

British Columbia Organic Grower



Feeding Wisdom:
Leadership

Journal for the Certified Organic Associations of BC - Summer 2021 - Volume 24, Issue 3 (\$5.00)

COABC, 202-3002 32 Ave, Vernon BC V1T 2L7
Canadian Publications Mail Agreement #40047167



COABC

In This Issue

Editor's Note	3
COABC News Patch	4
Biodynamic Farm Story	6
Organic Stories: Kloverdalen Farm	8
iCertify: Umi Nami Farm	20
Footnotes: A Whale of a Story	22



Kloverdalen Farm

Nestled in K'ómoks Territory in Courtenay, BC, Kloverdalen Farm grows giant cabbages and more on page 8.

Features

Farmers for Climate Solutions	12
Organic Conversion Support Funding	16
A 30-Year Legacy at Pilgrims' Produce	26
Organic Leadership	30



Farmers for Climate Solutions

Arzeena Hamir shares why she's become involved with Farmers for Climate Solutions on page 12.

BC Organic Grower

The BC Organic Grower is published quarterly by the Certified Organic Associations of British Columbia (COABC), and is distributed to all its members.

View and share articles from our online edition:

bcorganicgrower.ca

Editor: Darcy Smith
Designer: Moss Dance

We welcome Letters to the Editor (300 words maximum) and articles (1,000 words maximum). Letters to the Editor are published at the discretion of the editor, based on relevance and suitability.

Letters & submissions
editor@certifiedorganic.bc.ca

Advertising (rates & copy)
bcgadvertising@certifiedorganic.bc.ca

Non-member subscriptions
(\$20/year plus GST) please contact:

COABC
202-3002 32nd Ave
Vernon, BC, V1T 2L7
Phone: 250-260-4429
Fax: 250-260-4436
office@certifiedorganic.bc.ca
certifiedorganic.bc.ca

For general information or to contact your local Certification Body, call the office, or check our website:

certifiedorganic.bc.ca

On the Cover: Kira Kotilla in the field at Kloverdalen Farm with the Comox Glacier in the background. Credit: zoomphotography.ca

Unless otherwise credited, all photos property of the COABC or Creative Commons.

Products advertised in BC Organic Grower are not necessarily approved for use by organic operators. Please consult the permitted substance list, CAN/CGSB 32.311 for guidance. Your Certification Body has the final authority for approval of inputs.

Editor's Note

By Darcy Smith

My first BC Organic Conference in 2014 left quite an impression on me. What a joy it was to be surrounded by so much knowledge, and a community that so clearly cared for and respected its members. What really touched me that weekend, and since, was the way that COABC cultivated leaders.



The agriculture sector at large is currently facing a crisis in attracting the next generation, and while organics is certainly not immune to these challenges, new and young farmers are drawn to the movement. For the philosophy, yes, but also for the community—a community made up of leaders who have carved a path and now share generously of their knowledge while also creating space for future leaders to step into their power and create change.

The Summer 2021 issue of the BC Organic Grower looks at the theme of wisdom from another angle: feeding wisdom. What does it mean to be a leader? After decades of building the soil of the organic movement, how are we feeding those nutrients of knowledge back into the system?

In our Organic Stories feature, Moss Dance shares a story of mutually-developing leadership muscles with Kira Kottilla at Kloverdalen Farm on K'ómoks territory in Courtenay, BC (page 8). On page 6, Anna Helmer looks to nature (and Steiner) to lead the way on another installment of her Biodynamic Farm Story—after all, the best leaders can admit that they don't know everything, even if the thing they don't know is just what on earth to do with cull potatoes.

Organic farmers have long been at the forefront of the climate conversation, and on page 12 Arzeena Hamir takes us into the success of Farmers for Climate Solutions, a national farmer-led coalition who believe that agriculture must be part of the solution to climate change. Footnotes from the Field (page 22) is a bit wetter than usual as Marjorie Harris ventures off land and into our vast oceans, exploring the importance of whales—and the whole oceanic food web—to our land-based food provisioning.

On page 16, something for the organicurious: funding to help with organic certification costs for the newly-converted. Sydney Franc fills us in on the Organic Conversion Support Program—there's still time to apply! Over on page 20, Heather Ramsay of Umi Nami Farm shares her perspective on the value of iCertify, and how important such a system is to bringing the organic movement successfully into the future.

On page 24, Michelle Tsutsumi reflects on the 30-year legacy of Pilgrims' Produce as the farm transitions from founders Rob and Kathryn Hettler to a new generation, from their deeply personal impact on her life to the wider-ranging seeds of farmers they've planted throughout the community.

Speaking of leaders, Anne Macey retired this year from the Accreditation Board. We have a few words of thanks for her on page 4, and be sure to revisit her 2021 BC Organic Conference podcast interview with Paddy Doherty.

On page 30, Niklaus Forstbauer shares some treasures from his memories of growing up under the table at organic board meetings, and a call to action for the next generation of leaders in organic: "it's our turn."

If you have a story to tell about organic food and farming, please get in touch. Reach out with your thoughts, letters, and story ideas to editor@certifiedorganic.bc.ca—and be sure to visit us online. 🌱

 bcorganicgrower.ca



Organic leaders: the next generation at Forstbauer Farm. Credit: Niklaus Forstbauer



Anne Macey at the 2018 Organic Conference. Credit: Michael Marrapese

A Heartfelt Thank You to Anne Macey!

Anne Macey has given so much to the organic sector, and this year, she is retiring! We at COABC wanted to take a moment to recognize her many contributions over the years.

Anne, your deep knowledge, care for others—both two- and four-legged, dedication to the organic philosophy, and your ability to connect the dots between philosophy and practice, will be greatly missed by all!

Anne has been a long-time advocate for organic agriculture at the local, provincial, national, and international levels. She has served on the Canadian General Standards Board technical committee on organic agriculture, the Expert Committee on Organic Agriculture - Animal Welfare Task Force, the COABC Accreditation Board, the Accreditation Committee for the International Organic Accreditation Service, and with her local Canadian Organic Grow-

ers (COG) chapter. She is a writer/editor of COG's Organic Livestock Handbook, a retired sheep farmer, and a past president of COG—and this is just scratching the surface.

Long-time friend and collaborator Rochelle Eisen calls Anne “an original thinker; creative, and visionary.” Rochelle reflects on Anne’s powerful presence in the organic sector: “She doesn’t take ‘no’ for an answer; is committed to organics principles and takes the most practical approach to most matters. She not only is great to work with she is the best roommate anyone could have; she is a great team player as well as a great leader.”

Thank you, Anne!

Participate in Organic Field Crop Research

Organic Federation of Canada is seeking input into the next phase of research for organic crop production in Canada—see below for more information, and be sure to complete the survey so your needs are heard!

How does organic field crop production contribute to climate change in Canada? Your farm can help answer this question.

Our climate is changing rapidly and governments around the world are seeking ways to reduce greenhouse gas emissions. Agriculture has long been recognized as an important contributor to greenhouse gas emissions, but has recently made it into the spotlight as a potential sink. Organic sector leaders want to identify whether organic production systems have a net positive

or net negative effect on climate change.

We need to compile data and your participation would be greatly appreciated!

Dr. Peter Tyedmers, the lead researcher of a research activity that is part of the Organic Science Cluster 3 Project, invites all Canadian organic field crop farmers to join his research activity and report on their operations and the types of inputs and practices being used.

The team will collect information such as crop rotations, average yearly fertilizer inputs, and energy inputs that have been used on farms. They do not need to know inputs down to the gram!

The research team will work with any information you can provide; the more farmers that join in this research activity, the better!

The research team will also look at where the farm is located, its soil profile, and its potential for sequestering carbon. All of this data will help to provide an understanding of how the diverse practices used across organic farms contribute to the climate change conversation.

Fill out the survey here:

ubc.ca/1.qualtrics.com/jfe/form/SV_bEoxMOKGy69zS7j

Funding Supports Organic Conversion

Do you know a farmer transitioning to organic who could use a leg up during COVID? The Canada Organic Trade Association (COTA) is accepting further applications for their Organic Conversion Support Program to assist

organic producers financially for their added costs incurred while transitioning to organic farming.

This program reimburses producers for their paid certification costs up to \$1,000 maximum. The fund has been a huge success in supporting and growing organic in Canada through an incredibly difficult year for farmers.

The program is for farmers in their first, second, or third year of pre-certification or for already-certified farmers who are increasing their organic acreage.

COTA is accepting applications until June 30, 2021. Learn more and apply here:

canada-organic.ca/en/what-we-do/market-access/organic-conversion-support-program

Heart & Soil Magazine

Heart & Soil Magazine is committed to global regeneration and planetary health through regenerative farming and gardening. Providing the best tips and techniques for today's farmers and gardeners to easily and regeneratively impact their farms, gardens, businesses, health, and communities.

Published bi-monthly and available digitally, it's written for the expert, the activist, and the curious. With a focus on soil, plants, food, and people, the Heart & Soil community is one of global experts, farmers, scientists, and gardeners.

Heart & Soil amplifies voices, ideas, and movements of global regeneration.

heartandsoilmagazine.com



Spring 2021 Edition of Organic Science Canada

The Organic Federation of Canada and the Organic Agriculture Centre of Canada have published the Spring 2021 edition of Organic Science Canada! Organic Science Canada magazine is packed with the latest advancements in organic research and innovation from the Organic Science Cluster. The magazine brings you trends, news and results from across Canada.

dal.ca/faculty/agriculture/oacc/en-home/organic-science-cluster/OSCI/latest-news-/organic-science-canada.html

New AgSafe Resources Address Slip, Trip, Fall Hazards

Slips, trips, and falls are a leading cause of injury in agricultural workplaces. A new series of safety awareness videos and

Continued on page 19...



biodynamic farm story:

Late Pandemic Musings on Thriving, Not Just Surviving

Russian blue heart potatoes. Credit: Idéalités

By Anna Helmer

The Biodynamic baseline regeneration mission: replace the vitality of the soil—successfully drawn into the plants and then removed along with the crop, for consumption. In Biodynamics, the way to do this is through composting—the creation of humus that supports soil to regain its power. The Biodynamic Compost Preparations are the fertility tools of Biodynamics. Steiner wants us to think of them as forces, rather than items, substances, or amendments. They are not directly aimed at plant growth, but rather intended to compliment, enhance, energize, and enliven the soil. Soil thusly treated can grow the very best of crops.

Compare this to nutrient replacement programs that are aimed at crop yield. Soil, although obviously important, is not the object of support. It's necessary as a vessel to hold amendments long enough and close enough for plant roots to find them, and of course, it is there to hold the plants upright. Luckily for soil, nothing else does a better job of this! However, in the pursuit of weed-free big yields, it tends to get neglected and its performance diminishes. Biodynamically-supported, it is capable of much more.

The Compost Preparations transform compost into a special treat for the soil itself, to the benefit of the crop: holding moisture and warmth, for example, and providing the conditions necessary for essential relationships to form and flourish between all the biological, chemical, and physical elements. Most importantly, as far as I can understand, the

application of Biodynamic compost allows for the possibility that science doesn't have all the answers and optimum plant growth and health-giving properties are the result of mysterious things that probably occur in healthy soil.

It is difficult for me to reconcile this grand notion with the reality of my scraggly heap of cull potatoes. It doesn't look like a regenerative treat for the soil.

My compost heap is beginning to levitate.

This is not a Biodynamic accomplishment. It's a seed potato situation.

As you may recall, I am attempting to create a Biodynamic compost pile that will digest cull potatoes into useful material, an expectation made necessary by a sad lack of cattle, those immensely more efficient composting machines. I started the pile in late fall, layering the rejected potatoes with hay, kitchen compost, chicken litter, leaves, and eggshells. By way of example, I added periodic scoops of a precious Biodynamic compost made from the manure of the departed cattle.

The culls that went in during the winter months are good and rotten, having been subjected to freezing, but the additions since the last freeze have encountered nothing but premium growing conditions. They are vigorous seed potatoes with only unsightly blemishes to hold them back.

Unightly blemishes have no effect on vigour, I can tell you that for free. The potatoes are growing lustily, and the pile is expanding rapidly.

I dug into it earlier in the year, once the sun had some warmth, to see what was happening. It was hot in there, with a plethora of worms. I reckon all these seed potatoes are now sitting on top of a nice warm bed and that is making them grow with even more gusto. Should I leave them to flower? That would be a lovely sight. At any rate, there will be a generous amount of fresh green material when I turn the pile and finish it by adding the Compost Preparations.

It's a reasonable plan. However, these potatoes are currently dominating the compost pile, and I think it might take more than one turn to stifle their urges. Talk about a living force. I don't think I should apply the Compost Preparations until the pile becomes...more balanced...inert...less unhinged...

Turning to a more optimistic aspect of my Biodynamic practice, I am thrilled to discover that all the plants necessary to make the Compost Preparations are to be found on our farm. Oak tree bark was the missing piece until I belatedly realized there is a massive specimen looming out front of mom and dad's house, right there in the main farmyard. I have been raking its copious leaves for about 40 years and lamenting almost annually that they are useless in a compost heap. One supposes a proper Biodynamic

farmer would be a touch more aware of her surroundings. Anyways. Turns out the bark is full of calcium and it plays a big role in making strong plants.

So that's the lot: oak bark, along with yarrow, stinging nettle, dandelion, valerian, and chamomile.

Just need a stag's bladder, dog skull, and sheep mesentery. Say, what? Oh shoot, it got weird again. 🌿

🌿 heltersorganic.com

Anna Helmer farms with her family in Pemberton, and still does not exactly know what she's going to do everyday.



**Fieldstone
Organics**

For all your whole grain needs... and more.

fieldstoneorganics.ca

✉ info@fieldstoneorganics.ca
📱 @FieldstoneOrg
🏢 Fieldstone Organics Ltd



**CHOICES
markets**

**MORE
ORGANIC
CHOICES**

Supporting Organic Producers Since 1990



100% BC Owned and Operated | choicesmarkets.com

 /ChoicesMarkets  @ChoicesMarkets  /Choices_Markets



LEARNING & SHARING AT KLOVERDALEN FARM



Kira Kotilla holding beautiful beets. Credit: zoomphotography.ca

By Moss Dance

Kloverdalen Farm is a beautiful patch of great farmland in the Comox Valley producing mixed organic veggies. It is owned and operated by Kira Kotilla and Ingemar Dalen, along with their two adorable kids, Eilif and Olin.

I met Kira Kotilla in the Comox Valley. My five-acre farm was just down the road from where she grew up in Merville, BC. We both learned and apprenticed in the early- to mid-2000's with some of the same mentors on southern Vancouver Island.

When she saw what I was up to with small-scale mixed organic veggies, she generously offered to come over and help out a few days a week. She taught me all kinds of things about soil and plant science, got a lot of work done, and she was really good with the tractor. She says one of the things she gleaned from that time on my farm was experience creating real hardpan! Oops.

Luckily for me, I sold the tractor and bought a walk-behind rototiller, and those early days of her volunteering on my farm ended up creating a lot of collaboration, learning, and fun. We ended up becoming co-founding members of Merville Organics Growers' Cooperative with Arzeena Hamir, Neil Turner, Russell Heitzmann, Calliope Gazetas, and Robin Sturley.

By the time we met in 2013, Kira was well into her explorations of profitable small-scale farming. And her interest in techniques and tools that increase farm profitability was a huge boon for Merville Organics. Like many of us, she was originally drawn to farming by the ideals and the way of life it could offer. "I was inspired by my love of plants," she says, "I wanted to work outside, and being very independent, I wanted to work on my own."

So she did her homework. Kira wasn't content to pursue her dreams without doing the research first to make sure it was a life path that could support her well.

Kira's incredible cabbages. Credit: zoomphotography.ca



Ingemar Dalen shares Kira's passion for sizeable brassicas. Credit: zoomphotography.ca



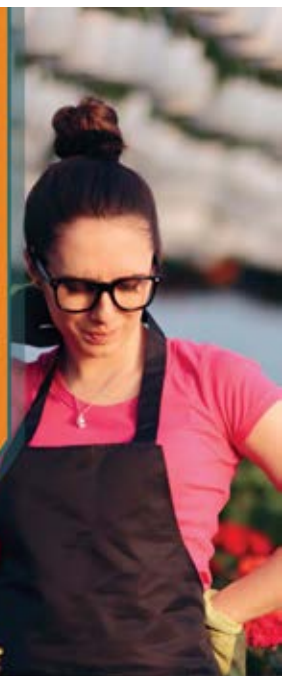
Little Olin keeping busy on the farm. Credit: zoomphotography.ca



Injury Management

Contact AgSafe for online and on-site injury management resources to build a program that works for your workplace.

1-877-533-1789
AgSafeBC.ca



AgSafe



Preventing Injuries • Minimizing Impact
Encouraging Worker Health & Wellbeing



Photos: Mouth-watering CSA box program contents (left), and beautiful sunflower bouquets (right) at the farm stand. Credit: zoomphotography.

Early Farm Mentors

It's amazing to think about the ways in which we all, as organic farmers, come from various tributaries into this river of organic agriculture, finding mentors along the way who lead us into pockets of communities across the country.

Kira first became interested in farming in the mid-2000's, and found her way to Nova Scotia Agricultural College. She remembers thinking, "I hope there are organic farming courses there." Once she was settled in at school, she realized that the Organic Agriculture Centre of Canada (OACC) was headquartered there, and many of her professors were a part of the OACC! These early mentors in organic agriculture lead to Kira's first apprenticeship in Nova Scotia. Ever practical, Kira knew her dreams needed to be tested. During her school and apprenticeship years, she watched her mentors carefully to see if farming would be financially viable and worth trying in her own life.

She had a revelatory moment at a workshop by *Crop Planning for Organic Farmers* author and Ferme Coopérative Tourne-Sol farmer Daniel Brisebois. "Daniel inspired me at an ACORN conference back in 2008. He was one of the first speakers I'd ever heard who made me think being a small-scale organic farmer was a viable option."

From there, she had to decide where to dig in and start her own farm. "I had a really great time at school in Nova Scotia and was really tempted to stay out there and buy land," she says, "but I came back to BC."

Kira's encounter with Daniel Brisebois and the organic agriculture community in Nova Scotia had piqued her interest in co-operatives, so when she returned to BC, she was drawn to working with Rachel Fisher at Three Oaks Farm,

one of the co-founding members of Saanich Organics. She spent the 2011 season in a Stewards Of Irreplaceable Land (SOIL) apprenticeship with Rachel, and learned about collaborative farming with the other farmers at Saanich Organics, Heather Stretch and Robin Tunnicliffe. During her apprenticeship, she mentions that the "educational field trips with SOIL connected me to many other mentors as well."

By the time Kira ended up back in the Comox Valley, she was well-educated, and keen to get started on her own projects.

Never Stop Learning

Kira and Ingemar purchased their farm in 2014, a sweet 4.25-acre parcel right on a rural highway for excellent exposure and farm stand potential. She planted a garlic patch, and was planning to go back to camp cooking for one more season to save up money when Arzeena Hamir called her up and invited her to join Merville Organics Growers' Cooperative. Kira decided to abandon her camp cooking plans and dive in that season, growing some staple crops for the co-op.

Once the co-op ball started rolling, the learning curve drew her in again, and of course, many new mentors appeared along the way. In that first year of farm operation, Kira and two other Merville Organics farmers had an opportunity to join the Business Mentorship Program via Young Agrarians with John and Katy Ehrlich at Alderlea Farm. Kira and I also took part in the Young Agrarians Business Mentorship Program and were matched with Frédéric Thériault at Ferme Coopérative Tourne-Sol, who helped to guide us in developing our cooperative business structures, financial goals, and principles of operation.

Kira continues to pursue educational opportunities wherever she can. Recently she had a chance to participate in the B.C. Agri-Business Planning Program and was matched with Chris Bodnar of Close to Home Organics.

Favourite Crops

“People keep calling me the cabbage queen and I keep forgetting that I have this unsquashable drive to grow cabbage,” quips Kira. “But I’m trying really hard to grow less cabbage all the time. I try to find smaller varieties but they keep turning out twice as large as the seed catalogue says!”

The fact that Kira can’t grow a small cabbage is a testament to her excellent farming skills. That low-tillage approach is really working for her—the soil biology at Kloverdalen is off the charts.

Kira has had to diversify for this coming season, since Merville Organics Growers’ Cooperative recently dissolved. As it turned out, all the current farmer members found themselves outgrowing the need for a marketing co-operative, so they all struck out on their own. Despite Kira’s penchant for cabbage, she now has to grow the full spectrum of crops, including crops she used to rely on other Merville Organics farmers to grow for the collectively-planned CSA program and farmers markets.

Now that she’s running a one-farm show, Kira has pared her markets down to her popular farm gate stand and a CSA program. These markets are more limited and specific than the cooperative’s variety of market options, meaning she now has to crop plan carefully. Kira spent a lot of time learning new crop planning techniques this past winter. “It’s harder to grow for CSA as a single farm than with a co-op,” she says. Cooperative CSA planning has built in redundancy from multiple farms, so there’s less risk of being short on CSA box options from week-to-week. But the downside of that redundancy are the occasional gluts of certain crops—the hustle to find markets for fresh produce on the spot can be a real challenge.

Favourite Tools

Kira tries to minimize tillage at the farm to encourage diverse soil biology. That’s why one of her most treasured tools is her broadfork. Luckily, she enjoys the action of digging with the broadfork. Kloverdalen employs one local person full-time each season, and they work hard to reduce their fossil fuel use through hand labour. They also aim to minimize plastic use at every level of production.

Kira and I share a love of the humble Ho-Mi, an ancient Korean gardening tool. I got my first Ho-Mi when I was a farm apprentice with Mary Alice Johnson at ALM Farm in Sooke, so when Kira was spending time working with me at my farm, I gave her one too. I like to imagine all these farmers, connected by our time in the fields together, dig-

ging with our Ho-Mis—our little iron spear-shaped diggers remaining a familiar constant throughout all the changes of life. Kira said I should mention she has both the short- and long-handled Ho-Mi, and she loves them both.

Her most modern tool acquisition is the Jang Seeder, and she says she loves it, despite (or maybe because of) the learning curve. See, I told you—she just loves a good challenge.


Hot Tips: Farming with Kids

I’ve always been curious about how Kira gets all that farming done with two young kids in tow, so I asked if she had any hot tips for farming parents. “Don’t be shy about using daycare!” she laughs. “And just abandon perfectionism—you have to accept a certain amount of destruction if you’re going to have them tagging along with you.”


Kira copes by allowing a certain amount of chaos with the kids in the field: “I let them dig holes right in the garden beds just to keep them entertained while I’m working.” Kira also suggests wasting a little water to keep your sanity. Let the kids play with the hose.


Growing into the Future

In the past seven years, Kira and Ingemar have managed to grow a vacant field with a dilapidated farmhouse and decaying shed into a thriving small farm with excellent infrastructure, soil fertility, and markets to sell their produce. And it all started with a quarter-acre garlic patch and an invitation to join a co-op. Since then, Kira and Ingemar have expanded to a full acre in production with new infrastructure, including a greenhouse and barn with a farm stand.

I’ve been enjoying watching her story unfold, gathering up seeds of knowledge from her experiences and seeing her develop into a leader in her field, both literally and figuratively. I know Kloverdalen Farm is just going to keep growing and adapting, even in these unpredictable times—and I am grateful for their example of resilience, curiosity and innovation. 

 kloverdalenfarm.com

 [instagram.com/kloverdalenfarm](https://www.instagram.com/kloverdalenfarm)

 [facebook.com/kloverdalenfarm](https://www.facebook.com/kloverdalenfarm)

Moss Dance (she/they) is an organic gardener on Territories of Hul’qumi’num and SENĆOŦEN speaking peoples (Salt Spring Island), and works with the BC Organic Grower as layout editor. Moss spent a decade farming and organizing in K’ómoks Territory as a founding member of Merville Organics. She is currently completing her Diploma of Acupuncture in Victoria, BC, and hopes to have a market garden again someday.



Arzeena Hamir harvesting beans in the field at Amara Farm. Credit: Michaela Parks.

Why I Joined a Farmer-Led Coalition ADVOCATING FOR CLIMATE ACTION

By Arzeena Hamir

My husband Neil and I have been growing organic food for our community in the Comox Valley for nine seasons now. As a farmer, an agronomist, a food security activist, and a mother, ensuring the safety of our planet is really close to my heart. I have always farmed with the goal of giving back to the land and to my community, which has embraced our family farm and supported us in so many ways. This support led me to run for election in

local government in 2018 and since then, I have been sitting as the Director of the Comox Valley Regional District. I love being able to advocate for local policies that will ensure the health and prosperity of our community.

I saw what I was able to achieve locally through my political involvement, and recognized the benefits it brought to my work as a farmer. In an effort to grow this impact, I sought out opportunities to reach the wider agricultural sector.



The squash field at Amara Farm next to moveable hoophouse. Credit: Michaela Parks.

That’s when I found Farmers for Climate Solutions (FCS) and decided to get involved. FCS is a national coalition of farmers and farmer-supporters who believe that agriculture must be part of the solution to climate change. FCS currently represents over 20,000 farmers and ranchers across Canada, reflecting the vibrant diversity of the agricultural sector in terms of farm size, types of production, and farmers themselves.

In just one year of operation, FCS has garnered some serious attention from the media and policy-makers. The coalition was launched in February 2020, marking Canada’s Agriculture Day. Shortly after their exciting launch, the COVID-19 pandemic hit. Through the tragedy of countless losses across communities, I felt the weight of this pandemic on top of the growing threat of climate change to my livelihood as a farmer. FCS felt this too, and as our government planned to “build back better,” they asked: what does this mean for agriculture?

A smart, forward-thinking and lasting COVID-19 recovery should prioritize climate resilience on our farms. I was thrilled to see a report recommending five priorities to achieve this, from encouraging the energy transition on farms, providing incentives for climate-friendly practices,



Neil Turner and Arzeena Hamir. Credit: Michaela Parks.



An Amara Farm worker harvesting field cucumbers. Credit: Amara Farm.

investing in farmer-to-farmer training, and supporting new and young farmers. These were priorities that I felt proud to develop even more as I formally joined the efforts of the coalition.

In September 2020, after an unprecedented commitment from the Speech to the Throne to farmers and ranchers, the Canadian government recognized us as key partners in the fight against climate change and pledged to support our efforts to reduce emissions and build resilience. In order to ensure that the government would deliver on their commitment, FCS set out to recruit a farmer-led task force of experts to propose short-term actions that would deliver long-term lasting benefits in emissions reductions and economic well-being. The short list of recommendations was to be advanced for Budget 2021 to inform the next agricultural policy framework in 2023.

I initially signed up as an interested farmer and attended a focus group, and then ultimately took on the role of task force co-chair, where I shared leadership with fellow farmer Ian McCreary, who farms grain and livestock in Saskatchewan. Together, we led a team of members with expertise in agricultural economy, greenhouse gas (GHG) modeling, and domestic and international agricultural policy analysis, to advance six high-impact programs that

would reduce on-farm GHG emissions and build resilience. I am also working with fellow British Columbian and long-time friend, Abra Brynne, on an equity analysis of these recommendations to ensure that we do not leave out BIPOC, 2SLGBTQ+, and other equity-seeking farmers, and that supports are accessible to all farmers.

Being part of this team was incredible. Meeting farmers from across Canada who were equally committed to climate action was so heartening. Having access to Canada's best GHG modellers and scientists was fascinating and I was able to expose myself to a whole area of lobbying and policy development at a federal level that I had never been involved in. I got to meet the federal Minister of Agriculture, Marie-Claude Bibeau! Ultimately, with this team, we were able to make the case for how agriculture could really be a powerhouse for climate mitigation and that message was heard.

Over the course of several months, FCS held over 20 meetings to engage with representatives from the federal government to promote and refine our budget recommendations. We often heard positive and hopeful feedback from these meetings, commending the evidence-based and detailed research our group had brought forward. Essentially,

we were championing climate-friendly farming practices that have been proven to reduce emissions and are cost-effective for both farmers and the government.

We launched our budget recommendation report on February 23rd 2021, once again marking Canada's Agriculture Day with a national media tour to help amplify the voices of farmers who are already implementing these practices on their farms and who have seen the benefits on their business and the environment. This really reinforced the most important potential that I see for Farmers for Climate Solutions: we are shifting the viewpoint that farmers are solely the victims of climate change, and recognizing that we are also valuable actors in moving the agriculture sector forward.

Our team waited for the announcement of the budget with bated breath. In a year where the government had to prioritize funding immense gaps left by the pandemic, we were hoping that a climate-focused budget for agriculture would also make the cut, and it did. This historic win for our sector showed us that the government is committing to supporting farmers directly to scale up adoption of climate-friendly farming. Because we can no longer wait to act. With only nine growing seasons left to achieve Canada's target under the 2030 Paris Agreement, and our agricultural emissions projected to rise, we urgently needed this kind of meaningful support to lead the climate transition in our sector.

Farmers are already leading the way, and have shown their innovation and resilience in the face of many challenges, and climate change is no different. There is a growing movement of farmers who are inspiring change, from fence post to fence post, and now we have concrete support to ensure we can harness the positive impact that our sector can have on the environment. I feel incredibly proud to be part of seeing this change happen across millions of acres of farmland in Canada. 🌱

Read more:

- 🔗 farmersforclimatesolutions.ca
- 🔗 farmersforclimatesolutions.ca/recovery-from-covid19
- 🔗 farmersforclimatesolutions.ca/budget-2021-recommendation
- 🔗 farmersforclimatesolutions.ca/news-and-stories/budget-2021-represents-historical-win-for-canadian-agriculture

Arzeena Hamir is the owner of Amara Farm in Courtenay, BC and a Director of the Comox Valley Regional District.



DISCOVERY ORGANICS

We are a locally owned independent distributor of certified organic fruits and vegetables. We specialize in working with established and emerging local farms—big and small. This includes providing market intelligence about seasonal crop supply in our regional markets and other support services.

Whether you are a new farmer, considering organic certification, or want to expand your production, we are your go-to.

www.discoveryorganics.ca
604-299-1684



Support Organic Farmers, Support Organic Change

By Sydney Franc

Two thirds of Canadians purchase organic products weekly, and organic is the fastest growing part of the Canadian agriculture landscape. With a booming \$6.9 billion in annual sales, Canada is the sixth largest organic market in the world. Yet, despite double digit production growth, demand continuously outpaces supply. Given this impressive and sustained growth, it is crucial to continue supporting Canada's organic industry. Farms are the keystone component. Without sustained efforts to provide training in organic techniques and support Canadian farmers to transition to organic, Canada may find itself trailing behind in the global movement towards bettering agricultural systems.

As a response to growing domestic and international demand for Canadian organic products, the Canada Organic Trade Association (COTA) sought to support farms as they





Opposite page, top: overlooking the vineyards at Scorched Earth Winery. Opposite page, bottom: grapes on the vine. Above: sunset lighting up the vineyard. Credit: Scorched Earth Winery.

convert to certified organic. COTA launched the Organic Conversion Support Program in 2019, through the Support Organic Change Fund. The program assists converting and future organic producers financially with their added costs incurred while transitioning to organic farming by reimbursing producers for paid certification costs up to \$1,000. The fund has proven to be a key piece by the organic industry in supporting and growing our supply chain through an incredibly difficult year for farmers.

Seeds of Change has returned as a primary sponsor of the program, joined this year by Mill Street Brewery, as a way to give back to the organic community in recognition of their 20th Anniversary. Thanks to these generous funders,

N.O.O.A

Farm Certification
 \$445/low risk \$325

Certifier for small/medium scale operations
throughout BC

Benefits: ~Lowest fees with Peer Review
~Mentoring, Seminars, Farm Visits
~Flexible, Friendly organization

Contact: Cara 250-540-2557 northorganics@gmail.com



BC's Largest Supplier of Certified Organic Fruit Trees!



Supporting Commercial Growers • Child Welfare Projects • River Gardens

Check out our Inventory of Apple Trees for 2021!

similkameennurseries.com
 jobs@similkameennurseries.com
 (250)-899-0498
128 Hazel Pk. Central Saanich, BC V8Z 1C3

Similkameen Okanagan Organic Producers Association



Join others committed to maintaining the integrity of BC Organic farming

- First applicants membership fee deals
- Affordable certification fees
- COR options available

For more information, contact
 Cara Nunn: 250-540-2557
 simokorganics@gmail.com



Coco assisting in the vineyard. Credit: Scorched Earth Winery.

the 2019 edition of the Organic Conversion Support Program funded 41 farmers and contributed 6,167 new organic hectares nationwide.

“Our association is dedicated to strengthening the expansion of organic farming in Canada, and through COTA’s organic transition fund, more farmers won’t be left alone to bear the costs of certification on their own,” says Tia Loftsgard, Executive Director of the Canada Organic Trade Association. Tia adds, “Seeds of Change and Mill Street Brewery’s contributions to the program encourage more farmers to adopt organic practises on their land. Not only is this ensuring long term viability and sustainability of the Canadian landscape but also protecting the health and wellbeing of the farmers as they adopt more organic practises.”

The program has done a great deal in assisting farmers during the transition to organic farming. Converting to organic is no small feat for a farm. It requires a significant dedication of time and resources, something Canadian farmers often find lacking. And yet, year after year, farmers make the decision to join the movement.

Scorched Earth Winery in Kelowna, BC was one such farm supported by the Organic Conversion Support Program. General manager Anita Pazdernik rationalises the choice her family made to convert the winery to organic farming practices: “After purchasing our vineyard, we submitted numerous soil test samples to determine how healthy the vineyard was. The lab results came back to show that we had ZERO organic matter and ZERO nutrients in the

vineyard.” As she explains, the family “immediately chose to convert to organic after learning that the soil had been completely stripped of any nutrients whatsoever, after 30 years of conventional farming. We chose to grow organic because we strive for a sustainable future for our children, their children, and our pets.”

In a year that has seen difficulties throughout the organic supply chain, the Organic Conversion Support Program has proven to be key to supporting and growing the organic supply chain at its most fundamental level. Building capacity and resiliency within Canada’s organic systems ensure a better future for all.

COTA is thrilled to announce that the program will be continuing on into a third year of funding. The Organic Conversion Support Program is continuing to support farmers, and applications for the 2020 reimbursement program will be open until June 30th, 2021. Applications will be accepted on a rolling basis for producers who are in the process of converting, or who become certified in 2020 or 2021. In order to qualify for the program, farmers must be in their first, second, or third year of pre-certification, or already certified organic and increasing their organic acreage. Eligible costs are certification and consultation expenses, up to a maximum reimbursement of \$1,000. 🌿

Want to learn more about our program guidelines? Find more information about the Organic Conversion Support program here:

🔗 canada-organic.ca/sites/default/files/2020_fund_overview_guidelines_eng_v2.pdf

Do you meet our Organic Conversion Support Program guidelines and want to apply? Get in touch with Caroline Bernard, Member Relations and Executive Coordinator at cbernard@canada-organic.ca.

Have a funding project you’d like to propose for COTA’s Support Organic Change Fund? Contact Kim De Lallo, Member Relations and Business Development Manager at kdelallo@canada-organic.ca.

The Canada Organic Trade Association is a membership-based association for the organic industry in Canada: representing growers, processors, certifiers, provincial farmers’ associations, importers, exporters, retailers, and others throughout the organic value chain. COTA’s mission is to envision organic products becoming a significant part of everyday life, enhancing people’s lives and the environment. Through our leadership and collaboration, COTA provides a strong voice for organic in Canada. COTA brings together the diversity of Canada’s organic sector: from farmer and processor to retail, including food products, fibre and textiles, personal care, and emerging sectors such as organic aquaculture.

...Newspatch, continued from page 5

a workplace knowledge quiz released by AgSafe address some common slipping, tripping, and falling hazards and how to reduce the risk of injury.


The videos are an introductory piece that illustrates some of the slipping, tripping, and falling hazards common on farms, ranches, nurseries, and in greenhouses and workshops.


The knowledge quiz is intended to get producers and employees thinking about slip, trip, fall hazards in their own workplace. The quiz provides feedback on answers, right or wrong, that is intended to educate about common causes, controls, and safety protocols to mitigate injury.

“The quiz takes five minutes and can serve as a discussion starter and as a safety evaluation tool for employers, site managers, and workers,” says Reg Steward, AgSafe Provincial Ranch Safety Consultant. “We encourage employers and employees to continually refresh their knowledge so as not to become complacent. Everyone wants to go home safely at the end of each and every workday. Don’t let a slip, trip, or fall, take you down. Stand up for safety in your workplace.”

The number of injuries resulting from slipping, tripping, and falling generally increases between autumn and spring, peaking during winter. Changes in weather and temperatures cause surface conditions to become wet, slippery, or cracked increasing the risk of slipping or tripping.

Eliminating the hazard is always best, but not always possible. Employers and workers are reminded to regularly inspect surfaces and terrain, and to pay attention to other changes in the workplace that may create a safety hazard.

Visit AgSafe’s website for Slips, Trips, Falls Resources to learn more about slipping, tripping and falling hazards in the workplace. Materials were produced in partnership with Canadian Agricultural Safety Association (CASA), Canadian Agricultural Partnership (CAP) and the Government of Canada. 

 agsafebc.ca/slips-trips-falls



Pro Organics.
produce & fresh food

Canada's premier distributor of certified organic fresh food


www.ProOrganics.com



nammex
Organic Mushroom Extracts

nammex.com

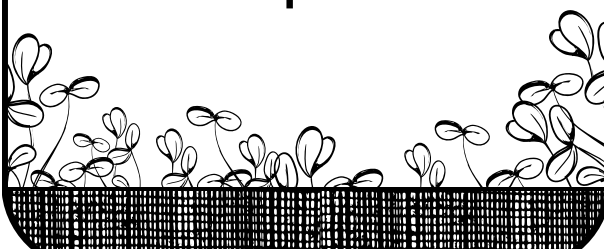
Gibsons, BC, Canada
604-886-7799



EAT MORE
SPROUTS
& Greens Ltd.

Organically grown year-round
in the Comox Valley

eatmoresprouts.com



iCertify Supports the Organic Movement Umi Nami Farm



An aerial view of Umi Nami Farm in Metchosin. Credit: Umi Nami Farm

Originally started in Iwaki, Japan, Umi Nami Farm moved to Metchosin on southern Vancouver Island in 1996. The farm has been certified organic for more than 20 years.

Umi Nami Farm specializes in year-round production of Japanese vegetables and some Asian and Western produce. They use both unheated greenhouses (high tunnels) and outdoor fields to achieve year-round growing, and their small orchard supplies apples, pears, and plums.

As they prepared to do their 2020 organic certification renewal, Heather Ramsay from Umi Nami Farm says they were pleasantly surprised by how easy it was to use iCertify, COABC's new online organic certification system.

"We weren't so enthusiastic about the switch to an online system at first, but after seeing how easy it is to use, we're liking it," says Heather. "It serves as both an upload platform and a checklist for what we need to provide. It was nice having standardized premade records to make it easy to know what we do and don't need to report."


According to Heather, one of the biggest benefits of iCertify is that by helping growers to standardize their reporting, the work of reviewing all the applications—whether renewal or first-time—gets easier for the certifying body. This, in turn, helps keep costs low.

"As a grower, I also find it easier not having to wonder how much detail to go into," says Heather. "The online system

asks the questions I need to answer and provides forms to capture the information we need to record. I like that we have the option of photographing or scanning hand-written records and then uploading the electronic image."

From Heather's point of view as an organic farmer and organic farming advocate, iCertify also plays a larger role in the organic movement.

"Shifting to the online system makes sense to keep up with the times and to take ourselves seriously as a movement and as business owners," says Heather.

"The organic movement has really grown. We expect more of our farms now than in the earlier years of the organic movement. And since BC's mandatory organic regulations came into effect in 2018, we need to step up to the plate with documentation and traceability. A standardized online system is only one small part of the bigger picture, but it helps us in our efforts to efficiently function as the growing movement and robust businesses that we are." 

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.

DELIVERED BY

FUNDING PROVIDED BY



ORGANIC, NATURALLY. For forty five years, Horizon Grocery + Wellness has supplied retailers with premium organic and natural products in the dry grocery, fresh, frozen and wellness categories. More than 10,000 products provide healthy choices for your customers, who number among the 66% of Canadians who regularly buy organic foods¹ and the growing diversity of those who seek out natural options.

The market leader in Western Canada for decades, Horizon Organic + Wellness is the flagship company of a national network of Canadian businesses, which distribute organic and natural foods, nutritional supplements, natural body care and eco-friendly household products. The Horizon Group comprises the following well-established companies, which supply 18,000 organic and natural products to more than 4,000 outlets across Canada:

- Horizon Grocery + Wellness, Burnaby, BC
- ONFC Grocery + Wellness, Mississauga, ON
- PSC Natural Foods, Victoria, BC
- Directa Distribution, Pointe-Claire, QC
- Planet Foods, Calgary, AB



Vegan Pudding & Co.
organic

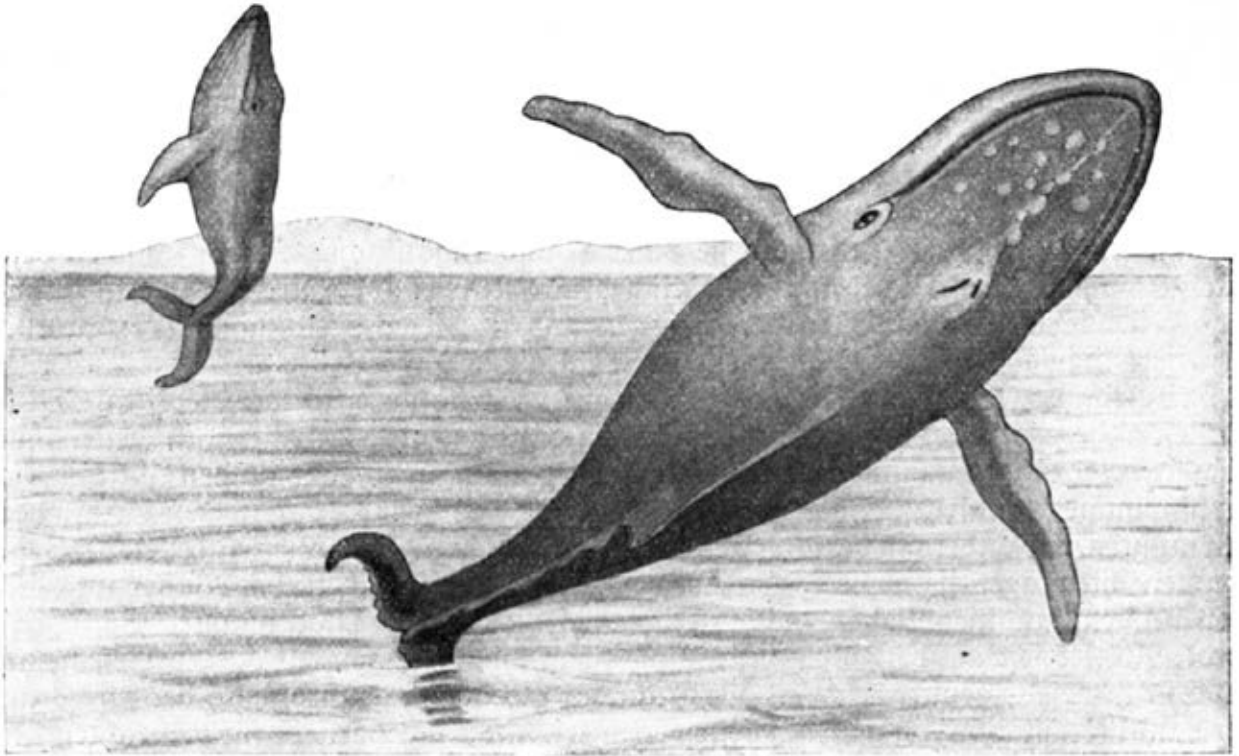
organicfair 





Feeding Wisdom

A WHALE OF A STORY



By Marjorie Harris

Excerpt from the BC Certified Organic Program Operators Manual:

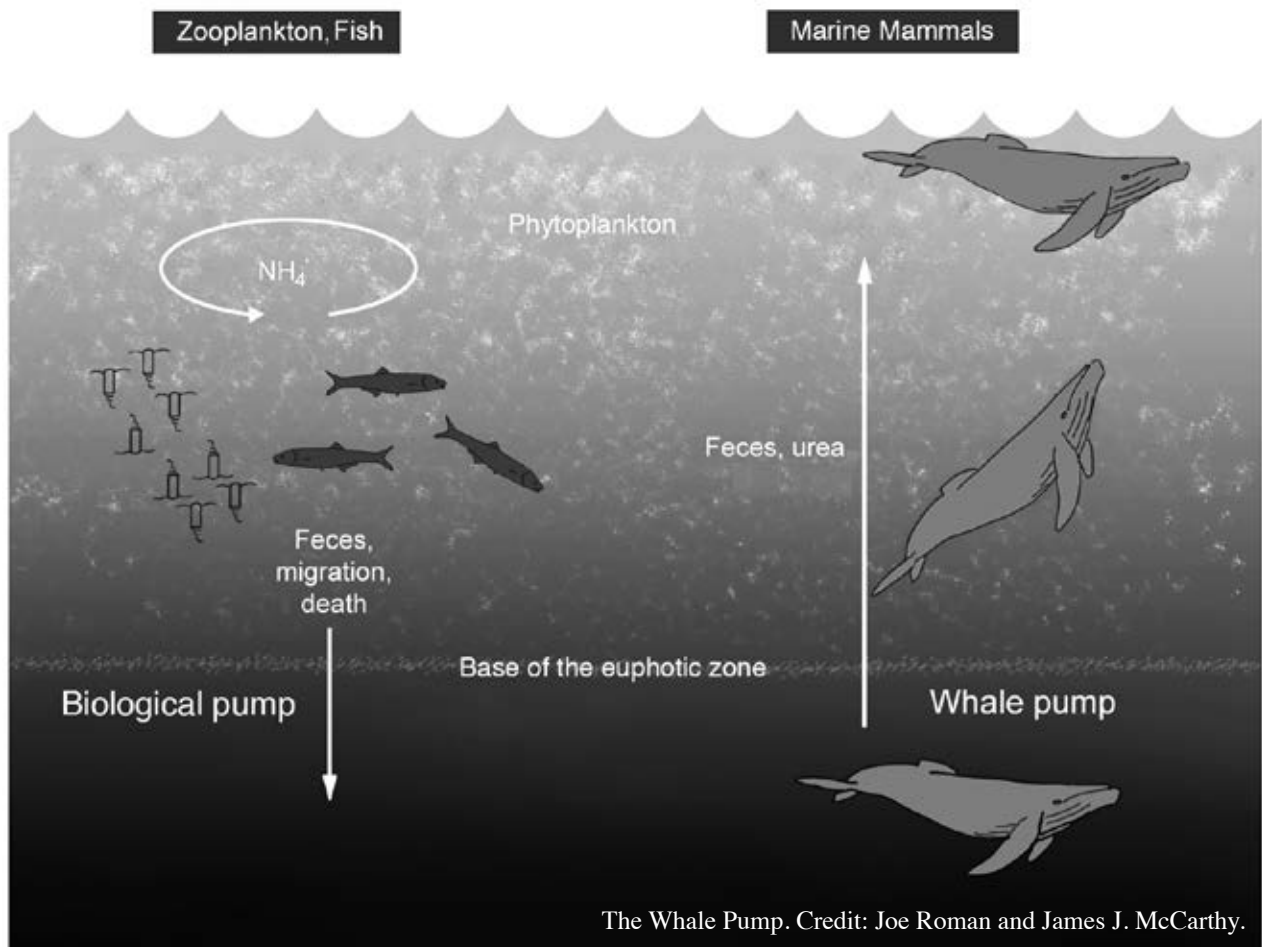
1.4 Principles of Organic Farming

- 2) To interact in a constructive and life-enhancing way with natural systems and cycles.
- 5) To develop a valuable and sustainable aquatic ecosystem.
- 8) To promote the healthy use and proper care of water, water resources and all life therein.

The Oceans of Life

Our planet's web of life is inextricably linked to the mineral- and nutrient-rich oceans that cover 71% of our Earth's surface and hold 96.5% of all the water, yet it is said that we know more about space than about the great abundance of life in our oceans. We are only just discovering how the multitudes of complex food webs on land are completely dependent on the ocean's abundance for nourishment. The oceans provide the oxygen we breathe, the rain we need, the minerals and nutrients we grow with, the climate temperatures we live in, and more. And the oceans are home to the planet's keystone species, the whales.

Every ecosystem has a keystone organism that helps to define the entire ecosystem, without which the ecosystem would be dramatically different or cease to exist altogether. Blue whales are the largest of the whale family, and the largest animals that have ever existed on Earth. Whales as a group define the ocean ecosystems by "the whale pump."



The Whale Pump. Credit: Joe Roman and James J. McCarthy.

a cycle that circulates nutrients that support the ocean’s food webs and ultimately deliver nutrients to land. The whales are irreplaceable. If lost, the web of life as we know it would likely cease to exist.

Aquaculture has joined the organic family of organic standards; therefore, it is prudent to understand the breath and scope of how the ocean ecosystems underpin our very existence on land, so that we can be good stewards of our water world.

The Whale Pump

Whales release copious amounts of nutrient-rich liquid feces, which floats, suspending dissolved nutrient particles in the sunlit surface waters. Whales circulate 24% of the ocean’s iron; these iron-rich plumes of fertilizer boost pelagic, or open ocean, microscopic algae phytoplankton blooms. Blue whales living in the southern oceans can excrete 2% of their body weight per day. For an adult whale, this is equivalent to about three tonnes. Sperm whales specialize in bottom feeding, bringing nutrients back to the surface. Vast pastures of phytoplankton blooms play a crucial role in regulating the planet’s climate temperature. Da-

vid Attenborough has said that the phytoplankton pastures of the oceans are our greatest ally in combating climate change.

As phytoplankton photosynthesize, producing oxygen, they in turn sequester atmospheric carbon in their bodies, which, when they die, sinks down to the deep ocean sediments, taking it out of circulation for a period of time. The US National Oceanic and Atmospheric Administration (NOAA) estimates that 50% to 80% of all the Earth’s oxygen is produced from the oceans’ phytoplankton pastures, which produce more oxygen than all the forests, jungles, and other sources combined.

Blue whales are known as baleen whales, specialized filter feeders depending mainly on a diet of shrimp-like krill. The krill are also filter feeders, feeding mainly on microscopic algae phytoplankton fertilized by the whales. Essentially, whales fertilize the food chain for themselves and all of the other higher-level food webs that depend on krill and phytoplankton. Krill are a keystone food species for the open oceans higher-level food web feeders including

Continued on page 28...

A 30 Year Legacy: How the Hettlers Embody Organic Principles (and Are Good at Growing Farmers)



Farm Families: Robert and Kathryn Hettler smiling with Dan and Kat Saxton and their children—the next stewards of Pilgrim's Produce. Credit: Pilgrims' Produce

By Michelle Tsutsumi

Finding my way to Pilgrims' Produce in the fall of 2009, when I wanted to learn how to garden, ended up changing my life. It sounds dramatic; however, witnessing and experiencing the ways in which Robert and Kathryn engage with the world impacted me in subtle ways, over time. Over a decade later, and with a more nuanced relationship with organics, I can see more fully how the Hettlers embody organic principles.

Not only have Robert and Kathryn stewarded the land they lived on, and with, for the past 30 years, using a combina-

tion of responsibility and innovation, they have done so with future generations in mind. One of the first things I remember Kathryn describing was how important it was to her and Robert to be growing good food for their family, friends, and wider community. The farm has been a special gathering space for the extended Hettler clan, serving as a central meeting point for children and grandchildren who are now dispersed around the world. So many incredible memories and feasts have been celebrated at Pilgrims' Produce over the years!

Their thoughtful appreciation for people showed up in attentive conversations, as in really listening and asking



A vintage photo of the Hettler Family. Credit: Pilgrims' Produce.



Kathryn and Robert sorting fruit. Credit: Alan Price.

pointed questions, as well as in random moments walking from one section of the farm to another. This caring way of being was reciprocated by many employees who would return to work at Pilgrims' Produce year after year and, eventually, launch into their own farming with a solid base of learning and mentoring to draw from. Not to mention always feeling welcome to give Rob a call with questions or stop in for a visit that inevitably would include 'shop talk.'

Employees who went on to create their own farms include Kate Murphy at Lakehead & Beyond Produce Society,

Mark Uher at Mara Valley Produce, and Joel Hayhoe and Tessa Wetherill at Our Open Farm. Through the Young Agrarians Business Mentorship Program, Rob mentored Emily Jubenvill at Enderberry Farm. Folks who returned to or joined family farms include Eva-Lena Lang at Cedarstein Farm and me at Golden Ears Farm.

Many of these names are probably familiar to you because they have also engaged in actions that serve the organic community, or agriculture more broadly, through participation in Agriculture Advisory Committees, land matching,



Photos: this page, top: So many markets over the years! Robert at the market stand; facing page: Kathryn at market. Credit: Pilgrims' Produce. Above: Michelle Tsutsumi at Pilgrims' Produce with the team. Credit: Alan Price.



certifying body boards and committees, expanding food systems networks, and even in the role of Executive Director of COABC! This community involvement mirrors the years and years of Robert and Kathryn’s contributions and dedication to building the organic movement.

Working at Pilgrims’ Produce was a beautiful mix of hard work, a buzz of activity—particularly in June, when you would see the quad and trailers bringing in the harvest on top of a steady interchange of vehicles belonging to the folks flocking in for u-pick strawberries—and the most amazing staff lunches (thank you, Kathryn!).

Pilgrims’ Produce was also a site for events like Shoots ‘n Blooms, CSA strawberry socials, and inter-farm potlucks. The importance of relationships and creating the time and space to nurture them was affirmed by example and reassuring words: “Take the time you need to visit your family. Not to worry, the weeds will be here when you get back.”

On March 31st, 2021, a sizeable group of people who have been impacted by Robert and Kathryn gathered over Zoom to share memories and stories of what the farm means to them. It served as both a celebration of Rob and Kathryn’s organic farming and community building and the transfer of the farm to Dan and Kat Saxton 30 years—to the day—after the Hettlers moved in!

Many named the beauty of the land, its healing capacity, and the generous-in-spirit nature of Robert and Kathryn as influencing them. Kate Murphy aptly described how Rob-

ert and Kathryn have been growing more than food, they have been growing farmers.

We love you Robert and Kathryn and are so pleased that you have kindred spirits in Dan and Kat to carry on the legacy of Pilgrims’ Produce. A legacy of care, stewardship, good food, and growing farmers!

*We have the world to live in on the condition that we will take good care of it.
And to take good care of it, we have to know it.
And to know it and to be willing to take care of it, we have to love it.*

~ Wendell Berry 

 pilgrimsproduce.com

Michelle Tsutsumi grows food on the unceded land of Secwépemcul’ecw and, in doing so, acknowledges the tension inherent in the practice of agriculture and Indigenous-settler relations. As a communicator, she engages in difficult conversations around dominant cultural mindsets and structures so that we can transform them into a more just and equitable way of being.



whales, seals, penguins, squid, invertebrates (such as jellyfish), albatrosses, many species of seabirds, and several fish species, including salmon and oily foraging fish.

The Salmon-Nitrogen-Forest Cycle

As they spawn, salmon come to British Columbia's rivers in mass migrations, where their decomposing bodies act like a pipeline of nutrients from the ocean. Salmon feed in the open ocean on krill, oily foraging fish, crabs, and other seafoods.

Throughout the province's salmon-bearing watersheds, 40% to 80% of the nitrogen in the riparian zone shrubs and trees originates in the open ocean. Nitrogen (N15) from the ocean has a heavier isotope signature than other sources of nitrogen and can be easily identified by laboratory analysis.

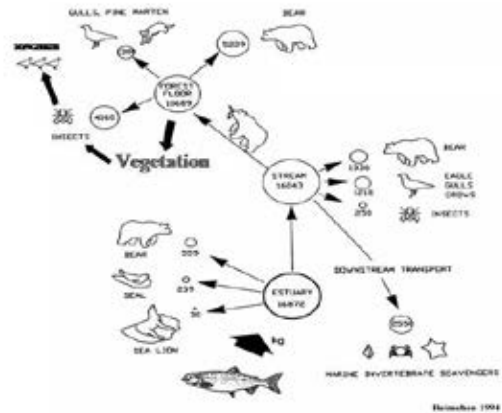
Dr. Tom Reimchen, forest ecology researcher at the University of Victoria, has found that nutrients derived from salmon returning from the open ocean can be observed in old-growth trees that are hundreds of years old, and in the animals that live on the salmon. "There's a cascading effect on the food web," Reimchen says. "Salmon are primarily eaten by bears, who pull them out of streams to eat. Decomposing salmon on the sides of streams not only fertilize the soil beneath them, they also provide the base of a complex food web that depends upon them."

The scraps of fish are passed onto gulls, ravens, crows, eagles, and up to 55 insect species. The oldest fossilised salmon skeleton found near Kamloops, BC, dates back to approximately 18,000 years ago when the last Ice Age glaciers started to melt.

Whales Neared Extinction

Until the Iron Age arrived around 3,000 years ago, humans had only been able to hunt smaller sea creatures using canoes and spears. Iron Age tools gave the ancient Romans an edge to hunt larger whales like gray and right whales possibly to extinction from the Mediterranean Sea ecosystem. Bones found at ancient Roman fish processing sites provide evidence that these whales once inhabited the Mediterranean Sea area.

Whaling increased steadily from the 16th century onward even as it remained a very hazardous pursuit. With the invention of the bow-mounted exploding harpoon in 1864 the entire whaling industry changed drastically. The largest baleen whales could now be harvested. Whale oil and whale products fueled the industrial revolution of the 19th century. Next came the factory ships of the 20th century,



The Salmon Forest Project. Credit: T. E. Reimchen.

bringing commercial whaling into the industrial scale. Scientists estimate that 2.9 million whales were killed for commercial purposes in the 20th century, causing the catastrophic decline of global whale populations. By some

estimates, sperm whales were depleted to one-third of their pre-whaling population, and blue whales by up to 90%.

The International Whaling Commission (IWC) was formed in 1946 to provide for the proper conservation of global whale populations. The IWC established various bans on whaling; however, even with whaling bans in place, commercial whale harvesting numbers did not peak until the mid-1970s. This prompted the IWC in 1982 to place a global moratorium on all whale species in 1986, with an exemption for scientific study and Indigenous whaling as a traditional food source.

However, the IWC lacks any enforcement powers over whaling as membership is voluntary. Canada had already prohibited commercial whaling from all Canadian ports in 1972, but left the IWC in 1982 in order to formally recognize Inuit treaty rights to hunt whales. Countries that have resumed commercial whaling outside of the IWC moratorium are Japan, Norway-Faroe Islands, and Iceland. At the same time, markets for whale meat are shrinking as people become more aware of the whaling impacts on the global environment.

Recovery of Whale Populations

Whale recovery monitoring data collected since the 1990s shows that recovery has varied widely. Some populations have grown, some are experiencing new declines, and many remained endangered. A main factor implicated in slow whale population recovery is a lack of food. The whale food supply has been hit by pollution, climate change, and competition with human commercial fisheries.

The most productive ecosystems for krill are at the polar ice edges where the mix of cold and warm waters causes

nutrients to circulate rapidly. Ice shifts have caused less nutrient circulation through the water columns, reducing food web production. Other factors include human commercial fisheries depleting krill, salmon, and oily forage fish populations leaving the food webs to starve.

The Whale Pump Has Slowed

Recovering from disruptions to the whale nutrient pumping cycle can take decades. Scientific measurements demonstrate a slowing of the whale pump due to whaling activity. Phytoplankton biomass has reduced in volume causing a two-fold effect: lower grazing volumes, and a contributing factor in climate change.

Marine mammal biologist, Trish Lavery of Flinders University, Australia, calculated how much atmospheric carbon was being removed by just one whale species, sperm whales, whose poop fertilizes phytoplankton in the southern oceans. The Southern Ocean was once home to over 120,000 sperm whales. “If we hadn’t removed them,” she says, “we’d have an extra two million tonnes of carbon being removed out of our atmosphere every year.”

Lower phytoplankton grazing volumes for foraging critters restricts food for fisheries worldwide. The Food and Agriculture Organization (FAO) of the United Nations monitors 600 marine fish stocks. Findings show that the majority of global commercial fish stocks are already fully exploited, over exploited, or depleted.

FAO lists five Pacific West Coast fisheries, Chinook salmon, Coho salmon, North Pacific hake, and Pacific herring as being moderately exploited to overexploited, and other shrimps ranging from fully exploited to depleted. There are many reasons for the decline in salmon populations: stream destruction, dams, pollution, disease, overfishing, and the amount of food that is available to salmon in the ocean. An article published in *Nature* reported recent declines in salmon body size due to lack of food in the oceans and the further impacts to land ecosystems receiving less nutrients from the oceans.

Fish meal and fish oils derived from ocean fish are allowed in the 2018 Organic production systems standard – Permitted substances list for aquaculture (CAN/CGSB-32.312-2018). Fish fertilizers are allowed in crop production. The most harvested species caught for fish meal, fish oil, and fertilizer products, in North American waters is menhaden. Menhaden is a small oily fish that forages on phytoplankton.

Menhaden are a keystone food species for the entire Atlantic food web, sustaining fish, whales, and seals. The menhaden fishery has operated for 150 years, with mature breeding stock in decline in some areas. Even though regulatory bodies keep certifying the fishery as sustainable

there are conservationist concerns over poor regulatory controls being in place to protect the menhaden fishery. The vast majority of the menhaden harvest is diverted from the natural food webs into protein meal for penned aquaculture systems and large animal feed.

In less than 200 years of intensive whaling, the oceans’ nutrient cycling whale pump has been disrupted and slowed. The ocean’s food webs continue to decline while whale population recovery lags. Both aquaculture and soil crop production depend, in large part, on ocean protein and mineral resources. The FAO reports that the oceans resources are in critical decline.

There are no simple answers to this problem, so education and awareness are at the heart of real solutions. Hope for the future depends on our collective ability to become effective stewards of our shared global ecosystems and the rich diversity of life that is anchored in the oceans, fertilized by the whales’ nutrient pump. 🌿

Marjorie Harris, IOIA VO and concerned organophyte.

References:

Roman, J., McCarthy, J.J. (2010). The Whale Pump: Marine Mammals Enhance Primary Productivity in a Coastal Basin. *PLoS ONE* 5(10): e13255. doi.org/10.1371/journal.pone.0013255

Reimchen, T.E. The Salmon Forest Project. University of Victoria. web.uvic.ca/~reimlab/salmonforest.html

Rodrigues, A.S.L., Charpetier, A., Bernal-Casasola D., et al. (2018). Forgotten Mediterranean calving grounds of grey and North Atlantic right whales: evidence from Roman archaeological records. *Proc. R. Soc. B.* 285: 20180961. doi.org/10.1098/rspb.2018.0961

Specia, A. (2012). Specia: In the belly of the whaling commission. Northern Public Affairs. northernpublicaffairs.ca/index/in-the-belly-of-the-whaling-commission/

Oke, K.B., Cunningham, C.J., Westley, P.A.H. et al. (2020). Recent declines in salmon body size impact ecosystems and fisheries. *Nat Commun.* 11, 4155. doi.org/10.1038/s41467-020-17726-z

United Nations Food and Agriculture Organization. General situation of world fish stocks. fao.org/newsroom/common/ecg/1000505/en/stocks.pdf

Lavery, T.J., Roudnew, B., Gill, P., et al. (2010). Iron defecation by sperm whales stimulates carbon export in the Southern Ocean. *Proc. R. Soc. B.* 277: 3527-3531. doi.org/10.1098/rspb.2010.0863

Salleh, Anne. (2010). Sperm whales more than offset their carbon. ABC. abc.net.au/science/articles/2010/06/16/2927491.htm



Organic Leadership

By Niklaus Forstbauer

When I was asked what it means to be on the Certified Organic Associations of BC (COABC) board and executive, and the importance of engagement and being an advocate and ambassador for organics in the agriculture sector I immediately took a step back to think. It brought me way back in time.

The first organic board meeting that I remember attending was back in January of 1991. The reason I remember this is because, as a special treat on my birthday, I got to tag along with my mom to a BC Association of Regenerative Agriculture (BCARA) meeting. For my birthday that year I got my own little transistor radio, and with it I sat under the table at Mom's feet flipping through the stations quietly listening to whatever music I could find—and news of the start of the first Iraq war. I was 12.

That was normal for us growing up. When my parents began farming in the 1970's they began to meet with other like-minded farmers who had the same calling and passion for organic agriculture. Through their meetings they began to lay the foundation for the strong organic sector that we have in our province today.

The organic standards that were eventually developed were important for consumer confidence and best practices, but the reason they did it is because they knew it was the right thing to do for the planet, for the soil, and for our health. And it wasn't easy: every expert, the government, and the universities all advocated, endorsed, and promoted

chemical agriculture with the promise of it being safe and profitable. Organic was definitely counter-culture.

Fast forward to this past winter. While rummaging through our barn we came across a pile of old papers and documents from years gone by. Included in it were some old BCARA and COABC newsletters and meeting notes. We even came across an old flyer from Harvey Snow, at the time a young contractor offering his expertise to help folks get started in organic agriculture. The forgotten history, often taken for granted, is an incredible tale. Beginning with several dozen folks with conviction, growing to hundreds with a vision, and now numbering thousands. A movement, all because of a few farmers who started volunteering their time to get organized.

So here we are today—we've come a long way. We have a strong and growing organic sector. It's great and all the hard work is done, right? Not quite! Though organics has become mainstream, we are facing some pretty serious global challenges directly related to agriculture—climate change, increased use of pesticides, GMO, depletion of soil, health crises... The list is long.

I'm sure as farmers we can all relate to the age old saying, "the harvest is plentiful but the workers are few." We've all been there! When it comes to the work that the organic sector is doing, both in the province and beyond, I think that this saying certainly strikes a chord. We still have strong and courageous people who year after year work hard to advocate for the earth through organic agriculture, and we would love to have more people get involved!



Facing page: Forstbauer kids leading the way with rhubarb placards. Top: Travis and Forstbauer kids doing farm chores on the tractor. Above: generations of Forstbauers harvesting in the greenhouse.

So what does it mean to be involved as an advocate for organics? It's rewarding to contribute alongside amazing and passionate people at COABC. The earth can be healed by working with nature through organics; we simply need people who are willing to do the work.

I was fortunate to be brought up around people, my parents included, who put in a lot of work to build what we have today. Now it's our turn to build on their foundation to leave a thriving system for the next generation. Your unique talents and voice are needed to ensure the vitality of the organic movement in BC! Let us know how you can help! 🌱

Get in touch:

✉ info@certifiedorganic.bc.ca

Niklaus Forstbauer farms at Forstbauer Family Farm with his wife Lindsey and other members of his family. Established in 1977, Forstbauer Farm uses biodynamic farming principles, a method of farming that focuses on soil health and a holistic approach. Niklaus is the Co-President of COABC, and sits on the board of BCARA.



ALWAYS 100%

ORGANIC PRODUCE

BECAUSE YOUR BODY
AND OUR EARTH DESERVE
THE BEST CARE.

Live well. Live organic.

