British Columbia Organic Grover

In this issue:

Celebrating Organic Week, Steps to Starting a Pastured Poultry Operation, Learning to Live with Wildlife, GMO Alfalfa Update, Cow Behaviour... and more.

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In memory

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BC Organic Grower

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Executive's Report

By Arzeena Hamir

A s I write this, storm clouds loom overhead and it looks like we're going to get another summer shower. I'm doing my happy dance! As a new farmer in the Comox Valley who is trying to grow food with



just a shallow dug well, it's been a challenge to say the least. And now that Mother Nature has given us some lovely, moist soil to plant into, the scramble to get all the plants in the ground is on!

At times like these, I lean heavily on the community of organic farmers around me. When I needed to re-skin a greenhouse in the early spring, Gerry Pattison from Pattison Farm in Black Creek was a huge help and showed us how to get the plastic over the frame without having to climb 20 feet in the air. I'm shaky on a ladder at the best of times so this was a huge relief!

When the weeds threatened to swallow up my rows of beets and carrots, Moss Dance and her apprentice from Ripple Farm came by to lend a hand, and they returned at garlic harvest time too. And when feed prices suddenly spiked a few months ago, all the local organic farms who raised poultry got together and combined their orders so that we could get a price break on the feed.

Coming together to work on issues has also allowed organic farmers to play key roles in the resistance to GMO alfalfa and the recent vote on Vancouver Island to declare the Island a GMO-free zone. Similarly, organic farmers have been instrumental in supporting new farmers by hosting Young Agrarian potlucks and acting as mentors to up-and-coming farmers.

No one knows the trials and tribulations of growing food like your fellow organic farmer and I am humbled by the generosity of time and energy in this community. And I don't think we're unique in the Comox Valley. I know many organic growers, across BC, who work together not only because it makes financial sense but also because we like supporting each other. It takes a community to raise a farmer. The organic community lost two huge supporters with the passing of Brad Reid and Roger London. I met both of them about 15 years ago when I volunteered on the BC Association for Regenerative Agriculture certification committee. Their depth of knowledge and commitment to organic standards was amazing to listen to. They will be hugely missed.

As the newest member of the COABC Executive, I get to see how the back end of the organization works and I am amazed at how we've been able to get so much accomplished with the few resources we have. COABC just received a huge shot in the arm with the approval of a VanCity grant that will increase our organizational capacity.

I can't wait to see the changes and the new infusion of energy this will bring to COABC. Thanks for allowing me to be part of this incredible movement and for all your tremendous support.



Administrator's Report

By Jen Gamble

Organic Week is here! The fourth annual national celebration of the organic sector will kick off September 21, 2013 and run through to September 28, 2013. Every year since its inception,



Organic Week has been growing and building momentum for the certified organic community across the country.

As the Organic Week website (www.organicweek. ca) says, we have so much to celebrate in Canada. Our sector is growing and creating a transparent, sustainable food source. In BC alone, the demand for organic products has been steadily increasing over the last number of years and BC organic consumers are among the most savvy in Canada. The BC organic community has fostered this heightened awareness over the past 20 years.

To help bring more attention to certified organic operators during Organic Week and throughout the year, COABC has launched a new Organic Resource Toolkit project. Find more information on page 13. Promotional materials from this project will give operators the opportunity to enhance consumer understanding of the increasingly confusing organic marketplace, making them better equipped to navigate it.

So this Organic Week, be proud of your certification and all it represents, talk to your customers about organics and why it is important to you. Organic Week is the time to celebrate this amazingly vibrant community of which we are all an important part.

Remembering Brad Reid

In July, the BC Organic Community lost a prominent figure and dedicated supporter in Brad Reid. Brad was the first president that I worked under as the COABC Administrator. He helped me learn the ropes and was always very supportive. We will miss him greatly.

Last Quarter Achievements

- Received Vancity enviroFund grant
- Received Investment Agriculture Foundation grant
- Hired Resilient Solutions Consulting team for the Organic Resource Toolkit Project
- Finalized 2nd quarter financials

Save the Date!

The 2014 COABC Conference will be held in Nanaimo at the Coast Bastion Hotel, February 21-23, 2014. Watch the COABC website for more information.



Editor's Note

By Marilee Peters

Tt's time to celebrate! I'm de-L lighted to be making my debut as the editor of the BC Organic Grower just as producers, processors, handlers and retailers from around the province are gearing up for the annual festivities marking Organic Week. One of the (most delicious) ways I'll be celebrating Organic Week this year is by enjoying to the fullest the bounty available from my local farmers' markets. And as we move into the fall season, after one of the loveliest summers in recent memory, what a rainbow array of abundance is filling the market stands, CSA boxes, and farmgates.



Marilee Peters, editor



Moss Dance, layout

Thinking about that incredible variety, all the diversity of organic crops that growers here in BC are able to produce, led me to thinking about how the immense diversity of needs and interests among growers is represented right here in the pages of the BC Organic Grower. As growers celebrate the steady growth in the size of BC's market for organic produce, we should also recognize that diversity as a key asset and source of strength.

For instance, sharing the pages of this issue, along with our feature on Organic Week, are stories about the rebirth of BC's hazelnut orchards, advice on strategies for deterring wildlife from damaging crops, a profile of "cow scientist" Dr. Trevor DeVries, and an update on the ongoing controversy over GMO Alfalfa. In addition, writer Hannah Roessler takes us along on her visit to one of the original European models of agritourism -- the Rosendahl Tradgarden organic farm in Stockholm, Sweden -- as she explores how their approach to bringing tourists and consumers into the heart of the farm operation could benefit farmers and farm lovers here in BC.

It's not so surprising really -- after all, finding unity through diversity is the essence of communitybuilding, and the organic community is noted for its strength, vitality, and resilience. One more reason to celebrate! Have you got an opinion about what makes organic growers unique? Connect with us to share your thoughts! As always here at BC Organic Grower, we welcome your feedback. Tell us how we're doing, and share your suggestions for upcoming issues. BC Organic Grower is your magazine. Let us hear your voice.

Please send your letters, feedback and comments to editor@certifiedorganic.bc.ca.



up and coming...

BC Celebrates Organic Week



By Deborah Lovegrove

A cross the country communities, retailers, farmers and organic producers will be celebrating Organic Week from September 21 to 28th this year. Now in its fourth year, Canada's National Organic Week is a celebration of certified organic food, farming and products from across Canada and has grown quickly into the biggest marketing event of the year for organic retailers.

Organic Week is an excellent opportunity for the country's top organic retailers and producers to showcase their products and highlight the benefits of organic agriculture and its positive impact on the environment. Consumer demand for organic products continues to rise, as proven in a nationwide study that the Canadian Organic Trade Association launched last year as part of the Organic Market Research Program, a landmark comprehensive study of Canada's organic market and organic consumers.

"We're excited about the findings in the report showing 58% of Canadians now purchase organic foods every week, with that number jumping higher in major cities," said Matthew Holmes, Executive Director of the Canada Organic Trade Association. "Our study indicates 95% or more of Canadians expect to increase or maintain their spending next year, and the annual sales growth of organic foods continues to outpace the rest of the food sector."

Key indicators in the study point out the total Canadian organic market is now valued at \$3.7 billion per year in sales. Food and beverages account for roughly 96% of this, with the remainder in smaller, high-growth categories such as fibre and textiles, personal care, supplements, pet foods, exports and other products.

The outlook for the organic sector remains exceedingly bright: sales are tripling in mainstream retail, and natural health retailers are predicting another 10-20% growth, while farmers' market shoppers continue to request more markets and more vendors. Additional details and further analysis of the organic sector will be released in September of this year.

The proof is in the figures: the time is right to celebrate the growth of the market and Organic Week is the perfect occasion!

Engagement and Advocacy

Canada's National Organic Week offers hundreds of businesses and certified organic brands the chance to engage with consumers and their community by featuring their products in a series of weeklong events, workshops and educational forums, in addition to social media engagement, and contests on Facebook and Twitter. Organic Week also includes an annual Parliament Hill Day, to give industry representatives a chance to meet with parliamentarians to discuss issues that affect the organic sector in Canada. The event this year allows organic representatives and retailers a convenient opportunity to stop in the Nation's Capital and attend Parliament, before heading on to Toronto for the ever-popular Canadian Health Food Association East tradeshow.

Celebrate in Your Community

Large or small retailers, organizations, or community groups looking to promote certified organic products are welcome to get involved! The focus is on engagement and education of consumers.

Organic wine tasting, community BBQs and educational tours about growing organic are just some of the special events that take place during Organic Week. Retailers and companies are encouraged to host local events and submit the details for listing in the exclusive events calendar and interactive map on the Organic Week website.

Organic Week is a partnership of the Canadian Organic Trade Association, Canadian Organic Grow ers, and the Canadian Health Food Association, and supported directly through industry sponsors. Re-

tailers and businesses will have the opportunity to feature their brand and products in some exciting promotional and media outlets. For more information on how you can get involved with Organic Week and the benefits of sponsorship, visit organicweek.ca or email info@organicweek.ca.

The organicweek.ca

Deborah Lovegrove is the Marketing and Campaigns Manager at the Canadian Organic Trade Association.

in memory of Brad Reid

By Jen Gamble



t is with great sorrow that the BC organic community mourns the loss of Brad Reid. Brad passed away suddenly from heart complications on July 5, 2013. Brad's four sons, along with many others, shared their memories at the extremely well-attended memo-

rial for Brad held in Aldergrove.

A great farmer, a staunch supporter of organic certification, and of other farmers, Brad has been a beacon for the organic sector. He put much energy into forwarding organics through many projects. His great thoughtfulness, wit, and drive helped steer COABC, first as a board member and then as Chair from 2009-2011. He was an elemental force in meetings and his dedication to organics won wide-spread respect. Brad was truly committed to organics and though he might have changed tactics to achieve his ends, he never gave up. Brad was known at the COABC conference for his rousing trumpet blasts and for being the not-so-silent auctioneer at the silent auction. His energy, enthusiasm and good humour will be missed.

Brad applied his dedication and multitude of talents to a great many causes. COABC is fortunate to have been one of these causes but we are not the only ones who felt the benefit of Brad's work. He was also an active hockey coach, a musician, and a supporter of Covenant House. There are many communities feeling this loss.

A Lasting Legacy

In honour of Brad and his vast contributions to the BC organic community, the COABC Board has created a new award in his memory. The "Brad Reid Memorial Award" will be given out annually, beginning at the 2014 COABC conference. The award will be presented to one who builds the organic community with commitment, integrity, and thoughtfulness.

Our hearts and thoughts go out to the Reid family and to all of Brad's many friends. His presence will be sorely missed.

Farmer Focus

Learning to Love Agritourism in Stockholm



By Hannah Roessler

S ipping a glass of wine, surrounded by the very grapes from which it was made, relishing a delicious, locally-grown meal in full knowledge of where it came from — sounds pretty divine, no?

I have to admit - I've always been wary of agritourism. Though I realized that in theory it should provide additional income to farmers, I still had my doubts. Why waste agricultural land for art tours, B&Bs, and weddings, using up valuable resources that could be used for actual farming? The thought just set my teeth on edge. What occupied my mind was more along the lines of "farm-worker housing" rather than "B&B accomodation"; more "food sovereignty" than "tourist novelty".

But then, it happened — I became an agritourist.

Welcome to Rosendahl's Tradgarden

You can be standing in the middle of bustling downtown Stockholm and have no idea what awaits you just a 20-minute walk away across a small bridge on the island of Djugarden. In fact it's hard to know where Rosendahl's Tradgarden (the "Rose Valley Tree Garden") really starts. It seems as though you were just passing the ABBA Museum and the amusement park, when suddenly you are surrounded by fields bursting with vegetables and vibrant flowers.

A pathway lined with huge rosebushes and lush flowerbeds leads you right to the commercial hub of the gardens. Several small buildings and an outdoor pavilion house a small value-added product shop, a greenhouse and nursery, a fantastic restaurant with picnic seating under arbors, an artisanal bakery, and a farm-fresh vegetable stand loaded with produce from the garden's biodynamic farm.

The cleverly designed restaurant converts to a greenhouse for the cold Nordic winter months. All the food is made from ingredients gathered from the farm or from other local organic producers. And the food is incredible - on most days they sell out completely. You can munch on the farm's culinary delights at the picnic tables, or instead mosey out to the orchard where dwarf apple and pear trees, some over 120 years old, hold court. In their shade, normally reserved Swedes are sleeping, eating, talking, and playing with joyful abandon, all under the spell of this lovely place.

"Focus on HIGHLY VALUE-ADDED ARTISANAL PRODUCTS THAT ARE AUTHENTIC, HIGH QUAL-ITY AND LO-CALLY PROduced"

KOLOGISKA VINER

All in the name of Horticultural Dissemination!

Rosendahls Tradgarden dates back to the mid-1800s, when there was a strong push to promote gardening throughout Sweden. Masses of plants were propagated and given away, teaching programs were organized, and many people were trained in gardening, "all in the name of horticultural dissemination!". Although

Regulating Agritourism

Want to start an agritourism operation? Be aware of the following regulations for offering guest accommodations on working farms:

- ★ All or part of the parcel must be classified as a farm;
- ★ The accommodation must be 10 or fewer sleeping units including seasonal campsites, seasonal cabins or short term use of bedrooms, including bed and breakfast bedrooms allowed under Section 3 (1) (d) of the Regulation; and
- ★ The total developed area for this use including buildings, landscaping and access, (driveways and parking), must be less than 5% of the total parcel area.

Source: Agricultural Land Reserve Use, Subdivision and Procedure Regulation (BC Reg. 171/2002), the "Regulation", Section 3 (1)(a) and Section 1(1).



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eventually these glory days ended, and the area went through various permutations of development, people never stopped growing food on the land.

Today the gardens are bursting with food, flowers and people. The gardens have been self-sufficient since 1984, existing without dependence on grants or other subsidies. All of the proceeds from the restaurant, shops and bakery support garden maintenance, and the food waste goes back into the compost. The sheer numbers of people who visit the gardens is a clear testament to its success: the restaurant was packed every time I went, and the vegetable stands needed frequent refilling. Both locals and tourists alike were absolutely enchanted with Rosendahl's, and everyone I spoke with hoped to return again soon.

So I asked myself, "Can farms in BC emulate the Rosendahl Tradgarden agritourism model?"

The British Columbia Experience

While there tend to be much larger and older agritourism operations in Europe, its popularity is taking a firm hold in BC, spurred on by increasing consumer awareness of local food along with a burgeoning curiosity for how it's actually produced. Agritourism started to gain more momentum in 2002 when the BC AgriTourism Alliance (BCATA) was established, and in that same year legislation was introduced allowing agritourism to be classified as a farm use in the Agricultural Land Reserve. Then in 2003, accommodation for agritourism on a farm was allowed, as long as it met certain criteria (see sidebar, page 9).

In BC we have incredible vineyards, orchards, farms and ranches, with the BCATA counting over 100 farms as members. Choosing what particular type of agritourism venture to embark on will depend on the farmer's personal strengths and interests, and on the growing region, while local zoning, bylaws, and longrange plans for different communities also play a large part in what is feasible.

Farmers who decide to embark on agritourism ventures require savvy business and marketing skills, beyond what is already required for their current farming operations. An interesting report by the Okanagan Valley Economic Development Society in 2012 showed that out of 70 farmers interviewed, 62% were interested in expanding to value-added, 59% were requiring assistance with market research, and 51% needed help with a marketing plan. This same report concluded that there were several important strategies in creating a successful environment for value-added agriculture:



"ALL THE FOOD IS MADE FROM INGREDIENTS GATHERED FROM THE FARM OR FROM OTH-ER LOCAL ORGANIC PRODUCERS. AND THE FOOD IS INCREDIBLE - ON MOST DAYS THEY SELL OUT COMPLETELY." *Credit: Hannah Roessler*

- ★ Focus on highly value-added artisanal products that are authentic, high quality, and locally produced.
- ★ Establish an environment that supports and facilitates innovation and creativity, including a regulatory environment that is conducive to taking advantage of emerging opportunities.
- Create sufficient infrastructure to establish and sustain these value-added productions.

Clearly there is interest in BC for more agritourism, from both consumers and from farmers. But are the supports and incentives there to assist more farmers in getting started with agritourism? In Sweden, Rosendahl's Garden has developed into a sustainable and interconnected model of successful agritourism. But a crucial part of Rosendahl's success has been the initial investment made by the Swedish government, supporting the garden's horticultural programs in the early years. Without those start-up funds, its difficult to say whether the gardens would be the success they are today.

The end result? I am converted. I now absolutely love agritourism. I can see how it can be beautifully incorporated into a farm, while actually enhancing farming activities and contributing income. I'm getting married next summer, and guess where I want to have the ceremony? On a beautiful farm, of course.

Www.rosendalstradgard.se

Hannah Roessler has farmed in Nicaragua, Washington and BC on organic farms, permaculture projects, mixed-crop cafetals, and a biodynamic vineyard. She is finishing her M.A. in Environmental Studies at the University of Victoria.

Get involved

Think Before You Eat Campaign Launch Planned for Organic Week 2013

By Gunta Vitins

There is lots to celebrate for Organic Week in British Columbia. New research indicates that Canada's organic market grew to \$3.7 billion in 2012, with BC as the hotspot where two thirds of consumers purchase organic groceries weekly!

To support this growth and to help BC producers promote their certified organic products at farmers markets and retail, COABC created Organic Week materials that producers and retailers could download and customize. Check them out at www.certifiedorganic.bc.ca.

Colourful posters and infocards sporting Organic Week graphics and the new Think Before You Eat organic brand messaging are displayed in many venues across BC, generating lots of buzz! Developed by the organic sector through the Organic Value Chain Roundtable, and launched by the Canada Organic Trade Association during Organic Week, the bold and compelling Think campaign has staying power, promoting BC and Canadian certified organic products all year round.

Stay tuned for more marketing resources this fall and winter, as the on-line toolkits project gets off to a roaring start during Organic Week!

Www.certifiedorganic.bc.ca

The Organic Week materials from COABC were funded in part by the Investment Agriculture Foundation of B.C. through the Agri-Food Futures Fund, Emerging Sectors Initiative, a provincial trust funded from money under the former federal-provincial safety nets framework.





2012: The Year in Numbers

According to *The BC Organic Market: Growth, Trends & Opportunities, 2013*, a recent report from the Canada Organic Trade Association, an estimated \$64 million in certified organic

food sales was generated in BC through direct marketing channels in 2012. Sales data suggests that over 40% of all BC farmers' market sales in 2012 were from certified organic operators, generating a total of \$45.5 million in certified organic sales. Certified organic sales through BC farm-stands are estimated at \$17.7 million, while \$800,000 of certified organic fruits, vegetables and other food products were sold through BC CSAs in 2012. news

Industry Presses Ahead with GM Alfalfa via "Coexistence Plan"

By Taarini Chopra and Lucy Sharratt, Canadian Biotechnology Action Network

D espite major resistance from organic and conventional farmers across the country, the biotech industry is pressing ahead with its proposed release of genetically engineered Roundup Ready Alfalfa (RRA). Forage Genetics International (FGI), the company that would market the crop, says it will wait to release RRA until the industry has a "coexistence plan" in place. The Canadian Seed Trade Association (CSTA), whose members include Monsanto and FGI, is now in the final stages of developing this plan. RRA could be released this fall.

The CSTA defines a coexistence plan as "a framework that guides the implementation of stewardship and best management practices to be employed in order for three production systems (organic, conventional and GM) to successfully coexist." Clearly, this is not possible with GM alfalfa. Instead, by allowing GM alfalfa to contaminate the environment, Monsanto and FGI would gain a market for their seed and chemicals with a tiny minority of farmers, while imposing severe costs and losses on all other producers.

A new analysis from the Canadian Biotechnology Action Network (CBAN) and the National Farmers Union (NFU) argues that "the CSTA's 'coexistence plan' is an aggressive, harmful intrusion into the existing, well-functioning farming systems and markets that benefit from alfalfa use." Citing six fundamental weaknesses in the coexistence plan, CBAN and NFU conclude that the plan is less about containment of GM alfalfa and more about public relations, and worry that the industry's goal is to use the plan to placate the public and provide decision-makers with an excuse not to intervene.

"Fundamental Weaknesses"

The analysis from CBAN and NFU argues that the CSTA's plan ignores the basic facts of alfalfa's biology, as well as many realities of farming, and shows a complete disregard for the interests of those farmers whose businesses would be harmed by GM contamination. In concrete terms, the CSTA's coexistence plan suggests unrealistic practices for farmers. For example, the plan relies heavily on good communica-



tion and "mutual respect" between neighbours, which, though it may be a goal to strive towards, is highly variable and unpredictable in reality. Similarly, the plan does not recognize the real-world constraints that farmers face. This is evident in its recommended containment measures, which include, for example, that farmers clean out equipment well enough to remove every last tiny alfalfa seed.

Recognizing successful opposition to GM alfalfa in Western Canada, FGI claims that it only plans to release RRA in Eastern Canada. Yet as CBAN and NFU point out, even if the company sticks to its promise, regional containment would not be possible. A release in Eastern Canada will certainly mean contamination across the country.

Over 36% of BC's cropland is planted with alfalfa or alfalfa mixtures grown for hay. BC also produces alfalfa for seed and has a large area under tame pasture. Together, alfalfa is likely grown on over a million acres in the province.

In late April, despite protests from farmers, the federal Minister of Agriculture allowed the Canadian Food Inspection Agency to register the first-ever variety of GM alfalfa. In the face of an unbending federal commitment to the biotech industry, it's now time for provincial governments to step in. Its time for organic farmers and ranchers in BC to contact their MPs, MLAs, and the Premier, to demand that they ensure BC producers are not harmed by the release of RRA. The only way to prevent contamination from GM alfalfa from spreading across the country is to stop it from entering the market anywhere in Canada.

Advocacy and Action Resources

- ✓ To read the critique of the "Coexistence Plan" please see the commentary and technical paper published by CBAN and the NFU at: www.cban. ca/planrebuttal
- ✓ For more information on contacting provincial and federal ministers and the premier, visit: www. cban.ca/alfalfa

Two farmers in Ontario have requested an environmental assessment of RRA from the Ontario Government. For info and to donate, visit the Organic Agriculture Protection Fund: http://oapf.saskorganic.com/donate.html

🗇 www.cban.ca/alfalfa

Lucy Sharratt is the coordinator of the Canadian Biotechnology Action Network, an Ottawa-based campaign coalition of 18 organizations including farmer associations, environmental groups and international development organizations.

Taarini Chopra is a researcher with CBAN, and the co-chair of the Waterloo Region Food System Roundtable.

New Toolkits for Organic Producers

By Gunta Vitins

C OABC is creating a series of online toolkits to help producers with marketing and certification of organic products. The creation of these toolkits and a new website navigation system will mean better access to resources for everyone.

The Organic Toolkits will consolidate and enhance existing resources, focusing on four main areas:

- Farmers Markets
- Organic Retailers
- Organic Certification Bodies
- New Organic Entrants

The Farmers Markets Toolkit will focus on marketing tools for organic vendors at farmers' markets. This toolkit will include ready-to-use organic branding materials that will help certified organic farmers differentiate themselves in these venues.

The Retailers Toolkit will concentrate on ready-touse marketing and branding tools for the retail stream. Once again the objective is to help certified organic products distinguish themselves but the key is that the materials will be sufficiently nimble and able to fit into any retailer's existing promotional campaign.

The third toolkit will deal with organic certification bodies and all such related materials.

The fourth toolkit will help new entrants navigate the BC world of organic certification.

COABC has hired Resilient Solutions Consulting to develop the toolkits, and Mediabililty for the design and implementation of a new navigation platform. Expect to see information posted about the various toolkits as they come to life over the next eight months, starting with Organic Week 2013.

For more information about the toolkits, please contact the Resilient Solutions Consulting Team:

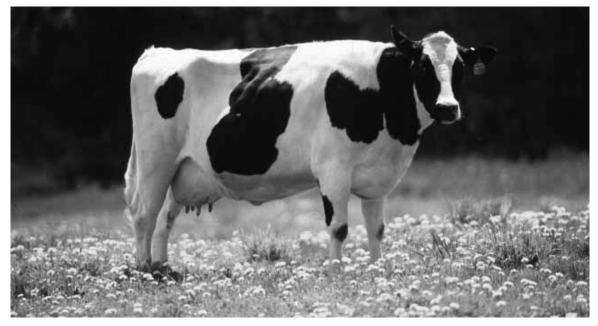
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This project is funded in part by the Investment Agriculture Foundation of B.C. through the Agri-Food Futures Fund, Emerging Sectors Initiative, a provincial trust funded from money under the former federal-provincial safety nets framework.

The Science of Cow Behaviour an interview with Dr. Trevor DeVries



By Nicole Boudreau

Editor's note: Information and research reported in this article is largely drawn from Ontario and may not reflect realities of dairy farming in BC.

T revor DeVries specializes in the behavior of dairy cows, and is now applying his expertise to organic dairies.

DeVries was born in British Columbia, a province that is perhaps better known for its fruit production than its dairies. Nonetheless, BC is home to around 500 dairy farms, mostly found in the Fraser Valley, as well as in the Interior and on Vancouver Island. With a family connection to the dairy industry - the dairy farm owned by his grandfather is still operated by his extended family - it should come as no surprise that DeVries developed a keen interest in animal science that was complemented by UBC's active dairy research program. There, his PhD thesis examined the effect of bunk feed management and design on the feeding and social behavior of dairy cows.

Researcher Dr. Trevor DeVries

These days, DeVries focuses his research on the feeding behavior of dairy cattle, examining the effects of housing and nutrition management on cow behavior. To do so, he observes cows as they feed, noting things like the size of their meals, how fast they eat and what they sort out of their food, and then explores how it all relates back to the cows' health, welfare and productivity. As an associate professor at the University of Guelph's Kemptville Campus, he also has other research projects that explore topics such as the interaction between housing, cow behavior and mastitis, or the "modern" topic of robotic milking.

DeVries is also involved in a research project that is a part of the Organic Science Cluster. When he became involved in the project "Assessment of health, welfare and milk composition on organic and conventional dairy farms", it was his first foray into research on dairy farms under organic management. The project involves measurements of animal welfare, milk quality, and mastitis rates in both conventional and organic dairy farms.

"There are not as many differences as people think there are," comments DeVries when invited to point out the differences between organic and conventional management systems. "We visited many farms for our project, and one of the biggest differences that I noted is the feeding practices. You have much more forage and use of pasture in organic systems, which can translate into lower production in those herds. There is also greater variability in the approaches to production under organic management. This might be related to limited options available to treat cows, and thus the greater need to prevent certain illnesses from happening," he adds. "[I]t is an art and skill to know how the cattle react to your behavior, how to position your body so that you could effectively move and handle them without having to be forceful..."



DeVries also considers that lower productivity may be linked to genetics. "In conventional systems, the majority of producers utilize Holstein cows, which have been bred for higher production and intake capacity, but do not graze as well. They may be genetically geared to produce more than what they can actually consume on a ration higher in forage. In organic production, there tends to be a wider variety of breeds utilized. More research is needed with these other breeds to optimize production in these systems".

The observations made over the course of DeVries' Organic Science Cluster study suggest that in the spring, after the winter feeding period, conventionally-raised cows exhibit better body condition scores than their organically raised counterparts. However, body condition scores under both management systems were equivalent after the summer.

"In larger herds, cows are not tied up in stalls. They are housed in free stalls where they can exercise and walk around. I was surprised with the percentage of cows kept in tie stalls in organic systems," comments DeVries. He goes on to confirm that the dairy cattle Code of Practice for Care and Handling recommends providing opportunities for daily exercise. "This is definitely a good recommendation, but you need the appropriate environment," observes DeVries.

DeVries also recognizes that gentle handling matters in both systems. "Proper handling of dairy cattle is a trained skill that a lot of people could improve - it is an art and skill to know how the cattle react to your behavior, how to position your body so that you could effectively move and handle them without having to be forceful at all or aggressive."

While DeVries' animal welfare research under the umbrella of the Organic Science Cluster will soon be completed, data that will be used to assess the impact of management systems on milk quality are still being compiled. "There is a variability in the incidence rate of mastitis in both systems, and we need to do further analysis to look at what might be specific in those systems that influence those incidence rates. The rates are similar, but are influenced by different factors" adds DeVries.

This livestock scientist, who appreciates drinking a cold glass of milk and likes trying different types of cheeses, feels that he can rest assured when he knows that the cows producing these tasty and nutritious products are happy, and is working to ensure that this is the case.

Www.organicagcentre.ca

Nicole Boudreau is with the Organic Federation of Canada, and wrote this article on behalf of the Organic Agriculture Centre of Canada with funding provided by Canada's Organic Science Cluster (a part of the Canadian Agri-Science Clusters Initiative of Agriculture and Agri-Food Canada's Growing Forward Policy Framework). The article originally appeared on the OACC website, and is reprinted here with permission of the OACC.



Establishing a small-scale, sustainable

Pastured Poultry Operation



Innovative poultry pens created by the Birds and the Beans in the Comox Valley. Credit: The Birds and the Beans

By Melanie Bare and Christine Ziegler-Ulsh

P astured chickens offer many benefits to the sustainable farm, supplying eggs and/or meat, enhancing soil fertility, and controlling weeds and insects. Advantages of raising poultry on pasture include:

Improved farm soil fertility and disease prevention. Poultry enhance soil fertility by working their manure into the soil, and they help manage crop pests by grazing on weeds and insects. Also, birds can be rotated into pasture following other livestock to control fly and parasite problems.

Increased farm profitability with minimal capital investment. Pastured poultry enhance and diversify the farm operation, providing several income options with minimal investment for housing, equipment, and maintenance.

Better health for the chickens and consumers who eat their products. Pastured birds eat grasses and legumes that contain Vitamin A and omega-3 fatty acids, nutrients that are known to reduce cholesterol. Pastured birds also have more access to adequate space, fresh air, sunshine, and exercise, and thus maintain better physical health than confined birds. With more exercise, birds maintain a lower fat content, which is healthier for the bird and the consumer.

The first priority of raising pastured poultry is providing the chickens with fresh pasture every

day or every few days. Therefore, a key feature of a pastured poultry operation is a building and/ or pasture design that moves easily and allows the chickens to graze and benefit from frequent fresh pasture (these designs are sometimes called "chicken tractors").

Steps to establish a successful pastured poultry operation:

Step I Assess your goals and resources. Begin your poultry operation by assessing your personal goals for the business (income, time availability, lifestyle, etc.) and listing your available business resources (your labor and that of family or employees, cash, skills, existing structures and systems, waste products that can be utilized profitably, etc.) on paper. By identifying your goals and assets right from the start, you establish a solid foundation upon which to build your operation and guide all your business decisions.

Step 2 Decide what kinds of poultry products you want to sell, and where you want to sell them. Once you have identified your goals and assets, you must answer three important questions:

• To whom will you sell your poultry products? Your choices include the general public, restaurants, wholesalers, retailers, or a combination of outlets. As you answer this question, be certain to study your local markets to see what products exist and what new products are needed, assess demand and prices for existing products, and identify possible niche markets you might serve.

- Where do you want to sell your poultry products? Do you want to sell directly from your farm, at some venue off the farm (like a farmers' market), or through wholesale distributors? The answer to this question will strongly influence the size, scope, and design of your operation.
- Do you want to sell eggs, meat, or both? The answer to this question will determine the chicken breeds you raise and may affect the design of your housing, pastures, and processing facilities.

When setting your retail or wholesale price, be certain to calculate a price that covers all your production expenses, including labor. Many producers forget to pay themselves for labor and thus are unable to make a profit, support their families, and grow their businesses.

Step 3 Develop a budget. Make a list of all the items you will need for every aspect of your operation, including: chicks or pullets, brooder equipment, feed, housing, pasture, fencing, feeders and waterers, processing equipment, product transportation, farm stand fees or rent on a retail space, and labor.

Assign a dollar value to each item; the total dollar value of that list will determine the cash you need to start your operation. This budget will help you define the initial size and scope of your operation, in line with your goals and resources. The budget will also help you determine how much profit you will need to make to sustain your family and your operation. As you develop your budget, find creative ways to barter or trade for items, find them used or for free, or fashion them from fixtures that already exist on your farm. Each creative solution will reduce your start-up costs and increase your profit.

Step 4 Choose your breeds. Many pastured poultry producers favor the Cornish Cross as a meat bird because they gain weight quickly and have a flavor that is familiar to customers. Hybrid cross birds tend to produce more meat and eggs than purebred breeds. However, these newer breeds are also losing positive traits, such as foraging abilities, disease resistance, and adaptability to climate change, that have been "selected out" in favor of meat and egg production. Every



"Many pastured poultry producers favor the Cornish Cross as a meat bird because they gain weight quickly and have a flavor that is familiar to customers."

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For more information, contact Julie Hinton: T 250-499-7080 soopa@nethop.net breed has its own unique characteristics, and your choice of breed will depend on your farm site and marketing plan.

Below are some suggested breeds, based on use. These suggestions are focused toward purebreds that were originally raised as dual purpose birds:

Broilers: Cornish Cross (currently being bred to regain foraging characteristics) is the preferred meat bird, but other suitable purebred meat birds include the Delaware and Java (though they will not reach market weight as quickly).

Layers: Rhode Island Red, Leghorn, and Plymouth Rock lay a large number of eggs as well as the Ancona (beautiful colored eggs) and Minora. **Dual Purpose:** Australorp, Barred Plymouth

Rock, Delaware, Java, New Hampshire, Rhode Island Red, and White Wyandotte.

Step 5 Design housing and pasture for your birds. Begin by selecting a site or general area where the house and chickens will reside permanently or within which they'll be moved. When choosing a site consider:

Direction: Orient the house toward the south in winter

Soil drainage: Choose high, well drained ground with a south or southeast slope if possible

Space requirements: Provide 2.0 - 2.5 square feet of indoor space per bird if they have outside access for free range.

Once you choose a site, you can begin to design an appropriate pasture and housing system for your birds. Several "pre-designed" alternative housing and pasture systems are available, or you can develop your own. The system you choose or design should fit well with your farm site and operational goals.

Examples of some "pre-designed" systems include:

The Pasture Poultry Pen by Joel Salatin: A 10' x 12' x 2' floorless portable pen that is moved daily to fresh pasture. Building materials cost: \$200 per pen. Advantages: inexpensive to build and houses large number of birds (80 - 90 birds). Disadvantages: time and labor intensive, intended primarily for raising broilers.

"Net Range" (or "Day Range") by Andy Lee: Typically, a mobile hoop house structure surrounded by poultry fencing ("poultry netting"). The housing is rotated frequently through pasture



areas. Building costs are about \$1,000 per pen, including labour. Advantages: good weather and predator protection; houses a very large number of birds; sturdy. Disadvantages: requires more advanced pasture management skills.

Yarding (for example, Label Rouge Production in France): Stationary housing with access to outdoor yards or pasture during the day. Building costs vary depending on the complexity of the structure, or the reuse of existing structures. Advantages: little labour. Disadvantages: if you do not subdivide and rotate through paddocks, the birds will eventually deplete the forage and create a high concentration of manure that increases the possibility of pathogen build-up.

The Chicken Tractor by Andy Lee: A 4' x 10' moveable floorless pen that holds 20 broilers or 10 layers. Building costs are \$75 per pen, including labor. Advantages: inexpensive, and can be developed to integrate with vegetable production systems and/or improve soil fertility in gardens. Disadvantages: time and labor intensive, poor weather and predator protection.

Free Range (for example, "Skid Housing" by Herman Beck-Chenoweth or "Egg Mobiles" by Joel Salatin): Mobile housing is moved regularly to encourage birds to range particular areas of pasture. Skid housing is built on runners. Egg mobiles (12' x 20') are designed for layers (portable housing with nests), built on trailer hitch and pulled with a tractor. Building costs vary by design complexity and size. Advantages: more space for birds, less labour required, flexibility to produce more or fewer birds as demand requires. Disadvantages: unless fencing is used, these systems offer no predator protection. Also, significant acreage is needed so birds can be continually rotated to fresh pasture. No matter which system you choose, you will need to include the following features in your housing design:

- Ventilation
- Insulation
- Walls
- Roof (needs to be waterproof and include an overhang for passive temperature regulation)
- Nests (only needed for layers: 1 square foot of area with 1 foot of head room)
- Roosts (2" x 2" stock, rounded or beveled, spaced 12 15 inches apart: should not be more than 2 feet off floor).

Step 6 Nutrition. Like all living creatures, chickens require a balanced diet of proteins, carbohydrates, minerals and vitamins. Protein requirements vary from 16-20% of the total feed weight, depending on the chickens' stage of development and output. Most feeds consist of corn, soybeans, and wheat, as well as vitamin and mineral supplements. Since chickens do not have teeth, they also need some form of grit (tiny stones or oyster shells) to aid the gizzard (an organ located before the small intestine) in digestion.

Pastured poultry ingest many vital nutrients from grazing weeds, weed seeds, legumes, grasses and bugs. There is some debate as to how much pasture-based nutrition the birds can actually digest and assimilate. Unlike ruminants, chickens lack a multi-compartmented stomach and cannot efficiently digest cellulose. Therefore, chickens cannot live on pasture alone. Nonetheless, birds benefit greatly from grazing pasture. Studies have found significantly more vitamins and omega-3 fatty acids, as well as lower fat content, in free range birds.

Livestock nutritionists can help you develop an appropriate ration for your poultry, and many of these nutritionists are also organic feed suppliers. Feed costs (especially organic feed) can be fairly high. Therefore, if you are raising a significant number of birds, you may want to consider growing some or all of your own feed. Growing feed can reduce your expenses and make your operation more self-sufficient and sustainable.

Step 7 Maintain your flock and keep them healthy. Pastured poultry are generally resilient to diseases and infections. The most common health and management challenges are weather and predators. Adequate shelter is vital in most cli mates to shield your birds from cold, rain, severe wind, and heat. Predator protection, such as portable electric poultry fencing, is also important in most areas. Daily maintenance tasks include checking the birds for health, replenishing their feed and water supply, and cleaning their housing and pen areas. Be sure to keep detailed health records for your birds, including: age, vaccinations, egg production, etc., as this information is helpful in tracking and resolving potential health issues, assessing production costs, and gaining organic certification.

Step 8 Manage your pastures effectively. Chickens will graze any type of pasture, and while they prefer legumes over grasses, they will eventually consume the entire pasture. As you plan your pastures, begin by utilizing pre-existing pastures, especially if you already keep pastured ruminants. However, if you must replant or create new pasture areas, plant a diverse mix of forages that mature at different times of the year to improve soil quality and provide grazing variety for the birds.

As you choose forages to plant, be certain to consider your site factors (such as soil type, rainfall, etc.) and production plans (such as replanting the area in vegetable crop or using it for other livestock to graze). Joel Salatin, author of Pastured Poultry Profits, grows what he calls a "permanent polyculture" which is a mix of "grasses and clovers, including native grasses, broadleaves, clovers, chicories, oats, and rye". Salatin also suggests keeping grass short (a few inches) because it helps the birds to ingest more food.

Fencing is another significant and beneficial component of your poultry pasture. Though fencing is not essential, it offers protection from most predators (except avian predators such as hawks), while enabling the birds to access adequate range space. Fencing also helps you better manage and/ or rotate areas where the flock grazes. Portable poultry fencing, also called "poultry netting", is a reasonable investment. Most small scale producers use only a few 165 foot rolls of poultry netting and one battery charger to pasture an entire flock. Andy Lee offers helpful advice on working with poultry netting in his book Day Range Poultry.

Step 9 Plan for economic and environmental sustainability. Before, during, and after you've designed and established your poultry operation, you must regularly evaluate its ecological and economical sustainability. Recycling resources within your farm is the key to both; it reduces the

number of inputs that must be purchased from off the farm and replaces many of the resources that are lost through off-farm exports.

For example, some or all of your chickens' water requirements can be met by an on-site rainwater catchment system, and their grain feed needs can be met with a minimal investment of land. Approximately 3 acres is required to grow feed for about 1000 broilers per year, and as Andy Lee notes, the manure from that number of birds is sufficient to fertilize the land to grow their feed. If feed is grown on the farm and manure is recycled as fertilizer for the feed crops (via pasture and composting), it is then easy to replace the nitrogen exported off the farm via eggs and meat by growing leguminous cover crops and forage. Recent research determined that 0.02 acres of alfalfa can replace the nitrogen lost from 19 layers and 20 3.5 lb. broilers per year, which multiplies to about one acre of alfalfa for 1000 layers and broilers.

Clearly, poultry can enhance and benefit the farm, but is small scale poultry farming economically viable? Producers Joel Salatin and Andy Lee agree that pastured poultry farming is easy to start on a small scale, with little initial capital investment, and often provides a quick return on investment. As with all farming endeavors, preliminary market research is the key to success: you'll only make money if the market is there! Diversity is also vital. Pastured poultry is an excellent, low cost way to diversify your farm and increase your income.

The full version of this article originally appeared at rodaleinstitute.org.

Editor's note: When making any changes to a certified operation, be sure to consult the standards for compliance.

Suggested Further Reading

Pastured Poultry Profits by Joel Salatin

Chicken Tractor: The Permaculture Guide to Happy Hens and Healthy Soil, by Andy Lee and Patricia Foreman

Day Range: Every Chicken Owner's Guide to Grazing Gardens and Improving Pastures, by Andy Lee and Patricia Foreman





By Margaret Holm

O ne of the results of farming organically may be that you notice or even encourage wildlife on your property. But living in close proximity to wildlife can put both humans and animals at risk -- not to mention the effects on crops! Helping growers to safely and humanely assess, manage and, when necessary, deter wildlife, has been the focus of my work with the Okanagan Similkameen Conservation Alliance and other BC conservation organizations for a number of years, providing information on the agricultural practices that are compatible with the province's species at risk.

At the same time that the number of farms, orchards and vineyards in BC has increased, the population of certain species of wildlife has also increased to take advantage of new food sources and opportunities presented by urban and rural communities. Attractants are an unavoidable part of agriculture, and will continue to be an issue when attractants are being produced as a commercial product. Wildlife Control agencies are understandably reticent to respond to complaints about damage to commercial crops or livestock, if little or no predator control measures are in place such as fencing and basic attractant management. Responsibility for the reduction of potential conflicts lies first with the landowner. It's becoming increasingly clear that there is a need for resources and information that can help growers to reduce crop damage while also reducing the need to kill problem wildlife.

To fill this information gap, a series of eight new wildlife management guides for agriculture has been developed, written by Zoe Kirk, a coordinator with WildsafeBC -- a program to reduce human-wildlife conflicts throughout BC -- and myself. The series, "Living with Wildlife", is designed to serve several purposes. The guides present options for wildlife deterrents for the species that are most problematic for growers, including rodents, starlings, deer, and bear; while others focus on safety for species that may cause concern for people working outdoors, such as snakes, cougars, and coyotes.

Choices for wildlife management, worker safety, and animal deterrents are provided for each species and are also compiled in the twelve-page "Wildlife Conflict Reduction" guide. Wildlife management assessments are outlined as a planning tool and can help determine whether measures such as bird netting or fencing are cost-effective. Web links for further information on each species as well as wildlife control suppliers are included.

Excerpt from Conflict Reduction Guide:

Old or new fencing?

It can be a difficult balance, being sensitive to wildlife while protecting crops, livestock and workers. Costs involved in re-fencing may be too onerous to take on all at once and require a prioritized, staged implementation. There may be options to remedy existing fences to save both money and time, while ensuring an added level of safety to humans and wildlife.

Remedies for existing fences:

- regular maintenance: include regular physical inspections as part of ongoing maintenance schedule
- keep wires taut and replace any part of the fence that is broken or damaged
- fill in places where wildlife have dug underneath or bury a wire mesh skirt under the fence
- add a smooth wire section atop an existing fence to add height
- emphasize height with a top rail, using polyvinyl chloride (PVC) pipe sections or flagging tape
- add one or two strands of electric wire outside and along existing fences
- dig a trench and fill with large rocks to prevent wildlife digging beneath the fence.

* Low fences augmented with higher strands of barbed wire are not recommended for deer fencing. This type of fence is most commonly implicated in wildlife injury.

Continued on page 29 ...



by Thom O'Dell and Haley Argen

H azelnut trees, newly available after being in short supply in BC for almost a decade due to the impact of Eastern Filbert Blight (EFB), are regaining interest from growers—both those with existing orchards and those wanting to start one. New varieties selected for resistance to EFB, high yields, and other desirable traits are now in evaluation trials in BC, and new orchards are being planted around the Lower Mainland, Sunshine Coast, Gulf Islands and beyond as word of the availability of blight-resistant varieties spreads. Hazelnuts are back!

An Ideal BC Crop

There are few places in the world as suitable to hazelnut orchards as the southwest corner of BC. For good production, hazelnut trees require winters that are fairly mild to facilitate pollination (which tends to peak in late winter), yet cold enough to provide adequate chilling of about 1600 hours below 7° C. While they prefer well-drained soil with good moisture, they can tolerate a wide range of soil conditions. Hazelnuts fall from the trees in September through November (depending on the variety and the weather). They are cleaned and dried before sale or processing. Dried hazelnuts store well for up to a year at room temperature.

Hazelnuts—also known as filberts or cobnuts—have been a commercial crop in the Fraser Valley since about the 1930s. By 2000, there were over 800 acres of hazelnut trees in the Fraser Valley producing over 300 tons of nuts per year, mostly around Chilliwack and Agassiz. Then eastern filbert blight arrived.

Blight takes a Bite

EFB is native to eastern North America, where its destructive effects on cultivated hazelnut varieties have so far prevented their adoption as a commercial crop. It arrived in Oregon in the 1970s, where it wrought havoc on the hazelnut industry, and made it to BC around 2003. Over the next decade, as EFB spread, BC's hazelnut farmers became increasingly discouraged and nurseries stopped growing the trees. Currently there is a quarantine preventing importation of hazelnut trees to British Columbia from anywhere that EFB is known to occur, except in tissue culture.

You might ask: "If the disease is already here, why not open the border?" But introducing more trees could open the door to more of the hundreds of strains of blight (currently only one is known to be found on the west coast), allowing it to evolve here and become even more virulent. Producers and regulators agree it is important to keep the quarantine in place to slow the spread of the disease.

Advantages of Agroforestry

Hazelnuts are generally considered hardy to Zone 5 US, though this can vary by cultivar and some varieties may survive in the Peace River area. In addition to



Clockwise from top right: Oregon State University plant breeder, Dr. Shawn Mehlenbacher, with a five-year old 'Jefferson' hazelnut tree; Eastern Filbert Blight cankers on a twig; Hazelnut tree with crown dying from EFB (credit:Thom O'Dell) Young hazelnut planting, intercropped with garlic at Poplar Grove Orchard, Agassiz. BC (credit: P. Andres)

the Lower Mainland and coastal islands of BC, older varieties are known to be hardy and produce nuts in some areas of the Okanagan, around Kamloops and Nelson. The areas of potential success for new cultivars in Canada is unknown, since each cultivar and microclimate is different, and they have not yet been widely planted here (almost all current data is from Oregon).

Hazelnuts can be planted in orchards, with intercropping, for 'silvapastures', hedgerows and windbreaks, to shade farm buildings, as hosts for truffles, and of course for the many other benefits that come from adding more kinds of trees on your farm. Intercropping with crops such as garlic, squash, and clover seed between the hazelnut trees works best during establishment—before nut production, when harvests impact the alleys between the rows, and the orchard becomes more shaded. Feeding culls to livestock, allowing them to feed from nuts left on the ground after harvest, or growing nuts purposely for feed are time-proven agroforestry strategies.

BC Hazelnut Growers Association President Peter Andres is intercropping garlic with his new planting at Poplar Grove Orchard and has plans to plant a heritage grain seed crop next. He sells much of his harvest at farmers markets to get premium prices (for his garlic and scapes too!) and he makes a hazelnut face cream for a unique value-added product.

Continued on page 28 ...

Food Not Lawns Farming in the Big City



Transforming urban lawns into fertile vegetable gardens, City Beet Farm is changing how Vancouverites see their food.

by Karin Olafson

omething unexpected is happening in suburban East Vancouver. Instead of the usual grassy lawns, small plots of farmland are taking over the city streetscape.

City Beet Farm, founded by recent UBC grads Katie Ralphs and Ruth Warren, is one of a new crop of urban farms taking off in Vancouver – a kind of farming that has been growing in popularity over the last two years. Passionate about helping develop a more sustainable food system and about making local, affordable food more readily available for people in cities, farms like City Beet are making it easier for Vancouverites to eat healthy. City Beet relies on landowners' front and back yards, reclaiming the land to turn the lawns into fertile gardens.

Turning Over a New... Lawn

Still in their first year of operation, the City Beet farmers have found that farming in an urban environment is easier said than done. One of their first challenges



was ensuring that the soil is fertile enough to support growth. Ralphs and Warren tried several preparation techniques before landing on one that worked the best to meet their particular needs. Their original strategy -lifting the sod at each plot and tilling -- was too workintensive to be practical. In order to be more time efficient and to return the nutrients from the grass back into the soil, Ralphs and Warren turned to rototilling, treating the lawns like any other farm turning over a cover crop.

But while effective, rototilling comes with a drawback - it is time consuming. With an increasing number of lawns in East Vancouver being offered up for City Beet Farm to use, a quicker method was needed to prepare the lawns before the planting dates. A sod cutter was the optimal solution.

Before planting, the prepared lawns needed to be composted. Compost, integral for increasing the nutrient level of the soil and improving the soil structure, is especially important in urban environments where the soil isn't necessarily fertile or optimal for growth. While City Beet is building up its own compost to use in subsequent years to further minimize the business' carbon footprint, for its first year of business, organic compost was trucked in from Richmond.

Meeting the Challenges of Urban Density

The average Canadian lawn is the size of half a tennis court. Considering City Beet Farm produces 40 dif-

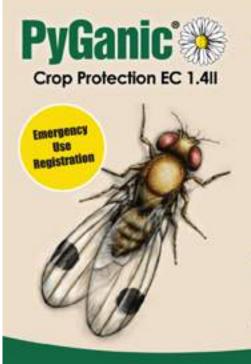
"High-density planting, inter-planting and companion planting are all methods that have been implemented in order to produce a high yield in a very restricted space."



ferent types of vegetable, space is scarce. One of the challenges that accompanies urban farming is making good use of a small amount of space – and City Beet Farm has employed several planting methods to do just that.



Ralphs and Warren knew from the beginning that they had to make use of the little space they had. High-density planting, inter-planting and companion planting are all methods that have been implemented in order to produce a high yield in a very restricted space.



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"We planted all our head lettuce in between our onion rows as a way to conserve space, we have inter-planted leeks and carrots, and we have also planted kohlrabi in between cabbage rows." The urban farmers explain that while enough space needs to be left to allow for growth, the space between each row is reduced compared to rural farms.

Urban farmers can also choose to make use of free space – by going up instead of out. The City Beet Farmers have been experimenting with trellising, finding the long-practiced technique ideal for increasing the amount of usable space and increasing their yield. Realizing that not all crops need to be planted in the ground, this urban farm makes use of planting methods like grow bags, saving prime bed space for other vegetables that rely on this growing environment.

"We always make sure we continue to give the plants the best environment, but it's great to find ways that allow the plant to thrive and also help conserve space."

The Future of Urban Farming in Vancouver

Despite being a new business and having to find solutions to the variety of challenges that accompany farming in an urban environment, City Beet Farm has had a summer full of successful harvests, selling produce through local stores and their own CSA. Deliveries are by bike, as Ralphs and Warren are committed to keeping their methods as environmentally friendly as possible.

City Beet Farm has already overcome many obstacles in their quest to farm in a sustainable way in Vancouver. But what's next for them, or for other small urban farms in the Vancouver area? Right now, Ralphs and Warren don't see certification as a viable future alternative for them, relying instead on their visibility in the community to connect with consumers directly about their produce. Ralphs explains: "It's a lot easier for our growing process to be transparent. People can ask us



What urban farming practices are working really well?

- CSAs provide secure advance income and more financial security as well as shared risk.
- Farmgate sales involve limited transportation and marketing costs. Farmgate sales further decentralize access to food and they also provide an opportunity for outreach and demonstration.
- Size of Land: Larger pieces of land (no less than 500 square feet) provide reasonable yields at a manageable scale. If a farm has multiple pieces of land, soil conditions often vary, but this can also be of benefit to the farmer for growing different types of crops suited to varying soils.
- Community Development: Urban farms in residential neighbourhoods connect people from different cultural backgrounds
- Education: For some urban farms, the education component of their operations provides a steady stream of income over a year in addition to food sales. Even those that do not run education programs demonstrate great value in growing food, and inspire residents with options to use their space e.g. growing on boulevards.
- Co-operative: Several farms teamed up in 2012 as a co-op to sell at farmers markets by amalgamating produce, and assigning a coordinator, which enabled them to provide more variety and great presentation at the market.

(Source: Understanding Our Practices from Seed to Scrap: The 2012 Vancouver Urban Farming Forum, Vancouver Urban Farming Society)



A typical urban farm in Vancouver:

- Is revenue generating
- Utilizes sustainable practices
- Utilizes spatially and temporally intensive growing methods
- Often takes place on multiple sites
- Often collaborative in nature between individuals, farms, and organizations
- Often electronically documented via website, blog or other social media tools
- Is, by definition if selling food, a business.

(Source: 2011 Urban Farming Forum Report, Vancouver Urban Farming Society)



what we are doing with the plants, where they come from, they visit our greenhouse – and I think we are very accountable because of that."

As urban farms increase in numbers in Vancouver, the need

for best practice standards is also growing. "Understanding our Practices from Seed to Scrap," a new report released from the Vancouver Urban Farming Society in June 2013 is the first step developing a baseline landscape of urban farming practices throughout the region, addressing what is working, what is not, and where the gaps are. As that process continues, it may become easier for startup farms like City Beet to bring sustainable farming practices to the city.

🕆 urbanfarmers.ca

The citybeetfarm.com

Karin Olafson is the assistant web editor at Avenue Calgary Magazine. This is her first contribution to the BC Organic Grower.

All photos: City Beet Farm

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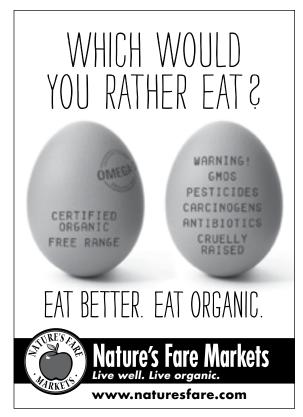
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Selective Breeding for Superior Nuts

In 1969, Oregon State University in Corvallis began a large hazelnut breeding program, applying classic selective breeding to produce superior trees. The past 10 years have seen the release of many new hazelnut varieties selected for EFB resistance, nut quality, and pollen characteristics. Some new varieties can produce almost double the yield per acre of the old standard Barcelona hazelnut variety.

By creating new varieties with high resistance to EFB, the Oregon State University breeding program is widely credited with rescuing the hazelnut industry in Oregon, which has grown by about 3000 acres per year for three straight years. At a recent field day in early August at Oregon State University there were a couple hundred people and many young farmers. It was inspiring to see so many multi-generational farm families celebrating hazelnuts; clearly their industry is thriving.

In BC, many hazelnut farmers are certified organic, a big distinction from Oregon where they are only about 5% of the total. Canadian Hazelnuts is one of the two processors in the Fraser Valley. They're set up to handle organic nuts and make a variety of products such as roasted nuts, nut butter, oil, and protein powder.



New orchards are being planted now, so while some see hazelnuts as a dying commodity in BC, we are watching the crop being reborn. Resistant to disease, bearing bountiful crops of flavourful, nutritious nuts with endless uses, now is the time to diversify your farm with hazelnut trees!

Www.naturetechnursery.com

Thom O'Dell and Haley Argen run Nature Tech Nursery in Langley, where they produce disease-resistant Hazelnut cultivars.



... Got Critters? continued from page 21

Wildlife friendly fences

- Are highly visible to birds and mammals.
- Allow wildlife to easily move past or along the fence line.
- Allow non-target wildlife safe passage through; either to jump over or crawl through.
- Use smooth, solid galvanized wire not barbed wire.
- Domestic sheep and llamas have a double fence to prevent the transmission of disease to California Bighorn Sheep
- Do not impede wildlife access to important habitat and safe zones.
- Do not crowd wildlife onto major roads.
- Do make room for a safe corridor for wildlife to move through.
- Use wildlife Friendly construction techniques and materials to deter predators and problem wildlife.
- Cantilevered smooth wire tops with flagging tape are the best deterrent to prevent fence-jumping and injuries to wildlife.

Refer to Fencing with Wildlife in Mind at: http://bit.ly/ CODOWfenwildmind

BC Agricultural Fencing Handbook: http://bit.ly/ FencingwithElectricity

Planning for an Electric Fence

- 1. Consider the project: What are you most concerned about keeping out or inside the fence? This will determine the number of strands and type of fence required.
- 2. Decide which is best for your application: solar or electric, fixed or mobile perhaps both.
- 3. Make a sketch to lay out boundaries and to calculate actual footage of fencing required: account for gates, driveway openings, corners and additional bracing.
- 4. Ensure the fence loops back to maximize energizing potential.
- 5. Consider all conditions under which the fence must operate i.e., temperature and moisture.
- 6. Identify potential hazards and barriers, such as cables, hydro lines, roadways, large boulders and terrain challenges.
- 7. Mark out distances for brush clearing on each side of the fence to improve line of sight and ease fence maintenance. This removes cover and shelter for predators and allows wildlife to see the fence. Consider a set back from the property line to allow for easy fence maintenance and to let other wildlife pass.

8. Consult a professional to purchase the correct materials.

Is electric fencing a viable option for you?

- 1. Estimate the annual losses in dollar value of wildlife predation.
- 2. Consider actual crop or product loss and time spent removing trapped wildlife.
- 3. Calculate the approximate annual costs of labour and materials to repair property damage and fences.
- 4. Obtain at least two quotes for a professional installation – on a cost per foot basis showing gate and driveway options. Discuss what role you can play in the installation so the quote reflects your participation.
- 5. Decide how much of the preparation work you can do before the installers arrive. Brush clearing, line marking and terrain modification will save you money.
- 6. Note: Many growers that have professionally installed fencing have saved more than originally

Guides in the "Living with Wildlife" series are available for free downloading and distribution on the following web sites:

www.osca.org/Living with Wildlife – Agriculture section

Regional District Okanagan Similkameen www.rdos. bc.ca WildSafeBC-Bear Aware section

BC Wine Grape Council www.bcwgc.org Health & Safety section

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🕆 www.osca.org

Margaret Holm works for the Okanagan Similkameen Conservation Alliance.



Announcements

Organic Week is September 21-28. Send in your event details by September 15 to www.organicweek.ca to be listed in the online events guide.

The Salt Spring Island Apple Festival will be held on September 29. Info online at: www.saltspringapplefestival. org

Practitioner Standards Process: Anyone wanting involvement in the development of the Society of Organic Urban Land Care's organic practitioner standards and certification process, contact Rochelle Eisen rare@telus. net 250.499.2413. SOUL is undertaking this project with financial assistance from the COABC's OSDP fund.

Agri-Innovation Applications Open: The Investment Agriculture Foundation of BC will be delivering the renewed \$3 million Canada-BC Agri-Innovation Program (CBCAIP) to help advance agricultural innovation and competitiveness in BC. Applications will be accepted on an ongoing basis. All projects (including all reporting requirements) must be completed by January 31, 2015. For more information on CB-CAIP and the application process, visit www.iafbc.ca

Events

The 2014 COABC Conference will be held in Nanaimo at the Coast Bastion Hotel, February 21-23, 2014. Watch the COABC website for more information. www.certifiedorganic.bc.ca

Organic Okanagan Festival is Sept 29 from 11am-5pm in Kelowna at the Summerhill Winery

Freak'n Farmer Adventure Obstacle Race September 21, 2013 at Covert Farm in Oliver, BC. Visit organicweek. ca for more info.

Organic Regime Livestock Standards IOIA Webinar a two-part series on September 25 & October 2. Visit organicweek.ca for more info.

Upcoming fall workshops at the Kootenay Farm School in Creston, BC. More information online at http://www.cotr.bc.ca/kootenay-farm-school To register for workshops contact (250) 428-5332 or Toll Free: 1-866-740-2687.

Advanced Seed Saving with Patrick Steiner: Learn seed saving and storage techniques. Work with simple, lowtech tools to clean a variety of seeds for the Dan McMurray Community Seed Bank.October 6, 2013, 1:00pm - 5:00pm, \$39 +GST

CLASSIFIEDS

Place your classified ad in the BC Organic Grower for only \$25/ issue!

Events listings are free!

For more information, contact Moss at:

bcogadvertising@certifiedorganic. bc.ca

- Grow Your Own Mushrooms with Robert Macrae: Explore the world of mushroom cultivation followed by a hands-on workshop on how to grow oyster mushrooms. November 2, 2013, 10:00am-3:00pm, \$59 +GST
- More Food in the Valley with Colleen Ross: Join accomplished agriculturalist and food systems builder Colleen Ross for a highly interactive workshop on scaling up production on small farms. December 6, 2013, 7:00pm - 9:00pm, \$29 +GST





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Contact Name:			Option 1: PST Number:		
			Option 2: Certificate of Exemption Farmer exemption form: www.sbr.gov.bc.ca/documents_library/forms/0458FILL. Other enterprises exemption form: www.sbr.gov.bc.ca/documents_library/forms/0490FILL.		
Item	Units	Unit Price	Quantity Discount	Quantity	Total
Stickers 1" round	1000 pc roll	\$13.50	10 rolls \$120.00		
Stickers 1 1/4" square	1000 pc roll	\$10.50	10 rolls \$90.00		
Twist Ties 10" (15,000 per case)	1000 pc	\$13.00	Full Case-\$165.00		
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Ball Caps	\$15.75 \$13.10	\$15.75 \$13.10	PST taxable PST taxable		
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*Limited quantities available - please contact the COABC office for availability

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TO ORDER ONLINE VISIT: WWW.CERTIFIEDORGANIC.BC.CA

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