

## Framework for Evaluating Specialty Crops (Part 1)

### Overview of Questions

#### About the Framework

The purpose of the framework is to aid producers and professionals in decision making when considering alternate crops. **It is designed for use with managed or cultivated systems as opposed to wild-harvest systems. There are many factors not included in this framework which may be important for assessing wild-harvest collection.**

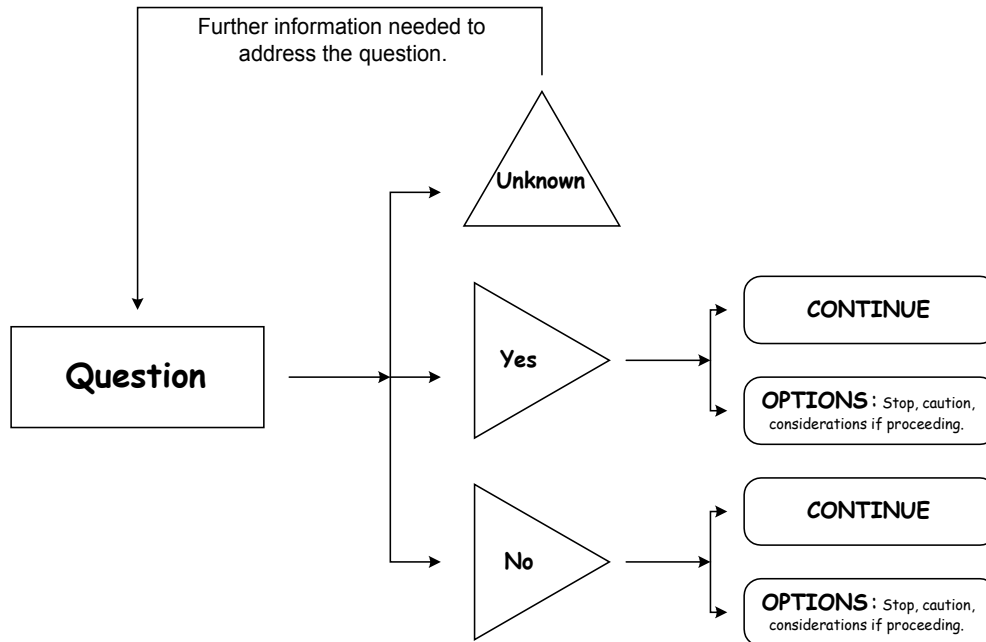
Within BC, the term 'specialty crop' refers to a new crop, a new use for an established crop, or an established crop new to another region. Specialty crops are generally not considered part of mainstream agriculture (e.g. hay production, tree fruits, grains, etc;). Many of the specialty crops may have non-traditional use areas, e.g. essential oils, herbal medicines, nutraceuticals, cosmeceuticals, functional foods, fibre, florals, craft products, etc. As compared with traditional agricultural commodities, there are generally few marketing structures in place, and there may be relatively little information regarding crop management. **It is strongly advisable to do a business plan and a market study before starting to grow any crop. Joining an association(s) will expand your access to information resources and increase your knowledge base. If market studies relevant to your crop of interest already exist, you may be able to access them through an industry association (e.g. BC Herb Growers, The Associated Ginseng Growers of BC, etc;) as associations and organizations frequently participate in or conduct various studies. These types of studies provide valuable resources as you *conduct your own market assessment and marketing plan*. Once you make a decision to grow or test a crop, consider beginning with a small-scale test plot. This will provide critical information on production variables, product quality and product-specific marketability (e.g. test marketing) for you to evaluate, at the same time as providing important fiscal information for your business plan. Determine if there are good agriculture practices guidelines, on-farm food safety programs, or other recognized standards which you as a producer should follow and which markets demand.**

**You as the producer will likely need to find, create and/or develop markets for your own products. Attending workshops and accessing materials aimed at developing markets and marketing skills will help you determine: 1) if product marketing is something you enjoy; 2) if you are willing or able to invest the substantial time and effort required; or, 3) if you need to access the services of a professional marketer as part of your business team.**

This framework is designed to aid the user in assessing where the information gaps occur. This analysis can then be used by the potential producer to assess the crop against his or her degree of acceptable risk in pursuing crops of interest

The framework is set up as two interlinked parts.

- 1) Part 1. This '*Overview of Questions*' document lists a series of questions which the potential producer needs to consider prior to moving into production. It also lists a few general resources related to business planning, programs and sources of information. **This document is not designed to be used as a flow diagram on its own. All questions have further considerations identified in the *WORKSHEET* document.**
- 2) Part 2. The *WORKSHEET* is a separate document which lists each question, followed by considerations for a 'yes' or 'no' response, whereas a response of 'unknown' indicates further investigation is needed (see figure below). A non-exhaustive resource list associated with groups of questions provides a starting point for users to begin searching for information pertinent to the plant of interest, the products and the question being considered within the framework.



## Framework Questions

Questions are grouped into three consideration areas: 1) questions about the crop plant; 2) questions about crop management; and, 3) questions about the product.

## Questions about the crop plant.

### Identification Subset

1. Have you positively identified your plant of interest?

*CAUTION: There may be many different common names for the same plant or several plants referred to by the same common name, including related (e.g. huckleberries) or unrelated species. Botanical (latin) names are more reliable for identification purposes; however, you should note that nomenclature may change over time with plant re-classification. Thus, there may also be alternate botanical names.*

*Correct identification for both the product of interest, and physical plant identification are critical to all questions in the framework whether plant, management or product related.*

### Regulatory Subset

2. Is the plant classified a noxious weed?
3. Is the plant invasive or a 'nuisance' weed?  
*CAUTION: Sources listing alien invasive plants may not be in agreement as to species lists. Management approach is evolving. Consult with those with expertise before considering introduction and management.*
4. Is the plant classified as 'at risk' with respect to conservation status (e.g. endangered, red or blue listed, etc;)?
5. Is the plant host of a regulated or quarantined pest?

### Safety Subset

6. Is the plant toxic to animals or humans?
7. Are there worker safety concerns with respect to management and harvest of the plant?  
*Consideration: Are there accepted practices which mitigate the associated risk.*

### Socio-economic Subset

8. Does the plant have traditional uses or other cultural importance to First Nations? *Note that many plants may have widespread cultural importance and may be used across many cultural or language groups.*
9. As a cultivated or managed crop will it compete with the same or a similar crop within the wild harvest sector?
10. Is long-term land tenure required for crop production? *Consideration. Perennial crops may require several to many years before reaching crop maturity (e.g. truffles, Saskatoons, etc;).*

## Questions about crop management.

### Production Subset

11. If propagative material is needed is it available (seeds, seedlings, cuttings, etc;)?  
*Consideration: Agroforestry systems may result from management and enhancement of existing species without need of propagative material.*
12. Are crop fertility requirements well understood, especially as related to product quality?
13. Are other management techniques such as pruning well understood?
14. Are crop pests (disease, insect, mammal, avian) well documented and mitigation measures well understood and available?
15. Are soil/media and water (volume and quality) requirements known?
16. Is there adequate information regarding section or part of the plant to harvest?
17. Is there adequate information regarding how and when to harvest the plant/ plant part?

### Product quality Subset

18. Are product quality standards available and achievable? *CAUTION. Standards can vary reflecting market demand among clients and over time. Maintain close ties with clients as to their needs. Note that changes in standards will affect 16) & 17).*  
*Establish linkages with industry associations to be aware of, and proactively involved in, development and use of recognized good agricultural practices (GAPs) covering safety, quality assurance, traceability, etc. Reference for further information: Good Practices for Plant Identification for the Herbal Industry, Sask Herb and Spice Association/National Herb and Spice Coalition.*
19. Is your post-harvest system capable of producing the required product quality in variable weather conditions (e.g. high humidity, rain, etc;)?

### Labour Subset

20. Do production or harvest practices require a high degree of labour? *Consideration. The information gained from addressing questions 11) to 17) will aid in assessment of labour needs.*
21. Is supplemental labour required for production or harvest? *Consideration. Some crops have very short harvest windows which may be an added challenge in attracting and maintaining labour.*

### Cash-flow Subset

22. Does the crop provide or add to year-round cash flow?  
*Considerations. Potential for year-round harvest (e.g. greenhouse herbs); length of lag time between planting or regeneration and harvest (e.g. weeks or months (herbs) vs years (ginseng, Saskatoons)); perishability (length of time the crop can be stored); and, diversification by growing more than one crop.*

## Questions about the product.

### Packaging and Processing Subset

23. Is this a food, functional food, or other edible crop (e.g. natural health product, medicinal, etc;?)
24. Is your water source suitable for the intended use of the crop (post-harvest handling through to processing)?
25. Is processing of the crop required to sell the product?
26. Are there processors accessible to sell the product to OR are there processors available to contract to?
27. Can product value be enhanced through innovative packaging or through combination with other materials?
28. Are there brokers/buyers or other known avenues available through which to sell the product? (E.g. direct to consumer, direct to retail, internet, etc.)

### Safety Subset

29. Are there worker safety concerns associated with crop processing methodologies?

### Market Subset

30. Is the product market well established?
31. Is the market saturated?
32. Is the market volatile (e.g. boom bust cycles)? *CAUTION: Can you afford to store the product for a period of time (e.g. 1-2 years), and if so, will the quality be acceptable?*
33. Are there critical volumes of product (at market standard) needed for market entry and continuity?
34. Is there enough information to assess production costs and returns? *NOTE. Estimates of liability insurance need to be incorporated in a business-specific manner. E.g. It may be more complex and costly for a food crop/product than a non-food crop/product.*
35. Is growth in product demand expected (e.g. increased per capita consumption; increased access to markets previously not accessed)?
36. Is there a high degree, or potential for a high degree, of competition within the market place (local, regional, national, international) and who is your major competition?
37. Are you a marketer in addition to being a grower? *CAUTION: Marketing skills and interest are a critical factor for success.*
38. Are you intending to export the product? *Consideration. Domestic and receiving country regulations and standards may apply.*

## General Resources

The following resource lists are neither comprehensive nor exhaustive. Instead they provide a starting point for users to begin searching for information pertinent to their interest area. The 'LINKS' webpages associated with the websites listed will provide access to related sites.

For further resources see the InfoBasket website

[\[www.infobasket.gov.bc.ca\]](http://www.infobasket.gov.bc.ca).



BC Ministry of Small Business and Revenue

<http://www.sbr.gov.bc.ca/smallbusiness/main.htm>

Export Development Canada

[http://www.edc.ca/index\\_e.htm](http://www.edc.ca/index_e.htm)

Government of Canada

Business Startup Assistant

<http://bsa.cbasc.org/>

Business Information

<http://canadabusiness.gc.ca/gol/cbec/site.nsf/en/index.html>

Industry Canada

BizPaL - website in development - online tool to help identify permit and license information

[http://www.bizpal.ca/index\\_e.shtml](http://www.bizpal.ca/index_e.shtml)

Small Business BC

Resources pertinent from idea stage through to established business phase.

e.g. Interactive Business Planner, Market Research Services, etc;

<http://www.smallbusinessbc.ca/index.php>

Agriculture and Agri-food Canada - Programs and Services

[http://www.agr.gc.ca/progser/index\\_e.phtml](http://www.agr.gc.ca/progser/index_e.phtml)

BC Innovation Council

<http://www.scbc.org/>

BC Investment Agriculture Foundation

<http://www.iafbc.ca/>

BC Ministry of Agriculture and Lands - Plant Diagnostic Laboratory

<http://www.agf.gov.bc.ca/cropprot/lab.htm>

BC Ministry of Economic Development

Investment Capital Programs

[http://www.ecdev.gov.bc.ca/ProgramsAndServices/BusinessServices/Investment\\_Capital/default.htm](http://www.ecdev.gov.bc.ca/ProgramsAndServices/BusinessServices/Investment_Capital/default.htm)

BCIT - Herbal Evaluation and Analysis Laboratory

<http://www.bcit.ca/appliedresearch/nhp/>

Business Development Bank of Canada

<http://www.bdc.ca/en/home.htm>

Industry Canada

<http://strategis.ic.gc.ca/engdoc/main.html>

National Research Council of Canada - Industrial Research Assistance Program

Technology Expertise and Advisory services, Financial Assistance for R&D Activities, Networking, Partnerships.

[http://irap-pari.nrc-cnrc.gc.ca/howirapcanhelpyou\\_e.html](http://irap-pari.nrc-cnrc.gc.ca/howirapcanhelpyou_e.html)

UBC Food Information Service

<http://www.fis.agsci.ubc.ca/>

Western Economic Diversification Canada

[http://www.wd.gc.ca/default\\_e.asp](http://www.wd.gc.ca/default_e.asp)

WellnessWest

<http://www.agwellness.ca/wellnesswest/>

*Pathways to Market: Commercialization Roadmap for Functional Foods, Natural Health Products and Related end Products. By Shambrock Consulting Group & Kelwin Management Consulting for Wellness West.*

Detailed planning tool providing valuable information and approaches for other agricultural sectors. Note that the tool is designed for large commercial-scale business; however, techniques, information and methods may be adapted to smaller-scale and crop approaches. For more information contact Raman Gill, Specialty Crops & Bioproducts Specialist, BCMAL [Raman.Gill@gov.bc.ca](mailto:Raman.Gill@gov.bc.ca)

- Agriculture and Agri-food Canada  
[http://www.agr.gc.ca/index\\_e.php](http://www.agr.gc.ca/index_e.php)  
 Plant Hardiness Zones in Canada  
<http://sis.agr.gc.ca/cansis/nsdb/climate/hardiness/intro.html>  
 Canadian Farm Business Management Council  
<http://www.cfbmc.com/>
- Alberta Agriculture, Food and Rural Development  
<http://www.agric.gov.ab.ca/app21/rtw/index.jsp>
- BC Ministry of Agriculture and Lands  
 Reports and publications  
<http://www.agf.gov.bc.ca/publicat/publications.htm>
- Canadian Biodiversity Information Facility  
 Integrated Taxonomic Information System  
 Searchable species catalog with links to other databases e.g. MedLine  
[http://www.cbif.gc.ca/pls/itisca/taxaget?p\\_ifx=cbif](http://www.cbif.gc.ca/pls/itisca/taxaget?p_ifx=cbif)
- Center for Non-Timber Resources (CNTR) – Royal Roads University  
<http://www.royalroads.ca/programs/faculties-schools-centres/non-timber-resources/>  
<http://www.royalroads.net/ntfp/>
- Crown Publications Inc.  
<http://www.crownpub.bc.ca/>
- Canadian Forest Service - Bookstore  
<http://bookstore.cfs.nrcan.gc.ca/>
- FAO Non-Wood Forest Products  
[www.fao.org/forestry/site/6366/en](http://www.fao.org/forestry/site/6366/en)
- Institute for Culture and Ecology  
<http://www.ifcae.org/ntfp/index.shtml>  
 NTFP Bibliographic database  
<http://www.ifcae.org/cgi-bin/ntfp/db/dbsql/db.cgi?db=bib&uid=default>  
 NTFP Species Database  
<http://www.ifcae.org/cgi-bin/ntfp/db/dbsql/db.cgi?db=prod&uid=default>  
 NTFP Cultural Considerations  
<http://www.ifcae.org/ntfp/databases/products/cultural.shtml>
- National Sustainable Agriculture Information Service  
<http://www.attra.org/>  
 Publication List - crops, marketing etc;  
<http://attra.ncat.org/publication.html>
- Saskatchewan Herb and Spice Association  
 Access to: 1) Plant Identification Practice (current); and, 2) information about the National Coalition and projects such as the Good Agricultural Practices Workbook (safety, quality assurance, and traceability)  
<http://www.saskherbspice.org/>  
<http://www.saskherbspice.org/Good%20Practices%20for%20plant%20identification.pdf>
- Small Woodlands Collection  
 College of New Caledonia  
<http://www.cnc.bc.ca/Exploring/Services/Library/infosheets/smallwood.htm>  
 Malaspina University College  
<http://marlin.mala.bc.ca/malabin/door.pl/0/0/0/60/336/X>
- USDA National Agricultural Library - AGRICOLA  
<http://agricola.nal.usda.gov/>
- USDA Forest Service - Research Station Publications  
<http://www.treearch.fs.fed.us/>

The following list provides examples and sources of printed materials which provide background information on plants and management methods. Check your local library or online sources for other general publications on the principles of propagation, crop fertility, pruning, pest management, soil and water management, etc. If crop-specific information is lacking, methods may be adapted and tested following sound horticultural/agricultural principles. If you decide to proceed, use CAUTION, testing a limited number of variables at one time on a small scale. Testing of management methods is a long-term commitment and accurate record keeping is essential.

#### **Plant Information**

- Hitchcock, C.L., and Cronquist, A. 1973. Flora of the Pacific Northwest. The University of Washington Press, Seattle, WA. 730p.
- Johnson, D., Kershaw, L., MacKinnon, A. and Pojar, J. Plants of the Western Boreal Forest & Aspen Parkland. Lone Pine Publishing. Edmonton, AB. 391p.
- MacKinnon, A., Pojar, J., and Coupe, R. 1992. Plants of Northern British Columbia. Lone Pine Publishing. Edmonton, AB.
- Parish, R., Coupe, R., and Lloyd, D. 1996. Plants of the Southern Interior British Columbia. Lone Pine Publishing. Edmonton, AB. 463p.
- Pojar, J. and MacKinnon, A. 1994. Plants of Coastal British Columbia including Washington, Oregon & Alaska. Lone Pine Publishing. Edmonton, AB. 527p.
- Royer, F., and Dickinson, R., 1999. Weeds of Canada and the Northern United States. University of Alberta Press and Lone Pine Publishing, Edmonton, AB. 434p.

#### **Production Information**

- Elzinga, R.J. 1987. Fundamentals of Entomology. Third Edition. Prentice Hall, Inc. Englewood Cliffs, New Jersey. 456p.
- Gill, S., Clement, D.L., and Dutky, E. 1999. Pests & Diseases of Herbaceous Perennials. Ball Publishing, Batavia, Illinois. 304p.
- Nau, J. 1996. Ball Perennial Manual. Propagation and Production. Ball Publishing, Batavia, Illinois. 487p.
- Powell, C.C., and Lindquist, R.K. 1992. Ball Pest & Disease Manual. Disease, insect and mite control on flower and foliate crops. Ball Publishing, Geneva, Illinois.
- Reed, D.W. 1996. Water, Media, and Nutrition for Greenhouse Crops. Ball Publishing, Batavia, Illinois. 314p.
- Staby, G. 1994. Flower & Plant Care Manual. Virginia: Society of American Florists.
- University of California. 2001. Integrated Pest Management for Floriculture and Nurseries. Publication 3402. University of California, Agriculture and Natural Resources Communication Services, Oakland, CA. 422p.

#### **Websites**

- BC MAL – Industry Crop Production Guides  
Berry, Field Crop, Floriculture, Ginseng, Grape, Greenhouse Vegetable, Mushroom, Nursery & Landscape, Tree Fruits, Turfgrass IPM, Vegetable  
<http://www.agf.gov.bc.ca/cropprot/prodguide.htm>
- BC Home and Garden Pest Management Guide  
<http://www.agf.gov.bc.ca/cropprot/gardguide.pdf>
- Special Crops Resource Booklist – compiled in May 2001. Lists resources relating to herbs; processing/value-added/chemistry; BC reports; directories and other crops.  
[http://www.agf.gov.bc.ca/speccrop/publications/documents/sc\\_resource\\_book.pdf](http://www.agf.gov.bc.ca/speccrop/publications/documents/sc_resource_book.pdf)
- BC Government Publications Index  
<http://www.publications.gov.bc.ca/>
- Ball Publishing  
<http://www.ballpublishing.com/>
- Timber Press  
<http://www.timberpress.com/index.cfm>
- Lone Pine Publishing  
<http://www.lonepinepublishing.com/>

## British Columbia

Associated Ginseng Growers of BC

<http://www.bcginsenggrowers.com/>

BC Agritourism Alliance

<http://www.agritourismbc.org/>

BC Association of Farmer's Markets

<http://www.bcfarmersmarket.org/web/index.htm>

BC BioProducts Association

<http://www.bcbioproducts.ca/>

BC Biotech

<http://www.bcbiotech.ca/>

BC Food Processors Association

<http://www.bcfpa.ca/>

BC Herb Grower's Association

<http://www.bcherbgrowers.com/>

Certified Organic Associations of BC

<http://www.certifiedorganic.bc.ca/>

Farm Direct Marketing Associations

Fraser Valley

<http://www.bcfarmfresh.com/>

Southern Vancouver Island

<http://www.islandfarmfresh.com/>

Federation of BC Woodlot Associations

Agroforestry Initiative

<http://www.woodlot.bc.ca/agroforestry/whatis.htm>

Western Canadian Functional Food & Natural Health Product Network

[http://www.bcfn2.com/html/about\\_us.html](http://www.bcfn2.com/html/about_us.html)

## Canadian

Ag-West Bio Inc.

<http://www.agwest.sk.ca/>

Alberta Agriculture Wellness Products Network

<http://www.agwellness.ca/>

Alberta Association of Professional Aromatherapists

<http://www.albertaaromatherapy.org/WelcomePage.htm>

Alberta Natural Health Agricultural Network

<http://www.anhan.org/>

Canadian Hemp Trade Alliance

<http://www.hemptrade.ca/>

Canadian Health Food Association

<http://www.chfa.ca/>

Canadian Herb, Spice & Natural Health Products Coalition

<http://www.saskherbspice.org/may10132007/Webpage/index.htm>

<http://www.saskherbspice.org/What%20is%20the%20national%20coalition.pdf>

Canadian Organic Growers

<http://www.cog.ca/>

Flowers Canada

<http://flowerscanada.org/content/en/internal.htm>

Natural Health Products Research Society of Canada

<http://www.nhpresearch.bcit.ca/index.html>

Ontario Herbalists Association

<http://www.herbalists.on.ca/>

Saskatchewan Herb and Spice Association

<http://www.saskherbspice.org/>

Seeds of Diversity

<http://www.seeds.ca/>

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