British Columbia Organic Grower

ORGANIC FARMING + CLIMATE CHANGE

water

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COABC
Certified Organic Associations of BC

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Ready for Organic Week?

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BC Organic Grower

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On the Cover: Watering the fields at Organic Only Farm in Cawston, BC. Credit: Sara Dent.

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Editor's Note

By Darcy Smith

Climate change is a wild ride. After a couple disastrous fire seasons, this year a cold-but-dry winter shifted into a hot, dry early spring and then a wet summer. For farmers who have grown accustomed to long periods of summer drought, the unexpected weather has meant muddy harvest days, poor yields for some crops, and wet market days. Farms have struggled with flooding in Central & Northern BC—a change of pace from fiery years in the recent past, and cherry growers in the Okanagan rushed to hire helicopters to rescue crops from splitting in the rain. Love it or hate it, all that water falling from the sky sets the tone nicely for our Fall 2019 issue, looking at what climate change means for water conservation and agriculture.

Before we dive in, head over to the Newspatch section for some exciting updates—upcoming events, funding and program announcements, news from the organic community, and more. We love to showcase all the amazing things that strengthen the organic sector each issue, and we look forward to seeing you at some upcoming events!

Our Organic Stories feature takes us to Covert Farms in Oliver, BC, to explore how this third-generation family farm is leading the way with innovative approaches to water management (page 8). Thanks to Emma Holmes, Organic Industry Specialist, for writing this one—we'll miss you while you're on maternity leave!

Flip to page 6 for an update on the new Agricultural Environmental Management Regulation from the Ministry of Environment and Climate Change Strategy. For more on the policy side of things, Marjorie Harris reviews the revised Canada Aquaculture Standard on page 20.

On page 23, get a sneak peak at the new Community Food Analysis Lab in Comox, an exciting development for small scale farmers on the island, and Gayle Palas unpacks plastic packaging for the organic farmer on page 27.

Frequent contributor to the BC Organic Grower Saikat Basu, who has been sharing research into cover crops and pollinators in previous issues, switches gears this round with an impassioned plea to protect and conserve our precious global water supply (page 12). Luckily, he's preaching to the converted in these pages!

Organic Week is marking 10 years of celebrating all things organic with a look back at how the annual national festival has contributed to Canada's growing organic sector (page 15). This year also marks 10 years of Canada's Organic Standard!

On page 24, Michael Marrapese shares a visual tour of Fraser Common Farm's recent climate adaptation research projects, and Anna Helmer is back with another dose of biodynamic farm stories on page 16—by the way, this editor is eternally grateful to all the farmers who somehow manage to squeeze in a bit of writing time (in July, no less!) to contribute to our fall issue.

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 at:

bcorganicgrower.ca

Cows on the range in 150 Mile. Credit: Allan Dobb.

Organic Grows on You!

Celebrate Organic Week September 8-15, 2019

It's a very special year for Organic Week as the largest annual celebration of organic food, farming, and products across the country celebrates 10 years! Organic Week supports a growing organic sector, a transparent food system, and a sustainable source of food for future generations.

Organic Week highlights the benefits of organic agriculture in communities and across Canada. From pickling workshops, recipe contests, and educational seminars to farm tours and food & libation samplings, there is something for everyone. Look out for events in your community as well as local retailers, restaurants, and farmers' markets showcasing organic products.

To find an event happening in your community, or to plan your own event, check out the event map at:

organicweek.ca

Save the Date!

#BCOrganic2020

Be sure to mark your calendars—dates have been set for the 2020 BC Organic Conference. We're already looking forward to gathering with you to learn, share, celebrate BC's organic sector, and, most importantly, eat delicious organic food!

When: Feb 28–March 1, 2020
Where: Location TBD

Coming in 2020: Online Organic Certification

If you're a BC farmer who would like to become certified organic through one of the COABC's accredited Certifying Bodies, you'll soon have the option of completing your application or annual renewal online! The COABC received $118,000 in funding from the Canada-British Columbia Agri-Innovation Program Canadian Agricultural Partnership (CAP) and $221,080 from Sector Development CAP programming to be put towards a new online certification tool that will streamline the certification process and encourage more producers to follow up with organic certification.

A beta version of the tool was released in 2018 for testing and feedback and many modifications and improvements are currently being worked on throughout 2019. The new program will assist with much of the administrative workload involved with tracking and reviewing the required information for organic management verification and will help keep costs down for everyone involved, including operators, administrators, inspectors and certification committee members.

The addition of standardized record keeping sample documents, made available throughout the new program, will let operators know just what information needs to be tracked in order to help their inspections run smoothly and avoid additional inspection fees. As well, historical documents will be stored safely on COABC's own servers for easy retrieval and review when needed so you never have to worry about misplaced documentation.

And with updates to the aesthetics and functionality of the beta version, even those farmers who can't stand sitting at a computer will find the process straightforward and easy to use, so they can complete their renewals quickly and get back outside.

In order to help encourage organic farming in BC, all of the COABC's Certifying Bodies are working together to ensure this system functions for all the varied types of Enterprises found throughout BC: large or small, simple or complex. By working together to improve the certification process, we can strengthen organic farming in BC as a whole!

Training sessions are planned for the fall of 2019 and will continue through 2020, along with a comprehensive video library of user guides for those who like to learn at their own pace.

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.

BC Ministry of Agriculture Welcomes New Organics Specialist

By Emma Holmes

I am pleased to announce Karina Sakalauskas will be taking over the Organics Specialist position while I am on maternity leave. Karina started with the Ministry of Agriculture in 2017 as the Acting Industry Specialist, Berries. During this time, Karina keenly took on the hazelnut file as well, and subsequently developed, implemented and delivered our successful Hazelnut Renewal program in partnership with the BC Hazelnut Growers Association. Karina has worked extensively with the association and growers one-on-one for the past two years to develop and promote Ministry support to revitalize the Hazelnut industry. If you have any questions about growing Hazelnuts in BC – Karina is your expert!

Before working for the Ministry, Karina was the Research Coordinator for the BC Blueberry Council (BCBC). Prior to this, she worked as a potato and blueberry IPM specialist with ES CropConsult.

Pacific Agricultural Certification Society Reveals New Branding

By Shay Anderson, PACS Social Media Coordinator

Over the past 18 years, the Pacific Agricultural Certification Society (PACS) has grown to become a strong leader in organic certification across Canada. We're offering a broader infrastructure of service opportunities, including a 2020 project for online fillable registration and forms, organic certification for trading/distributing, increased product diversity certification including natural health products, and more!

PACS was founded by a group of organic, health-minded individuals who wanted to create a sustainable food system. We strive to honour their dedication and legacy every day by serving our clients with the highest degree of quality and integrity.

We are continually seeking new and innovating ways to better serve new and existing clients alike! In the Spring of 2019, we launched our new website, which we are very excited about. It was innovatively designed to be a tool for visitors to discover more about organic certification and connect to our membership and the organic community. With the website launch, we also redesigned our logo with a fresh look to align with our vision, and connected with the public on social media platforms such as Facebook and Instagram!

Our clients' hard work and dedication inspire us to continue our services as a Certification Body, thus promoting a healthy food lifestyle and supporting a sustainable food system. It all starts at the farmers' fields, to the caring hands of our processors, to the end consumers who present these products confidently to their families and friends.

Check us out:

- **pacscertifiedorganic.ca**
- **facebook.com/PACSOrganic**
- **@pacs_organic**

Save the Date for the 2019 BC Seed Gathering Nov 8 & 9!

No seed, no food! Seed security takes a front row seat in the food security endeavour.

Join FarmFolk CityFolk for the 4th biennial BC Seed Gathering on November 8 and 9 at Kwantlen Polytechnic University in Richmond. This two-day event aims to engage new and established

Continued on page 30...

A New Agricultural Environmental Management Regulation

PHOTOS: Credit: Province of BC

By the Province of British Columbia

In keeping with the respect BC's agricultural operators have for the land, air, and water, new rules for agricultural environmental management are now in place. After years of science and evidence-based analysis, as well as conversations with agricultural operators throughout the province, a new regulation called the Code of Practice for Agricultural Environmental Management (AEM Code) came into effect on February 28, 2019. The goal of this Code is to provide more clarity for the agriculture sector while better protecting the environment for all British Columbians.

Organic farmers will see that some requirements are continued from the previous regulation, such as no direct discharges into watercourses, some have been revised to clarify expectations, and some are new, several of which are being phased in over the next decade.

Why a new regulation?

Through several consultations we heard that the old rules were too vague for operators and weren't adequately protecting the environment. Working with farmers, we built a fair set of rules that ensure agricultural practices protect our drinking water, watercourses, and air.

The new AEM Code takes a different approach to the previous regulation. Requirements are more clearly outlined, and they're both risk-based and science-based. For example, more protective measures now need to be taken in high-risk areas and during high-risk conditions. Also, soil samples are required to be taken to help determine what measures are necessary on specific farms.

Who does this regulation apply to?

It applies to all agricultural operations in BC, from small hobby farms to large commercial operations, including organic farms. That said, the regulation has been built with the understanding that not all agricultural operations are the same and that there are differences from one region of this province to another. Various requirements are contingent on an operation's location, size, and type of activity. Many farms won't need to make big changes to adjust to the new regulation.

What does this regulation include?

The new regulation includes provisions that aim to: ensure watercourses and groundwater are protected through proper storage and use of manure, other nutrient sources, and other materials, such as wood residue; prevent water quality impacts from contaminated run-off; prohibit direct discharges into watercourses; require nutrient management planning; allow for increased monitoring in high-risk areas; provide clear compliance expectations for agricultural operators for setbacks, storage, and nutrient applications; and, require record-keeping.

When is this happening?

The new rules came into effect on February 28, 2019, but some of the requirements, such as nutrient management plans, will be phased-in over the next decade. This approach will give agricultural operators time to plan for and adjust to the new rules, and for government to work collaboratively with industry to develop the necessary tools to support implementation.

What does this mean for me?

Organic farmers will need to demonstrate a basic level of environmental protection, but many are already doing what the regulation requires. This includes:

- ensuring minimum setbacks for various activities and proper storage requirements are followed;
- preventing contaminated runoff, leachate, solids, and air contaminants from entering watercourses, crossing property boundaries, or going below the seasonal high water table;
- registration for boilers and heaters with greater than 0.15 MW capacity, and meeting emissions limits for opacity and particulate matter;
- nitrogen application rates that meet the crop's needs and not more, for applications to land and other than to land (e.g., grown in containers);
- collecting and containing wastewater, contaminated runoff, or leachate;
- wastewater needs to be treated prior to discharge into the environment; and
- record-keeping to demonstrate compliance.

Requirements will affect farms differently depending on whether they are in a high-risk area, what their current practices are, and the nature and size of the farm. In addition to the basic level of protection above, these include increased monitoring and protective measures in high-risk areas and during high-risk conditions, such as:

- protective bases for greenhouses and storage structures in vulnerable aquifer recharge areas to ensure no leaching down into the aquifer;
- covering temporary field-stored piles, including agricultural by-products or wood residue, and outdoor agricultural composting piles, in high precipitation areas from October 1 to April 1.

How will the regulation be enforced?

As we roll out the new regulation, we will be working with you on how to best help you comply with the new rules. Our goal is to support agricultural operators so that, working together, we can better protect the environment.

There are dedicated staff within the Ministry of Environment and Climate Change Strategy who will work with you to understand your obligations under the Environmental Management Act, which this regulation falls under. The team uses a consistent and risk-based approach for establishing compliance and enforcement priorities.

Learn more:

To find out if you are in a high-risk area, or need more information on what records you need to keep, or what minimum setbacks you need to follow, please visit the following website at: gov.bc.ca/Agricultural-Environmental-Management

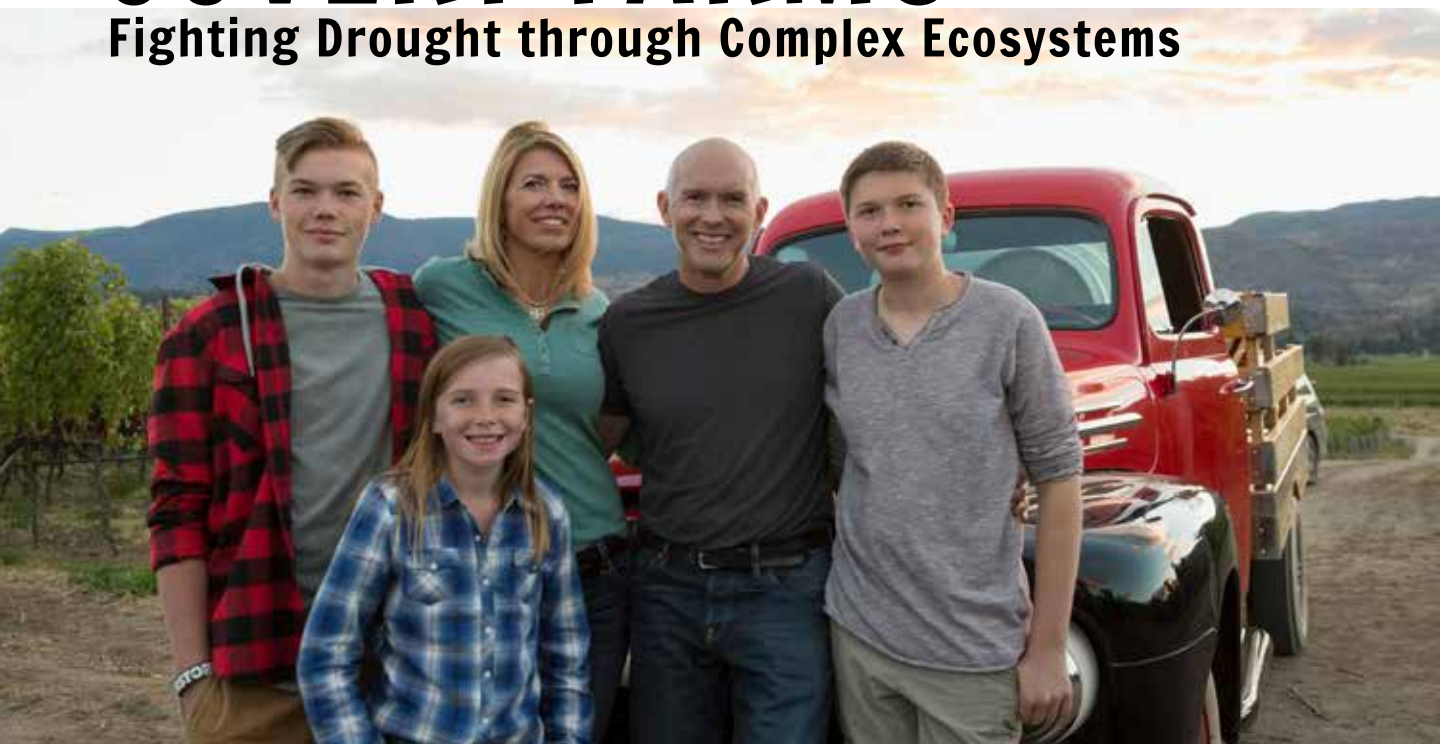
Quesitons?

AEMCoPenquiries@gov.bc.ca

Organic Stories: Oliver, BC

COVERT FARMS

Fighting Drought through Complex Ecosystems



By Emma Holmes

I recently had the pleasure of visiting Covert Farms Family Estate in Oliver, where Gene Covert, a third-generation farmer, gave me a tour of his family's 650 acre organic farm, vineyard, and winery. Gene's grandpa George Covert bought the desert-like piece of land back in 1959, and although some laughed, thinking the land would not be suitable for agriculture, he, his son, and eventually grandson, Gene, have built the farm into a robust, flourishing, certified organic farm that embraces biodynamic, permaculture, and regenerative farming methods.

Gene studied ecosystem complexity as a Physical Geography student at UBC and has carried this learning through to his farming career, approaching it with a high level of curiosity for the natural world and experimentation. His wife, Shelly Covert, a holistic nutritionist, has been co-managing the family farm and in 2010 they were awarded the Outsanding Young Farmer Award BC/Yukon. Gene and Shelley are deeply connected to their land: "The relationships of our land are complex and most have yet to be discovered. As we learn more we find interest, intrigue, and humility."

Cover crop cocktails. Credit: Covert Farms

Like many places in BC, Oliver is expected to face increasing warmer and drier conditions. Already a drought

Opposite: The Covert family. This page: Grapevines and mountains. Credit: Covert Farms

prone desert, it is more important than ever to find ways to slow the water down, trap it at the surface, give it time to infiltrate, and store it in the soil.

The secret to storing more water lies in soil organic matter. Soil organic matter holds, on average, 10 times more water than its weight. A 1 percent increase in soil organic matter helps soil hold approximately 20,000 gallons more water per acre.[1]

The Covert's guiding philosophy is that "only by creating and fostering complexity can we hope to grow food with complex and persistent flavours. Flavours are the ultimate expression of the mineralization brought about by healthy soil microbial ecosystems." To increase the organic matter content of his sandy soil, Gene took inspiration from organic and regenerative farmers in other agricultural sectors and began experimenting with cover crop cocktails, reduced tillage, and integrating livestock into his system.

Cover Crop Cocktails

Cover crop cocktails are mixtures of three or more cover crop species that allow producers to diversify the number of benefits and management goals they can meet using cover crops. Farmers like Gabe Brown are leading the way and driving the excitement around cover crop cocktails, and research is following suit, with universities starting research

programs such as Penn's State Cover Crop Cocktail for Organic Systems lab.[2]

To help him in meeting the right mix for his system, Gene uses the Smartmix calculator, made by farmers for farmers[3]. He has found that seven or more species affords the most drought tolerance. He uses a combination of warm and cool season grasses, lentils, and brassicas. Some of the species in his blend include guargum, a drought tolerant N-fixing bean, radish to break up soil at lower depths, and mustards as a cutworm control.

Gene plants Morton lentils right under the vine to fix N and suppress downy brome. This type of lentil was developed by Washington State University for fall planting in minimum tillage systems. Crop establishment is in the fall and early spring, which is when evapo-transpiration demand is minimal, thus improving water-use efficiency.

The diverse benefits of his cover crop include N fixation, increase in soil organic matter, weed control, pest control, and increased system resilience in a changing climate.

Low-Till

Frequent tillage can negatively impact soil organic matter levels and water-holding capacity. Regular tillage over a long-time period can have a severe negative impact on soil quality, structure, and biological health.
The challenge for organic systems is that tillage is often used for weed control, seedbed preparation, soil aeration, turning in cover crops, and incorporating soil amendment. Thus, new management strategies need to be adopted in place of tillage. Cover cropping, roller crimping, rotational grazing, mowing, mulching, steaming, flaming, and horticulture vinegars are cultural weed control practices that can be used in organic systems as an alternative to tillage. The most successful organic systems embrace and build on the complexity of their system, and utilize several solutions for best results.

Gene used to cultivate five to six times a year, mostly for weed control, but now cultivates just once a year to incorporate cover crop seeds under the vines. Instead of regular tilling to control weeds, he uses cover crops that will compete with weeds but that won't devigorate the crop and that can be controlled through non-tillage management strategies like roller crimping and rotational grazing. For cover crop seeds between the rows, he uses a no-till seeder.

Intensive Rotational Grazing

Integrated grazing sheep or cattle in vineyards is not a new concept, but it became much less common since the rise in modern fertilizers. It has been increasingly gaining steam in recent years due to the myriad benefits it provides. The animals act as cover crop terminators, lawn mowers, and weed eaters while also improving the overall soil fertility and biological health[4]. The appropriate presence of animals increases soil organic matter, and some on-farm

demonstration research out of Australia showed significant reductions in irrigation use, reduced reliance on machinery, fuels, and fertilizers, and increased soil organic matter.[5]

Incorporating livestock into a horticultural system adds a completely new management challenge and thus level of complexity. It comes with the risk of compaction and over grazing if not managed properly. The key is to move herds frequently, controlling their access to different sections and never letting them stay too long in one area. As well, the grazing window needs to be limited to after harvest and before bud-break to prevent damage to the cash crop.

Increased Resiliency

Since experimenting with and adopting these management practices, Gene has found his cost of inputs has dropped and he has noticed a significant increase in soil organic matter and reduced irrigation requirements. Based on his success so far, he has a goal of eventually dryland farming. No small feat on a sandy, gravelly, glacio-fluvial soil in a desert climate facing increasing droughty conditions!

On-Farm Demonstration Research

A farmer's experience and observations are critical in problem solving and the development of new management practices. Increasing farmer-led on-farm research is fundamental to improving the resiliency of producers in the face of ongoing climate change impacts, such as drought and unpredictable precipitation.

Farmer-led on-farm research compliments and builds experience by allowing a farmer to use a small portion of their land to test and identify ways to better manage their resources in order to achieve any farming goal they have, including climate adaptation strategies such as increasing soil organic matter to reduce irrigation requirements. The beauty of on-farm demonstration research is that it is farmer directed, it can be carried out independently, and it uses the resources a typical farmer would have on hand.

If you're inspired by an idea, or a practice you have seen used in another agricultural system and are interested in conducting your own field trials, I highly recommend the BC Forage Council Guide to On-Farm Demonstration Research: How to Plan, Prepare, and Conduct Your Own On-Farm Trials.[6] It is an accessible guide that covers the foundations of planning and conducting research, allowing you to achieve the best results. While it was created for the forage industry, the guide covers the basics of research and is applicable to farmers in any sector.

My highest gratitude and praise for the farmers who are finding the overlaps at the edges of agricultural models, where one becomes another—and leading the way into the new fertile and diverse opportunities for sustainable food production in a changing climate.

Thank you to Gene Covert and Lisa Wambold for their knowledge, passion, and insights.

Emma Holmes has a BSc in Sustainable Agriculture and an MSc in Soil Science, both from UBC. She farmed on Orcas Island and Salt Spring Island and is now the Organics Industry Specialist at the BC Ministry of Agriculture. She can be reached at: Emma.Holmes@gov.bc.ca

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FARMER PODCAST CLUB

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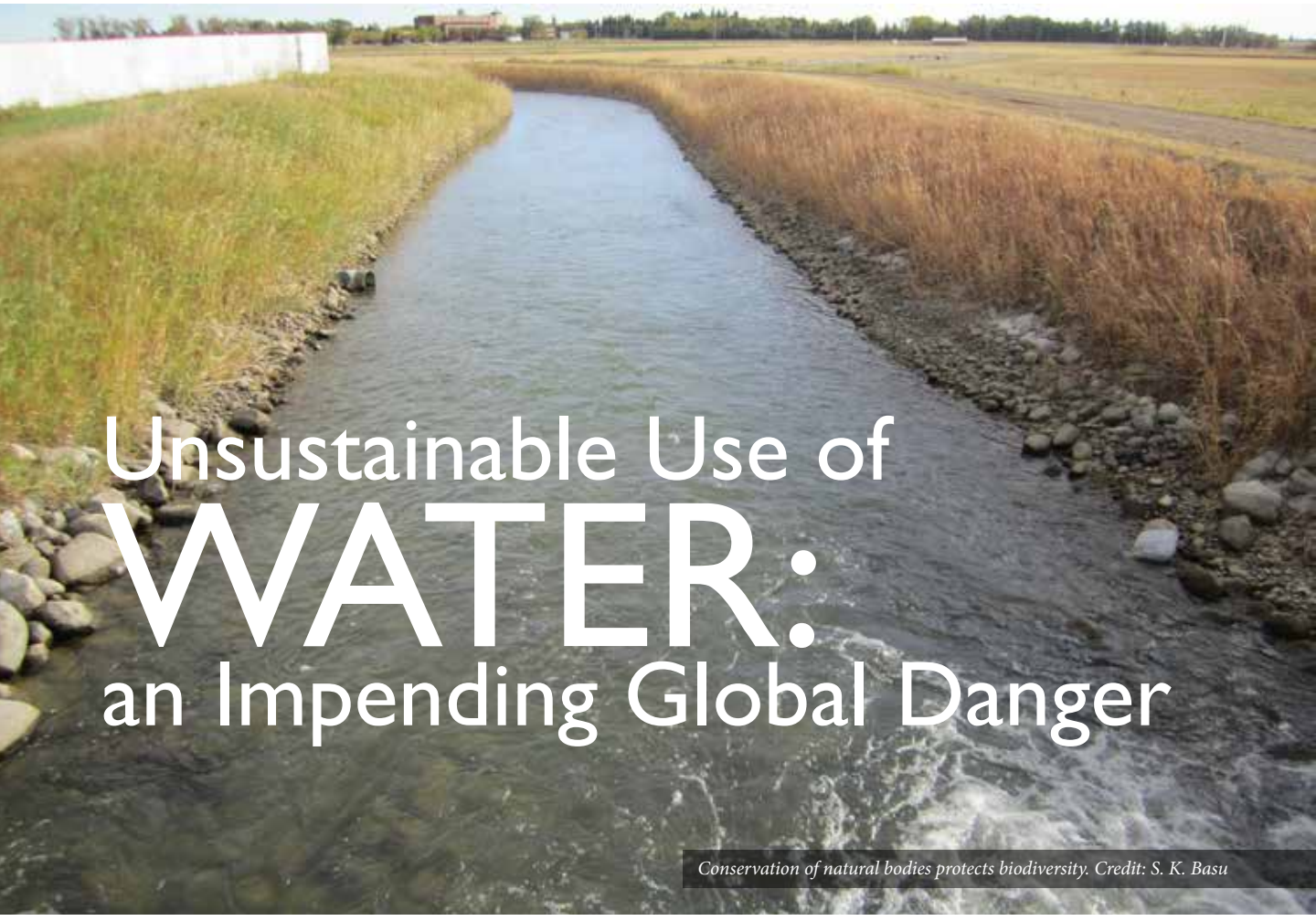
The Brown Revolution
Rural Routes to Climate Solutions - Episode 20

Listen to Dr. Kristine Nichols' fascinating and thought provoking call for a new revolution in agriculture. Not another Green Revolution, but one that uses something she refers to as eco-functional intensification—working with the soil and soil organisms and their amazing abilities to support many, many different forms of life.
Listen to the full episode:

youngagrarians.org/farmer-podcast-club-brown-revolution



Unsustainable Use of WATER: an Impending Global Danger

Conservation of natural bodies protects biodiversity. Credit: S. K. Basu

By S. K. Basu

Water conservation has been an increasingly important priority across the planet in developed, developing, and under-developed nations in both hemispheres. The alarming increase in global human population across the planet has been putting excessive pressures on all our natural resources. Water is one such commodity that has been hit hard and hence needs urgent attention. Excessive, non-judicious, and explorative use of water for domestic, agricultural, and industrial purposes with no long-term planning has been one of the factors at the root of the state of globally available potable water today.

For a long time, our utter negligence and lack of sensitivity towards sustainable use of natural resources has aggravated the current global crisis of water in every aspect of human life. It is us humans inhabiting the green planet that are critically responsible for the rapid loss of freshwater water resources and initiating this global crisis. Climate change and global warming are further making the situation worse and are anthropogenic in nature.

Our bad habit of using excessive agrochemicals to secure agricultural productivity has been contaminating both groundwater and surface water resources alike. Various agrochemicals in the form of pesticides, herbicides, and insecticides, as well as synthetic fertilizers and numerous plant growth regulators, have a long life in the soil before undergoing biodegradation. Several of these chemicals slowly percolate into our precious underground water sources. Other chemical residues surviving in the soil long after application are washed away by irrigation water or rain into adjacent freshwater bodies thus contaminating them over time. The presence of such chemicals in freshwater bodies promotes changes in both physical and chemical parameters of water and stimulates the growth of undesirable bacterial species that reduce available oxygen in the water, making the water unsuitable for human and animal consumption and threatening the acquatic ecosystem.

Furthermore, the legal and illegal release of untreated industrial waste water into natural ecosystems is also proving detrimental to local aquatic flora and fauna, making them unsafe for human and animal consumption. Under the unacceptable and unfortunate circumstances of the release of untreated industrial waste water into ecosystems, highly expensive treatment processes are now being installed in order to render the water, flora, and fauna suitable, and to reduce the impact on the local environment. The cost of treating waste water is thereby increasing the base price

Water conservation holds the key to our future. Credit: S. K. Basu

Credit: S. K. Basu

of water making them unavailable to a large section of our society. This in turn promotes social discrimination, as well as improper allocation and distribution of water. No long-term planning for water conservation, as well as judicious use of water resources and treatment of waste water, has been observed across several under developed and developing nations.

Another significant impact on the looming global water crisis is due to the unplanned network of infrastructure development that interferes with the natural courses of rivers, tributaries, distributaries, streams, rivulets, springs, rapids, waterfalls, etc., negatively impacting recharging of groundwater and natural fresh water bodies (lakes, pools, ponds, bogs), as well as estuarine and marine ecosystems. Unsustainable infrastructural developments, such as building mega dams, as well as numerous micro water

Credit: S. K. Basu

dams, is actually proving detrimental to our economy and ecology alike. Such dams for hydro power projects built in key riverine areas without proper impact assessment evaluations and planning have a short life, undergo rapid sedimentation that reduces the water holding capacity, promote occasional floods, damage local aquatic and terrestrial ecosystems, and affect local biodiversity. These impacts increase both our economic as well as ecological expenses with long-term detrimental consequences on both human and animal lives.

It is therefore extremely important for all of us to look to sustainable and judicious use of our water resources. Unless we move forward with sustainable practices and look for ways to conserve our groundwater as well as freshwater resources, we are doomed ourselves in the not-so-distant future.

Farmers and crop producers can have a significant positive impact through limiting or restricting over applications of various agricultural chemicals to prevent the rapid pollution of both ground water and freshwater resources.

Stringent laws should be established and protocols instituted to make sure that no untreated water could get into a natural environment and ecosystem via any available legal and illegal routes. We may need to change legislation and enact new laws and charge new taxes to prevent industrial pollution of our natural aquatic systems. Judicious and sustainable water use should be promoted by different government and non-government agencies and programs launched for public education and raising awareness of our global water crisis.

If we do not learn to be responsible today, we cannot expect to have a better tomorrow. Conservation of water should be promoted at every level and should be included in the course curriculum at primary, secondary, and post-secondary levels of education to capture our younger generations. Our new light bearers and future citizens are an important stakeholder in this process.

Non-judicious use of water as well as unacceptable wastage of water needs should be curtailed or prevented to the best of our abilities. Water conservation approaches such as rain harvesting should be promoted in both urban and rural areas alike to use this precious commodity from a long-term conservation and judicious use perspective. Construction of dams and infrastructure across sensitive aquatic ecosystems should be re-evaluated and reviewed before implementation.

Our current actions are important steps to achieving success with water conservation. All stakeholders in the process needs to be involved, educated, and made aware of our future global water crisis, jointly work towards strong global initiative and networks for successful water conservation and adoption of better water use practices. All members of society need to be actively engaged and involved in working towards water conservation practices. Our actions today will certainly help and make a difference in conserving water for the future.

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

ORGANIC WEEK SEPT 9-15, 2019

Supporting the Entire Organic Food Chain by Increasing Awareness of Organic Products Nationally

By Karen Squires

This year will mark the big 10th year anniversary of Organic Week occurring September 9-15, 2019! Please check out Canadian Organic Trade Association's (COTA) website (canada-organic.ca) for more information on Organic Week 2019, our online contests launching in July, our IQ Organic Quiz launching September 2 and our ongoing national consumer awareness campaign.

The Organic Grows On You campaign was launched this year to celebrate the 10th anniversary of Organic Week. The concept is a play on "you are what you eat," reinforcing the notion of choosing organic and feeling good about yourself and your choices. The campaign's secondary message, "invest in yourself," is a subtle way to reinforce feeling more connected to your food source and the farmers who grow it—by choosing organic you are shopping with your values in mind and organic is an investment in your health and the environment.

COTA coordinates Canada's national organic consumer marketing campaigns on behalf of its members and the industry. You can review the Organic Week 2018 Overview Report on COTA's website to get a sense of the reach the campaign had last year, which engaged over 3,500 retailers nationally, distributed 1,144 point of sales kits to retailers, achieved 4 million advertising impressions, 8 million social media impressions and reached millions of Canadian consumers. COTA works in collaboration with provincial associations and industry from across the country to lead this campaign each year.

Organic Week is a massive collaborative undertaking, coordinating industry to cross promote and reach new Canadian audiences with a synchronized marketing strategy, engaging at all levels (retail, community events, media via magazines, newspapers, online and consumer contests, etc) to reach Canadian consumers to deepen their knowledge of organic, reaffirm their commitment to purchase organic, or learn about organic for the first time. After last year's Organic Week activities, IPSOS polling of 1,000 Canadians indicated that public trust in Organic rose 4% directly after our marketing efforts, landing at 48%. Sixty six percent of Canadians are purchasing organic

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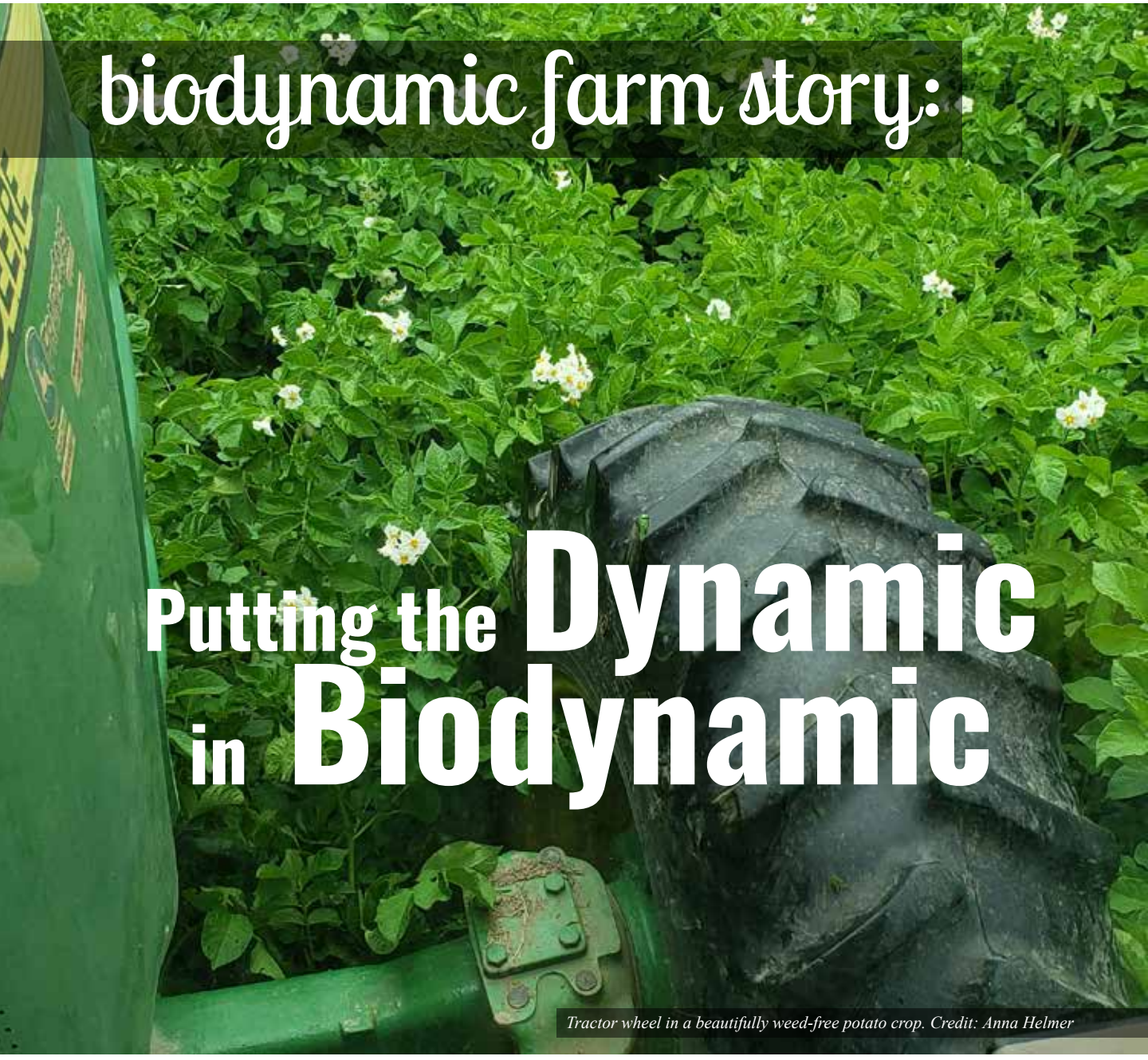
biodynamic farm story:

Putting the Dynamic in Biodynamic



Tractor wheel in a beautifully weed-free potato crop. Credit: Anna Helmer

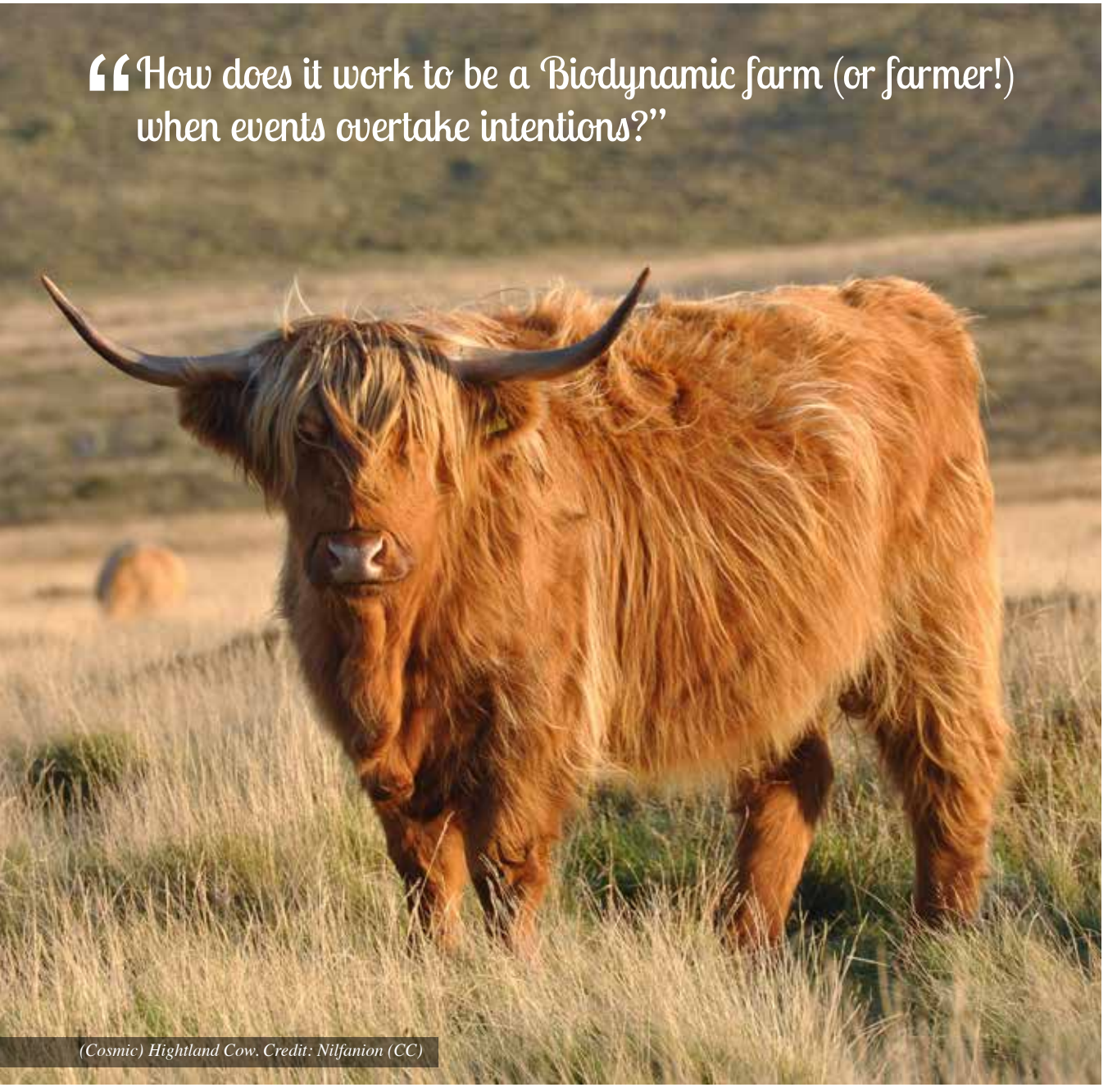
By Anna Helmer

I used to write a small weekly column for the local paper, telling stories about the farm each week. I kept it going through the busy times and the not busy times. I hardly remember how I managed to write the required 600 coherent words during those intensely busy summer weeks. Maybe they weren't coherent. Likely not, now that I think about it. Maybe coherence was not a goal. If you can't do it, don't make it a goal, I always say.

Those winter columns, though. I remember writing those. They were the ones where I had done precious little farm work during the week and now had to write about it. They were a challenge to compose. At least in the summer weeks there was lots of material. However, I did learn how to make 600 entertaining words out of, say, a flat tire and a quiet market.

I am feeling reminiscent of those lazy days of winter and cobbling together something interesting about scant farming activities because I have agreed to do another installment of *Biodynamic Farm Story*, but I really haven't done much Biodynamic stuff lately.

The blame for this lies entirely with the farm. In addition to non-descript regular farm work, each tractor has broken down several times, we've poured new concrete, built a new shed, and started attending our local market about six weeks earlier than ever before. The events have very much



(Cosmic) Hightland Cow. Credit: Nilfanion (CC)

taken precedence over Biodynamic activities. The original Biodynamic lectures don't seem to specifically address what to do when this happens.

Those lectures contain a fair amount about the importance of talking with other farmers about Biodynamic methods, however. I gather Steiner, the lecturer, understood that much of his content was untested in real farm-world situations. There is also acknowledgement that every single farm, being its own entity consisting of its own unique people, soil, and environment, will have to find its own way.

I think that's the story this time: how does it work to be a Biodynamic farm (or farmer!) when events overtake intentions? This is about how we can't seem to follow the Biodynamic calendar very well, and how in actual fact, we

seem to forget all about being Biodynamic when the fur starts flying on a busy farm season. Perhaps this is when the "dynamic" part comes into play.

I would like to think that the work we do in the shoulder seasons—creating composts, using the preparations, planning planting around propitious dates in the calendar—all contribute to the strength of the farm now, when it is being fully taxed. I suppose it possibly might be so.

Theoretically, what would a biodynamically active farmer not like me be doing right now on the farm? I would have two things on the list: compost management and Biodynamic Preparation 508.

Priority one: turn the cow manure pile and bung in more Biodynamic preparations, purchased in a set from the Josephine Porter Institute—nettle, yarrow, dandelion, oak bark, chamomile and valerian. They are intended to not only stimulate the biological breakdown of the material into humus and whatnot, but also to create a source of energy for the farm. How cool is that?

I came across a metaphor for the Biodynamic compost heap several years ago, the source regretfully forgotten, the actual meaning mangled: Cosmic Cow. Consider the cow that can transform the energy of the sun (via green grass) turning it into precious manure that may be used to grow our eating plants. It is a remarkable feat that is accomplished in a complex digestive system. Even more remarkable, the function carries on despite the animal eating all kinds of garbage along with the lovely grass. And through thick and thin, the animal maintains a more or less even disposition, emanating a particular energy that is quite powerful, in its own way.

So the Cosmic Cow Biodynamic Compost heap can do the same sort of thing. Its digestive system is powered up to produce the desired dirt, and the whole thing is solidly grounded to be able to broadcast the infinite energy of the universe to the farm.

If I had some time, and if the loader tractor hadn't developed a leak in the axle and the right seal had been sent from the source of seals and if it therefore had a wheel, I totally would have done that job by now. Pretty certain it is high on Dad's list too. The wheel will eventually go back on, surely. Meanwhile, the pile sits patiently in the field, the essential activity continuing despite neglect.

I am also looking into the preparation called 508. It uses horsetail in either a tea form (very easy to make) or a more complicated distillation. There has been a lot of rain, heat, and wind lately and fungal issues may arise. The 508 may help cope with that. Plus, it is all the rage right now in Biodynamics and I am nothing if not keen to fit in.

If there is one weed we have plenty of in the potatoes this year, it is horsetail. Do I go to the effort of picking it, boiling it up and spraying it around? So far, I do not.

A look into my farm notes for the past couple of months reveals at least a passing nod to the Biodynamic Calendar. I have noted when something I did was done because it was a good day to do it according to the position of the moon and the planets. It still means nothing to me, but I think the plants get it, so that's good. For example, the carrots were done right. As that field also had a good helping of BD 500 both last fall and this spring, I could expect one of our best crops ever. I don't, however. Biodynamics is a method, not a guarantee.

Unlike chemical fertilizers. They are more of a guarantee. It is very plain to see the appeal of popping in a wee bit of N, P, and K at planting time. Conventional farmers in Pemberton who planted potatoes weeks later than us are pleased that theirs came into flower right at the same time and achieved row cover well ahead. It's just a fact of science.

A fact that means nothing to me. Today when I walked through our potato field, I would have needed a machete to get through the White Rose and Fingerlings. As an aside, did you know that potato flowers smell delicious?

I boast like this because I think Biodynamic farming can be a difficult sell to…well…most farmers. Let's face it. The positive results are heavily anecdotal. I must add my own.

Anna Helmer farms with her family and friends in the Pemberton Valley and could have submitted the picture that featured a lot of weeds but instead chose the one that did not.

...Organic Week, continued from page 15

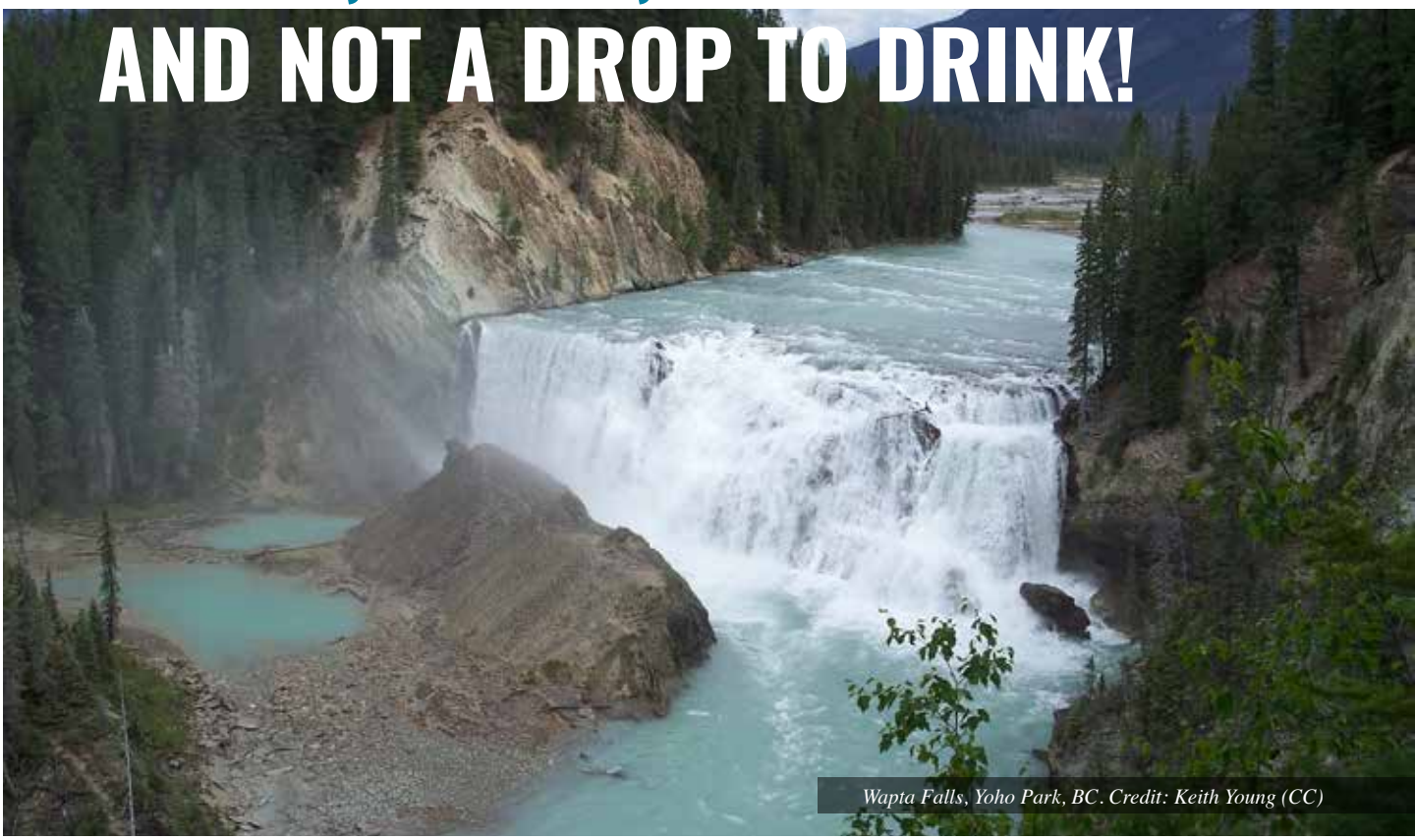
products weekly! Make sure your brand is seen as a leader and is at the forefront of Canadian's minds, as a committed company offering organic products.

For more information on Organic Week, please contact Lauren Howard at intern@canada-organic.ca. Lauren will be happy to explain the various ways you can get involved in future events, including joining in the conversation on social media, having in store promotions or holding special events in your community!

Otherwise, for more information on membership or partnerships with COTA, please contact ksquires@canada-organic.ca.

Karen Squires joined COTA as Member Relations & Business Development Manager with over 15 years' senior level experience in the non-for-profit sector. Karen works with COTA members to develop innovative partnership models that leverage budgets while continuing to advance Canada's organic sector!

WATER, WATER, EVERYWHERE...
AND NOT A DROP TO DRINK!



Wapta Falls, Yoho Park, BC. Credit: Keith Young (CC)

By Marjorie Harris

Special thanks to Tim Rundle of Creative Salmon for helping pull this synopsis on Aquaculture together!

Seventy percent of our blue planet's surface is covered by the oceanic ecosystem. Short of desalination, that water isn't available for drinking, and yet the oceans' salt water has all of the micronutrients required for human health. As of 2012, farmed fish production throughout the world outpaced beef production.[1] Surprisingly, 60% of British Columbia's exported agricultural products come from aquaculture operations. In 2017, Canada's wild fish catch harvest was 851,510 million tonnes, and the aquaculture harvest was 191,416 million tonnes.[2]

Fisheries and Oceans Canada (DFO) tracks 179 wild fish stocks worldwide, and states that "fishing is a global industry, and of key importance to Canada. Sadly, overfishing, illegal fishing activities, and the destruction of ocean ecosystems are serious global issues that require immediate and continuing attention. Canada is committed to combating these problems."[3]

The Canadian Aquaculture Standard CAN/CGSB-32.312 was published in 2012, with the new revision released in February 2018.

The Aquaculture Standard stipulates the following:

- *Section 1.3: In the event of any conflict or inconsistency between this standard and CAN/CGSB-32.310 /311, this standard will take precedence.*
- *Section 1.4: Prohibited substances list is identical to organic agriculture except that the soil amendments clause is expanded for aquaculture - Soil, sediment, benthic, and water amendments that contain a substance not listed in clause 11.*

According to the Earth Policy Institute, these trends illustrate the latest stage in a historic shift in food production—a shift that at its core is a story of natural limits: "The bottom line is that getting much more food from natural systems may not be possible." In terms of resources required for livestock production, "Cattle consume seven pounds of grain or more to produce an additional pound of beef. This

is twice as high as the grain rations for pigs, and over three times those of poultry." In contrast, states the Earth Policy Institute, "Fish are far more efficient, typically taking less than two pounds of feed to add another pound of weight. Pork and poultry are the most widely eaten forms of animal protein worldwide, but farmed fish output is increasing the fastest."[1]

Clearly, it looks like aquaculture is here to stay as a form of high quality, lower input, method of protein production, but is it the answer? Conventional aquaculture systems have left a legacy of controversy and environmental issues when operated in natural ecosystems.

Can organic aquaculture meet the needs for human food production and be environmentally friendly?

On January 25th, 2019 I attended an organic aquaculture training given by Tim Rundle, General Manager of Creative Salmon, North America's only major producer of indigenous Pacific Chinook (King) salmon and Canada's first producer of certified organic farm-raised salmon.

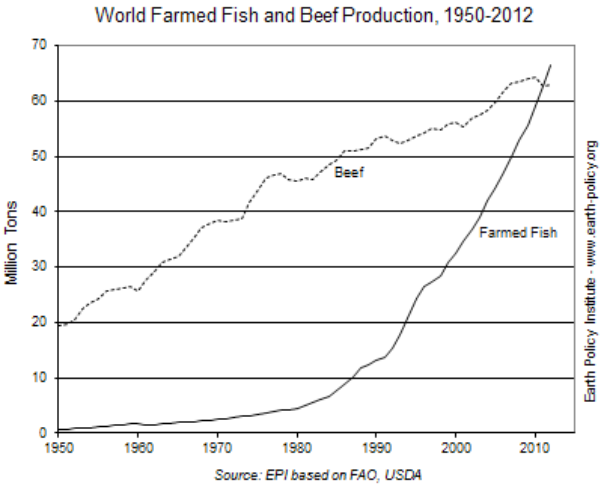
The biggest take away for me was that I was impressed with the standard's requirements for the farmed species to be indigenous or adapted to the region. This requirement is a huge improvement over conventional systems. For example, Atlantic salmon being raised in conventional farmed systems in BC coastal waters are plagued by sea lice, while Creative Salmon's Chinook salmon have a natural resistance to sea lice and no parasite treatments have been required—the species is indigenous or adapted to living where it is being raised with respect to its natural requirements.[4]

Species List in Canadian Aquaculture

Canada's Department of Fisheries and oceans lists 45 different organisms in conventional and organic aquaculture systems across Canada, including fin fish, crustaceans, molluscs, aquatic plants, algae, kelp and others. Currently across Canada, the following aquaculture operations have achieved organic certification:

BC: 1 Chinook Salmon Producer; 1 Sturgeon/Coho/Caviar; 2 Fish Processor; 2 Feed Producers
AB: 1 Aquaponics
ON: 1 Rainbow Trout; 1 Aquaponics
NB: 1 Seaweed; 1 Feed Producer
NL: 7 Mussel Producers; 4 Mussel Processing
PEI: 1 Mussel producer; 1 Mussel Processing

In an article featured on Aquaculture North America, Liza Mayer writes, "Rundle is first to admit that organic farming is not easy. Compared to conventional farming, fish raised

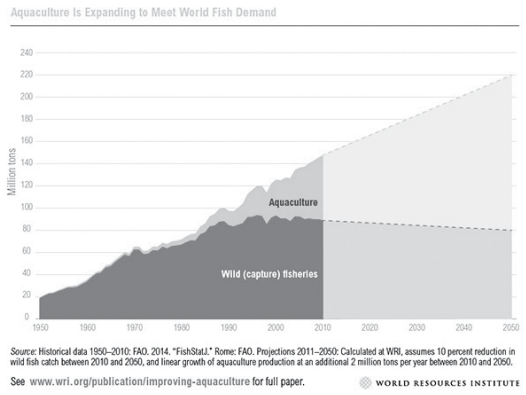


under organic standards are provided added space in the pen enclosures," in a parallel to the stocking requirements for land-based livestock in the organic standards. Moyer goes on to explain that "Chinooks, known to be more aggressive than their Atlantic cousins, swim freely because there are fewer of them in the pen, but it also means lower harvest volume. For Creative Salmon, that is 8 kilograms of fish per cubic meter maximum, although organic standards allow up to 10 kilograms of fish per cubic meter. Density in conventional farming could be from 20 to 25 kilograms per cubic metre."[5]

What does the Aquaculture Standard cover?

Aquaculture is defined as the cultivation of crops or livestock in a controlled or managed aquatic environment (marine and land based freshwater and salt water operations). Aquaculture products are crops and livestock, or a product wholly or partly derived therefrom, cultivated in a controlled or managed aquatic environment. Aquaponics is also covered by the new Aquaculture Standard and is defined as a production system that combines the cultivation of crops and livestock in a symbiotic relationship. The products of fishing and wild animals are not considered part of this definition.

Recently, conventional aquaponics received some negative press due to the announcement that CanadaGap would be withdrawing aquaculture from its FoodSafe certification programs due to the use of antibiotics, which end up being incorporated into the plant and livestock products. Organic aquaculture does not allow for the use of antibiotics, and so the discussions around aquaponics need clarity to highlight the differences between conventional and organic productions systems. As aquaponics entrepreneur Gabe Cipes explains, "We have two conventional agricultural systems, aquaculture and hydroponics, that are dependent on chemical inputs and are decidedly bad for human health and the health of the environment."



Hungry for More Aquaculture Info?

World Resources Institute projects that aquaculture production will need to more than double by 2050. But how to get there sustainably? Check out their findings, along with the recommendations they're making to transform the aquaculture industry:

wri.org/publication/improving-aquaculture

Cipes, who has extensive experience in organic and biodynamic farming, says that "If those two conventional systems are combined [into aquaponics] and managed according to the organic Aquaculture Standards, then the fish take care of the plants and the plants take care of the fish and there is no need for chemical or conventional inputs." The benefit of aquaponics, according to Cipes, is the ability to "create a closed loop ecology that is beneficial for humans and our ecology. It is a high density, low foot print method of food production that could be an integral and biologically secure part of the future of food security and sovereignty if given the opportunity."

Aquaculture is already producing more fish than wild catches and the predictions are that aquaculture will keep growing at a steady rate. British Columbia is a leading salmon producer in the world and is Canada's leader in aquaculture production. There is tremendous opportunity to expand organic aquaculture production in BC!

Marjorie Harris, BSc, IOIA VO and Organophyte.

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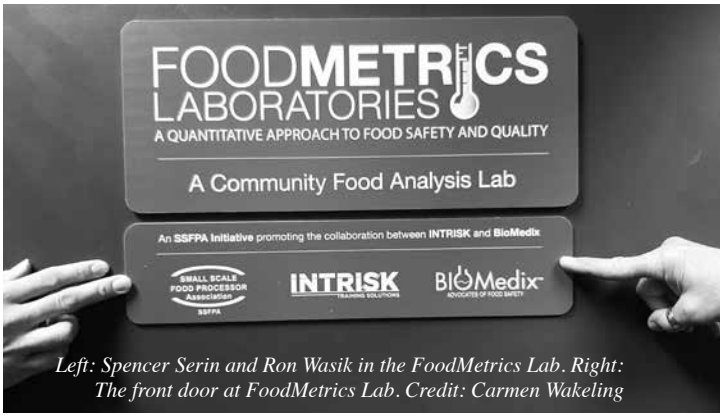
A COMMUNITY FOOD LAB COMES TO BC!



Left: Spencer Serin and Ron Wasik in the FoodMetrics Lab. Right: The front door at FoodMetrics Lab. Credit: Carmen Wakeling

Community Food Analysis Laboratories

By Ron Wasik and Carmen Wakeling

The Small Scale Food Processors Association (SSFPA) is a national trade association of processors, growers and suppliers of food and agricultural products which aims to help its members grow their businesses and expand local economies.

A 2016 survey by the SSFPA revealed that there was a need for producers and processors to have access to local laboratory facilities that could provide less complex and more affordable alternatives to testing. It was a happy coincidence that around this time the SSFPA became aware of a concept being tested by the agriculture-based community on Lopez Island in the north-western corner of the State of Washington.

Being very remote, island food businesses had difficulty accessing mainland food laboratories. Their solution was to establish a co-operative food analysis laboratory with BioMedix, a California-based biotechnology company that provides food safety testing systems to food companies and government agencies around the world.

The cooperative food laboratory concept was a revolutionary departure from BioMedix's conventional model of establishing in-house laboratories within businesses. Now, four years after that initial lab opening, Lopez Island food producers can satisfy the US Food Safety Modernization Act (FSMA) rules and have also made many improvements to their food safety practices.

About the same time, the Safe Food for Canadians Regulations (SFCR) were in the consultation phase. The expectation was that a more definitive, on-going food safety verification system would be a compulsory part of small food production in Canada.

In August 2015, Candice Appleby, Executive Director of the SSFPA, and Dr. Claver Bundac, founder and CEO of BioMedix, met to discuss establishing a similar communal food analysis system for the food producers and processors in BC. The first challenge was to decide which community to use as a testing ground. After much deliberation the town of Courtenay in the Comox Valley on Vancouver Island was chosen.

The community laboratory, "FoodMetrics", opened for business in October 2018 and was established as a partnership between Biomedix and Intrisk Training Solutions (a partner organization to SSFPA). The laboratory has been equipped by BioMedix with state-of-the-art rapid testing systems that can be used to perform a wide variety of screening tests for common foodborne pathogens and indicator organisms. The laboratory is entering the final stages of the ISO/IEC 17025:2017 accreditation, and now provides convenient and cost-effective food analysis services to growers and processors in the Comox Valley and surrounding areas.

Moving forward, if this pilot lab is financially viable the next steps include initiating labs in other rural areas. There have been people across the province knocking at the door already. Don't hesitate to contact SSFPA with questions or feedback.

Small Scale Food Processors Association:
ssfpa.net

Safe Food for Canadians Regulation:
inspection.gc.ca/food/eng/1299092387033/1299093490225

US Food Safety Modernization Act:
fda.gov/food/guidance-regulation-food-and-dietary-supplements/food-safety-modernization-act-fsma

ADAPTING

at Fraser Common Farm Cooperative

Photos and text by Michael Marrapese

In 2018 Fraser Common Farm Co-operative—home of Glorious Organics—undertook a year long on-farm research project to explore how small farms could adapt to climate change. Seeing the changes in seasonal rainfall, climate predictions by Environment Canada, and new ground water regulations from the provincial government, the cooperative could see that water availability would eventually become a significant limiting factor in farming operations.

The discussions about adaptation were complex and multi-factored. Every operation on the farm is connected to something else and many systems interconnect in differing ways throughout the season. Changing practices can be difficult, time consuming, and sometimes risky.

During the year-long project, funded by Vancity, Co-op members worked to evaluate farming practices and areas of opportunity and weakness in farm management. The project generated several feasible solutions to decrease the demand on groundwater, buffer water demand, harvest rain water, and use irrigation water more efficiently. Some solutions were fairly straightforward and easy to implement. Others required more expertise, better data, and further capital.

Clockwise from left: David Catzel's watermelon varieties; the fake apple trap; identifying active pests; Barry Cole inspects walnutd for pests; Mark Cormier with fava bean cover crop; plums in the upper orchard; David Catzel with his White Winter Kale seed crop. Credit: Michael Marrapese.

Mark Cormier: Improving Water Practices

Mark Cormier explains how Glorious Organics uses edible, nitrogen fixing peas, and Fava beans for cover crops. He's moved away from overhead spray irrigation to drip tape for the bulk of Glorious Organics' field crops. He puts drip tape under black plastic row mulch. The plastic mulch significantly increases water retention and suppresses weeds. After the first crop comes off the field he rolls up the plastic and plants salad greens in the same row without tilling. Glorious Organics plans to double the size of the artificial pond and and dredge out a smaller natural spring basin to provide more water for the longer, dryer summers the region is experiencing. Cormier notes that this year they are selling a lot of plums, a crop that they don't water at all.

David Catzel tending sheep. Credit: Michael Marrapese.

David Catzel: Developing Diversity

Catzel has several plant breeding and selection projects on the go to develop populations of productive, flavourful, and marketable crops. Preserving and expanding bio-diversity on the farm is vital for long-term sustainability. With his multi-year Kale breeding project, David has been seeking to develop a denticulated white kale and in the process has seen other useful characteristics, like frost-hardiness, develop in his breeding program. He's currently crossing varieties of watermelon in order to develop a short-season, highly productive variety. His development of seed crops has also become a significant income source. He estimates his recent batch of Winter White Kale seed alone will net $1,500 in sales. As the Co-operative diversifies its product line to include more fruit and berries, organic orchard management practices have become increasingly important. Catzel has been instrumental in incorporating sheep into orchard management. A critical component of pest management is to keep the orchards clean and to remove any fruit on the ground to reduce insect pest populations. The sheep eat a lot of the fallen fruit and keep the grass and weeds in check making it easier to keep the orchards clean.

Barry Cole: Gathering Insect Data

With the arrival of the spotted wing drosophila fruit fly, Fraser Common Farm was facing a management crisis. There seemed to be little organic growers could do to combat the pest, which destroys fruit before is is ripe. Infestations of Coddling Moth and Apple Maggot were making it difficult to offer fruit for sale. Barry Cole set about to gather meaningful data to help understand pest life cycles and vectors of attack. He's set up a variety of traps and tapes and monitors them regularly to determine when pests are most active and which trees they prefer. The "Bait Apples" attract a large number of Apple Coddling Moths. The yellow sticky tapes help determine which species are present at various times in the season. Since many of the fruit trees are more than 20 years old, he also monitors and records tree productivity and fruit quality to better determine which trees should be kept and which should be replaced.

Michael Marrapese is the IT and Communications Manager at FarmFolk CityFolk. He lives and works at Fraser Common Farm Cooperative, one of BC's longest running cooperative farms, and is an avid photographer, singer, and cook.

UNPACKING PLASTIC PACKAGING

By Gayle Palas

Consumer opinion can make or break a brand. The recent surge in awareness around food waste, the climate crisis, and ocean pollution has increased anti-plastic sentiments and triggered campaigns to remove single use plastic from our communities. Naturally this has extended to food packaging where the impact of consumer perspective is starting to be seen at the checkout.

Consumers' food ideologies are closely connected with their food purchasing habits. This is especially true in the organic industry. Organic farming is often associated with a more sustainable approach to food production. In a 2016 study from Pew Research Center on views about and consumption of organic foods, 33% of participants surveyed who bought organic food in the past month mentioned helping the environment.[1] Follow that up with a search on Google for the phrase "packaging and the environment," which brings up 302 million results, and there literally might be millions of consumers who, by association, believe that organic food packaging is somehow better for the environment. This puts a significant amount of added pressure on the organics industry. What might be seen as a new 'green' feature by a major brand, might simply be expected in organics.

Sustainability Influences Purchase Intent

We know sustainability influences purchase intent. According to the *Harvard Business Review*, "Today's consumers perceive a higher level of product performance in products from sustainable companies and sustainability information has a significantly positive impact on consumers' evaluation of a company, which translates into purchase intent."[2] This means that communicating packaging sustainability choices to consumers needs to be a company priority. However, sustainability is not the most important role of packaging.

What is the Role of Packaging?

Food packaging is responsible for containing, protecting, and selling a product. It has to balance product quality with an efficient shape and dimension that minimizes cost, all while still providing the safety and integrity needed for the product. It also has to ensure that the product stays in perfect condition until it reaches its end user. This means defending against transport issues, travel vibrations, and temperature changes, which can all affect spoilage. Last but not least, packaging is the silent salesperson. When done well, it promotes the product at the point of sale, tells the company story, and attracts new and returning buyers.

There is a lot of responsibility on this aspect of the business and it is being put under increasing scrutiny. With the rise in anti-plastics sentiment, consumers are pushing back in the grocery stores. They are demanding alternatives to single use plastics.

The Challenge is Real

A good example of the challenge that exists is producers who typically sell their value-added products in a bag or clamshell, as many organic greens are sold. Clamshells are seen by the consumer simply as a piece of plastic. They fail to recognize that clamshells are a popular choice because they solve a myriad of other challenges. Clamshells are a terrific way to introduce new products by providing high visual appeal. They reduce handling, are stackable to maximize display options, reduce spoilage, and provide significantly more marketing space than a reusable bag. For the berry industry, clamshells have been a game changer. The berries are protected so there is no more labour-intensive

culling at the store level and they can be stacked four or five layers deep, all because of packaging. Strawberries, for example, are no longer the most labour-intensive items in the produce department, so naturally retailers love the clamshell.

But the consumer doesn't know the reasons behind a company's packaging choices. It has become a binary decision with the two alternatives being plastic or no plastic. The consumer has no idea how much influence the grocery chains have on packaging. They do not realize that packaging plays a significant role with the grocery buyer when they are determining if a product will be listed or not. They also don't realize that their own buying habits, and the analytics grocery retailers look at regularly, influence the decisions that those retailers make.

Which means that the responsibility falls on the individual companies to explain their packaging choices to the consumer.

Why Companies Need to Talk About Packaging as Part of Their Sustainability Values

Because there isn't a sign beside the plastic tubs of organic salad greens that tells consumers where they can recycle the containers locally (although hopefully one day there might be) or how they fit into the circular economy, companies have to find another way to get the message out.

The reason the message needs to be proactive is three-fold. First, by preparing the information in advance, companies have the opportunity to craft a solid message built around their values. No one is caught standing at a trade show in front of a potential buyer fumbling around how to add it to the value proposition. Second, consumers want to know that the packaging choice was thought about and acted on. It builds trust. If sustainable packaging is important to the consumer, it can be a deal breaker if they can't quickly verify the company's choices. Finally, with a proactive message, the entire team will sing from the same song sheet. This will build company culture and strengthen the brand message.

How to Talk About Packaging

1. Make it easy: Add a QR code to the product label that takes consumers to a dedicated section on the website that clearly explains the company's sustainability values. This can be applied to any consumer facing packaging as part of the label, adding a band, or a sticker.
2. Use an omnichannel approach: Implement a cross-channel campaign that moves the sustainability message up front and drives interested consumers to the appropriate section of the website. This enhances the brand and presents a good opportunity to talk about more than sustainable packaging choices. As long as it isn't greenwashing, this is could be a powerful brand message that is very much on trend.

Two resources to help guide packaging decisions:

1. The PAC Packaging Consortium, a top North American organization leading the way in reducing packaging waste produced a packaging sustainability guide to help companies make better decisions around sustainability:

pac.ca/Programs/Next/Documents/pac-packaging-sustainability-checklist-structural.pdf

2. If it's a packaging process refresh that is needed, PackYourProduct.com and the How to Package Your Product in 10 Steps checklist is a step by step guide to streamlining the packaging process and avoiding common mistakes:

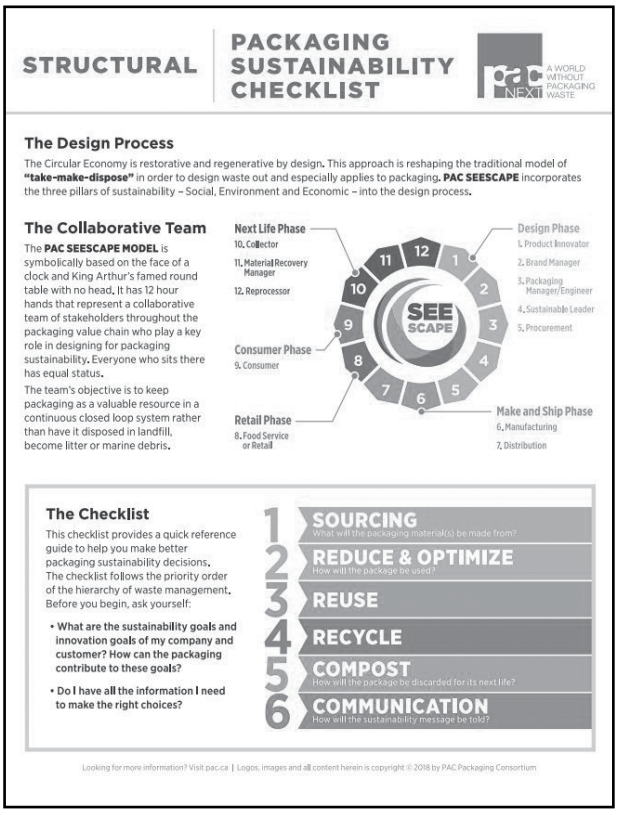
packyourproduct.com/for-buyers/how-to-package-your-product

When is it Time for New Packaging?

Sometimes the right choice is to change packaging. There is a lot of new design and development occurring in the packaging industry as companies race to find solutions to the climate crisis, making it a complicated decision. The packaging choices a company makes today may have significant impact in the future as product sustainability features gain importance in the eyes of the major retailers and new consumers.

Packaging truly is a company's silent salesperson. It makes the product look good, keeps it safe and fresh and communicates the brand story. Until a sustainable packaging alternative to plastic is developed, companies using it as part of their consumer facing products will have to focus on weathering out the anti-plastic media storm with compelling storytelling.

Gayle Palas provides customized training, marketing insight, and research for the agrifood industry. She has delivered programs across Western Canada that help entrepreneurs grow and scale their food businesses regionally and internationally. In addition to her passion for adult learning and commitment to sustainability, she is a co-founder of PackYourProduct.com, a free online resource that connects people and ideas around how to package their products.



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...Newspatch, continued from page 5

seed growers, organizers, and advocates working to increase the quantity, quality, and diversity of ecologically grown seed in British Columbia. The Gathering will offer learning and engagement opportunities that delve into multiple aspects of seed production, from production techniques to marketing models, and will also provide space for dialogue and strategizing how to further strengthen, grow, and connect local seed systems across BC.

The BC Seed Gathering is the place for folks working across the seed spectrum in BC to come together in one place to foster collaboration to build a strong seed system for British Columbia. For more information visit:

bcseeds.org/gathering

BC Land Matching Program Grows to Central & Northern BC

The BC Land Matching Program (BCLMP) delivered by Young Agrarians provides land matching and business support services to new farmers looking for land to farm as well as landowners interested in finding someone to farm their land. Beginning as a 2016 pilot in Metro Vancouver, with support from the Province of British Columbia the program expanded in 2018 and is now available in five regions: Vancouver Island, Metro Vancouver, Okanagan, Columbia Basin, and Central & Northern BC. If you're looking for land to lease, or interested in leasing your land to a farmer, reach out to find out how a Land Matcher can support you.

Land Linking Workshops are also coming soon near you! Young Agrarians will be hosting five Land Links across BC—come learn, network, and meet your local Land Matchers.

Prince George: Oct 20
Kelowna: Nov 2
Nelson: Nov 16
Langley: Nov 23
Cowichan: Dec 1

For more information, email land@youngagrarians.org and visit

youngagrarians.org/land

Managing Livestock Surface Water in the Cariboo

By the BC Agriculture & Food Climate Action Initiative (CAI)

Three demonstration projects to develop and evaluate livestock surface water resources on range units in the Cariboo will evaluate options for managing increasingly dry conditions in the region, as well as the associated costs and benefits of each option.

Detailed site designs for the projects are underway, with installation expected to happen in fall 2019. The sites are also planned to be used for multi-year research, field days and other learning opportunities. The sites were identified through an earlier CAI project that tested a livestock surface water risk assessment process.

That process assesses how existing surface water resources will be impacted by climate change and combines this information with forage availability data to assist with managing Crown range in hotter and drier conditions. A workshop taught agricultural experts, range managers and producers how to move through the assessment process. The project report is available at:

bcagclimateaction.ca/regional-project/cb11.

To learn more about this work or be notified of future field days, contact Samantha Charlton:

Samantha@BCAgClimateAction.ca.

This work is part of the Regional Adaptation Program delivered by the BC Agriculture & Food Climate Action Initiative. Funding has been provided in part by the governments of Canada and British Columbia under the Canadian Agricultural Partnership, a federal-provincial-territorial initiative.

Western Yellowstriped Armyworm

This season, growers in the Okanagan dealt with an onslaught of Western Yellowstriped Armyworm for the second year in a row. The pest has not commonly been found in the region, and many farmers have been hit hard by this voracious pest. Farmers and homeowners are asked to report any suspect Western Yellowstriped armyworm caterpillars and damage in new regions to the B.C. Ministry of Agriculture offices or contacts below

gov.bc.ca/assets/gov/farming-natural-resources-and-industry/agriculture-and-seafood/animal-and-crops/plant-health/western-yellow-striped-armyworm.pdf

Call for Photos

Do you have some great organic farming/production photos you'd like to share? A beautiful farm vista, mouth-watering produce, livestock or poultry, farming in action, or other images that showcase organics in British Columbia? We're looking for high-quality images to use in our e-news, social media posts, documents and publications. Please send your shots to Stacey at:

communications@certifiedorganic.bc.ca

along with the name of the photographer and some details about the image!

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