

Strawberry Profit\$

Agdex FS 230/821-1

. . . profit planning tools for an Alberta strawberry enterprise

Business Summary

This factsheet provides economic information on establishing and operating a U-pick strawberry enterprise. This information was generated by a group of strawberry producers who arrived at a consensus on investment, production, costs and revenues.

The enterprise is a 7 acre strawberry operation with 3 acres of harvestable production, 2 acres in preparation and 2 acres of yard and parking lot. Ninety per cent of the production is taken as U-pick with the remaining 10 per cent marketed in farmers' markets.

This information is intended as a business planning tool. Managers will have to assess all the key production and financial variables that would influence the success of their enterprise.

Production Targets

Production per acre (average)	7,300 lbs.
Labour	\$1,170/acre

Strawberries are an intensely managed crop requiring precise timing. Because of the short season, yield and quality hinge on the timely management of all cultural practices. Production planning should be based on achieving target production by the fifth year.

Newly established operations will require two years of field preparation. Fields must be clean and weed free prior to planting in the second year. Failure to have weeds under control will impact yields and labour requirements during production.

A 50/50 mix of day neutrals and June bearers is suggested to capture both U-pick and farmers' markets.

Irrigation is essential for high yields, good quality and frost control. Access to a reliable source of water of adequate quantity and quality is needed.

Financial Benchmarks

Gross operating profit per acre	\$ 2,831
Labour costs as a percentage of gross revenues	12%

Capital Investment

The investment reflects a developed enterprise capable of generating approximately \$50,000 in gross revenues. ***It is not a startup enterprise.***

	Investment
Machinery	
Tractor - 60 hp	\$ 25,000
Weed sprayer	\$ 3,900
Transplanter	\$ 2,000
Rototiller	\$ 3,500
Fertilizer spreader	\$ 500
Rake	\$ 1,000
Mower	\$ 1,200
Cultivator	\$ 500
Refrigerator	\$ 4,000
Quad & wagon	\$ 5,000
Truck & topper	\$ 30,000
Harrows	\$ 300
Irrigation lines	\$ 5,000
Irrigation pump	\$ 1,500
Total Machinery	\$ 83,400
Buildings & Other	
Signage	\$ 4,000
Storage shed	\$ 12,500
Sales centre	\$ 12,000
Dugout	\$ 7,000
Parking lot	\$ 6,250
Washrooms	\$ 1,250
Total Buildings & other	\$ 44,000
Total Investment (plus land @ \$200/acre/year)	\$ 127,400

Market Factors

Market assessment and development are critical to the success of a strawberry operation. This enterprise direct markets to its customers through U-pick and farmers' markets. The primary market is U-pick, with 90 per cent of the sales. The planting of day neutral varieties provides some cash flow for the first year of planting.

Location is critical for a U-pick operation. Ideal sites are located within 50 km of an urban centre or along a major transportation route. Rural locations must rely on farmers' market sales to supplement lower U-pick revenues.



Cash Flow Projections - Strawberry Enterprise 7 Acres

Cash flow must be looked at separately from revenue and expenses to assess the viability of the enterprise. Year to year variations in prices and yields will affect cash flow. Individuals investing in a strawberry enterprise will require sufficient start-up capital to meet cash outflows until sales are made. New operators may require longer time to learn marketing techniques, weed control, establish customers and manage labour.

	Year 1	Year 2	Year 3	Year 4	Year 5
Cash Outflows					
Total Capital Investment	\$ 127,400	\$ -	\$ -	\$ -	\$ -
Total Cash Operating Expenses¹	\$ 2,776	\$ 8,750	\$ 17,107	\$ 24,917	\$ 31,104
Personal Withdrawals	\$ 5,000	\$ 5,000	\$ 5,000	\$ 5,000	\$ 5,000
Annual Debt Payments	\$ 5,442	\$ 5,442	\$ 5,442	\$ 5,442	\$ 5,442
Total Cash Outflows	\$ 140,618	\$ 19,192	\$ 27,548	\$ 35,358	\$ 41,545
Cash Inflows					
Borrowed Capital	\$ 38,220				
Equity Capital	\$ 89,180				
Start Up Capital	\$ 35,000				
Total Cash Revenues	\$ -	\$ -	\$ 18,320	\$ 35,495	\$ 50,380
Total Cash Inflows	\$ 162,400	\$ -	\$ 18,320	\$ 35,495	\$ 50,380
Net Cash Flows	\$ 21,782	\$ (19,192)	\$ (9,228)	\$ 137	\$ 8,835
Cumulative Cash Flows	\$ 21,782	\$ 2,590	\$ (6,638)	\$ (6,502)	\$ 2,333

Debt level is not likely to exceed 30%.

Critical Cost Variable

Labour

Hired labour is a significant cost component in strawberry enterprises. Field work is usually hired while owners supervise pickers.

Crop	Labour	Number of Hours	Total Cost
Planting	Hoeing	24	\$ 756
	Placing irrigation	16	\$ 168
	Deblooming	8	\$ 84
	Irrigation	8	\$ 84
	Winterize irrigation	8	\$ 84
First year production	Weedwipe	20	\$ 210
	Hand weeding	32	\$ 336
	Irrigation	64	\$ 672
	Winterize irrigation	8	\$ 84
Second year production	Weedwipe	20	\$ 210
	Hand weeding	64	\$ 672
	Irrigation	64	\$ 672
	Winterize irrigation	8	\$ 84
Third year production	Weedwipe	16	\$ 168
	Hand weeding	32	\$ 336
	Irrigation	48	\$ 504
	Remove irrigation	8	\$ 84

*Weedwiping is not commonly used on larger acreages. Its use will depend on the effectiveness of mechanical and chemical control.

Snapshot Enterprise Budget

7 Acre Strawberry Enterprise - Year 5

Projected Revenues	No.	Price	Revenues	Your Snapshot
U-pick sales	19,800 lb	\$2.10/lb	\$41,580	_____
Farmers' market sales	2,200 lb	\$4.00/lb	\$ 8,800	_____
Total Projected Revenues			\$50,380	_____
Projected Direct Costs				
Plant material			\$ 1,500	_____
Fertilizer			\$ 910	_____
Chemicals			\$ 485	_____
Custom Work (straw spreading)			\$ 3,565	_____
Equipment operating & maintenance			\$ 462	_____
Marketing costs			\$ 2,640	_____
Picking costs			\$ 1,100	_____
Containers			\$ 330	_____
Professional development			\$ 1,000	_____
Advertising			\$ 2,000	_____
Utilities			\$ 1,000	_____
Other Pest Control			\$ 100	_____
Windbreaks			\$ 200	_____
Interest on operating loan ²			\$ 551	_____
U-pick supervision ³			<u>\$ 7,560</u>	_____
Total Projected Direct Costs			\$23,403	_____
Projected Indirect Costs				
Insurance			\$ 450	_____
Labour			\$ 5,850	_____
Land rental			\$ 1,400	_____
Depreciation on machinery ⁴			\$ 1,811	_____
Depreciation on buildings			<u>\$ 3,308</u>	_____
Total Projected Indirect Costs			\$12,819	_____
Total Projected Direct & Indirect Costs			\$36,222	_____
Gross Operating Profit			\$14,158	_____
Interest on Investment⁵				
Buildings and equipment			\$ 660	_____
Total Projected Economic Costs			\$36,882	_____
Return to Management⁶			\$13,498	_____

Sensitivity Analysis

The profitability of a strawberry enterprise will be influenced by changes in production and market prices.

The table below lists the changes to return to management as market prices for strawberries vary.

Change in Strawberry Prices	Return to Management
-20%	\$ 3,422
-10%	\$ 8,460
0%	\$ 13,498
+ 10%	\$ 18,536
+ 20%	\$ 23,574

Average production for strawberry enterprises is 7,300 pounds per acre. The following table shows the changes to return to management as production varies.

Production Per Acre	Return to Management
8,030	\$ 9,590
7,665	\$ 8,754
7,300 (average)	\$ 7,918
6,935	\$ 7,082
6,570	\$ 6,246

Definitions

¹Cash operating costs: Direct costs + insurance

²Interest on operating: The interest on an operating loan, at 7% for 6 months.

³U-pick supervision: Labour contributed by the owner-operator, valued at \$10.50/hour.

⁴Depreciation: The reduction in the value of an asset over its lifetime.

⁵Interest on Investment: The cost of investing in capital assets rather than in a financial investment. Valued at 5.89% on machinery and buildings.

⁶Return to Management: An amount left to compensate the owner-operator for risk and management.

Risk Factors

Individual operators must address the following risk factor:

- Water — adequate rainfall or availability of irrigation is necessary.
- Perishability
- Weather — adequate snowfall is required for winter protection. Late spring frosts can damage flowers and reduce yields.
- Insects — strawberries are susceptible to attack from a number of insect pests.
- Diseases
- Labour

Management Strategies

Key management strategies that will contribute to the production and economic performance:

- Analyse the local market and nearby grower competitor
- Develop a marketing strategy to capture the U-pick market. Farmers' market sales can generate higher revenue but constitute a lower sales volume.
- Plant a mix of day neutrals and June bearers to capture both markets.
- Fields must be clean and weed free to reduce competition.
- Management of hired labour is essential to achieve average production.

For more information, contact:

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Alberta Ag-Info Centre
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Visit our website at <http://www.agric.gov.ab.ca>

Publications
"Commercial Strawberry/Raspberry Industry"
AgVentures, 1998. Agdex 230/830-1

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