

British Columbia

Organic Grower



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Correction Notice:

In the Spring 2009 Issue, the article on pg 16 about Haliburton Farm stated that "Four Winds Farm had fallen into disuse." Please note that there is currently another BC farm located Cawston with this same name that is still a productive apple orchard.

BC Organic Grower

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**Next Issue Deadline:
August 24, 2009**

President's Letter

By Brad Reid



The growing season is in full swing and with winter hanging on for so long it has made things now all that much more frantic. During this busy time on the farms we are not as involved in the greater industry; however, that doesn't mean that nothing is happening. The National Canadian Organic Regime will be starting up as of the end of June, our office is working hard on many projects and our extension work continues.



We are all sad at the passing of Gary King from Hazelmere Organic Farms. Gary was a great advocate of local organic farming and a good friend to many. He will be missed. It was men and women like Gary that started the organic industry in BC. Gary was determined to teach, anyone that would listen, the value of buying local and supporting the work on the land. Bye-bye Farmer Gary, your work lives on in the land and with those of us that had the honour to know you.

On a brighter note, we all congratulate Paddy Doherty on being chosen for the Organic

Trade Associations' Organic Leadership Award. Way to go Paddy! As we all know in BC and across Canada, it is well deserved. All of the work that you have done for the organic industry as a whole has made the industry strong and stable.

We encourage you all to keep an eye on the news of the industry over the summer months. During these times of change we need everyone to give their input on all aspects of the new regime as it is implemented. Your voice can only be heard if you use it and we all have something of value to say.

Good luck for the season and great growing.

Brad Reid 

GREENBYTES...

Further News Regarding Arsenate Treated Trees in BC

Research into arsenate-treated trees has provided substantial evidence that the Ministry of Forests and Range has policies and procedures in place to ensure that these trees **were not and never will be harvested**. The MSMA treatment was not a spray application. Individual trees were injected with the poison and left standing as bait trees to protect adjacent marketable timber. As it was understood that these trees were being sacrificed, the usual practice was to choose unmarketable trees or trees whose locations precluded easy harvest. Recent management practices required that the trees be tagged (with paint or surveyors tape) and mapped by GPS coordinates. MSMA treated trees that date back to the 1980's (prior to the implementation of tagging and mapping practices) are currently being flagged and mapped as they are located.

While this does not protect the woodpeckers that are endangered precisely because the trees have remained standing in the forests; it **does** protect our farms and fields. Producers using sawdust for mulch or compost must continue to be vigilant when they investigate the possibility of prohibited substances being present in the sawdust. However, it is clearly not warranted that MSMA be singled out for any special scrutiny.

This greenbyte prepared by the PACS Certification Committee

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Report from the Administrator



By Sarah Clark

Summer - this season of bounty brings to mind, not only tables graced with fresh flavorful organic food but the bounty of information and activities COABC does to support the BC certified organic producers and processors.



Recent activities have included the launch of the new website - www.certifiedorganic.bc.ca - which includes important and useful information for organic producers and consumers in a more user-friendly format.


The COABC office has also continued to work with the Organic Extension Agent to deliver and communicate information regarding the new standards. As a result of the constant accumulation of extension activities and office work, we are hiring an assistant to help both the office and the Organic Extension Agent maintain research and coordinate these activities.

Planning has also started on the 2010 Conference and AGM. The event will be held in the Kamloops region in early March.

As an accreditation body, the COABC office undergoes audits each year, to ensure the accreditation activities carried out by Kristy, COABC's Office Manager, and the Accreditation Board meet the designated requirements. The internal audit was completed in April. The results showed that the accreditation activities continue to meet the necessary requirements but like any good audit, a number of opportunities for improvement were identified and will be reviewed and acted upon by the Accreditation Board.

Like the assortment of the summer bounty, the range of activities overseen by the office is plentiful - from communications, event planning, and accessing funding, to the daily administration. We are your support team and we want to work cooperatively with the CB's and members to benefit the organic sector as a whole.

And finally, but not least, our congratulations go out to Paddy Doherty on being awarded the Organic Trade Association's Organic Leadership

Award for "Achievement in Growing the Organic Industry." The award recognizes Paddy's work in helping to develop the organic standards and system in Canada. Congratulations Paddy! 

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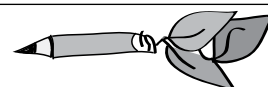


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Editor's Note by Andrea Langlois



Like any good salad mix, the BC Organic Grower is a blend of differently flavoured and textured leaves. This Summer issue of the BCOG is just that – a mix of red leaf lettuce, arugula, kale, curly cress, and sorrel. With a handful of edible flowers, of course!



Andrea Langlois,
Editor

Within these pages, you'll find a great variety of articles from what has been a wonderful group of contributors to work with. Rochelle, COABC's organic extension agent, has once again worked hard to bring the latest information to members – news about the Canadian organic standard, a summary about the Grower Group Network, and a survey to assess how bindweed is affecting BC growers – to name just a few of her contributions.




Moss Dance
Layout and Ad Desk

The BC Organic Grower draws from a list of writers and experts to write on issues impor-

tant to organic growers in BC. For example, this issue includes a report about the Grasshopper Biopesticide Project, undertaken by the BC Ministry of Agriculture and Lands. Readers will also find important information about GMO sugar beets being grown in Canada, including details on how to take action.

A theme that arises out of many of the articles in these pages is the importance of soil – from examining the concept of "peak soil" and soil conservation, to soil health and soil testing. How to build soil is also addressed in a very practical article based on research at Oregon State University on how to estimate the value of nitrogen in cover crops. Soil is an essential component of farming, and as we draw essential nutrients from the soil this season, these articles will hopefully add some food, or dirt, for thought on how to protect this resource.

We also welcome your submissions and would like to hear your thoughts. If there are pressing issues in organic farming that you would like to see covered within these pages, please drop me an email at editor@certifiedorganic.bc.ca. 

Dear Rochelle

by Rochelle Eisen



Dear Rochelle

I am new to organic farming and thinking of applying for certification. I have heard soil tests are needed, is this true? I have never done one. Do I do the soil test or does the government? What type of test is required? Does it matter that the land has been a horse pasture for at least 20 years?

Testy in Rutland

Dear Testy

There is no overarching soil testing requirement stipulated in the Canada Organic Standard, but some individual Certification Bodies (CBs) do require submission of mac-

ro & micronutrient test results with each initial farm application, no matter what the land was used for up to submission of your application. Either you or your current crop consultant can



take the soil samples. The samples are submitted to the lab of your choice and then you submit the results to your CB to serve as a soil nutrient benchmark.

Some people think that not requiring soil tests means the organic certification process doesn't encourage organic operators to do regular soil testing. Nothing could be farther

Typical Soil Test

The standard soil test – readily available through commercial labs – provides data on soil macro and micronutrient levels, it also includes the percent organic matter and the bulk density factor and a few soil chemical characteristics (pH, Electrical Conductivity and sometimes Cation Exchange Capacity). In general, these parameters form the basis of commercial synthetic fertilizer and liming recommendations.³



Soil Health

Soils are considered healthy when there is a diversity of beneficial soil organisms (bacteria, fungi, protozoa, nematodes, tiny insect-like creatures, earthworms, etc.) digesting organic residues (fallen leaves, manure, crop residues, etc.) and converting these into humus (the decomposed organic matter that makes topsoil dark brown and enhances its capacity to hold water and nutrients). This activity is called the “organic matter cycle,” and it releases nutrients in plant-available form. In addition, healthy and diverse soil life promotes good tilth and protects plants against soil-borne pathogens⁴.


from the truth, but there is a huge difference of opinion on what type of testing would be actually useful to the certification process or to the farmer, and that is basically why a specific requirement for a soil test is not in the current standard. However, sometimes when a CB has concerns about an operator’s soil management, they can¹ direct their Verification Officer to sample while onsite and the CB will review those results. Also, be aware that micronutrients can only be applied to land or be foliar fed when a deficiency is identified by either a soil or plant tissue test²; thus making soil or tissue testing a necessity to support certification in certain situations.

Why is there debate about whether soil testing should be required? There are a few reasons including: (1) soil tests are only as good as the sampling technique used; (2) most commonly available soil tests focus on the chemical makeup [see typical soil test sidebar] and don’t supply any insight into the soil health [see soil health sidebar] aspect of soil fertility which is a critical part of the story; (3) a single soil test is only a “snapshot” of one moment in time and doesn’t necessarily give credible insight into an operation’s soil management regime; (4) even if recognized as a valuable diagnostic tool, the recommendations are only as good as their interpretation; (5) most labs don’t provide practical fertilizer recommendations suited to commercial organic farming; and (6) for a significant portion of operations soil testing is a standard operating practice, so why regulate this activity?

Don’t get me wrong, soil tests, can be very useful over time to observe trends. But you need to stick to one lab, send in replicate samples (to see if the results are consistent), have a reliable sampling technique, and be sure sampling is done at the same time each year and taken roughly in the same locations. This is the only way you can compare results and notice any trends over the years to ensure soil improvement is taking place.

In fact, the trends are probably the most useful information that can be gleaned from the whole exercise. Are the Soil Organic Matter (SOM), pH and nutrient levels approaching the optimum range? Are “low” nutrient levels coming up and “excessive” nutrient levels coming down? Sometimes the over application of inputs, like compost or dolomite lime, can create imbalances in nutrients in the soil that will affect your crops. Remember that

even though your soil may be "healthy," you can easily ruin your soil with poor cultivation techniques.

I hope this little missive helps you embrace the principles of organic farming, so you will be conscious of not only the chemical health of your soil but become aware of both the biological and physical aspects as well. Most farmers have a gut sense of how they are doing based on yields, productivity and quality, but erroneous assumptions can easily be made. Sometimes testing is the only logical option. For a contact list of labs check out: www.certifiedorganic.bc.ca/rcbtoa/services/soil-testing-services.html 

¹ This can be inferred by virtue of CAN/CGSB 32.310 para 5.5.2.2 as it maybe be necessary to substantiate an operator's nutrient management plan.

² Refer to CAN/CGSB 32.311 Permitted Substance List entries for Gypsum, Iron products, Sulphates of zinc and iron, and Trace Elements.

³ Modified from ATTRA's Alternative Soil Testing Laboratories <http://attra.ncat.org/attra-pub/soil-lab.html>

⁴ Modified from VABF's How to Use A Soil Test <http://www.vabf.org/soilre3.php>

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LATEST ON THE CANADA ORGANIC STANDARD

By Rochelle Eisen

In the hopes of keeping everyone informed of what standards changes may be coming down the road, I have attempted to summarize the results of the last CGSB Technical Committee meeting held the 15th & 16th April 2009, which was the 10th Meeting of the CGSB Committee on Organic Agriculture. Suggested changes were completed for both CAN/CGSB 32.310 General Principles and Management Standards & CAN/CGSB 32.311 Permitted Substance List (PSL).

To see a complete summary of these go to:

www.certifiedorganic.bc.ca/contacts/extension/COS_update_spring09.pdf or contact Rochelle Eisen 250.547.6573 extension@certifiedorganic.bc.ca.



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Community Farms Program Draws in Next Generation of Farmers

By Robin Tunnicliffe

At the 2008 COABC conference in Sidney, the session for young producers called "Starting Your Own Farm" was so full, there was standing room only. I was impressed with the thoughtful and probing questions from the audience, and was left full of hope that organic farming will thrive in the coming years. The workshop highlighted challenges for new farmers, like access to land, return on investment and living wages, but a tremendous determination to pursue farming as a way of life emerged from participants in the session.



Glen Valley Farm in Abbotsford
Credit: Brian Harris

This next generation of farmers is waiting in the wings for the right conditions, and they are approaching farming with a sober look at the financial reality mixed with optimism and determination to create a food system that works. There are very favourable conditions emerging right now, and the potential is very exciting.

The Community Farms Program (CFP) offers a vision of the future of farming in our province. This joint project of The Land Conservancy (TLC) of BC and FarmFolk/CityFolk is covering all the important bases to help new farmers succeed. From land access, to grants, information-sharing and networking, CFP is forging creative ways to use farmland for the benefit of farmers and the community around them.

A major challenge for aspiring farmers is the cost of buying land and equipment. Secure and long-term tenure on farmland is being provided to new farmers thanks to donations and purchases of land for conservation through ecologically-sound agriculture. This land is managed by TLC. Leases are provided to farmers who run their businesses, and in some cases are housed, on the land. Since the parcels of land are shared, opportunities arise for sharing equipment and farm duties. Each farm arrangement is unique, but CFP is finding ways to support and foster these farming endeavours.




Garlic rows at Bhumi Farm
Credit: Brian Harris

Information-sharing and networking are also important elements of the project. CFP is currently launching a website that will contain important tools and resources for

A community farm is a multi-functional farm where the land is held "in trust" for community rather than owned privately. A community group or cooperative governs land use agreements, and agricultural uses of the land are shared by a community of farmers. The primary focus of a community farm is local food production using sustainable agricultural practices. Land holders, land managers, and farmers work together by mutual agreement. Farmers are housed on or near the land.

new farmers. They have developed a business plan template for small-scale producers. And they've also interviewed successful small-scale producers and written up case studies of producers in different sectors from dairy to seed-saving, in order to provide new farmers with a window into the life of a seasoned producer. Finally, they have compiled databases of farmer training programs, as well as sources of grants and other funding available for farming businesses.

Every winter, CFP hosts a weekend gathering of community farmers from around the province to come together to share their experiences. The farmers really value the opportunity to discuss their successes and challenges, and to engage as a group to problem-solve and further the cause of community farming. 

Robin Tunnicliffe is a farmer with Saanich Organics near Victoria, BC. She spends her winters doing freelance writing and research. Robin is a board member of USC Canada and a member of the Community Farms Program council.

For more information on the Community Farms Program, go to their website at:
http://ffcf.bc.ca/NewSiteFiles/programs/farm/community_farms.html



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In Memory of Gary King

March 20, 1944 - April 29, 2009



By Karl Hann

One of the first things that came to my mind on accepting the assignment of writing this piece was – how would Gary react to this? What if I would have asked him to sum up his life in one page or less, without leaving too much untold? His answer would have started with a very typical “yeah right,” the way only he could say it.

For those that don't know Gary King, this short article will describe merely the frame of the complex picture showing his work. For those that know him as family, as a friend, as Farmer Gary these words will tell only a small part of his life and his dreams.

.....
Gary knew about the need to preserve the earth's force through proper husbandry. And he gave back through composting, crop rotation, and a lot of manual labour.
.....

When I met Gary in 1996, as a newcomer to the organic movement, his “Hazelmere Organic Farm” operated already for 12 years. He was part of the handful of initiators to bring certification and credibility to organic farming in British Columbia. Back then, he shared with me his motives to start farming. Besides being on the land and trying to live off it he wanted to create a model for sustainability. Good tasting, healthy and organic food was never a “niche market” for him. It was the only thing. His pleasure in growing and eating really good food kept him in close connection with the Vancouver chefs that cared for local products.

Farming was a dream he had, which he shared with his wife Naty for several years while working in the city. Still living and working in California they scouted through the Lower Mainland, where Gary grew up, and decided to buy their farm in Hazelmere. Eventually Gary came up from California to break the ground. Naty was still busy with her job, which forced her to fly up over the weekend for several months. In the meantime, Gary tackled his land with a shovel, because a tractor was not in the budget. This should speak for the determination not found in many of his generation.

And, it was this early struggle and that closeness to the soil that most likely kept him on track. He really liked the earth, and the power it holds. Gary knew about the need to preserve this force through proper husbandry. And, he gave back through composting, crop rotation and a lot of manual labour. His efforts paid back with 2-pound Walla Walla onions, juicier spinach than any one chemically produced. Over all these years I always enjoyed those beds in which he alternately grew beets, chards, onions, leeks, beans, cucumbers, kale, tomatoes, herbs, potatoes, sun chokes, rhubarb, strawberries, a few fruit trees, some grape vines, raspberries, flowers and, of course, fava beans. He believed in diversity and not once did I hear him talk about a “cash crop.” It was always about nutrition, mainly for his family, especially his four daughters.

For Gary King farming was also about food security from small and sustainable farms. He rationalized that a larger number of small diversified farms were more desirable than the large commodity producers. From their place in Hazelmere, he supplied families from his neighbourhood, took some products to stores, restaurants

and in the early days to the small organic distributors in Vancouver.

For the last few years of his life, Gary's focus was on preserving farmland and he was part of the Surrey Farmers' Institute, the first municipality in BC with an Agricultural Advisory Council. He did not agree that poor soil was an excuse to have it paved over. Any soil could be used to its potential and eventually improved. He always tried to convince his "conventional" neighbours to give organic a chance.

One of his latest attempts was to encourage "backyard organics," which would have used peer support and endorsement for this type of production. This should have increased the local supply of organic food and reduced our reliance on the providers from the south. He knew from his childhood that it was possible to grow most of the fruits and vegetables a family needs in a backyard. Ten years ago, his philosophy on the subject made him a naysayer and some might not even agree with him even today. Perhaps he was seeing too far ahead.

Let the memory of Gary's spirit enrich our lives as he has enriched our Mother Earth like those autumn leaves falling to the ground. 🌿

Karl Hann is a grower with the Biodynamic Agriculture Society of BC and the operator of Biota Farm in Abbotsford.



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Peak Soil

By David Montgomery



Photo: Moss Dance

Oil is what most of us think of as a strategic resource, yet in the long run it is soil that is the most important. Even so, people's eyes tend to glaze over when talk turns to soil conservation, maybe because it is so much easier to see the immediate relevance of rising gas prices and climate change in these days of peak oil. So while public attitudes on climate change have shifted dramatically over the past few years, a crisis in global agriculture remains hidden: we are, and have long been, using up the supply of topsoil we rely on to grow our food. Those of us living in modern cities can easily forget that without fertile soil we could not survive.

Yet modern agricultural techniques are eroding the very soil on which food production depends. This ongoing soil loss means we face the problem of feeding a growing population from a shrinking land base. This should be troubling, because even a casual reading of history shows that, under the right circumstances, climatic extremes, political turmoil or resource abuse can bring down a society. And in the cen-

tury ahead we face all three, as shifting climate patterns and depleted oil supplies coincide with progressive loss of farmland.

We have, in effect, been "mining" soil for much of human history. Indeed, the decline in fertility and loss of agricultural lands through wind and water erosion is a problem as old as agriculture itself. Civilizations from Babylon to Easter Island have proven only as durable as the fertility of their land. The Roman Empire left Eastern

Mediterranean agriculture in a state from which it has yet to recover. But the problem of soil loss is not just ancient history. Exacerbated by modern industrial farming, global agricultural soil loss of about a millimeter per year outpaces soil formation by at least tenfold. Over the past century, the effects of long-term soil erosion were masked by bringing new land under cultivation and by developing fertilizers, pesticides and crop varieties to compensate for declining soil productivity.

However, such "agrotech" fixes become progressively more difficult to maintain, because crop yields decline exponentially as soil thins. While fertilizers can temporarily offset the effects of soil erosion, the long-term productivity of the land cannot be maintained in the face of the reduced organic matter and thinning of soil that characterize industrial agriculture. Replacing soil fertility with chemical fertilizers and genetically engineered crops can boost productivity in the short run, but a world stripped of its soil cannot, in the end, feed itself. Feeding a doubled human

population without further increasing crop yields would require doubling the area presently under cultivation. Such vast tracts of land could only be found in tropical forests and subtropical grasslands, like the Amazon and the Sahel. Experience shows that farming such marginal lands produces an initial return, but the land quickly becomes degraded and has to be abandoned – if the population has somewhere to go. With the land best suited for agriculture already under cultivation, expansion into marginal areas is not a long-term strategy.

Small and soil friendly

In contrast to the amount of arable land, which has varied widely through time and across civilizations, the amount of land needed to feed a person has systematically declined. Hunting and gathering societies used from 20 to 100 hectares per person; our current use of 1.5 billion hectares of cultivated land to feed roughly 6 billion people equates to about 0.25 hectares of cropland per person. And by 2050 the amount of available cropland is projected to drop to less than 0.1 hectare per person. Therefore, simply keeping up will require major increases in crop yields.

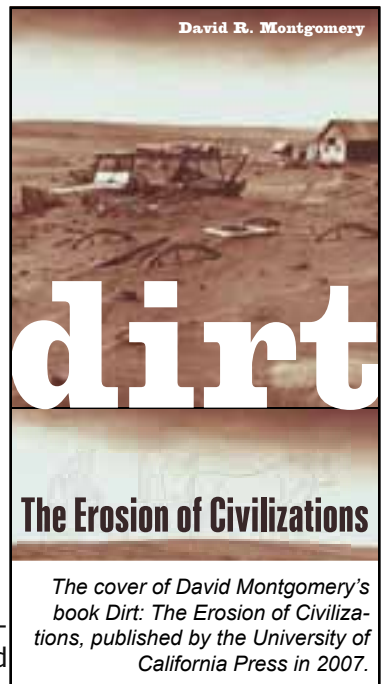
Before 1950, increases in global food production came by either enlarging the area under cultivation or through improved husbandry. Since 1950, most of the increase has come from mechanization and intensified use of chemical fertilizers. The 'green revolution' doubled food production and averted a food crisis through increased use of chemical fertilizers, massive investments in irrigation infrastructure in developing nations and the introduction of high yielding varieties of wheat and rice capable of producing two or three harvests a year. Subsequently, however, growth in crop yields has slowed, and achieving further substantial increases through conventional means seems unlikely; since crops take up less than half the nitrogen in the fertilizers farmers apply today, adding even more will not help. Perhaps genetic engineering could substantially increase crop

yields – but only at the risk of releasing super competitive species into agricultural and natural environments, with unknowable consequences. So far, the promise of greatly increased crop yields from genetic engineering remains unfulfilled. And it could prove

catastrophic, should genetically modified genes that convey sterility cross to non-proprietary crops. Does it even make sense to design crops that can not reproduce?

So how do we move to sustainable agriculture and still feed the world? The answer lies in changing what we do so it is better adapted to where we do it. To do this we need to restructure agricultural subsidies so they favor small-scale organic farms; encourage soil-friendly farming methods, such as no tilling (see below), for larger industrial farms; and develop urban agriculture. Public dialogue and media portrayals of organic farming tend to be simplistic, pitting those who consider modern industrial farming unsustainable against those who argue that organic methods are unethical when hunger plagues so many people. Representatives of agribusiness like to question the relevance of organic agriculture in feeding a 10 billion-person planet and instead promote agrochemicals and genetically modified crops as the keys to food security.

Yet many studies over the past decades have shown that crop yields under organic methods are comparable to those achieved through conventional methods.



Indeed, some of the highest crop yields come from small-scale, labor intensive organic farms. Many currently profitable industrial farming methods would become uneconomic if their true costs were incorporated into market pricing. Direct financial subsidies and failure to include the costs of depleting soil fertility encourage practices that degrade the land. In the US, for example, the top 10 percent of agricultural producers now receive 66 percent of the more than \$10 billion handed out as annual subsidies. This money is then used to support large farms growing single crops, particularly wheat, corn and cotton. On the global scale \$300 billion is paid in agricultural subsidies – more than six times the world’s annual development assistance budget – to encourage unsustainable industrial farming. We need to curb these payments and shift public support to make organic agriculture more competitive.

No till alternative

No till agriculture also warrants greater public support, as it can effectively maintain crop yields and slow down soil loss, even on large, mechanized farms. Instead of using a plow to turn the soil and open the ground, no till farmers push seeds into the ground through the organic matter left over from prior crops, minimizing direct disturbance of the soil. Although adoption of no till methods is often accompanied by increased herbicide use, crop residue left at the ground surface acts as mulch, helping to retain moisture and retard erosion by as much as 90 percent. With no till practices currently being used on less than 10 percent of global cropland, there is tremendous potential to expand them and to research how to couple them better with organic methods. Industrial agriculture will never provide a way out of hunger for the third of humanity that lives on less than two dollars a day. More innovative thinking is necessary, and on a global scale.

If we are to feed those too poor to buy food, the naïve idea that all we need to

Maintaining Soil Fertility in a Postcarbon Food System

Both nitrogen and phosphorus are essential to agriculture, and our current ways of supplying both are clearly unsustainable. Unless alternative ways of maintaining soil fertility are quickly found, a crisis looms.

The long-term solution will depend on designing farm systems that build fertility through a two-fold strategy: rotating crops, and recycling nutrients.

Crop rotation can help with maintaining nitrogen levels. Simply planting a cover crop after the fall harvest significantly reduces nitrogen leaching while cutting down on soil erosion. Meanwhile, introducing nitrogen-fixing leguminous crops into the rotation cycle replaces nitrogen.

Cleverly designed polycultures sustainably out-produce monocultures on small and large farms in both the U.S. and around the world. Mixing crops, and reconnecting crop and livestock production, consistently makes more efficient use of land, nutrients, and energy, but usually requires more labor and farmer expertise.

Traditional farmers increase organic matter in topsoil through the application of compost, which not only builds soil fertility, but also improves the soil’s ability to hold water and withstand drought. There is also mounting evidence that food grown in compost-amended soil is of higher nutritional quality.

Ultimately, there is no solution to the phosphorus supply problem other than full-system nutrient recycling. This will entail a complete redesign of sewage systems and animal feedlots to recapture nutrients so they can be returned to the soil.

Excerpt from The Food and Farming Transition: Towards a Postcarbon Food System, published by the Post Carbon Institute in the Spring of 2009.

Visit www.postcarbon.org/food to read the whole report.

do is produce cheap food must go. While food was still cheap there were still far too many hungry people on the planet. A different approach – one that might actually work – would be to promote the prosperity of small farms in the Global South, so that subsistence farmers can feed themselves, generate an income and become stewards of the land. To do this they need access to enough land to grow a marketable surplus, and an agricultural support system that not only builds on indigenous agricultural knowledge but also provides appropriate tools.

Finally, as oil and the cost of shipping food around the world become more expensive, it will become increasingly attractive to take food production to the people – into the cities. With 800 million people already involved, urban farming is not restricted to developing countries; by the late 1990s two thirds of Moscow's families were engaged in urban agriculture. City agriculturalist, Will Allen, has been pioneering urban farming in Milwaukee, in Wisconsin State, USA, as a way to provide healthy, affordable diets to low income urban populations. He has come to realize that urban farms not only deliver fresh produce to city dwellers at a lower cost of transportation, but that they typically use far less water, fertilizer and oil, and can reduce urban waste disposal problems and costs.

Among soil scientists, concern over the world's fast depleting soil is almost universal. Unfortunately, saving dirt just is not a very sexy issue. However, time grows short and industrial agriculture is proving an expensive and increasingly risky dead end. We are left with a fundamental challenge: how do we merge traditional agricultural knowledge with modern understanding of soil ecology to promote and sustain intensive agriculture? Herein lies our real hope for feeding a hungry world.



*David Montgomery is the author of **Dirt: The Erosion of Civilizations** and a professor of geomorphology at the University of Washington.*

This article originally appeared in Issue 418 of the *New Internationalist*, www.newint.org.

Chick Tips

Checking your chicks' crop fill



*Heritage hen and chicks at Biota Farm in Abbotsford
Credit: Karl Hann*

If you are raising poultry from chicks, did you know that the most important time in the bird's life is the first week? Getting chicks off to a good start will make every other part of growth and development more successful. And, the most important time of that first week is the first day. It is imperative that the new chicks get feed and water within 24 hours. One valuable tool you can use to assess the success of the first day is to check the chicks for crop fill 24 hours after they are placed. Simply pick up a number of birds and feel for the crop, at the base of the neck, between the "chin" and the breastbone. You should be able to feel a marble-sized mass of feed in the crop in at least 90% of the chicks that you check. If you don't find a majority of birds with feed in the crops, you may want to review your brooding procedures.

By Dr. William Cox, BC Ministry of Agriculture's Poultry Health Veterinarian Contact him by telephone 604 556-3023 or email William.Cox@gov.bc.ca

The 2008 Grasshopper Biopesticide Project in British Columbia

By: Tracy Hueppelsheuser, Susanna Acheampong, and Graham Strachan

Grasshoppers are a sporadic but significant pest in British Columbia. They build up over time in ideal sites, which tend to be hot and dry. In outbreak situations, food sources can include gardens, trees, and any other accessible plants. Pest species of grasshoppers are highly mobile as adults and will move to new feeding areas once they exploit the one they are in. Eventually, natural forces such as parasitic insects, disease, and habitat suitability will decrease populations, however, intervention may be necessary. There are several components to a good grasshopper management program, including habitat management and appropriate pesticide use.

At the time of the trials in 2008, there were no organically approved or biological pesticides registered for grasshopper management in Canada. NoloBait, *Nosema locusta*, has since become registered in Canada. In our trials, we compared some 'soft' pesticides to a broad-spectrum industry standard. Two sites were chosen with high grasshopper levels in the Lil-

looett-Lytton-Spences Bridge area. Both sites were relatively unmanaged and dry; one was grass/alfalfa and the other was rangeland.

Site One had five treatments: Entrust 80W (80% spinosad), Tick-Ex (11% *Metarhizium anisopliae* strain F52), Sevin SLR spray (42.8% carbaryl), Eco-bran bait (2% carbaryl), and untreated). Site Two was certified organic, and had three treatments, Entrust, Tick-EX, and untreated. Pesticides were applied on June 23 and 24, 2008, when there were significant pest species at the appropriate size (mostly 2-4 instar nymphs). Grasshoppers were collected using sweep nets, counted, and identified to species and age class before the treatments (June 23-24), and then 6 days after the treatments (June 30) and 13 days after (July 7). In addition, visual assessment of grasshopper activity level was recorded on these dates using a scale of 1-10, with 1 being the lowest activity level, and 10 being the highest. In order to detect presence of any grasshopper diseases (entomopathogens), grasshoppers collected from Tick-Ex treated and untreated plots were frozen, plated out and incubated to encourage any pathogens to grow.



Photo 1: A 2nd or 3rd instar migratory grasshopper (*Melanoplus sanguinipes*). 2nd and 3rd instars are larger than the 1st instars. Wing buds are starting to develop on their side (indicated by the arrow).



Photo 2: A 5th instar two-striped grasshopper (*M. bivittatus*) nymph; identifiable by the two prominent stripes on the thorax.

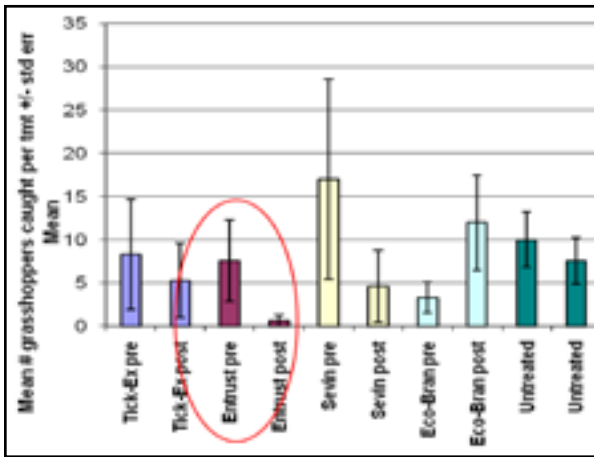


Figure 1 - Site 1 Clearwing grasshopper catches pre-treatment and 6 day post-treatment

The main species present at both sites were migratory (*Melanoplus sanguinipes*), clearwinged (*Camnula pellucida*), and two-striped (*Melanoplus bivittatus*) grasshoppers.

There were site and species differences in time of emergence and presence of certain age classes on the spray date. For example, migratory and clearwing nymphs were present at the time of the spray. However, the majority of two-striped nymphs emerged after the spray.

The clearwinged nymph emergence period appeared shorter, while migratory nymphs were present throughout the sampling period, indicating that emergence period is longer for this species. This observation strongly supports careful weekly monitoring for grasshoppers in areas of concern beginning in early June and continuing until a spray is done. After a spray, monitoring should resume one week later to evaluate the effectiveness of the spray. If populations remain high and there are still lots of young hoppers (1-3 instar nymphs), another spray 7-14 days after the first may be necessary.

At Site One, data from sweep net catches indicated that there was a decrease in number of grasshoppers for 2 species: 91% reduction in clearwinged and 93% reduction in migratory grasshoppers 6 days after treatment with Entrust 80 W. For two-striped grasshoppers, the Entrust-treated plots did not increase in hoppers, but the other treatments showed an increase 6 days after treatment. Figure 1 shows data for clearwinged grasshoppers at Site One.

At Site Two, migratory and two-striped grasshopper levels did not increase in

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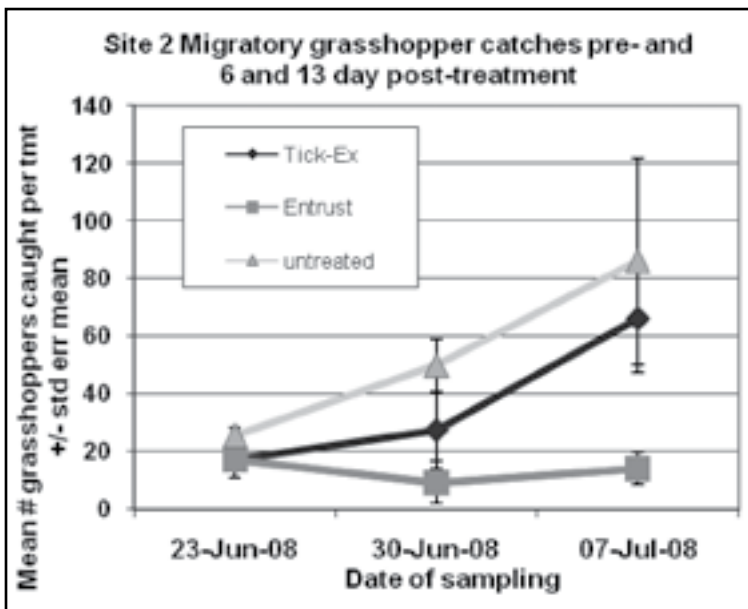


Figure 2: Site 2 Migratory grasshopper catches pre- and 6 and 13 day post-treatment

Entrust-treated plots, while there was an increase in grasshoppers in the untreated and Tick-Ex-treated plots. Figure 2 shows data from migratory grasshopper collections at Site Two. Clearwing grasshopper numbers dropped in all plots at 6 and 13 days post-treatment, which could be due



Photo 3: A clearwinged grasshopper (*Camnula pellucida*) adult; identifiable by the blotchy spots on the hindwings.

to emigration to better feeding sites.

Grasshopper activity level was significantly lower in the Entrust and Sevin-treated plots than in the other plots 6 days after treatment at Site One. However, by 13 days after treatment, hoppers were flying in from other areas and the plots became re-infested.

There were no apparent entomopathogen-infected grasshoppers collected in sweep

net samples. None were noted, except for saphrophytic organisms.

It appears that Entrust 80 W at the tested rate of 109 g product per hectare is an effective pesticide for management of three main species of pest grasshoppers. The next step is to work with the industry to apply for Minor Use Label Expansion (URMULE) for Entrust. If all goes well with PMRA (Pest Management Regulatory Agency), the registration could be completed in 2 years. Our BC study will support the URMULE submission, in addition to USA studies, and has given us some experience using the product. 🌱

Tracy Hueppelsheuser, Entomologist, Susanna Acheampong, Entomologist, and Graham Strachan, Resource Stewardship Agrologist work for the BC Ministry of Agriculture and Lands.

For more information:

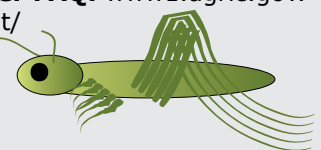
Field Crop Production Guide 2008/09: Guide to Best Management Practices in British Columbia: www.al.gov.bc.ca/crop-prot/grasshopper.htm

Agriculture Canada Grasshopper Control Methods: www.agr.gc.ca/pfra/drought/info/grasshopper_e.htm

United States Department of Agriculture grasshopper information: www.sidney.ars.usda.gov/grasshopper/

University of Lethbridge, Dan Johnson's grasshopper guide: http://people.uleth.ca/~dan.johnson/html/dj_gh_guide.htm

Alberta Agriculture and Rural Development grasshopper FAQ: [www1.agric.gov.ab.ca/\\$department/deptdocs.nsf/all/faq6750](http://www1.agric.gov.ab.ca/$department/deptdocs.nsf/all/faq6750)



Ministry to Inspect Agricultural Pesticide Storage Facilities in the Okanagan and Similkameen

By David Nield

The Ministry of Environment will be conducting more surveys and inspections of agricultural pesticide storage facilities throughout the Okanagan and Similkameen this spring and summer as part of its ongoing compliance activities. Please ensure that your storage sheds are locked, appropriately signed and vented. In 2008, compliance rates were low which resulted in 15 tickets (\$575.00 each) and 7 official warnings. For further information please see the requirements listed below or contact the Ministry of Environment 250-490-2254.

Pesticide storage IPM Regulation S.66

1. Pesticide, other than excluded pesticides and domestic pesticides, must be stored
 - a) **separately from food intended for human or animal consumption**, and
 - b) in a storage facility that is
 - i) **ventilated** so that pesticide vapours are vented to the outside,
 - ii) **not used for the storage of food** intended for human or animal consumption,
 - iii) **locked** when unattended, and
 - iv) **accessible only to persons authorized** by the person storing the pesticide.
2. Each door providing access to a facility described in subsection (1) (b) must bear a sign that
 - a) has the words "warning: chemical storage – authorized persons only" written in block letters, and
 - b) is clearly visible to a person approaching the door.
3. Fumigants and other pesticides that
 - a) release vapours, and
 - b) bear a "poison" symbol on the label must be **stored in a storage facility that is not attached to or within a building used for living accommodation**.

David Nield is an integrated pest management officer with the BC Ministry of the Environment.

The Ministry of the Environment does not have a prohibited list of pesticides associated with the IPM Regulations but they do have list of products that are excluded from some of the requirements of the IPM Regulation. This list can be viewed in Schedule 1 of the IPM Regulation that can be found at www.env.gov.bc.ca/epd/ipmp/.

Status of NuFarm's copper hydroxide product PARASOL® WG Fungicide

By Rochelle Eisen

(PCP Reg. No. 29063). Parasol® WG is a foliar applied copper hydroxide fungicide/bactericide registered for use in the control of various fungal and bacterial diseases in potatoes, tomatoes, beans, peppers, cucumbers and sugar beets. PARASOL WG Fungicide is a wettable granule formulation containing 50% elemental copper, present as copper hydroxide. In the United States, the identical product is known under the tradename **CHAMP®WG Agricultural Fungicide**, EPA Reg. No. 55146-01. Both products are manufactured at the same facility, from the same ingredients, and are identical except for tradename and registered label uses in the respective countries.

On April 1, 2009, the Organic Materials Review Institute (OMRI) (www.omri.org) announced CHAMP WG Agricultural Fungicide as an acceptable product for use in disease control in certified organic crop production (OMRI code agt-1382). Nufarm Americas, Inc. and Nufarm Agriculture Inc. will pursue having the Canadian tradename, PARASOL WG Fungicide, listed by OMRI in parallel to CHAMP WG Agricultural Fungicide. Canadian organic crop producers who may be interested in using PARASOL WG Fungicide should consult with their organic certifier to confirm the acceptability of using this product in their production system. For further information, contact Nufarm Agriculture Inc. at 1-800-868-5444.

Estimating Nitrogen from Cover Crops

By Nick Andrews

Cover crops are widely used to reduce soil erosion and increase soil organic matter. When legumes are included in the seed mixture, the cover crop can provide a lot of nitrogen (N) and reduce the need for fertilizer. The N content of cover crop stands varies widely (figure 1), and we don't currently have a reliable method for estimating the nitrogen value of the cover crops, especially when cover crop stands are a mixture of non-legumes and legumes. However, with funding from Western Region Sustainable Agriculture Research and Education (<http://wsare.usu.edu>) and the USDA, we are making progress in the Pacific Northwest of the US.

In the spring 2007 issue of *Oregon Small Farm News* (page 6), I described three N-estimation methods that could be used on farms. In the recently completed WSARE-funded portion of our research (Estimating Nitrogen Contribution from Cover Crops on Organic Vegetable and Cane Berry Farms, FW 06-301) we compared five methods for estimating N from annual cover crops. As a result of the research, we recommend the bulked species method. It is relatively easy to use, and compares very well to the separated species method, our standard laboratory method. The steps below walk you through the recommended bulk species method.



Figure 1. A 26" tall oats and common stand providing an estimated 110 lbs total N and 10 lbs plant-available N.

Step 1

Make a 2' x 2' sampling frame, we used aluminum (see figure 2).

Step 2

Carefully work the frame down to the base of the plants, making sure to only include the plants that are rooted within the frame.



Figure 2. Placing the sampling frame (step 2).

Cut the plants at soil level. Select at least 6 representative areas to sample per acre. No more than 15 would be needed from a large field with one type of cover crop stand. The more samples taken, the more reliable the estimate will be. We found it



Figure 3. Cutting the cover crop sample (step 2).

much quicker to use a harvesting knife than shears. We collected the samples in paper bags, but large plastic bags are fine too, if you make sure the plants don't wilt.

Step 3

Record the total area sampled (table 1, line 2), and weigh the fresh weight of your total sample (table 1, line 1).

Step 4

Quickly cut up the largest weeds or cover crop stems enough to enable thorough mixing of the cover crops. Mix well on a

large table or clean floor, as this needs to be a uniform mix. Then take a representative sub-sample of 0.5-1.0 lb and record the fresh weight in table 1, line 3.

Step 5

Send the sample to a reliable lab (see ATTRA's Alternative Soil Testing Laboratories <http://attra.ncat.org/attra-pub/soil-lab.html>). Ask the lab to dry the whole sample, weigh the dry sample and provide sample dry weight (table 1, line 6), total N (table 1, line 7) and total C.

Step 6

Calculate the total nitrogen contribution of the cover crop using the worksheet below (table 1).

Line	Estimate	Information source	Units & accuracy	Example	Your values
1	Area sampled	Calculation [size of quadrat (ft ²) x no. of quadrats sampled]	ft ²	32 ft ²	
2	Acreage conversion	Calculation [43,560 ft ² / line 1]	Factor	1361.25	
3	Fresh weight of field sample	Measured weight from step 3 in text	x.xx lb	17.6 lbs	
4	Fresh weight per acre	Calculation [line 2 x line 3]	x lb	23,958	
5	Fresh weight of sub-sample	Measured weight from step 4 in text	x.xx lb	0.68 lbs	
6	Dry weight of sub-sample	Measured weight from lab	x.xxx lb	0.093 lbs	
7	Total % N	Value from lab	Percent	2.91	
8	% dry weight of sub-sample	Calculation [line 6 / line 5]	Factor	0.1368	
9	Total dry weight per acre	Calculation [line 4 x line 8]	x lb	3277 lbs	
10	Total N per acre	Calculation [line 7 / 100 x line 9]	x lb	95 lbs	
11	Estimated % plant-available N (PAN)	University research	Percent	?	
12	Estimated PAN per acre	Calculation [line 10 x line 11]	x lb	?	


Table 1: Worksheet for calculating total N and plant-available N (PAN) from cover crops.

Plant-Available Nitrogen (PAN):

The major finding of this WSARE funded research was that total N estimates using the bulked species method compare well to the results from the analysis of separated species. This allows farmers to save the time of separating individual species. We hope this will make it more feasible to estimate N from cover crops. The other methods we tested were not as accurate, and were easier to use than the bulk species method. In this study we compared methods to estimate total N. However, nitrogen from grasses and forbs is less plant-available than nitrogen from legumes. If we are to gain confidence in cover crops as a source of nitrogen, we need a method to estimate plant-available nitrogen (PAN) from cover crops.

We used the N-mineralization model in the OSU Organic Fertilizer Calculator (<http://smallfarms.oregonstate.edu/organic-fertilizer-calculator>) to test whether the bulked species method is capable of estimating cover crop PAN reliably. This model was developed for fertilizers, but it attributes different PAN values to grasses and legumes based on their N content. The comparison of the PAN estimates generated by the bulked species method and the separated species method is shown in

figure 4. The line drawn between the data points shows a very strong correlation between the two methods. Therefore, we can conclude that the bulked species method described here is sufficiently accurate to give useful PAN estimates. However, the mineralization model in the Organic Fertilizer Calculator has not been validated for cover crops. Our study proved the concept, that the bulked species method can estimate PAN, but we don't recommend using the Organic Fertilizer Calculator for cover crops.

With funding from the USDA, Dan Sullivan, John Luna and I are now conducting the research needed to estimate N mineralization from cover crops. Initial results are promising, and we expect to complete this phase of our research this year. We plan to post a Cover Crop Calculator online at the OSU Small Farms website in time for the 2010 season. 

Nick Andrews works for Oregon State University Extension Service as the Metro-Area Small Farms Extension Agent specializing in horticultural crops. He is based at the North Willamette Research & Extension Center just south of Portland, Oregon. The OSU Small Farms website and newsletter are at <http://smallfarms.oregonstate.edu>.

Common Grounds for Success: Launching Grower Group Networks

by Rochelle Eisen

Grower Group Networks' First Experience

April 2009 was an auspicious month as the COABC launched precursor Grower Group Networks (GGN) by holding three conference calls (Processing/Handling, Livestock/Poultry and Tree Fruit/Grapes & Wine/Ground Crops) that I facilitated as the Organic Extension Agent. The sole purpose of these inaugural sessions was to hear concerns from producers in regards to both the Canada Organic Standard and the Organic Products Regulation. As I am part of the CGSB Technical Committee, I was able to update participants on the latest Standards changes that will be going to ballot shortly. Appreciation must be extended to the COABC office for help in developing and launching this portion of the GGN and to Robert Prins, Susan Smith and Terri Giacomazzi for their participation and use of BCMAL's teleconferencing capacity.

This First Kick at the "GGN Can" in Review

Attendance was not immense for any of the three calls, but those that participated appreciated the opportunity to talk with other producers and hear the updates. Amazingly enough, no new horrendous problems were identified, which was a great relief to me. Of course I am truly curious why the participation rate was not

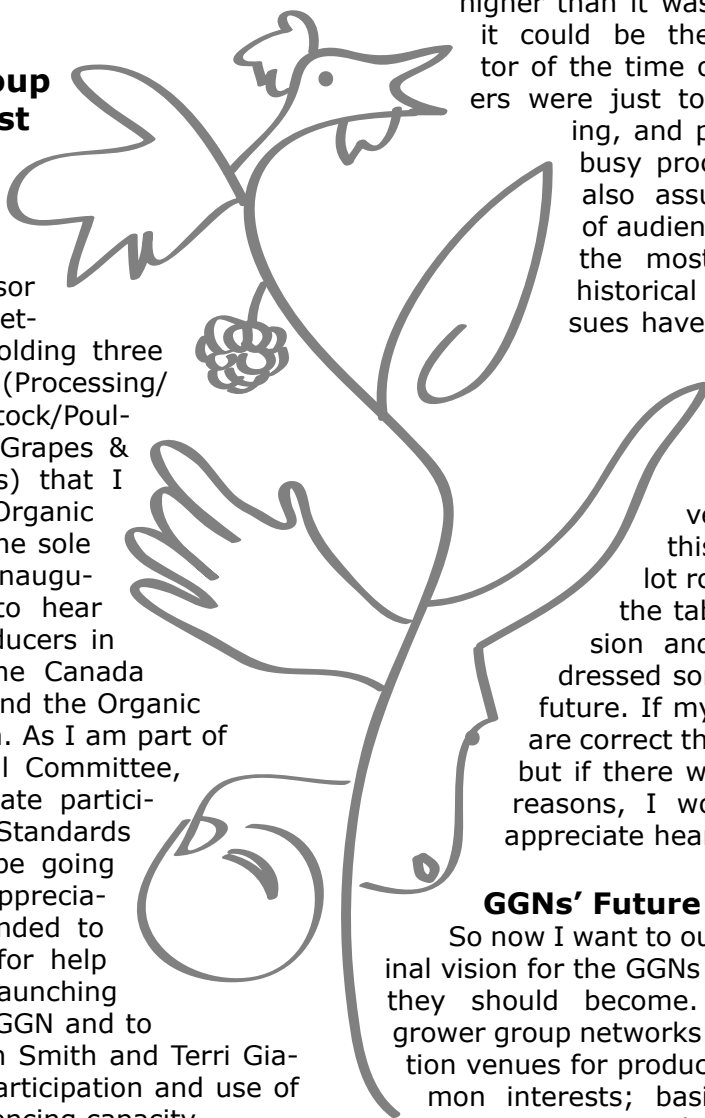
higher than it was, but I guess it could be the simple factor of the time of year; farmers were just too busy farming, and processors too busy processing. But I also assume the lack of audience meant that the most problematic historical Standard issues have already been resolved and are reflected in the 2008 amended version or in this latest ballot round or are on the table for discussion and will be addressed sometime in the future. If my assumptions are correct then I am good, but if there were additional reasons, I would sincerely appreciate hearing them.

GGNs' Future

So now I want to outline the original vision for the GGNs was and what they should become. Simply put, grower group networks are collaboration venues for producers with common interests; basically farming support groups with net benefits.

Why are we doing this?

It has been found in Prince Edward Island, for example (read Beth McMahon's report on PEI's Organic Berry Network on page of the Feb 2009 Wild Blueberry Newsletter www.gov.pe.ca/photos/original/af_wbb_feb09.pdf), that creating such environments where shared understanding and/or collective action can happen, GGNs not only serve as a communication



tool amongst farmers with a common interest, they in turn help establish research and development project priorities as the network serves as a mechanism for securing much needed research funding and allowing researchers to consult with growers. One of the major benefits of this process is that it helps to ensure that new research is truly relevant to producers' needs and research outcomes will have a positive impact.


How will this happen?

Along with the Organic Extension Agent, the COABC will be directly involved in getting the GGNs going. However, once established, the Group champion (a producer willing to take on this role) will coordinate activities and the COABC will play a secondary role by providing support to groups and their champion, by supplying conference calling facilities, and an email listserv if desired. The Extension Agent will continue to be there as resource to support the GGNs. Who knows, maybe these groups will end up holding workshops with guest speakers at some point, as there is really no limit on what these groups can achieve.

What GGNs are proposed?

Off the top of my head I was thinking the first networks we need are probably ones that focus on grain production for the southern half of the province, berries (mainly raspberry and strawberry), and probably poultry or maybe just livestock until we tease out who needs what and if champions step forward to spearhead each group. I could be totally wrong on is needed or where the interest lies, it really is up to producers to decide.

What is the lifespan of each of these GGNs?

As long as producers feel they need them (and there are sufficient funds left in the COABC kitty to support the calls) and there is a champion able to lead the way, a GGN can be maintained. If producers no longer need a particular GGN, it can be retired and resurrected as needed. 

How does a GGN get started?

All it takes is consensus on a stream of interest and an initial call will be set up. Hopefully a champion will have already stepped forward, or will in the early stages. Maybe a guest speaker on the first calls will help stimulate interest.

If you are interested in any type of GGN please drop me a note, Rochelle Eisen 250.547.6573, extension@certifiedorganic.bc.ca. I would appreciate ideas for speakers, topics, or anything other pertinent comment as well as hearing from anyone interested in being a GGN champion.



Rochelle Eisen is BC's Organic Extension Agent.

GREENBYTES...

WHAT IS WRONG WITH USING ANTIBACTERIAL SOAPS?



Avoid supplying antibacterial soaps to your workers because "**antibacterial**" often indicates the presence of chemicals prohibited for use in organic enterprises (like triclosan or quaternary ammonium compounds). Such chemicals on the hands of the pickers can contaminate organic crops and compromise organic integrity.

This greenbyte prepared by the PACS Certification Committee

Monsanto: Contaminating Cupcakes across Canada with GE Sugar

By: Lucy Sharratt, Canadian Biotechnology Action Network

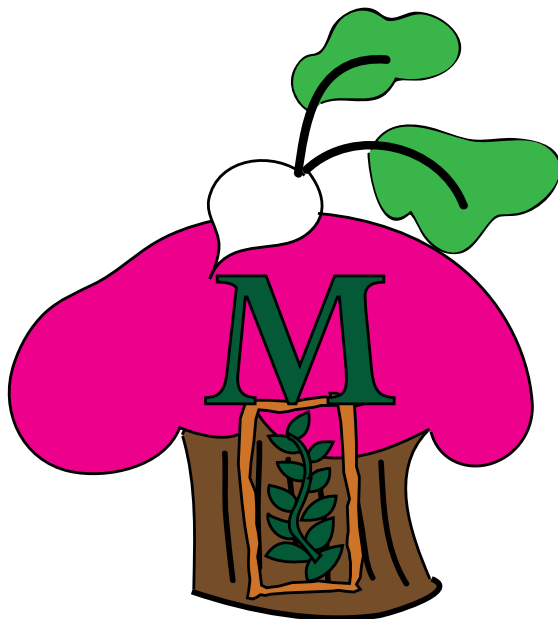
Unfortunately, we can now add sugar beet to the list of genetically engineered crops grown in Canada. In its entirety this list now includes: corn, canola, soy and sugar beet. Thanks to Monsanto and the Canadian company Rogers Sugar/Lantic, this spring GE sugar beets were planted in Alberta for the first time. As of this Fall, Canadian sugar will be processed from GE sugar beet.

Rogers Sugar and Lantic Sugar have now merged into Lantic Inc., the only Canadian company that processes sugar beet into sugar. Most sugar consumed in Canada is processed from imported cane sugar but a small portion, less than 10%, comes from sugar beet grown in Alberta and processed at the Rogers Sugar plant in Taber, Alberta.

The sugar beet is genetically engineered to be resistant to Monsanto's herbicide Roundup and is not red and yellow table beets but the white sugar beet. Sugar beet in Canada is only grown in two places: Ontario and Alberta. Ontario farmers actually grew GE sugar beets last year but their product is sent to a plant in Michigan for processing. It is in Alberta where farmers grow sugar beet on contract to Rogers Sugar/Lantic. It is these farmers that will now

send their GE sugar beet straight into the only domestic sugar source in Canada, one that was GE-Free until now.

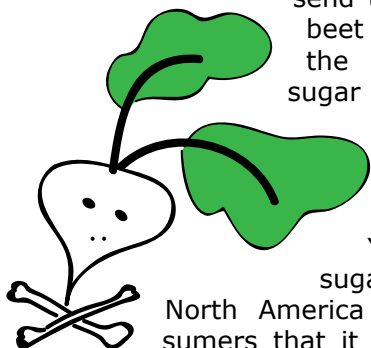
Years ago, the sugar industry in North America assured consumers that it would not ac-



cept GE sugar beet (approved by the Canadian government for commercial planting in 2005). Until 2008 Rogers/Lantic had a statement on their website saying that they do not use any GE ingredients. While farmers and consumers across Canada and the US successfully campaigned to stop Monsanto's GE wheat, Monsanto convinced the sugar industry to accept GE sugar beet, and in 2007, sugar companies announced together that they were ready to use GE sugar beet. Growers were happy to adopt the herbicide tolerant sugar beet with its promise of "easier weed control," and Monsanto's GE varieties are now expected to take over the entire market within a few short years.

The sugar industry was able to introduce this additional GE ingredient despite major consumer opposition because processed food ingredients are not labeled in Canada and the US, making it harder for consumers to reject them outright. Consumers are left helpless in the face of the increasing presence of GE ingredients in their foods – or so Monsanto hopes. Faced with the power of Monsanto, consumers turned to the well-know Canadian company Rogers Sugar/Lantic. Unfortunately Lantic had already decided to accept GE sugar beet from the farmers they contract in Alberta.

Lantic received over 4000 emails, letters and cards from consumers, including Val-



entines and Easter cards. However, the company refused to respond to these consumers or to the repeated requests from the Canadian Biotechnology Action Network for a meeting.

Approximately 10% of Lantic's sugar comes from sugar beet (the entire amount of sugar beet that goes into Canadian sugar) and the rest is from imported cane sugar. Less than 300 farmers grow 30,000 acres of sugar beet in Alberta. So for 10%, and less than 300 farmers, the major Canadian company Lantic has contaminated its brand and supply. Why?

Monsanto has big plans for sugar. They have worked behind the scenes for years to reverse the consensus in the sugar industry against GE sugar because the biotech company wants to genetically engineer sugar cane and control this major crop. Monsanto is the largest seed company in the world and owns approximately 90% of all the GM seed sown across the world.

The industry-biased International Service for the Acquisition of Agri-Biotech Applications (ISAAA) clearly exposed Monsanto's plans when it stated in its 2008 report that, "The success of the RR [Monsanto's GE] sugar beet launch has positive implications for sugarcane, (80% of global sugar production is from cane) for which several

GM Wheat Update

The Canadian Wheat Board (CWB) has identified consumer resistance to GM wheat and unresolved issues about segregation of GM and non-GM wheat as the major obstacles supporting their ongoing opposition to the commercial release of GM wheat.

The CWB recently released these comments in response to the May 2009 joint statement signed by various grain producing groups in Canada, the US and Australia vowing to work together to bring genetically modified (GM) wheat to market to save the global wheat industry. Links to background stories on this topic can be found under the "GENETICALLY MODIFIED FOODS" heading on Cyber-Help's Links page www.certifiedorganic.bc.ca/rcbtoa/services/links.html

Individuals and groups are invited to join this global rejection by signing on before August 31, 2009 at www.cban.ca/globalstopGE-wheat.

biotech traits are at an advanced stage of development in several countries." (Brief 39, ISAAA, 2008)

The global research group GRAIN has documented how the same corporations that are leading the destructive boom in soy production in Argentina, Brazil and Paraguay, are moving aggressively into sugar



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PACA, MCCA, and the WSDA.



cane. GRAIN predicts that the impacts of GE sugar cane production will mirror those of soy: overrunning local food production, exposing workers to increased levels of pesticides, and displacing workers and communities. GE sugar beet and GE cane sugar will help foreign agribusiness tighten its grip on sugar production. (See: "Corporate Candyland" by GRAIN at www.grain.org.)

The story of GE sugar beet also exposes how biofuels are feeding Monsanto's dream of expanding plantings of GE crops like corn and soy, sugar beet and, in the future,

sugar cane. Sugar beet is now being promoted across the world as a great biofuel feedstock. Biofuels from sugar beet will increase the acreage of sugar beet plantings, just as Monsanto's GE sugar beet takes over the market.

But just when we thought Monsanto had squeezed all the sweetness out of the earth, local communities in Prince Edward Island won a substantial victory against GE sugar beet. The company Atlantec BioEnergy was set to open a sugar beet biofuel plant this year. Instead, the company was chased off the island by locals concerned over another pesticide-intensive row crop and a bad business model. The company is now trying to open its plant in Nova Scotia. This plant would create an entirely new market for Monsanto's GE sugar beet, as Nova Scotia's farmers do not currently grow sugar beet. We can expect these local fights over sugar beet biofuels to pop up across the continent.

Continued on page 29...


Seedy Compost and GMOs

By Rochelle Eisen

Linda Edwards has offered a neat suggestion for farmers concerned about the possibility of whole GMO seeds surviving the feed grinding and subsequent composting processes, which may then be able to germinate. Where there is a potential for this to happen (when manure is purchased from a conventional source that may contain whole grain GMO corn, soybeans and canola), farmers will have to monitor their composting sites to see if any of these errant plants are actually growing. They should be easy to spot. If any are found, farmers will need to rogue them out before they set seed and be sure to bury the residues in the heating piles. Any seeds that germinate after mid-summer in the colder parts of the province will most likely not set seed and will winter kill.

For warmer areas of the province these sites may need to be checked later in the season to deal with any stragglers. Other plants could be

added to this checklist as needed. Verifying Officers could be instructed to check composting sites for this problem during site visits.

If you find any potential GMO survivors germinating in your composting areas, would you please drop me a line? Rochelle Eisen, your Organic Extension Agent, extension@certifiedorganic.bc.ca 250.547.6573. And, if anyone needs to brush up on effective on-farm composting procedures check out the composting resource page on Cyber-Help <http://www.certifiedorganic.bc.ca/rcbtoa/trainint/rcbtoa/composting.html>. 



European Field Bindweed Survey

European Field Bindweed (*Convolvulus arvensis*), the unspoken bane of many BC organic operators, is currently listed as an invasive plant by the BC Ministry of Forest and Range's Biocontrol Program, and is categorized as a prohibited noxious weed under the Canada Seeds Act, but only listed as a nuisance weed by the BC Ministry of Agriculture and Lands (where is it listed). Field bindweed is generally manageable using standard agricultural practices, but is more difficult to manage in organic food production areas. The purpose of this survey is to quantify the extent of the problem of field bindweed on organic farms.

Name: _____ Date: _____

Phone number: _____ Email: _____

Address: _____

Total managed _____ Acres or _____ Hectares



1. Are you growing organically? YES NO
2. Which crops do you grow organically?

3. Do you have the weed, field bindweed (*Convolvulus arvensis*) on your farming operation? If yes, proceed to question 4, if no, thank you for your time.
 YES NO

4. Do you consider field bindweed a problem on your farm? Does it reduce your production? Does it impact your yield or product quality? (i.e., does it have an economic impact on your operation?)

5. Are you able to estimate:
 - a. Crop loss from field bindweed infested land? YES NO
 - b. Contain the spread of field bindweed? YES NO
 - c. Prevent field bindweed from establishing? YES NO

Optional Question: If you don't mind please provide an estimate of income loss due to field bindweed in 2008 _____. This information will be kept confidential.

6. Please describe the type of areas where you have field bindweed, for example, in your crops, in the turn around zones, along fencelines, along the creek, etc. If possible, briefly describe the soil, topography, soil moisture level, of these areas. Is the bindweed more correlated to heavy or light soil, or is it just spreading from one spot whichever way you cultivate? If you have GPS coordinates, please include these.

7. Annual Crops: How many acres (hectares) do you **no longer use** for annual crop production because of field bindweed? (Select all that apply)
- _____ acres (_____ hectares) impacted.
 - Not applicable – do not produce annual crops
 - Not applicable – do not have field bindweed in any fields used for annual crops
 - Not applicable – I switched these acres to perennial crops
 - Not applicable – I am still working those annual crop acres that have field bindweed
 - I stopped organic farming because of field bindweed.
8. Perennial Crops: How many perennial crop acres are infested with field bindweed?
- _____ acres impacted
 - Not applicable – do not produce perennial crops
 - Not applicable – do not have field bindweed in any fields used for perennial crops
 - Not applicable – controlling field bindweed in perennial crops.
 - I stopped organic farming because of field bindweed.
9. Is the field bindweed spreading on your property? If so, can you quantify the spread?
10. If not, how have you managed to slowdown/stop the spread? Please describe all the control methods you use.
11. Do you know how these areas initially got infested? If yes, please explain. For example, transported in soil or manure, brought in on machinery, was already present when production began, etc....
12. Would you like more information on how to control field bindweed
- In a manner that is compliant with organic certification requirements?
 - In whatever fashion possible?

Please submit completed surveys to Rochelle Eisen by Aug 31, 2009

Email: extension@certifiedorganic.bc.ca

Mail: Box 370, Lumby, BC V0E 2G0

Fax: 250.547.6580

The online version can be found at:

www.certifiedorganic.bc.ca/education/surveys/fieldbindweedsurvey.doc or

www.certifiedorganic.bc.ca/education/surveys/fieldbindweedsurvey.pdf

If you have any questions contact Rochelle via email address above or by phone 250.547.6573



Bindweed Image Credit: C U. of WA Press; reprinted with permission. Artist Jeanne R. Janish

People Points

Training Employees Quickly

By Karen Fenske

Your new employees show up for their first day of work. You want them to be productive quickly. You go to the fence and talk to them about what you want done and leave them to work. The morning goes by and you come to check their work and nothing has really happened. You might say: "What is going on? Why isn't anything done?" You might think: "What is wrong with this person? Have I hired the wrong person?" Usually, the answer to both these questions is "no." However, there are some things you can do to help them "get it."


People learn in different ways such as by: **seeing** (visual learners), **hearing** (aural learners), and **touching/moving** (tactile/kinesthetic learners).

Though each of us use all three methods, we *all have one method that works best*. People who are visual learners need to see the process or read the instructions; they don't need a lot of words. People who are aural learners prefer to process information that is spoken therefore need to hear your explanation, while those who are kinesthetic learners need to get into the field to "touch and do."

Often we teach others using the style we prefer, which can lead to frustration. For example, if someone is a visual learner, they need to see you do it. If you choose to just explain with words then it will take longer for that person to understand what is required. The normal consequence to this scenario is that you think the employee is clueless, the employee feels incompetent, and then you are both frustrated.

You don't have the time to figure out their personal learning style but you can *opt for a combined, "holistic" approach to training*:


- Walk the person through the job explaining what you want,
- Do a demonstration so they can see what you expect them to do,
- Get them to do it and practice, and
- As an added step, ask them questions to confirm that they understand.

This may seem to take more time up-front, however, in the long run the **employee will catch on faster, productivity will exist sooner** and you will have developed a respectful employee/ employer relationship. 

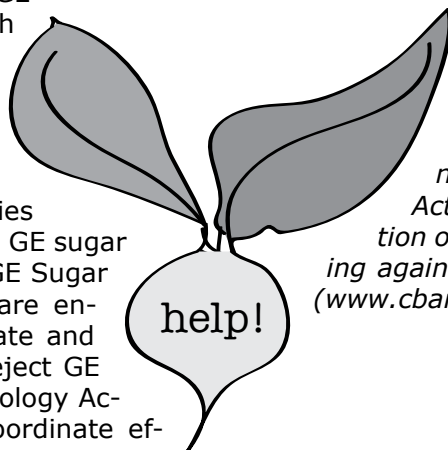
Karen Fenske, is the President of StratPoint Solutions, www.stratpoint.ca.

....GE Sugar Beets, continued from page 26

Meanwhile, consumers continue to fight against the proliferation of GE sugar beet. In the aftermath of the decision from Rogers Sugar/Lantic to accept GE, Cadbury stated that they have no intention of using sugar from sugar beet. Cadbury and any other companies that want to pledge not to use GE sugar can now sign up to the Non-GE Sugar Beet Registry. Communities are encouraged to ask local chocolate and baked goods companies to reject GE sugar. The Canadian Biotechnology Action Network continues to coordinate ef-

orts to stop GE sugar beet and sponsors the Registry in Canada. 

Lucy Sharratt is the Coordinator of the Canadian Biotechnology Action Network, a coalition of 18 groups campaigning against genetic engineering (www.cban.ca/sugarbeet).



Events and Announcements...

The Building Community Food Security with Bits & Bytes Project, in collaboration with Food Secure Canada, has created an online food security resource database – www.bitsandbytes.ca. It will be a living, ever-growing cornucopia of freely-accessible, community food security resources. Fashioned after Wikipedia, the database will grow through the submissions and comments of the food security community who use it.

OCIA "micro-grants" program seeks projects. OCIA is actively encouraging farmers from Canada and elsewhere to apply for "micro-grants" to support organic research and/or education. Eligible projects "must support organic research, organic education or other ideas supporting/promoting organic agriculture and benefit multiple producers, processors and/or consumers" Complete details at www.ocia.org/RE/Micro-Grant.aspx

The Invasive Plant Council of BC is pleased to announce the establishment of a provincial toll free hotline, 1-888-WEEDSBC, to which callers can report invasive plants and make a difference in their community.

Rossland Joins the Growing List of G.E. Free Communities - On May 11, 2009, the City of Rossland, British Columbia took leadership on a controversial food and agricultural issue. Through the efforts of the regional G.E. Free Kootenays campaign, a sub-group of the Kootenay Food Strategy Society, Rossland's council voted in favor of a resolution to oppose the cultivation of genetically engineered plants and trees. For more information on the resolution visit the webpage of CJLY's syndicated radio program Deconstructing Dinner at www.cjly.net/deconstructingdinner/gefreezones.htm

New and hot of the press: "A Guide to Farmland Access Agreements: Leases, Profits à Prendre, Licences and Memoranda of Understanding" <http://ffcf.bc.ca/NewSite-Files/programs/farm/cf/laa.html>. Prepared for the Community Farms Program by The Land Conservancy of BC for use by landowners, farmers, communities, and other land trusts. The Community Farms Program

(CFP) is a joint venture between FarmFolk/CityFolk Society (FFCF) and The Land Conservancy of British Columbia (TLC).

Serenade MAX, Serenade ASO and Rhapsody labels have been expanded to cover additional crops and diseases. To see a complete summary of the new additions find the Extension Agent page on the COABC website and look under the "Items of Interest" heading or contact Rochelle by phone at 250 547.6573 or email extension@certifiedorganic.bc.ca.

The Future of Organic Sales in Quebec territory

The CARTV confirmed that products actually defined and certified under the Canadian Standards will be approved for sale on the Quebec territory. Quebec will control products that are not regulated under the OPR and will require the recognition of the programs under which CBs are certifying those products.

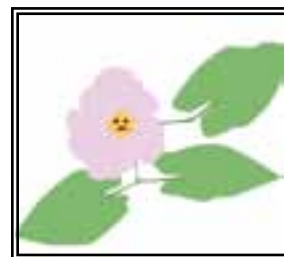
Bindweed Support Group

Are you a field bindweed sufferer? Do you suffer in silence? Did you just wake up one morning and it was there? Have you been ignoring the signs?

Contact Rochelle Eisen 250-547-6573
extension@certifiedorganic.bc.ca
to join the...

Field Bindweed Sufferers Society (FBSS)

An informal approach to a serious problem
– you don't have to feel alone anymore!



COABC

ORDER FORM

202-3002 32nd Avenue, Vernon, BC V1T 2L7; p. 250.260.4429; f. 250.260.4436; assistant@certifiedorganic.bc.ca

Enterprise Name: _____
 Contact: _____
 Address: _____
 City/Province: _____
 Postal Code: _____
 Phone: _____
 Date ordered: _____
 CB + Certification No.: _____

PST Exemption	
<input type="checkbox"/>	BCAC Farmer ID Card #: _____ If no BCAC Farmer ID #:
<input type="checkbox"/>	Certificate of Exemption must be provided for PST Exemption for each purchase. Form available at: www.sbr.gov.bc.ca/documents_library/forms/0453FILL.pdf or request the form from the office.

Item	Units	Unit Price	Quantity Discount	Quantity	Total
Plastic 10 lb apple bags/vented	250/wicket	\$12.00	4 wickets \$40.00		
Stickers 1" round	1000 pc roll	\$12.50	10 rolls \$108.00		
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		

The packaging materials above are only available to COABC Certified Organic members.
 Have you signed a new Consent to use Official Marks Declaration Form (revised July 2006)? Y/N
 Have all your labels been reviewed by your CB? Y/N
 With which products will you be using the packaging materials? _____

Promo Materials: available to everyone	Member \$	Non-member \$			
Cloth Aprons with 3 pockets *	\$12.50	\$12.50	PST taxable		
Bucket Hats size M or L *	\$15.75	\$15.75	PST taxable		
Ball Caps	\$13.10	\$13.10	PST taxable		
Green T-shirts L or XL *	\$18.00	\$18.00	PST taxable		
Natural T-shirts (Logo) M or L*	\$7.25	\$7.25	PST taxable		
Natural T-shirts (Plain) S M L XL or XXL	\$5.00	\$5.00	PST taxable		
Organic Tree Fruit Management	\$32.00	\$39.95	No PST		
Steel in the Field *	\$25.00	\$25.00	No PST		
Livestock Nutrition *	\$12.00	\$12.00	No PST		
Sub-total (before taxes and shipping):					

*Limited quantities available - please contact the COABC office for availability GST # 887782431 RT 0001

Postage Rates

Minimum charge of \$10.00 per order for any promo and/or packaging materials

GST will be added to postage amounts

Rates vary and will be calculated at the office

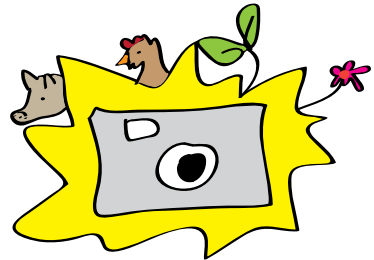
An invoice will be sent with your order. Postage and applicable taxes will be added to your invoice.

Please do not send payment before receiving invoice.

Featured Photo

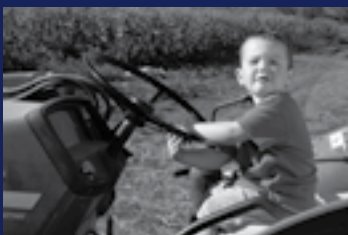


This photo of Daniel (adult) and young friend with the pigs was taken by Helmut Lang at Cedarstein Farm in Lumby, BC.



Every issue we feature a photo from a BCOG reader. Have a photo you want to share? Email a high-resolution copy (300 dpi or higher) to Moss at bcogadvertising@certifiedorganic.bc.ca.

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.

If you would like to receive a card or additional cards, please contact the COABC office at (250) 260-4429 or email us at office@certifiedorganic.bc.ca.