



## Approved Projects

### Hawthorn Agroforestry Demonstration Farm Trials

Extracts from hawthorn (*Crataegus* spp.) have established markets for use in medicinal products. In Western herbalism, hawthorn has a long history of use for treating cardiac weakness and is used as a "blood vitalizer:" lowering cholesterol, improving blood circulation, and alleviating hypertension. The majority of hawthorn used in western medicinal practices is currently imported from Eastern Europe. The West Kootenay region (as well as central/southern regions of BC) has a natural abundance of hawthorn with the potential for development as an alternative crop to supply this market. The native hawthorn species of British Columbia (*Crataegus douglasii*, *C. columbiana*) have both been reported to possess "medicinal value" and are referenced in the American Herbal Pharmacopoeia, but neither has been researched extensively. There is also little research or information to provide sufficient evidence to health product manufacturers and distributors that native hawthorn species may be comparable to the European hawthorn (*C. laevigata*/*C. monogyna*) - the recognized medicinal standard. Additionally, there is scarce information available to growers for hawthorn crop management practices and basic processing techniques.

With support from the Agroforestry Industry Development Initiative, the West Kootenay Medicinal Herb Grower's Cooperative is addressing this knowledge gap to determine the economic viability of growing hawthorn (both native and European medicinal species) within an environmentally sustainable and enhancing agroforestry system management framework.

Based out of Edgewood, the West Kootenay Medicinal Herb Grower's Cooperative was incorporated in August 2004 with the purpose of development of medicinal herbal opportunities that balance economic, social and environmental concerns. Hawthorn production in agroforestry systems represents an opportunity to diversify and strengthen the local economy with an economically and environmentally beneficial crop. Another important part of this project is the potential to demonstrate enhanced riparian stewardship. After the Arrow Lakes were flooded for hydroelectric development, compensation included plans for a ladder to replace the loss of fish spawning channels on the Inonoaklin River. The fish ladder was not built however, due to a lack of consensus on the management actions. Based on results of a community survey conducted in 2004, fisheries enhancement and conservation of local creeks/rivers is still a priority within the community. The potential for economic benefit resulting from agroforestry systems may provide landowners with significant encouragement to restore and replant riparian areas with net benefits for fish habitat.

The Hawthorn Agroforestry Demonstration Farm Trials will span four farm sites utilizing a combination of integrated riparian management and alley cropping (sun agroforest) techniques. The production trials will be used to develop and document in detail management practices for hawthorn as an alternative crop in agroforestry production systems and provide an economic feasibility analysis for producing hawthorn as a commercial crop.

The quality and the correct botanical identification (in accordance with Natural Health Products regulations, plant materials used in health products must be authenticated) of the hawthorn species are crucial to acceptance of these trial results by the health products manufacturers/distributors. The West Kootenay Medicinal Herb Grower's Co-operative with additional support from the Health Products and Functional Food Initiative is using DNA fingerprinting and other analytical techniques to conduct a comparative analysis of medicinal species results to both native species and medicinal species standards of evidence. These results will also be correlated to specific growth habitats (climate and soil) and hawthorn management practices (pruning, irrigation, soil amendments, harvest, storage and processing techniques) recorded during the trials.

Once fully established, demonstration farm trial tours will be conducted for prospective producers and buyers, government and non-government agencies, as well as other interested individuals and groups. The tours will be conducted through partnership with organizations such as the Tourism Action Society in the Kootenays (TASK) and the BC Medicinal Herb Grower's Association. Planned publications from this project include a survey of manufacturer requirements, an economic feasibility analysis report, and a hawthorn management practices technical document.

In addition to the support of the Health Products and Functional Food Initiative, this project has also garnered funding from Columbia Basin Trust, and has endorsements from the BC Herb Growers Association, Regional District of the Central Kootenay, Fisheries and Oceans Canada and industry (Nature's Formulae, Strauss Herbs).

For more information on the Hawthorn Agroforestry Demonstration Farm Trials, please contact Jeanette Lee ([D\\_Saywer@columbiacable.net](mailto:D_Saywer@columbiacable.net)), director of the West Kootenay Medicinal Herb Grower's Cooperative.

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