was a given, it wasn't the goal. A shift in emphasis from an organic movement to an organic industry means that we are losing our ethical and ecological focus, which threatens the ability of our robust standards to withstand a strong push from industry toward non-organic practices (similar to mission drift in the nonprofit world, shifting to an organic industry could lead to practice drift).

The way we manage certification is also being lost as the organic movement shifts to that of an industry. This has a large impact on regional or community-based certification (which is still an unusual model, but with increasing membership, interestingly enough), because they are seen as being less valid and less valuable than Canada Organic Regime (COR) certification bodies. In my view, farmer-to-farmer certification review leads to deeper relationships, better understanding and communication, and is just as strict as third-party certification. That being said, people are craving community, which is something the regional certification bodies do well (and also aligns with organics as a movement).

How do you see reconnecting with social change as part of organics extending deeply?

The organic community has long been taking responsibility, where other sectors have been outsourcing or offloading responsibilities. For example, organics has been a leader in terms of traceability standards, responsible packaging and reducing packaging waste, and emphasizing the need for social justice. Social justice becomes an issue of scale when looking at employment. If employment potential is increased, so does the potential for exploitation. Our identity as stewards, as well as values of social justice and fairness, have been grounded in the organic standards, and we are working on deepening these areas nationally right

now. With most of BC being on unceded territories, there is an opportunity to deepen our organic perspective on social justice in terms of land and land ownership.

What are 'next steps' that you see as being important for social justice in organics?

Listening. And trust. These both entail a worldview or paradigm shift that is reliant on relationships. Reflecting on organics with a social justice lens will challenge our notions of ownership and relations to land. It will be an uncomfortable (but necessary) exercise in questioning our understanding of security and access to tenure. It will require us to work through assumptions and tensions, and let new ideas percolate. Here is an interesting thought exercise: if you hold debt or a mortgage, you don't truly own the land. Do you really care if the owner is the bank or your Indigenous neighbour? If you do care, this is an opportunity to delve more deeply into the reasons why this matters (and to examine the paradigms of individualism, capitalism, and systemic racism which live in our brains).

After allowing this conversation to percolate and settle, it was interesting to note that what was being named as innovative and improving practices at Crannóg Ales are ancient practices that have been, and continue to be, carried out by Indigenous people and traditional sustainable farmers. These practices are seen in subsistence living through hunting, fishing, gardening, and harvesting medicines. Principled practices of observing and knowing the land, not seeing oneself as an owner of the land, tending to relationships, recognizing interconnectivity, being mindful of scale, and stewardship have been part of Indigenous ways of knowing and being for millenia.

Identifying social justice as being important to organics ties in with the need to stop erasing Indigenous ways of being from the land where we grow and prepare food, including access to this land. If any group or community can do it, it is the organic movement that can start to see the areas where Indigenous food sovereignty and organic agriculture align. In the face of uncertain, and changing, times due to COVID-19, we will need to recognize interconnectivity and help each other more than ever. It is easy enough to remember that what joins us together is the soil, so we can start there as our common ground.

"The soil is the great connector of lives, the source and destination of all. It is the healer and restorer and resurrector, by which disease passes into health, age into youth, death into life. Without proper care for it we can have no community, because without proper care for it we can have no life." ~ *Wendell Berry, The Unsettling of America: Culture and Agriculture.*

Resources to Explore Further

Indigenous Principles of Just Transition:
ienearth.org/wp-content/uploads/2017/10/IENJustTransitionPrinciples.pdf

Opinion: Fairness in Organic Agriculture by Anne Macey (2018)
magazine.cog.ca/article/opinion-fairness-organic-agriculture/

Reviving Social Justice in Sustainable and Organic Agriculture by Elizabeth Henderson (2012)
fairworldproject.org/reviving-social-justice-in-sustainable-and-organic-agriculture

Food Sovereignty: Indigenous Food, Land and Heritage by Dawn Morrison
youngagrarians.org/indigenous-food- sovereignty

Working Group on Indigenous Food Sovereignty:
indigenousfoodsystems.org

Michelle Tsutsumi is a mid-life switcher to organic farming. She is grateful to have learned from the Hettler's at Pilgrims' Produce in Armstrong and has been at Golden Ears Farm in Secwepemculecw (Chase) since 2014. Michelle is also an organizer and communicator, with an eye for process and a passion for systems thinking.

BC ORGANIC CONFERENCE RECAP

Tour of KPU Farm. Credit: COABC.

BC's Minister of Agriculture, Lana Popham, opened the 2020 BC Organic Conference with a message of hope. In front of a very large crowd of organic growers, producers, and supporters, she spoke of the convergence of the increased demand for local food, a growing interest in where it all comes from, and a renewed interest in producing it. More and more British Columbians are engaged in how their food moves from farm to plate and they're taking a lot of pride in choosing goods that are grown and made here. "This is the moment for food in British Columbia," she proclaimed.

This feeling of hope—of support, growth, and optimism—was woven throughout the entire conference weekend. Not just because the conference theme was The Future of Organic, but because, after decades of hard work, the organic sector has consumer confidence and is more connected and ambitious than ever!


Clockwise from top: Jordan Marr speaking at the opening reception at KPU; Rebecca Kneen shares the latest information about the 2020 review of the Canadian Organic Standards; and two of the many volunteers who helped make the conference possible. Credit: COABC.

BC Organic: Challenges and Opportunities for the Future

Dag Falck, Organic Program Manager at Nature's Path Foods, gave this year's keynote address and encouraged everyone to stand together for a peaceful, just, and sustainable world.

He examined some of the current threats and challenges to organic principles, particularly in light of what is happening to erode the organic standards south of the border. He outlined some of the current responses and opportunities globally, such as IFOAM's Organic 3.0, and the emergence of additional certification labeling such as Regenerative Organic Certification.

But most importantly, he concluded by presenting his ideas of the best steps that can be taken to ensure a bright and growing future for BC Organic:

- Farm organically as what it originally was created to be
- Focus on soil health as a foundation for all
- Focus on what organics is, not what it isn't
- Avoid criticizing others and invite participation (don't demand it)
- Challenge group thinking and dare to be different
- Work together to reach common goals

Clockwise from bottom left: KPU farm tour inside the geodesic greenhouse; Kwantlen Nation Elder Lekeyten with Lana Popham at the opening reception at KPU; Helmer's Organic Farm with their seed potatoes at the tradeshow; Heather Stretch, Lana Popham, Eva-Lena Lang at the opening reception at KPU. Credit: COABC.

Tour of KPU Farm. Credit: COABC.

In case you missed the keynote (or want to experience it again), you can view the full presentation here:

bcorganicgrower.ca/2020/03/2020-bc-organic-conference-keynote-dag-falck

The Future is Here

This year's conference featured two farm tours (UBC and KPU) plus over 15 sessions and workshops. From emerging technologies, innovative techniques, and new training opportunities to the latest on organic policies, standards, and research, it's clear BC's organic sector has one foot firmly planted in the future. As always, the sessions were informative and full of passion, and motivated us all to take action and continue to move things forward.

There were also some bittersweet moments: Carmen Wakeling's term as COABC President ended, and Jen Gamble wrapped up her long-time role as COABC's Executive Director of Operations. We'd like to thank them both for all the passion they brought to their positions and for all of their work to support organic farming in BC. We wish them both the best!

And, a big welcome to COABC's new President, Heather Stretch, and Executive Director, Eva-Lena Lang.

Award Winners

Congratulations to the 2020 award winners! DeLisa Lewis took home the Brad Reid Award, which honours an innovative leader who has strengthened the organic community by moving the sector forward. Jon and Sher Alcock of Sunshine Farm were the winners of this year's Bedrock Award, which honours work on the foundations organics.

To learn more about these incredibly deserving recipients, check out:

bcorganicgrower.ca/2020/03/2020-coabc-award-winners

So...What Does the Future Hold?

Right now, BC is home to over 900 certified organic businesses. COABC will continue to work with the Ministry of Agriculture to strengthen the term "organic" and make leaps forward in truth in labeling. COABC will keep striving to reduce one of the biggest barriers to becoming certified organic—that darn paperwork—through the COABC's new online certification system, iCertify. And, it will focus on emerging issues, such as the organic certification of cannabis in BC.

One of the best parts of the BC Organic Conference is the wrap-up session, when everyone gathers together, looks back on the weekend, and shares their hopes and dreams for the organic sector. With so much knowledge, drive, and experience in the room, the ideas were insightful and plentiful—and not out of reach. Well-paid farm workers. More respect for manual labour. Accountability for conventional farmers. Public understanding of the true meaning of organic and all its principles. Relationships with, not ownership of, land. Diverse and bioregional available seeds. More funding for first-generation start-up farms. Social justice. And too many more to list!

How do we achieve these dreams? Together. Express gratitude to those who are moving the sector forward, engage in research, share your knowledge, embrace Indigenous perspectives, attend public meetings, care for those who are struggling, and find common ground with other organizations. Oh, and help out farmers who have kids. Include and involve children whenever possible and babysit them as often as you can!

And above all, have hope! The future is bright. The future is organic.

Thank you!

A huge thanks to Gavin Wright for organizing this fabulous event, KPU's Elder in Residence, Lekeyten, for opening the event, BC's Minister of Agriculture, Lana Popham, and Agriculture Co-Critic, Ian Patton, for their opening remarks, Natalie Forstbauer for putting together another successful silent auction (even though she now lives in Saskatchewan!), MC Jordan Marr for his highly entertaining words, and Ken McCormick for his excellent video of the event. And also to the event sponsors, silent auction donors, food donors, volunteer staff, hotel staff, and KPU staff for all your time and efforts towards another amazing weekend together. We couldn't have done it without you.

IMPROVING POULTRY RATIONS

to Accommodate Natural Behaviours & Strengthen Supply Chains

Laying hens enjoying arugula. Credit: Moss Dance

By Marjorie Harris

COR Section 6.4: Livestock feed

6.4.3 - Specific livestock rations shall take the following into account:

j) poultry and pigs shall be given vegetable matter other than grain;

k) poultry shall be fed daily…

Why did the chicken cross the road? To eat organic greens of course!

It is well understood that a very important natural behaviour of a healthy and happy hen's lifestyle is to scratch and peck vegetation and dirt.

The COR standard 6.4.3 (j) states that poultry shall be given vegetable matter other than grain and (k) states they be fed daily.

While the wording and use of language of this standard has led to many confused looks and interpretations by the industry, the intent of this standard is to support the natural behaviours of poultry. It also begs the question, what kind of vegetable matter for poultry?

Thankfully, at the Roundtable Q & A session held at this years' COABC conference, Anne Macey shared information to help clarify the standards pertaining to poultry nutrition and natural behaviours and how they relate to outdoor access, pasture, and vegetables.

Anne suggested an appropriate interpretation for the term 'vegetable matter,' would be 'green matter,' and that the simplest solution is to hang sufficient alfalfa/grass hay mesh bags/baskets in the barns for the birds to peck.

The reasons why the hanging hay bag/basket is the simplest and potentially the only current solution for providing green matter on a daily basis in today's organic poultry industry are discussed here, including the supply chain disruption for organic alfalfa pellets.

Pasture constitutes one possible source of green matter. However, there are several limitations that affect the amount of time green matter can be consumed on pasture, such as weather conditions, season, and vegetation cover. Pasture vegetation can quickly be degraded to dirt by flocks eagerly scratching and pecking.

Requirements for outdoor access, and access to rotational pasture, contained in 6.7.1 (a & j); 6.13.1 (c (2)) are sometimes mistakenly thought to meet the green matter provision. Anne Macey pointed out that these standards also present many limitations for accessing green matter on a daily basis.

Outdoor access during inclement weather can be achieved using winter gardens that typically have sand or sawdust for scratch and no vegetation. Pullets can be kept indoors during vaccination programs and never see the light of day

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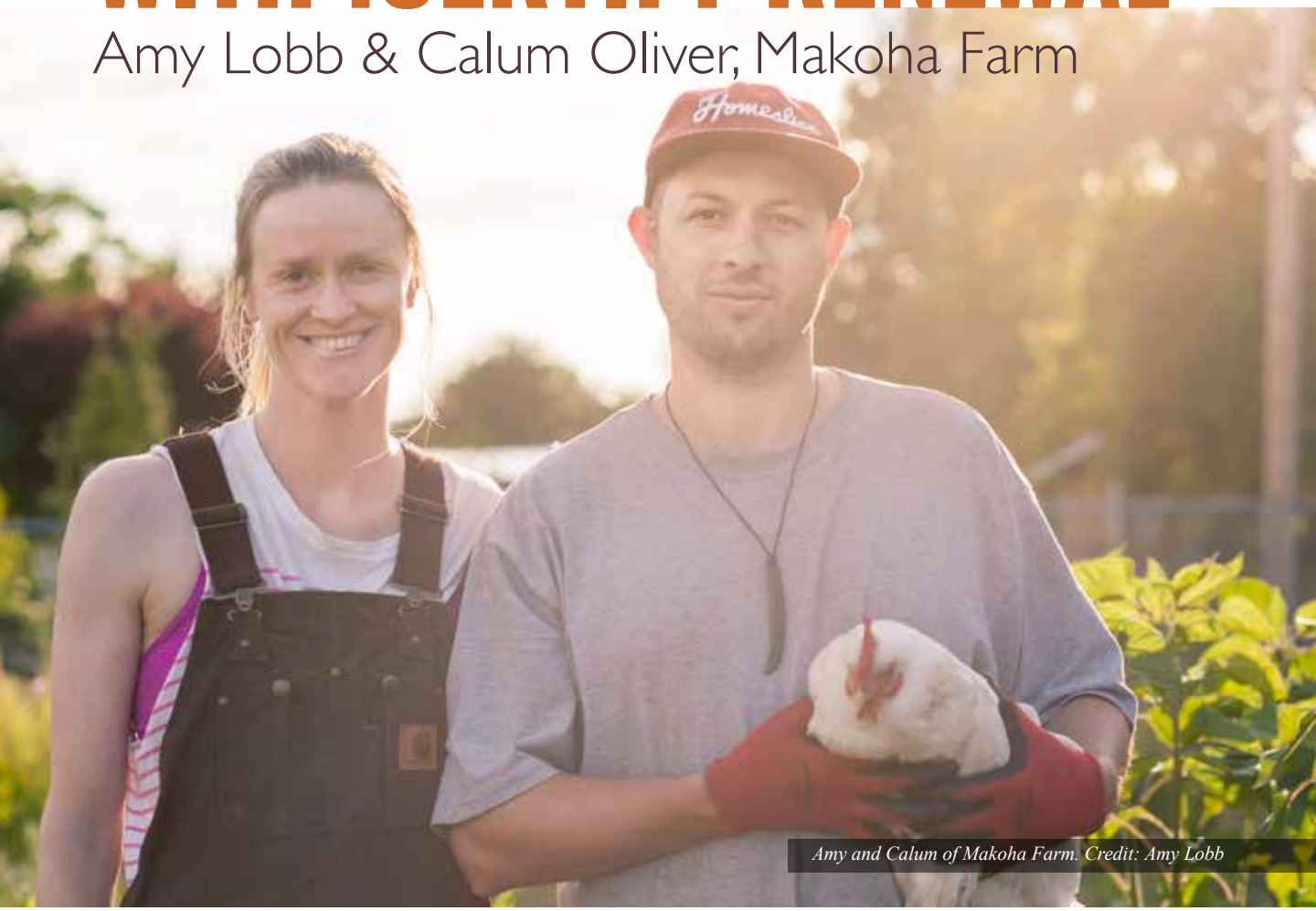
First Generation Farmers Find Ease

WITH iCERTIFY RENEWAL

Amy Lobb & Calum Oliver, Makoha Farm



Amy and Calum of Makoha Farm. Credit: Amy Lobb

By Corinne Impey

Makoha Farm is owned and operated by Amy and Calum, who began their farming journey in 2019 on 0.6 acres of leased land on Cordova Bay Ridge in Saanich, BC.

At Makoha Farm, they want their love of good food to come across in what they grow: providing tasty, healthy, and top-quality produce. They grow a diversity of vegetable crops and have quickly fallen in love with growing flowers for cut arrangements.

Currently at the start of their second year of farming, Mahoka Farm is part of Haliburton Community Organic Farm, a certified organic incubator farm in Saanich, BC.

As they geared up for their 2020 organic renewal with Islands Organic Producers Association earlier this year, they were looking forward to trying iCertify, COABC's new online organic certification system.

Amy with a harvest of leeks. Credit: Kristina Coleman

"iCertify was quite simple to use when it came time to do our renewal," says Amy. "The webinar preview and in-person training sessions were helpful and informative and made the process undaunting. To be honest, I feel that even if I hadn't done the initial training before starting my renewal I wouldn't have had any issues." In particular, Amy found the clear and simple layout easy to follow.

"Also, having the percentage complete bars for each section is a nice touch visually, quickly letting you know if you missed something or giving you peace of mind that you're almost done."

Amy looks forward to future renewals where the process will be even more streamlined now that everything lives in iCertify. "It will be interesting to see how everything goes during next year's renewal," says Amy. "It should save us time in the future, only needing to update information that may have changed for our operation and uploading our annual forms."

Time saved doing administration work means more time spent focused on farming. For 2020, Makoha has launched their first flower CSA subscription, which includes a small veggie box add-on option.

"We can't wait to share this with the community. As the season begins in this world of uncertainty, we're also happy to be able to still provide the local community with food for their homes. No matter what happens, we will be here growing food and offering it to the public."

Funding for this project has been provided by the Governments of Canada and British Columbia through the Canadian Agricultural Partnership, a federal-provincial-territorial initiative. The program is delivered by the Investment Agriculture Foundation of BC.

Why Nature's Path Embraces REAL ORGANIC & REGENERATIVE ORGANIC

By Arran Stephens, Nature's Path Founder, and Dag Falck, Nature's Path Organic Programs Manager

Pioneer organic farmers were the visionaries of their age. Like many other inspired thinkers born before their time, they viewed the ordinary in extraordinary new ways, working quietly and diligently towards an alternate approach, often years or even decades before the general population awaken to the same realizations.

Consider the doctor who was fired from his job in 1847 for suggesting that surgeons wash their hands before operating on a patient. Dr. Ignaz Semmelweis and his new "idea" of practicing basic sanitary procedures has saved millions and millions of lives.

At the center and core of Nature's Path Foods is the goal of creating an agricultural system that aims towards healing the soil, land, water, air and all of us who rely on these essential and natural elements.

All around the world, people are waking up to the direct connection between how we farm locally and the massive collective impact this has on the stability of the global climate. This awareness has led to a will to do something about it. And we welcome the conversation on how we better reach that goal.

Around the time of the Industrial Revolution, humanity was excited with a "new form" of agriculture that increased yields and reduced backbreaking labor. It was clear that the invention of mechanical tools and chemicals that lent themselves to mass agricultural production of food and fiber was welcomed and celebrated worldwide.

At the same time, there was a handful of visionary individuals spread around the globe who had an awareness of a different sort. They observed how traditional agricultural practices had developed over thousands of years, being vital in support not only to people, but to all living things.

They saw the tiny organisms in the soil, the animals and people living above ground, all working together in cooperation in a way that provided calories and nourishment through the plants growing in the soil. This whole-system-approach is now recognized as having an intrinsic capacity for maintaining and perpetuating a complex balance where all parts co-exist in balance.

We call this system "nature," which includes supporting the modulated climate on planet earth that makes our existence possible.

As if by some divine decree, this diverse core of individuals across the globe were awakening to this insight about the same time, being mostly unaware that others like themselves were all having the same revelations. The individuals and small groups inspired by this idea often felt isolated, and their efforts to reconnect with Nature as their role-model and teacher was certainly considered as going against the tide. In their experience, the system of cultivating the soil was not seen as having value, and these visionaries were often ridiculed as wanting to return to harsh and barbaric methods.

This was a key period in history where the concept of being "alternative" took hold. Carrying the torch for an idea not embraced by the mainstream society is a hard path with much struggle and little recognition. Especially in the early stages, visionaries are often exposed to ridicule and direct opposition from the mainstream way of doing things.

Imagine the frustration of Dr. Semmelweis, when he met resistance to something as simple as washing hands before surgical procedures. He clearly saw the death toll resulting from not doing so.

Fortunately for us, the visionaries who came before our time were provided with an extra dose of resiliency and energy that allowed them to keep going against all odds. They never gave up and they often did not receive any recognition in their own lifetimes. And the issues that they fought for didn't see the light of day until generations later.

Organic farming is one of these alternatives.

The early organic farming pioneers bravely blazed the way forward. They lived and died believing in their vision, but never saw any real uptake on any large scale. Years later, organic agriculture started to grow as a movement, and with it, organic food and fiber became available around the world.

Even if organic agriculture is just a drop in the bucket compared to the growth of chemical and industrial monoculture, we have arrived at a moment where the pioneers of the organic movement and their vision for a healthy and truly sustainable way of agriculture are becoming recognized by an ever-growing segment of society. It can no longer be denied that our very survival as a species depends on shifting our current conventional agriculture model towards the kinds of organic practices that nurture and support nature's wholistic system health. This is the birthing room that today's Regenerative Agriculture movements have been born in.

Is Nature's Path excited about regenerating agriculture? You bet!

Yet in the last few decades of false starts and opportunistic profiteering muddying the waters of the soil health movements, we've observed label claims like "natural" that have no proper definition, with no standards and no certification or oversight. This has confused consumers and provided a mockery of the soil health movements with deeply authentic goals to improve conditions for all life on earth. The organic movement has always been in front and center of this conversation.

Our highest hopes for the latest movement to hit the scene is that it will drive a sincere and intensely practical revolution for how we care for the thin crust around the earth that feeds all life here. Our thin layer of top soil, and the new movement recognizing its paramount importance has taken on the name of Regenerative Agriculture.

The three key concepts that gave rise to the recent iteration of the regenerative agriculture movement are that:

- Soil which is nurtured to support a largely unseen microbial network will grow healthier plants,
- The plants grown in healthy soil provide healthier nutrition for people and animals, and
- The big "Aha!" realization is that this very same healthy soil actually sequesters enough carbon from the atmosphere to heal our catastrophic global climate disruption.

Nature's Path Foods is deeply concerned over the disastrous effects of climatic change felt by people in most parts of the world, and vocal with our message that the problem of climate change must be recognized as the most critical issue of our age.

How amazing is our discovery that organic farmers indeed hold the knowledge to reverse a climate calamity? Nature's perfect mechanism of photosynthesis can draw carbon down out of thin air, and lock it into living soil. By simply taking better care of the soil and nurturing the life that lives below our feet, we can contribute so importantly to the most existential crisis humanity has yet faced.

The life in our soil can hold much more carbon if we only treat it well and allow it to flourish instead of constantly applying practices that diminish its fertility and vitality.

At this point please allow us to make an introduction. Dear regenerative movement: Meet the organic movement.

We have a lot in common and could benefit from sharing ideas and best approaches. The organic movement brings decades of hands-on experience in carrying an unpopular torch and what it takes to keep it burning despite opposition from powerful vested interests.

Our common bond is capturing carbon to reverse climate crisis. Where the divergence happens is in the details of the plan to accomplish this.

There are two main challenges: One is that according to the latest science, there is very little time to make enough of an impact to actually affect the climate— so we need to be in a hurry by necessity. The other is that if the scale of adoption is not massive, then the outcomes won't be big enough to make a difference.

Reaching large scales of adaption in a hurry is undeniably the key to success. We will even venture to guess that most people with a stake in one or more of the myriads of today's regenerative initiatives are with us on this assessment so far—that we need to scale up in a hurry.

Here is the point where we face a wide divergence of approaches. Two key strategies to help reverse the climate crisis. If we are to rise above our respective positions in this massive puzzle to save soil, environment, climate and humanity, we will need to find ways to synchronize our efforts. The first logical step in addressing both speed and scale is to tap into everyone's efforts at the same time.

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CHANGING THE CLIMATE CONVERSATION THROUGH AGRICULTURE

Shirlene Cote operates Earth Apple Organic Farm, and is one of the Western Canada spokespeople for Farmers for Climate Solutions. Credit: Brian Harris.

By Julia Zado

Tackling climate change is a daunting task. With each season we see drastic weather events affecting farmers across Canada. The food we eat and how it is grown can and does have a significant impact on climate. Farmers are on the frontline of the climate crisis and are in a unique position to positively impact climate change.

In 2019 FarmFolk CityFolk released "Climate Change Mitigation Opportunities," a report researched and written by Shauna MacKinnon. This report aims to change the narrative that climate change cannot be stopped. Although some agricultural practices create significant greenhouse gas emissions, agriculture has the potential to deliver fast and effective climate solutions.

"Our report is eye opening. We want to move the conversation from adapting to climate change, to mitigating and stopping climate change," says Anita Georgy, Executive Director for FarmFolk CityFolk.

According to MacKinnon, changing the climate conversation is possible and already in motion: "individuals and communities are already shifting energy use and changing land management in ways that can prevent climate change from reaching its worst potential."

The report demonstrates that in order for Canada to meet its greenhouse gas reduction targets, policies and programs must include agriculture and food systems. This will allow for a much larger and inclusive conversation between communities to make necessary changes, "helping shift the climate conversation from abstract to tangible, inadequate to meaningful. Agriculture and food systems are one of the keys to unlocking a lower carbon future and motivating action."

The agriculture industry produces greenhouse gas emissions; however, it also has the unique ability to absorb carbon and incorporate it into the soil, which in turn improves the health of the soil. Much research is being done about exactly what practices are most effective, and how to store carbon for the long term. Healthy soil with higher carbon levels not only increases crop yields, it also holds more water and can better withstand the extreme weather effects of climate change such as drought or heavy rainfall.

The report details how certain farm-level management practices can increase or deplete organic carbon in the soil, using regenerative methods of farming and grazing that focuses on rebuilding and restoring soil. Without the use of synthetic fertilizers or inputs, restored soil health can improve productivity and carbon drawdown.

"There are a wide range of on-farm practices that can help both reduce greenhouse gas emissions, and mitigate climate change that many BC farmers are already using, and saving money at the same time," says Georgy.

Mark Cormier; Glorious Organics. Mark with green cover crop which helps reduce evaporation and soil loss. Photo by Michael Marrapese.

Drip Tapes in Upper Field; Glorious Organics. Glorious Organics have replaced their sprinkler irrigation with drip tapes for more efficient water use. Photo by Michael Marrapese.

Glorious Organics, a cooperatively owned and operated farm in Aldergrove, is dedicated to soil conservation techniques including low-till, cover cropping, and intercropping. Committed to climate solutions, Glorious Organics has reduced greenhouse gas emissions by switching to a solar water pump system from a gas system, which has the added benefits of reducing water use, thanks to partial funding from the Environmental Farm Plan.

With its emphasis on carbon storage to rebuild soil health, regenerative agriculture offers different strategies to manage and reduce reliance on external inputs. "These practices can also provide additional co-benefits, such as improved water holding capacity and increased habitat for biodiversity," says MacKinnon. "The integration of livestock and annual crop production is an important part of these approaches, diversifying production, breaking up pest cycles, and providing manure to replace synthetic fertilizers." For example, Shirlene Cote, of Earth Apple Farm in Glen Valley, rotates her chickens through the fields, both to control pests and provide natural fertilizer.

In the report, MacKinnon recommends prioritizing "agricultural practices that can store carbon, produce nutrient-rich food, improve water management, and provide greater biodiversity."

The report calls for policymakers at all levels of government—federal, regional, and municipal—to fully engage in a reduction of greenhouse gas emissions across all sec-

tors, agriculture and food systems included. The changes suggested represent a major shift in Canadian agriculture—a shift that requires support from all of us.

MacKinnon concludes, "there is much room for improvement in Canadian agriculture production, from reducing nitrous oxide emissions in the Prairies to reducing livestock methane. Beneficial management practices have already been identified to begin to reduce emissions and reduce the reliance on external inputs, and producers are continuing to push the boundaries in finding more sustainable production methods."

"Agriculture and food systems contribute less emissions compared to the transport and energy sectors and for that reason have potentially not been a focus of federal and provincial level mitigation strategies as of yet. The time has come for us to join the conversation," says Georgy.

In February 2020, FarmFolk CityFolk announced its participation in Farmers for Climate Solutions, a new national alliance of farmer organizations and supporters. "The ultimate goal for Farmers for Climate Solutions is to impact policy change," says Georgy. The alliance is calling for Canadian agricultural policies that help farmers mitigate and adapt to climate change, and support the increased use of low-input, low-emissions agricultural systems.

Farmers for Climate Change is a collaborative effort led by the National Farmers Union, Canadian Organic Growers, FarmFolk CityFolk, Rural Routes to Climate Solutions, the Ecological Farmers Association of Ontario, Equiterre, and SeedChange.

This new alliance will give farmers a platform to share stories about climate impacts, practical solutions and policy recommendations, and engage Canadians to support their vision. Farmers for Climate Solutions includes a pledge for both farmers and the general public. Farmers and supporters are encouraged to sign the alliance's pledge and add their voices towards achieving climate-friendly agriculture while maintaining farm livelihoods.

"Individuals can support change through their everyday food choices. This is an opportunity to strengthen the connection between food products and climate change, and promote further dialogue," says Georgy.

So far over 600 farmers and engaged citizens have signed the pledge.

farmersforclimatesolutions.ca

Julia Zado is the Engagement Manager for FarmFolk CityFolk and is passionate about supporting local farmers and small scale producers. farmfolkcityfolk.ca

...Regenerative Organic, continued from page 19

Our conflict centers around these two opposing theories:

A. That carbon intensifying farming can be achieved by adding practices to any existing form of agricultural system today, including "conventional." Versus;
B. That even with the best added practices, success cannot be achieved without also addressing the removal of those practices that have the most grievously detrimental effect on the life in the soil.

A. Is the conventional regenerative movement's belief, and;
B. Is the organic belief. We have to be clear about this and not settle for a compromise where we say we promote carbon capture, while also allowing use of the methods that basically make that intent ineffective.

"Regenerative Agriculture" is easily co-opted and used as a form of greenwash and duplicity. Regenerative Organic agriculture does not employ fossil fuel-based synthetic fertilizer, toxic pesticides or GMOs, and agricultural practices cannot be labeled as Regenerative if they are harming people and polluting our planet.

We simply and clearly cannot call it Regenerative Agriculture by introducing a few time-honoured organic practices such as crop rotations, compost and ruminant pasturing into any practice that allows the use of toxic chemicals and GMOs.

Reaching scale quickly cannot be done with clever wording alone. The practices actually must have a positive effect on carbon capture.

We must directly address the applications of agrichemicals that are working counter to actual carbon capture and diligently weed out these practices, while requiring agricultural producers to add regenerative practices. Carbon intensifying farming cannot be achieved by adding practices to today's conventional systems of heavy reliance on synthetic fossil fuel-based agrichemical inputs that kill the life in the soil, which is responsible for the capturing of carbon.

To meet the goal of scaling-up solutions to the climate crisis, we must evaluate which of two critical practices have the most detrimental effects on the life in the soil:

1. Is it the practice of using agrichemicals on the soil to control weeds, disease, and fertility, with the consequences of negatively affecting soil life, or
2. Is it the practice of tillage, which addresses weeds, disease, and fertility, but which may expose the soil to baking in the sun, eroding in rains, and the resulting loss of soil life?

We agree that tillage needs to be reduced and be carefully practiced with discretion. But even in its most extreme form, it is not thought to be anywhere near as detrimental as agrichemicals.

The fork in the road where we are standing today looks like this: The south fork is going along without confronting the status quo of industrial agriculture, while adding carbon-capturing practices. The north fork is confronting the status quo, and adding carbon-capturing practices.

As part of our commitment to continue raising food on a compromised planet, we all have to wrestle with these issues and decide which fork in the road we will follow. All we can offer is the suggestion that we all look clearly and dispassionately at the issues. For Nature's Path, the north fork is the one we choose to take. In our assessment, chemicals have a strong detrimental effect on the ability of our topsoils to capture carbon and do not belong in a food production system in the first place.

Tillage can be moderated. Before agrichemicals, there was no alternative to tillage, and we refuse to believe we're stuck with putting poisons on our food and fiber-producing fields in order to save our climate. Organic farmers have long proven that food can be produced without chemicals, using some tillage as a tool.

Our hope is that the diverse regenerative agricultural movements will seek to find existing systems that already embody the solutions we disparately need to implement, and deeply study the successes and challenges in these systems to see how they can be scaled up quickly.

Let's take a closer look at historical examples where sustainable, regenerative practices have been employed over the ages. In Asian wet rice farming, abundant soil fertility has been consistently maintained, producing bountiful harvests on the same plots for over 2,000 years. The greatest input we can add to our farmlands is the wisdom of cultures around the world who have been growing organically for hundreds of generations before chemical agriculture was introduced in the 20th century.

Since the recent invention of "conventional agriculture", we have been steadily eroding soil fertility and rapidly increasing the destruction of our natural environment— while decreasing the nutritional content of our food.

We should view and treat our soil as a bank containing the present and future wealth of nations. Instead of reinventing the wheel, let's utilize the momentum already built by the worldwide organic agriculture movement. It has not yet reached the scale we need to solve the climate crisis, but there is no comparable system of agriculture that is as well defined and that has as much success to show.

Let us all join ranks with organic and make it the kind of movement that can change the world on a large scale. With your help, we can get past the tipping point and make the kinds of changes in our food system that we need to survive.

In the end, organic agriculture is really just good farming. It treats natural soil life, insects, animals, people, air, water and earth with integrity. Our support of the Real Organic Project is not a radical move— it's simply a clear statement for the preservation of integrity in organic.

Together we offer the strong voice needed to stand up against the practices now tearing the fabric of the planet apart. And as the Real Organic Project continues to raise this voice in support of integrity in the face of well-entrenched and well-financed opposition, Nature's Path hopes that it won't stand down or give in.

Organic knows what it's like to be a threat to the world economy's largest interests. If healthy soil is the solution we need, then the chemicals that kill the life in the soil must be prohibited.

That's doing, versus promising.

Pioneer, entrepreneur, artist and visionary, Arran Stephen's organic legacy sprouted more than 50 years ago with just $7, a $1,500 loan and a dream. After opening the first vegetarian restaurant in Canada and the first organic cereal manufacturing facility, he is now leading future generations down a path of organic food and agriculture practices so we may all leave the Earth better than we found it. naturespath.com

Recognized as an expert in the organic industry, Dag Falck has served as Organic Program Manager for Nature's Path Organic Foods since 2003. Prior to joining the company, he was an organic inspector for 14 years.

A NEW CONSERVATION MODEL FOR POLLINATORS

From Southern Alberta

Fig 6: A bumble bee pollinating Phacelia flowers. Credit: S.K. Basu

By S.K. Basu

Pollinators have an important ecological role in securing the stability of all natural ecosystems, through ensuring cross pollination and reproduction across a wide diversity of higher plants. This unique pollinator-plant relationship is a key aspect of maintaining the dynamics of both our ecology as well as our economy.

From an ecological perspective, pollination is important because it helps achieve reproduction in plants. This includes not just wild plants, but a significant array of plant species that are important to humans as food and industrial crops, numerous ornamentals, forage and vegetable crops, and forest species. According to one estimate, over 80% of global plant species are dependent on pollination for reproduction and survival. One can appreciate that this fact has an impact on our economy too. Pollinators have a significant role in three industries, namely: agriculture, forestry, and apiculture. Thus, pollination and pollinators have important stake in our life by integrating the stability of our ecosystem with the dynamics of our economy.

Fig 3: Wild radish flowering Credit: S.K. Basu

Fig 4: Balansa clover in full bloom. Credit: S.K. Basu

While insects perform the most significant role of natural pollinators in our ecosystem, other animal species that also help in the process of pollination are often overlooked. These include some species of snails and slugs, birds (such as humming birds) and mammals (like bats). Insects such as bees (honey bees and native bees), moths and butterflies, some species of flies, beetles, wasps, and ants all play a highly significant roles in our natural ecosystem, without a doubt. But unfortunately, the insect pollinators, predominantly bees and more specifically, native wild bees

Fig 7: A drone fly pollinating alfalfa. Credit: S.K. Basu

Fig 5: A pollinator insect visiting flax flower. Credit: S.K. Basu

or indigenous bees, are showing alarming decline in their natural populations due to the synergistic or cumulative impacts of several overlapping anthropogenic factors.

Some of these include excessive use of agricultural chemicals and aggressive agroindustrial approaches in rapid land transformation, rise of resistant parasitic diseases, colony collapse disorder, high level of pollution in the environment, lack of suitable foraging plants to supply bees with adequate nectar and pollens to sustain them throughout the year, and climate change, to mention only a handful factors. Hence, it is important that we develop comprehensive sustainable, ecosystem, and farmer-friendly, and affordable conservation strategies to help secure the survival of insect pollinators to directly and indirectly secure our own future. Farming Smarter, an applied research organization from

Fig 8: The crop mix on the experimental plot is well established with good ability to withstand local weed competition. Credit: S.K. Basu

Southern Alberta, has come up with a simple, sustainable, and nature-based solution for this grave crisis. They have successfully established experimental pollinator sanctuary plots using local crop-based annual and/or perennial pollinator mixes with different and overlapping flowering periods to extend the bee foraging period across the seasons.

The major objectives of this unique and innovative research work has been to identify specific crop combinations with different flowering periods adapted to the local agro-climatic regime and their potential in attracting insect pollinators. Furthermore, various agronomic parameters such as seeding dates and seeding rates, crop establishment and weed competition under rain-fed conditions, identifying the floral cycles and biodiversity of local pollinator insect populations attracted and visiting the pollinator sanctuary experimental plots across the growing season are being also monitored and evaluated. This unique pollinator sanctuary project has been funded by the Canadian Agricultural Partnership (CAP) program.

The results have been promising. The experimental plots have been attracting insect pollinators in large numbers and the crops have been well established and performed well against local weed competition. The implications of this study could be far reaching as Pollinator Sanctuaries can not only cater to pollination services; but also help in acting as cover crops, preventing soil erosion, contributing to soil reclamation, and, since they are predominantly crop-based, can be used in grazing. Thus, the benefits of this innovative and sustainable method are not restricted to pollinator conservation alone, and could cater to multiple users.

Such low-cost and low-maintenance pollinator sanctuaries could easily be established in non-agricultural and marginal lands, hard to access areas of the farm, around pivot stand and farm perimeters, shelter belts, along water bodies and irrigational canals, low lying areas, salinity impacted areas, unused spaces in both rural and urban areas, in boulevards parks, gardens, and golf courses, to mention only a handful of potential application sites. Locally adapted crop-based pollinator mixes could fill a vacuum in the market and serve as viable alternatives to exclusive use of wildflower mixes, since they are relatively cheaper, easy to establish, and do not run the risk of becoming a weed or invasive species.

Saikat Kumar Basu has a Masters in Plant Sciences and Agricultural Studies. He loves writing, traveling, and photography during his leisure and is passionate about nature and conservation.

WHY YOUR FOOD CHOICES MATTER

a new public education tool to support the organic solution

By Lucy Sharratt

The gravity and gathering speed of the global climate and biodiversity crises threaten to paralyze many people who want to make meaningful change but don't know where to start. Thankfully, organic farmers are already implementing concrete solutions that everyone can support. In the face of climate emergency, organic farmers show us what is possible.

That's why, at the beginning of this year, the Canadian Biotechnology Action Network (CBAN) started a new public education program to support organic farming. It centres around a new pamphlet called "Why Your Food Choices Matter," which is designed for farmers to hand out at farm stands, farmers' market tables, or in CSA boxes, and for distribution at health food stores and local events. The goal is to help people commit, or re-commit, to making organic food choices, and to buying locally and directly from farmers where possible.

In Canada and around the world, organic farmers are at the forefront of building real and lasting solutions to the climate and biodiversity crises. This is a global movement that relies on the support of an informed non-farming public. In this context, individual food choices are more important than ever because they support farmers who are, together, making profound change. At a time of ecological crisis, we are encouraging consumers to take heart from farmers who are already growing food for a better future.

Even consumers who are already making one or more ecological food choices need information to help them continue, and to help them share information with their family and friends. CBAN's pamphlet says, "your food choices can help protect our environment, support your health, and build a better future for food and farming," and it describes organic farming. We know this information is necessary because people still ask us if organic is non-genetically modified (GM). They also ask us if organic is sustainable, and if they can trust the organic label. The pamphlet is actually an update of a similar tool launched 10 years ago. People clearly still need this information.

In fact, this information is an important counterpoint to a new highly-organized and well-funded public relations campaign designed to win public trust or "social license" for conventional agriculture practices, including the use of pesticides and genetically modified organisms (GMOs). Coordinated by the Canadian Centre for Food Integrity and Farm & Food Care, the campaign is tracking public opinion and asking farmers to speak up to counter consumer mistrust.

GM Foods on the market in Canada

GM Food in Canada	Where	What
CORN	In processed food and animal feed. (Also a very small amount of GM sweet corn).	*Herbicide-tolerant & insect resistant*
CANOLA	As oil in processed food and animal feed.	*Herbicide-tolerant*
SOY	In processed food (not in tofu or soy milks).	*Herbicide-tolerant*
SUGARBEET (white)	Processed into sugar.	*Herbicide-tolerant*
ALFALFA	For animal feed only.	*Herbicide-tolerant, low-ligin*
SALMON (Atlantic)	Farmed salmon.	*Faster growing*
PAPAYA	Imported from the US or China.	*Virus-resistant*
SQUASH	Imported from the US only.	*Virus-resistant*
GM Foods that could come to the market soon		
APPLE	Sliced apples in foodservice or sold in plastic bags.	*Non-browning*

For more information and updates:
CBAN.CA/GMFOODS

However, this campaign does not change the reality that, as described in "Why Your Food Choices Matter," most of the food we eat is produced through a long chain of steps in a global system that contributes to the climate crisis, puts harmful toxins into our environment, and removes decision-making from farmers and consumers. This global food system is dominated by a few large companies that control the markets for seeds, pesticides, and other technologies, as well as much of the distribution and sale of food in our communities. But consumers don't have to surrender to this reality—they can choose an organic path forward, with local farmers.

According to the International Panel on Climate Change, agricultural production contributes approximately 12% of human greenhouse gas emissions. This includes emissions of nitrous oxide from synthetic fertilizers and methane from livestock production. When we add emissions from other related activities in our global food system, such as food production, land-use changes such as clearing forests to make way for farming, manufacturing pesticides and fertilizers, and processing, packaging, and transporting food, this number increases to 21%-37% of all global emissions caused by human activities. Synthetic pesticides and chemical fertilizers are both petrochemical products, made from fossil fuels.

Canadians are increasingly becoming more aware about the use of synthetic pesticides in farming, or at least the use of glyphosate-based herbicides. For many consumers, glyphosate is a concern that is also associated with the use of genetically modified seeds. This connection is correct because almost all the GM seeds sold in Canada are engineered to be herbicide tolerant, and most of these are glyphosate tolerant. CBAN's research has found that herbicide sales in Canada have increased by 199% since the introduction of GM crops (1994-2016).

However, glyphosate formulations are only one among many different types of synthetic herbicides, insecticides, and fungicides used to produce the majority of food on the market. In fact, the emergence of glyphosate-resistant weeds has meant that companies have started shifting their sales from glyphosate-tolerant GM crops to 2,4-D- and dicamba-tolerant GM crops.

Corporate consolidation is a defining feature of our global food system. Four companies control over half of both the global seed and pesticide markets. These same top companies also control the sales of genetically engineered seeds. For example, Bayer is now the largest seed company, the second largest pesticide company, and the largest seller of genetically engineered seed in the world. Following its acquisition of Monsanto, Bayer owns 33% of the global seed market and 23% of the global pesticides market.

This high level of corporate concentration in seeds and pesticides is unprecedented, and it means higher prices for farmers, fewer choices, and decreased seed diversity. These inputs have environmental costs, and also take money out of farmers' pockets. In 2018, Canadian farmers spent 94% of their gross farm income on farm inputs. This is why the National Farmers Union (NFU) has just launched a new discussion about how the farm crisis and the climate crisis are linked.

The NFU says, "The solutions to the farm crisis and the climate crisis are largely the same: reduce dependence on high-emission petro-industrial farm inputs, and rely more on ecological cycles, energy from the sun, and the knowledge and wisdom of farm families." This conversation is in full swing due to a new alliance called Farmers for Climate

Solutions, which is creating space for farmers to share stories about climate impacts, practical solutions and policy recommendations.

Organic farming provides a path forward, but encouraging organic consumption alone is not sufficient. This is why CBAN's pamphlet encourages a range of complementary consumer food choices. For example, we know that small independent food manufacturers and stores are facing pressure in a marketplace dominated by the big grocery chains. Five grocery companies (Loblaw, Sobeys/Safeway, Costco, Metro, and Walmart) control 80% of the food retail market in Canada. This is why we also emphasize the importance of buying directly from farmers, and from local and independent businesses.

Along with all these issues, consumer concern over genetic engineering (genetic modification or GM) is also driving support to organics. New techniques of gene editing are the latest way that genetic engineering is being sold as the future of farming. However, the connection between the two issues of genetic engineering and organics is about more than just an option to buy non-GM via organics.

Genetic engineering and organics offer two different visions for farming, and two different visions for problem solving. Organic farmers reject GM seeds and GM animals as unnecessary and risky. Instead, organics values the diversity and bounty that nature already offers, and often replaces such corporate products with natural systems and human labour. This is why emerging and powerful new genetic engineering techniques such as gene editing will fail to provide the solutions needed. The real solutions are in the hands of organic farmers, and it is time to mobilize consumers to more fully support farmers' work.

You can view the pamphlet "Why Your Food Choices Matter," along with references for the information, at cban.ca/whyyourfoodchoicesmatter and order your copies at cban.ca/orderpamphlets. You can also contact us at cban.ca/contact or call Lucy at 902.209.4906.

Copies are available free of charge, though your donations to help support printing and postage are gratefully accepted:

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cban.ca/donate.

Lucy Sharratt is the Coordinator of the Canadian Biotechnology Action Network (CBAN). CBAN brings together 16 groups to research, monitor and raise awareness about issues relating to genetic engineering in food and farming. CBAN members include farmer associations, environmental and social justice organizations, and regional coalitions of grassroots groups. CBAN is a project on the shared platform of Tides Canada, a registered charity.

...Footnotes, continued from page 15

and then be placed directly into layer barns and continue to be kept indoors until peak egg production around 26 weeks of age. The COR standard 6.13.1 (f) only speaks to laying flocks having access to outdoors as little as one-third of laying life. The standards pertaining to outdoor access, and access to pasture, are clearly insufficient to account for the daily green matter provisions of 6.4.3 (j & k).

The overarching standard COR 6.4.3, 'Specific livestock rations shall take the following into account,' is interpreted in (j) to refer to the natural behaviours exhibited by the animal while feeding.

The next step is to determine what kinds of green matter would be suitable for use in the various types of poultry operations: ducks, turkeys, broilers, pullets, and layer hens. This is where the application of the standards becomes more complex.

The first thing to consider is that rearing a small flock of less than 200 birds and rearing a large flock of 200 to 10,000 or more birds employ entirely different animal husbandry barn setups, with each method presenting its own set of challenges.

Small flocks are typically part of a mixed farm production unit and poultry will benefit from on-farm garden and orchard waste throughout the growing season. Small scale farms that overwinter poultry can provide a wide range of green matter from hay to sprouted fodder. Large flocks regulated under the egg marketing boards are the main production units of the farm and are raised under tight biosecurity regulations in comparison to small scale farms.

Livestock feed suppliers across Canada are governed by the Feed Act regulations which adds one more wrinkle to how green matter can be supplied in feed. BC feed producers produce a 'coarse mash' complete nutrition feed. In contrast, the Ontario poultry feed industry has switched over to a completely 'pelleted' complete nutrition feed.

Leanne Cooley, MSc., Poultry Scientist, working in the Ontario poultry industry, described how green matter is provided both as a feed ingredient, and as hay for natural behaviour. Dehydrated alfalfa is mostly indigestible by poultry and when it is included in the pelleted feed certain enzymes must be included to assist in the digestion of alfalfa. According to Cooley, "Insoluble grit is provided either as, or in combination, in free choice feeders and/or in the hens feed to assist in forage digestion and prevent birds developing impacted crops. Hay (second or third cut preferred), alfalfa, or hay-alfalfa blend may be done hanging in mesh bags or baskets, or scattered as litter. I see both. Warning —do not use straw!"

Hanging alfalfa or grass hay in mesh bags or baskets is a good method for accommodating the birds' need to fulfill natural behaviors for scratching and pecking on a daily basis. When alfalfa/grass hay is made available to the birds early in life it can help to reduce and prevent the poultry pecking behavior that results in bird cannibalism.

Hanging the hay in bags or baskets will also keep the hay clean and out of any moving parts of larger egg layer operations. Pullet and broiler operations typically provide the hay as litter which doubles as scratch.

Organic alfalfa pellets are also a good, clean, sterilized source for 'green matter.' Unfortunately, there has been a supply chain shortage and currently there are no organic alfalfa pellets available from Western Canadian producers. The supply chain has suffered in the past few years due to an inappropriately applied 'commercial availability' clause in the PSL Can-CGSB 32-311 Table 4.2. This clause, without proper scrutiny, has become a loophole allowing crop producers to use no-spray and non-gmo alfalfa meal and pellets at lower cost. This left only livestock producers in place to purchase organic alfalfa pellets, and not able to create enough demand on the supply chain to keep it healthy in Western Canada. The Ontario supply chain is strong with Ontario Dehy Inc. supplying the Ontario poultry farmers with organic alfalfa pellets.

Western Alfalfa Milling Company (WAMCO) is a pioneer in the industry and grows and processes alfalfa near Norquay, Saskatchewan. WAMCO is certified organic to produce organic alfalfa meals, pellets, and hays. However, due to the misapplication of the commercial availability clause noted above the greater demand was for conventional alfalfa pellets as green fertilizer and mulch. WAMCO had to make a 'supply and demand' business decision this year to downsize alfalfa pellet production in 2020 from 60,000 tons a year to just 6,500 tons a year, with a focus on the conventional green fertilizer market. WMACO sales representative, April Guertin, shared some industry history, noting that 20 years ago there were 48 alfalfa pellet producers in Canada, shrinking down to only 3 producers in 2019, with only Ontario Dehy Inc. and WAMCO being certified organic. WAMCO gave assurance that if requests for organic alfalfa pellets were placed now at the beginning of the 2020 growing season, then WAMCO could certainly fill the orders for poultry and crop producers.

In summary, the intention behind COR 6.4.3 (j & k) is that poultry shall be given rations of green matter with respect to meeting their natural behavior needs for pecking and scratching daily. Options that would work for both small and large scale producers include alfalfa/grass hays hanging in bags or baskets and as litter and alfalfa pellets. Livestock producers need to be aware of keeping supply chains viable, strong, and competitive by ordering product ahead of the growing season. Crop producers can also buy into the organic supply chain, avoiding the misappropriate uses of the 'commercial availability' clauses for green fertilizer and mulches, further strengthening supply chains for the entire organic industry.

Marjorie Harris, IOI VO and concerned organophyte.

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