



# PLANNING FOR PROFIT

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Ministry of Agriculture,  
Food, & Fisheries

## Certified Organic Versus Non-Organic Budgets for Calendula Flower 1/4 Acre Winter 2002

This information is a tool to project costs and returns for B.C. farm enterprises and is a general guide to plan individual farm operations. This sample budget should be used as a guide only. Each farm should develop their own budget to reflect specific production goals, costs and market prices.

Information regarding financial planning and other enterprise budgets may be viewed at the B.C. Ministry of Agriculture, Food and Fisheries website (<http://www.agf.gov.bc.ca/busmgmt/>).

### 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 appear and disappear 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

## 1/4 ACRE OF CALENDULA FLOWERS

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 (e.g., general labour costs; general marketing costs; irrigation fees; repair maintenance, organic certification fees).

### Projected Income - Certified Organic Calendula Flowers

	Yield	Unit	Average Price	Total Income
Calendula flower, cert organic	175	lbs	13.00	\$2,275.00

Your Farm

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### Projected Direct Expenses - Certified Organic Calendula Flowers

Labour	Area	Quantity	Unit	Price	Expense
Weeding - hired labour		60	hour	8.00	480.00
Harvest - hired labour		40	hour	8.00	320.00
<i>Total hired labour costs</i>		100	hour	8.00	800.00
Seed Cost					
Calendula	.25 acre	1	kg	120.00	120.00
Fall rye - cover crop	.25 acre	10	kg	0.65	6.50
Cover corp. annualized cost					5.00
Tractor Fuel		14	litres	0.50	7.00
Tractor Oil & lube					1.05
Packaging					
Bags - large		5	each	0.05	0.25
Corrugated boxes		5	each	2.50	12.50
Marketing					
Advertising/faxes/telephone					100.00
Irrigation	0.25	0.25	acres	60.00	15.00
<b>TOTAL</b>					<b>\$1,067.30</b>

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**Income less Direct Expenses (certified organic production)**

\$1,207.70
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### Projected Indirect Expenses

Your Farm

Depreciation .....

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Interest .....

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**Insurance** .....

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Administration .....

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Legal/accounting .....

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Other .....

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**Total** .....

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

Your Farm

Projected Income .....

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*minus* Projected Direct AND Indirect Expenses .....

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**Projected Net Income**

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## 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.

### Price vs. Income

	Low	Average	Target	High
	Price	Price	Price	Prices
	6	10	13	18
<b>Total Income</b>	-\$17	\$683	\$1,208	\$2,083

### Yield vs. Income

	Low	Average	Target	High
	Yield	Yield	Yield	Yield
	75	125	175	190
<b>Total Income</b>	-\$92	\$558	\$1,208	\$1,403

## Projected Income - Organic vs. Conventional

	Area	Yield	Unit	Average	Price	Total
				Price	Range	Income
b	.25 acre	175	lbs	13	10.00-18.00	\$2,275
Calendula flower, conventional	.25 acre	175	lbs	3	1.25-4.00	\$525

## 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
<b>% Income</b>	0	0	0	0	0	0	0	0	0	50	50	0
<b>% Direct Expenses</b>	0	0	12	8	20	20	20	10	10	0	0	0

## Total labour hours required

Labour	Quantity	Unit
Seeding	1.5	hour
Weeding	60	hour
Weeding - hired labour	60	hour
Pest/Disease control	4	hour
Fertilization	2	hour
Irrigation	2	hour
Harvest	45	hour
Harvest - hired labour	40	hour
Drying	2	hour
Packaging	2	hour
Soil prep (spring & fall)	1.5	hour
Seeding of cover crop	0.5	hour
<b>Total operator labour hours</b>	<b>120.5</b>	<b>hour</b>
<b>Total hired labour hours</b>	<b>100</b>	<b>hour</b>
<b>Total labour hours required</b>	<b>220.5</b>	<b>hours</b>

## Investment Capital Replacement Costs

Buildings	\$15,000
Tractor	15,000
Implements	
..... Tillers	8,000
..... Harrows	2,000
Rototiller	500
Rightway™ Planter	150
Washing equipment	200
Dryer	1,500
Bins/totes etc.	100
Hand trucks/dolleys	100
Scale	300
Vehicle	12,000
Small Tools & Equip	500
Irrigation System	<u>3,000</u>
<b>Total</b>	<b>\$58,350</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 of annual crops. 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 (i.e. nutrient/organic matter source) with no direct income gained.

### **Calendula Assumptions**

#### **Planting Information:**

- Planting is based on rows with 30" centres - Aim for 6" between plants.
- Planting equipment: single row, push-type "Rightway TM" precision seeder .

#### **Marketing Information:**

- Prices are based on selling entire production to a small to mid-size manufacturer. 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.
- Calendula is used in both cosmetic and medicinal herb sectors.
- Some research being done on the prairies to produce calendula seed as an oil crop.

#### **Quality Considerations**

- Flowers must be picked in the heat of the day when the resin content is the highest.
- Colour is important and must be retained by careful drying.

#### **Labour requirements:**

- Herb enterprises are normally conducted using operator labour with occasional outside help brought in during weed or harvest crisis situations.
- Most weed control labour happens during the seedling stage when the plants are the least weed tolerant. Once the plants reach 12", they begin to shade out weeds and the labour requirements diminish dramatically.
- Harvest labour is estimated on an average picker harvesting 2 dried lbs/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 costs 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 - <http://www.agf.gov.bc.ca/busmgmt/budgets/index.htm>

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