

Agroforestry *Update*

June 2006

*British Columbia
Agroforestry
Industry
Development
Initiative*

Also In This Issue:

News and Events	4
Understanding Agroforestry	5
Web Sites of Interest	7

Birch Agroforestry Development Project Underway

Within the interior of British Columbia, paper birch (*Betula papyrifera*, also known as White Birch or Canoe Birch) is abundant on both private and provincial forestlands. It typically grows on lowlands to lower mountain slopes and is a shade intolerant species; as such, it thrives well on previously burned and / or harvested sites where it may form pure stands. As the forest matures, it usually is restricted to openings.

Commercial, paper birch use in the region is primarily limited to small amounts of traditional wood products including flooring, lumber, oriented strand board (OSB) and fuelwood. However, there is growing interest and demand for non-timber products from birch. Currently, in addition to some “backyard”, hobby operations, there are two commercial birch syrup businesses in the province, both located in the Cariboo region: **Birch Place Farm** in Quesnel -

producing *Sugar Spring Classic Birch Syrup*, and **Sweet Tree Ventures** in Big Lake. In 2005, the two commercial producers collected approximately 68,000 litres of raw sap and produced approximately 790 litres of finished syrup. Both sell most of their product directly to the consumer and through a variety of retail outlets, farmers markets and fairs in the region and throughout BC. Limited sales over the internet have also occurred with distribution across Canada and into the United States of America. The commercial producers indicate current demand exceeds production, and interest in their natural, unique products is growing.

Despite the opportunity for new operations or products from birch, at present, there are no publications or training materials available to support prospective practitioners in BC whom may be interested in birch agroforestry. To address

this information and technology transfer gap, the **Quesnel Community and Economic Development Corporation (QCEDC)**, with funding assistance from the **BC Agroforestry Industry Development Initiative**, is sponsoring a Birch Agroforestry Industry Development program. The goals of this program are to support: (i) the development and expansion of a paper birch based agroforestry, and (ii) to promote value-added products from the same, to assist with strengthening and diversifying the regional economy.

To meet these goals, the QCEDC, is facilitating stronger partnerships with the current birch syrup businesses, regional agricultural producers, *Harvest*, the organising body for the **Quesnel “Old Time” Farmers Market**, and any other interested individuals or organizations.

Continued next page.

Birch Agroforestry *continued*

“...improve access to birch agroforestry information and support technology transfer with the development of a guidebook, new products research and training sessions.”

Together they will work to improve access to birch agroforestry information and support technology transfer with the development of a guidebook, new products research and training sessions.

Specifically, the program will research and compile existing information and producer knowledge on birch tapping and sap processing into a user-friendly guidebook / production manual for prospective birch agroforestry practitioners. The QCEDC and its partners

will also deliver a minimum of two workshops in the spring of 2007 and 2008 providing:

- An overview and on-farm demonstration of birch tapping;
- An overview and on-farm demonstration of birch syrup processing;
- Information on the regulations for processing and relevant food safety and labelling; and,
- Market information and marketing training.

In looking to future development of the sector, research and a pre-feasibility assessment of potential new niche birch products will also be completed. In addition to syrup, other birch products from agroforestry systems could be developed including sap drinks (birch tonic, birch wine, birch sap-fruit juice blends), crafts (from wood and bark) and non-traditional wood products.

Concluded next page.



Kim McIvor of Birch Place Farm displays a bottle of Sugar Springs Classic Birch Syrup. Research into new products will assist expansion of birch agroforestry industry in BC.

Birch Agroforestry *concluded*

Development and expansion of birch agroforestry in the Cariboo is expected to benefit individual producers by diversifying their agricultural or woodlot production and thereby increasing incomes. Secondly, it will strengthen and diversify the economy of the region and contribute to mitigating the expected economic slowdown in the coming decade as a result of the Mountain Pine Beetle (MPB) epidemic.

The QCEDC is the designated economic development agency of the City of Quesnel. Quesnel is located in the North Cariboo, and is one of the most forest-industry dependent communities in Canada, and thus faces challenges posed by both globalization and technology advances. The area is also severely affected by the MPB crisis which, according to BC's Chief Forester, is a "catastrophe" that will result in a reduction in timber harvesting in about 10 years of at least 40%, and as much as 70% when compared to recent levels. Because an estimated 4,500 direct jobs in the Quesnel area are dependent on the current

timber harvest, a 40% reduction in the timber supply is anticipated to cause substantial, unprecedented economic adjustment. The agriculture sector has long been a key component of the economy in the Cariboo. It is deeply rooted in the history and culture of the area and it has provided a source of economic stability. Investing in agroforestry and other integrated opportunities is essential to assist in diversifying the future regional economy. As such, the opportunity to expand the existing birch syrup industry and to promote the Cariboo as a primary producer of a variety of birch products fits well with overall community and economic development plans of the region.

Jim Savage, Executive Director at the QCEDC is pleased to be supporting agroforestry development and sees long-term benefits from the program: "The improved availability of 'producer-friendly' information is a key to the expansion of the birch syrup industry, and to develop other birch agroforestry products and new markets."

Additionally, the networking and partnerships developed to implement this project will form a basis for future industry development and co-operation on projects of mutual benefit, where currently no formal industry structure exists. Savage sees the benefits of the program extending for a long time: "The QCEDC is committed to supporting the development of the long-term capacity in this area and will support industry-building activities beyond the scope of the Agroforestry Initiative funding term."

Although this project is being developed as a regional initiative, it also has the possibility of reaching and benefiting interested persons throughout a much larger area (i.e. wherever paper birch grows in BC). Interested individuals or groups from outside the region are welcome to participate in the training sessions. For more information on the Birch Agroforestry program, please contact the QCEDC at (250) 992 – 3522 or email them at mail@quesnelcorp.com

"The improved availability of 'producer-friendly' information is a key to the expansion of the birch syrup industry, and to develop other birch agroforestry products and new markets."

Announcements and Upcoming Events

“Fields, Trees & Everything In Between” Developing the Peace Region’s Agroforestry Sector ” A symposium and workshop presented by The Boreal Centre for Conservation Enterprise, Moberly Lake:

June 23 & 24, 2006 at Northern Lights College in Dawson Creek. Presentations and workshop sessions include:

- Federal Initiatives in Agroforestry
- Birch Syrup Production
- Diversifying with Evergreens, Berry Products & More
- Agroforestry funding
- Silvopasture with Goats
- Growing Seed crops In a Hybrid Poplar Alley System
- Non-timber Forest Products from the Boreal Forest
- Branding the Peace as a Tool for Business Development
- Hands on workshop on implementing your agroforestry idea

Lunch Special at the Symposium...A culinary “Black Box” competition between the Muskoti Learning Centre, Moberly Lk & NLC Dawson Campus reaturing country foods of the Peace!

Also available to participants: “Boreal Forest Bounty– A Non-Timber Product Marketing Resource” on CD or Hardcopy at Discount Prices.

For further information: www.peaceriverwatershed.ca/borealenterprise

Registration at the Door: Friday \$65 and Saturday \$55 (includes lunch and handouts). For registration please contact Reg Whiten, 1-866-788-9635 or interraplan@gmail.com

The West Kootenay Herb Growers Cooperative invites you to attend a free agroforestry demonstration tour day in Edgewood, **June 23, 2006** Presentations include an overview of the Hawthorn Agroforestry Demonstration Farm Trial activities, riparian restoration, plant drying and processing for medicinal products. For more information or to RSVP your attendance, please contact : Jeanette Lee at d_sawyer@columbiacable.net

Kootenay Tree Farms invites you to a free Christmas free **agroforestry production area tour** located in the Rampart and Picture Valley area of the beautiful East Kootenay. DATE: **Aug 28, 2006** TIME: 8:30 AM, PLACE: Start of Prichard Road, 10 KM east of Cranbrook. Bring your own lunch and transportation. For additional details or to RSVP your attendance phone Charlie Willis at (250) 489-4887.

Fraser Valley Agroforestry Workshop and Tour, September 29 & 30, 2006

Workshop Friday Sept. 29, in Abbotsford on agroforestry for production and conservation, direct marketing and specialty crops from agroforestry systems. Tour Saturday September 30, to various agroforestry demonstrations and direct farm marketing sites in the Fraser Valley. For more information, please contact George Powell at: agroforestry@uniserve.com

A reminder that next **deadline** for letters of intent and applications to the British Columbia Agroforestry Industry Development Initiative is **Tuesday, August 15th**

Understanding Agroforestry

Agroforestry is a family of land use systems that are tied together by the common use of trees or shrubs intentionally integrated with other crops and / or livestock production. This is done in way to take advantage of natural synergies of production, economic efficiencies or positive environmental or social outcomes that result from their integration.

Agroforestry is not linked to any particular species or agricultural or forest commodities. And, apart from the obvious inclusion of a woody perennial (tree or shrub) in the system, agroforestry is not defined in terms of its inputs or outputs, but rather by the processes involved. In this regard, agroforestry is analogous to organic farming, which also can best be defined in terms of the processes of production used, not the specific crops or livestock.

A brief description of the major agroforestry systems used in BC follows.

Shelterbelts

Also including *Hedgerows Timberbelts*, *Windbreaks* and *Fence Line Plantings*. These systems are designed for shelter / con-

servation purposes and the opportunity for woody plant harvest and non-timber forest production. Trees and shrubs have long been used for protecting livestock, crops and buildings as well as a means of reducing soil and water erosion.

Shelterbelts are truly conservation practices that pay. Research has demonstrated lower winter heating costs for buildings, improved livestock weight gains and higher crop yields are among the benefits from sheltering against the wind. Shelterbelts can also be important sources of biological and 'structural' diversity, adding to the wildlife habitat and aesthetics of agricultural landscapes. Agroforestry plantings can also be managed to derive forest products and thus provide an opportunity for diversification of farm production. A wide variety of tree and shrub species can be employed for shelter, each suited to specific growing conditions and production opportunities. Shelterbelts are a popular agroforestry practice in the Peace River region and other prairie or parkland environments. Approximately 6 % of all farms in BC reported

using shelterbelts in the 2001 Census of Agriculture.

Alley Cropping

Also referred to as 'sun systems' or silvoarable systems. Alley cropping employs the cultivation of any of a variety of forages, berries, vegetables, grains or other field crops between rows of trees or shrubs. The tree or shrub crops in these agroforestry systems are oriented and spaced to allow near full sun between their rows. Tree fruits, nut or berry producing shrubs, native or exotic high value hardwoods or more common softwood trees can all be produced in alley cropping systems. A common practice in the early orchard plantings in the Okanagan Valley and other fruit growing areas of BC, alley cropping is regaining popularity as high land costs and small lot agriculture dictate efficient land use systems.

Forest Farming

Also known as 'shade systems' or forest gardens. Forest farming is the sustainable, integrated cultivation of timber and non-timber forest products. Forest farming utilize trees as hosts or the natural shade of their understory to

Continued next page.

This is the second 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.

Understanding Agroforestry *continued*

produce a range of products in addition to the traditional forest (solid wood) products. Forest farming is separate and distinct from the opportunistic exploitation of wild non-timber forest products (“wild-crafting”).

Forest farming in BC already produces small amounts of a variety of products including: mushrooms, maple and birch syrup, plants used for landscaping, floral greenery (e.g. sword fern, bear grass, cedar boughs and others) and specialty crops for food or medicinal purposes. There is tremendous opportunity for many other high-value niche crops to be grown using these systems.

Silvopasture

Silvopasture is an agroforestry practice that combines livestock grazing on forage crops or pastures within actively managed tree crops. Cattle, sheep and goats have all been incorporated into silvopasture systems in BC and they may be deployed entirely within a private farm / woodlot silvopasture or through collaborative arrangements between forest licensees and livestock producers on Crown land. For example sheep are employed as a vegetation management tool on forest plantations around BC to derive silvicultural benefits from their grazing.

Integrated Riparian Management

Riparian buffers are managed forest and shrubs in areas bordering lakes, streams, rivers, and wetlands. Integrated riparian management systems are employed to enhance and protect the aquatic and riparian resources as well as generating income from timber and non-timber forest products. Similar to shelterbelts, integrated riparian management systems can employ a wide variety of tree and shrub species, with specific plantings tailored to suit the specific growing conditions and production opportunities.

“There is tremendous opportunity for many other high-value niche crops to be grown...”



Alley cropping forages between black walnut on Vancouver Island.

Some International Web Resources of Interest

Free agroforestry publications available for download from

www.agroforestry.net

A variety of free agroforestry publications are available from the Agroforestry Network. Although the focus is on tropical agroforestry, there is much of interest to British Columbia agroforesters including:

The Overstory: an e-mail journal for agroforesters, gardeners, researchers, professionals, and enthusiasts, focusing on agricultural system design

Forest Technology Bulletins by Norman Jones to guide forestry establishment from "seed to outplanting."

A number of other downloadable guides and articles covering topics such as:

- Multipurpose windbreak
- Orchard Alley Cropping
- Chainsaw milling
- Sheet Mulching: Greater Plant and Soil Health for Less Work
- Leaves to Live By: Perennial Leaf Vegetables

Agroforestry Research Trust

www.agroforestry.co.uk

The Agroforestry Research Trust (ART) is a not-for-profit organization in England, which conducts research on temperate agroforestry and into all aspects of plant cropping and uses, with a focus on tree, shrub and perennial crops.

ART produces several publications and a quarterly journal, and sells plants (particularly fruit and nut trees and bushes) and seeds. Please note that *all* plant material imported into Canada requires Canada Food Inspection Agency certification. Many species for sale through ART may be prohibited from import for disease control measures or may require quarantine, with the associated expense to be borne by the individual importing said material.

ART also sponsors the Agroforestry and Forest Garden Network; an informal network of people and organizations in the UK or other parts of Europe cultivating their own agroforestry or forest garden systems.

The Rudy Grah Memorial Agroforestry Collection

www.lib.berkeley.edu/BIOS/grah.html

The Rudy Grah Memorial Agroforestry Collection at the University of California, Berkeley was established in 1986 and consists of over 800 articles, reports and papers focusing on the social, political, economic, and ecological aspects of agroforestry including land tenure. A unique feature of the collection are the many manuscripts, correspondence, and publications of limited distribution. Much of the material was donated by faculty and graduate students who acquired it in their international travels and correspondence with individuals and agencies who research and practice agroforestry.

The university website features a searchable bibliography of Grah collection.

Contact Us

George Powell,
Agroforestry Initiative
Facilitator
agroforestry@uniserve.com

or:

April Anderson,
Agroforestry Initiative
Administrator
aaa@netidea.com

Visit us on the Web

www.woodlot.bc.ca/agroforestry/

Subscribe to the Agroforestry *Update* mailing list

If you would like to receive Agroforestry Update and other agroforestry-related information and news, please subscribe to the Agroforestry Update mailing list by sending an e-mail to agroforestry@uniserve.com with "Subscribe Agroforestry Update" in the subject line. In the body of your message please include your:

- 1) Name & location
- 2) E-mail address
- 3) Organization or interest in agroforestry (optional)

Your personal information is secure.
We will never sell, give or distribute your personal information to any third party without your prior consent.

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.



Financial support for the Agroforestry Industry Development Initiative is provided by the **Investment Agriculture Foundation of British Columbia**, **Agriculture and Agri-Food Canada** and the **British Columbia Ministry of Agriculture and Lands** provide funding and support for the Foundation.



**Investment
Agriculture
Foundation**
of British Columbia



Ministry of
Agriculture and Lands



Agriculture and
Agri-Food Canada

Agriculture et
Agroalimentaire Canada

The contents of this publication are the sole and exclusive property of the respective authors. No reproduction in any manner or any form is permitted without express written permission.