

Agroforestry *Update*

March 2006

*British Columbia
Agroforestry
Industry
Development
Initiative*

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You are Invited to Join the BC Agroforestry Information Network

With growing interest in agroforestry solutions in British Columbia, there is also growing demand for information and expertise to support this emerging sector.

The varied fields of knowledge encompassed in the agroforestry family require support from a breadth of sources. Nowhere is this truer than in BC, where our diverse society, climates and geography dictate that an equally diverse set of production tools and conservation resources to are needed to successfully and sustainably implement agroforestry practices.

In keeping with its strategic goal to support the creation of, and access to agroforestry information and training, the BC Agroforestry Initiative is proud to facilitate the creation of the BC Agroforestry Information Network. The primary goal of the network is to provide existing and potential agroforestry practitioners with a 'one-

stop' source for relevant, regionally-based information and contacts.

The Network will provide free access to online resources (contacts and electronic publications) searchable by subject area, (production, conservation, value-added processing, marketing), organization, or BC region of interest.

A key feature the network will be the inclusion of producer contacts and profiles together with a catalog of formal demonstration areas around the province. Land owners currently employing agroforestry practices are encouraged to join the Network and share their knowledge and expertise. We are looking for producers willing to have their operations featured in a written profile on the web site and in this newsletter. Those with the time and inclination are also encouraged to sign on to showcase their efforts through agroforestry tours or can sign on as Agroforestry Mentors;

providing others with the ability to contact them directly for information on the practical aspects of putting agroforestry into practice. Costs associated with approved activities (e.g. tours or field days) will be covered by the Agroforestry Initiative and / or our delivery partners.

In addition to linking with the existing agroforestry extension resources of the BC Ministry of Agriculture & Lands and Agriculture & Agri-food Canada, we welcome industry associations, academic organizations, and other groups with an interest in promoting agroforestry to meet their goals in conservation, agriculture, forestry or other natural resource management.

For more information or to request a partnership agreement for joining the BC Agroforestry Information Network, please contact George Powell, Agroforestry Initiative Facilitator: agroforestry@uniserve.com

The Agroforestry Advantage

This is the first article in a series on understanding the basics of agroforestry and how these systems can help to meet the production, social, and conservation needs of British Columbia's agriculture and forestry sectors.

Agroforestry is practised around the world and is a common land use in tropical and subtropical areas where population pressures have dictated the co-evolution of efficient land use (through better resource capture, multiple products from the same land holding) and natural resource conservation. Simply put, in many areas of the world the large population base does not have the luxury to designate separate production of crops, livestock and forest products, or to designate some areas solely for conservation purposes. Yet despite its broad

appeal elsewhere, it remains relatively unknown here in Canada.

The potential increased productivity, blending of conservation and production practices, and new market opportunities all give impetus for the wider adoption of agroforestry systems in BC and other temperate regions.

Agroforestry has several potential advantages over conventional agricultural or woodlot systems. The first possible advantage is in **production gains** through efficient capture and utilization of sunlight and soil resources. If structured properly, the

multiple canopy and rooting layers from mixing trees, shrubs and herbs in an agroforestry configuration can make better use of the production potential of the land. Agroforests have been shown to produce more in total per unit area (known as *overyielding*) than separating production into single use forestry or agriculture operations.

A second area of advantage is based on **economics**. Agroforestry systems are another option for diversification, and it

Continued next page..

"...an agroforestry configuration can make better use of the production potential of the land..."



Agroforestry production is common in many parts of the world, such as this home garden in Indonesia, but it is relatively unknown in Canada.

The Agroforestry Advantage *continued*

is prudent for any woodlot or agricultural operation to be diversified amidst the uncertainty of constantly changing market, regulatory and production risks.

Agroforestry systems also offer the means to generate annual cash flow. Tree or shrub crops are long-term investments and require some investment input early on for planting and maintenance. Inflation through the years means your initial cash outlay reduces the “real” return from these systems in the future. Agroforestry systems blend annual production (and cash flow) with long-term production investments, meaning you can offset some or all of the discounting of future profits from your tree or shrub crops.

Because the seasonal work load between the “agro” and the “forestry” components are often balanced, agroforestry systems can allow for better year-round use of labour, machinery or capital. This allows for year-round retention of skilled labour (and thus avoiding the potential costs associated with recruiting and training

new seasonal help each year) and makes for more efficient and profitable use of your machinery.

A third area of agroforestry advantage is in the **environmental services** afforded by these systems. Trees and shrubs have been used for well over a century on the Canadian prairies to shelter livestock, farmsteads and reduce erosion. Trees and shrubs add to the biodiversity of our agricultural landscapes providing for critical wildlife habitat in some highly developed areas such as the Okanagan and Fraser valleys.

In addition to the long standing use as wind breaks, trees and shrubs are being used in novel applications to filter dust, odours or noise from agricultural and industrial operations as well as providing a visual and physical buffer between farms and urban development. Trees and shrubs also have the capacity to fix and hold carbon – the sequestration of carbon in agroforestry systems can contribute to our international commitments to reduce “greenhouse” gases with the potential for future carbon

credit programs rewarding land owners who steward this environmental service on their land.

The final area of advantage spans the physical and economic benefits in the collective **social benefits** from adopting agroforestry practices.

Combining different production interests on the same land base allows for workable compromises to single use land zoning, thus reducing the planning and operational burden for industry and government.

Similarly, the buffering and conservation features of agroforestry systems help to move rural - urban interface issues from conflict to compromise and can change environmental adversaries into partners working for sustainable, integrated solutions.

Finally, and equally important, agroforestry provides our agriculture and forestry sectors with additional sustainable, profitable production options. And profitable, sustainable operations will confer stability on their respective production sectors and the communities that depend on them.

“...agroforestry provides our agriculture and forestry sectors with additional sustainable, profitable production options.”

Announcements and Upcoming Events

North Island Woodlot Association's Annual General Meeting at the Quadra Island Community Centre on **Saturday, April 22**. A guest speaker will be provided along with other activities such as a horse logging demonstration by Tim and Jim, the two Belgian draft horses managed and fed by Jerry and Jill. All Woodlot Licensees and private forestland managers are invited to attend. For more information contact Harold Macy at HQCreek@axion.net

The BC Agroforestry Initiative has moved to fixed intake dates for funding proposals and letter of intent submissions. Applications will now be accepted quarterly for review. **Deadlines for the remainder of 2006 are May 15, August 15 and November 15**. Submissions received after any review deadline will be considered in the next scheduled review period.

"Promoting A Peace Region Bio-Economy" a symposium presented by The Boreal Centre for Conservation Enterprise, Moberly Lake:

June 16 to 18, 2006 (tentative). Guest speaker presentations and workshop sessions on:

- Agroforestry
- Non-Timber Forest Products
- Renewable Energy
- Eco/Cultural Tourism
- Conservation Enterprise Financing

For more information contact: Reg C. Whiten at 1-866-788-9635 or interraplan@uniserve.com

May 16, 2006 is Census of Agriculture Day in Canada – stand up and be counted!

The 12th International Symposium on Society and Resource Management (ISSRM). The official meeting of the International Association for Society and Natural Resources, will take place from **June 3-8, 2006**, hosted by Simon Fraser University. The conference activities will take place on the campus of the University of British Columbia in Vancouver. The ISSRM is the largest gathering of social scientists and managers in resource management world-wide and this is the first time that the symposium will be held in Canada. For more information, please visit: www.issrm2006.rem.sfu.ca or e-mail: issrm_2006@sfu.ca

Topics to be discussed include: First Nations peoples and resource co-management, natural resources in regional and local planning, non-timber forest products, resource economics and urban forestry.

Alternative Crops Framework – Evaluating Potential

Contributed by
Lisa Zabek

What are specialty crops?

Specialty crops are new commodities, new uses for established commodities, or an established crop new to another region. They generally are not part of mainstream agriculture, and tend to fall into non-traditional use areas: e.g. essential oils, herbal medicines, nutraceuticals, functional foods, fibre, florals, craft products, etc. However, several agricultural sectors are related to specialty crops or share common ground. For example, culinary herbs and specialty vegetables are also regarded as part of the vegetable and greenhouse industries. If crops are produced in agroforestry systems (e.g. alley cropping, forest farming, etc;) or are produced organically, overlap with these sectors also occurs. One of the challenges with new crops, as compared with traditional commodities, is that there are generally fewer marketing structures in place, which also varies among the potential crops. In addition, there may be relatively little information pertaining to management.

Project Purpose

The purpose is to design a framework that will aid professionals and producers in decision making when considering alternate crops. It is set up as a

series of questions on the factors that should be considered prior to production. The framework is designed to aid users assess where information gaps occur, which can then be used to assess his or her degree of acceptable risk in pursuing crops of interest. It is designed for use with managed or cultivated systems, as other factors not included in the framework may be important to wild harvest systems.

The Project

The project, now in the development stage, will be available through InfoBasket once completed. The framework consists of 32 questions; a 'yes' or 'no' response to each question indicates further considerations for the user. A response of 'unknown' indicates further investigation is needed. A resource list will provide a starting point to search for information on plants and products of interest. Questions are grouped into three sections about the plant, crop management and products.

Plant Questions

These source information about weediness, conservation status, toxicity, traditional First Nations use, if it is host of a regulated or quarantined pest, if there is competition with the wild harvest sector, the type of land tenure needed for production (perennials),

and worker safety considerations.

Crop Management Questions

These assess if information exists and is adequate for production purposes relating to crop fertility, management techniques, soil and water requirements, planting, harvest, and product quality standards. Information on labour requirements or if there are mechanical management options is also collected. Production cycle information relates to cash flow, e.g. can the crop be harvested year-round, can it be stored, etc.

Product Questions

These relate to processing and market information. If the crop is for food, regulations and standards may pertain (e.g. food safety regulations, product and labeling standards, etc;). Other information needed, if processing of the crop is necessary for sale (and if processors are accessible), or if there are other avenues of sale. Product processing may also have worker safety implications, which need to be assessed. In terms of market, questions are related to assessing whether the market is established, how stable it is, if specific volumes are required for market entry, potential product demand, competition and production costs and returns.

“Specialty crops are new commodities, new uses for established commodities, or an established crop new to another region.”

For More Information
on the framework or the Specialty Crops and Bioproducts sectors contact:

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With the BC Ministry of
Agriculture and Lands

Tapping Bigleaf Maple Project Nearing Completion

Contributed by

Gary Backlund

The BC Agroforestry Industry Development Initiative's first demonstration project is showing positive results for agroforestry on Vancouver Island as the two-year maple syrup project is nearing completion.

In the course of the project more than 4400 litres of sap has been collected and processed into syrup as part of the goal to fine tune the production and processing details for this emerging industry. The processing equipment was made available to the public on a limited basis for the processing of an additional 1500 litres of bigleaf maple sap.

Other results of the project include:

- Creation of a maple tapping web site that has received about 4500 hits.
- 12 presentations given to more than 400 people, 11 tours given to about 150 people, 8 workshops given to 112 people and an open house were held.
- Displays at three community events. Tastes of bigleaf maple syrup were given to over 1000 people.

- Major newspaper and community television coverage. CBC radio ran a short segment during both tapping seasons of the project. Many newspapers and community newsletters also ran stories.
- A Vancouver Island maple email group was established with a distribution list of more than 100 individuals;
- The number of commercial evaporators active on Vancouver Island went from one at the beginning of the project to at least seven at the end of the project plus many homemade units.
- The number of people tapping in the Vancouver Island area and the amount of syrup made has more than doubled each tapping season.
- Buckerfield's Farm and Garden Supply, the largest chain of its type on the Island, now carries tapping supplies. This last season they sold out and had to reorder at least once.
- Gary Backlund's "how-to" book for western sugaring and has sold 1000 copies.
- Dominion & Grimm syrup bottles are now carried at an Island outlet. At least five bigleaf maple syrup producers are selling syrup from the farm gates and at farmers' markets. Several others are using the product to enhance their B&Bs.
- The project has had involvement and visits from students and/or faculty from Malaspina University-College, the British Columbia Institute of Technology, Royal Roads University, University of Victoria, University of British Columbia, Langara College and the University of Alaska.
- The quest to find indicators for choosing the best trees to tap has met with limited success; every rule seems to have exceptions. A general guideline points toward choosing open growing trees with vigorous growth. The research points away from choosing trees in dry sites. The presence of sapsucker holes almost always indicates a good tapping tree.

"The number of people tapping in the Vancouver Island area and the amount of syrup made has more than doubled each tapping season."

“Best” Project on the Ground

Contributed by
Michelle Boshard

On March 10th, a small but merry group of project partners and landowners including AMC Chair, Detmar Schwichtenberg got out in the sun (which was perfectly sandwiched between two days of snow and rain) to do the first portion of plant installation for the Page Creek Riparian Agroforestry Demonstration Project near Abbotsford. After considering the advice of the Technical Advisory Committee for the project, her own goals and capacity for harvesting, Marlene Best selected a small subset of the potential plants to install in the 330 m stretch of riparian area on her property. The freshly installed 750+ red osier dogwoods planted by the volunteers will go a long way towards improving bank stabilization (currently being provided only by reed canary grass) and improving fish habitat in this salmonid bearing stream. But this is really just the beginning. The plan is to let the osier take root while applying different stretches of various kinds of mulch appli-

cations that will test how to best reduce the site's pervasive reed canary grass. Then the other plants that Marlene would like to install will have a higher survival chance. All the test mulch applications are designed so that no nutrients or toxins are leached into the creek, and include recycled unbleached paper, nutshells, pinecones, and grass. These applications will then be compared with hand-weeded and fabric-covered stretches. The other plants such as contorted willow and contorted hazelnut plus cranberry will be installed when the grass gets under control. Marlene will be installing 3' chicken wire

along the creek bank to prevent beavers and muskrat from considering the freshly planted shrubs as a smorgasbord, and will watch closely for voles.

There will be a tour of the site later in the year. Marlene's project was also highlighted at two major events recently, including the Horticultural Short Course at the Pacific Agricultural Show and the Certified Organic Associations of BC Conference (both in Abbotsford). The project continues to raise eyebrows in the fisheries world, and was also presented at a major salmon restoration conference in Portland Oregon in January.

Planting for the Page Creek Riparian Agroforestry Demonstration Project is underway.



Volunteers planting red osier dogwood along Page Creek.

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Visit us on the Web

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If you have suggestions for future editions of the *Update* or know of an event that should be included, please let us know.



The Federation of British Columbia Woodlot Associations administers the BC Agroforestry Initiative.



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