



PLANNING FOR PROFIT



Ministry of Agriculture,
Food and Fisheries

Ginseng - Southern Interior Spring 2000

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.

The sample budget should be used as a guide only and should not be used for business analysis. 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://fbminet.ca/bc> or obtained from your local office of the B.C. Ministry of Agriculture, Food and Fisheries.

Market Factors

The ginseng industry has experienced some price volatility in recent years due to increased production volumes and a slowing in the market distribution system.

Producers are increasingly investigating value-added processing for ginseng. Product development continues to take place with ginseng tea, novel beverages and nutraceuticals.

Key Success Factors

- Supply stabilization
- Market distribution channel maturation
- Processed product market development
- Increased yields per acre

Risk Factors & Strategies

- Fungal infections continue to cause problems in some production areas, especially in wet years. Ginseng production is best located in warm, dry climates with south facing slopes and well-

drained, sandy loam soil. Timely applications of appropriate fungicides will reduce the incidence of disease.

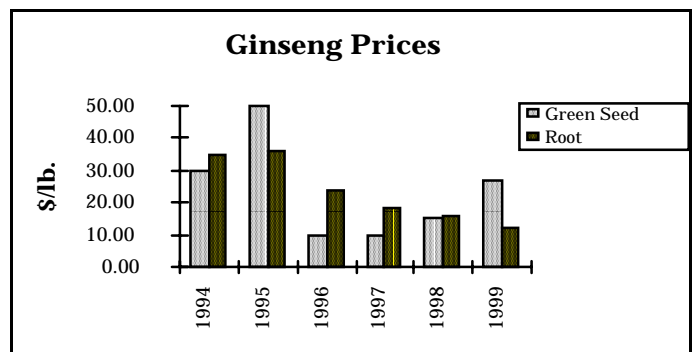
- Pesticide residue standards differ in Canada and the U.S.A.. In Canada, the maximum residue limit has been set at 1 ppm but in the U.S., is set at 10 ppb. Strategies to reduce pesticide residues to meet the current U.S. standard include research to develop super critical CO₂ extraction techniques to produce “pesticide residue free” ginseng value-added products (powdered ginseng and ginseng extracts) for export into the U.S. Another management technique is the use of different chemicals for disease control.

Production Targets

- Root yields in Year 4 of 2,800 lbs./acre
- Seed yields in Year 4 of 400 lbs./acre
- Total Labour:

Year 1 (planting)	49 hrs/acre
Year 2	128 hrs/acre
Year 3	64 hrs/acre
Year 4	124 hrs/acre
Year 5 (harvesting)	363 hrs/acre

The above indicators are provided for comparison purposes and are set out as potential production targets.



Sample Enterprise Budget and Worksheet

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

The sample budget is based on interviews with producers and BCMAF commodity specialists. Cost estimates are based on standard practices in the area and do not represent any particular farm.

	Your Planting Estimate	Year 1 1st Grow Yr	Your Estimate	Year 2 2nd Grow Yr	Your Estimate	Year 3 3rd Grow Yr	Your Estimate	Year 4 Harvest	Your Estimate
Projected Income									
Seed	\$0	\$0		\$0		\$0		\$0	
Root	0	0		0		0		39,200	
Projected Direct Expenses									
Stratified Seed	\$3,000	\$0		\$0		\$0		\$0	
Irrigation System*	1,500								
Fertilizer	100	100		100		100		100	
Pest Control									
Fumigation	20								
Herbicide	30	30		30		30		30	
Fungicide		350		350		350		350	
Insecticide		50		50		50		50	
Straw Mulch	700	100							
Posts & Anchors*	212								
Cable System*	2,500								
Shade Cloth*		9,000							
Machinery Operations									
Fuel, Oil, Lubrication	156	46		46		46		87	
Repairs & Maintenance	309	617		617		617		617	
Labour									
Layout and Set-Up	270								
Hand Weeding		400		240		240		160	
Install/Pull Shade Cloth		440		120		120		120	
Roll/Remove Shade Cloth		120		120		120		300	
Harvesting - Berries/Flowers						400		800	
Remove Posts & Cables								160	
Harvesting - Root								800	
Washing - Root								256	
Rack & Unrack Dryer								280	
Marketing								1,960	
Total Direct Expenses	\$8,797	\$11,253		\$1,673		\$2,073		\$6,071	

Assumptions—Ginseng - 10 Acres

The following assumptions were made in calculating the sample budget:

- 1 acre of a ten acre ginseng operation growing in the Southern Interior.
- The operation is well managed.
- Target Yield of 400 lbs/acre of seed in the 4th year. Sufficient seed for the operation's replanting program is harvested. Seed is assumed not to be sold. Flowers are removed on the balance.
- Target Yield of 2,800 lbs/acre of root (dried) in the 4th year.
- Price of \$14.00/lb.
- Machinery Costs (fuel, oil and lube) are for the following operations: Field Preparation (plowing, disking and bed forming) (Year 1) Layout (Year 1), Seeding (Year 1), Post & Cable Installation (Year 1), Fertilization (Year 1+), Herbicide Application (Year 1-5), Fungicide Application (Year 2-5), Insecticide Application (Year 2-5) and Root Harvesting (Year 5).
- Labour costs are calculated at \$8.00/hr of hand weeding and berry picking and at 10.00/hour for layout, post and cable installation and removal, shade cloth installation, unrolling and removal and racking and unracking the dryer. Labour costs include UIC, CPP and WCB for all other operations.
- All other labour operations are performed by the operation owners.

Calculation of Projected Net Income

To assess the net income of an enterprise, **indirect expenses** must be subtracted from income. 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 Income
Less Projected Direct Expenses	-
= Projected Contribution Margin	=
Less Projected Indirect Expenses	
Depreciation (e.g., buildings and equipment)	-
Interest	-
Other Indirect Expenses (e.g., operator labour)	-
= Projected Net Income

Building & Machinery Replacement Cost

Buildings ¹	\$25,000	¹ Accommodates equipment and supply storage, washing area, dryers and workshop
Power Machinery ²	25,000	² New 45 Hp tractor, modified
Field Machinery ³	51,600	³ Plow, disk, fertilizer spreader, sprayer, bed shaper, mulch spreader, post pounder, seeder, digger, washer, dryer
Irrigation	5,000	
Posts & Cables	21,700	
Shade Cloth	45,000	
Washer	5,000	
Dryer	30,000	
Vehicle	20,000	
Other	<u>2,500</u>	
Total	\$230,800	

Labour Requirements

Year 1		Year 2		Year 3	
Field Preparation	8	Install Shade Cloth	32	Pull Shade Cloth	12
Bed Shaping & Packing	3	Unroll Shade Cloth	12	Fertilize	2
Plant	6	Apply Mulch (hand)	12	Pest Control	8
Mulch	3	Fertilize	2	Hand Weed	30
Fertilize	2	Pest Control	8	Roll Shade Cloth	<u>12</u>
Herbicide Application	2	Hand Weed	50	Total Year 3 Labour	64
Install Posts & Anchors	<u>25</u>	Roll Shade Cloth	<u>12</u>		
Total Year 1 Labour	49	Total Year 2 Labour	128		

Year 4		Year 5* - Harvest		Year 5* - Harvest (continued)	
Unroll Shade Cloth	12	Unroll Shade Cloth	12	Harvest Root	100
Fertilize	2	Fertilize	1	Wash Root	32
Pest Control	8	Pest Control	2	Rack Dryer	16
Hand Weed	30	Hand Weed	20	Sort and Store	<u>12</u>
Harvest - Seed	50	Harvest - Seed	100	Total Year 5 Labour	363
Wash - Seed	5	Wash - Seed	10		
Seed Stratification	5	Seed Stratification	10		
Roll Shade Cloth	<u>12</u>	Remove Shade Cloth	30		
Total Year 4 Labour	124	Remove Posts	16		
		Remove Straw	2		

*Excluding Marketing

Sensitivity Analysis—

The profitability of a ginseng operation will depend strongly on successful marketing and strong production management.

The table below illustrates the changes to returns resulting from a change in price.

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Income	Ginseng Root Yield		
	2,000 lbs/Acre	2,800	3,200
Year 4	21,929	28,929	33,129

Income	Ginseng Root Prices \$/lb.		
	8.00	11.00	14.00
Year 4	16,329	24,729	33,129

The table below illustrates the changes to income-expenses resulting from a change in labour costs.

Income - Expenses	Labour Cost			
	8.00	10.00	12.00	14.00
Planting	-8,743	-8,797	-8,851	-8,905
Year 1	-11,141	-11,253	-11,565	-11,777
Year 2	-1,625	-1,673	-1,841	-1,949
Year 3	-2,025	-2,073	-2,441	-2,649
Year 4	33,301	33,129	31,949	31,273

For More Information

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