



President's Message
ED Report
Letter From the Editor
Know Your Soil Fungi
Getting to Know White Rot
Viva La Mama
A Little History
OSDP Positions
Biodynamic News
Limiting our Plastic Footprint

Biodynamics
Clearing the Waters
The Memory of Water
New Method of Vole Control
To Certify or Not at UBC Farm
Food Security & Agriculture
Eat Local for Food Security
Organic Harvest Awards –
Evaluation Criteria and
Awards Application!

COABC 3402 32nd Ave. Vernon BC V1T 2N1

President's Message

I am a happy camper, the farmers' markets have started up again and I have had my second feeding of peas for the season. Yum.

Spring has been a busy time for COABC. We are busy with a major review of our Accreditation program in light of the new ISO guidelines as well as changes that will have to be made to keep us in line with the National Program. This project is possible thanks to a generous grant from the BC Ministry of Agriculture and Lands. Anne Macey is heading up this project and is being supported by Kirsten and Kristy in the office.

In conjunction with the work that Anne is doing, we have contracted with Abra Brynne to do a comparison between the most recent draft of the National Standard and the BC standard to determine what modifications we will have to make to the BC program in order to meet the requirement of the minimum standard as laid out in the National Program. We have also recently agreed to contract Paddy Doherty to review our policies and to draft new policies where required for compliance to either the National Program and/or ISO 17011.

In addition to this work, at our April retreat the Board agreed to conduct an internal audit of COABC. The purpose of the audit is to determine the strengths and weaknesses of the organization and to assist the board in setting direction for the future in terms of meeting our mandate as laid out in the Constitution. The board appointed Linda Edwards and Marla Limousin from PACS to conduct the internal audit with the assistance of Dave Fontaine from FVOPA.

Plans are underway for the 2006 Organic Harvest Awards; we are pleased to announce that Marc Smith of Amuse Consulting has been hire to manage this contact. Marc is formerly from Capers Community Markets and was their event coordinator for a number of years. Having ventured out on his own a few years ago Marc has worked with the Van City Foundation (among other notables) to create dynamic events, including the Ethics in Action Awards. We are very excited that Marc has agreed to organize



this year's event. You will find nomination forms and guidelines along with sponsorship information within this issue. We look forward to seeing you there.

On a personal note, by the time this issue "hits the street" I will have punched the time clock at Wild West for the last time. It was not an easy decision to tender my resignation with Management at Wild West, but when it comes down to it, the

reason was simply that the time had come for a change. When Wild West was purchased by SunOpta (Stake Technology) I had agreed to stay on for a three year period. Three years ended last November. At that point I was approximately six months from my 20th anniversary. So I maintained the course feeling that I needed to hit this milestone, I viewed it as a major life achievement.

I am very proud that the company where I invested so much energy growing and fostering quality business relationships was seen as a worthy investment for an organisation of the nature of SunOpta. But mostly it is the associations I've made during my 20 years of involvement with the business that will truly be memorable for years to come.

I will continue to serve my term with PACS and COABC; this is made possible given the fact that the Organic Grocer (owned by my husband Garth and myself) is a Certified Organic retailer under PACS. I look forward to continuing to work with all of you.

Happy Farming



ED Report

by Kirsten Kane

I want to take up this space this quarter with information on one of the most important undertakings COABC has embarked on in some time – the Accreditation Renewal Project.

Recently COABC underwent an internal audit which found that the majority of our CB members polled (10% of the total number) were not



aware of COABC's primary role as an accreditor, and administrator of the British Columbia Certified Organic Program. Whether or not people are aware of it, these roles are of critical importance to anyone who is Certified Organic in BC. As our website states:

The British Columbia Certified Organic Program is a voluntary agri-food quality program sanctioned by the Government of British Columbia through the Organic Agricultural Products Certification Regulation under the Agri-Food Choice and Quality Act. The COABC is designated as the provincial program administrator, working closely with Ministry staff in monitoring the program's credibility and acceptance in domestic and international markets. COABC has amended its policies and procedures for the accreditation of member certifying associations and the certification of program participants, and its provincial organic agriculture production, processing and handling standards four times since its inception in 1993. Program administration activities are focused on auditing its member associations for compliance and administering the use of the program's official mark, which is comprised of the prescribed phrase "British Columbia Certified Organic" and the symbol "checkmark in a box". The COABC also carries out initiatives that support the growth of the sector in the province.

The key phrase here is "focused on auditing its member associations for compliance..." COABC accredits (audits for compliance) at two levels: Regional (for marketing within BC), and "ISO 65" for moving product outside of BC. As our Certification Bodies are well aware, COABC conducts annual audits of the CBs according to their program requirements, either scheduled or on a randomly selected basis. As an accreditor, we currently meet the ISO 61 requirements.

ED Report – continued on page 4...

BC Organic Grower

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

We welcome letters to the Editor (500 words maximum) and articles (1000 words maximum). We reserve the right to edit for length.

Letters & submissions Advertising (rates & copy) non-member subscriptions (\$20/year plus \$1.40 GST) send to:

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For general information or to contact your local Certifying Body, call the office – or check our website:

www.CertifiedOrganic.bc.ca

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Next Issue Deadline: October 1, 2006

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The new Canadian Organic Regulation is imminent, and COABC is poised to remain one of the four accreditation systems (CAAQ - Quebec, Standards Council of Canada, and the IOAS. the accreditation arm of IFOAM, are the other three) currently operating in this country. ISO 61 has been upgraded to ISO 17011, and in are essential to ensure order to maintain its status as that COABC members an accreditor. COABC must upgrade its own quality system maintain access to accordingly. To ensure that this happens, and that the members of our CBs have uninterrupted access to their markets both inside and outside of BC. COABC launched the Accreditation Renewal Project. With tremendous financial assistance from the BC Ministry of Agriculture and Lands, the process of upgrading our systems is now well underway.

The project is divided into a number of sections, or areas requiring attention, with appropriate funding allocated to each. At present,

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contractors Abra Brynne, Anne Macey and Paddy Doherty are working on different sections of the upgrade, with assistance from the office staff. COABC will be audited by the Canadian Food Inspection Agency, or by an agency designated by the CFIA, to ensure that our systems will stand up to the Auditing requirements of the new Organic and accreditation Regulation.

> Through completion of each section, we will move our systems into 17011 compliance. The project is laid out as follows, with a portion of the overall budget allocated to each section:

- · Review BC Standard against Canada Standard
- Complete detailed review of COABC Accreditation procedures against ISO 17011 and other requirements of proposed federal regulation.
- Draft revised COABC Accreditation Criteria, Quality Manual and Management Standards
- Communication and meetings with COABC Accreditation Board
- · Ensure changes are implemented throughout the program
- Assessment of BC Certified Organic program against 17011 by impartial agency (e.g. Standards Council of Canada)

The project will run from April 2006 to February 2007. For more information on the project or for questions about COABC in general, please contact me at the COABC office.

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markets

Letter From the Editor

After more than 9 years, this will be my last issue as Editor of the BC Organic Grower, since my husband Brewster and I are moving to Ottawa this fall. It has been a wonderful experience and a regular challenge to put together a journal which reflects and stimulates the creative thinking which has enabled the organic sector in BC to grow and thrive. Somehow the journal has to tread the lines between political analysis and coverage of the 'hot-button' issues, practical information for real farmers, and information that Certified Organic operators require (eg. updates on standards, supply management, etc.). Insofar as I have achieved this, it has been largely due to the collaboration of a number of people who have served as an informal editorial board, particularly Paddy Doherty (the BCOG is his brainchild), Linda Edwards, Rochelle Eisen - and of course Rebecca Kneen who has not only designed and laid out the journal, but also provided unfailingly helpful critical support to the editing process.

I am also grateful to all the writers who have volunteered (or been persuaded by vigorous arm-twisting) to share their experiences and knowledge through these pages. The pre-publication dialogue with writers, debating finer points of politics or punctuation, has been one of the highlights of the job for me.

BC Organic Grower Editor Resigns after nine years

Rebecca is also
resigning her
position, so the BC Organic
Grower is now seeking both an
editor and a designer/layout person.

Anyone interested in either position should contact the COABC office for details of the job description and remuneration. The deadline for the next issue of the Grower is October 1st and I will be available in early October to provide assistance and support to the new Editor; however, the sooner the position is filled the easier this will be.

Cathleen Kneen is the Executive Director of the BC Food Systems Network and co-publisher of The Ram's Horn, a monthly journal of food systems analysis (since 1980). She served on the Board of Directors of COABC as the Consumer/Environment Representative for 6 years and was honoured with the COABC Founder's Award in 2004. She has been editor of the BC Organic Grower since its inception.

Know Your Soil Fungi

Mycorrhizae are a type of soil fungus that can have a beneficial effect on fruit trees when they invade and colonize the roots.

"In the rhizospheric soil, these soil fungi develop a hyphal network that serves as a fundamental link between the soil, the nutrient reservoir and the plant. ... the hyphal network is more efficient than root hairs...." (Canadian Journal of Plant Science, 1/05)

These benefits include:

- 1. increase available Phosphorus (P) & other nutrients
- 2. increase available water

by Robert Dixon

- 3. reduce some soil borne disease
- 4. improve soil structure

In the water-scarce Okanagan centred bioregion, improving a crop's access to water can mean a significant difference in yield and fruit quality. What do we know about this mycorrhizae fungus that help farmers encourage its growth? Here are some research facts:

Beneficial fungi like mycorrhizae need oxygen from the air to breathe; water-logged and compacted soils kill soil organisms through lack of oxygen. Reduced tillage therefore supports mycorrhizae growth, as do legumes (as opposed to

Soil Fungi – continued on page 6...

... Soil Fungi – continued from page 5

grasses) and cover crops with legumes provide food for mycorrhizae at a time when harvested crops would leave those fields bare.

Crops like Broccoli (*Brassica* family) and Beets (*Chenopodiacea spp.*) do not require mycorrhizae and thus reduce levels of this soil organism in fields growing these crops as they have no host and nowhere to feed.

Phosphorus management is very important. Phosphorus (P) is a very reactive material so it gets bound up quickly in the soil. The mycorrhizae will help make P currently bound up become more available to crops. However, in low P soils, (soil test would show low to very low extractable P), then what little that is there would be taken by the fungus itself, thus competing with the crop. And just to make it confusing, where there are high levels of available P in the soil (and thus in crop tissue tests), the level of mycorrhizae growth in the soil can be suppressed.

What do all these facts mean for local tree fruit growers? The great British soil scientist and father of organic farming, Sir Albert Howard said: "There is a mass of evidence which points to a shortage of oxygen in the soil under the turf of our grasses. This limiting factor can be very effectively removed by a subsoiler drawn by a caterpillar tractor." (The Soil and Health, 1947 Sir Albert Howard) The vast majority of local orchards are in permanent grass cover. Local research has also found soil compaction in the root zone of orchards (see Soil Health Assessment, Wagner 2005). Research in France on orchards confirms that soil compaction occurs in the root zone of fruit trees. (IFOAM world conference proceedings, 2002 Victoria, BC)

Since grass cover and soil compaction reduce the oxygen that reaches the tree fruit roots where the beneficial mycorrhiza fungi live, it can be assumed this would not encourage the growth of these beneficial soil organisms in local orchards. The implications of these two limiting factors observed in local orchards is negative for fruit tree yields.

So what can tree fruit growers do? The first step would be a simple field test to assess whether soil compaction is occurring in their orchards. If this shows that soil in the tree fruit root zone is compacted, they are not limited to the subsoiling recommended by Sir Albert Howard. Two strategies that need to be assessed for their effectiveness in loosening compact soil zones and encouraging the growth of mycorrhizae are the use of well made compost, and growing legumes within the tree row. Deep rooted legumes might be the most cost effective way to go, though as direct seeding would be difficult it might require the use of transplants grown in a greenhouse, perhaps inoculated with a commercially available mycorrhriza mix.

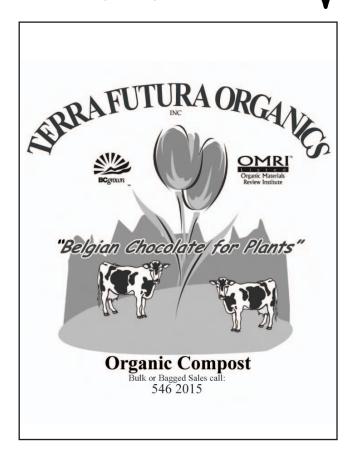
References:

The Soil and Health, Sir Albert Howard, 1947 Soil Biology Primer, USDA Conservation Service, 2000

IFOAM Conference Proceedings, Victoria, BC 2002

Mycorrhizae symposium, Canadian Journal of Plant Science, Jan 05

Soil Health Assessments in Organic Farming, Julia Wagner, May 05



If there is anything that is going to make an allium grower cringe, it is the mention of white rot. This is a devastating disease of alliums such as leeks, onions, and garlic that spreads quickly, is difficult to control, and almost impossible to eliminate. So when plant pathologist Dr. Fred Crowe, one of the world's foremost authorities on this disease, made his way from Oregon State University to Victoria, BC for a one-day workshop on white rot, farmers were excited. Dr. Crowe has been working with white rot for 25 years, so his experience and time was well appreciated at the workshop.

White rot (Sclerotia Cepivorum) is a fungus, related to sclerotinia and botrytis, but not related to most mushroom forming fungi. It only affects the allium family (including ornamentals) so fields infected with white rot can successfully grow crops other than alliums. It is a disease that lingers for decades, spreads easily in the soil and through transport, and can destroy a crop faster than you can say, "What's wrong with the garlic, honey?"

White rot is not the only important disease of allium crops, but it is likely the most powerful. When diagnosing white rot, it is important to rule out other diseases before assuming white rot.

Fusarium Basal Rot results in watery, beige lesions moving up from the stem plate, typically with a red zone above the lesion. It tends to affect single plants, which remain well rooted.

Botrytis Neck Rot starts on the neck near the soil line and runs down to the bulb. A grey mould and large sclerotia (look something like rat turds) develop and it usually affects 1-4 plants grouped together, which remain well rooted.

Bulb Nematode results in bloated bulb leaves that separate easily from the stem plate.

Identifying White Rot

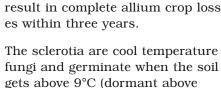
White rot has several defining features and is

quite easy to diagnose with a thorough examination of the symptoms.

Sclerotia

The most important white rot identifier is the sclerotia that form on the bulb and on the roots. The sclerotia are soil borne and never form above the soil line. White rot sclerotia look exactly like small poppy seeds and can be found in clusters on the roots and bulb. While they can be seen with the naked eye, they are easier to identify with a magnifying glass or dissecting scope. These sclerotia are essentially

one of the farmer's worst enemies as they spread the disease from field to field and farm to farm. They are easily transported on shoes, tools, machinery, infected garlic, and on other crops such as potatoes, or other root crops. One sclerotium in 10 litres of soil can result in complete allium crop losses within three years.



20°C). They germinate in the pres-

ence of alliums (which emit an odour that promotes germination) and can do so when as far as 2.5 centimetres away from the roots or bulb.



The mycelia can be seen here at the top of the bulb.

Mvcelium

Once the sclerotia germinate, the mycelia that stem from them can grow at temperatures between 5°C and 22°C. The mycelia go dormant below 5°C and die above 22°C. While it is the sclerotia that result in the movement of white rot from area to area, it is the mycelia that spread white rot through the crop. The mycelia give white rot its name, characterized by the white fungal mess it creates on the bulb. However, the white rot cannot be identified from just the mycelia alone, the sclerotia must also be present for accurate diagnosis.

The mycelia can infect a root from a centimetre away and spread horizontally through the crop. They spread at an astounding rate, usually

White Rot – continued on page 8...

...White Rot - continued from page 7

destroying the root systems, resulting in rapid dieback of the garlic above ground.

Dieback

White rot is often first noticed as rapid dieback of plant tops, starting in late May to early June. This dieback is similar to the dieback that occurs around harvest time, except that it is premature and much more rapid. While the dieback may only affect single plants, it is likely to be noticed in clusters as the mycelia spread from bulb to bulb through crossing root systems.

Weak roots

As the white rot infects a plant, it effectively severs the roots from the plant, resulting in garlic that is easy to pull up, often with very little roots attached. Severe infections result in the plants falling over due to lack of root support. On some occasions, often when the soil is



Dieback in this garlic crop started at one corner and worked its way into the crop over a three to four week period.

minimally disturbed, the whiter rot infects the bulb and not the roots, and thus the plant does not die off as quickly, if at all. These garlic can be consumed or processed, but should not be used as seed or sold at the market as this can spread the sclerotia.



Controlling and Preventing White Rot

Prevention

True prevention of white rot needs to start with avoidance – do not get it! This can be achieved in many ways:

- Clean all equipment coming onto the farm thoroughly. A good, thorough spray of water will rinse off any lingering sclerotia. This is especially important when bringing in contract machinery that may have picked up the sclerotia at another location.
- Clean footwear. Be careful when visiting other farms, especially ones known to be infected with white rot.
- Buy clean seed stock. Ask lots of this questions when buying your garlic seed, as well as seed potatoes or any other crop that may be infected with soil or sclerotia.

White rot cannot be controlled by crop rotation and it is very difficult to control once introduced to your soil. Prevention is the key to a white rot free farm.

Control

Sometimes white rot makes its way into a field no matter how careful you are with hygiene and thus the focus needs to turn to control. The key to effective control is early identification. Once white rot has been identified in a plant (or plants) it important to segregate those plants from the rest of the crop. The infected plants, plus the plants at least 1 foot on either side of them, should all be carefully pulled and destroyed. Ideally the soil from this area (1 foot deep) should also be carefully removed and destroyed; however, simply segregating an area will stop the spread.

White rot spreads quickly horizontally through intersecting root systems. Increased plant spacing reduces the likelihood of crossing root systems and can thus halt progress of the mycelia if they do infect a plant. Ensuring you have a well-structured, deep soil also helps ensure roots utilize vertical space to grow downward and not be forced to grow horizontally.

Eliminating White Rot

Forced Germination

A unique new method of trying to eliminate

white rot is through stimulated germination. This method involves inoculating the soil with a sclerotia stimulant, diallyl sulphide (the compound that gives garlic its smell), which tricks the sclerotia into germinating. Without the presence of an allium to infect, the sclerotia



This garlic bulb is heavily infested with white rot sclerotia.

then dies as it has nothing to 'feed' on. This compound can be applied as a garlic powder or a liquid spray that can easily be made using your own garlic. Dr. Crowe suggests using 25 kg of macerated garlic bulbs in 25 litres of water, finely

strained, and applied to a hectare of land. This rate results in an application of about 10 parts per million of the stimulant that our noses can detect at as low as 1 ppm. The more often this mixture can be applied, the more effective it will be. It is known to eliminate 99% of the sclerotia. But remember 1 sclerotium can cause an infestation in only a few short years.

Since white rot is known to linger in the soil for 40 years or more, its control is of utmost importance to allium growers. Here on Vancouver Island, many small farms are already infected with white rot. Since garlic is such an important economic crop for many of these growers, the further spread of this disease could be devastating to the local organic and conventional garlic industry. Oregon and Washington State are already experiencing widespread reports of white rot, and it has wiped out the garlic industry in some areas of California.

Diseases like white rot help strengthen the need for better communication between farmers. If you would like more information on white rot, contact Chris Wells (quinoa@shaw.ca). The workshop held in Victoria was recorded and The Islands Organic Producers Association is working to make this recording available to the farmers nationwide through the COG library and other methods.

Chris Wells is a Certified Organic Farmer in Saanich, BC. As of yet, he is white rot free.



Regardless of the breed you use, the goals of most shepherds at lambing time are the same – a healthy ewe with plenty of milk, dropping strong vigorous lambs without assistance, and raising them to weaning without disease or injury. One of the most important factors in achieving these goals is the behaviour of the ewe towards her lamb. The maternal bond is the most important factor ensuring lamb survival, since poor maternal care invariably results in lamb death.

Normal healthy behaviour of the ewe at lambing begins by selecting a quiet secluded area in which to lamb. Shortly before birth, a ewe will begin to be attracted instead of repelled by the smell of afterbirth and the smell and shape of a

newborn lamb. This attraction is caused by a combination of changes in hormone levels (oestradiol, progesterone and oxytocin) and physical stimulation of the vagina and cervix. After birth the ewe will normally lick and nose her lamb, make characteristic lowpitched vocalizations (known in the scientific literature as

"grumbles") and stand to allow her lamb to nurse. Within hours of birth, the ewe will recognize her lamb and will react badly to being separated from it.

Unfortunately not all sheep have read and memorized the above paragraph before lambing. Most sheep producers have at one time or another had to deal with a ewe that simply won't have anything to do with her lamb, circling so as not to let it drink, butting at it and then walking away and abandoning it. It is tempting in this situation to attempt behavioural modification with a handy two-byfour but before such drastic measures are attempted, here are a few things to consider.

Stress and time

Higher cortisol levels, associated with stress, reduce the expression of maternal behaviours. As well as the threat of the two-by-four, stressful events include presence of predators (humans are predators, like it or not), difficulty lambing, interference by other ewes (which can be caused by overcrowding, or by older ewes attempting to get away from the whole painful messy delivery thing by stealing another ewe's lamb), poor environment (such as cold, wet, windy weather) and any disturbance from the lambing area. Stress prior to lambing (being moved to a different pasture for instance) will also increase the likelihood of a ewe abandoning her lambs.



The first hour after delivery is the most important time in the formation of a healthy maternal bond. A ewe should be allowed to remain undisturbed for at least six hours after lambing, and any disturbance during this time will impair the bonding process. It is always tempting to jump in as soon

as possible and make sure the ewe and newborn are all right. Sometimes that can be the very worst thing to do.

Age and experience

Lambing can be a pretty confusing time for inexperienced ewes. Ewes with their first lambs are slower to learn to recognize their lambs. They are also more likely to abandon their lambs, especially if they are disturbed from their birthing site. This means that it is particularly important to avoid stressing maiden ewes, and to ensure that they are healthy and in good body condition at lambing time.

Nutrition of the ewe

Ewes that are in poor body condition at the time of lambing, or ewes dropping their lambs on poor pasture are more likely to abandon or reject lambs. This is partly because the motivation to eat may compete with the motivation to care for the newborn lamb. For example, ewes on poor pasture will not be able to stay at the birth site for as long without leaving to forage. At the same time, healthy ewes in good body condition are less likely to have difficult deliveries, which cause higher stress levels and reduce maternal behaviours. Supplementing thin ewes during the last week of pregnancy can improve maternal behaviour. After lambing, ewes should have access to high-quality feed or high-quality pasture.

Healthy lambs

Ewes are more responsive to lambs that are vigorous and active. This means that a weak or ill lamb has an extra challenge facing it during its most susceptible time, and also that if one lamb in a set of twins is stronger and healthier than the other it is less likely to be abandoned. Many abortion diseases can also cause weak or sick newborns, or unequal litter sizes.

Breed/genetic differences

Will a healthy unstressed ewe in good body condition on high-quality pasture ever reject a lamb? Of course it can happen. A final factor to consider is that there are breed and individual differences in maternal behaviour. Some breeds are known to be more maternal than others for example hill breeds are more maternal than lowland breeds, and fine-wool Merinos are known to be particularly poor mothers. Within a given breed or flock, some ewes will be more maternal than others. It is possible to select genetically for better maternal behaviour. This means that ewes that repeatedly reject or abandon lambs should be removed from the flock. If you give them another chance because they are beautiful, you will probably regret it the next lambing.

Lambing - continued on page 12...

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most lambs are capable of recognizing their own mother, and as time progresses the maintenance of the maternal bond falls more and more to the lamb. Both the physical act of nursing and the ingestion of sufficient colostrum are important in the lamb's bonding process. Weak and light birthweight lambs are slower to learn

to recognize their mother. Again, there are breed and individual differences in a lamb's recognition of its mother, but strong healthy lambs will be those least likely to have problems bonding.

Breeding, feeding and health care are all essential management factors to be aware of and concerned with in raising healthy lambs from birth to weaning. At the same time, behaviour of the ewe and of the lamb must not be

> ignored. Simple and common sense interventions such as avoiding stress around lambing and making sure ewes are in good body condition will make the conditions right for ewes to be able to engage in normal healthy lambing behaviour resulting in a strong and healthy maternal bond. This will also allow shepherds to

engage in normal and healthy lambing behaviour like sleeping and eating instead of fostering lambs and caring for orphans.



A Little History

It all started in the mid 1970's. I joined together with some neighbours to form an organic food buying co op. There were about 10 of us who wanted organic food for our families. We met in our homes and reviewed the catalogue form CRS Workers Co-op (now Horizon Distributors). In those early days in order to purchase from CRS we had to send someone from our buying club to were the days of do a work week in the warehouse, which was a small room on fun and laughter! Commercial Drive.

Now we just work We connected ourselves with Ira and worry. Zarbasky who helped us find the organic producers from the Okanagan farms. I was already aware of Otto Rothe and his farm as my parents-in-law were friends with Otto and Sophie. Ira introduced us to Ikka Vaisaine and Apple Whale trucking (Billy Potash and Elam Wills). Elam and Billy talked about SOOPA. What was SOOPA? They explained that a group of producers were certifying their tree fruits with peer review. Around the same time BC Bio Dynamic Agriculture Society was also certifying farmers by peer review. These two groups were the first that I know of that were certifying farms as organic in BC.

by Mary Forstbauer, aka "Organic Earth Mother"

As time moved forward we started farming on a larger scale. I was selling "organically" raised vegetables and fruits to our small co-op and also to many customers who came to the farm. One day while at our farm in Matsqui Ira asked me if I would sell some of our lettuce to Wild

> West. What was Wild West? I asked. Ira explained that he and a couple of

friends had opened a warehouse to sell BC organic produce. So now I was hooked!

Oh those early days were interesting! There were not so many rules and regulations – or if there were I was not aware of them. I would go

down to Funks grocery store in Clearbrook and retrieve wax cartons from their "garbage truck". The boxes were sturdy and would keep the lettuce and other greens nice and fresh. I took the boxes home and rinsed them out. They were boxes that had been uses for shipping fresh chickens. Nobody said anything (it was the days before the salmonella scare). They were impressed that I was using such good quality boxes. We would put the lettuce into the box as it fit and mark the boxes "12 red lettuce" "17 green lettuce" etc. - no one told us

Those

that everything should be in a 24 count container.

We also picked up old wooden grape boxes for our blueberries (Billy hated those boxes because when they slid he would have blueberries all over his truck). It was fun scrounging for boxes at Funks. The staff got to know me and even set the boxes aside for me. As time moved on we moved to more standardized packaging that met the industry requirements – purchasing expensive new boxes from suppliers, some with our name on them!

In the mid 1980's a group of us decided to start the BC Association for Regenerative Agriculture (BCARA). We were lucky to have amongst us John Cox who had been involved with certification in California. He helped us set industry standards that would later be used as a guide for the present COABC standards (and the COABC standarda are the basis for the National Organic Standards). John was full of information. It was like he was a walking encyclopedia when it came to the knowledge we needed.

In the late 1980s the BC Alliance of Organic farmers met for the first time at the Cawston Hall. It was there that I first met Linda Edwards, Brian Mennell, Paddy Doherty, and many more that I cannot even remember. It was a good meeting and we had big dreams. Our second meeting was at our farm in Chilliwack. I remember Paddy going outside in the early morning to visit our pigs! Those were the days of fun and laughter! Where have those days gone? Now we just work and worry. Our meetings have become more business and less fun.

Around the same time, a group of us met out at UBC for the first meeting of the Canadian Organic Unity Project (COUP). It has taken

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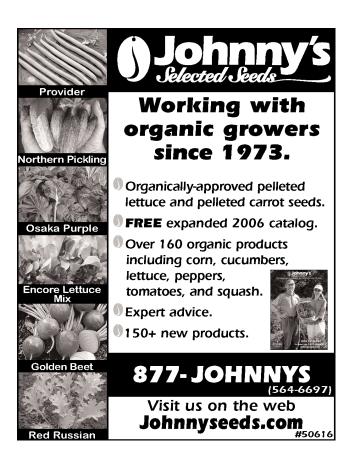
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many years but now we are embarking on the National Organic Standards. Is this what we expected the outcome to be when we sat at that COUP meeting?

Time has moved forward. No more peer review! Gone are the days of packaging in used conventional boxes! Now we have certified verifiers who are trained to in what to look for, and I have to say that some of them have no idea about farming and the challenges we are faced with. They only are interested in the bookwork, the record keeping, inputs and harvest. It is difficult enough preparing the fields, planting, weeding and harvesting. But now we must record what we planted when, where and even why! We need to record harvest and sales and now some verifiers even want us to record what we feed to the animals, what we give to the food bank and what we compost! The bookwork is enormous.

All we ever wanted to do was farm according to ecological and ethical principles. How did we get to this place?



OSDP Steering Committee Positions

The Organic Sector Development Program Steering committee is looking for replacements for two of our present members who will not be able to continue with their duties after the next funding period (July-August 06).

Potential committee members need to have a broad and deep understanding of and commitment to the BC Organic Sector. Members do not need to be on the COABC Board of directors, or on the board of their Certification Body, though participation in the British Columbia Certified Organic Program (eg. Producer/Processor/Handler) would be desireable. The important attributes are a broad perspective of the BC Organic Sector in general, and a desire to work with the committee to assist us to distribute the OSDP funds to worthy projects (both COABC and Industry-driven) in order to benefit the BC Organic Sector as a whole.

Responsibilities of the committee members include: attending meetings (usually 1-2 per year



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in Kelowna for proposal review) and participating in teleconferences (approximately 4-6 per year). The teleconferences are usually 11/2 hours in duration, and include proposal review and OSDP committee business. There are three funding periods per year in which proposals are received, reviewed by committee members, and then discussed at a meeting or teleconference where funding decisions are made. The amount of time required for review depends on the number of proposals received. The committee members are also asked to review interim and final reports of current projects and report their findings to the committee. As well, the committee members are asked to review comprehensive reports (2x per year) of committee activities prepared by the OSDP Co-ordinator. Committee members are not paid for their time, although expenses for attendance at meetings are reimbursed.

The OSDP program is slated to distribute funding until at least mid 2007, but there will be ongoing administration of existing proposals for some time after that. It may well be that the program will run in the same or slightly pared down form after Mid 2007, but we will soon be consulting with the Investment Agriculture Foundation to determine this.

Interested persons should contact Kirsten Kane, the OSDP Coordinator, at the COABC office. Potential members need to submit a short CV to Kirsten for consideration by the Investment Agriculture Foundation. For more information on the OSDP in general please see the OSDP page on the COABC website:

www.certifiedorganic.bc.ca/programs/osdp.htm

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Biodynamic News

The Biodynamic Agriculture Society of BC hosted a short course on Biodynamic Agriculture at the end of March. Topics covered in the course, held in Chilliwack, were The Rudolf Steiner Agriculture Lectures, Farm Individuality, Goethean Observation, The Etheic World, Cosmic and Earthly Interaction, Biodynamic Preparations, Biodynamic Sprays and Teas and Compost Preparations. It was attended by a number of farms and two organic verifiers. Instructor Gena Nonini, a successful Biodynamic farmer from California, encouraged participants to work together in making the preparations on our farms.

Gena Nonini was also one of the main presenters at the Society's Annual Conference and AGM in Duncan, on the topic "Celebrating the Festivals and Renewing our Work with the BD

Preparations". The conference included presentations from Laurier Cabot (Quebec) and Ulrich Hack (Ontario) on what was happening in their provinces. "Intro to Biodynamics" and "What is Bio-dynamic Compost?" were addressed by Uli Hack and Olaf Lampson, a founder of the

Biodynamic Agriculture Society of BC.

Tours of Glenora Farm, Alderlea Farm and Dragonfly Farm and Greenhouses were a popular part of the program.

At the AGM, John Ehrlich from Alderlea Farm in Duncan was elected President. Discussion of Demeter Canada and Demeter International was of interest to all attending, since producers in the Biodynamic Agriculture Society of BC must meet the COABC standards and also the Demeter International Standard.

Mary Forstbauer is past president of BDASBC





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Farmers are using more and more plastic products in their production—from plastic covered

greenhouses, to silage wrap, to plastic mulch.
None of this material is recycled or disposed of in an environmentally friendly manner. At Dragon Mountain Farm, we are trying to reduce the amount of plastic we use.

This year we have experimented with paper and biodegradable mulch. Both products do the job they are supposed to, and are much friendlier on the environment than black plastic mulch. The starch-based 'biofilm" mulch (it is approved for organic use by Debio Norway) is easy to use and essential for heat loving crops (being black it attracts heat) but it costs four times the price of conventional black plas-

tic mulch. Paper

mulch takes

some getting

used to as it doesn't act like plastic. We had to adapt our mulch layer but were able to lay it out ok. Again, it is more expensive than plastic mulch and we are unsure if there are any residues associated with the papermaking process, but in the end we feel much better about using paper mulch than using black plastic on our garden.

We use sisal twine instead of plastic twine on our hay bales. The sisal twine is more expensive, but we've found that we can use less of the sisal because it holds the hay better. The sisal twine rots, but we consider this an advantage, as we don't have plastic twine appearing

all over the farm. Plastic twine can get stuck in the sheep's feet and if it gets in the wool, it presents a problem in the wool milling process.

We use wooden boxes for our box delivery business. Though heavier than plastic, they can be washed and reused indefinitely. We have been using wooden

> boxes for over ten years and have had no complaints from our customers. Similarly, we have been using paper pints for berries instead of plastic clamshell boxes. Though the advantages of clamshells are obvious. until there is an ecological method of dis-

posal, we'll continue to use the cardboard option.

Reducing our use of plastic produce bags is a challenge, as we wash and store vegetables for a few days before delivery. If we are giving every customer five pounds of potatoes, then we need to have them weighed and bagged the day of delivery—we cannot figure a way to put bulk potatoes (or carrots etc) loose into the boxes that wouldn't involve a lot of extra handling. To help make up for this problem, we have asked the COABC to produce thinner produce bags—they cost less and use less plastic, though they are not as durable.

Biodynamics

The biodynamic philosophy developed out of eight lectures given in 1924 by Austrian scientist, educator, and philosopher Rudolf Steiner (1861-1925), in which he emphasized the need for a healthy, living soil (bio-) with a concrete relationship to cosmic (-dynamic) forces. Steiner had previously developed anthroposophy – a theory of spiritual science that takes a spiritual view of the relationship between human beings and the cosmos but with an emphasis on knowing, not faith – and biodynamics developed as the agricultural facet of that. Steiner also applied anthroposophy to education (developing the Waldorf schools), medicine, and architecture.

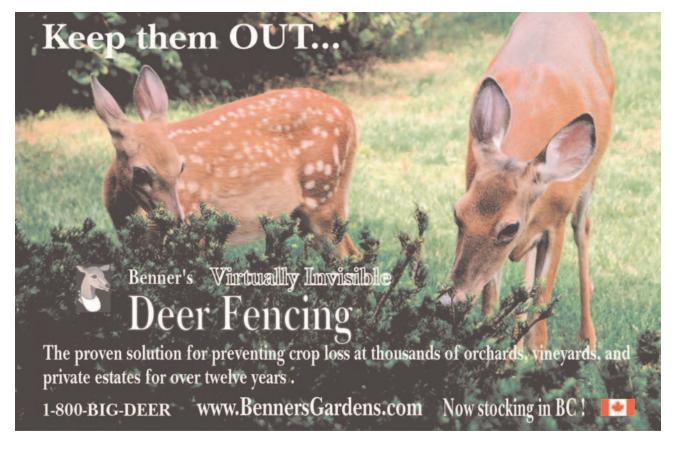
No matter where our land is located, if we are observant we will see sure signs of illness in trees, in our cultivated plants, in the water, even in the weather. Organic agriculture rightly wants to halt the devastation caused by humans; however, organic agriculture has no

cure for the ailing Earth. This is where biodynamics comes in. In brief, Biodynamics is a science of life-forces, a recognition of the basic principles at work in nature, and an approach to agriculture which takes these principles into account to bring about balance and healing. In a very real way, then, Biodynamics is an ongoing path of knowledge rather than an assemblage of methods and techniques.

Some basic principles of Biodynamics

Broaden Our Perspective: Just as we need to look at the magnetic field of the whole earth to comprehend the compass, to understand plant life we must expand our view to include all that affects plant growth. No narrow microscopic view will suffice. Plants are utterly open to and formed by influences from the depths of the earth to the heights of the heavens. Therefore our considerations in agriculture

Biodynamics – continued on page 18...



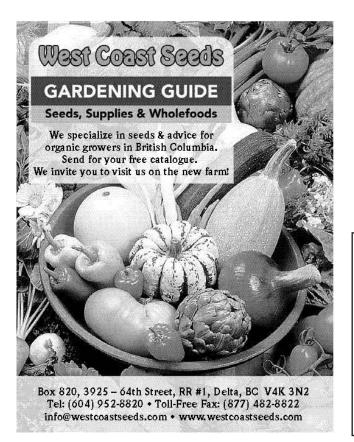
... Biodynamics – continued from page 17

must range more broadly than is generally assumed to be relevant.

Read the Book of Nature: Everything in nature reveals something of its essential character in its form and gesture. Careful observations of nature—in shade and full sun, in wet and dry areas, on different soils—will yield a more fluid grasp of the elements. Then one can be creative, bringing new emphasis and balance through specific actions.

Cosmic Rhythms: The light of the sun, moon, planets and stars reaches the plants in regular rhythms. Each contributes to the life, growth and form of the plant. By understanding the gesture and effect of each rhythm, we can time our ground preparation, sowing, cultivating and harvesting to the advantage of the crops we are raising.

Plant Life Is Intimately Bound Up with the Life of the Soil: Biodynamics recognizes that soil itself can be alive, and this vitality



supports and affects the quality and health of the plants that grow in it. Therefore, one of Biodynamics' fundamental efforts is to build up stable humus in our soil through composting.

A New View of Nutrition: We gain our physical strength from the process of breaking down the food we eat. The more vital our food, the more it stimulates our own activity. Thus, Biodynamic farmers and gardeners aim for quality, and not only quantity. Chemical agriculture has developed short-cuts to quantity by adding soluble minerals to the soil. The plants take these up via water, thus by-passing their natural ability to seek from the soil what is needed for health, vitality and growth. The result is a deadened soil and artificially stimulated growth. Biodynamics grows food with a strong connection to a healthy, living soil.

Medicine for the Earth: Rudolf Steiner pointed out that a new science of cosmic influences would have to replace old, instinctive wisdom and superstition. Out of his own insight, he introduced what are known as biodynamic preparations. Naturally occurring plant and animal materials are combined in specific recipes in certain seasons of the year and then placed in compost piles. These preparations bear concentrated forces within them and are used to organize the chaotic elements within the compost piles. When the process is complete, the resulting preparations are medicines for the Earth which draw new life forces from the cosmos. Two of the preparations are used directly in the field, one on the earth before planting, to stimulate soil life, and one on the leaves of growing plants to enhance their capacity to receive the light. Effects of the

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preparations have been verified scientifically.

The Farm as the Basic Unit of Agriculture: In his Agriculture course, Rudolf Steiner posed the ideal of the self-contained farm – that there should be just the right number of animals to provide manure for fertility, and these animals should, in turn, be fed from the farm. This has to do with the preservation and recycling of the life-forces with which we are working. Vegetable waste, manure, leaves, food scraps, all contain precious vitality which can be held and put to use for building up the soil if they are handled wisely. The farm is also a teacher, and provides the educational opportunity to imitate nature's wise self-sufficiency within a limited area.

Economics Based on Knowledge of the Job: Steiner emphasized the absurdity of agricultural economics determined by people who have never actually raised crops or managed a farm.

The main differences between biodynamics & organics are:

- 1. The use of biodynamic preparations.
- 2. Both biodynamic and organic practices improve soil health by adding compost, but whereas organic farming uses compost for fertilization, biodynamics uses much smaller quantities to enliven the soil. In this respect, biodynamics can be likened to homeopathic medicine, where the aim is to have the body heal itself rather than treat the symptoms. Minute amounts of natural preparations introduce microbial life and nutrients into the soil priming the pump, so to speak - and that life multiplies and reproduces throughout the earth. Studies have shown that both biodynamic and organic fields have the same level of beneficial microbial life (which is much greater than conventionally farmed land) up to 30 cm deep, but deeper than that, biodynamic soil has vastly greater life.
- 3. Additionally, the "dynamic" aspect of biodynamics introduces concepts of relating four elemental states of matter and following natural rhythms. In short, organic farming is concerned only with substances, while biodynamics is also concerned with forces.

What are the biodynamic preparations?

There are nine different biodynamic preparations, each with distinct properties. All of these

The end of food?

In the 1920s, Rudolf Steiner wrote:

We can calculate in approximately how many decades (agricultural) products will have degenerated to such an extent that they can no longer serve as human nourishment. It will certainly be within this (20th) century....We can see how necessary it is to derive forces from the spirit, forces that are as yet quite unknown. This is necessary not only for the sake of somehow improving agriculture, but so that human life on earth can continue at all, since as physical beings we depend on what the Earth provides.

Researchers have recently compared the nutrient values of vegetables published by the USDA in 1963 and 2000. The amount of vitamin C in sweet peppers has plummeted from 128 mg to 89 mg. The vitamin A in apples has dropped from 90 mg to 53 mg. Nearly half the calcium and vitamin A in broccoli have disappeared, while cauliflower has lost almost half its vitamin C, along with its thiamin and riboflavin. Tomatoes have lost 16.9 percent of their vitamin C. The Canadian figures are similar; a Globe & Mail article by Andre Picard reported that potatoes have lost 100 percent of their vitamin A, along with 57% of their vitamin C and iron and 28% of their calcium. Thomas F. Pawlick, in his book The End of Food, suggests that we are close to the point where food "has minimal nutritional value and server chiefly as a toxic poison". It seems that it has just taken a little longer than

preparations are vastly diluted and then activated or energized by a special stirring process known as dynamization. This stirring creates a vortex in the liquid, which draws in ambient energy and evenly integrates the preparation into the solution.

#500: Cow manure packed in a cow's horn, which is then buried and over-wintered in the soil to undergo a chemical transmutation (somewhat similar to the fermentation of wine). Sprayed on the soil, it promotes root activity, stimulates soil microbial life and increases beneficial bacteria growth, regulates lime and

Biodynamics – continued on page 20...

Steiner predicted.

...Biodynamics – continued from page 19

nitrogen content, and helps in the release of trace elements.

#501: Ground quartz (silica) mixed with rainwater and packed in a cow's horn, buried in spring and then dug up in autumn. Sprayed on the vines, this preparation enhances the light metabolism of the plant and stimulates photosynthesis and the formation of chlorophyll. It also influences the color, aroma, and flavor of the crop.

#502: Dried flower heads of yarrow put into a stag's bladder in early summer; the filled bladders are hung up in the sun from spring until autumn, buried in the soil during winter, and dug up the following spring. This preparation is connected to potassium and sulfur, and applied to compost it permits plants to attract trace elements in extremely dilute quantities for their best nutrition.

#503: Flower heads of chamomile stuffed into a piece of bovine intestine and buried. Also applied to compost, it stabilizes nitrogen within the compost and increases microbial soil life so as to stimulate plant growth.

#504: Stinging nettle tea, made from nettle buried and aged in an inert container. This tea has two uses. Applied to the compost, it stimulates soil health and provides plants with necessary nutritional components. It's also sprayed on plants in summer, helping them to withstand drought and excessive sun.

#505: Grated oak bark aged in the skull of a domestic animal. This calcium-rich preparation combats harmful plant diseases and fungal attacks.

#506: Flower heads of dandelion fermented in a cow's mesentery (lining of the abdominal cavity). Inserted in the compost pile, it stimulates the relationship between silica and potassium so that silica can attract cosmic forces to the soil.

#507: Juice from valerian flowers. Half of this preparation is inserted into the compost pile and half is sprayed over it. Valerian stimulates the compost so that phosphorus components will be properly used by the soil.

#508: Tea prepared from horsetail plant. This is used as a spray to counter fungal diseases.

Barrel compost is also used; it's similar to a large biodynamic compost pile, but with the addition of basalt and ground eggshells and aged in a closed pit. These modifications enable the compost to be ready in three to six months instead of the eleven months a large pile requires.

In an ideal biodynamic environment, everything is balanced – animals, plants, minerals. Each contributes not only physical qualities, but an energy as well. The animal organs also possess the unique properties of their former functions – for example, chamomile is used medicinally to treat digestive tract ailments. Thus, to draw out the beneficial properties of the chamomile in that preparation, bovine intestine is used as a catalyst in the fermentation. Additionally, the animal-based preparations introduce unique beneficial microbial life into the soil and bring it into balance.

Do lunar and cosmic cycles really have an effect?

Without question. Just look at the powerful impact the moon has on the oceans' tides, and people as well – the word derives from (moon), because of the full moon's effect on human behaviour. Also consider circadian rhythms, the human biological clock that is attuned to the earth's rotation even in the absence of environmental time cues. Plants, too, follow natural cycles. By understanding these, we are able to determine the best times to plant, prune, water, and harvest to ensure the optimum health of the plant and the highest-quality crop.

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Clearing the Waters

There are two programs currently underway in BC through which agricultural producers can access funds for water-related projects. Several organic producers have secured funds from one or both programs. However, there are some common misconceptions about what is available under each program.

Reducing Environmental Risk, Improving water use efficiency

The Canada-British Columbia Environmental Farm Plan Program (EFP)

The intention of this program is to help producers address environmental risk. The first step is to use EFP resources and planning advisors to develop an Environmental Farm Plan; once this has been completed, Beneficial Management Practices which improve water use efficiency may be eligible for funding. There are some limitations: funding will **not** be provided for pumps, pipe infrastucture and watersource development costs.

Installation of an irrigation system on new land that has not been irrigated, or does not have an irrigation system, is NOT eligible. In BC, eligible costs include:

Improved efficiency of Irrigation systems:
Converting existing sprinkler systems to micro
sprinkler/drip/trickle irrigation systems, and
improving the efficiency of centre pivot systems. (must demonstrate a minimum 15%
improvement in water use efficiency)

Improved Irrigation scheduling. Do you spend a portion of your day trudging around opening valves for your drip irrigation? Then you get busy, forget to close a valve, and over-irrigate?

Equipment for the automation of irrigation systems such as timers, valves and wire are eligible, when accompanied by system design information that outlines an irrigation schedule.

Funding is also eligible for soil monitoring equipment and climate monitoring equipment that will enable producers to accurately schedule their irrigation systems and increase water use efficiency.

For Irrigation equipment modification/improvement to increase water use efficiency, the Environmental Farm Plan Program covers up to 30% of eligible costs, and an additional 20% from Ducks Unlimited is available to bring the total cost-share to 50%.

COABC is a Delivery Group for the

Environmental Farm Plan Program. For more information contact Elaine Spearing (250) 747-3237, e-mail elaines@quesnelbc.com

Addressing Water supply Concerns

The Canada-British Columbia Water Supply Expansion Program (WSEP)

The intention of this program is to assist with developing a new source of water supply, to reduce the risk of water shortage. Producers in B.C have access to technical and financial support for the planning and development of projects that will improve their ability to develop and strengthen sustainable agricul-

tural water supplies. This covers supply of water only, not the agricultural infrastructure to use it, e.g. irrigation or livestock watering equipment.

Examples of eligible projects: where a new well or dug-out is needed, dam rehabilitation, and replacing canals with pipelines. Where water cannot be used due to poor water quality, then equipment to improve the quality of the water supply may be eligible; for example, removing minerals or sediment, or U.V treatment of wash water to remove pathogens.

For on-farm infrastructure costs, Canada will cover up to one third of the eligible costs, to a maximum of \$5,000 per project. Larger scale projects that will provide agricultural water to multiple users are also covered by this program.

For WSEP program and application, (individual one-farm projects) call B.C Agriculture Council,

Water Funding – continued on page 22...

...Water Fundng - continued from page 22

(604) 854-4483. For WSEP program and application, (multi-user projects) call (250) 782-3116

The bigger picture

The BC Ministry of Agriculture and Lands is at work studying the water needs of agriculture as a whole. In partnership with the BC Agriculture Council and AAFC, they are working on an Okanagan Agricultural Water Demand Project. This project will determine the agricultural water requirements on a property-by-property basis by collecting land-use and irrigation system type for every farm in the Okanagan Basin. Once completed, the methodology can be used to determine the agricultural water use in other regions.

"The methodology will incorporate climate scenarios that will allow for the agricultural water demand to be calculated for any particular year or to predict agricultural water use requirements up to 40 years ahead," says MAL's Ted VanderGulik. "The intention is to be able to provide good data to support the development of an agricultural water strategy."

Further Information

BC. Agriculture Council (604) 854-4483 www.bcac.bc.ca

See 'Programs' for information about Environmental Farm Plans, the Environmental Farm Plan Reference Guide, and the Water Supply Expansion Program. See 'Presentations and Briefs' for BCAC Water Policy for Agriculture.

Ministry of Agriculture and Lands Publications. 1-888-221-7141

Many useful factsheets on irrigation systems, irrigation scheduling and livestock watering. On the web, or can be ordered.

http://www.agf.gov.bc.ca/resmgmt/publist/waterhtm

'Water bucket'

www.waterbucket.ca

Website with information about many aspects of water sustainability in B.C. A section on Agriculture and Water. Watch out for a crop irrigation scheduling calculator (MAL are hard at work on this now) that should be in place for the 2007 season.

The Memory of Water

by Allan Baddock

Water's memory made the cover of New Scientist magazine in April (Vol 190, #2546). That's significant principally because there's nothing like the suggestion water has a memory to get conventional thinkers scoffing and chuckling about homeopathy and biodynamics. So it made for interesting reading while waiting for a plane during Easter.

In a nutshell, New Scientist reported work of researchers at the Ruhr University of Bochum, in Germany on a protein, (bacterio-rhodopsin), which undergoes a simple form of photosynthesis using light to create a source of chemical energy. (Nature, vol 439, p.109). The report says researchers have long suspected incoming light shifted protons around the protein molecule, creating a charge difference that acts like a battery. Florian Garczarek and Klaus Gerwert exposed the protein to infra-red light and established that photons of light actually broke some of the hydrogen bonds between water molecules trapped within the protein, triggering a chain of events in which fragments and clusters of water molecules interacted to move protons through the protein.

Further insights into water's possible memory came with new computer modeling work. *New Scientist* says biochemists have long noted concentrations of water molecules around DNA which appear to correlate with biological activity.

"It turns out that water undergoes radical changes as it approaches the surface of DNA", the report says. The network of hydrogen bonds within water becomes disrupted, and the movement of individual molecules starts to vary. They linger longer and rotate more slowly around some base pairs on DNA than others. (The sequence of base pairs on DNA dictates the order in which amino acids combine to make proteins.) Computer modeling now suggests that as water molecules linger longer around some base pairs, the level of hydration will mirror, and effectively signal, the sequence of base pairs to proteins via variations in electrostatic forces.

As the protein gets closer, the loosely bound water molecules are ejected from the site until the protein binds tightly to the DNA.

If we should now take as proven that light can change the nature of water without changing its chemistry, and charge water molecules like a battery as the New Scientist report suggests, it seems no great step for the "science-inclined" amongst us to consider that a biodynamic formulation may change a water molecule by exposing it to a particular compound, process, or chemical even. This exposure could presumably alter the water molecule to behave in particular ways that deliver particular results in terms of biological development.

Biodynamic advocates will tell you it isn't presence of an ingredient that makes a biodynamic formulation work. Now within conventional scientific terms, we can agree, considering that it may be the preconditioning of the water molecule itself - by exposure to a particular environmental element or process, including particular patterns of pressure, shaking, light levels, and other conditions prescribed by biodynamic disciplines. And if we're talking about creating some kind of electro-static charge, it is similarly logical to think the conditioning may

persist even once dilution has removed all trace of the original catalyst. That may take the mystery out of the notion of water having a memory, for those who are troubled by the notion. Virginity once lost, stays gone.

Interestingly, the same concept may shed light at the other end of the organic/scientific divide, regarding the vexed issue of pesticide residues. If intentional exposure can induce change in water's nature beyond mere chemistry, unintentional exposure to an element or compound may also. Is this an insight into how pesticides and chemicals could trigger harm to living organisms, even when no detectable levels of those chemicals remain? That process may go some way to explain why cancers, allergies, and diseases are at epidemic levels despite all "advances" in our understanding of medicine and health.

More things in heaven and earth, Horatio, than are dreamt of . . .

This article originally appeared as an editorial in the May/June 2006 issue of Organic NZ.

Regional Seminar Series

Interested in demonstrating the latest farming techniques or equipment to farmers? Looking for some financial support to get this kind of hands-on event off the ground?

The COABC's Organic Sector Development Fund has approved funding to support a set of regionally oriented seminars around the province. These events must demonstrate something new that can help producers increase their organic productivity.

If you have an idea, and a CB or a regional production group who will help coordinate the event, talk to Rochelle Eisen to see if you qualify for financial assistance. You can reach us:

Rochelle Eisen 250.547.6573 (h) 250.306.7980 (c) or via email rgre@telus.net.





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Voles (short tailed mice) can cause a great deal of damage in many crops. Unlike their long tailed relatives (who feed mainly on seeds), voles will girdle trees and shrubs especially in the winter and will feed on root crops of all kinds. They build, nest and live in shallow, underground tunnels. The main control of course is keeping the vegetation clear or very short around your plants or trees. These pests are hard wired to avoid open areas because that makes them vulnerable to predators. Doing that before winter is especially important.

This fall, when we noticed that the vole population was noticeably higher than usual, we tried something else as well. We filled a spray tank with water and went out into our orchard. One of the family dogs is particularly enthusiastic about sniffing out voles. Someone would follow with the sprayer as she sniffed along the rows. When she appeared to have scented something,

we would blast the area with water; this would exposed and fill up the voles' holes and they would come to the surface. They were incapacitated enough by the water that either the dog would get them or someone could kill them. There were those who preferred stomping to clubbing but both were effective. Sometimes our human/dog combination would get 30 or 40 voles in a couple of hours. Considering where we were finding them (in the tree rows) and that each was capable of killing several trees over the winter, it was time well spent.

Having a mouser type dog helps but is not necessary. This method has also worked with someone going ahead of the sprayer, raking vegetation away from the base of the trees to expose the tunnels. In some situations I think a pressure washer could even be used. I shall probably try this in my sweet potato and parsnip patches next to the garage later this summer if damage starts occurring.





To Certify or Not at UBC Farm by Gavin Wright, Georgia Stanley, Megan Halstead, Danny Gruner, Jason Gray

The UBC Farm, which this year adopted the much more worldly moniker "The Centre for Sustainable Food Systems at UBC Farm", sits on a 24-hectare mix of field and forest on UBC's South Campus. The site was cleared in the 1960's and used as a research site for several decades, before falling into disuse in the early 90's. The farm did not develop an organic philosophy until 2000, when students and professors of the university's Agricultural Sciences faculty (now Land and Food Systems) set out to re-invent the site, transforming it into a place for experiential education in sustainable food systems, facilitating innovative research in agroecology, and opening it's doors to benefit the surrounding community.

Among over a dozen research, education, and

community projects, UBC Farm runs a 1.75-hectare market garden, supplying four restaurants, one retailer and over three hundred loyal market customers with local organic produce, flowers and eggs. Since its inception in 2001, the market garden has been operated following the COABC's management standards. Despite strict adherence to organic standards and phi-

losophy, the UBC Farm has never sought certification. A forum in March was envisioned as a way to involve the community in the decision of whether now is the time to do so.

The forum featured a keynote introduction from Lee McFayden, organic market gardener and COABC board member, and a panel discussion with McFayden, Heather Pritchard, director of Farm Folk City Folk and a local organic grower, Mark Bomford, Programs Coordinator of the Centre for Sustainable Food Systems at UBC Farm, and Rosy Smit, co-founder of UBC Farm. About 60 people attended the forum, and engaged in a lively discussion of the issue for over three hours. It represented the culmination of a semester-long study, conducted by the

authors of this article, regarding the implications of seeking certification for the UBC Farm. At the end of the forum people were asked to vote on whether or not the farm should certify, and to provide comments on their opinion. An opportunity to vote and comment was also provided for students and faculty who did not attend the forum.

The outcome of the vote among participants was 77% in favour of certification and 20% in favour of remaining uncertified, with the remaining 3% undecided. Perhaps even more important were the many comments, some of them in depth, which will provide the Farm administrators with a concrete sampling of the concerns and ideas of some of the stakeholders involved in shaping the Farm's future. The

major areas of debate around certification seem to fall in four broad areas: solidarity / promoting certified organic products, research, marketing, and sustainability.

Solidarity

An important reason to seek certification, as expressed by many respondents, was to join in solidarity with the organic movement and promote organic

products in the local market. Many expressed the desire to see the UBC Farm take on a leadership role in promoting organic agriculture from within the organic community.

One forum attendee had this to say: "What interests me most is the ability of certification to unify organic producers [enabling] some of their goals/voices to be heard that otherwise would maybe be isolated & ignored."

Countering this argument, at least one attendee stated that the UBC Farm, being part of a university, should be discovering, demonstrating and instructing techniques in sustainable agriculture, but should not be joining "movements".

UBC – continued on page 26...

Research

A major debate throughout the forum revolved around research at the UBC Farm. There was a strong sentiment expressed that certification could limit the flexibility of the Farm as a research facility, and that this flexibility needs to be maintained, both to promote the Farm and to allow for experimentation that might not otherwise be possible. One forum attendee put it this way: "Agriculture is a constantly changing living system, we need some facilities with organic morals and goals with the flexibility to experiment [in order to make] our whole food system more sustainable."

A strong counter-argument pointed out the potential value of the Farm as a leader in certified organic research. Also discussed was the possibility of maintaining a buffered, non-certified research area, and the idea of applying to the COABC Standards Review Committee for a special "organic research area" designation for UBC Farm, which would allow for the testing of uncertified substances.

Marketing

There was a strong sentiment from voters that UBC Farm does not require the marketing advantages that would come with third-party certification. The UBC Farm sells all of its product locally and is thus able to maintain assurance of management standards that takes place first-hand. Many people stated that maintaining and promoting this "hand-shake" certification, a staple of a local food system, is an important role for the UBC Farm.

Sustainability

Finally, there was much discussion of the role of UBC Farm in promoting sustainable food systems. On the issue of certification and sustainability there was strong and polarized debate. One side argued that certification would allow the Farm more credibility and a wider audience in promoting sustainable food systems. The other countered that the Farm already exceeds organic standards and that certification would not increase, and might even eventually hinder, the sustainable mandate of the Farm.

As of printing, the UBC Farm remains uncertified. However, the many people who have been involved in the debate have learned a great deal about the process of certification and about sustainable food systems. Whether or not the plea of one respondent to "just do it already!" is answered, the question of certification for UBC Farm remains open, and many people have had the opportunity to discuss it and make new discoveries and connections in the process.

Food Security & Agriculture

by Hans Buchler

Security of food supply has been an issue ever since the early beginnings of agriculture. Recent archaeological evidence has suggested that, at the very early stages of agriculture, populations relying on farming for their food supply fared much worse than their hunting and gathering counterparts. This was probably mostly due to periodic crop failures. Throughout history food has been used as a weapon in war; invading armies loot the food reserves of local populations and then proceed to destroy all growing crops to starve the population and disrupt access to food for their opposing armies. As a result, many countries have, until very recently, spent a fair bit of time

planning for continued, sufficient supply of nutritious food for the population.

Today, however, governments and people in general have become largely oblivious of where their food comes from and take an abundant supply of cheap agricultural products for granted. This is especially true for North America, which has never truly experienced severe famines caused by war, climate or widespread crop failures. We are now increasingly dependent on products shipped from further and further away (some estimates claim that, on average, food travels 2,500 km before it gets to our plates). This has introduced a new risk factor in

terms of food security, especially in countries like Canada and the USA, which depend almost entirely on petroleum products for the transportation of goods. In my opinion, this dependency on transportation, together with the threat of worldwide climate change, makes

planning for a secure food supply an eminently urgent matter.

One of the basic principles of food security requires that sufficient, diverse, nutritious food be produced close to where large concentrations of people live. To provide the population with a reliable and secure source of food close to population centres requires primarily two things: land and farmers.

The land and related infrastructure has to be available now and in perpetuity in proximity to where the big population concentrations are, in

order to reduce exposure to the risk of transportation disruptions. In Canada most population concentrations also tend to occur where climate is relatively element and growing conditions are generally favourable.

The Agriculture Land Reserve (ALR) in BC could be the tool to preserve productive land for future generations. For this to work would however require that the reserve be left untouched and not whittled away bit by small bit where it counts the most (Lower Mainland, Vancouver Island, Okanagan). The Lower Mainland has lost approximately 12% of its agricultural land base in the last thirty years. Since projections of population expansion estimate a doubling of numbers within the next thirty years in the major areas, we should be planning for an expansion of the production base instead.

The current, and all future Governments must make it crystal clear that from now on no exclusions from the ALR will be granted. Apart from preserving the current production base, this will also reduce speculative pressure on the price of agriculture land. Today the price of farm land in the above-mentioned three areas is based on the potential for development, not on the potential return from agriculture pro-

duction.

Over time new policies will have to be developed to make sure that growers will have access to productive land, and that no potentially good piece of ground in the ALR will lay fallow due to the unwillingness or inability of the owners to cultivate it themselves (e.g.: Switzerland, for one, allows qualified farmers to occupy and farm unused private land in the agriculture zone).



The easiest way to guarantee that farmers will be around to cultivate the land is to ensure that the activity of farming is economically viable and profitable. This can be achieved in a number of ways:

Convince the local population that buying local food at a price which makes farming viable is in their best interest (to me this is the most appealing solution; it will however take an enormous amount of effort to achieve).

Support farmers' income through subsidies, direct payments for Ecological Goods and Services and other financial support programs (currently, some countries have very generous 'green' payment programs).

Establish import restrictions on agricultural goods which can be produced locally (at this time this would be almost impossible to

Food Security – continued on page 28...

... Food Security – continued from page 27

achieve, given the present WTO rules and restrictions. In the long run the WTO will need to be convinced that certain import restrictions aimed at preserving a secure, local food supply, are in the best interest of all citizens of the world).

At present there is practically no long-term plan in place to deal with prolonged food shortages in BC. The emergency response plan for the Lower Mainland has plans to provide the population with the basic necessities for a period of one week only (in case of an earthquake).

Given the uncertainties around continued supply of petroleum and the impact of climate

change, it seems obvious that some serious, long term planning is in order. Providing fresh, nutritious food close to where people live not only assures secure access in times of shortages or emergencies, but has positive effects on the general health of the population. Food eaten fresh off the field, allowed to ripen to its full potential, is much more healthy and nutritious.

Will the proposed Provincial long term Agriculture Plan address this? – one can only hope

Hans Buchler grows Certified Organic grapes in Oliver and is chair of the Food Security Task Force of the BC Agriculture Council. The opinions in this article are his own.

Eat Local for Food Security

by Jen Gamble

From a community perspective, food security usually focuses on feeding the hungry, but there is a business perspective that is often not considered. A sustainable food system that feeds the entire community can come to fruition only when producers, retailers and consumers are all dedicated to the process. Producers need to be able and willing to provide for the immediate area while retailers and consumers must support these efforts by maintaining a steady demand for local products. Business opportunities for local producers are a natural spin-off of a viable local food system. Increasingly consumers are looking for safe, nutritious food that local producers could provide with a few adjustments to their business priorities. The Shuswap Eat Local project was created with an emphasis on demonstrating the economic feasibility of the local marketplace. In order to do this, the program has a wide scope that brings together many diverse interests within the community.

The Shuswap Eat Local project encompasses many aspects of food security. The program plans to facilitate lasting relationships between producers and retailers, to encourage low income and "at risk" groups to eat more nutritiously and to promote wider accessibility of local products for the general public. Through a

series of luncheons focused on partnering producers with retailers, we hope to strengthen the local food network. The promotion of local food is one of the main goals of the Eat Local project. We also have a number of initiatives to help address food issues in groups who are often at the highest risk of food insecurity. For pregnant women and new mothers, we've hired a lactation consultant to visit Salmon Arm monthly. She encourages breastfeeding so the youngest members of our community have the advantage of eating the best local food available. For youth and young adults the importance of nutrition and how to prepare food is taught at the Chaotic Kitchen Program run by the Downtown Activity Centre. We've also been



laying the ground work for the creation of a community garden in order to increase the accessibility to locally grown food for all residents. By generating public interest through our events, we demonstrate to local business that there is a demand in our marketplace for local foods that has not been satisfied. Ultimately, we would like to initiate a local food policy for the city of Salmon Arm.

Our first Eat Local lunch was for a number of business leaders in the community. Attendees were asked to consider how they could better use locally produced foods in their business and personal lives. The second lunch was a part of the Youth Conference held at the Downtown Activity Centre in Salmon Arm. Youth were astounded that the full delicious meal we provided cost a fraction of the price of a comparable McDonald's meal. Participating organic producers included Wildflight Farm and Green Croft Gardens. We also hosted a dinner, open to the public, at which a sold out crowd enjoyed the amazing feast. Among the suppliers for the dinner were Highland Farms, Roots and Greens Farm, Eagle River Organics, Wildflight Farm and Crannog Ales. In all these events we've been extremely lucky to have the professional talents of chef Rob Sengotta of Shuswap Chefs. He is a superb chef who believes that ingredients from the immediate area taste better and therefore create a superior final product. In his catering business Rob uses as much local produce as possible.

Soon we will be posting a directory of local producers and processors on our website. This list will serve as a reference for retailers, restaurants and the public in general. It will also be available at the Salmon Arm Fall Fair as part of the 2006 "Showcase of Agriculture" Project. The Eat Local program and the Salmon Arm Fall Fair Association have partnered to create an display to be entered in the province wide competition held by the BC Association of Agricultural Fairs and Exhibitions.

Using the Eat Local directory as a base, a comprehensive guide to local eating in the Shuswap will be published for the 2007 season. This free guide will give local producers and processors valuable exposure in the community, while encouraging consumers to eat more nutritiously. The creation of this guide will be made possible by a grant from the Community Action for Health Fund.

If you would like more information please visit our website, www.shuswapfoodaction.ca or email Jen Gamble at foodaction@youthpartners.ca.

The Eat Local Project is a Shuswap Food Action initiative in partnership with the Salmon Arm Partners in Community Leadership and the City of Salmon Arm, funded as part of the Healthy Communities program of the Union of BC Municipalities.

BRIDGING BORDERS TOWARD FOOD SECURITY

a joint conference of the Community Food Security Coalition (USA) & Food Secure Canada/Sécurité Alimentaire Canada

OCTOBER 9-11

This conference brings together people across North America who are working on issues related to food security and food sovereignty. It will include many workshops addressing interests of food producers and particularly the building of links between food producers and consumers in developing sustainable food systems. There will be three plenary sessions on food and health, indigenous food systems, and farmers' visions for food sovereignty. Other events include 60 cutting edge workshops on such themes as food and cities, food and communities, and global food issues.

October 7-8: short courses and more than a dozen field trips to highlights of the Vancouver area food system.

October 11: Annual meeting with position papers on key issues & setting priority actions for the cross-Canada network.

This is a unique opportunity to rub shoulders with people who have done serious thinking and action about food systems, enjoy (and promote) local foods, and promote BC organics. The program and registration form are at www.bridgingbordersconference.org.

WWW.BRIDGINGBORDERSCONFERENCE.ORG

AT TH SHERATON WALL HOTEL, VANCOUVER, BC

Organic Harvest Awards: Categories

Best Organic Non-Alcoholic Beverage

Best Organic Alcoholic Beverage Best Organic Livestock Producer Best Organic Dairy Producer Best Organic Bakery Product Best Organic Processed Product Best Organic Direct Farm Marketing Best Processed Organic Meat Product Best Farm CSA (Box Program) Best Organic Dairy Product

Best Integrated Farm System

Best Retailer
Best Organic Horticultural
Producer
Best Home-delivery System (non farm)
new! Best Commitment to
Organic by Restaurant.

Evaluation Criteria

Product entered must be Certified Organic in British Columbia by a recognised Certification Body. For a processed product to be eligible, it must be made up of raw materials that have been transformed into an edible product in BC.

Best Non-Alcoholic organic beverage: finished product must be certified organic.

Best Alcoholic organic beverage: finished product must be certified organic. For wine, using certified organic grapes is not sufficient. Processing must also be certified.

Best organic Bakery product: (bread, muffins, bagels etc) finished product must be certified organic.

Best processed organic Meat product: processed beyond slaughter and finishing; (sausage, prepared/ 'deli' meat, jerky, etc); finished product must be certified organic.

Best organic Dairy Product: finished product must be certified organic.

Best Processed organic product (non-livestock based): any product processed in BC not made up of any animal products (flour, cereal, pasta, tofu, vegetarian meal, etc.) finished product must be certified organic.

Best organic Horticultural Producer:

questions to consider: How long has my farm been certified organic? How many horticultural foods do I produce and sell? Where is my food sold? Have I done anything special on my farm e.g. developed a new farming practice, researched new ways to fight disease and pests, pioneered a new variety, developed a new market? —did I pass this knowledge on to other organic farmers? Do I promote organics in the community? Do I hire local people on my farm? Do Í teach people about organic farming? Have I reached any of my organic goals e.g. moving toward a closed nutrient system? Are there environmental aspects to my farm e.g. wildlife or fish habitat?

Best organic Livestock Producer:

questions to consider: How long have I been certified?—am I proud of my certification record? Did I convert from nonorganic to organic?—if so, why? How well do I integrate the organic principles on my farm? How much of my own feed do I produce on-farm? Do I make any value-added products? Do I do any special marketing?—where is my meat sold?Do I do anything special to promote organic farming? How well do I treat my animals? Do I have SPCA certification as well as organic?

Best organic Dairy Producer: questions to consider: How long has my farm been certified organic? How well do my farming practices integrate the organic principles? Am I proud of my dairy herd—have I developed a healthy organic cow? What have I learned about organic dairying?—have I passed my knowledge on to others? Do I produce other organic products beside dairy e.g. organic meat? How much of my feed do I produce on-farm? How do I help my local community? Do I have any environmental achievements to show off?

Best organic direct farm marketing business: (innovation in farm's marketing practices) Direct farm marketing means a farmer selling their own produce direct to the consumer e.g. farmers' market, home fruit or vegetable stand, your own storefront. Questions to consider: What am I doing in my business that makes it special? Am I financially successful? What range of foods am I selling? Am I selling special crops e.g. meats or eggs or wine or beer or vinegar as well as vegetables and fruit?

Best farm-based organic home delivery business (CSA/'Box' Program): Farm must be certified organic. Questions

Farm must be certified organic. Questions to consider: Evolution of business? How many customers? Geography/distance cov-

ered? How Long? Variety of products available given size and scale of operation? How do I reduce/recycle packaging? Is my business financially successful? Do I promote organic agriculture? Do I support the local community? Do I buy organic produce (for re-sale) from local organic farmers?

Best organic integrated-farm system (sustainable practices): Questions to consider: How well do I recycle the waste produced on my farm/in my home? How many inputs do I bring in from outside my farm? Are there special examples of how one farm activity nourishes another? If I sell produce off-farm, how do I make up this net-loss of organic material? How do I reduce my reliance on fossil fuels?

Best Retailer: Questions to consider: how well do we promote BC Organic Local Products? Evolution of business? Ratio of certified organic product carried to non C.O or organic product? How many customers? Reducing packaging?

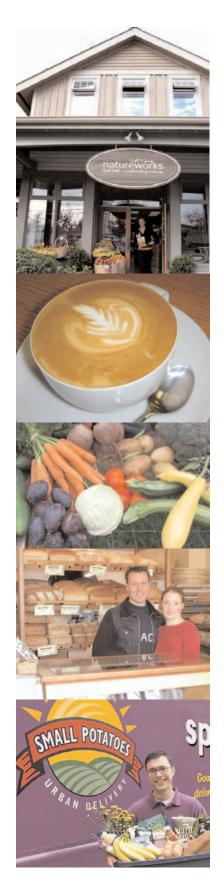
Best Home Delivery System (non-farm): Questions to consider: Evolution of business? How many customers? Geography/distance covered? How Long? Ratio of BC Certified Organic products to imported C.O. product? Reducing packaging? Financially successful?

Best Commitment to Organic by Restaurant: Questions to consider: is a significant percentage of the food purchased by my restaurant BC Organic product? Can I demonstrate my commitment to Organic production and sustainable practices in my restaurant? Do I attempt to promote organic production to my customers? Do I collaborate with local farmers to source my product and plan menus? Am I financially successful?

Organic Harvest Awards: Application

Deadline September 15, 2006

Please submit completed applications and any accompanying materials to the COABC Office: 3402 32nd Ave, Vernon, BC V1T 2N1 or fax to 250 260 4436 by September 15th, 2006. Category: If you are nominating a farm/business/product that is not your own please check here **Applicant Info:** Your Name & Phone: _____ Do you wish to remain anonymous to the nominee? Y \(\subseteq N \subseteq \) Product/Farm/Business Name: Manufacturer's Name (if nominating product): Contact Person: Address:_____ Phone: _____ Fax: _____ Email: _____ Website: ____ **Evaluation:** Please review the award criteria on the previous page for additional information. Note that the farm/business/*product must be certified organic in British Columbia, but not necessarily by a COABC- accredited Certification Body. Proof of Organic Certification must accompany the application. If you are a farm or business, it is desirable to attach photos and/or any promotional materials- unfortunately your farm will not be visited by the judges. If you are nominating someone else's farm/business/product, the nominee will be contacted in order that they may accept the nomination, indicate if they are able to provide any additional information as required, and also to provide proof of organic certification. *You must be prepared to provide a sample of the Nominated Product(s) to the judges. The product must be able to be transported safely to the judging location (TBA). Nominees will be contacted to arrange this as details become available. The judging will take place approximately two weeks prior to the November 4th event date. Please tell us why your (or the farm/business/product) you are nominating deserves the title "the best......". Attach additional sheets if necessary:



Organic Harvest Awards 2006

Mark your calendars for Saturday, November 4th: The COABC will be presenting the second annual Organic Harvest Awards at the Coast Plaza Hotel in Vancouver!

The first annual Organic Harvest Awards was a sold out, fun-filled event that featured a sumptuous organic meal prepared by hotel chef Luc Gruffauz, entertainment, networking opportunities, and of course, award presentations to very excited recipients. The chef is already hard at work on the menu for 2006, planning is well underway, and things are shaping up nicely.

Inside the back cover of the *Grower*, you will find the 2006 application form and award criteria. Please take the time to review the criteria and note that the nomination format has changed somewhat from 2005.

This year you may nominate your own farm/business/product OR nominate someone else's farm/business/product.

If you choose to nominate another, you need to complete the application form on their behalf, and submit it to COABC. The nominee will be contacted to accept the nomination, and in order that we may gather any additional information that may be required. The deadline for applications is **September 15th**. They must be submitted by post or fax to the COABC office on or before that date. Winners of Awards will be notified as soon as possible after the decisions are made, and will receive a ticket for the event as well as the opportunity to include the award in any subsequent publicity. Last year's winners are more than welcome to apply again—in the same or any new category.

Ticket information will be available soon, and there are sponsorship opportunities available. Please contact Kirsten at the COABC office if you wish to discuss sponsorship or have any questions about the event. The Organic Harvest Awards Page on the COABC Website will be updated regularly with new information (click on COABC Programs)

Last Year's Winners:

Best Bakery Product (tie): Natures Path & Artisan Bake Shop Best Non Alcoholic Beverage (tie): Happy Planet & Ethical Bean

Best Alcoholic Beverage: Crannóg Ales Best Processed Meat Product: Organa Farms

Best Processed (non livestock) Product: Kootenay Kitchen

Best Dairy Producer: Avalon Dairy/Bradner Farms

Best Livestock Producer: Bradner Farms

Best Integrated Farm System: Alderlea Biodynamic Farm

Best Direct Farm Marketing Business: Cincott Nursery and Market Garden

Best Home Delivery System (non farm): S.P.U.D.

Best Retailer: Salt Spring Natureworks

Saturday, November 4, 2007