PLANNING FOR PROFIT

BRITISH COLUMBIA Ministry of Agriculture, Food and Fisheries

Summer 2001

Late Season Cherries – Okanagan Valley
Central Axe – 581 trees/acre

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.

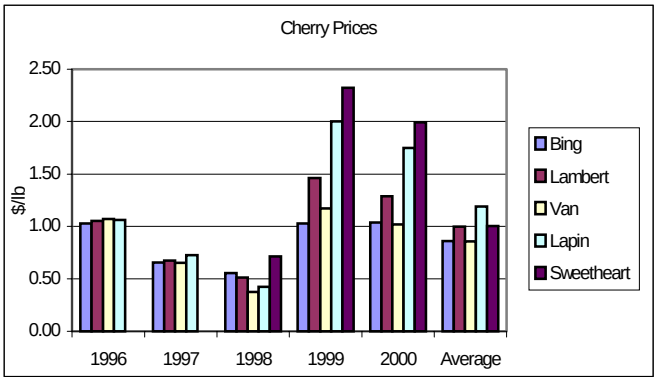
Information regarding financial planning and other enterprise budgets may be downloaded from the internet at http://fbminet.ca/bc or obtained from your local office of the B.C. Ministry of Agriculture, Food and Fisheries.

Market Factors

Late season cherry production is well suited to the Okanagan Valley. Cherries growers have a number of market options including local brokers or direct farm gate sales to peddlars, roadside stands, and consumers. Some growers pack and sell their crop in their own private packing facilities while others ship to packinghouse cooperatives. The market for late season cherries remains strong, although variety diversification to extend the harvest period is crucial to achieving high returns.

The potential for direct to the consumer sales is limited, although price returns per pound are generally greater than returns from brokers, peddlars or roadside stands.

The demand for late season cherries is still growing.



Note: Weighted averages for all grades and sizes. Source: B.C. Fruit Packers, Kelowna, B.C.

Risk Factors & Strategies

Price Fluctuations in prices are the largest risk factor. For direct farm gate sales, producers should plant several varieties in order to have a greater harvest period and avoid a midseason surplus. Use conservative prices when developing budgets.

Production Horticultural skills must be at a high level, with varieties having different demands. Inexperience and lack of diligence can reduce yield. Brown rot, powdery mildew, insect and rodent damage can cause substantial yield losses. Excellent weed control, nutrition, and soil preparation in addition to proper irrigation are also essential for low tree mortality and high yields. Hail and frost damage are a constant threat as is cherry splitting (caused by heavy rains during warm weather).

Financial Capital inputs including land, equipment, irrigation systems, and trees are substantial. Equipment sharing, land leasing, and reducing labour input costs can offset the financial risk. Crop insurance, whole farm insurance, and NISA are risk management tools to consider.

Assumptions: Late Season Cherries Central Axe 581 trees/acre Okanagan

The sample budget reflects standard practices in the area and does not represent any particular farm. The budget is based on interviews with producers, packinghouse staff, and BCMAFF specialists plus information from local nurseries and agricultural suppliers.

- 1 acre of late season Cherries in the Okanagan Valley. Total farm size of 20 acres
- Production of 2000 lbs in year 2 and full production of 14,000 lbs/acre in year 7.
- 80% of the total yield is for the fresh market and attains price returns at a target price of $1.50/lb. 20% of the total yield is culled and receives no price return.
- 5/8 inch caliper trees are planted 5 feet apart in rows 15 feet apart (581 trees/acre) at a cost of $8.50 per tree. There is a 3% tree mortality rate and these trees are replaced in year 2.
- Building and machinery repair and maintenance costs are estimated at 3% of replacement value for one acre. These costs include the repair and maintenance of buildings, tractors, implements, farm vehicles and irrigation system.
- Fuel costs are calculated on the basis of a standard 8L/hr fuel consumption, $0.50/L fuel cost, and the time/acre required to complete the following tasks with a tractor: mowing (4X in year 1; 5X in years 2 to 7; 0.75 hrs each); weed spraying (4X in year 1; 3X for years 2 to 7; 0.75 hrs each); tree drying (2X in yr 3; 3X in yr. 4-7; 0.5 hrs each); tree spraying (8X in year 1; 10X in years 2 to 7; 0.5 hrs each); ground fertilizing (3X in year 1 to 2; 1X in year 3 to 7; 0.25 hrs each); bin/pail yarding (1,3,5,6 and 7 hrs for years 3 to 7, respectively).
- There is a variable amount of labour associated with equipment set-up and maintenance, purchasing supplies, organizing picking crews, general administration, etc. Due to the high cost variability, these operations are not accounted for in this sample budget but are important parts of any farm operation.

Key Success Factors

- High level of horticultural training & skills to produce high quality and high yields.
- Reduce direct and indirect expenses as much as possible. Hire out as little of the labour inputs as possible (eg.prune yourself)
- Plant more than one variety to extend harvest period.
- Diversify your markets.

Sensitivity Analysis

The profitability of an operation will be strongly influenced by prices and marketable yield. The table below illustrates the changes to contribution margin as prices and yield vary in the full production year.

	Yield (lb)	Contribution margin *
Low	8,000	5,986
Average	9,600	8,386
Target	11,200	**10,786**
High	14,800	16,186

*$1.50/lb

	Price($/lb)	Contribution margin *
Low	1.00	5,186
Average	1.20	7,426
Target	1.50	**10,786**
High	2.00	16,386

11,200 lbs

Cash Flow Timing

The table below indicates the monthly flow of income and direct expenses. It assumed that fruit is delivered to the local packinghouse cooperative. Packinghouse payments are made in August and September. A complete Projected Cash Flow should inlcude indirect expenses, capital sales and purchases, loans and personal expenses.

Month	**J**	**F**	**M**	**A**	**M**	**J**	**J**	**A**	**S**	**O**	**N**	**D**
%Income								75	25			
%Expenses			5	10	10	10	35	30				

One Acre Enterprise Budget and Worksheet
Late Season Cherries Central Axe – 581 trees/acre

These projections 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.

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Your Estimate
Projected Income	(planting)						Full prod'n	
Yield (lb./acre)	0	0	2,000	6,000	10,000	12,000	14,000	
80% Marketable Yield (lb.)**	0	0	1,600	4,800	8,000	9,600	11,200	
Total Projected Income **	**0**	**0**	**2,400**	**7,200**	**12,000**	**14,400**	**16,800**	
** 85% of the total yield attains price returns at a target price of $1.50/lb								
Projected Direct Expenses								
Trees (3/4")*	5,159	155	0	0	0	0	0	
Soil Amendments (eg.,. peat)	466	0	0	0	0	0	0	
Irrigation System*/Tax	1550	50	50	50	50	50	50	
IPM charges	50	50	75	75	75	75	75	
Insecticides / Rodent Bait	14	141	205	205	205	205	205	
Fungicides	23	23	190	190	190	190	190	
Herbicides	146	96	96	96	96	96	96	
Fertilizers	89	89	40	53	53	53	53	
Foliar nutrients	96	96	66	66	66	66	66	
Activol (gibberillic acid)	0	0	204	204	204	204	204	
Agral90	0	0	2	2	2	2	2	
Hive Rental	0	0	100	100	100	100	100	
Crop Insurance	0	0	0	75	75	75	75	
Machinery R&M	312	312	312	312	312	312	312	
Fuel, Oil & lube	114	54	66	76	82	86	93	
Labour								
-Plant/Prune/Train/General	2,713	394	333	333	333	333	333	
-Harvesting (incl. Bin handling)	0	0	594	1,783	2,972	3,566	4,161	
Total Direct Expenses	**10,731**	**1,460**	**2,332**	**3,620**	**4,814**	**5,413**	**6,014**	
Contribution Margin	**-10,731**	**-1,460**	**68**	**3,580**	**7,186**	**8,987**	**10,786**	

* May be a viewed as a capital item.

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 - .....
= Projected Contribution Margin = ...

Less Projected Indirect Expenses
Depreciation (e.g., buildings and equipment) - .....
Interest - .....
Other Indirect Expenses (e.g., operator labour) - .....
= Projected Net Income .....

Labour Requirements Late Season Cherries Central Axe 581 trees/acre

Person Labour (hrs/acre)	Yr1	Yr2	Yr3	Yr4	Yr5	Yr6	Yr7
Land clear/prep	60						
Irrigation install	20						
Survey, stake, plant ,paint	48						
Pruning	5	15	29	29	29	29	29
Training	20	20					
Mow, spray, fertilize	10.75	11.75	12.25	12.75	12.75	12.75	12.75
Harvest							
...picking	0	0	50	150	250	300	350
…yarding (bins in/out)	0	0	1	3	5	6	7
Trucking (bin hauling)	0	0	1	3	5	6	7

Machine Labour (hours/acre)	
Land clear/prep.	
….stump removal	5
…ground ripping	3
Irrigation Install (trenching)	1

Hired labour is required for land clearing and preparation, irrigation installation, planting, pruning, hand thinning, and harvesting. Land clearing and preparation assumes: 5 hr of machine time at $80/hr for stump removal; 3 hrs of machine time at $125.00/hr for ground ripping; 60 hrs of labour at $10/hr for tree cutting, wood bucking & removal, debris removal & burning, and cultivation. Planting assumes: 4 hrs of labour for surveying and staking site and 4.5 min/tree at $10/hr for planting and painting trunks. Irrigation installation assumes 1 hr at $75/hr for trenching and 20 hrs at $10/hr for system installation. Labour costs for pruning are based on $10/hr and 0.5 min/tree, 1.5 min/tree and 3 min/tree for yr 1, yr 2. And yr 3 to 7, respectively. Costs for harvesting assume: $0.25/lb for picking; 2000 lb/hr x $10/hr for yarding bins in and out. Trucking (shipping) costs are estimated at 2000 lb/hr x $10/hr. WCB and benefits are detailed separately and total 14.3% (2.85% WCB; 7.45% CPP&EI; 4% vacation pay).

Alternative Production Practices

- Planting at lower densities will prolong the time to attain full production by two or more years.
- The use of dwarfing rootstocks to limit tree size and maintain a small tree in higher density plantings is currently recommended for trial plantings only.
- Growers may consider growing a greater diversity of crops to help reduce overall farm risk.

Buildings and Machinery Replacement Cost (20 acres)

Buildings (does not include cabins)	$40,000
Tractors	50,000
Girette	10,000
Implements	
…mower, tiller, ripper, blade	11,500
…sprayers	17,500
…loader & attachments	7,000
…fertilizer spreader	2,300
Small Tools & Equipment	18,500
Irrigation system	45,000
Supplies (bins, barrels)	1,000
Farm vehicles	25,000
Total	**227,800**

For More Information

References:

- Tree Fruit Production Guide, BCMAFF
- Sweet Cherries: 311 trees/acre – Okanagan Valley. Spring 1999. Planning for Profit. BCMAFF
- FBMInet-BC- Farm business management web site. http://fbminet.ca/bc
- BCMAFF web site. http://www.agf.gov.bc.ca/
- BCMAFF Infobasket http://infobasket.gov.bc.ca

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