

# Agroforestry Update

## British Columbia Agroforestry Industry Development Initiative

December 2005

### Pine Beetle Epidemic Spurs Diversification Interest Opportunities for Agroforestry?

Across a broad band through the heartland of British Columbia, a Mountain Pine Beetle (*Dendroctonus ponderosae*, MPB) population explosion is laying waste to millions of hectares of lodgepole pine (*Pinus contorta*). The scale of the outbreak and level of pine mortality are truly staggering. The start of the current infestation can be traced back to the early 1990s and now covers over 10 million ha, with more than 360 million m<sup>3</sup> of lodgepole pine killed. And the beetle's advance is far from over. According to the BC Ministry of Forests and Range, 80% of BC's mature pine, or approximately 960 million m<sup>3</sup>, will likely be dead by 2014.

The MPB is native to North America's forests and contributes to the normal dynamics of intermountain ecosystems. A growing body of evidence however, suggests forest management and recent weather patterns have contributed to the unprecedented expansion of this ravenous bark beetle. Pine beetle outbreaks are normally held in check by either episodic cold weather or fire. Sustained temperatures of at least -25 °C in the early fall or late spring or -40 °C in the winter are needed to stop the beetle. But the cold weather has not materialized in the past decade. Moreover, 80 years of active fire suppression has removed another beetle control and coupled with other forest management, has contributed to a three-fold increase in mature lodgepole pine (the beetle's primary host) in the last 90 years.

Depending on site and weather conditions, beetle-killed pine has a 'shelf-life' of 5 to 15 years, after which the trees deteriorate to the point where commercial wood products are no longer viable. To address this, a massive salvage program is underway. One-time increases (or 'uplift') in the allowable harvest from Crown forests have been authorized by the province's Chief Forester to maximize wood recovery. The annual timber harvest levels have already doubled in the hardest hit Forest Districts. Salvage logging and beetle-wood processing are creating short-term economic opportunities. The current boom, however, comes at the expense of future harvests. To ensure the long-term sustainability of BC's forests, future cuts will have to be reduced to below pre-uplift levels while the affected forests regenerate. Even more troubling is that with the current massive MPB population, smaller and younger pine is being attacked than previously noted. This could mean a longer regeneration lag to commercial timber harvesting than originally forecast and it will be decades in some areas before a return to pre-outbreak harvest levels.

Woodlot owners and licensees have been particularly hard hit by MPB. Unlike the major forest companies that harvest from large areas (>1 million ha), small-scale forest (< 600 ha) managers have little flexibility to shift harvests

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## Mountain Pine Beetle (continued)

to new areas. Some have been completely devastated (100% beetle kill) and these operations won't see timber harvested for 60 to 80 years after the salvage. Those able to remain in business will need other production opportunities to fill the timber revenue void.

The ensuing 'short-fall' period when forest harvesting must be scaled back does not bode well for many of BC's interior communities. Heavy reliance on traditional forest industries has left them vulnerable to an economic slowdown in the wake of salvage activities.

But far from sinking quietly into despair, community groups are rallying and building plans to diversify and strengthen their local economies. Groups such as the Cariboo-Chilcotin Beetle Action Coalition, the BC First Nations Mountain Pine Beetle Working Group and Ominica Beetle Action Coalition are working on strategies to support community and economic development in the face of the looming forest industry decline. And agroforestry can be apart of the solution, bringing sustainable, integrated options for new production opportunities.

Provincially, the BC Ministry of Agriculture and Lands (BCMAL) has identified agroforestry as an opportunity to augment and diversify production on Crown lands and foster integrated management. Dave Trotter, Agroforestry Specialist with BCMAL is part of a team looking at these opportunities and he sees two agroforestry systems with a large potential to contribute to the beetle recovery plans: "silvopasture through increased access to grazing resources and forest farming through enhanced, managed production of non-timber forest products."

Silvopasture seems to be a natural fit with situation at hand. The livestock industry is already well established throughout the interior of BC. Cattle producers in particular already make extensive use of forested rangeland. Implementing silvopastoral systems would allow for an expansion of grazing opportunities for cattle or sheep while being fully integrated with the silvicultural efforts. This means the sites will return to productive forests and properly

timed and managed grazing may generate silvicultural benefits through reducing competing vegetation around the trees. Although there is no consensus on the latter because a large area of the beetle-killed forest has not traditionally presented silvicultural 'brush' problems.

Forest farming opportunities also merit examination. Throughout the interior there are already a number of small enterprises making use of herbs, sap, essential oils and other non-timber resources to produce an array of niche health, food, cosmetic and craft products. Management and commercial harvesting of non-timber forest products is only a small fraction of its potential. Existing markets for these products could be tapped into with some product development and marketing support.

At present there is very little information to help those interested in developing and marketing non-timber forest products in northern BC. In order to increase agroforestry use, a synthesis of existing silvopasture and forest farming information is required followed by knowledge gap identification that can feed into industry development plans and provide the basis for informed support. Dave Trotter sees the Agroforestry Initiative as one component of this strategy and says, "it represents an avenue to address some of the economic, information and market gaps." BCMAL will also work with government agencies at all levels, First Nations and NGO's to increase the profile of agroforestry in the beetle affected areas.

**More information** on the MPB is available at: [www.for.gov.bc.ca/hfp/mountain\\_pine\\_beetle/](http://www.for.gov.bc.ca/hfp/mountain_pine_beetle/)

For information on funding opportunities to support agroforestry projects, please visit the Agroforestry Initiative website: [www.woodlot.bc.ca/agroforestry/](http://www.woodlot.bc.ca/agroforestry/)

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## Maple Tapping News: “Sapsuckers” Congregate

*Harold Macy, Headquarters Creek Woodlot Ltd.,  
Merville, BC*

On the first weekend in November, a flock of Island Sapsuckers gathered at the Horticulture Centre of Malaspina College for a pre-season meeting. About half the attendees were new to the operation and the rest were old-timers. Gary Backlund chaired the meeting and also brought some tasty snacks with maple flavours.

A round of introductions demonstrated the high level of interest and the commitment by established producers. There are now at least four commercial-scale evaporators on the Island, which bodes well for retail production this season. This new initiative is already producing secondary industry dollars--one fellow at the meeting is a metal fabricator and is building hobby-size evaporators in his machine shop and is looking into other equipment such as hoods and tanks. Buckerfields, an island-side farm supply company, is now stocking tapping equipment such as spiles, tubing and drills.

The meeting discussed many common challenges and opportunities. One recurring theme was how to access more maple stands on Crown or industrial forest company lands. The idea of forming an organization was discussed in the hopes that a larger group could instill greater confidence in company forest managers. A working group was struck to

explore the need of corporate structure. Group purchasing of tubing, taps and bottles was another topic. Two or three producers will be bringing in supplies extra to their needs and will make these available to others. An e-mail alert was established to advise Sapsuckers of upcoming events, equipment availability and when the sweet juice starts running. More than seventy people have already signed onto this list.

Excitement is building as the season approaches. The demand for the syrup far exceeds the present production capacity, so effort will be required to keep the momentum alive.

Late summer also saw the Sapsuckers at the Feast of Fields at Glenora Farm near Duncan. This was a gourmet 'foodies' dream, a dozen of the most exotic restaurants on south Island set up their tents and portable kitchens on a hayfield. Those forking out the entry fee of \$75 could wander at will, tasting local foods and beverages. Lawrence Lampson, manager of the farm and Master Woodland Manager graduate, set up his new evaporator (which he bought from an interior birch syrup producer) to demonstrate how syrup is made. Gary and Teesh Backlund had a wonderfully informative booth serving samples of maple syrup and homemade ice cream. If we had a thousand bottles of syrup, we would have sold out!



**Harold Macy (r) and Lawrence Lampson (middle) demonstrating a new maple sap evaporator for two cooks at the recent 'Feast of Fields' in Duncan.**

## Bigleaf Maple Tapping Season is Underway

*Gary Backlund, Backlund's Backwoods, Ladysmith, BC*

This year's bigleaf maple tapping season was kick started by the snowfall and cold snap that hit Vancouver Island as November turned to December. Although the larger sap flows will occur in January and February, Gary, Teesh and Katherine Backlund recorded flows in excess of a litre per hour from tap holes drilled on December 2, 2005. Their managed forest is starting its second year of a two-year agroforestry maple tapping demonstration project near Ladysmith.

Last year the Backlunds focused on promoting the new to Vancouver Island maple sugaring industry. The Backlunds estimate that there are about 600 people tapping on Vancouver Island and more than a dozen of them are tapping in excess of 100 spiles. A local stainless fabricator has joined the group and is catering to those wanting custom built evaporators. Both an apiary supply and the Buckerfields chain of feed/gardening stores, now carry tapping supplies.

The Backlunds' focus for this second year will be on efficiency and economics. This will include using tanks, pumps and even trying a small pipeline tapping system. They are looking forward to not having to carry 300 litres of sap in jugs and hand pouring it into the evaporator. Finishing and bottling will be done in larger batches and freezing will be experimented with to force water out of the nearly finished syrup to raise the sugar content. Value-added maple products are the Backlunds' next new frontier with an eye to creating a Dijon maple mustard plus other maple related treats.

This spring a group of Royal Roads MBA students created an impressive marketing plan for bigleaf maple syrup as a class project. Other Vancouver Island maple news includes Glenora Farm's recent purchase of a high efficient evaporator. Besides boiling their own sap, they hope to boil down for other tappers.



**Gary Backlund drills for “liquid gold” as the Vancouver Island maple-sugaring season begins.**

## Boreal Agroforestry Publications In Development

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Agricultural producers, woodlot and other land owners in the north will soon have a valuable resource for planning and implementing the integration of non-timber forest products through agroforestry systems and wild harvesting on their private lands. The Boreal Centre for Conservation Enterprise with the support of the British Columbia Agroforestry Industry Development Initiative is developing publications featuring production and market research on conservation-enterprises for current and prospective agroforestry producers in the region.

The Boreal Centre is a not-for-profit association of people concerned with community development in the Peace River Region. The Centre's goal is to help improve livelihoods in marginalized northern, rural communities through the promotion of profitable, but ecologically and socially responsible enterprises. Support for the goals and objectives of the Boreal Centre has come from producer groups, all levels of government, elected representatives, First Nations leaders, academic institutions, community development groups and financial organizations.

Since its inception in 2000, volunteers and student assistants at the Centre have conducted market research on non-timber forest products (NTFPs). This information will now be made available as a new output of the Centre's Northern Innovators Business Development Initiative. The current work involves the final writing, editing and printing of two publications related to agroforestry. "**Finding Value from the Boreal Forest Floor – An Agroforestry Marketing Resource Guide for Selected Botanical Species**" will provide detailed profiles on marketable botanical NTFPs found in boreal and sub-boreal zones. The second publication, the "**Peace Region Directory of Conservation Enterprise,**" will feature profiles of entrepreneurs and organizations involved in the production and/or marketing of boreal NTFPs.

The Agroforestry Marketing Resource Guide will include information on conservation-based rural enterprise, sector development issues, and rural diversification opportunities in the north with an emphasis on the emerging agroforestry sector. The guide will feature 30 plant species known to have

market potential through value-added processing. Each profile will include detailed species descriptions, information on commercial applications, First Nations uses, accessibility, environmental sensitivity, market locations, harvesting specifications, customer requirements, prices, cultivation potential, processing technology, government regulations and transportation costs. Species highlighted will include: alder, balsam poplar, birch, blueberry, clubmoss, cranberry, dandelion, Devil's club, red osier dogwood, hazel nut, horsetail, juniper, bearberry, Labrador tea, lodgepole pine, Manitoba maple, nettle, ostrich fern, wild rose, sweetgrass, sage, saskatoons, spruce, subalpine fir, sweet flag, tamarack, valerian, wild mint, diamond willow, and yarrow.

The Directory of Conservation Enterprise will serve as a tool for linking buyers and sellers of value-added agroforestry products (woodcraft, food and furniture). The directory will contain detailed profiles of established businesses in the region and marketing outlets where their products can be purchased. The directory will capitalize on the growing importance of agri-tourism and the potential for it to support agroforestry product marketing. The directory will be available at nominal cost through Chambers of Commerce, tourism outlets, business development organizations, agriculture/forestry associations, academic institutions, government agencies and other interested parties.

Workshops and guest speaking engagements will be held in conjunction with various interest groups (e.g. Chambers of Commerce, First Nations groups, agricultural organizations and producer associations) to highlight agroforestry production and business opportunities. These workshops will promote the new publications and conservation-based enterprise within the rural community and farming sector of the Peace region and will create additional information networks for product development and marketing.

These publications will generate a solid information base upon which producers can plan for new

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## Boreal Agroforestry Publications (continued)

enterprises or expand existing production, thus strengthening and diversifying the local economies and creating new employment opportunities. Another important goal of this work is to help focus attention on the needs and aspirations of specific economically-marginalized groups in the region including unemployed youth and women, aboriginal groups and displaced agriculture and forestry workers. It is also hoped that these publications will help foster partnerships and joint ventures

between First Nations, resource industries and provincial resource agencies. These groups have a vested interest in promoting new opportunities for aboriginal resource-users given existing Treaty rights over a shared resource-base that is under increasing local development pressure.

For more information on these publications or to reserve a copy please contact the Boreal Centre for Conservation Enterprise, at 250-788-9635, [theborealcentre@hotmail.com](mailto:theborealcentre@hotmail.com), or mail Box 285, Moberly Lake, BC V0C 1X0

## Coming Events

**Agroforestry Session at the Pacific Agriculture Show** at the Tradex in Abbotsford ([www.agricultureshow.net](http://www.agricultureshow.net)), **February 16-18, 2006**, hosted by Douglas Justice of the BC Agroforestry Management Committee. Presentations will include:

**BC Agroforestry Initiative - Current Projects and Funding Opportunities**, with George Powell, BC Agroforestry Industry Development Initiative

**Integrated Rural Development at the Agriculture/Forestry Interface** with Reg Whiten, Boreal Centre for Conservation Enterprise

**Birch Syrup Production – How Sweet It Is!** with Kim McIvor, Birch Place Farm (samples will be available so get there early!)

**Silvopasture, Christmas Trees and Forage – All Moving Together** with Charlie Willis, Kootenay Tree Farms Ltd

**The "Best" Project – Integrated Riparian Management with Benefits** with Michelle Boshard, Rural Resource Associates Ltd

**The Mountain Pine Beetle Epidemic and Agroforestry – Opportunity?** with Dave Trotter, Ministry of Agriculture and Lands

Upcoming **Vancouver Island Maple Events** include three tapping and sugaring workshops.

- **January 21, 2006.** Malaspina University-College, Nanaimo. Register for HGTM 001 S0601 by phone: 1 866 734-6252;
- **January 28, 2006.** The Land Conservancy, Ladysmith. Register with Jay Rastogi, phone: 250-816-1816; and,
- **February 4, 2006.** Malaspina University-College, Duncan. Register for HGTM 001 S06D1 by phone: (250) 746-3519.

### **Certified Organic Associations of BC 2006 AGM, Conference and Tradeshow**

**February 24 to 26, 2006** in Abbotsford. For more information or registration / tradeshow booth forms, call the Conference Coordinator, Michelle Boshard at (604) 820 1181, email: [michelle@ruralresource.com](mailto:michelle@ruralresource.com) or visit [www.certifiedorganics.bc.ca](http://www.certifiedorganics.bc.ca)

### **Tech 2006 - BC Natural Resource Forum & Trade Show**, in Prince George, **January 12 & 13, 2006.**

Government and community decision-makers and business people from the natural resources sector will have the opportunity to examine key issues, challenges and identify opportunities for sustainable, responsible development of natural resources in BC. For more information visit:

[bcnaturalresourceforum.com](http://bcnaturalresourceforum.com)

# Federal Programs Support Agroforestry

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## Canadian Agriculture Skills Service Helps With Training

Are you an agricultural producer interested in education and training to upgrade your agroforestry production or marketing knowledge? The Canadian Agriculture Skills Service (CASS) program is now available in BC and agroforestry training is eligible. It is being delivered through Service Canada (formerly HRSDC) and interested producers can apply at their local Service Canada/HRSDC office.

The program is available to farmers and their spouses having family incomes of less than \$45,000 and farm sales of more than \$10,000. Beginning farmers are also eligible. Program benefits are staged according to family income: persons with less than \$35,000 family income are eligible for up to \$18,000 in training support; those with \$35 - 40,000 are eligible for up to \$12,000; and those with \$40 - 45,000 are eligible for up to \$10,000.

Formal training (college/short courses), informal training (field days, conferences) and associated expenses (replacement labour and childcare costs) are eligible. Training for both farm and off-farm skills are eligible. A three-step process is followed in order to access program support: (1) skill assessment; (2) development of an individual learning plan; and, (3) training.

For full program details and eligibility requirements for CASS, or assistance with applications contact Service Canada. Locate your nearest Service Canada Centre by calling: 1-800 O CANADA. Additional details are also available on the web: <http://servicecanada.gc.ca/en/cass/cass.html>

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## Apply Now for 2006 Shelterbelt Trees From AAFC - PFRA

The PFRA Shelterbelt Centre provides tree and shrub seedlings as well as technical services to eligible applicants in the Peace River area in BC.

Seedlings are free of charge but the applicant must pay transportation costs. Shipping occurs in the spring, usually late April to mid-May. Applications are accepted from June to March and are serviced

on a first-come, first-served basis, so early application is recommended.

The following are eligible for tree and shrub seedlings under this program:

- Bona fide farmers and producers of primary agricultural products with > 16 ha of land (some restrictions apply).
- Owners of rural land holdings of 0.4 – 16 ha are eligible to receive caragana, green ash, Manitoba maple and hawthorn.
- Federal and provincial departments planting on eligible public, private or Crown lands for conservation, reclamation or research.
- Villages, towns and cities are eligible to receive caragana, Manitoba maple, green ash, villosa lilac and hawthorn for perimeter plantings and shelterbelts.
- Plantings around churches, schools and cemetery lands are eligible, providing maintenance is guaranteed.
- Charitable organizations, such as 4-H, Scouts, etc., can plant seedlings on eligible land that serves the public without charge.
- First Nations councils and individuals for planting on reserves.

Commercial enterprises, golf courses, resorts and private holdings in urban areas are not eligible.

Planning assistance for eligible applicants, including technical staff site visits, is available subject to staff availability.

Full details and eligibility requirements, as well as, a variety of technical literature is available from the PFRA District Office in Dawson Creek:

#104, 1005 - 104<sup>th</sup> Avenue  
Dawson Creek, BC V1G 2H9  
Phone: (250) 719-1415  
Fax: (250) 782-8156  
E-mail: [pfratree@agr.gc.ca](mailto:pfratree@agr.gc.ca)

Or go online to:

[www.agr.gc.ca/pfra/shelterbelt/guide\\_e.htm](http://www.agr.gc.ca/pfra/shelterbelt/guide_e.htm)

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George Powell  
Agroforestry Update Editor

**The Federation of BC Woodlot Associations** administers the Agroforestry Initiative



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