

# PLANNING FOR PROFIT



Ministry of Agriculture,  
Food, & Fisheries

## **Certified Organic Versus Non-Organic Budgets for Licorice Root 1/4 Acre Winter 2002**

This information is provided as a tool for projecting costs and returns for B.C. farm enterprises and as a general guide for planning individual farms. The sample budget should be used as a guide only and should not be used for business analysis without adjustments to reflect individual situations. Each farm should develop their own budget to reflect their production goals, costs and market prices.

Information regarding financial planning and other enterprise budgets may be downloaded from the internet at <http://www.agf.gov.bc.ca/busmgmt/budgets/index.htm>.

### **Key Success Factors**

- Medium level of horticultural training and skills.
- Good site selection and preparation.
- Vigilant record keeping of all aspects of operation from production to marketing.
- Strong marketing skills. Identify and research your markets prior to planting.
- Reduce direct and indirect expenses as much as possible.

### **Risk Factors and Strategies**

Production Risks - Disease, weed and insect control are essential to ensure high yields. Climate, topography and soil conditions will affect crop and variety options. Ensure you make selections that are suited to your area. Inexperience and lack of diligence can result in a set back or general reduction in crop yields. Adverse weather conditions can reduce yields and quality. Programs available to offset production risks include NISA and whole farm insurance.

Handling Risks - Ensure all crops are properly harvested, dried, packaged, stored and shipped. Improper handling will reduce the amount of your marketable product.

Price Risks - Depending upon your target market, competition from other local growers or import products is a constant factor. Adjustments in your production or marketing plans may be required. Providing a consistent and high quality product and ensuring your customer needs are met are vital elements in offsetting adverse effects of a competitive market place.

Herbs prices are also very quantity sensitive. Small scale production may result in higher gains than production over 250 lbs.

Market Risks - This will depend upon your marketing strategy. Buyers for herb crops change quite rapidly. Demand for one herb may be high in one year and slow the next. Ensure that your commodity mix will allow for the rise and fall of the markets for individual herbs. Expect to spend a large portion of time keeping track of the current market.

### **Sample Enterprise Budget and Worksheet**

## Certified Organic Versus Non-Organic Budgets for Licorice Root

The sample enterprise budget provided should be viewed as a first approximation only. Use the column "your farm" to add, delete and adjust items to reflect your specific production situation.

The following income and direct expense information does not account for general farm inputs that are applied to the total farm area (eg. general labour costs; general marketing costs; irrigation fees; repair&maintenance, organic certification fees).

### Projected Income - Certified Organic Licorice Root

	Yield	Unit	Average Price	Total Income
Licorice root, cert organic	1000	lbs	5.00	\$5,000.00

### Projected Direct Expenses- Certified Organic Licorice Root

Labour	Qty-Year 1	Qty-Year 2	Qty-Year 3	Unit	Price	Expense-Yr 1	Expense-Yr 2	Expense-Yr 3
Weeding - hired labour	60	20	20	hour	8.00	480.00	160.00	160.00
Harvest - hired labour	0	0	80	hour	8.00	0.00	0.00	640.00
Total hired labour costs	60	20	100	hour	8.00	480.00	160.00	800.00
<b>Seed Cost</b>								
Licorice	1			kg	200.00	200.00	0.00	0.00
Fall rye - cover crop			10	kg	0.65	0.00	0.00	6.50
<b>Tractor Fuel</b>	14		14	litres	0.50	7.00	0.00	7.00
<b>Tractor Oil &amp; lube</b>						1.05	0.00	1.05
<b>Packaging</b>								
Bags - large			25	each	0.05	0.00	0.00	1.25
Corrugated boxes			25	each	2.50	0.00	0.00	62.50
<b>Marketing</b>								
Advertising/faxes/telephone						0.00	0.00	100.00
<b>Irrigation</b>	0.25	0.25	0.25	acres	60.00	15.00	15.00	15.00
<b>TOTAL</b>						1,183.05	335.00	1,793.30

1st Year Expenses

**-\$1,183.05**

2nd Year Expenses

**-\$335.00**

Income less Direct Expenses, 3rd year (certified organic production)

**\$3,206.70**

**Projected Indirect Expenses**

Depreciation	.....
Interest	.....
Insurance	.....
Administration	.....
Legal/accounting	.....
Other	.....
<b>Total</b>	

Indirect expenses do not vary with the level of output and are typically associated with inputs used in more than one enterprise and must be allocated appropriately (prorated) between uses.

**Projected Net Income**

Projected Income	.....
<i>minus</i> Projected Direct AND Indirect Expenses	.....
	<b>Projected Net Income</b>

**SENSITIVITY ANALYSIS OF TOTAL PRODUCTION INCOME**

Profitability is strongly influenced by market prices and yield. The tables below illustrate the changes to income as prices and yield vary.

<b>Price vs. Income</b>	<b>Low</b>	<b>Average</b>	<b>Target</b>	<b>High</b>
	<b>Price</b>	<b>Price</b>	<b>Price</b>	<b>Prices</b>
	\$3.75	\$4.50	\$5.00	\$8.00
<b>Total Income</b>	\$1,957	\$2,707	\$3,207	\$6,207

<b>Yield vs. Income</b>	<b>Low</b>	<b>Average</b>	<b>Target</b>	<b>High</b>
	<b>Yield</b>	<b>Yield</b>	<b>Yield</b>	<b>Yield</b>
	750	925	1000	1250
<b>Total Income</b>	\$1,957	\$2,832	\$3,207	\$4,457

**Certified Organic vs Conventional**

	Area	Yield	Unit	Average	Price	Total
				Price	Range	Income
<b>Licorice root, cert organic</b>	.25 acre	1000	lbs	5.00	4.00-12.00	\$5,000.00
<b>Licorice root, conventional</b>	.25 acre	1000	lbs	1.00	.50-3.00	\$1,000.00

**Cash Flow Timing**

The table below indicates the monthly flow of income and indirect expenses.

	J	F	M	A	M	J	J	A	S	O	N	D	Totals
<b>% Direct Expenses - Year 1</b>	0	0	8	4	3	5	5	5	0	0	0	0	30%
<b>% Direct Expenses - Year 2</b>	0	0	0	0	3	5	5	5	0	0	0	0	18%
<b>% Direct Expenses - Year 3</b>	0	0	0	0	3	5	5	5	29	5	0	0	52%
<b>% Income - Year 3</b>	0	0	0	0	0	0	0	0	0	50	50	0	100%

## Total Labour Hours Required

Labour	Qty-Year 1	Qty-Year 2	Qty-Year 3
Seeding	2	0	0
Weeding	20	20	20
Weeding - hired labour	60	20	20
Pest/Disease control	4	4	4
Irrigation	2	2	2
Harvest	0	0	65
Harvest - hired labour	0	0	80
Washing/Drying	0	0	16
Packaging	0	0	8
Soil prep	1.5	0.0	1.5
Seeding of cover crop-Fall	0.0	0.0	0.5
Total operator labour hours	29.5	26	117
Total hired labour hours	60	20	100
<b>Total labour hours</b>	<b>89.5</b>	<b>46</b>	<b>217</b>

## Investment Capital Replacement Costs

Buildings	\$15,000
Tractor	15,000
Implements	
..... Tillers	8,000
..... Harrows	2,000
Rototiller	500
Washing equipment	200
Dryer	1,500
Bins/totes etc.	100
Hand trucks/dolleys	100
Scale	300
Vehicle	12,000
Small Tools & Equipment	500
Irrigation System	<u>3,000</u>
<b>Total</b>	<b>\$58,200</b>

## Assumptions

The following assumptions were made in calculating the sample budget:

### General Farm Assumptions

#### Income & Expenses:

- Projected income and expenses are based on current markets.

#### Cover crop Assumptions (.25 acres):

- Planting rate: 40kg fall rye/acre; 10 kg total requirements.
- Tractor hours: 3hrs/acre soil prep in fall; 1hr/acre discing in seed; 3hrs/acre soil prep in spring; total 7hrs/acre x .25 acres = 1.75 hrs.
- Cover crop (fall rye) planted in the fall (September) after harvest. Time to work in crop residues and prepare soil for seeding is 3hr/acre. Seed is broadcasted by hand (1hr/acre) and then disced into the soil (1hr/acre) - In the spring the cover crop is worked back into the soil and the land is prepared for planting (3hr/acre) - Nutrients applied to cover crop will be subsequently be released to food crop.
- Cover crop is used as a green manure (ie.nutrient/organic matter source) with no direct income gained.

#### Planting Information:

- Planting is based on rows with 36" centres - Aim for 18-24" between plants.
- Planting is done by hand.
- Licorice does well in poor soil.

#### Marketing Information:

- Prices are based on selling entire production to small to mid-size manufacturers. A more difficult market is selling directly to retail customers, small craft companies or herbalists. A higher price could be realized in the smaller market but will increase the time and expense required for marketing and packaging.

#### Labour requirements:

- Herb enterprises are normally conducted using operator labour with occasional outside help brought in during weed & harvest crisis situations.
- Most weed control labour happens during the seedling stage when the plants are the least weed tolerant.
- Harvest labour is estimated on digging 30 plants per hour.

**Equipment Costs:**

- Tractor Fuel Costs are calculated as follows: no - of tractor hours x 8L/hr consumption x \$0.50/L price.
- Oil & lube costs are assumed at 15% of fuel costs.
- Repair and Maintenance costs are calculated at 3% of investment capital replacement costs.
- Investment capital replacements cost are for a 10 acre farm with 2 acres in production.

**References:**

- Technical Feasibility Study for Medicinal & Aromatic Plants - AG Consulting
- Medicinal Herbs in the Garden, Field & Marketplace, L - Sturdivant, T - Blakeley
- Potential of Herbs as a Cash Crop, RA Miller
- Richters Herbs, [www.richters.com](http://www.richters.com)
- BCMAFF - Planning for Profit Budgets - available at <http://www.agf.gov.bc.ca/busmgmt/budgets/index.htm>

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