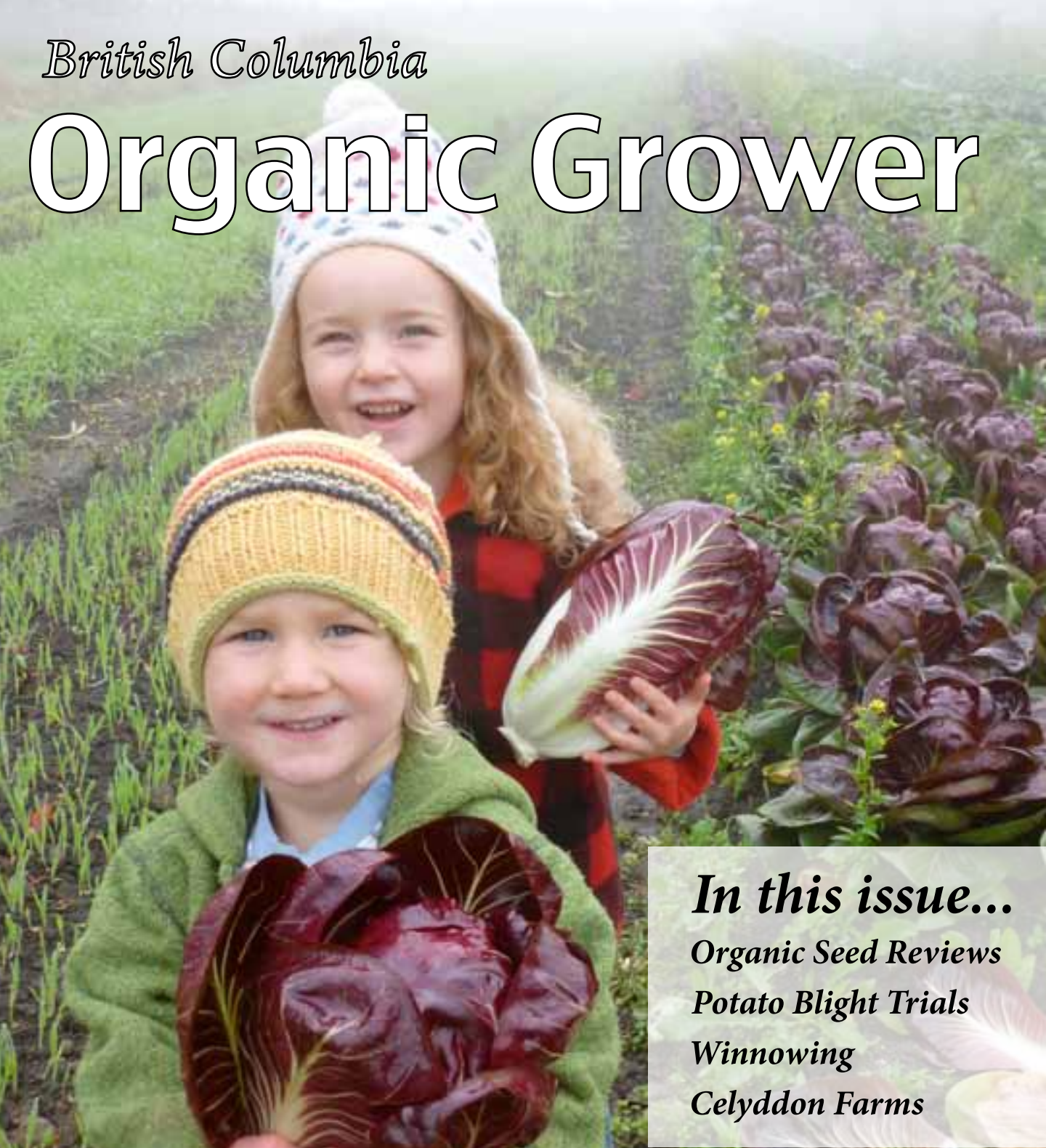


British Columbia

Organic Grower



In this issue...

Organic Seed Reviews

Potato Blight Trials

Winnowing

Celyddon Farms

Journal for the Certified Organic Associations of BC - Winter 2012

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COABC
Certified Organic Associations of BC

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"Innovations" – COABC's 2012 Annual Conference will take place in February. Details are on page 8.

BC Organic Grower

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On the Cover: Clara and Roxie show off Raddichio at Glen Valley Farm. Credit: Glen Valley Farm

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President's Letter

“The innovation point is the pivotal moment when talented and motivated people seek the opportunity to act on their ideas and dreams.”

W.Arthur Porter

This year has gone quickly. When I accepted the position as president of COABC I had ideas and dreams.



Reflecting on the past year, I read Brad's message from this time last year. He shared that we were in an environment of no government funding and little government support for the organic sector. Agriculture is one of the lowest funded ministries in BC and all of agriculture is suffering because of this.

As farmers and businesses that rely on farming we need to look at our journey and see where we can improve. We want to be sustainable and we also need to be profitable.

The board has worked very hard this year at building relationships with government to help bring change. We have had three meetings with the Minister of Agriculture and one with ministry staff assigned to help the organic sector. I also attended a meeting with BCAC where the Minister of Jobs, Innovation and Tourism made a presentation and the Minister of Agriculture was also in attendance.

The effort has paid off not in cash, but in some assistance from the Agriculture Ministry, and for this we thank the Honorable Don McRae and his ministry. We have been heard and recognized. This year the minister also proclaimed the week of October 17 as Organic Week while we were in Victoria at one of our meetings.

We could not have had such a productive year without our amazing staff. Jen Gamble our administrator who has stepped up and helped to grow the COABC and Kristy Wiperman our office manager. Both of these women work very hard at looking after the COABC business. Their efforts ensure that the COABC is recognized at all levels and they keep the directors' work to a minimum.

We also need to thank our volunteers as well. Hermann Bruns has spent many hours doing work on our behalf with the Organic Federation of Canada. The meetings he attends are beneficial to all of us. Paddy Doherty, along with a supportive committee, has continued to look after our OSDP funds. All COABC board members spend hours reading documents, preparing for and attending meetings.

A special thank you to the executive this year that has stepped up and worked hard to move COABC forward in innovative ways.

Remember that the COABC is not the directors, it is not the office, it is YOU our certified members. My term on the COABC board comes to an end at the AGM. I will continue to work on behalf of the organic sector as a volunteer and advocate. Please join me in volunteering for the organic sector. 🌱

Mary Forstbauer
COABC President & BioD rep

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Administrator's Report

By Jen Gamble


January marks one year since I started as the COABC Administrator. The year has flown by and I've enjoyed the work and the learning. I look forward to sharing the successes of the BC organic sector in the coming year as well.



Especially exciting for 2012 will be our annual conference in February. I am pleased to announce that we will be hosting Humberto Rios Labrada as the conference keynote speaker. Humberto is a scientist and biodiversity researcher who has encouraged Cuba's agricultural shift towards more sustainable practices. Last year he was awarded the Alternative Nobel Prize for Grass Roots Environmental Activism by creating countrywide Programs for Innovative Local Agriculture (PILA/PIAL), radically improving agricultural outputs and landscapes with bio-diversity management methodologies. In 2005, Humberto delivered an inspirational presentation at our conference and we are fortunate to welcome him once more.

The conference will explore innovations in social justice, on-farm practices and alternative farm models. There are also many sessions within these streams that focus on the business and marketing side of organics. Our conference coordinators and the conference committee have been working hard to create an exciting line-up of presenters that will appeal to both the COABC membership and the general public. Help us spread the word!

Registration is now open and you can go to www.certifiedorganic.bc.ca to hold your spot. The early bird pricing is in effect until Feb 7, 2011.

We look forward to you joining us in Chilliwack at the Rainbow Country Inn on February 24-26, 2012. Watch for conference updates on the COABC website and through Facebook and Twitter. 

Achievements for last Quarter

- National Organic Week Events including COABC executive meeting with the Minister of Agriculture and the Agriculture Critic
- Organic Week Proclamation by the Provincial Government
- New Ex-officio assigned to COABC by the Minister of Agriculture
- Finalized 3rd Quarter financials




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Editor's Note

By Andrea Langlois

Every Spring, as I open seed packets and pour the little grains of life into my hand, I never cease to be amazed at how in just a few months, these small granules will become kale, beets, kohlrabi and more. As Gary Atkey, a farmer from Mayne Island, says in this issue, it is incredible as to “how much potential there is within that tiny organism that you can trigger by adding soil, water and some degree of heat.”



Andrea Langlois,
editor



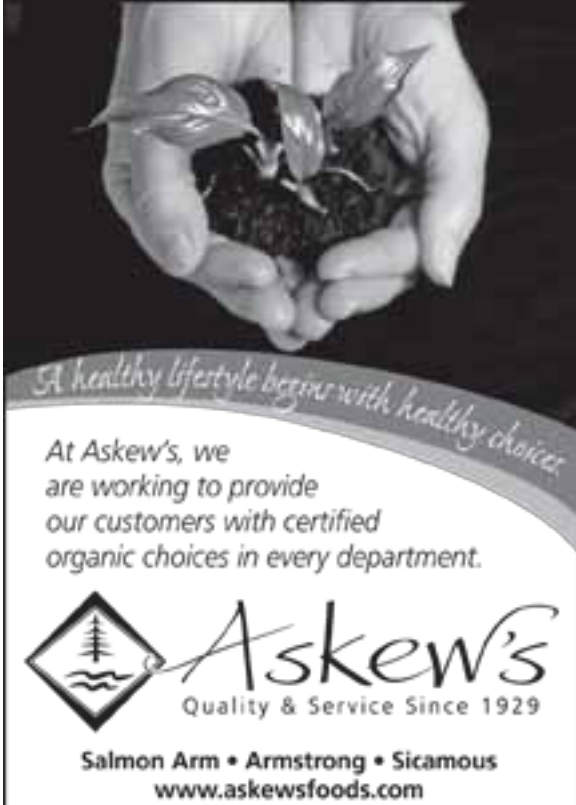
moss dance, layout

Perhaps it is the magic of the seed and of life that draws so many to agriculture. It's a good thing to remember as we are enveloped in the dark wings of mid-Winter, as we wait for that time when once again we can hold those little miracles between our fingers.

In the meantime, it's time for reflection and planning. I am pleased to bring you an issue that is in large part dedicated to seeds – from seed reviews, to discussions about seeders and winnowing, to new research findings about potatoes, to the latest information on genetically engineered crops.


And as we gear up to our yearly opportunity to meet face to face at the COABC conference, I hope that the faces and stories from BC farms in this issue – from Mayne Island to the Fraser Valley and beyond – will act like an appetizer to the yearly gathering of amazing growers from around the province in February.

This issue marks the beginning of Moss and I's fourth year as the BCOG editor & design team, and we look forward to another fruitful year of great articles, ideas and photographs from all of you. The email lines are open at editor@certifiedorganic.bc.ca!



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Celyddon Farms



Cherry tomatoes gleaming in the greenhouse. Credit: Colin Hughes

By Spring Gillard

After graduating from Animal Science at UBC fifteen years ago, Colin Hughes worked in the livestock industry, but that didn't last too long.

"I couldn't bear the cruel and inhumane way animals were treated," he said. He became a vegetarian and began to look for a different line of work. He was hired by BC Hothouse, and entered the world of conventional, hydroponic greenhouse growing – first as an Integrated Pest Management (IPM) monitor.

In 2003, he left the industry to start his own operation. His training at BC Hothouse would serve him well, but he wanted his greenhouse to be organic, a rarity in BC at the time. Without nearby mentors, he relied on books by Eliot Coleman.

Leasing a half-acre of farmland in Delta, Hughes put up four small greenhouses and began to grow cherry and heirloom tomatoes, cucumbers, peppers and eggplants, in soil, one of the main differences between the conventional and organic greenhouse systems.

"People thought I was crazy," he said. The hydroponic growers thought it wasn't possible on a small scale and that growing in soil wouldn't be as productive. Organic growers didn't think it would be possible to grow that intensively in soil.

Celyddon (pronounced *kel-i-thon*) Farms is now in its eighth year and certified by the Fraser Valley Organic Producers Association.

At first Hughes sold his entire crop to a local wholesale distributor. Now he sells exclusively at lower mainland farmers markets with help from his parents and sisters. He is able to get a better return for himself that way and offer his customers fair prices, about 25 percent less than in the grocery store. His customers are very loyal, turning up in the pouring rain because they can't do without his delicious tomatoes; some even stop eating tomatoes during the winter. Many love to buy the pretty purple eggplants too, but don't know what to do with them, so he provides recipes to encourage them to experiment.

Despite his popularity, he hears a few complaints from time to time about his methods. Some people object to the hybrid varieties he grows, though they only make up a small percentage of his crop. Hughes buys much of his seed from the Seed Savers Exchange; many of his heritage varieties come from Gary Ibsen in Carmel, California, known for his annual tomato fest.

There are also farmers market frequenters who are resistant to greenhouse grown products in general. But Hughes is able to argue in favour of this model of production.

"A greenhouse can produce five times as much in a given area as you would out in a field. You can grow

more intensively and extend the growing season,” he says.

Organic tomatoes are very hard to grow in our wet lower mainland climate, but Hughes uses that natural environment to his advantage.

“Too much water will puff up the fruit and you lose flavour and nutrition,” he says.

He tries to dry land farm as much as possible. He starts early in the spring when the ground is saturated. Over the summer, the soil slowly dries; by August there is no moisture in the top two to three feet of soil. “That way, the plants can root five to six feet into the ground and find their own water,” he explains.

Hughes uses a drip irrigation system more for feeding the plants than for irrigating; fish and kelp fertilizers deliver the needed nutrients through the drippers. As he doesn’t grow through the winter, he relies on natural light. In March and April, he heats the greenhouse with hot water propane boilers.


“Some people object to me using energy to heat the greenhouse, forgetting that I am right on their doorstep. If a backyard grown tomato is the equivalent of walking to work and a conventional hydroponic greenhouse equal to a single occupant car, then I am the same as taking the bus to work,” says Hughes.

His dream is to have an off-grid greenhouse, using geothermal for heating and wind turbines to produce the electricity. While the capital outlay will be huge, Hughes knows it will be worth it. He will be able to grow out of season and reduce his current energy use by 100 percent.

“I think a greenhouse can be the backbone of any mixed farm,” he says. “It’s the most productive part of an operation. It’s only a problem if the greenhouses dominate the farm. On a ten-acre farm, half an acre of greenhouses fits in well, gives the farmer a steady income and makes the farm more profitable.” Even on half an acre, he manages to mix in a couple of other crops, growing garlic and broccoli between the greenhouses.

As for the name, the Hughes family has a Welsh background. Celyddon was the forest where King Arthur

“I think a greenhouse can be the backbone of any mixed farm... [It] gives the farmer a steady income and makes the farm more profitable.”

and Merlin the Magician hung out, a place of refuge and sanctuary. Hughes felt the name was a good fit what he was trying to do. And, as it turns out, this piece of land is a refuge for more than an organic greenhouse. He shares the farm with a large horse stable that runs an equine therapy program for people with disabilities or addictions. 

Spring Gillard is a communications consultant, SFU sustainability instructor and author of Something’s Rotten in Compost City, A Primer on the Politics of Food (Smashwords Edition 2011). She blogs at:

 www.compostdiaries.com.



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INNOVATIONS



2012 COABC Conference

Best Western Rainbow Country Inn
Chilliwack, BC
February 24 - 26, 2012

COABC's Conference provides educational and networking opportunities for new and established farmers, as well as the general public. We feature educational topics presented by knowledgeable speakers who are experts in their field.

We have pulled together a wonderful selection of presentations that provide new insight into various concerns or challenges we experience in the farming community. These could be concerns related to on-farm management systems, succession planning, alternative farm models, certification, marketing or broader social issues. The conference will be organized into three streams:

On-Farm Innovations will explore on-farm issues such as wildlife management, the production and use of biochar, permaculture, waste reduction and utilization, simple record keeping and animal welfare.

Alternative Farm Models will focus on different farming models and examine the good, the bad and the ugly. We will look into different forms of cooperative farming, community farming and land leasing arrangements. We'll also examine a farm school education program and a Young Agrarians network of new farmers.

Social Justice will focus on issues that are rarely discussed openly in the farming community. We'll examine farm worker housing situations, apprenticeship programs, conflict and nuisance complaints, as well as working with people from First Nations and marginalized communities.

In addition to these streams, several workshops will explore topics including community seed collectives, innovative marketing tools, such as social media,

and resources for selling at farmers' markets.

Keynote Speaker

We are also extremely fortunate to welcome Humberto Ríos Labrada and his son Humberto Ríos Rodríguez from Cuba to provide our keynote presentation and entertainment after the Saturday evening banquet. They will be speaking about the participatory, farmer-controlled Plant Breeding and Seed Diffusion methodologies (PPB & PSD) and his now world renowned & prize winning Programs of Innovations for Local Agriculture (PILA / PIAL).

Other conference highlights (subject to change)

- Friday evening wine and cheese reception
- Trade show and poster presentations will provide a marketplace of products and ideas to challenge your imagination
- Practical and interactive workshops all day Saturday and Sunday morning
- COABC AGM Sunday

Location

The 2012 COABC Conference will be held at the Best Western Rainbow Country Inn Hotel & Conference Center at 43971 Industrial Way, Chilliwack, BC. If you require specific transportation arrangements please contact the conference organizers at conference@certifiedorganic.bc.ca

Accommodation

The Best Western Rainbow Country Inn is holding rooms at a rate of \$99.00/day (double occupancy), plus tax. To reserve please call the hotel at 1-800-665-1030 and ask for the COABC rate. For other accommodations options & maps please visit the COABC website.

Continued on page 10...

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Silent Auction

Every year our creative community provides an amazing range of items to be auctioned which includes: clothing, books, art, food, wine, tools, seeds, and much, much more. If you would like to donate an auction item, just bring it with you to the conference. Auction items will be on display from 6pm Friday evening until bidding closes at 9pm on Saturday.

Trade Show

Tables can be booked by emailing conference@certifiedorganic.bc.ca.

Poster Sessions

Free space is available for poster presentations related to innovative organic production. Email conference@certifiedorganic.bc.ca with your poster idea to book space.

Workshops & Presentations

ON-FARM INNOVATIONS

Biochar: A Soil Amendment for Improved Soil Quality and Carbon Sequestration, presented by Dave McCandless, Fraser Common Farm Cooperative & Jessica Dennis, UBC.

Summerhill Permaculture and Biodynamic, presented by Gabe Cipes.

Animal Health and Welfare on Organic Farms, presented by Jackie Wepruk, General Manager of the National Farm Animal Care Council (NFACC).

The Six Masters Story: Feeding Animals Better, For Less, present-

ed by Walter Bergen, Six Masters Farm.

Record Keeping for Organic Producers, presented by Rochelle Eisen, Resilient Solutions Consulting.

Innovative Farm Practices for Soil & Wildlife, Examples from BC's Vegetable Basket, presented by David Bradbeer, Delta Farmland and Wildlife Trust.

ALTERNATIVE FARM MODELS

Improving the Apprenticing Experience, presented by Jordan Marr.

Yarrow Ecovillage Community Farm: The Triumphs and Tribulations of Community Farming, presented by Tamara Bonnemaïson.

"You Clean the Pig Pen While I Go to the Beach": Cooperative Farming, presented by Tom Henry, Small Farm Canada.

Preparing a New Generation of Agriculturists – Kwantlen Polytechnic University's Commitment: The Richmond Farm School and Bachelor of Science, presented by Kent Mullinix.

SOCIAL JUSTICE

Grounded in the Ground: The District of Mission Community Organic Garden and Its Role in the Safe Reintegration of Long-term Offenders, presented by Glen Flett & Marjean Fichtenberg.

Being a Friendly Farmer: Practical Tips on Preventing Complaints and Managing Conflict, presented by Gloria Chojnacki, Case

Manager with BC Farm Industry Review Board.

Sunshine Coast Organics, presented by Peter Doig.

Farm Worker/Housing Conditions & Solutions: Options for Farm Workers' Conditions on the Farm, presented by Doe Gregoire, Similkameen Farmworkers Camp-ground Society.

Beyond Our Plates, presented by Raul Gattica, Agriculture Workers Alliance.

Working Within the ALR for Agricultural Industry and Farmers: Relationships with Agricultural Land, presented by Doe Gregoire, Similkameen Farmworkers Camp-ground Society.

OTHER INNOVATIVE TOPICS

ISEAL Assurance Code Project, presented by Paddy Doherty.

Selling at Farmers' Markets, presented by David Connell, UNBC & Chris Hergesheimer.

Organic Labelling, presented by Rochelle Eisen, Resilient Solutions Consulting.

And much more including... Community seed collectives, community farming and food access, managing conflict, land leasing arrangements, social media for farmers, biomass trading, and Young Agrarians. 🌱

This is a selection of the presentations and workshops. **For complete workshop descriptions visit:**

 www.certifiedorganic.bc.ca



“INNOVATIONS”

BC Organic Conference & AGM

Best Western Rainbow Country Inn – Chilliwack, BC
February 24th – 26th, 2012

REGISTRATION FORM

Registration Deadline is February 7, 2012.

Late registration subject to \$25 additional fee.

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Address: _____

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| <input type="checkbox"/> | Full Conference: | Includes Pass to Friday night reception, Saturday and Sunday COABC workshops, tradeshow and Saturday Night Organic Feast, entertainment and Silent Auction | \$195 |
| <input type="checkbox"/> | Saturday Conference & Feast | Includes pass to the Saturday COABC workshops, tradeshow and Saturday Night Organic Feast, entertainment and Silent Auction | \$135 |
| <input type="checkbox"/> | Feast Only | Organic Feast on Saturday, February 25, 2012 | \$40 |
| <input type="checkbox"/> | Late Fee | (postmarked after February 7, 2012) | \$25 |

TOTAL

\$ _____

_____ I would like to volunteer to assist during the conference.

I have the following dietary requirements: _____

The item I can donate to the auction is (describe): _____

The food I can donate for the meals is (describe): _____

**Please make your cheque payable to COABC and mail it and this form to:
COABC, 202-3002 32 Ave, Vernon, BC, V1T 2L7**

Cancellation Policy: The COABC will refund registration fees less a 25% service fee only until February 17th. Cancellation requests must be made in writing to the Conference Coordinator to the address noted above. Refunds will not be provided after February 17th and refund payments will be prepared after the conference.

Winnowing

An Essential Part of Seed Production

An interview with Mojave Kaplan, Planting Seeds Project

By Marjorie Harris

When asked recently about old style farming equipment, my mind's eye immediately rested on the sight of Mojave Kaplan's amazing antique wooden winnower that is brilliant in its simple design, and concise in effectiveness separating the seed from the chaff.

After the harvest has been threshed to loosen the seeds from the outer hard shell casings it is ready to be winnowed to remove the chaff from the seed.

As Mojave explains, "The history of winnowing goes back to the very inception of agriculture, if not before, by using the power inherent in the element of air. It is an obvious and natural way to move and separate the lighter from the heavier of materials. With methods, such as simply blowing into our hands, using baskets or textiles and tossing seed up into the wind, dancing around large heaps of grain with paddles and turning the material to the breeze, or by the manufacturing of cyclone and windmill styles of machinery, winnowing is as diverse as human culture. It is yet another thread that unites us."


The winnower that the Planting Seeds Project has been using is a handcrafted antique Asian model acquired at a museum auction about 15 years ago and given to Mojave as a birthday present. Mojave has been carrying it around with her ever since; bringing it to Seedy Saturdays, Seed Growing/Cleaning Workshops, Conferences, and School classrooms, where the "hands on" allure proves especially effective with young folks by riveting their attention.



Mojave with her antique winnower. Credit: Margorie Harris

The Planting Seeds Project...

Mojave Harris grows, maintains, and distributes Heirloom and Heritage Open-pollinated vegetable, herb, and flower seeds. She is the central grower, co-ordinator, and co-creator of Planting Seeds Project. The Planting Seeds Project (www.plantingseedsproject.ca) has been involved since 1990 in the lobby and education for small farm scale production of open pollinated seeds, farming and distributing seed, touring workshops globally, developing the "Youth in Agriculture program," educational work supporting garden development, seed cleaning, and coining such phrases as "Local Living Seed Banks in Every Community," "If You Eat, This Is For You" and "Putting The Culture Back Into Agriculture." Contact Mojave Kaplan at seedwarrior@yahoo.ca

 www.plantingseedsproject.ca

Mojave speaks with enthusiasm about sharing the winnowing technology with potential young farmers. She says, "When something is demonstrated by hand or with the simplest of technology, cognition occurs which elicits fascination. You can see it most easily in children. We have experienced this time and again over the years whenever the Planting Seeds Project demonstrates our antique hand operated seed winnower."

Mojave speaks to the wonder that the winnower brings.

"As soon as it winnower comes out children touch it, they turn the handle. They want to do it! Unprocessed but threshed field harvest is dumped into the hopper and the children crank away with the familiarity of riding a bike, all the while watching the chaff blowing, leaving the seed as clean jewels tumbling out of the chute into a basket. Others are

inextricably drawn to the action. A crowd forms, comprised of all ages, as life should be.”

This “hands on” learning about plants, where food comes from, and being a farmer re-establishes culture with instant satisfaction of accomplishment and success!

“These immediately transferable skills jumpstart youth into motion in their own areas of fascination and is especially supportive for fledgling farmers. The fascination occurs because the state of wonder has become so rare. Children see this process instantly because they can understand it and participate,” says Mojave.

One of the goals of the Planting Seeds Project is to support local, regional, and inter-regional seed production and to encourage seed to be held in public domain. This is fundamental to any local farming movement, and was an early tenant of organic farming and gardening.

Mojave explains, “While this theme has become lost in the centralized growth of the agricultural industry, it is returning with such concepts as the hundred mile diet, the resurgence of small scale farming, and hopefully in the blossoming cause of organic and fertile seed.”

Ensuring simple, effective and portable seed cleaning systems is necessary for the completion of seed processing. These hand crank winnowers who are available for local farm and communities are economical. Units are easily transportable in cars, trucks, or even by a pull cart or wheelbarrow.

Winnowers are easy to repair and to maintain; they are an accessible technology. The Planting Seeds Project has been using their antique handmade winnower along with


hand screens to do all of their in-house seed cleaning.

The winnowing basics are simple. Paddles turned by a handle produce appropriate wind. The seed drops from the hopper, past the generated wind, which blows off the chaff. Cleaned seeds fall from the chute into waiting containers. This works well on all seed where the seed is heavier than the chaff. This also provides “fanning” to blow off underdeveloped “light” seed, and is a necessary part of seed cleaning.

The advantage to these hand turned models is that you control the speed of the wind. Each seed type has a different requirement. They are also inherently reliable and economical.

“In its travels,” says Mojave, “This winnower has been shown alongside the most diversified and technical of modern seed cleaning equipment. At an Organic Seed Alliance Conference technology show, there were semi trucks full of sophisticated seed cleaning equipment that were complicated to use and hard to transport. Yet it is our simple winnower that was talked about in the local newspaper covering the event. The same is so often true here in BC where local papers covering Seedy Saturdays published a photograph of children running the antique winnower.”

The Planting Seeds Project’s next step in evolution is to embark on the design, production and distribution of a line of simple hand winnowers, configured to meet the needs of home, small farm, and community use. “We will be showcasing models, doing seed cleaning demos, and offering on site consultation with farmers to match your farm scale needs,” says Mojave.

Look for them with BC Seeds at the COABC Conference, “Innovations” February 24th-26th. 

Seed Resources

- Check out Farm Folk City Folks’ Knowledge Pantry at: www.ffcf.bc.ca/resources/knowledge_pantry.html The Knowledge Pantry is stocked with links and resources to help you stock your own pantry with sustainable foods. The BC Seed Security Project is located here and includes books to help you breed and save seed, such as *Small Scale Organic Seed Production Manual* and *How to Grow a Seed Collective: A Community Template for Seed Saving*, by Robin Wheeler and Susan Davidson.
- An extensive listing of where to buy BC Seeds: www.bc-seeds.org/retailers.php
- Seeds of Diversity, formerly known as the Heritage Seed Program, maintains a living gene bank and is a Canadian charitable organization with 1400 members dedicated to the conservation, documentation and use of public-domain, non-hybrid plants of Canadian significance and keeps up a list of for the locations for Seedy Saturdays across Canada at: www.seeds.ca/ev/events.php. Organizers are encouraged to register their events.

Marjorie Harris, BSc, IOIA Adv.V.O., A.Ag, lives in Armstrong BC and works both locally and internationally. She can be reached at marjorieharris@telus.net.

SEEDER EXPOSÉ

Two Alternatives to (and a Wizard's fix for) the Earthway Push Seeder

By Jordan Marr with Tim Carter & Eric Simons

Among veggie producers, nothing begets divisiveness like the Earthway Push Seeder. Most growers I know have one, and in their appraisal of the contraption they fall into one of two camps. I think a Lord of the Rings analogy is appropriate to describe the two, if you'll indulge me.

In the Middle Earth that is your garden, gardeners either view the Earthway as Frodo, forever questing, noble martyr to the cause of even germination. Others view the Earthway as Lord Sauron, locked away in Mount Doom (your tool shed), a shadow of itself since it lost its ring (when you removed its drive belt), just waiting for another chance to dispense its misery (ground up seed and carrot-thinning nightmares) across the land.

I fall firmly into the Earthway-as-Lord-Sauron camp, having never had much success with the thing. So recently, I made some inquiries about two other push seeders—the Jang Clean Seeder and the Johnny's Six-Row Seeder—on the COABC listserv. I received some helpful responses, including one from Paul Neufeld to let me know that Canadian Organic Growers magazine recently published a great article about push seeders (“Seeding Crops in the Market Garden,” Summer 2010). I've since read it and concur with Daniel Brisebois & Reid Allaway's review, so encourage readers to cross reference with that article as well.

Below, I've included some user-reviews of the Jang and the Six-Row. And for those readers who maintain hope that the Earthway can be used for good, visit my blog for a nifty fix that only a wizard like Gandalf could have come up with.

The Jang Clean Seeder A review by UBC Farm's Tim Carter

We've used a Clean Seeder at the UBC Farm for the past few seasons, and overall, I highly recommend it for line seeding. Compared to an Earthway, the Clean Seeder is much easier to keep in a straight and level line. It closes the furrow better, it distributes seeds



more evenly and accurately, doesn't get clogged or grind small seeds, and the seeding rate can actually be adjusted.

If you're attentive to seed size differences and desired plant densities, you can save a lot on overly dense plantings or time spent thinning. And although it doesn't exactly singulate seed, some crops that you might normally transplant can be sown directly with the Clean Seeder, such as basil, cilantro, pelleted head lettuce, pac choi, bulb fennel, Swiss chard, and rapini. The Clean Seeder is not particularly durable, but it seems good enough if you don't abuse it. And compared to the price of other precision seeders, it's a great deal.

A few things to note:

- While the seed roller mechanism is ideal for small round seeds (especially brassicas), it doesn't work as well for larger seeds like beans, peas, or corn.
- It doesn't come with a row marker (and the add-on one is expensive), but you can easily rig up your own row marker. We used one from an old Earthway.
- The roller clutch in the drive mechanism will wear out at some point (ours did), especially if you get bits of grit in there. They are available for approximately \$25.
- The recommended seed rollers are sometimes way too conservative. For instance, using the recommended YX-6 for arugula or mustards would give you about 1 or 2 seeds every 4 inches at the highest gearing and 1 or 2 seeds every 10 inches at the lowest gearing.
- For convenience, we aim to leave the seeder at the highest gearing for most crops and only gear it down for more widely spaced crops or crops that vary widely in seed size and require some attention to plant density (like beets).

The Johnny's Six-Row Seeder

The anecdotal experience of Eric Simons, Bountifield's Farm

We've owned the six-row seeder since the beginning of 2011. Our experience with it is really quite limited, so I'm more comfortable offering anecdotal experience than a review. Our soil type is a mix of clay and sand with a few rocks.

The whole machine feels well-built, both in its attention to detail and the almost completely steel construction of all the parts. There are a myriad of adjustment options including seed size, three spacing settings, and brush settings to control the number of seeds allowed into each hole on the seeding rod. There is a separate hopper for each row of the seeder's six rows.

With this seeder, choosing an appropriate hole size in the seeding rod for a given seed is fairly easy, in that you can watch all the mechanisms (including the six individually adjustable brushes that work in concert with the holed seeding rod) and do a few test rotations to see what you'll be dropping.

That said, we had a host of problems in getting it to work for us. Some initial stumbles could be chalked up to our inexperience with it, others not. Here are a few examples:

- The rollers often didn't have enough power to drive the seed rod. This seemed due to at least three separate design issues:
 1. The rubber band that acted as a drive belt is smooth, as are the circular furrows it sits in, so it relies on friction. If that furrow got dusty, or dirty, the belt sometimes wouldn't catch. If the furrows got a bit more dirt in them, the belt was liable to slip/pop right "out of gear," either to the wrong adjacent furrow or right off the machine.
 2. The rod itself is difficult to rotate. If you lubricate the two plastic rings that hold it, it will move more easily, and puts less pressure on the friction of the drive belt. Just be careful where you get that lube on the machine—seeds will stick to it.
 3. Finally, our soil, particularly in its post-tilling lofty state, frequently built up between the front roller and the hoppers, jamming the front wheel and requiring cleaning, sometimes every five or ten feet. Not only did this interrupt the seeding, but it left the soil cover over the new seeds uneven. Pre-packing the bed with the roller's front wheel only helped the situation a little.

- The individual hoppers for each row are a nice idea, allowing you to seed different things at the same time (so long as the seed size is the same), and allowing for various row-spacing choices, yet they aren't practical if you are using a small amount of seed or want to recover the seed out of the hoppers when you're finished.
- Because the seeder does a nice job covering its own furrows, it's impossible to tell whether your seeding has been successful. This was really the thing that prevented us from using the seeder much this year. (Jordan's note: in another review submitted for this article, Shawn Dirksen suggests that the seeder can be set to drop seed on top of the soil so that good spacing can be confirmed.)

Johnny's told us that some of the problems we were experiencing could simply be due to our soil type. But frankly, ours is not such an unusual composition—neither too rocky or clay or sandy.

All in all, I wouldn't be surprised if more time spent tinkering and testing this thing would bear good results, but that feels like a lot of effort to put into a time-saving device, and I don't want to risk it on any more important seedings. If it were easier to return (customs and postage get in the way, not Johnny's who did offer to refund us) we probably already would have. As is, we might play with it a bit more next spring, and cross our fingers.

For longer, more detailed versions of these reviews, plus a wizard's fix for your Earthway seeder, please visit *The Ruminant*, where Jordan Marr publishes a blog that features farmers' tools and techniques.

www.theruminant.ca

Jordan Marr is an organic grower and editor of The Ruminant, a farming blog that encourages farmers to share their tools and techniques using photos.



Seed Variety Reviews

By Chris Bodnar

In his book *The Winter Harvest Handbook*, Eliot Coleman states that farmers have a responsibility to share their knowledge and experiments with each other in order to improve organic growing. It is in this spirit that I offer the following variety reviews from trials on our farm this season.

Our trials focus on finding suitable organic varieties of seed to replace standard conventional options. A primary focus is the production of profitable, marketable crops. As such, we use a number of hybrid varieties for the sake of yield, appearance and consistency of maturity dates. At the same time, we are always looking for suitable open-pollinated varieties to replace or grow alongside hybrid varieties.

Our farm is located in Abbotsford, in the Fraser Valley. We had an exceptionally late start in 2011, with cool, wet weather through to July. The second-half of the season provided warm, dry conditions, allowing crops to mature. These conditions have been taken into account when reviewing the following varieties.

BROCCOLI

Batavia F1, Belstar F1

High Mowing Seed

Batavia was a new variety for 2011. It performed well, producing an early crop of crowns and side shoots afterward. The catalogue notes that Batavia does not have the same heat tolerance as Belstar, although it is significantly earlier. Belstar produces consistent, even crowns. When grown side-by-side with conventional hybrids such as Everest and Diplomat, both Belstar and Batavia are slightly smaller with somewhat less-dense crowns. Overall both are excellent organic alternatives.

Calabrese OP

West Coast Seeds

Over the past few years I've been searching for an open pollinated broccoli that would perform well for markets. Calabrese looked promising based on the catalogue, but we were unable to get any reasonable harvest from these plants. Some plants produced small crowns, but for most it was even difficult to find marketable side-shoots. Most of the planting ended up flowering early-on in the season.



Top: Glen Valley Fields. Credit: Fire and Light Media Group. Bottom: Roxie and Clara show off their harvest of Jack Straw pumpkins. Credit: Glen Valley Farm.

RADICCHIO

Leonardo F1

Johnny's Selected Seeds

This round-type radicchio produced consistent, sizable heads that held well in the field. We were pleased to see this variety available as organic. Leonardo impressed customers at markets, particularly alongside the trevisio-type hybrid Fiero (which is not available as organic seed).

BEETS

Blankoma OP

Johnny's Selected Seeds

This isn't actually a new variety, although it was new to me this season. I thought this would be at least a popular novelty, particularly given that some customers are beet fanatics. Although the crop grew well, the beets did not have a high market appeal. We sold some in multi-colour bunches as "rainbow beets," but would approach with caution in the future, particularly given the high cost of the seeds. Purple beets are perennial favorites and we stick to Early Wonder Tall Top as the preferred variety. Gold beets are second-most popular and nothing compares to Touchstone Gold. Chioggia Guardsmark appeared in 2010 and was a significant improvement on the traditional Chioggia, although the striped beets are not significantly popular at any of our markets.

CABBAGE

Buscaro F1

High Mowing Seeds

I added Buscaro to our crop plan in order to get a late-season harvest of red cabbage after our tried-and-true Red Acre was finished. Overall, Buscaro disappointed with small heads and inconsistent maturity dates. This is one example where the open pollinated variety (available from BC's own Stellar Seeds) performs best.

Kaitlin F1

High Mowing Seeds

Although others on the farm may have been cursing me under their breath for the amount of cabbage I seeded this season, I couldn't resist some of the varieties listed. Of these, Kaitlin was one that impressed the most. This sauerkraut-type cabbage produces large (12-15 lb) heads of densely packed white leaves. Plants mature uniformly, meaning you'll either need an army of krauting customers on standby or plans for processing them yourself. They hold well in the field and in the cooler. Sauerkraut made in the summer from Kaitlin has an exceptional flavour.



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Clara and Roxie supervise their Dad, Chris Bodnar during onion harvest. Credit: Glen Valley Farm.

ONIONS

Cortland F1

Johnny's Selected Seeds

Bedfordshire Champion OP

Stellar Seeds

Although Cortland wasn't a new variety this season, I am compelled to review it after trialing it for two seasons. We grew Cortland alongside Bedfordshire Champion (an open pollinated variety) in an effort to find an organic seed alternative to Copra. After two seasons I remain hesitant to suggest either as an all-out replacement. Both Cortland and Bedfordshire Champion had high rates of bolting in the field. This season, neither variety's tops fell over at maturity. Both retained significant amounts of moisture in the necks, making curing difficult and resulting in high rates of loss in storage. We didn't have

this problem last season, although neither variety stored as well as Copra. Given that Copra is produced by Bejo (which produces an array of organic seed varieties) and is widely used by organic farmers, it would seem logical that the company would develop an organic version soon.

PUMPKINS

Jack Straw OP

High Mowing Seeds

I would usually be hesitant to review a non-edible pumpkin (or at least a carving pumpkin), except that Jack Straw was an exceptional variety. Plants produced large, consistently-sized pumpkins that matured evenly and with time to spare before Halloween.

Black Futzu OP

High Mowing Seeds

Listed as "a rare Japanese spe-

cialty for the porch or the table," I couldn't resist trying this new variety. This is a stunning pumpkin, with a visual appearance that draws customers' attention at the market stand. Plants are productive and the catalogue notes that it can even be grown in large containers. My only mistake was harvesting it too early; I took the word "black" in its name as an indicator of maturity. In fact, mature fruit turn a chestnut-orange. I was about to write off this variety based on this mistake and the resulting lack of flavour. Luckily I left enough fruit to realize my mistake a few weeks later. It's worth growing again.

SQUASH

Nutterbutter OP

High Mowing Seeds

Finding a Buttnerut variety that matures before rain (or frost) set in has always been a challenge for us.

“Our trials focus on finding suitable organic varieties of seed to replace standard conventional options. A primary focus is the production of profitable, marketable crops.”

So it was nice to see a new, early, open-pollinated Butternut variety. But the promised 90 days in the catalogue is too ambitious. We still struggled to get the fruit out before frost – long after our 95 day varieties were picked and cured. The squash we did get were excellent texture, flavour and size (not too large). It’s a nice squash, but not the silver bullet for short-season climates.

2012 Wish List

Of course, I can always hope that there are some surprises in the new seed catalogues for 2012. At the top of my list is an indeterminate beefsteak tomato comparable with Big Beef in productivity, flavour and durability. The main objective is to find a seed that isn’t produced by a Monsanto-owned company.

Notes about seed suppliers

We purchased a significant amount of seed from **High Mowing Seed** in 2011. We did this for two reasons. First, High Mowing only sells organic seed. When looking through their catalogue, there is no need to worry about whether a variety is available as organic seed. Second, they offer a Community Supported Seed program. Seed shares purchased before December 31 include a 10% discount.

Unfortunately, we encountered problems getting our seed from High Mowing. Our first order ended up stalled at Canadian Customs for over a month (at no fault of High Mowing), and because the company didn’t offer a courier delivery option for Canadian customers there was no way to track the package. High Mowing re-shipped the order via courier (at their own expense) and has promised to offer better shipping arrangements to Canadian customers this coming season.


Johnny’s Selected Seeds remains the most efficient company for shipping, not to mention an excellent selection of varieties and tools. We have yet to have a problem getting a package through customs.

Both Johnny’s and High Mowing carry a wide range of the best organic seed varieties being produced by companies such as Vitalis and Bejo as well as small breeders of specialty cultivars. Both feature a number of varieties bred in-house or in co-operation with breeding research projects.

We stopped ordering from **Seeds of Change** after a string of problems is recent years. After parent company, multi-national Mars Corp, closed the business’ research farm in New Mexico without warning last year, we aren’t confident there is a commitment to developing new varieties or any effort to work with the organic community.

West Coast Seeds remains an option for some seeds, although the company carries limited selection for organic growers and seems focused more on the home gardener. Pricing on some commercial organic varieties this season (such as Napoli carrots) made it prohibitive to purchase from this local company. West Coast’s shipping charges policy on backordered products has racked up additional charges.

US competitors generally ship backorders at no additional cost.

William Dam Seeds provides an alternative Canadian seed source. They have increased their selection of organic varieties and have competitive pricing. The only drawback is that they take an exceptionally long time to fill orders (up to six weeks). 

Chris Bodnar farms and lives with his family at Glen Valley Organic Farm in Abbotsford.

Additional variety reviews can be found on Chris’ blog (address below). Jordan Marr’s blog, *The Ruminant*, also hosts a database of variety reviews.

 www.glenvalleyorganicfarm.blogspot.com

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BC or BUST!

On the road to no GMOs in BC

By Lucy Sharratt

Genetic engineering (GE, also called genetic modification) is a very powerful technology. Scientists can move genes from one organism to another, regardless of what species or kingdom they are in – but what are the potential environmental and health risks of moving genes and, more importantly perhaps, what do we think genetic engineering means to us and our society?

In September I had the great privilege of traveling to 12 communities in British Columbia to discuss these questions. The Society for a GE Free BC is a member group of the Canadian Biotechnology Action Network (CBAN) and with their assistance, along with the help of other local organizers as well as BC Southern Interior Member of Parliament Alex Atamaneko, we planned panel events that included orchardists, farmers, and community activists.

We scheduled public forums for each day, sometimes two a day, which meant I had a great opportunity to learn about the concerns of people in parts of rural and urban BC.

Richmond urban farmer April Reeves from GE Free BC knows the BC mountain roads well, so we stocked the car with organic snacks and headed straight to the 6th Annual Organic Okanagan Festival at the Summerhill Winery in Kelowna. Speaking in the Pyramid at the winery was a great start before travelling to events in Nelson, Grand Forks, Keremeos, Osoyoos, Princeton, Vancouver, Richmond,



April Reeves (right) from GE-Free BC and Abra Brynne, local activist on the CBAN Steering Committee, host a table with Lucy outside of the Kootenay Coop in Nelson. Credit: Lucy Sharratt.

Bella Coola, Courtenay and Campbell River. We also staffed information tables at the Kootenay Co-op in Nelson, the Trout Lake Farmer's Market in Vancouver, and the Nature's Fare store in Langley.

Everywhere we went we were greeted with positive energy and gratitude. We were hosted with warmth and kindness by orchardists, farmers, ranchers and local activists – which also meant we ate delicious organic tree fruit and homemade cream-cheese brownies (thank you Donna!). The tour ended with a Friday night event in Courtenay that included a fundraising dance thanks to amazing musician Shane Philip (www.shanephilip.com). Needless to say, the tour provided us with food for the soul and the body!

My goal for the tour was to share some of the basic, but hard to find, information about genetically

engineered foods that CBAN researches and monitors. I was happy to share our work and to dialogue about strategies for collective action.

Knowing what GE foods are on the market allows us to take action in the grocery store and beyond. There have been reports of all kinds of miracle GE products, anything we could dream up, but these are not on the shelves and most never make it to market. People are still surprised to learn that there are no GE tomatoes or potatoes on the market, that Golden Rice does not exist, and that GE wheat is not grown anywhere in the world.

In fact, there are only four GE crops grown in Canada: corn, canola, soy and white sugarbeets (for sugar processing) and if we look globally, the only additions are small amounts of GE papaya and squash grown in the USA, and

“Throughout the tour people asked if I thought we could make real change and win against Monsanto. My answer is a definitive yes.”

GE cotton grown in the USA, India and China. If we add GE alfalfa that is now allowed in the USA (not yet in Canada), there are a total of eight GE crops grown in the world. Understanding the limits of the current GE reality can allow us to plan effectively to stop and reverse the GE experiment.

Throughout the tour people asked if I thought we could make real change and win against Monsanto. My answer is a definitive yes. It has already been proven. We don't eat GE potatoes in Canada because of consumer resistance and GE wheat is not grown anywhere in the world because farmers and consumers protested together. Monsanto's first GE product in Canada was supposed to be recombinant Bovine Growth Hormone (BGH), to allow dairy cows produce more milk, but this product was denied after 10 years because of resistance from consumers and farmers that paved the way for Health Canada whistleblowers.

The BGH example is important because it shows that we can stop a GE product, against all the odds. It might take a decade or more, but it can be done. It also tells us we can still stop a GE product even after the U.S. government has approved it. We need to remember this particular lesson while we work to stop GE alfalfa in Canada.

BC's Okanagan is already the site of another major victory against genetic engineering. In 2001, local organic apple growers stopped field tests of a GE apple that were supposed to take place at the Agriculture Canada Summerland research station. Though the small company Okanagan Specialty Fruits has recently been promoting the idea of their non-browning GE apple again, local apple growers we spoke to were clear that, as far as they were concerned, growers would never allow it.

Lee McFadyen of Mariposa Organic Farm and the Living Earth Organic Growers Association pointed out at our Keremeos event that there are already several varieties of apple that don't brown, and orchardist Andrea Turner of the Pacific Agriculture Certification Society said, “The tree fruit industry cannot afford anything silly like that.”

GE alfalfa is a serious threat to many different types of farmers across Canada but I have a new appreciation for how this issue would affect BC farmers, particularly BC ranchers. Across BC I saw alfalfa fields and

green alfalfa hay bales for livestock and horse feed. Alfalfa is a perennial crop and the issue of contamination is clearly an urgent concern, particularly now that planting has been allowed in the USA.

At our event in Princeton, one cattleman asked, “How do I make sure my seed alfalfa is GE free?” There is no satisfactory answer and this rancher said he would bring his concerns to the BC Cattleman's Association. GE alfalfa is not yet legal to sell in Canada and we can still stop it, especially with strong actions from farmer associations in BC.

In closing, I would like to thank everyone who played a part in organizing and hosting the tour, and to everyone who came out to participate in the events. 🌱

Lucy Sharratt works in Ottawa as the Coordinator of the Canadian Biotechnology Action Network, a coalition of 18 groups campaigning against genetic engineering.

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A Mayne Destination for Organic Food



Starry Night Meadows Farm. Credit: Deb Foote.

By Deb Foote

The first settlers came to Mayne Island in 1858 when gold miners en route to the Fraser Valley from Victoria began using the island as an overnight stopover at what soon became Miners Bay, where the first wharf on the outer gulf islands was built in 1878. This allowed the developing farming community on the island to ship their produce by steamer to Victoria or mainland markets, thereby enabling larger scale operations.

The total surface area of Mayne Island is 5,750 acres and it is the second smallest of the populated islands in the Southern Gulf Islands group. Three fertile valleys intersect the island from northwest to southeast giving Mayne Island a greater percentage of agricultural land than most of the outer islands. Along with its mild climate – said to average 2000 hours of sun and 31 inches of rain per year – Mayne offers its inhabitants an ideal environment for food production.

In the 21st Century, according to Stats Canada data from the 2006 Census on Agriculture, in the southern outer Gulf Islands (Mayne, Galiano, Pender, Saturna and their accessory islands) there were a total of 89 farms accounting for almost 3000 hectares in production.

There are three active IOPA Certified Organic farms here on Mayne, with a total production area of 63.5 acres. Here are three brief profiles on each of these that give a sense of the incredible capacity of these three farms, which is quite phenomenal in terms of both the volume as well as the range of product that they are producing and largely marketing right here on Mayne Island.

Deacon Vale Farms

54 Acres, Don & Shanti McDougall

Certified Organic Products: Beef, poultry (meat & eggs), sheep, pigs, hay, vegetables, fruit, berries, bedding plants, jams, jellies, relishes, sauces, and so much more

The largest organic farm on Mayne, Deacon Vale is the most diverse in terms of the range of products they grow and process. Deacon Vale has been certified since 1996 and Don and Shanti helped to develop the Saturday Farmers Market. They were completely green when they took possession of their farm on Mayne but there was never a doubt that they would be organic from the outset. Right from the start their approach in developing the farm was to create a closed cycle operation, wherein the farming operation is able to produce the amendments necessary to maintain soil fertility.

In addition to raising cattle, chicken and hogs, and growing vegetables, Deacon Vale has an onsite commercial kitchen where Shanti prepares all kinds of delightful jams, jellies and sauces (using on farm produce as the primary ingredients) and Don makes wonderful sausages. Their meat is processed to order and sold under the Deacon Vale label. Their focus on value added and direct marketing has allowed them to develop what they feel is a “right livelihood” they have never looked back. Asked if they would do it all again – without hesitation the answer is: “In a heartbeat.”

This spring the Deacons opened the Farm Gate Store as a way to support local producers and processors,

“Three fertile valleys intersect the island from northwest to southeast giving Mayne Island a greater percentage of agricultural land than most of the outer islands.”

and to bring to the island a cross section of fine food that one would otherwise have to leave the island to purchase. The Farm Gate venture has been supported by many people within the community but first and foremost by the producers who now have an opportunity to sell their products on Mayne Island year round. Farm Gate is an exciting venture that will take root, grow and flourish just like the fine organic tomatoes produced on the home farm.

Varalaya Farm

3.5 Acres, Ron Pither (managed by David Asher Rotsztain)

Certified Organic Products: Vegetables (including the best salad mix EVER), fruit, greenhouse crops, bedding plants, flowers, and seeds.

Varalaya was growing organically for a number of years prior to Deacon Vale's inception but did not seek certification until the late 1990's. When asked how he became a farmer, Ron states that he worked his way down the food chain to being a producer. But those of you who've been involved in the organic movement who know Ron know that he is a whole lot more than a BC Certified Organic Producer, even today. In this article, I'll focus on his farm.

Ron came to Mayne Island 40 years ago and purchased the property of Glen Echo in 1981, which has become

Varalaya. To create his farming enterprise Ron had to clear land that had been logged in the 1940's. Rather than building from scratch Ron, being the consummate recycler, chose to utilize existing structures from other areas of the island that were undergoing redevelopment. It took several years to develop the sight and farm.

Today, Ron sells about 50% of his product on Mayne through a combination of Farmers Market (May to October) farm direct sales, a small box service and through as of this spring two retail outlets. In addition he sells his salad to stores located in Ganges, Surrey (the Organic Grocer), and on Galiano and Saturna Islands.

When asked about what his favorite part of farming is, Ron says that he enjoys all aspects and is constantly amazed by the adaptability and resilience of the plant world. Farming, for Ron, involves ongoing learning and he is always willing to share what he has learned. He is especially interested in seeing young people enter the realm of organic farming. Ron's least favorite part of farming is the physical aspect, and after 40 years he is starting to feel it in his bones.

I guess you could say this is where David Asher Rotsztain comes in. David apprenticed with Ron in 2007. In the ensuing years Ron started spending more off island
Continued on page 29...



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The graphic features a central illustration of various organic produce items including corn, tomatoes, and leafy greens, set against a background of a farm scene with a cow and a barn under a sun.

Field Testing Potato Varieties

For late blight resistance

By Renee Prasad, Brock Glover and Heather Meberg

Late blight (*Phytophthora infestans*) is a potentially devastating potato disease that occurs worldwide. It is especially troublesome in the maritime growing regions of coastal BC, including the Fraser Valley, the Gulf Islands and Vancouver Island.

Managing late blight is a challenge for all potato growers (conventional and organic) and, like for all pest issues, the best approach for late blight management is a multi-pronged approach. This means not just relying on pesticides (organic formulations of copper-based fungicides work well for blight control) but also examining other management approaches.

For diseases, cultural control is always an important first step in overall management. Examples of cultural controls include removing alternate hosts for the disease (in this case alternate hosts include volunteer potatoes, tomatoes and nightshade weeds), using proper irrigation and drainage, crop rotation and the use of resistant varieties.

In 2010, E.S. Cropconsult Ltd. obtained funding through the Organic Sector Development Program

(OSDP) and the Lower Mainland Horticultural Improvement Association (LMHIA) to conduct a field trial examining late blight resistance of two potato varieties – Island Sunshine and Krantz.

The use of resistant varieties is the foundation of the disease management program for many crops. Some of the most commonly grown potato varieties, for example Russett Norkotah, are very susceptible to late blight. In contrast, less commonly grown varieties like Island Sunshine and Krantz are reportedly less susceptible to the disease. Island Sunshine is a round potato with rough yellow skin and dark yellow flesh; it is ideal for boiling and baking. Krantz is a blocky russeted potato with white flesh, used for fresh market and french fries.

We grew both test varieties (Island Sunshine and Krantz) and the industry standard (Russett Norkotah) in a commercial potato field that had been planted with early potatoes in the first part of the growing season. Potatoes were grown for 10 weeks and each week we assessed the amount of blight on the plants. Despite blight presence in the field (on volunteer potatoes) and infecting plots with blight infected leaves, we did not

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PHOTOS: (Clockwise from Top Left) Island Sunshine, Krantz and Russet Norkotah at Week 8. Foliage still present on Island Sunshine vines, vines still upright but foliage largely diseased on Krantz vines, and vines and foliage severely reduced on Russet Norkotah (green foliage in picture are from weeds).





Credit: Brock Glover



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observe late blight lesions on our test plants until the sixth week.

Within two weeks all of the Norkotah plants had severe late blight lesions, to the point where many plants were dead. In contrast, Island Sunshine plants did not succumb to the disease until Week 10. Visually the Krantz variety was not as susceptible as Norkotah, however statistically there was no difference between these two varieties.

The performance of Island Sunshine was further improved with weekly copper sprays and by Week 10 the disease rating score was only 50% for these potatoes. In contrast, by Week 10 Norkotahs sprayed weekly with copper had a disease rating of 100% – all plants had very severe levels of late blight. Again, Krantz did not perform as well as Island Sunshine or as poorly as Norkotah, and with the addition of weekly copper sprays the disease rating for Krantz was 85% by Week 10.

Late blight is not just a disease of potato foliage; blight spores can also infect tubers, which can result in potatoes rotting during storage. Therefore, at harvest we examined tubers for signs of late blight – the unsprayed (with copper) Island Sunshine and Krantz had much lower levels of tuber infection (5% or less) than the unsprayed Norkotah (28%).

After four weeks of storage, we re-examined tubers for symptoms of blight infection. Island Sunshine tubers continued to have low levels of infection compared to Norkotah. While the number of Krantz tubers with blight symptoms was not statistically different from the number of affected Norkotah tubers, the overall number was still lower. The addition of weekly copper sprays did not improve levels of tuber infection either at harvest or after storage.

We are continuing to examine potato varieties for late blight resistance with another round of funding through the OSDP research fund. In the summer of 2011 we conducted trials with Krantz and Innovator, another resistant russet variety. As well, we examined a white variety Keswick. We hope to share the results of our 2011 trials in a future issue of the BC Organic Grower. 

Renee Prasad is the research and cranberry IPM coordinator with E.S. Cropconsult Ltd. Renee also teaches IPM classes at the University of the Fraser Valley (Chilliwack). Brock Glover is the vegetable IPM co-

ordinator with E.S. Cropconsult Ltd. Brock works primarily in cole crop and conventional potato research and monitoring. Heather Meberg is the President of E.S. Cropconsult Ltd. Heather has worked in the field of IPM for more than fourteen years and specializes in potato, seed potato and organic vegetable IPM and variety trials.

To learn more about potato varieties...

visit the Canadian Food Inspection Agency's web site on the topic:

 www.inspection.gc.ca/english/plaveg/potpom/var/indexe.shtml



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Building a Commercial Kitchen

Where to start...

By Dana Zaruba

Building a commercial kitchen on your property may be a dream scenario for some, but for others it's a necessity due to geographic location and unavailability of rental kitchens. Another consideration for many organic growers is that it can be critical to produce in facilities free of wheat, gluten, dairy, nuts or allergens. Essentially, if you want complete control over how you manufacture, you will likely have to invest in your own commercial kitchen.

Manufacturing at home is fine for low-risk products meant only for your local farmers' market, but as soon as you start wholesaling, you have to produce in a certified production facility. Be warned that stores may be ordered to remove your products from shelves should it be discovered that they were not made in a commercial kitchen. This can and does cause damage to a company's reputation and does not generally engender trust in your brand.

Take your time, do research, and until your facility is certified as a Food Establishment, continue either selling only at the local market, farm gate, or rent a commercial kitchen.

So, where do you start the journey and what do you need to do in order to build your own kitchen?

Your Vision

It is important to take considerable time to map our short and long term goals with the people involved. Everyone needs to be on board for the project as there will be multiple tasks and will quite likely take a lot longer than you'd originally planned. Sit down together and create a wish list for your space, what you'd like to produce, and what production will look like.

The end uses of a commercial kitchen could include food production, cooking classes, food service,

catering, educational opportunities, rentals to other producers, agritourism and of course, retail. There is vast revenue generating potential in building your own kitchen but the key is careful structural planning to include the expansion and, of course effective marketing of your services.

Local regulations

The very first thing you need to do is find out whether your area zoning allows for food production facilities. Your local municipal offices should be able to provide you with this information.

If you live in a rural area and have well water and septic systems, you will need them inspected and approved for potential food production before an initial project proposal will even be considered by your local health inspector. You may have to add additional water treatment systems and possibly install a separate septic system to handle extra wastewater.

The Environmental Health Inspector at your local health authority is the next on the list of resources for planning your kitchen. Meet with them to discuss your needs and they will tell you what you have to do in order to be approved as a Food Establishment.

While also hiring an independent consultant sounds like a good idea, there are a few important things to keep in mind. First, make sure you have them sign non-competition and privacy contracts stipulating that they will not reveal your recipes nor work with others on similar projects. Always ask for and contact references for any consultant, electrician or builder you're considering. The specialty food business is small and highly competitive and it will only cost you more in the end if you end up with incompetent or unethical people.

As far as a comprehensive resource, unfortunately there doesn't seem to be any comprehensive manual for building a commercial kitchen.

Generally the way it works is that you meet with your local Health Inspector, tell them your plans and they'll map out what you have to do before he or she will approve your kitchen.

Remember, the role of a health inspector is to help you, not hinder you. Their expertise lies in making certain your facility is safe and clean from a health perspective but they're not experts in construction and building codes. Also, there can be some confusion when working with health inspectors. It appears that some are especially diligent while others are more lenient. It seems as though the rules under which they operate can be open for interpretation, allowing for some mixed messages. Generally, though, if you treat your health inspector as a resource and ally, they are usually more than happy to help facilitate the process.

Permits, Building and Electrical Codes and Regulations

You are the one responsible for making sure that you conform to local building codes and regulations. Check the minimum requirements for your equipment and consult with and hire certified electricians. You may need permits if you're creating a new footprint, while renovating an existing space may not need one. Find out what you need in advance or you may end up having to rip it out and start over.

What does a Commercial Kitchen Need?

This will obviously depend on how you will use the space, but generally, if you're going to be making value-added food products, the following is a list of some general items you need to have in a commercial kitchen before you even consider your task specific equipment. Ask your health inspector to run through an official list specific to your needs.

- Commercial dishwashers and/or triple sink
- Hand washing sink
- Adequate lighting
- Impermeable flooring with proper drainage
- Impermeable, cleanable work surfaces
- Adequate storage
- Refrigeration, cooler and/or freezers (if required)
- Appropriate venting systems
- Storage areas
- Pest control systems
- Adequate power, water and septic
- First Aid supplies and fire suppression equipment
- Inventory and batch tracking systems

Obviously this is just a small list, and the equipment you need will be added. Spend the time necessary to research and be certain of necessary equipment. If you're not sure if one piece of equipment is better than another, consider leasing it to see if it works for you before you invest in an expensive item that isn't adequate.

Other Resources

One of the very best things to do is to find a mentor who can help guide you in the process. It's preferable to find someone who has a similar project and who isn't threatened by your ideas. Also, the Small Scale Food processors Association (www.ssfpa.net/) and the BC Food Processors Association (www.bcfpa.ca) both have vast resources available.

Your local economic development office can also help, and several of these organizations can help put you in touch with potential mentors and financing opportunities. The people in these organizations may also be able to connect you with other farmers who would like to collaborate on building a shared facility in your

community. The potential for shared processing is hugely untapped and seems ripe for exploration at the present time.

Conclusion

Building your own kitchen can be an exceptionally involved, costly and complex process, but once it's done, you're free to create to your heart's content. It is very important to thoroughly plan and cost out the project and regularly review how it's going. It's easy to become lost in the details and become frustrated. If you map out and celebrate the completion of each step, you will have a much better idea of how far you've come.

With a refined vision, careful planning and judicious use of local resources, many organic farmers can begin the journey towards diversifying their operations, while maintaining the values that are the cornerstone of organic food production.

Dana Zaruba is a vendor and writer from the Cowichan Valley. Her new book How to Run a Successful Market Stall provides many useful tips on developing, marketing and selling both food and craft products. Visit her website at:



www.overunitypress.com

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and needed a strong partner at the Mayne location. David was invited back to Varalaya in 2009, and since that time, he and Ron have been working collaboratively benefiting from each other’s contributions, as well as those of the many visitors to the farm. They have been talking about calling Varalaya an “incubator” farm, as it has provided opportunities for many people to spread their wings as farmers. They see the importance of younger folk who are interested in to having an opportunity to try their hand at managing different aspects of the farm. In addition to coordinating field production, and managing the WWOOFers who have spent time at Varalaya, David oversees the stall at Mayne Island’s farmers Market, and has run a small CSA from the farm for the last three years.

Starry Night Meadows

6 Acres, Gary & Diane Akey

Certified Organic Products: Apples, raspberries, pink currants, kiwi, hazelnuts, vegetables, and garlic.

Starry Night is the newest of the trio and has taken a slightly different focus than the above two farms, focusing to a large extent on tree fruit and berries.

Gary & Diane Akey were “weekenders” on Mayne for a number of years before they purchased the property that has become Starry Night Meadows. The property sits on a south-facing slope and Gary describes what they saw when they first arrived as a poor example of land clearing. There were numerous stumps from large trees and a virtual forest of thistles and nettles. Yet somehow they were able to see the potential!

Neither Gary nor Diane have any background in farming and when they decided to become farmers there was never a doubt that they wanted to be certified organic from the outset. For them they find the regimented nature of documentation and record keeping married well with their work style. They admit that they had no idea what they were doing so they hunkered down and started to study, reading every book they could get their hands on and studying numerous websites. In the fall of 2007, they planted their first orchard.

Since that time they have planted over 300 apple trees, which include 50 to 60 varieties many of which are heritage varieties traditionally grown in the region. In addition to the apple orchards, Gary & Diane also planted some 200 currant bushes, including a pink champagne variety that Diane blends with strawberries to create a delightful jam she dubs “Strawberry Champagne.” Gary is in the final phase of building a commercial kitchen where Diane will make her jams and jellies along with unique products like “apple pie in a jar” all prepared with certified organic products from their own farm and elsewhere.



Starry Night Meadows’ Alpacas. Credit: Deb Foote.

And then there are “the boys” – the four alpacas that share the land with Gary & Diane. They are not a part of the organic program, however they do provide the foundation for the compost used on the farm. Diane is also marketing their wool online, selling each batch by the name of the animal it came from.

Gary and Diane have found the process of building the farm and developing their skills as farmers and developing their business to be very satisfying. I had to ask what they liked least about their work, for Diane it was simple – picking pole beans. Gary said, very matter of fact, that he loved his work. When asked about her favorite parts of the work, Diane harkened back to a day recently when she was working in the orchard and it was so quiet she could hear the bees. For Gary, it was hard to identify. He said he loves being outside doing what he wants to do. He is also taken by the power contained within the seed. How much potential there is within that tiny organism that you can trigger by adding soil, water and some degree of heat.

And these attitudes are no doubt some of what makes farming on Mayne magical – soil, water, heat and a few hard working farmers with a sense of the importance of organics. 🌱

Deb Foote is an organic food advocate living on Mayne Island. Deb & her husband Garth own and operate the Organic Grocer in Surrey. Deb presently sits as Chair of the advisory board for Organic Agriculture Centre of Canada, is a new member of the OSDP adjudication committee, she also sits on the CHFA’s Organic & Food Advisory Council. Deb has completed the Basic Farm Inspector Training through IOIA and the COABC. Deb operates a consulting business providing guidance in the area of the Canada Organic Product Regulation and development of Organic Plans. She can be reached at organicdeb@shaw.ca

Events & Announcements

Growing Strawberries Organically, by Maureen Moore, is the latest handbook published by the Canadian Organic Growers in their Practical Skills Series. Visit their website at www.cog.ca under Publications, where you will find more info and the table of contents.

Congratulations to Annamarie and Kevin Klippenstein who on Nov 18, 2011, became the first ever Organic farmers to win the Outstanding Young Farmer of Canada award. Kevin and Annamarie are COABC members who own and run Klipper's Organic Acres based in Cawston, B.C. This year, they won the B.C. & Yukon Outstanding Young Farmers of 2011 title, which put them in the running for the National award. The Canadian Outstanding Young Farmers award always has two recipients. This year Kevin and Annamarie share the award with Geoff and Jennifer Bishop of Atlantic Canada. COABC congratulates both the Klippensteins and the Bishops on this achievement. More information at www.oifcanada.com/national-event.aspx

Seed Growers Conference: Strengthening Community Seed Systems, January 19-

21, 2012, Port Townsend, Washington. The Seed Growers Conference is recognized as the only event of its kind in North America, bringing together hundreds of farmers, seed production and distribution companies, researchers, plant breeders, pathologists, and university extension in two days of informative presentations, panel discussions, and networking events. For more information and to register online visit: www.seedalliance.org/Seed_Growers_Conference

Pacific Agriculture Show, January 26-28, 2012, Tradex, Abbotsford. The Pacific Agriculture Show will showcase the latest and most innovative equipment and technology for the agriculture industry. Join thousands of farmers and agri-food producers in comparing and investigating what over 250 dealers and manufacturers have to make your operation more efficient. www.agricultureshow.net/

COABC Conference & AGM
Date: February 24-26, 2012, Best Western Rainbow Country Inn, Chilliwack. COABC's conference provides educational and networking opportu-

nities for new and established farmers, as well as the general public. We feature educational topics presented by knowledgeable speakers who are experts in their field. This year's theme is "Innovations". Save the date and bring a friend.

BC Farmer's Market Association Conference, March 2-4, 2012, Westerly Hotel & Convention Centre, Courtenay, BC. "For the Love of Farmers' Markets", save the date for the BC Farmer's Market Association Annual Conference. www.bcfarmersmarket.org/conference

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Husky Mohawk Community Rebate Program



COABC is involved with the Husky Mohawk Community Rebate Program in order to raise additional funds for the organisation. Husky forwards 2% of the loyalty card users' purchases to COABC in the form of a rebate. All COABC members were sent a card in 2005 and a small amount of members have been using the card resulting in an average rebate of \$30 per quarter. We still need more help to raise funds using this loyalty program.

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