

British Columbia

Organic Grower

In this issue:

Formosa Farm

Spent Mushroom Substrate

DIY Drip Winder

Community Farms Part 3



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Certified Organic Associations of BC

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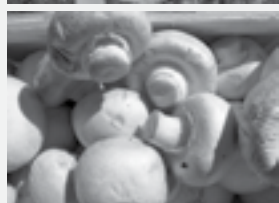
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Still growing strong at Formosa Nursery. Find out about farmer resiliency on page 16.



Learn more about spent mushroom substrate in Footnotes from the Field on page 12.

BC Organic Grower

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Getting all tangled with your irrigation? Try building your very own drip winder. Instructions on page 22.

President's Letter

For the man sound in body and serene of mind there is no such thing as bad weather; every day has its beauty, and storms which whip the blood do but make it pulse more vigorously.

*George Gissing, "Winter,"
The Private Papers of Henry Ryecroft, 1903*

As I look out the living room window at the falling rain, I contemplate my life. A large part of it has been about farming and being actively involved with COABC. The last three months I have thought a lot about what COABC has accomplished over the years. We have had many sunny days and we have weathered many storms.



The storms have strengthened us and made our blood pulse more vigorously and the sunshine has helped us grow.

The introduction of the Canadian Organic Standard has affected us all. We need to pay attention and be ready for June 30, 2011, when the Stream of Commerce ends and the regulations begin to be fully enforced.

In BC we have challenges as we weather the storm of having both regional and national certifiers. Under the national guidelines, we are not permitted to say "Certified Organic" but if we are regionally certified we can. We are blessed with sunshine as the phrase "Certified Organic" is incorporated into our checkmark logo.

This logo is like an umbrella. As the rain falls and the weather does not cooperate, we have raised our umbrellas and started an active campaign to market the checkmark logo. Now is the time for everyone to CHECK! CHECK! CHECK! your products!

Watch for emails from the Promotions committee as we tell the BC organic story. The beauty of the storm is the sunshine that will follow as more consumers recognize the checkmark and start asking for BC Organic.

As you farm and process this season think seriously about direct marketing and selling at a farmers market. Consumers are hungry for organics and they are starving to meet the farmers.

I encourage each of you to take ownership of COABC. Remember the COABC is your association! The directors, along with staff, guide the association but is the membership that must lead. Your cooperation in promoting the COABC will benefit you and the rest of the BC Organic Community.

I look forward to the next months as we look for the beauty in storm and the rainbows in our dreams. ☘

I'm "checking" my product are you?

*Mary Forstbauer
COABC President & BioD rep*

(Photo: Carol Topalian and Edible Vancouver)



Contact the promotions committee at coabcpromo@gmail.com with ideas or if you would like to support our program to promote the checkmark in various publications.

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Administrator's Report by Jen Gamble

The office and the board have been working together to raise the profile of COABC over the last couple of months. We've initiated a checkmark promotion campaign that started with a half page ad in the Summer edition of Edible Vancouver. COABC plans to continue the model of members purchasing ad space to help promote both their own businesses and the checkmark in subsequent publications.



We've also been raising the profile of the COABC within the government by collaborating with the Ministry of Agriculture to build a case for the regulation of the word organic. With the CFIA decision to disallow the use of the word "certified" to describe organic products, our ISO members have been put at a disadvantage. We are working on many fronts to convince the government that regulating the word organic is a necessary measure.

Information sheets on Mandatory Organic and the need for extension have been sent to the Ministry and the BCAC and are now available on the website. These are documents that any member can take to their local MLA or MP to impress upon them the importance of these needs in the organic sector. By sending a consistent message, we will increase the awareness of these issues through the government.

Achievements for last Quarter

- ✓ Selected Chilliwack as the 2012 conference location
- ✓ Finalized 1st Quarter financials
- ✓ The Accreditation Board met to review the annual reports and make the renewal decisions
- ✓ Sent thank you letter to all COABC operators

As an individual member of the organic community you can help by displaying the BC Certified Organic logo and COABC promotional material where you sell your certified organic products. Because the checkmark logo, including the words BC Certified Organic, has been approved for use by the CFIA, our ISO operators can use it to promote their certified status even though they can no longer use the word "certified" in the remainder of the packaging.

Finally, please help us spread the word that the COABC conference will be held in Chilliwack this coming February. Make plans to attend the conference and bring a friend. If you are able to volunteer or have an idea for speakers, please let the office know. 🌱

Husky Mohawk Community Rebate Program



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

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

Editor's Note by Andrea Langlois

Welcome to the summer issue of the BC Organic Grower, although many of you may have been so busy this summer that you're sitting down to read this in the fall!



Andrea Langlois,
editor

A few words that come to mind for me when reading through the submissions for this issue were "best practices." While there are no absolutes in farming, there are a lot of opinions and everyone has a "tried and true" method – from the best way to weed to the best way to market. One thing that the farming community is never lacking is advice!



moss dance, layout

This issue presents a few of these – from a third example of a community farm structure to an excellent article about building your own drip winder, to make that pesky side of irrigation a little, well less tangled.

This issue also brings findings from the OSDP-funded pea and aphid control project, conducted by E.S. Cropconsult Ltd, which shows that the "industry standard" of using soap to control aphids just doesn't pass the research test. It also presents some initial findings on that may be useful for farmers wanting to try a few new tricks to stop the bug brigade.

We also have our second article from Marjorie Harris in her BCOG series "Footnotes from the Field," in which she sheds some light on the complex story of spent mushroom substrate, outlining how it's made as well as offering tips for its use.

Dana Zaruba, author of an interesting new book on running a successful market stall joins us with the first of three articles that she will be contributing. Her first article comes just in time for the bounty of July (ie more zucchinis than anyone can handle!) with tips on how to offer value-added products as part of your farmers' market or CSA gig. And, if you're considering using new technologies to market your farm business, make sure you flip the pages and learn about how marketing has evolved, making advertising more affordable.

We're also pleased, as usual, to present the faces behind organic farms in BC with Spring Gillard's Farmer Focus – in this issue we get to meet Ting and Risa Lin from Formosa Nursery.

As always, I'll end with a plea for you to send us your thoughts. What would you like to learn about? Do you have a home-made solution to a common problem? Let us know, as sharing a great idea is always a wonderful thing. 🌱

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Business has Changed Marketing has Evolved...

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By Sharmila Singh

There are many definitions of marketing. Better definitions are focused on customer orientation and the satisfaction of customer needs. Here are a few definitions of marketing:

- Marketing is the social process by which individuals and groups obtain what they need and want through creating and exchanging products and value with others. (Kotler)
- Marketing is the management process that identifies, anticipates and satisfies customer requirements profitably. (The Chartered Institute of Marketing)

So what does that mean?

Marketing is the study of human behavior and the thought process that makes people purchase a product or service. Once we understand human behavior and why people buy, then we can determine which medium is best suited to get their attention (gain awareness).

This is where most small to medium businesses would hit a roadblock. Traditionally marketing costs could be upwards of 20% of your annual sales. Yes we know “it costs money to make money.” So let’s say that is true... but how did the companies know that for every dollar they were spending they were making three?

Generally, marketing is attributed to advertising, which comes across a scary expense. Some marketing mediums that can be costly are direct mail, TV, radio, newspaper & magazine advertising, billboard/signage, sponsorship, and the list goes on. Now if you’re a small or medium-sized business how are you supposed to afford these costs?

Today, marketing has evolved

In the later 90’s we embraced the internet – a medium that would affect the way people buy and the way people do business. The internet, in some ways, reset the competitive landscape for everyone. Then in early 2000 we were handed web-based technologies to

help us mass email our customers/clients, social platforms to engage and interact with end users, and better search capabilities.

People now rarely use the phone book, plus mobile phones have built in applications that can do the same things as your computer. Who would have ever thought! So now that all these great technologies are available to everyone for little or no cost – how do you apply them to your business?

Using new technology as marketing tools

Whether you’re a farm, a retail outfit, or a large corporation with a website, the fundamentals for using web-based technologies (such as newsletter programs) and social platforms (such as Facebook and Twitter) are the same. But as for all elements of business, it is important to make sure you are using an integrated approach and that you have someone who is maintaining and managing them as well.

Web-based technologies are great to use when you want to send mass email newsletters and manage the content on your website.

Email newsletter software: Some easy-to-use inexpensive solutions are Mail Chimp, Constant Contact and Infusion Soft. These allow you to use templates to create emails and help to manage large email lists.

Content management systems (CMS): CMSs are basically systems that allow for dynamic websites that can be maintained from any computer with minimal skills. One of the most valued open source CMSs is Wordpress because of its ease of use and compatibility with most plugins.

Social platforms: The introduction of social media has really put a tailspin on how people engage and interact with each other, enabling a type of narrow-casing that allows businesses to communicate directly to their audience of “friends” or “followers.” However if you don’t have someone managing this medium, it could work against you.

There are two major social platforms that are most used today – Facebook and LinkedIn. For example if you sell produce, Facebook could be a tool that you use to let your clients know what's ready at the farm each week. Now, if you sell cold storage to businesses you might use a business-to-businesses application, such as LinkedIn, so you could reach businesses faster. LinkedIn is the largest social networking site for business professionals looking to do more business. With LinkedIn you can see what others in your area are doing, dialogue with like-minded professionals worldwide, recruit professionals, and more.

And above all, these platforms are free!

Now that you know a bit more about the evolution of marketing remember one last thing... Don't just follow the crowd, figure out what tools work best for your business and then stick to it! 🌿

Sharmila Singh is a branding & marketing expert who brings 10 years of agriculture, food & beverage and high tech industry experience.

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Bolivia's Law of Mother Earth

Bolivia has enstated laws that recognize the rights of all species and ecologies as equal to humans. The Law of Mother Earth establishes 11 rights of nature. They include:

- the right to life and to exist
- the right to continue vital cycles and processes free from human alteration
- the right to maintain the integrity of life and natural processes
- the right to pure water
- the right to clean air
- the right to balance
- the right to be free of toxic and radioactive pollution
- the right to not have cellular structure modified or genetically altered.
- the right to not be affected by mega-infrastructure and development projects that affect the balance of ecosystems and the local inhabitant communities

Enacted by Bolivia's first Indigenous prime minister, Evo Morales, the law is inspired by Indigenous Andean values that recognize the earth deity *Pachamama* as the centre of all life. It represents a cultural revitalization that could inspire peoples across the world to stand up for Mother Earth.

Adapted by moss dance from John Vidal, guardian.co.uk, Sunday 10 April 2011 (<http://www.guardian.co.uk/environment/2011/apr/10/bolivia-enshrines-natural-worlds-rights>)



May pole parade. Credit: Michael Marrapese

Fraser Common Farm Cooperative & Glorious Organics Cooperative

By Heather Pritchard

The mid-seventies were an exciting and innovative time in the Vancouver area. Vancouver’s hosting of the United Nations Habitat Conference on Human Settlements in 1976 catalyzed new thinking about housing, energy, and community.

That year, a small group of engaged citizens formed “Community Alternatives,” a non-profit society dedicated to putting some of these new ideas into practical form.

Soon after, the group took its first real risk, buying a 10-acre plot of land near Aldergrove, about one hour east of Vancouver. They formed Fraser Common Farm Cooperative (FCFC) and sold shares to purchase the land for food production.

Decision-making about the daily operations on this community farm is the responsibility of a member-based committee called Farmkeepers. Farmkeepers are mostly farm residents with some interested non-residents. They provide leadership on policy, conflict resolution and farm use, as well as managing finances, housing, and licenses. They act on behalf of the shareholders in



Part 3 of a 4 part series on Community Farms

negotiating a license with Glorious Organics Cooperative (GLO) to farm the land.

Land licenses, housing charges, and member contributions are the main sources of FCFC revenue. This revenue is used to meet ongoing costs of insurance, utilities, maintenance and the mortgage.

Glorious Organic Cooperative: the Farming Cooperative

In 1986, two FCFC members, Heather Pritchard and Herb Barbolet – secured a contract to provide salad for the Northwest Territory pavilion at Expo '86 and incorporated a farming business: Glorious Garnish and Seasonal Salad Company. Shortly after, two other members, Susan Davidson and then Dave McCandless, joined “The Salad Company,” the business’s new nickname.

When Herb left in 1995 – to start FarmFolkCityFolk – the remaining members, all of which were rapidly approaching the average age for BC farmers, asked the question: “How can we attract the next generation of farmers?”

Hiring a facilitator (paid mostly in produce) they conducted a series of consultations with their custom-

ers/chefs, coop members and other organic growers. They determined that to attract young farmers to join them, they would need to be willing to change and open their business to new ideas. Young people may come to learn to how to farm but unless they became owners, they would most likely to move on to actualize their own dreams.

Glorious Garnish and Seasonal Salad Co. decided to sell the company. The three owners invited Donna and David, the young farming couple who were working on the farm to form a cooperative with them – Glorious Organic Cooperative. The new co-op negotiated the purchase of original company’s assets. A cooperative was clearly more congruent with their values and made ownership an easier transition for new farmers to buy into the business.

Glorious Organics continues to sell to restaurants but has added Farmer’s Markets and a 50-person Community Shared Agriculture (CSA) program to their marketing plan.

The Whole Farm Plan

Like other community farms, FCFC, is multi-functional and complex. When FarmFolkCityFolk received funding to adapt their Whole Farm Plan Guide

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to a cooperative farm, FCFC agreed to be the test farm.

Susan Davidson, who coordinated the process, reports: “Over the years, our farm has done a lot of visioning, goal-setting, conflict resolution, budgeting, and planning. Because the Whole Farm Plan is holistic, it has brought all of these into one place, along with a detailed inventory of all of our resources, policies, and agreements (land, buildings, leases). This improves accessibility and fairness for everyone.”

Community Engagement

For decades, FCFC members have been a major force in the movement for sustainable agriculture. They have helped develop, lead, and sustain numerous organizations working for healthy food and land in BC: FarmFolkCityFolk, the BC Association for Regenerative Agriculture (BCARA), Glen Valley Organic Farm Cooperative, Vancouver Farmers Market, and Langley Farmers Market.



Fraser Common Farm Cooperative Profile

- Owns two adjacent 10-acre farm properties in Langley Township close to Aldergrove
- Licenses 5-6 acres to Glorious Organics Cooperative for farming
- Certified organic by BCARA
- Home to 13 people aged 5-76, in three households
- Includes two shops for woodworking and blacksmithing
- Open to new members

Above: Donna harvesting rhubarb. Credit: Michael Marrapese



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For a community farm to succeed, two groups of people need to work closely together – one group that supports local food production by securing land to grow food and the other group that grows the food. In the case Fraser Common Farm and Glorious Organics both these groups are registered co-operatives. 🌱

Heather Pritchard is the Farm Program Manager of FarmFolkCityFolk Society, a member of Fraser Common Farm Cooperative, a founder of Glorious Organics Cooperative and sits on the Metro Vancouver Agricultural Advisory Committee.

For more information

Fraser Common Farm Cooperative and Glorious Organic Cooperative:
www.gloriousorganics.com

FarmFolkCityFolk:
www.farmfolkcityfolk.ca

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Putting the Spotlight on Spent Mushroom Substrate



By Marjorie Harris

Only a small percentage of the Spent Mushroom Substrate (SMS) produced is certified organic in BC; overwhelmingly, the SMS is from conventional sources. SMS is a varied and complex mixture of agricultural materials with organic compliance, health and safety risks attached to its use.

Recently, Deb Kellogg, administrator for the Shuswap Thompson Organic Producers Association (STOPA) certifying body asked for an evaluation of conventionally sourced SMS for compliance within the Canadian and BC Organic Regimes.

Well, no sooner said than done; it was like SMS wanted its story told and told right now. The day after STOPA asked for the review of SMS, CBC radio news was full of news coverage about the five BC mushroom workers who

had been overcome by toxic fumes released in a pump house on Sept. 5, 2008. Three of the workers died and two others suffered severe brain injuries. One worker still remains in hospital no longer able to recognize his wife and daughters.

Work Safe BC finally finished its investigation into this tragedy on May 18, 2010. Then on Aug. 30, 2010 the Crown laid 29 charges under the Workers' Compensation Act and safety related regulations on the owners and senior management of A-1 Mushroom Substratum Ltd.¹

What went wrong, and what was the toxic gas emission?

The SMS story continued to unfold that very evening at the BC Institute of Agrology AGM banquet. The colleague seating next to me was Dr. Jasbir Mann PhD, P.Ag., Regional Safety

Consultant with FARSHA (Farm and Ranch Safety and Health Association). Dr. Mann knew the answer – it was a release of hydrogen sulphide, (rotten egg) gas in an unventilated building that had caused harm and death to the workers.

The story was further revealed by Dr. Mann's co-worker David Nguyen, Fraser Valley Agricultural Health and Safety Specialist, his best understanding was that the ingredients of the Phase 1 mushroom substrate (of 3 production phases) of the production process had become anaerobic, and through a chain of events eventually exposed the workers to lethal hydrogen sulphide gas.

As my investigation into SMS continued in-earnest, I had a lot of questions. Was it in compliance with the organic regime and what are the potential risks to the farmer when handling it?



Footnotes from the Field

SMS must be handled by properly trained and skilled workers, who have on-site access to gas monitors, safety equipment and air respirators and follow Work Safe BC regulations. It is recommended to work with SMS in a well ventilated area or outside on a windy day with the tractor doors well sealed shut.

The Irish Teagasc Mushroom Group made a presentation specifically on monitoring hydrogen sulphide gas emissions from SMS, farm worker safety when handling it, and documented the death of a young Lithuanian worker.

In the Teagasc guideline 9.4 the conclusions clearly state that when SMS is taken out of mushroom production and allowed to stagnate in static piles or windrows, large or small, indoors or outdoors, for 20 weeks or more while turning into composted SMS, anaerobic digestion takes over and consistently produces hydrogen sulphide gas (H₂S) in concentrations between 20-80 ppm for indoor piles and a 3 fold greater H₂S production in outdoor piles with 50-250 ppm! Measurements are also given for inside the tractor cab that reach up to 28 ppm!²

Dr. John Paul, Ph.D, P.Ag., owner of Transform Compost Products in Abbotsford BC, concurred with the findings by the Irish Teagasc Mushroom Group's studies. Transform Compost

Products composts a fair amount of organic SMS into soil conditioners and top dressing. Dr. Paul confirmed that the only way to prevent H₂S gas generation and emissions from occurring was to keep the SMS in constant aerobic (oxygenated) digestion, turning frequently for complete composting until the pile is cured.

SMS must be handled by properly trained and skilled workers, who have on-site access to gas monitors, safety equipment and air respirators and follow Work Safe BC regulations. It is recommended to work with SMS in a well ventilated area or outside on a windy day with the tractor doors well sealed shut.

What kind of mushrooms are grown on SMS, and what is SMS composed of?

According to the Mushrooms Canada Association, Canada supports over 100 mushroom farms with 50% of the production in Ontario and 35% in British Columbia. Canada produces over 200 million pounds (91,000 tonnes) of mushrooms annually. Exports to the USA account for 80 million lb. (36,300 tonnes) and imports from China as canned or processed mushroom are 45 million lb. (20,600 tonnes).

The mushroom species, *Agaricus bisporus* produces the popular White Button, Brown Crimini and Portobello mushrooms. *Agaricus* mushrooms that are secondary saprophytes (decomposers) require a specialized growing media of which SMS is the end waste by-product. Until recently SMS was considered an industrial waste and the corporate mushroom industry has funded university and industry research demonstrating that

SMS can be used safely and be considered a valuable agricultural input.

All *Agaricus* mushroom substrate formulas are based on the primary ingredients of either straw-bedded horse or poultry manure and require the addition of nitrogen and gypsum supplements. Poultry manure has high levels of arsenic in it from dewormer compounds given to the chickens. High carbohydrate items such as corn cobs, cottonseed hulls, or cocoa bean hulls are mixed together with gypsum (calcium sulphate).

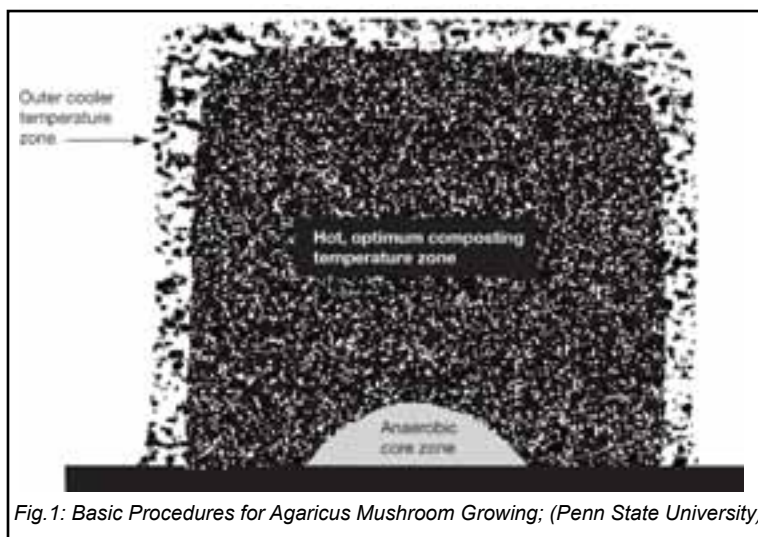
Mushroom growing basics

In Phase 1, hay bales are soaked in 'goody water' and mixed with the manure/gypsum material and composted on concrete aerated pads or placed in 'rics.' Phase 1 is a control-point for hydrogen sulphide gas production. (In the case mentioned above, Work Safe BC found hydrogen sulphide in improperly managed goody water.)

The process must remain hot, wet and aerobic to prevent "odours" from developing. The odorous emissions are a complex cocktail of chemical species and may contain ammonia, amines, mercaptans, hydrogen sulphide, volatile organic compounds, bioaerosols and airborne biological agents.³ At the end of Phase 1 the mushroom substrate should ideally be dark brown, pliable, water holding and have a sharp ammonia odour.

In Phase 2, the mushroom substrate achieves natural pasteurization and conditioning by the activity of the microbes in a hot, moist and aerobic environment.

Now, in Phase 3 the spawn is added along with additional feed materials



such as soybean meal or seed meal, then a ‘casing’ layer of sphagnum peat moss and ground limestone are applied over the top. During the crop cycle Organochloride pesticides are often used to control the Fungus Gnat, these pesticides persist in the compost.^{4,5}

When the mushroom substrate has finally become “spent,” evidenced by diminished mushroom harvest it is then removed from the mushroom house and considered to be the by-product. Fresh SMS is a control-point for hydrogen sulphide gas production, when the SMS is fumigated by chemicals or sterilized by steam it becomes vulnerable to anaerobic digestion and hydrogen sulphide gas production while stored in static piles of any size.

Characteristics of spent mushroom substrate

The typical composition of fresh SMS will vary slightly from source to source, since raw materials and other cultivation practices differ. Each load of fresh SMS has a slightly different content and mineral analysis.

The fresh substrate is high enough in dissolved salts to hinder plant growth, however, these salts decline during the final composting or “weathering” for 6 months over winter. Microbial activity changes the characteristics of the aged material. SMS can be sold “fresh” – with a higher hydrogen sulphide emission risk – or “weathered more than 6 months.”

All SMS should arrive at the farm with a “Compost Analysis Test,” lab report (make sure it’s not a Manure Test). The analysis provides macro-nutrient content, carbon to nitrogen ratios, dry matter, pH and total salts. An additional test for nitrates and heavy metals maybe required. SMS tends to contain appreciable amounts of iron, manganese, zinc and boron. Both types of fresh SMS or aged SMS should smell earthy and not odorous and resemble soil in texture.

In summary, potential non-compliance points and safety concerns

- PSL: Requires documented soil test for boron levels. High boron levels can hinder plant growth in some soil conditions.
- PSL: Requires documented soil test for copper levels.
- PSL: Limestone must be from a natural source.
- PSL: Sphagnum moss shall not have wetting agents.
- PSL: Use oilseed meals from organic sources, cannot be GMO.
- Prohibited 1.4.1 (b) Organochlorides-type pesticides to control the Fungus Gnat.
- Prohibited 1.4.1 (b) Fumigant to sterilize the fresh SMS
- Prohibited 1.4.1 (b) Straw bales and animal bedding must not come from sources treated with persistent herbicides.
- Compost obtained from off-farm source: “Compost obtained from off-farm sources shall meet the criteria

for composting feedstocks (i) and (ii) shall not cause a build-up of heavy metals in soil over repeated applications. Poultry manure has high levels of arsenic from chicken dewormers.

- Keep SMS on a concrete pad to prevent ‘goody water’ and leachate from contaminating soils.
- When placed in static piles or windrows, large or small, indoors or outdoors, for 20 weeks or more, anaerobic digestion consistently produces hydrogen sulphide gas (H₂S). There is a 3-fold greater concentration in outdoor vs. indoor H₂S emission generations.
- The only way to prevent H₂S production is to keep the SMS in constant aerobic (oxygenated) digestion, turning frequently for complete composting until the pile is cured. SMS must be handled by properly trained and skilled workers, who have on-site access to gas monitors, safety equipment and air respirators and follow Work Safe BC regulations. It is recommended to work with SMS in a well-ventilated area or outside on a windy day with the tractor doors well sealed shut.
- Excess salt in fresh SMS may harm plants.

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

References

- ¹ Canadian Employment Law Today; Published by Canadian HR Reporter, a Thomson Reuters business www.employmentlawtoday.com/ArticleView.aspx?l=1&articleid=2478
- ² Teagasc Mushroom Group, Ireland. www.hsa.ie/eng/Your_Industry/Agriculture/.../Hydrogen_Sulphide_gas.pdf
- ³ “Mushroom substrate manufacturing processes,” Department of the Environment; Process Guidance Note NIPG 6/30 (Version 2). www.doeni.gov.uk
- ⁴ Stamets, Paul. (2005) *Mycelium Running: How Mushrooms Can Help Save the World*, 10 Speed Press, p 166
- ⁵ Beyer, David M. “Spent Mushroom Substrate Fact Sheet,” <http://mushroomspawn.cas.psu.edu/spent.htm>
- ⁶ Car, Jim & Munn, David A. “Agricultural Disposal method of Construction Site Gypsum Wallboard Waste.” *Journal of Construction Education*, Spring 2001, Vol. 6, no1, pp 28-33

Cawston Cold Storage COMMERCIAL CIDER PROJECT & WORKSHOP

By *Brian Mennell*

Cawston Cold Storage stores, packs and sells a full range of organic tree fruits produced by its shareholders as well as 24 other organic growers located in the Similkameen and Okanagan Valleys. The company handles and sells about 80% of all the organic tree fruits produced in British Columbia with annual sales of about \$10 million.

Although there is a good market for organic cull apples, on bad hail years there can be excess supply. This study (partially funded by the Organic Sector Development Fund) examined the potential for taking the culls and hail damaged apples of the varieties handled by the CCS and creating an organic cider business.

If an organic cider market were to be developed to process this oversupply of apples and hopefully create a demand for more, all commercial organic tree fruit producers in the Okanagan and Similkameen Valleys (est. 60 enterprises) would benefit as it would firm up the price for all the apples culls that are sold.

If this comes to fruition and is located in the Similkameen Valley it will further enhance the "Organic Capital of Canada" prestige, as well as complimenting the two organic fruit wineries and the other conventional wineries in the valley. If the potential returns are anywhere near what people close to this area of business speculate, then those growers directly supplying the cull product will double or triple their current returns for their culls.

Two blends of varying degrees of dryness have been made from the 2010 crop. The first used 1/3 Mac, 1/3 Braeburn and 1/3 Pink Lady; the second used 50% Fuji and 50% equal share of Mac, Braeburn and Pink Lady. As well as creating a "garage test product," other evaluation reports on conventional apple ciders produced 7 years ago by the Okanagan Similkameen Co-op in cooperation with wine evaluators at the Ag Canada Research Station in Summerland have also been acquired to help with the study.

CCS has involved Dwight Brown and Rhys Pender in the project, both of who bring a variety of cider-mak-

ing experience to the project, along with Rob Horrick who, along with his experience in organic fruit growing, recently attended a workshop held by the North West Cider Society in Mount Vernon Washington.

If you are interested in learning more, please join us in July for our Organic Cider Workshop. 🍏



Organic Cider Workshop

Cawston Hall, Main Street, Cawston
1-4 PM, Sunday, July 24, 2011
FREE

Agenda

- Rob Horrick – Report on the North West Cider Society workshop held last Oct. in Mount Vernon Washington.
- Dwight Brown – Report on the design, source and cost of a plant equipment needed to produce cider from 80 to 100 tons of apples.
- Rhys Pender – Report on the market potential for an organic cider in BC and Alberta, the legal and government requirements to establish a Cidery and the potential distribution channels available to market and distribute product in BC and Alberta.
- We will end the afternoon with some taste testing of product.

For more information contact Brian or Linda at 250-499-5303 or email bmennell@nethop.net.

Photo credit: dean diamond

Formosa Nursery



Photos by Spring Gillard



Formosa Nursery's Hope Campaign attempted to stop Translink's plan to put a highway through their farm.

“In the morning when they want to go to the farm, they have to get in their vehicle and drive across the highway to get there.”

By Spring Gillard

In November 2006, I got involved in the fight to save Formosa Nursery, a forty-six acre organic blueberry farm in Maple Ridge. Translink, BC's transit authority, had decided to put a highway right through the farm, even though there was already a planned and gazetted road nearby, meaning it was legal and government sanctioned.

After a valiant struggle by the family, their friends, politicians and activists, our campaign called Hope lost the fight and the bulldozers moved in. It was heartbreaking for all of us. Golden Ears Way (originally called the Abernethy Connector) opened in June 2009.

I decided to pay owners Ting Wu and Risa Lin a visit, to hear how they were doing and how the highway had affected their farm. I had tried to get out to their farm by transit during the farm fight and when I did a trip plan on Translink's website, ironically it came up as “No use.” That means you need at least three transfers and would have to walk more than half a kilometre from the last bus stop. That is still true despite the new highway.

Fortunately for this trip, I had a friend drive me. As we drove up to the farm, I noticed how different it felt. The area used to feel very rural, like farm country. Now there is a major intersection on their doorstep.

As we sat in their kitchen chatting, we could hear the traffic roaring by. Ting and Risa told me the big trucks and the motorbikes are the worst. But the highway has brought a criminal element to their farm too. "They steal radiators, batteries, electrical wiring, aluminum fittings and they've even broken into the freezer," says Ting.

The break-ins never used to happen when the farm was in one piece and the family was on-site throughout the night. Now their house, which sits on a five-acre section, is split off from the rest of the thirty-five or so acres. In the morning when they want to go to the farm, they have to get in their vehicle and drive across the highway to get there. Sometimes Risa takes the golf cart, which is illegal to drive on the road, but if she has a load of materials, it can't be helped.

The highway took out the greenhouse, propagation buildings and their nursery area, where Risa used to grow and sell annuals – about five acres went to pavement. Ting had to reconfigure the farm, moving thousands of mature blueberry plants out of harm's way. Translink



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wanted to destroy them: in their opinion the plants wouldn't survive transplanting.

We drove over in the golf cart to take a look. It looked to me like the farm was imprisoned by the chain link fence that now surrounds it. Too bad they couldn't have dug them a tunnel at the same time, so that the farmers could have accessed their farm more easily.

A large new warehouse sits inside the locked gates; it will become the processing area. Armed guards would not look out of place there, perhaps the only way to keep vandals out now. Their new guard dog can guard the house, but not the farm. Remnants of the Hope campaign are tucked in a corner.

Despite the challenges, the farmers have persevered. They are looking at ways to diversify and make their operation more sustainable. They have added raspberries and strawberries to their repertoire. Risa would like to build waist high raised strawberry beds, to make it easier for seniors to pick the berries. Ting worries about the cost. They are both interested in the agritourism potential. Risa has visions of a healing garden, a destination place for the city-weary to come and revive.

"I just want to make people happy. To come, relax, let nature heal," she says. Both of them could use some of nature's healing themselves. All the hard work and stress of trying to save their farm took its toll. Ting still battles with the gout that began at that time. Risa has arthritis. They could use some extra helping hands; volunteers are welcome.

As we drive around the farm, it's obvious much Ting and Risa love their land. And how committed they are to farming organically. They have retained their organic status and are certified with Fraser Valley Organic Producers.

The biodiversity is rich and evident. They have a resident hawk, eagles fly over regularly, and coyotes roam. When I ask if there are any pest problems, Ting tells me the beaver that lives in the slough sometimes eats the trees, but that's about it.



Above: The new major intersection at Ting Wu and Risa Lin's doorstep. Below: The blueberries are still thriving at Formosa Nursery.

For more information, visit Formosa Nursery online:

www.formosanursery.com

Back in the bustling kitchen, Ting and Risa's kids Jessica, 18 and Jonathan, 13 wander in and out while we're having a delicious farm fresh lunch of freshly picked greens and mushroom stuffed focaccia bread. The kids are doing very well in school.

And the transplanted blueberries – they're thriving too. 🍓

Spring Gillard is a communications consultant, SFU sustainability instructor and author of *Diary of a Compost Hotline Operator*. She blogs at www.compostdiaries.com.

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Stopping the Bug Brigade:

Aphid control in organic pea and cole crop production

By Marjolaine Dessureault and Renee Prasad

Aphid control is one of the main challenges in organic production. Heavy aphid infestations cause severe economic losses for two main reasons: reduced crop yield and crop contamination for processing or fresh market.

Cabbage aphids (*Brevicoryne brassicae*) form large colonies, which often leads to weekly sprays of soap in organic cole crops. However, soap provides inconsistent control due to poor product coverage on plants. Peas, another important crop for organic vegetable growers, are attacked by pea aphids (*Acyrtosiphon pisum*). Although both types of aphids are attacked by many natural enemies, often these predators and parasitoids don't attack early enough prevent production losses.

It's clear that organic vegetable growers would benefit from more tools that could be used to control aphids, which is what led us to do this study. Funded jointly by the Organic Sector Development Program, the Certified Organic Association of BC, Fraserland Organics,

and the Processing Vegetable Trust Fund, this study explored three different methods of aphid control – biological, physical and chemical control – in a series of field experiments conducted in Delta, during the 2010 field season.

Biological control of pea aphids

For pea aphid control, we wanted to test the effectiveness of combining weekly introductions of the predatory midge *Aphidoletes aphidimyza* (Aphidoletes) with insectary plants that could provide the Aphidoletes with food (nectar) and help with establishment in the field.

Aphidoletes are very effective in greenhouses for aphid control. They were released weekly for three weeks once we started to see aphids on the peas, and the release rate was 3000 adult Aphidoletes/acre/week.

The insectary plants we used included alyssum, carrot, Phacelia, yarrow and dill; plants known to attract beneficial insects and provide additional food sources such as pollen and nectar (Fig. 1). In

our trial the plants were planted into 5 gallon pots, and grown in the greenhouse for several weeks prior to setting out in the field. This ensured that plants were flowering when Aphidoletes were released.

In our trial we did not observe any impact of Aphidoletes releases on pea aphids nor did we find any Aphidoletes larvae (released or native) on peas in the weeks following release. Further, the insectary plants that were introduced in fields did not support increased activity of the released Aphidoletes or other naturally occurring enemies (e.g. ladybugs, syrphids, parasitoid wasps).

Demonstrating effectiveness of biological control in the field is always challenging. Given the size of our plots (1/4 to 1 acres) we may have seen better results with higher Aphidoletes release rates and higher densities of insectary plants. For smaller plantings of peas, on mixed vegetable farms, planting insectary plants at the ends of beds could provide sufficient resources to encourage native Aphidoletes.

However, if native populations of predators are not acting quickly



Figure 1. Flowering insectary plants were placed in fields at a density of 6/acre. Credit: M. Dessureault

Interested in experimenting on your own farm?

Growers interested in experimenting with aphid control this season are encouraged to set up small trial areas so that they can evaluate a new control method against what they are currently using. Ideally, a Control treatment of not doing anything at all or spraying water should also be included. These trial areas should be checked frequently (at least once a week, but preferably more) to count the aphid and natural enemy activity.

Run the trial for multiple weeks, at least a month, and remember to take good notes on what the starting aphid population was in each plot before you made your treatments.

Although this type of on-farm evaluation is ideal, not all growers have the time to do this. But growers can still gain valuable information from a large scale approach - e.g. planting insectary plants on the whole farm or covering all of the cabbage transplants with row cover, by taking careful notes on aphid populations, natural enemy activity and comparing these notes to previous years.

One step that can make taking regular observations easier is to flag certain plants and to observe these plants regularly. Effective pest control is part art and part science and growers have to factor in their own tolerance for pest damage/activity versus costs (including labour) of a control technique.

enough to control aphids, growers may want to consider releases of Aphidoletes or other enemies. We encourage growers to experiment on their own in using insectary plants to support natural enemies, both naturally occurring and those that are released.

Physical control for cabbage aphids

For cabbage aphids we evaluated the potential of two types of row covers: Agryl P17 (lightweight polypropylene fabric) and Protecknet (high density polyethylene mesh, donated by Dubois Agrinovation, www.duboisag.com). The idea was to protect cabbage and broccoli from cabbage aphids by preventing aphids from contacting the plants (Fig. 2).

We compared the row covers with the industry standard of using soap sprays and an untreated Control plot. This trial was repeated in the three different fields.

We found that both types of row covers were equally effective at keeping aphids off of the crop. Overall, both row covers provided more consistent and longer duration of aphid control than soap, which provided inconsistent con-

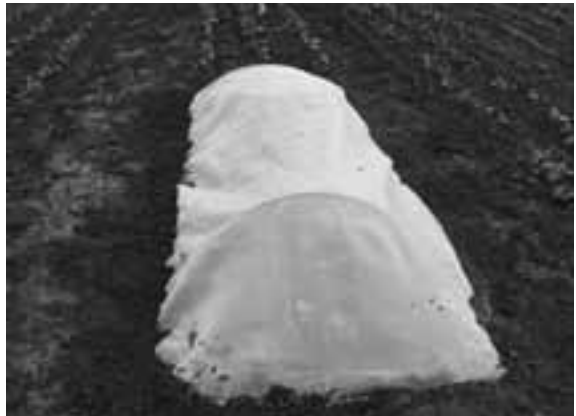


Figure 2. Agryl P17 (left) and Protecknet (right) were tested for cabbage aphid control. Credit: M. Dessureault

trol. We also saw that the row covers could be effective at excluding caterpillars from the crop as well. Finally, yield was significantly higher in Agryl P17 plots than the Control or soap plots in one of our three fields – i.e. the field with the earliest planting date.

To be used effectively, both types of row cover must be placed on to plants very early on, at transplant or seeding, before pests begin feeding. Covers must be securely buried and without holes because some pests can gain access to the crop via gaps.

In general the mesh-type row covers are more durable and long lasting than the fabric covers and these mesh-type covers are very difficult to tear or make holes in. Some growers are able to re-use their mesh-type row covers for 10 or more years. This is an important consideration as row covers are much more expensive than the standard of insecticidal soap, and there is the added labour cost of installing and removing the covers.

Chemical control in both pea and cole crops

Finally, we also evaluated the efficacy of three organic insecticides for aphid control in peas and cole crops. We tested three very different products: the first product was made from the fungus *Beauveria bassiana* a naturally-occurring pathogen of many insects including aphids; the second product was a paraffinic mineral oil; and the third product was a garlic extract.

Although none of these products are currently registered for use on field peas or cole crops, our goal was to determine which product(s) were effective and to have our data support the expansion of these products to field vegetables. These products were tested along with a water Control and the industry standard of insecticidal soap. In these trials plots were sprayed weekly for five weeks and aphids were counted weekly. In both pea and cole crops we observed good aphid control by the

mineral oil and the garlic extract when aphid populations were low at the first spray (i.e. < 30 aphids/plot in peas and < 10 aphids/plot in cole crops). Neither product was effective if starting aphid populations were high.

It is important to note that performance of both the mineral oil and garlic extract was similar to insecticidal soap. Additionally, we also saw some effects of both the garlic extract and mineral oil on caterpillars and this will be examined further in 2011 with a follow-up study. 🌱

Marjolaine Dessureault has a B.Sc. in Agronomy. She is passionate about all aspects of agriculture and specializes in Integrated Pest Management and coordinates organic vegetable monitoring services at E.S. Cropconsult Ltd. Renee Prasad is the research coordinator with E.S. Cropconsult Ltd. Renee also teaches IPM classes at the Unthe University of the Fraser Valley (Chilliwack).

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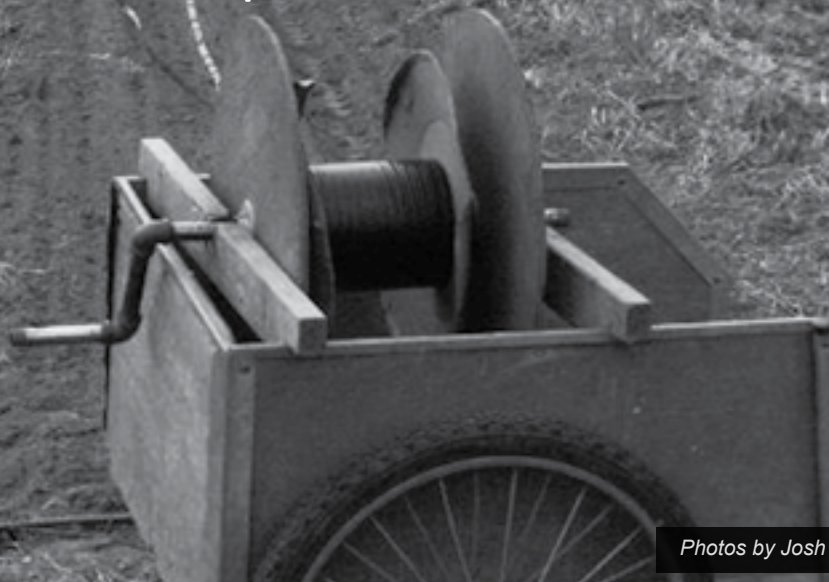
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Relax & Unwind

Build Your Own Drip Winder



Photos by Josh Volk

By Josh Volk

Spooling out new drip tape isn't too bad with just a stick and something to hold it up, but rolling it back up for storage is much easier with a winder. For larger farms there are PTO driven winders that take special plastic spools and will retrieve tape quickly, but these are expensive and require a tractor to power them.

A winder will spool out new or used drip tape, and it will roll it back up into compact, manageable bales for storage and reuse. I got this design from Mike Raymond when he was the manager of Holcomb Farm CSA in Connecticut. I've built a few different versions for different farms and I'll describe my most recent design here.

The winder is made from standard iron plumbing parts found at a good hardware store and two plywood rounds. It uses short pieces of PVC or ABS water pipe for spools. The winder can either sit on a simple stand made from scrap lumber, or

better, it can be mounted on a garden cart so that it can be easily wheeled around the farm and from bed to bed.

Building the winder

To build the roller itself you'll need two 24" rounds of plywood – 1/2" is probably best but anything that's not flimsy will work. Buy 1/2" black pipe nipples in the following lengths (galvanized will also work, but is unnecessary): one 24" and two 6". You will also need two 1/2" elbows, a 1" x 12" nipple, two 1" flanges, eight pan head machine screws to fit through the flanges and the depth of your plywood thickness, and eight T nuts and star washers to match the screws. You'll need a 1 1/2" long 1/4" bolt with a nut and split washer or a roll pin as well.

To assemble the winder slide the 1" nipple over the 12" long 1/2" nipple, center it and then drill through the center to tie them together either with the 1/4" bolt, or a roll pin. Next, take the plywood rounds

and drill a hole in the center large enough for the center of the flange to stick through. Drill four holes for the mounting screws and T nuts and mount the flanges so that the threads of the flange are extending into the center hole of the plywood. Screw the rounds to the 1" nipple and then an elbow to one end of the 24" nipple. Add a 6" nipple to the elbow, then the second elbow, and finally the last 6" nipple making a simple crank.

To make the winder work you'll need a center for your spool and a stand to hold it up while you crank. I make the spools out of scraps of 2" or 3" PVC, whatever will slide over the center of the winder. Any stiff plastic pipe will work but don't use cardboard. I made that mistake my first year and the next spring when I went to recover the spools the centers had dissolved from moisture left in the tape.

The spools need to be cut very square and to the exact length that will be captured firmly in the center of the roller. To determine this

measurement tighten the rounds onto the 12" nipple and measure the distance between the rounds close to the flanges. Then loosen the rounds until there's only about two or three threads holding them onto the nipple and measure again. You want a length between these numbers.

For a simple stand that works with a garden cart take two 2x4s that are 7" longer than the width of your garden cart and drill a 1" hole 3/4 of an inch from the edge at the center of the 2x4. Notch this out so that the winder axles can sit down in the notches. Cut two 17" lengths of 2x4. These are screwed to the opposite side from the notches in the long 2x4s to make a rectangle. This frame sits on top of the garden cart and the roller sits on top of the frame in the notches.

Using the winder

Drip tape comes in very compact rolls and it's impossible to get it that compact when you wind it back up but for the sake of saving space, it's important to wind the tape as tight and flat as possible.

To start, insert a new PVC spool in the center of the winder. Make sure that the tape in the bed is open at both ends to let water and air out and that it's lifted and not held down by weeds. Make a full wrap around the spool and start winding with the crank while holding a little tension on the tape and pinching it flat to exclude as much air and water as possible. Work the tape back and forth as you wind so that it fills the spool evenly – this is important! If you come to couplers remove them.

When you come to the end, start a new piece of tape by leaving about 12" of the old tape pulled tight and capture the new tape under it. As you start winding slowly, the old tape will capture the new, and as the old tape end is about to come

out of your hand, move it under the old tape to keep it from coming loose (this is a fancy way of doing this that makes unrolling easier).

The spool is full when you get to within an inch of the edge of the plywood round. At this point you need to tie up the spool and start a new one. Be very careful with this next part if you want to be able to reuse the tape without hours of tangled tape frustration.

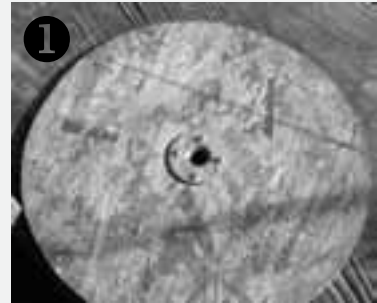
Lift the winder out of the notches and place the winder crank-side down on the handle of the garden cart. Carefully unscrew the plywood round from the winder, exposing the roll of tape. Using poly twine (not natural twine which will rot), carefully drop the twine end down the inside of the spool and lift the bottom edge of the roll enough to pull the twine around and tie it tightly. Do this in three or spots around the spooled tape to make a tight bale. Handle these bales carefully and store them on their sides so that they do not come apart at the edges (which would signify disaster).

In the spring, you can just remount the bales on the winder, cut or untie the twine, and then roll the tape back out. For easiest use, if you have different lengths or types of tape, wind them on separate spools and label the spools clearly with something that won't rot or fade.

I have used this system on miles of drip for more than 12 years now and it works really well, but it is not at all idiot proof so pay attention to what you're doing. The neater you are with the process the better it works. 🌱

Josh Volk grows vegetables at Slow Hand Farm just outside of Portland, Oregon and helps other farms improve their production in the US and Canada.

Step-by-Step



Adding Value



to your Farm Business

By Dana Zaruba

We are currently in the midst of a renaissance of artisanal food production and it can only mean good things for organic farmers seeking to create a diversified income stream. You are at a perfect time to provide customers with high quality, organic, locally grown and processed value-added food products.

One of the benefits of adding a line of specialty food products is that many can be made in the off-season, especially if you blanch, freeze or dehydrate ingredients until you have the time to process. Depending on the size of your operation, selling value-added foods can generate significant income throughout the market season and into the lucrative Holiday fair season of November and early December.

While some farm operations delve further into wholesaling to local

stores, there are many issues to consider, including careful cost analysis, cash flow and labeling requirements, and large batch production issues. It's a lot easier just to make and sell the products yourself on a smaller scale.

For many people, though, creating additional product lines is not just about the extra money. It's about expressing one's passions through sharing wonderful foods and recipes. For Deborah and Russ Fahlman of Kilrenny farm in Cobble Hill, BC, adding preserves to their market stall initially came due to a change in market policy. Many markets now insist that vendors remain at the market until the end of the day, even if they've completely sold out. The Fahlman's needed something else to sell for the rest of the day, so they translated Deborah's passion for cooking into selling jams and pickles.

According to Deborah, "What has

happened as a result is that now our regular produce customers have started coming back for the jams and preserves and our zucchini relish has since become our most popular item."

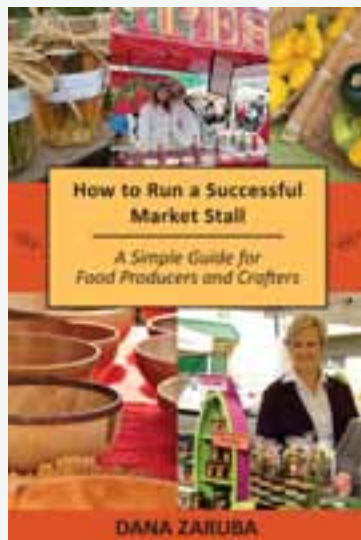
Be sure to check the guidelines and consult with your local health inspector before you make any investment in equipment or product development.

Deborah and Russ have been running their nine acre farm for the past 23 years and supplemented their fresh food and frozen chicken sales by making pickles and jams in their home kitchen. They use their own produce for the pickles and purchase local berries from nearby farms for their jams. Still, the ex-

hausting years of market life has led to a new venture meant to embrace more of Deborah's passion for cooking.

Their recently completed commercial kitchen and farm store will be used to manufacture their new line of pasta and sauces as well as for holding cooking classes. While building a commercial kitchen is, for many, a dream scenario, the good news is that most of us are allowed to produce low risk foods in a home kitchen as long as you don't plan on wholesaling your products through stores.

If you live in British Columbia visit your health authority's website (on Vancouver Island it is www.viha.ca/mho/food) and search for the Guidelines for Temporary Food Markets. Recent changes to the guidelines mean that you may no longer have to have health authority approval to sell your products through local farmers' markets. It is still important, though, to have certain products tested in a lab to be sure their pH and Aw (water activ-



Clockwise from top left: Kilrenny Farm's pasta sauce and chicken, Dana Zaruba's book includes more tips about how to succeed at local markets, Deborah Falham in her commercial kitchen in Cowichan Bay, BC. Credit: Dana Zaruba

ity) are within acceptable levels. Anything considered higher risk has the potential to develop deadly pathogens if they are not processed or stored correctly and will usually need health authority approval prior to sale. Be sure to check the guidelines and consult with your local health inspector before you





make any investment in equipment or product development. Once you have an idea of any relevant food safety issues, product development is next.

The key to creating a financially viable product line is to know your customer base, appeal to the wid-


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Well known in Victoria for delicious jams, spreads & sauces, Rebecca's Garden offers year-round local delectables. Credit: Rebecca Jehn

est range of tastes and be ready to adopt current trends. Each market attracts customers with different shopping habits and tastes so it's essential to address all aspects of product design, including formulation and visual appeal.

While you may believe that customers only care about what's inside a package, you would essentially be cutting yourself off from potential customers by creating poor packaging and labels. Invest in good graphic design and then save by using stock labels and packaging. Either get labels printed inexpensively through places like Staples, or team up with a few other vendors using the same size labels and do combined print runs.

Producing small batches from home also means that it's relatively easy

to add or change a product to adopt certain flavor trends as they come into the public awareness. You'll know it when it happens, but it's always a good idea to take a look at what's happening in food trends in the US as well as Australia, and then plan to see those trends adopted up to three years later in Canada. We're a little slower to adopt trends here but research also allows you to plan ahead.

Be prepared to phase out recipes that don't perform and try to add a new product to your line every year, if possible. This keeps things fresh and customers asking what's new.

Consumers are hungry for home preserved foods. Try to use ingredients sourced at your own farm if at all possible and be sure to sample everything you make. Careful, con-

trolled sampling is one of the best ways of selling a value-added food product. Be sure to provide a flyer with recipes that incorporate your main market products and display photos of the dishes made up using your ingredients and your value added food products. This has been, hands down, one of my most successful techniques for selling my own products.

Finally, try to create products that are complementary to what you're already selling. If you sell salad greens, then making your own dressings or vinegars makes sense. If your family uses spice blends or sauces specific to your cultural background or family, then make up a batch and provide recipes that include the other products you sell. The key is to incorporate items into your regular product line that become a natural extension of your overall farm image so that it makes sense to your customers.

One final thought – when you obviously love what you're selling, customers pick up on that and will trust you enough to try something new. They feed off your enthusiasm as much as your products and this, more than anything, determines a product's success. Have fun with it, experiment, test out recipes on friends and customers but in the end, create something you enjoy and will be confident promoting at the market. Happy cooking!

Dana Zaruba is gourmet food manufacturer and author from Vancouver Island. She sells her exotic condiments at markets on Vancouver Island and the lower mainland. Her new book, How to Run a Successful Market Stall: A Simple Guide for Food Producers and Crafters, is loaded with tips on how to develop and sell a product line. Visit her websites at www.overunitypress.com and www.hotchickspicecompany.com

The many benefits of Composting

By Marjorie Harris



Compost Definition

The product of a carefully managed aerobic process by which non-synthetic materials are digested by micro-organisms. Organic materials for compost shall be managed appropriately to reach temperatures for the duration necessary to effectively stabilize nutrients and kill human pathogens.

Compost adds organic matter to the soil which helps to:

- Break up the soil, improving soil structure with humus
- Let more air and water into the plant root zone
- Improve soil development, preventing soil erosion
- Reduce soil compaction providing good drainage for roots
- Make soil easier to work in for people and plants
- Release nutrients slowly to plants as they need them
- Provide a wide range of valuable micro-nutrients
- Minimize weed growth when used as a mulch
- Suppress some plant diseases
- Reduce or eliminate the use of fertilizers
- Hold water in the soil for plants so you water less

It is estimated that 40% of our garbage is made up of kitchen scraps and yard waste. By recycling this into garden soil through composting you can:

- Feed the soil food web of beneficial bacteria, fungi & insects


- Encourage earthworm activity in a good soil food web
- Hot composting suppresses weed seeds and pathogenic organisms
- Aerobic (oxygen breathing) compost reduces methane emissions
- Mature compost tends to have a neutral pH; good for soil

Making Your Compost

- Choose a compost system for a sunny spot with good soil drainage
- Put in kitchen scraps and yard waste in layers as they arrive
- Cut up or smash down large corn cobs and woody material
- When composter is full, cover with earth or landscape fabric to cook
- Water frequently; the beneficial organisms need water to live
- Turn often to keep air in it for the hard working fungi & bacteria
- Keep out meat or dairy products they tend to sour and attract rodents
- Leave to compost, it will smell like healthy earth when ready
- Screen out large chunks before applying to the garden

Compost produced on the farm

For Certified organic farms, compost produced on the farm must meet the criteria for composting feedstocks. If it is made from animal manures or other likely sources of human pathogens, it shall reach a temperature of 55 C (130F) for a period of four consecutive days or more. The compost piles shall be mixed or managed to ensure that all of the feedstock heats to the required temperature for the minimum time.

Compost obtained from off-farm sources shall meet the criteria for composting feedstocks (i) and (ii) and shall not cause a build-up of heavy metals in soil over repeated applications. 

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



Sponsorship Programs



Become a COABC Sponsor and cultivate the growth of certified organic food and agriculture throughout British Columbia.

The Certified Organic Associations of BC relies on generous financial partnerships with allied organizations to support our operations and essential programs. This is your opportunity to expose your brand to a large and growing target market.

Please join us in promoting a healthier, more vital and prosperous region by becoming a sponsor of COABC. Our diverse sponsorship programs include value-added sponsor benefits and comprehensive exposure. For more information, and to reserve your exclusive sponsorship opportunity, please contact the COABC Sponsorship Administrator.

In addition to sponsorship COABC offers advertising in their journal that is distributed to over 700 organic producers in B.C. For more information about advertising please call the COABC office: 250-260-4429.

Good for You, Good for the Environment

202-3002 32nd Ave, Vernon, BC, V1T 2L7

Phone: 250-260-4429 Fax: 250-260-4436

www.certifiedorganic.bc.ca

People Points

Is everyone on the up-and-up?

By Karen Fenske

You might have the most reliable, trustworthy staff today but that could change. To grow an operation with a high level of integrity and reliability, and to prevent disappointment, focus on transparency and accountability. The following article lists a few simple tracking systems you can try.

The first common area for accountability is employee hours. You want to make sure that you are paying the right amount for the hours worked. A simple system is to print numbered pages (Excel spreadsheets) on which employees can sign in and out and have you initial and date. This may seem awkward at first but many businesses have a similar procedure.

A major area for transparency is tracking sales and dealing with cash. If you have a farm gate or market operation you will want to track sales revenue with product volumes. It is efficient to have one page (Excel spreadsheet) to start the day or week with specific details such as beginning (the product you send) and ending inventory (the product that returns), the cash float start and end amounts, and places for employees to make notes of any extra spending or price changes, etc.

If you want more details and have the time, you can use numbered pages or a sales receipt book that employees input the sale data i.e. amount, price and total sale and have the customer sign. At the end of the day staple all the pages to the main page or they can be put into an envelope. Deal with any discrep-

ancies in cash at the end of the day, while everyone remembers. Either system allows you to track sales and volumes of products sold, gives you some statistics to see how the season went, and helps keep everyone honest.

Another area which is a little more work is employee efficiency and productivity – how much time should a task take? To determine this, you will need to do the task and then have someone who is new to do the task and take an average to set a baseline. Once you have the baseline (this could take a couple of seasons) you can determine if your employee is working hard or dawdling, and then you can discuss expectations with them.

You may experience resistance to the new systems from current employees as they may feel like they aren't trusted. It is a good idea to validate that change can be challenging, however, the new system will help operations be more consistent for everyone. Allowing staff to give input can also help the transition. Your staff may have some ideas from their own experience or be able to provide insights on how to make the systems better.

Working together to foster a reliable, organized, honorable business is one of the keys to sustainability. Have a great season! 🍀

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

Advertise with the...

British Columbia
Organic Grower

The advertisement features a large illustration of a bee on the left and a smaller image of a flower on the right. The text is arranged in a clean, modern layout with a mix of bold and italicized fonts.

Events and Announcements

The 2011 6th Annual Organic Okanagan Festival is on Sunday September 18, 2011 from 11am to 5pm at Summerhill Pyramid Winery, 4870 Chute Lake Road, Kelowna and Center for Learning at Okanagan College, 1000 KLO Road, Kelowna. For more information: www.okanagan-greens.ca

Salt Spring Island's 13th Annual Apple Festival - Let apples bring out the kid in everyone, it's fun! Sunday Oct 2, 2011 from 9am to 5pm. For more information: <http://saltspring-market.com/apples>

14th Annual Pacific Agriculture Show, Tradex Exhibition Centre (Abbotsford Airport), Abbotsford, BC, January 26-28, 2012. For more information www.agriculture-show.net

Organic Master Gardener Course in Shawnigan Lake, September 13 to Oct 13, 2011. For more information <http://gaiacollege.ca> or email info@gaiacollege.ca

The Organic Sector Development Program Strategic Initiative (OSDP) is a fund for the development of the BC organic sector. Applications are accepted for projects that match the objectives identified in the Organic Sector Strategic Plan 2009-2013. Any person or organisation with an interest in the organic sector may apply. Sector

participants may include primary producers, processors, handlers, members of the educational community and government and private regulators. The next application deadline is October 14, 2011. For more information visit www.certifiedorganic.bc.ca/programs/osdp.php

"What is organic farming?" BOOKLET IS NOW AVAILABLE ONLINE!

Are you familiar with the COABC's green "What is Organic Farming" booklet? The booklet is now available on our website as a downloadable resource at <http://certifiedorganic.bc.ca/marketing/docs/COABCbooklet.pdf>

My Garden Footprint is an online community focused on the development of the local food movement. They are currently signing up local producers and businesses and hope to be BC's leading online community for the local and sustainable movement by summer of 2011. Joining the MGF community is 100% free and could be the online marketing avenue that could grow your business within your local community. Go to MyGardenFootprint.com and sign your business up now for free!

Feast of Fields - a gourmet wandering harvest festival - is FarmFolkCityFolk's annual fundraising event. Feast of Fields highlights the connections between producer and chef, field and table, and farm folks and

city folks. Feast of Fields is a gastronomic journey towards a sustainable, local food system, with events in the Okanagan, Vancouver, and Victoria. www.feastof-fields.com

Midsummer Feast at Left Fields farm - On August 14 Crannóg Ales is hosting a Midsummer Feast at the farm and brewery in Sorrento with noted local chef Geoffrey Couper. French meets fresh, in this inspired combination of local food and drink. www.crannogales.com/site/events.php

farms2chefs - Shuswap Chef Farmer Collaborative Farm2Chefs fundraiser on August 7. We take over a farm for the day, invite the public, and let our chefs show off the best of what our farmers/producers offer. <http://tscfc.org/farm-2chefs/>

CLASSIFIEDS

Spencer Hill Orchard

- certified organic mixed market garden and orchard-BOPA #48, Grand Forks. 8 acres - many extra-established markets and strong local customer base. See blog spot site for all that comes with it. \$750,000. Contact 250-442-8583. <http://spencerhillorchard.blogspot.com/>

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

For more information, contact moss at: bcogadvertising@certifiedorganic.bc.ca

ORDER FORM

Enterprise Name: _____ Date Ordered: _____
 Contact Name: _____ Date Required: _____
 Address: _____ CB & Certification Number: _____
 City/Province: _____ Postal Code: _____ Contact Number: _____

Item	Units	Unit Price	Quantity Discount	Quantity	Total
Stickers 1" round	1000 pc roll	\$12.50	10 rolls \$108.00		
Stickers 1 1/4" square	1000 pc roll	\$10.50	10 rolls \$90.00		
Twist Ties 10" (15,000 per case)	1000 pc	\$13.00	Full Case-\$165.00		
The packaging materials above are only available to COABC Certified Organic members. Have you signed a Consent to use Official Marks Declaration Form (July 2006 revision)? Y/N With which products will you be using the packaging materials? _____ _____					
Promo Materials: available to everyone	Member \$	Non-member \$	Tax		
Bucket Hats size M or L *	\$15.75	\$15.75	HST taxable		
Ball Caps	\$13.10	\$13.10	HST taxable		
Green T-shirts L or XL *	\$18.00	\$18.00	HST taxable		
Natural T-shirts (Logo) M or L*	\$7.25	\$7.25	HST taxable		
Natural T-shirts (Plain) S M L XL or XXL	\$5.00	\$5.00	HST taxable		
Organic Tree Fruit Management	\$19.95	\$25.95	HST exempt (5% GST)		
Steel in the Field *	\$25.00	\$25.00	HST exempt (5% GST)		
				Sub-total (before taxes and shipping):	

*Limited quantities available - please contact the COABC office for availability

GST/HST # 887782431

Postage Rates

Minimum charge of \$10.00 per order for any promo and/or packaging materials
 HST will be added to postage amounts
 Rates vary and will be calculated at the office

An invoice will be sent with your order. Postage and applicable taxes will be added to your invoice.
 Please do not send payment before receiving invoice.

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



Healthy investment.

Great health begins with local, organic food. It's good for your body, good for the environment, good for growing communities. So we're making a healthy investment in the farmers, markets, stores and systems that grow our local economy and bring healthy food to our tables.

We can't wait to see what grows here.

Talk to us about how we can support your business or initiative at localandorganic@vancity.com or **604.709.5859**.

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