



PLANNING FOR PROFIT



BRITISH
COLUMBIA

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Organic Russet Potatoes—Lower Fraser Valley

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 and should not be used for business analysis. Each farm should develop their own budget to reflect their production goals, costs and market prices.

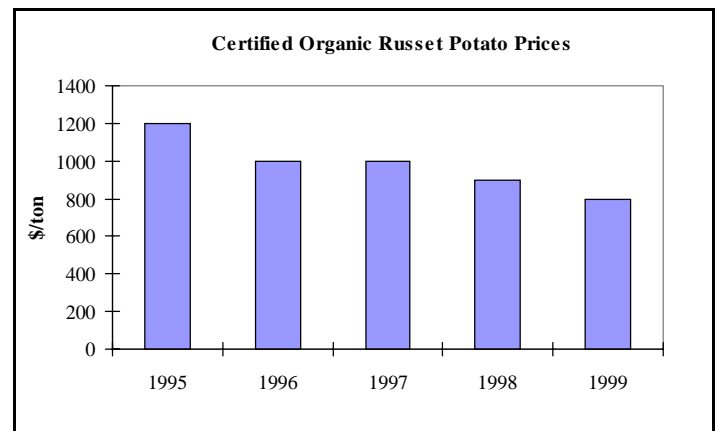
Information regarding financial planning and other enterprise budgets may be downloaded from the internet at <http://www.FBMInet.ca/bc> or obtained from your local office of the B.C. Ministry of Agriculture, Food and Fisheries.

Market Factors

Producers market organic potatoes directly to retail and wholesale markets or indirectly through organizations such as Direct Farm Fresh Co-operative or Better Choice Organics.

In order to sell into the wholesale market, organic potatoes must be certified. Certifying agencies in the Fraser Valley include the BC Association for Regenerative Agriculture, Oregon Tilth, and the Surrey Organic Farmers' Society.

For larger growers, opportunities to export product to U.S. markets exist.



Risk Factors & Strategies

- Largest production risk is late blight infestation. This risk can be minimized by using only clean, disease-free seed and diligently spraying with an approved fungicide.
- Weeds can also be a problem since selective herbicides cannot be used under organic production methods. Extra precautions need to be taken to avoid weeds, including the hilling, cultivating, and tinweeding of crops.
- Weather—to mitigate the risks associated with losses in yields due to poor weather, growers should utilize safety net programs such as NISA, whole farm insurance and crop insurance.

Key Success Factors

- Control of diseases (late blight)
- Weed control
- Fertility management and the effective spread of nutrients (compost/manure) onto the field.

Assumptions

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

The following assumptions were made in calculating the sample budget:

- 1 acre of organic russet potatoes grown in the Lower Fraser Valley.
- The operation is well managed
- Total farm size of 10 acres
- Target yield 12 tons/acre net (after culls have been removed)
- Prices reflect the fall and winter price for Canada #1 standard russet potatoes sold on the Vancouver wholesale organic market in 1999
- Uncertified (conventional) seed is used
- Washing, grading and packaging are done on-site. Washing and grading costs include machinery costs and labour. Packaging costs are for materials only.
- Commission fees are paid to the BC Vegetable Marketing Commission, although the production of organic potatoes is not regulated by the Commission.
- Contract labour is higher for hand hoeing (20 hours) and harvest (48 hours). Wages include workers' compensation and transportation.
- Fuel, oil and lube costs are per acre costs for the following operations: Field Preparation (includes plowing, disking, chisel and rototilling); Tinweed (3x); Cultivate (2x); Hilling (1x); Mechanical Topping (1x); Spraying (6x) and Harvest. It is assumed that mechanical topping is done with a flail mower. However, larger operators are more likely to use a specialized potato topper.
- Repair and maintenance costs includes buildings and machinery and is calculated as 3% of total replacement costs per year divided by the number of acres.

Sensitivity Analysis

The profitability of an organic potato operation will be strongly influenced by market prices and yield. The table below illustrates the changes to income as prices and yield vary.

Yield		Income*
Low	10	8000
Average	11	8800
Target	12	9600
High	13	10400

*Price \$800/ton

Price \$/ton		Income*
Low	600	7200
Average	700	8400
Target	800	9600
High	900	10800

*Yield 12 tons

Cash Flow Timing

The table below indicates the monthly flow of income and direct expenses. It is assumed that the potato crop is sold out of the field with limited or no storage. A complete Projected Cash Flow should include indirect expenses, capital sales and purchases, loans and personal expenses.

	J	F	M	A	M	J	J	A	S	O	N	D
% Income				30	10	10	10	10	30			
% Direct Expenses									20	50	30	

Sample Enterprise Budget and Worksheet Organic Russet Potatoes—One Acre, Lower Fraser Valley

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.

Projected Income	Yield	Unit	Price	Income	Your Farm
Russet potato	12	ton	800	9600	.....
Total Projected Income				9600	.....

Projected Direct Expenses	Quantity	Unit	Price	Expense	Your Farm
<u>Crop Supplies and Service</u>					
Seed	1	ton	280	280	.....
Cover Crop				8	.....
<u>Fertiliser</u>					
Compost	5	yd	35	175	.....
Sul-po-mag (0-0-20-18-20)	0.18		436	78	.....
<u>Crop Protection</u>					
IPM	1	acre	50	50	.....
Kocide (6X)	12	kg	13	156	.....
<u>Marketing</u>					
Washing and Grading	12	ton	100	1200	.....
Packaging	12	ton	100	1200	.....
Marketing	12	ton	80	960	.....
Commission Fee	12	ton	5	60	.....
Contract Labour	68	hr	9	612	.....
Fuel, Oil & Lube				50	.....
Repairs and Maintenance				453	.....
Organic Certification	1	acre	50	50	.....
Total Direct Expenses				5282	.....

Calculation of Projected Net Income

To assess net income, **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	-
= Contribution Margin	=
Less Projected Indirect Expenses	
Depreciation (e.g., buildings and equipment)	-
Interest	-
Other Indirect Expenses (e.g., operator labour)	-
= Projected Net Income	=

Buildings and Machinery Replacement Cost

Buildings	\$ 20,000
Power Machinery	60,000
Field Machinery	30,000
Handling Equipment	6,000
Washing/Packing Equipment	10,000
Vehicles	20,000
Other	5,000
Total Replacement Cost	\$151,000

- Buildings accommodate a small storage area, wash line and tractor.
- Power machinery includes two new tractors (70 Hp and 35 Hp).
- Field machinery includes: cultivator, planter, tinweeder, sprayer, hiller, harvester, topper (flail mower), and seed bed preparation equipment.
- Handling equipment includes wagons or tote bins and a tractor mechanism.
- Washing/packing equipment is for a basic grading line and barrel washer.

Labour Requirements

Hours Per Acre Organic Russet Potatoes
(10 Acre Total Farm Size)

Field Preparation	6
Field Machinery Operation	6
Hand Hoe	20
Harvest	48
Grade, Sort and Wash	20
Total Hours / Acre	100

(Not Including Marketing)

Alternative Production Practices

Russet potatoes represent the majority of the organic crop grown in the Fraser Valley. However, producers may be able to achieve higher prices for other varieties.

Prices for the following varieties for the 1999 season were estimated as:

Early Whites	\$2000/ton
Early Standards	\$1200/ton
Reds & Yellows (Summer)	\$1200/ton
Small Reds & Yellows	\$1600/ton
Reds & Yellows (Fall)	\$ 900/ton

For More Information

References

- Vegetable Production Guide, BCMAFF.
- BC Certified Organic Production Operation Policies and Farm Management Standards, BCMAFF (<http://www.agf.gov.bc.ca/foodind/organic>).
- Potato Health Management by Randall C. Roe (1993) American Phytopathological Society, Minnesota, USA.

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