

British Columbia Organic Grower



FUTURE OF ORGANIC:
EMPOWERMENT

Journal for the Certified Organic Associations of BC - Fall 2020
Volume 23, Issue 4 (\$5.00)

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



COABC

Certified Organic Associations of BC

Official mark of the
BC Certified Organic Program

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Urban Harvest

Urban Harvest brings the harvest from Okanagan farms to the city—read more on *page 8*.

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The Hands That Feed Us

Head to *page 16* to read about Devon Cooke's journey working at Amara Farm and his documentary *The Hands that Feed Us*.

BC Organic Grower

is received by all members of organizations belonging to the Certified Organic Associations of British Columbia. BC Organic Grower is published quarterly by COABC.

Subscribe online at:

certifiedorganic.bc.ca

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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.

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bcogadvertising@certifiedorganic.bc.ca

Non-member subscriptions

(\$20/year plus GST) please contact:

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On the Cover: Arzeena Hamir in her field at Amara Farm. Credit: Derek Gray.

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Editor's Note

By Darcy Smith

If there were ever any doubt of the importance of resilient food systems, the past six months have stormed in to clear that up for us. Local, organic food has never been more essential. For the majority of Canadians, who may have felt that their lives don't intersect with agriculture on a daily basis, the point has been driven home: agriculture is on every table, every day. Fear of food shortages, global supply chain disruptions, and scarcity sent consumers from grocery store shelves to the farmer's front door, while BC farmers scrambled to adjust to a changing marketplace and sudden spike in demand for local food.



In the Fall 2020 issue of the BC Organic Grower, we continue to explore what the future holds for organic, this time through empowerment from farm to fork. What does it mean to have not just a local, organic food system, but an *empowered* local, organic food system?

Empowerment in the organic sector means looking at the “interdependence and real partnerships along the value chain and also on a territorial basis. It particularly acknowledges the core position of small-scale family farmers, gender equality and fair trade,” according to IFOAM - Organics International. You can read more about Organic 3.0 here: ifoam.bio/about-us/our-history-organic-30.

Our organic story jumps right into the middle of the value chain, featuring Lisa McIntosh of Urban Harvest, an organic, local home delivery business that's been serving the Okanagan for 20 years (page 8). I love the way Lisa describes strong food systems as a web of relationships—and how her dedication to logistics supports a resilient food system.

Organic Week is all about celebrating organic with empowered farmers and consumers. On page 12, the Canadian Organic Trade Association showcases the ways farmers and consumers alike can get involved this coming September 7th to 13th.

Speaking of consumers, Devon Cooke went from eater to grower this spring when he ditched urban living to spend the season working on farms, and on his documentary, *The Hands that Feed Us*. Read up on his experience at Amara Farm, and the revelations that changed the way he looks at food, and our food system, on page 16.

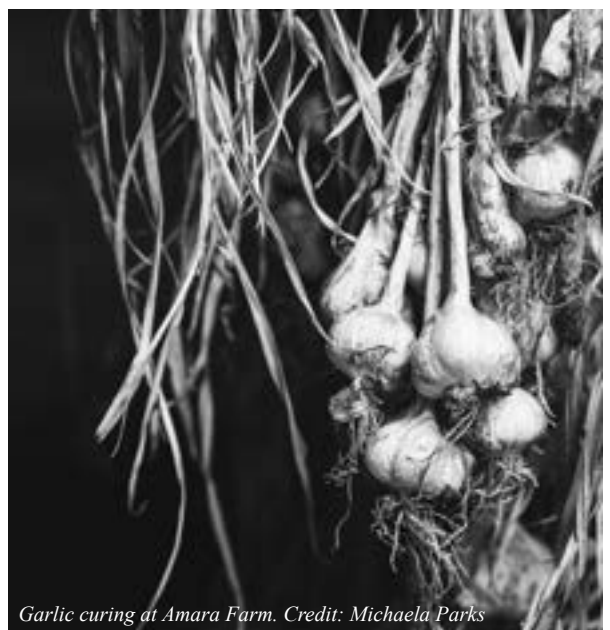
Ashala Daniel at Solstedt Organics speaks to her experience renewing her organic certification with iCertify, and the potential she sees for the new platform to build connections between organic farmers, and strengthen the sector as a whole (page 20). On page 6, Anna Helmer is back with a message from a biodynamic potato farm: cows are cool, and so are farm stands. It's all about relationships.

To rehash a cliché, knowledge is power—and empowerment (I know, I know...). On page 24, Lucy Sharatt shares an update on the latest technology to hit the GM market, gene editing, and the industry spin to watch out for. In Footnotes, Marjorie Harris takes us into the world of selenium and its place in the nutrient supply chain (page 14), and on page 28, our guest expert, Karen Fenske, unpacks financial planning in your thirties.

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 



Garlic curing at Amara Farm. Credit: Michaela Parks



Lettuce seeds. Credit: COABC

#BCOrganic2021 Goes Virtual

After much deliberation about the feasibility of hosting a regular conference with COVID-19 restrictions and unknowns, the 2021 BC Organic Conference and AGM will be held as a series of virtual seminars and educational events instead of a large in-person conference.

We've identified many positive aspects to this new format and look forward to the possibility of forging new partnerships, extending the reach of the event, and increasing opportunities for knowledge transfer and the growing and strengthening of the organic community!

We'll have more details to share soon, as well as plenty of opportunities to contribute and be involved.

Updates from the BC Agriculture Council

The BC Agriculture Council (BCAC) is a non-profit "council of associations" representing nearly 30 farm associations, including COABC. The role of the BCAC is to advocate for the interests of BC farm and ranch families. Niklaus Forstbauer is the current COABC representative to the BCAC,

where he ensures that the voice of organic is heard.

Policy Development: Members of the COABC Executive met with the BCAC to contribute to policy strategies for BCAC, giving COABC an opportunity to identify areas of importance when developing policy and strategic plans for the BCAC going forward.

AgDays: Due to COVID-19, AgDays in Victoria will look different this fall. As there will probably be no large reception, the BCAC is looking at alternative ways to grab the attention of MLAs and connect with government.

Climate Adaptation: The BCAC is working on a Climate Preparedness and Adaption strategy with the provincial government.

BC Farmer ID Card: The new online application for the BC Farmer ID card will go live in the fall. The BC Farmer ID Card allows farmers to access coloured fuel, farmer only tax benefits, insurance and travel discounts, and exclusive offers from businesses. The BCAC Farmer ID Card is government-recognized and only available through the BC Agriculture Council.

bcac.ca

Organic Week

Canada's National Organic Week is the largest annual celebration of organic food, farming and products across the country. This year, it's happening from September 7th to 13th online and across Canada! Learn more and get involved:

organicweek.ca

Countdown to the 2020 Canadian Organic Standards!

The revision of the Canadian Organic Standard (COS), which began in September 2018, will soon be complete. The Canadian General Standards Board (CGSB) plans to publish the 2020 version of the COS in the fall.

The revisions to the standard have been the subject of much debate. Practices related to animal welfare, promotion of biodiversity, greenhouse production, and other types of production have been assessed and compared to the organic standards of our trading partners. Consensus was sometimes difficult to reach, but, in the end, the COS 2020 includes improved practices and is intended to meet consum-

er expectations of COS-certified organic products.

Keep an eye out for news items leading up to the release of the standards in November which will inform operators and stakeholders of the updated practices of Canadian organic production.

In the fall of 2020, the OFC will host a webinar describing in detail the adopted revisions to the organic standard. Please note that operators will have a full year to comply with the revised practices from the date of its publication by the CGSB.

Canadian Organic Growers will release the Guide to the Canadian Organic Standards 2020, which will be published by Canadian Organic Growers Inc. in November 2020. The online guide will be available free of charge at:

cog.ca

Farm Status Safe for 2021

This summer, the province announced that all properties currently classed as farms with BC Assessment will be able to maintain their status on the 2021 tax roll, regardless of whether they meet revenue thresholds. This means that farmers already stretched thin and struggling to manage in a pandemic won't have to worry about losing farm class status.

The exemption does not apply to new applications, or to properties subject to a legal change, including a change in ownership or subdivision, according to the province, nor to any property with a change in use or where a lease is expiring.

Support for Farmers

The Investment Agriculture Foundation of BC is accepting appli-

cations between \$10,000 and \$100,000 for the Agriculture and Agri-Food Canada Emergency Processing Fund for Western Canada! The program funding is designed to support specific priority areas relating to food safety and security for food processing, manufacturing, or greenhouse operations. Applications must be completed by September 30, 2020.

iafbc.ca/emergency-processing-fund

Webinar on the Small Scale Meat Industry

The Small Scale Meat Producers Association (SSMPA) represents BC farmers and ranchers who are raising meat outside of the conventional, industrial system. Their goal is to build a thriving small-scale meat industry that supports farmers and contributes in a significant way to food security in BC by offering well-raised, high-quality meat to BC markets. Check out their latest webinar, with an SSMPA update from Tristan Banwell, info on livestock traceability, and featured products.

youtube.com/watch?v=-suq2KkfGGEY&feature=youtu.be

Open Letter to BC Government

A group of sustainable food systems advocates and leaders presented an Open Letter to the Honourable John Horgan, Premier and the Honourable Lana Popham, Minister of Agriculture, calling for transformative food systems change. The letter urges the government to adopt programs and policies that will lead to long term resilience in our food system.

"The Ministry of Agriculture has acted quickly during the pandem-

ic and has taken many positive steps to support local food production, distribution, and accessibility. The pandemic confirms the vulnerability of our global and regional food systems to economic, environmental, health, and social crises," says Anita Georgy, Executive Director of FarmFolk CityFolk.

Much of our food in BC travels thousands of miles, across many borders, and passes through many hands before reaching our plates. While climate change and the pandemic response are top of mind, our food system also suffers from deep social inequities, biodiversity loss, and water and soil degradation. The flaws in this system are becoming more apparent daily, as we see a range of immediate and medium to long-term impacts across our food systems.

"I believe that now is the time to bring about transformative change to create resilient and sustainable local food systems. The recommendations in the open letter focus on addressing the immediate and long-term challenges from both climate change and the COVID-19 pandemic," says Georgy.

Abra Brynne, Executive Director of the Central Kootenay Food Policy Council, describes the letter as "an invitation for the government to seize this moment, as we envision what recovery looks like in BC, to collaborate with us on initiatives to build food self-reliance in the province."

Read the full letter here:

farmfolkcityfolk.ca/wp-content/uploads/2020/07/Open-Letter.pdf



biodynamic farm story: Down Two Cows Up One Farm Stand

Credit: Helmers Organic Farm.

By Anna Helmer

We have no cattle on the farm this year. This is not an ideal situation for a biodynamic farmer. Rudolph Steiner's lectures are specifically reverent about the bovine influence. Very simply, their manure is important, and their manner is to be admired.

We never set up as ranchers, but the two cows were integral to the farm: Bella and May the Belted Galloways were not only manure producers, they were brush-cutters, cull potato-processors, and steady influences on us flighty farmers. They spent at least a decade in the same five-acre pasture, securely contained by a single strand of electric fence that hadn't been turned on for years. Although from time to time they would allow themselves a certain amount of, shall we generously say, reckless gay abandon, and turn up at the kitchen window...they never really lost the plot, emotionally speaking. Very chill animals. I wonder what they would have thought about COVID. Not much, I guess.

Good point.

We miss them. We plan to get more animals. However, we recently put a farm stand in the copse of trees in their pasture by the road, their go-to place during hot summer days.

It's the perfect place for a potato stall, and I can't even begin to explain all the factors that make a perfect environment for a potato stall.

As a rule, I resist change, despite numerous examples of delightful, or at least tolerable, results of succumbing to it. Let's, for example, take this insistence on using our own cow's manure to make BD Prep 500: obviously impossible this year because we have shipped all the cows away, taken down the fencing, and plopped a farm stand in the pasture.

Nevertheless, BD 500 must be had.

We dithered, we dathered, and long, boring story short, we finally ordered it from a mail order service. It worked a treat. The fields are next level in moisture retention and punching up lush cash crops (and weeds). I realize that the mail order people have been making the Prep for about 80 years, and so they probably are better at it than us. It's powerful stuff.

I'd like to circle back to the roadside farm stand and cite it as another example of farm empowerment. Apologies and respect at this point to farmers who already utilize and understand this powerful agricultural tool. I am still at the giddy goosebump evangelical stage of change. You may

now say “I told you so” and suffer through my inadequate thesis argument.

It’s a way we can sell to the people that is clean, open, traceable, and accessible for both ends of the food chain. On our farm, the workers range in age from eight to 80 and each one can get out to the farm stand to help manage it. Even those reluctant to engage the public can connect with the point of sale, as there is no expectation to greet each customer. There are no rules (yet). The people who turn into the driveway are choosing us and leaving nice notes in the book provided.

You know, the farmer can go to the city to sell, but the farm itself can’t. Customers have been telling us for years that they want to see the actual place where the food is grown. Historically aware that the work required to host people on the farm is counterproductive to farming, I have resisted this call. How thrilling to now discover that the farm stand is on the contrary, complimentary to farming, and it’s more than just a place to sell potatoes.

I am starting to think a proper food system has space in it for people to sit in the shade like Bella and May, doing nothing more than taking in the sights and not fussing. 🍃

Anna Helmer talks big and farms with her family and friends in the Pemberton Valley.

📍 heltersorganic.com



Celebrating 30 Years

Pro Organics is proud to represent BC organic producers and to be celebrating our 30th year of supporting local, organic, sustainable farming.

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URBAN HARVEST

Many Strands Make a Strong Food Web



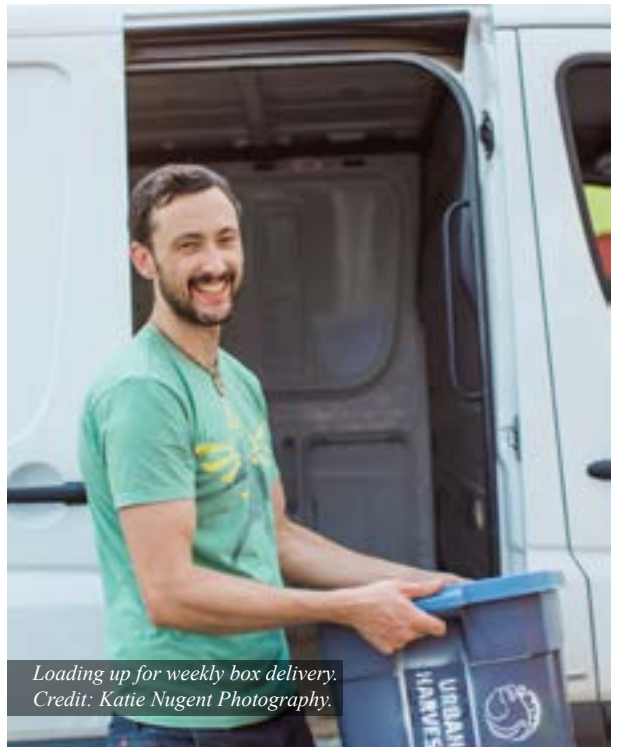
Lisa meets up with South Okanagan growers in Penticton for peaches, nectarines, plums, tomatoes, eggplant, and apples. Credit: Urban Harvest.

By Darcy Smith

Farm-to-fork has come to embody the eating ethos of people seeking a deeper connection to healthy, local food—and Urban Harvest has been putting the “to” in farm-to-fork for the last 20 years. Lisa McIntosh co-founded the Okanagan-based organic home delivery service with her partner at the time, David Nelson, in 2000.

For Lisa, “logistics are the part that makes the local food system work.” For the farmers who supply Urban Harvest, there’s no doubt she’s right. Lisa’s goal, and Urban Harvest’s slogan, has always been “bringing the farm to your doorstep.”

Urban Harvest was born out of “a real desire to support sustainable agriculture,” Lisa says. When Lisa and David started Urban Harvest, she was just coming out of a degree in sociology and anthropology, with a focus in community economic development. She’d been interested in the sustainable agriculture field for years, and when David put the idea of an urban delivery business on the table, Lisa “loved the fact that we could be connected to farmers but not be farming ourselves, that we could help get the food to customers wherever they are.”



Loading up for weekly box delivery. Credit: Katie Nugent Photography.



The Urban Harvest team takes a break. Credit: Katie Nugent Photography.



Lisa McIntosh, Urban Harvest Co-Founder
Credit: Katie Nugent Photography.



The Urban Harvest staff team
Credit: Urban Harvest.

market, we can cover that same route, and reduce waste because you don't have to have everything packed and labeled in the same way."

Lisa, and Urban Harvest, quickly built relationships with growers in the region. From WWOOFing at Sudoa Farm in the Shuswap, where she learned about growing and packing produce from Sue Moore, to getting involved with the North Okanagan Organics Association, to meeting Hermann Bruns at Wildflight Farm, word about Lisa and Urban Harvest got around fast.

"People can't always make it to the Farmers' Market," Lisa points out. "There's a carbon efficiency to home delivery as well. Rather than 60 people trucking down to the



Urban Harvest at the UBCO orientation fair in 2017. Credit: Urban Harvest

Urban Harvest now supplies between 400 to 600 families with local, organic produce each week. Lisa sources food from growers around the Okanagan as a priority, and from further afield when necessary to ensure a wide selection throughout the year. Urban Harvest offers standard regular and family-size produce boxes year-round. Each week, Lisa plans out the boxes based on what's seasonally available—and what the good deals are—which is “a bit of an art.” Then, customers can see what's on the docket for that week and customize or add to their orders, providing them with a flexible and convenient way to access local food. They place their orders, and Lisa communicates to the farmers, who harvest on Monday and get their product to Urban Harvest.

She drives down to the South Okanagan weekly to pick up from several farms. “There's a jumble every time, figuring out,” she says. “The beautiful part is I get to see the farmers every week. It's a little more legwork—and arm work—for sure.”

Wildflight Farm in the North Okanagan has been dropping off produce from Wildflight and other farmers in the area to Lisa for years, which has been a huge advantage to both Urban Harvest and the half-dozen farms who make use of the service. Other producers have different arrangements, with products getting shipped to, or dropped off at, the



Urban Harvest's delivery van. Credit: Katie Nugent Photography

warehouse, and some growers piggybacking on each other's shipments, so that someone's 100 pounds of plums, which might not be worth it on their own, can go with someone else's 800 pounds of apples. Whatever it takes to get the product from the farm to Lisa, and then to the customer's front door.

All that flexibility no doubt caters to the consumer, but Lisa is careful to ensure she's meeting the needs of farmers, too—it's a constant juggling act, and one she loves. She does an annual planning session with growers, she says, "to reduce overlap and maximize supply, so farmers are planting with us in mind. We know we have a supply we can count on and they have a market they can count on."

Like any healthy ecosystem, Urban Harvest is part of a web of interdependencies—relationships based on trust and community. For Rebecca Kneen of Crannóg Ales and Left Fields, "Lisa's produce buying policies have made a huge difference in the viability of organic vegetable farms in the North Okanagan."

From the annual planning meetings to Lisa's ability to look at what's available locally that week and use as much of it as possible, farmers are benefitting from Urban Harvest's approach. "That kind of flexibility is invaluable for small-scale farmers," Rebecca says. "Lisa McIntosh always has the interests of her farm suppliers close at heart." The organic community recognized Lisa's many contributions by presenting her with the Brad Reid award in 2019.

It's no surprise that farmers value Urban Harvest so deeply: the feeling is mutual. "I feel so privileged to have these relationships with farmers—such talented, dedicated farmers—and with customers who deeply care as well, and staff who have given so many of their years," Lisa says.

Urban Harvest has evolved over two decades in business, but remains true to the values it was built on. They've experimented with Saturday markets, donated a ton of food, and, in 2016, a partnership became a sole proprietorship. With all that change, "our little business has trucked along all these years with things coming and going, we just seem to have found our niche," Lisa says. "And customer number one is still a customer!"

When Lisa took the leap of faith and moved into running Urban Harvest solo, she found herself facing a big learning curve, especially, she says, on "all the things on the physical side, which I'd missed out on over the years." She's been able to grow into the new roles, and was heartened at "finding the support of staff and customers who believed in the business, and the farmers—there was a lot of interest from the farmers that we keep it going." That support showed up in all sorts of ways, right down to one particular farmer showing Lisa how to use the hand truck. Lisa also sings the praises of her team, several of whom have been with Urban Harvest for anywhere between sev-

en and twelve years. "It's been great to be able to rely on my staff," she says.

"Lisa has quietly and rigorously implemented her philosophy of supporting the local organic farming community year after year," Rebecca says. And that's never been more important. Not only did customers flock to delivery when COVID-19 hit, so did growers. All of a sudden, farmers were dealing with the uncertainty of how they would get their produce to market.

The global pandemic impacted many farmers who relied on Farmers' Markets and direct marketing relationships with consumers, leading some to find ways to do more on-line direct marketing, through taking pre-orders for pick-up or even trying home delivery themselves.

"The market was always there," Lisa says, "and it was interesting to see how quick people were to look for that." Delivery is a great option to reach out to customers. Some farmers love it, while others find it hard, with all the logistical challenges.

"Home delivery is on the uptick," Lisa says. "With things like the red onion scare recently, people like having a product they can put a face on. Home delivery helps put a face on the supply."

And while COVID-19 has meant extra steps in terms of sanitation, and some anxiety around keeping everyone healthy and safe, business-wise, Lisa has found the positive in these strange times. Weekly orders are selling out quickly—once in just 12 minutes!—and she hasn't been able to sign up new customers since March. She's had hundreds of new inquiries that she's been able to direct to similar businesses, like Farmbound in Vernon. It's felt good to have somewhere to send interested customers. "One of the beautiful things about a healthy food system is to have lots of options," Lisa says. "Many strands make a strong web."

In the end, of course, it all comes back to the food: "We have such an abundance of quality in the region, it's such a joyful thing," Lisa says. "I think we're moving forward with a strong organic sector." There's no shortage of consumer support for organic, she says, but "on the supply side, can we keep up, and bring the next generation into farming? Is there a future for them?"

With businesses like Urban Harvest out there, at the centre of a web of connections that makes it all happen, it's easy to take an optimistic view of the future. 🌱

Darcy Smith is the editor of the BC Organic Grower, and a huge fan of organic food systems, from farm to plate and everything in between. She also manages the BC Land Matching Program delivered by Young Agrarians.

Canadian Organic Trade Association's 11th Annual Organic Week Celebrations

Bok choy seedlings. Credit: Michaela Parks.

By Karen Squires

Canada's National Organic Week is the largest annual celebration of organic food, farming, and products across the country, and this year marks the 11th anniversary!

The celebration is a collaboration between the Canada Organic Trade Association (COTA) and its members and partners to grow awareness of organic across Canada.

The organic market represents almost 6.4 billion dollars in sales annually and continues to grow as two thirds of Canadians purchase organic products weekly. During COVID 19, survey results show Canadians are focusing more on healthy food and grocery shopping selection has become more important than ever.

The goal of Organic Week, happening September 7 to 13 this year, is to increase awareness of all organic products and to ensure consumers understand why it's important to support organic, which promotes better overall health of people, animals, soil, and the planet. The theme of the campaign this year is "I Choose Organic," which captures the essence of the importance of consumer choice and how it affects the planet, especially in relation to climate change. We are very pleased to see so much support and collaboration from members this year, especially with so many other competing priorities. As well, COTA has evolved the creative messaging to tell the Organic Story in a simple but compelling way through multiple media platforms.

The Organic Week campaign has multiple elements, including a national advertising campaign supported by The Globe and Mail and regional publications such as Now Magazine, The Georgia Straight and Montreal En Santé.

This year, for the first time, COTA is creating videos directly by farmers, sharing their story on why they grow organic. These videos are personal, engaging, informative, represent multiple sectors, and will be shared through social media platforms such as Facebook and Instagram.

The social media campaign will feature several contests with which consumers can engage to share their recipes and knowledge of organic, and win great prizes! In creating these contests, we also hope to spread more understanding on why choosing organic is an important decision and what it means to choose organic.

Ways to Participate

- The Recipe contest is a simple and fun way to participate in Organic Week. Simply take a photo of your favourite organic recipe and post it on Facebook, Instagram, or Pinterest using the hashtag #OrganicWeek. We will also have a multitude of prizes from our sponsors so stay tuned.

[organicweek.ca/contest](https://www.organicweek.ca/contest)

- Test your knowledge on organic with our IQ Quiz contest. The quiz consists of 10 questions that will test your

knowledge on organic and upon completing the quiz you will be entered to win some prizes.

organicweek.ca/test-your-organic-iq

- Our third contest is the Spot Canada Organic Contest, which highlights an interactive way for our contestants to be on the lookout for organic products. To participate, if you see the Canada Organic logo take a picture and share using the hashtag #OrganicWeek on Facebook, Instagram, or Pinterest.

All three contests open September 1st, 2020 at 12am EST / 9pm PST and end September 30th, 2020 at 11:59pm EST / 8:59pm PST. The winners will be selected based off creativity and presentation and will be announced on Facebook and Instagram on October 10th, 2020. This year we are also continuing with our #OrganicChat campaign.

Another important component of this campaign is the engagement of retailers across Canada. Retailers selling and promoting organic products will be highlighting organic and offering incentives during Organic Week. As such, COTA provides these retailers with display materials that are used to celebrate Organic Week and educate consumers. Stay tuned as many retailers across the country look at new and innovative ways to help consumers discover organic products during the month of September. Two thirds of Canadians purchase organic products weekly, a number which continues to grow—and we want to help consumers make informed healthy lifestyle decisions.

Outside of the campaign, COTA also provides a series of new research through data reports and surveys. We have found that during the pandemic many people are still choosing organic, even with the challenges they are facing. This newfound information has showcased to us and our members how significant organic is, especially when society is faced with new challenges. COTA features a multitude of resources outlining the significance of the sector and what COTA, along with our members, does on our website.

COTA would like to thank COABC and everyone in BC's organic sector for their ongoing support and collaboration. To learn more about COTA and membership with COTA, find information about research reports, and to receive ongoing communications and support, please visit:

canada-organic.ca 

Organic Week is coordinated by The Canada Organic Trade Association (COTA) with the help and support of their sponsors and members who make it possible. COTA's mission is to promote and protect the growth of organic trade to benefit the environment, farmers, the public, and the economy.

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WASTE NOT, WANT NOT

Empowering the Human Micronutrient Supply Chain from the Soil Up

By Marjorie Harris

I have long accepted that the saying “Healthy Soil, Healthy Plants, Healthy people” fully explained the human nutrient supply chain. Turns out, this is not entirely accurate. In fact, the mineral requirements for healthy plants, animals, and people are quite different.

During organic farm inspection tours, I met a BC farm family diagnosed with selenium deficiency syndromes. The local health unit had identified the conditions. One person suffered from a significant fused spinal curvature from a skeletal muscle disease caused by selenium deficiency.

The farm’s soil tests confirmed that the garden soils were indeed deficient in selenium. The farmer was aware that his newborn livestock required selenium shots to prevent white muscle disease and that his livestock were fed selenium-fortified commercial organic livestock feed.

That BC farmer’s “Aha!” moment came when he made the connection between his garden soils’ lack of selenium and his family’s health problems. My curiosity was piqued. What was going on here—what is selenium and where do we find it?

Selenium is recognized as an essential trace mineral for healthy livestock and it is standard best practice to give selenium shots shortly after birth. In the year 2000, the Canadian government, along with the rest of North America, mandated the addition of selenium minerals to commercial livestock feeds (poultry, swine, beef/dairy, goat, and sheep) as a way to increase animal health and fortify the human food supply in dairy, meat, and eggs. Canadian wildlife surveys have determined that wild creatures also suffer from selenium deficiency diseases. Chronic and sub-clinical selenium deficiency could be a contributing factor to recent wildlife population declines, as other causes have not been identified.

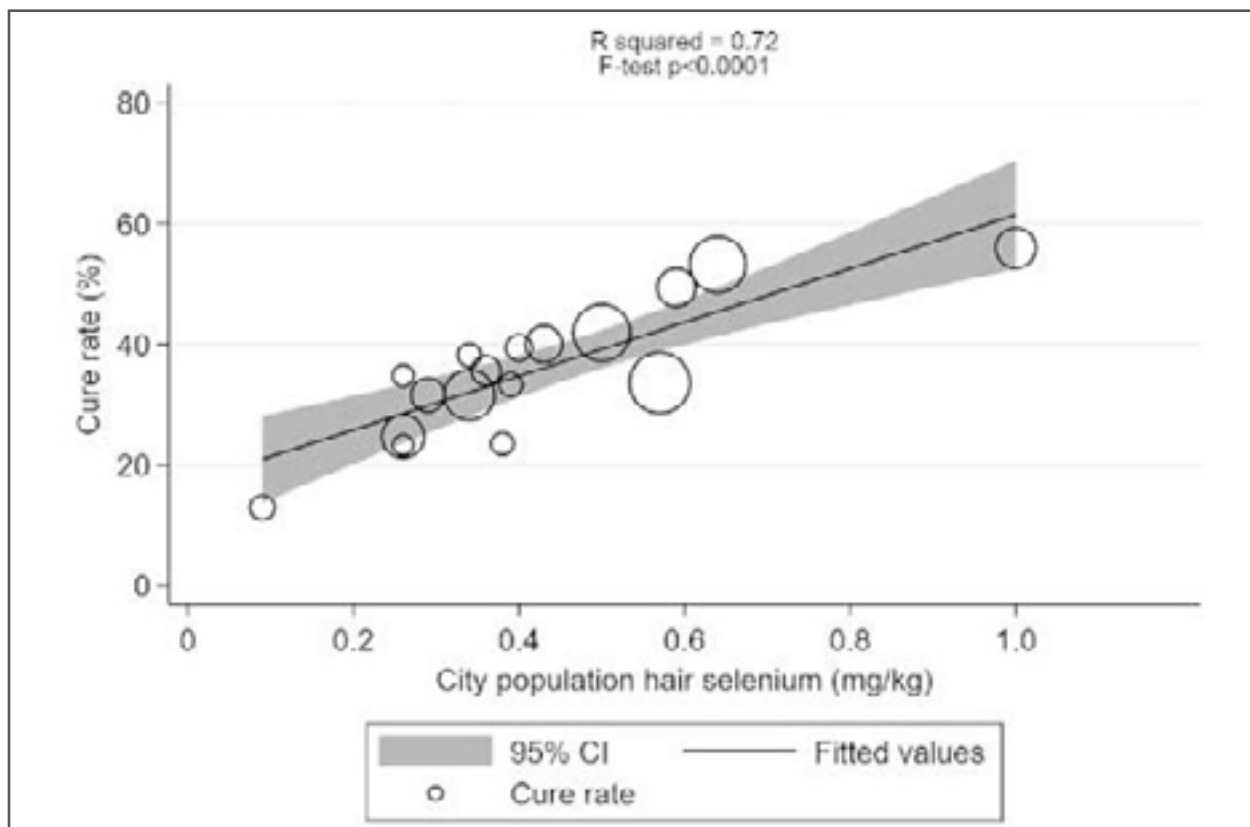
I was surprised to learn from the government of Alberta’s Agri-Fax sheet that plants do not use selenium and do not

show deficiency symptoms from its lack in the soil. At the same time, there are a few plants, such as locoweeds, that can hyperaccumulate selenium to levels that are toxic to livestock when selenium concentrations are high in the soil.

It was only relatively recently that we realized selenium was essential for human health. In 1979, Chinese scientists made the discovery while investigating the deaths of thousands of young women and children in the Keshan County of North Eastern China. The condition associated with these deaths was named Keshan disease, after the county where it was first recognized. The Chinese scientists discovered that selenium supplementation could correct the disorder. Since then, much has been learned about how selenium acts as a mineral in the human body in conjunction with other trace minerals such as chromium and iodine, which are also not used by plants.

Selenium deficiency is regarded as a major worldwide health problem with estimates of between 500 million to 1 billion people living with selenium deficiency diseases. Even larger numbers of people are consuming less than what is needed for optimal protection against cancer, cardiovascular diseases, and infectious diseases.

Researchers have found that selenium is widely distributed throughout the body’s tissues and of high importance for many regulatory and metabolic functions. Selenium is very much like a “Goldilocks” micronutrient: you need just the right amount. Too much or too little can lead to serious health consequences. The Recommended Daily Amount (RDA) in Canada for adults and children 14 and up is 55 micrograms per day. Our dietary selenium is taken up in the gut and becomes incorporated into more than 30 selenoproteins and selenoenzymes that play critical roles in human biological processes. Selenium is considered a cornerstone of the body’s antioxidant defense system as an integral component required for glutathione peroxidase (GPx) activity. The GPx enzyme family plays a major role in protection against oxidative stress.



In addition, selenoproteins regulate many physiological processes, including the immune system response, brain neurotransmitter functioning, male and female reproductive fertility, thyroid hormone functioning, DNA synthesis, cardiovascular health, mental health, and heavy metal chelation. Selenoproteins have a protective effect against some forms of cancer, possess chemo-preventive properties, and regulate the inflammatory mediators in asthma.

Many chronic diseases have been linked to selenium deficiency. A short list includes: diabetes, Alzheimer's, lupus, autoimmune disease, arthritis, schizophrenia, cardiovascular disease, degenerative muscle diseases, neurological diseases, and rheumatoid arthritis. The selenium GPX-1 immune defense system has demonstrated antiviral capability. GPx-1 is found in most body cells, including red blood cells.

Some lipid-enveloped viruses pirate host selenium resources as a strategy to outmaneuver the host immune selenium-activated GPX-1 antioxidant system. If a host is selenium-deficient the virus can overwhelm the host GPX-1 immune response. In selenium-competent individuals the GPX-1 initiates an immune response cascade which inhibits viral replication and clears the virus from host. Selenium's antiviral defense ability has been documented for Ebola, coronavirus, SARS-2003, influenza viruses (swine and bird flu), HIV, herpes viruses, cytomegalovirus (CMV), Epstein-Barr virus (EBV), hepatitis B and C, Newcastle disease virus, rubella (German measles), varicella (chicken pox), smallpox, swine fever, and West Nile virus. There

are a number of studies showing that selenium deficiency negatively impacts the course of HIV, and that selenium supplementation may delay the onset of full-blown AIDS.

While the research is still unfolding and it is too early to make determinative conclusions about COVID-19 and potential treatments, preliminary research indicates several interesting lines of inquiry. COVID-19 researchers in China published new data on April 28, 2020 making an association the COVID-19 "cure rates and death rates" and the soil selenium status of the region. Higher deaths rates were observed in populations living inside soil selenium-poor regions such as Hubei Province. Regional population selenium status was measured through hair samples. Samples were collected and compared from 17 different Chinese cities: "Results show an association between the reported cure rates for COVID-19 and selenium status. These data are consistent with the evidence of the antiviral effects of selenium from previous studies."

By now, you've probably figured out that we can't live without selenium. The evidence is clear: human and animal health is dependent on selenium, and yet it is the rarest micronutrient element in the Earth's crust. Selenium is classed as a non-renewable resource because there are no ore deposits from which Selenium can be mined as the primary product. Most selenium is extracted as a by-product of copper mining.

Selenium has many industrial applications because of its unique properties as a semi-conductor. The most outstand-

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A City Boy Goes to Work ON THE FARM!



Amara Farm salad fields. Credit: Michaela Parks.



Filmmaker Devon Cooke. Credit: Derek Gray.

By Devon Cooke

On April 15th, I uprooted myself from my Burnaby basement suite, packed as much as I could into my hatchback, and hit the road. Pandemic lockdown plan: go to where the food is. Destination: Amara Farm in the Co-mox Valley. I had negotiated what I thought was a pretty sweet deal. Amara Farm would provide me with room and board, and I would offer my labour on the farm. And one more thing: while I was there, I'd be filming my documentary, *The Hands that Feed Us*, about how farmers are coping with COVID-19.

I'm a city boy, with no farm experience and no particular desire to be a labourer, but Arzeena was thrilled to have me on the farm. Usually, she relies on interns for labour, and with travel shut down for COVID, she was wondering how she was going to get through planting season when I called. For myself, I saw a selfish opportunity to make my film, but also a safety net. The apocalyptic part of my mind could see the possibility of a Great Depression, and I wanted to be at the front of the breadlines. I might not make any money on the farm, but I wouldn't starve, and I'd be learning how to grow food to feed myself, if it came to that.



Basil harvest at Amara Farm. Credit: Michaela Parks.

I've had back problems for almost 20 years, and the legendary farmer work ethic made me a little nervous about how my body would stand up. I was envisioning working the fields sun-up to sun-down, so I was pleasantly surprised to learn that the farm's work hours were 8:30-4:30, with a full hour break for lunch. Those are better hours than I've ever worked, and certainly much better than the 12-plus hour days that are standard in the film industry.

The last hour of the first day turned out to be the hardest on my body. My assigned job was to mark holes for on-

ions that would be planted: three rows per bed, spaced 12 inches apart. Doing this efficiently meant squatting down, marking a few holes, standing up, shifting down the row, and squatting down again. Squatting was especially bad for my back, and with three beds left, I couldn't stand straight. At that point, the farm manager, Kate, took pity on me and took over. I felt defeated. Kate's comment: "That's farm life. Sometimes it defeats you."

Since then, I've had days where my back was sore, but my body has toughened up as I've gotten used to farm work,



Arzeena Hamir and Neil Turner of Amara Farm. Credit: Michaela Parks.



COVID-19 protocols at a Whole Foods Vancouver store. Credit: Devon Cooke.

and now I don't worry about my back. For the first time in years, I'm not paying \$120 a month to have someone "fix" my back. Who knew that all I really needed was some actual work!

One day, I wanted to film customers, so I needed to stay close to the farm gate where I could intercept them before they picked up their orders. I couldn't be in the fields while I waited, so I asked if there was any work I could be doing between customers. There was! The wash station was right where I would be waiting, so I was assigned to wash produce tubs.

After a few hours and a half dozen customers, I thought, "Gee, I wish I could be doing something more useful with my time." Cleaning tubs didn't feel like "real" farm work—real farm work was planting, or seeding, or weeding. But, as I ruminated a bit more, I became aware of the prejudice in my thought. Cleaning tubs is just as much a part of farm work as seeding or weeding. If I didn't clean them, someone else would have to do it later. Cleaning tubs is useful work; it was only the mundane nature of the task which made me feel like I wasn't contributing to the farm.

My realization contains a bigger lesson. We don't tend to place much value in the mundane. We like cleanliness, but cleaning tubs is a job for somebody else, and often we want to pay the absolute minimum to get the job done. Food has the same problem. What could be more mundane and

routine than eating a meal? We eat three times a day—and we do it quickly and thoughtlessly so we can spend our time on "more important things." Is it any wonder that our culture spends so little on food?

This cultural attitude was illuminated for me enroute to my next farm. I stopped in Vancouver for a day or two, which meant that for the first time in two months I had to buy my food at a store instead of just raiding the seconds bin.

Walking into Whole Foods, I was overwhelmed. Any food I could imagine was on a shelf somewhere, enticingly displayed and picture perfect. For a moment, I had no idea what to do. At Amara, I cooked whatever was growing at the farm; the idea that I could simply buy a pair of artichokes and a lemon for dinner didn't make sense. Are artichokes in season? How long ago was the lemon picked? I couldn't answer these questions, and that disturbed me because, at Amara, I would have known the answers intimately. I had helped grow it!

Allow me to use Whole Foods as a symbol. In our culture, Whole Foods is a shrine to food; it represents the best of our cultural ideals around food: organic, wholesome, healthy, and plentiful. It's more expensive, but people shop there anyway because they care about the quality of their food. Before I set out on this journey, I was a worshiper at the shrine of Whole Foods. And, indeed, the values behind Whole Foods are good values, ones that I still hold dear.



*Above: Farm interns working at Amara Farm.
Below: Green bean harvest. Credit: Michaela Parks.*

Nonetheless, my time on the farm has taught me that Whole Foods is a false idol. The ubiquitous bounty on the shelves, the fact that I can buy mangoes from the Philippines at any time of year, all that encourages me to treat food as mundane, as something I can obtain on a whim if I'm willing to part with a sufficient amount of cash. Because it is so easily available, I'm discouraged from knowing where the food was grown, who picked it, and what growing conditions were like. I can't know these things even if I want to; I simply trust that Whole Foods has taken care of that for me. I pay a bit more to Whole Foods because I believe they are better priests of food than the ones at Superstore, but the bottom line is that I'm still delegating control of my food to someone else. In doing so, I treat food in the same way I was thinking about cleaning tubs: a job for someone else.

I'm now on my third farm and fifth month of this journey. I've had many lessons since I left Amara Farm, with many more to come in the coming months. I expect that once winter comes, I'll stop working on the farm and focus on completing my documentary. I can't say what I'll be doing for food at that point, but I can say that I won't be satisfied shopping at the supermarket. Now that I've spent time learning how to grow food, I don't think I can simply put food in my mouth without asking where it came from or how it was grown. 🌱



*Devon Cooke is making *The Hands that Feed Us*, a documentary about how farmers make a living during COVID-19. You can follow his journey as a farmhand online.*

📺 [youtube.com/channel/UCkrzN7eKnPXpTxa7gr3p8XQ](https://www.youtube.com/channel/UCkrzN7eKnPXpTxa7gr3p8XQ)

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Off-Grid Organic Farm Shifts to iCertify

Solstedt Organics

Sunflowers at Solstedt Organics. Credit: Ashala Daniel.

By Corinne Impey

Tucked into the wilderness of the Fraser River Canyon, water flows from a glacial-fed creek on Ashala Daniel's off-grid five-acre organic farm, Solstedt Organics.

Living with a palpable link to the land, Ashala applies low-energy practices and sustainable farming techniques that minimize the dependence on machinery in the garden. She has fruit trees on half of her land and grows heat-loving ground crops on the rest.

With 2020 marking her fifth year of farming, Ashala was keen to try COABC's new online organic certification system, iCertify, to do her annual renewal. Certified through North Okanagan Organics Association (NOOA), Ashala started the new process in January.

"My experience with iCertify was very positive, though I am very glad I went to the training session provided to be able to ask a human the questions I had," says Ashala.

"iCertify seems to be more in depth than my previous certification application and I wanted to make sure I was providing all necessary information. iCertify is more complex for sure, but easy to work through all the stages. I liked that I could save the application renewal and go back and work on it in pieces."

Some of the greatest benefits, says Ashala are less paper and more consistency in reporting overall. It's also creating a stronger link between farmers.

"I can now talk to other farmers who are certified with different providers about the application process and we are talking about the same thing," says Ashala.

Because of the shift to an online system, Ashala also says there could be benefits to the industry as a whole. "I believe organic certification will be taken more seriously and it will enable farmers to be more organized in their reporting and accountability."



Solstedt Organics farm crew. Credit: Esther Amezcua.



Ashala of Solstedt Organics. Credit: Stefano Piccone.

And now, with her renewal application submitted, Ashala can get back to focusing on the farm season ahead.

You can find Solstedt Organics produce at Trout Lake Farmer's Market and in fine Vancouver restaurants from July until October. 🍂

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.

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ing physical property of crystalline selenium is its photo-conductivity. In sunlight electrical conductivity increases more than 1,000-fold, making it prized for use in solar energy panels and many other industrial uses that ultimately draw selenium out of the food chain, potentially permanently.

Selenium is very unevenly dispersed on land masses worldwide, ranging from deficient to toxic concentrations, with 70% to 80% of global agricultural lands considered to be deficient. Countries dominated by selenium-poor soils include Canada, Western and Eastern European, China, Russia, and New Zealand. Worldwide selenium-deficient soils are widespread, and increasing.

Naturally selenium-rich soils are primarily associated with marine environments. Ancient oceans leave behind dehydrated selenium salts as they recede. Here in Canada the receding salt waters of the Western Interior and Hudson seaways left mineral deposits from the Badlands of Alberta, following along the southern borders of Saskatchewan and Manitoba.


Some countries, including Finland and New Zealand, have added selenium (selenite) to fertilizer programs to fortify the soils with some success. Results show that only a small proportion of the selenium is taken up by plants and much of the remainder becomes bound up in non-bioavailable complexes out of reach for future plant utilization. On this basis, it is thought that large scale selenium biofortification with commercial fertilizers would be too wasteful for application to large areas of our planet. The geographic variability of selenium content, environmental conditions, and agricultural practices all have a profound influence on the final selenium content of our foods. Iodine, which works hand-in-hand with selenium, is even more randomly variable in soils and food crops.

The Globe and Mail ran the following January 2, 2020 headline: “Canadian researchers combat arsenic poisoning with Saskatchewan-grown lentils.” In 2012, it was estimated by the WHO that 39 million Bangladeshis were exposed to high levels of arsenic in their drinking water, and the World Health Organization (WHO) deemed Bangladesh’s arsenic poisoned groundwater crisis the “largest mass poisoning of a population in history.” As it turns out, the lentils from southern Saskatchewan accumulate enough selenium that they could be used as a “food-medicine” in Bangladesh as a cure for arsenic poisoning. Clinical trials conducted from 2015 to 2016 found that participants eating selenium-rich lentils had a breakthrough moment when urine samples confirmed that arsenic was being flushed from their bodies. Other studies have also shown that selenium binds to mercury to remove it from the body.

Now that we are finally wrapping our minds around the fact that our personal health depends on just the right amount of

selenium, we find out that the health of future generations may depend on it even more. It takes more than one parent’s generation to produce a single child. While a female fetus is growing in the womb, the eggs of the gestating mother’s grandchildren are also being formed in the ovaries of the fetus. The viability of the grandchildren’s DNA is protected from oxidative stress damage by antioxidant selenium. Oxidative stress on the new DNA could potentially result in epigenetic changes for future generations. The selenium intake of the grandparent directly affects the grandchildren. From this point of view, it is seen as imperative that all childbearing people have access to sufficient selenium. Selenium is essential for healthy spermatogenesis and for female reproductive health, as well as the brain formation of the fetus. In short, humanity is dependent on selenium for health—now and forever.

The world’s selenium resources are scarce and need to be carefully managed for future generations. Since both the human and livestock food chains are being fortified with this scarce resource, the manures from these sources are worth more than their weight in gold. The natural cycles of returning resources dictates that livestock manures need to be guided back into the soil for crop production. Human biosolids can be guided into fiber crops or forest production. Over time, livestock manures will fortify the soils with all of the micronutrients passing through their systems. Human manures passing through fiber crops can eventually be composted and recycled into crop production, returning selenium continually to the human micronutrient supply chain.

Waste not, want not. 

Marjorie Harris, IOIA VO and concerned organophyte.

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New to the Farm: Young Agrarians

Connected to the Land Podcast



On this week's episode of the Connected To The Land podcast, sponsored by McKenzie Seeds, Ian learns all about the Young Agrarians with help from his guest Dana Penrice, a Manitoban farmer and the Prairie Program manager for Young Agrarians (YA). With YA, Dana is working to grow the next generation of ecological farmers in Alberta and is committed to creating farmer-to-farmer relationships and helping new and young farmers navigate the opportunities and challenges of starting to farm.

youngagrarians.org/farmer-podcast-club-new-to-the-farm-young-agrarians

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GENE EDITING: THE END OF GMOs?

By Lucy Sharratt

There is a lot of excitement about “gene editing,” or genome editing, in the media and research community. In the farm press, genome editing techniques are being widely described as precise and, in some cases, non-GMO. Neither is correct.

Genome editing techniques can be used to alter the genetic material of plants, animals, and other organisms. They aim to insert, delete, or otherwise change a DNA sequence at a specific, targeted site in the genome. Genome editing techniques are a type of genetic engineering, resulting in the creation of genetically modified organisms (GMOs).

The techniques are powerful and could lead to the development of more genetically modified (GM) crop plants, and even GM farm animals. However, the hype surrounding genome editing is similar to what was seen with first-generation genetic engineering. Most news stories about new

products are actually about experiments in very early stages, which may never lead to new foods on the market.

Just as with first-generation genetic engineering, genome editing techniques are moving quickly in the lab to create new GM foods, even while our knowledge about how genomes work remains incomplete. The techniques are powerful and speedy, but can be imprecise and lead to unexpected consequences.

What is Genome Editing?

Genome editing most often uses DNA “cutters” that are guided to a location within an organism’s DNA and used to cut the DNA. This cut DNA is then repaired by the cell’s own repair mechanism, which creates changes or “edits” to the organism. The most frequently used genome editing technique is called CRISPR, but other techniques follow similar principles.

How Genome Editing Works



“DNA cutters” (nucleases) are guided to a location (the target site) on an organism’s DNA.



The DNA cutter docks onto the target site and cuts through the DNA.



The repair of DNA is then initiated and occurs either with or without a synthetic repair template. Alternatively, genes can be inserted.



The DNA is now “edited”. However, in reality, genome editing is prone to creating unintended changes and errors that can lead to unexpected effects in the genome-edited organism.

Genome editing is a set of new genetic engineering techniques that alter the genetic material of plants, animals and microbes, most often using DNA cutters that are guided to a location within an organism’s DNA and used to cut the DNA. This cut DNA is then repaired by the cell’s own repair mechanism, which creates “edits” or changes to the organism.

cban.ca/GenomeEditingReport



First-generation genetic engineering techniques insert genes at random locations. These genes then permanently become part of the host organism’s genome, creating new DNA sequences. In contrast, new genome editing techniques insert genetic material that is then guided to a specific target site to perform “edits.” This means that, with genome editing, the inserted genetic material makes changes to the genome but does not necessarily have to become incorporated into the resulting GMO and can be bred out. This means that not all genome-edited GMOs are transgenic.

The genome is the entire set of genetic material in an organism, including DNA.

This also means that, unlike all first-generation GMOs, not all genome-edited GMOs are transgenic (have foreign DNA). The ability to create non-transgenic organisms is often stressed by the biotechnology industry as an advantage to using genome editing but, as discussed below, whether or not a GMO is transgenic is not the chief concern about genetic engineering.

There is one genome-edited organism on the market in Canada: an herbicide tolerant canola from the company Cibus (Falco brand). This GM canola, like all other GMOs, is prohibited in organic farming and excluded from “Non-GMO Project” verification. However, despite also being regulated as GM in Europe, the company Cibus still sometimes refers to this non-transgenic canola as “non-GMO.” This one example provides a glimpse into how the biotechnology industry would like to shape the regulation and public perception of genome editing to avoid the GMO controversy.

Unexpected and Unpredictable Effects

Genome editing can be imprecise, and cause unexpected and unpredictable effects. Many studies have now shown that genome editing can create genetic errors, such as “off-target” and “on-target” effects:

 The advertisement features a yellow diamond-shaped sign on the left with a black silhouette of a person on a tractor. The background is a scenic view of a green field and mountains. The text on the right reads:

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¹COCA, "The Canadian Organic Market: Trends and Opportunities 2011" November 2011



Canola in bloom. Credit: Bellinghen2454 (CC)

- Genome editing techniques, such as the CRISPR-Cas9 system, can create unintended changes to genes that were not the target of the editing system. These are called “off-target effects.”
- Genome editing can also result in unintended “on-target effects,” which occur when a technique succeeds in making the intended change at the target location, but also leads to other unexpected outcomes.
- Genome editing can inadvertently cause extensive deletions and complex re-arrangements of DNA.
- Unwanted DNA can unexpectedly integrate into the host organism during the genome editing process. For example, foreign DNA was unexpectedly found in genome-edited hornless cows.

Despite these many potential impacts, there are no standard protocols yet to detect off-target and on-target effects of genome editing.

Sometimes intended changes that are created by genome editing techniques are described as “mutations,” because only very small parts of DNA are altered and no novel genes have been intentionally introduced. However, even small changes in a DNA sequence can have big effects.

The functioning of genes is coordinated by a complex regulatory network that is still poorly understood. This means that it is not possible to predict the nature and consequences of all the interactions between altered genetic material and other genes within an organism. For example, one small genetic change can impact an organism’s ability to express or suppress other genes.

An End to GMO Regulation?

Despite these risks, a number of researchers and companies are arguing that genome editing should be less regulated than first-generation genetic engineering, or not regulated at all.

It is commonly argued that regulation is an obstacle to innovation. In relation to genome-edited animals, the argument has been made that mandatory government safety assessment “makes no economic sense.”¹ Instead, industry argues that the process by which new plants and animals

are created should be irrelevant to safety considerations. This is why US government proposals to assess the safety of all genome-edited animals were called “insane” by one of the developers of genome-edited hornless cows²—three years before the cows were found by US government scientists to contain unexpected foreign DNA.

New genome editing techniques will challenge regulators with new traits and processes, with increasing complexity and ongoing uncertainty. Rather than assume their safety, these new technologies need to be met with precaution and increased independent scrutiny.

Even more fundamentally, our government must consider the question of social worth before approving products of genetic engineering. Without consulting Canadian farmers, for example, companies can commercialize new GM products (such as glyphosate-tolerant alfalfa) that have few benefits but can, on the contrary, pose serious risks to farming systems and the environment. 🌿

For references and for more information and discussion about genome editing, read CBAN’s new report, “Genome Editing in Food and Farming: Risks and Unexpected Consequences.” The report and an introductory factsheet are available online at:

🔗 cban.ca/GenomeEditingReport

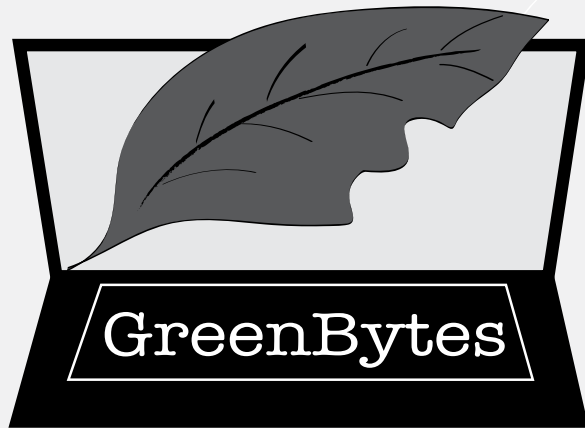
For updates or to find out more, visit:

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Lucy Sharratt is the Coordinator of the Canadian Biotechnology Action Network (CBAN). CBAN brings together 16 groups (cban.ca/about-us/members/) 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 MakeWay’s shared platform.

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1. See CBAN’s report at cban.ca/GenomeEditingReport2020
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Wealth & Retirement Strategy in Your Thirties and Beyond!



By Karen Fenske

Developing a well-balanced financial strategy at each stage of life promotes peace of mind. The wealth and retirement planning strategies outlined below are relevant for young farmers, whether you will own property or not. The need for supplemental income component has historically been a reality for many producers, and most likely will continue.

Planning for the future means looking at what you can do now, as well as what you'll need later, and designing a "bridge" to get you there. As a Financial Coach, I help you work through a planning process to determine what your needs are now, and in the future, and what you'll have to put in place to meet those needs.

Setting Your Goals

First, it's important to define your goals and priorities. Some areas to explore include:

- Manage your cash flow: Track your income & spending. With all the apps available today, this can be easy.
- Build an emergency fund: Know your expenses and "pay yourself first" by automatically putting money into a reserve account that is at arm's length.
- Protect your family in case of deaths, disability or critical illness: Insurance is an important risk management component for all family sizes. If one of the adults becomes ill or passes away the family left behind can be cared for financially. In your thirties insurance is fairly cheap and quick to obtain.
- Make space for travel, vacations, and leisure activities, (travel to see family, skiing, dirt biking, camping, etc.): What, when & how much? If you plan ahead, the tendency to splurge or put it on credit will be reduced. You can manage your expectations and maintain control.
- Plan for major purchases, such as vehicles, real estate, livestock, etc: What, when & how much? If you plan then you may not splurge and end up in "bad debt". You can manage your expectations and maintain control.
- Own your own business: Create a business plan, even a vague one that will highlight income potential and costs.

- Learn to invest wisely, staying ahead of the cost of living & reducing taxes: You may say I can't save anything to invest for the future and I always say, "We can find \$50 or \$100 a month!" to get the habit started. Typically, the saving/investment tool depends on your tax bracket. It often makes sense to save in a TFSA investment where you gain a return on your deposit and the compound earnings grow for your retirement. If you are above a certain income level an RRSP helps reduce your current income tax payable. RRSPs are a "tax deferral program" so a tax refund may be triggered now, but when you go to pull it out later (in retirement) you will pay the tax. Reinvest the refund into the RRSP or TFSA.
- Plan for your child's education: If you have children, put aside money into an RESP. You can contribute as little as \$25 a month, and the government will also contribute. The investment earns a return and the whole account grows. The funds may be used for trade, college, and university programs. Grandparents can arrange these too. It may not be a lot, but it will help!
- Stay employable: Continuous learning is part of our culture. We never know when our source of income might change. What skills, courses, and experience will you need?
- Ensure your money lasts through retirement: Learn about your Retirement Equation: Old Age Security, Canada Pension Plan, etc. Add to your retirement equation via "Supplemental Income."
- Preserve your estate: Ensure your loved ones are your beneficiaries in your will, etc.
- Give to charity: This can satisfy personal values and reduce taxes.
- Own your farm: What, when & how much? All of the other pieces can be implemented whether this goal is realized or not. This is a whole other topic which will include succession and estate planning.

Review Reality and Add Peace of Mind

Once you've got a sense of your dream, it's important to review reality—and add peace of mind. To do this, first you need to paint a picture. Review your current situation by pulling together all your financial documents, includ-

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ing bank accounts, insurance, debt, credit card statements, etc. I typically enter all the data into my financial planning software to create a whole financial picture and keep track. Explore your expenses: What does it cost to live? What do you need? Can things be changed, cut out, modified, delayed, achieved in steps, etc.? Also, explore your income sources.

As a farmer, this will likely include both your farm revenue and any supplemental income sources. What can you do off-farm to receive a paycheck, such as working part-time as a teacher, welder, nurse, instructor, snow removal tech, clerk, etc. This kind of employment will also add to your Canada Pension Plan (CPP) amount which pays out as early as 60 years old, and adds to your Employment Insurance (EI), which will help with medical leaves and periods of unemployment. You can arrange to contribute to EI even if you are self-employed. If you find employment with a hospital, school district, regional district, etc. You may even be entitled to a pension at some point. All these pieces together with your Old Age Security at 65 and your retirement equation may surprise you. I typically provide the potential future value which helps clarify need and strategies.

If working off-farm is not an option, or costs more than you would earn, consider an on-farm opportunity such as doing bookkeeping for others, machine repair, website development, snow removal, breeding dogs or cats, etc. Ensure you are contributing to CPP for your retirement, and maybe EI, too.

Something to keep in mind with these “supplemental income” options is work-life balance. Look at your whole equation. Every situation is going to be a little bit different. Your resources, skills, capacity, energy level, likes, needs, etc. will impact what is optimum for you. It’s easy to stretch yourselves too thin and end up disheartened, cranky, depressed, or divorced because there hasn’t been enough time or energy. Money is important but so is enjoying life and living it together.

It’s also important to look at your on-farm income. Whether you’re running your own farm or working for another farmer will change the picture. If you’re self-employed, your cost of production should account for your time so that you’re paying yourself a wage that supports your lifestyle—and future goals. As an employee, your job title and description determine your role, and can be helpful in figuring out how you’ll be compensated. For example, an Operations Manager and farm hand will have different levels of responsibility, and thus compensation. If you’re working on a farm as part of a succession planning process, whether on the family farm or not, discussions around compensation can get trickier. Using a third-party coach to facilitate this discussion as part of the succession planning process may be helpful. As an employee the owner will contribute to EI & CPP—this isn’t as complicated as it sounds! QuickBooks is cheap and you can get it all done.

Understanding your income and expenses helps you know how much you will have to live on. You can then budget spending and short term and retirement savings, and create a “doable” budget just for you. Build a “zero-based” budget including income from all sources and living expenses, such as gas, groceries, clothing, insurance, and short term and retirement savings. Every situation is different so meet your family’s needs and don’t compare to others.

Evaluate, Adjust, and Enjoy!

Financial planning is an ever-evolving process, and doesn’t stop once you’ve got your budget in place. Evaluate on a monthly basis, at minimum, where your money is going. There are apps and bank programs to help keep track. You can adjust the budget for surprise costs, add extra to your savings, or pay off debt faster.

It is good practice, once or twice a year, to ask your family, “What great things did we do,” “What was new, different or better?”, “Did we have enough or too little?”, “Do we need to make changes & how?”, “What do we want to do this year and next?”

Cast a big picture of realistic potential income and how your family is going to spend it: who needs a bike, clothes, tools, what kind of trips, etc. You can start an envelope for the goal or assign a piece of your savings accounts or TFSA to that goal.

Each of you has your own unique money story that impacts how you save and spend. Choose transparency instead of denial, courage to ask for your needs to be met, respect that you are in this together, and above all, use sound financial planning to help you enjoy life! 🍀

Sustainable agriculture is Karen Fenske’s vocation. After providing strategic planning in BC agriculture, and working for COABC & BC4H, Karen transitioned into the financial planning industry to assist with succession and estate planning. Through her business, Fenske Financial Coaching, she facilitates the transition process and provides relevant, useful advice on a fee-for-service basis.

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