



Southwest British Columbia Small-Scale Farm Enterprise Budget: **Kale**



Institute for Sustainable Food Systems
Kwantlen Polytechnic University

Technical Bulletin 2015-004

kpu.ca/isfs

Ermias Afeworki, Wallapak Polasub, Caroline Chiu and Kent Mullinix

This enterprise budget presents costs and returns for a 0.1 acre of kale grown on a small-scale mixed vegetable farm in southwest British Columbia, Canada. The sample values are typical of small-scale brassica crop production using low-input growing methods and selling directly to consumers through venues such as farmers' markets. These values were derived from data gathering sessions with representative farmers from the region, but do not represent any particular farm, and should be used only as a guide. The actual costs of production may vary from farm to farm depending on production method and scale, machinery use and other input costs. This budget is also available as a dynamic MS Excel spreadsheet to facilitate more detailed planning for your own operation. Please refer to the "Institute for Sustainable Food Systems Enterprise Budget User Guide for assistance in tailoring the spreadsheet to your own farm.

Assumptions:

- 1) The kale crop area is 0.1 acre, consisting of 11 beds, each measuring 4' x 100' (400 square feet per bed) grown on a small-scale mixed-vegetable farm.
- 2) Kale takes four months from seed to harvestable maturity.
- 3) An annual land rent of \$400 per acre is included in overhead charges.
- 4) Physical farm labourers (regular labour) are paid \$12 per hour.
- 5) Equipment operators (operator labour) are paid \$15 per hour.
- 6) The proportion of sales of kale to the total annual sales of 20 crops, grown on a 3.85-acre mixed vegetable farm, is used to allocate marketing costs to the kale enterprise.
- 7) The proportion of the farm's total cultivated acreage used to grow kale is used to allocate fixed costs to the kale enterprise.
- 8) Fuel cost is \$1.30 per liter.
- 9) The interest rate is fixed at 5%.
- 10) The annual fixed cost is estimated using the straight-line depreciation method.
- 11) Management time is not included as a cost. The net return over total cost may be considered as the return to management time.

The enterprise budgets project was generously funded by Vancouver City Savings Credit Union (Vancity). Support for this project does not necessarily imply Vancity's endorsement of the findings or contents here in.

Vancity

REVENUE					
Item	Quantity per 0.1 Acre	Unit	\$ per unit	\$ per 0.1 Acre	\$ per 100' Bed
Kale	2,880.00	bunches	\$2.50	\$7,200.00	\$654.55

ANNUAL VARIABLE COST					
Item	Quantity per 0.1 Acre	Unit	\$ per unit	\$ per 0.1 Acre	\$ per 100' Bed
Seeds and Plants					
Seed	2000.00	seeds	0.00	5.00	0.45
Fertility and Nutrients					
Compost	1.50	yards	40.00	60.00	5.45
Lime	200.00	pounds	0.10	20.00	1.82
Other Materials					
Potting mix				25.00	2.27
Trays	20.00	trays	1.20	24.00	2.18
Land Preparation					
Prepare land (plow, disk, rotovate) – operator labour	0.75	hours	15.00	11.25	1.02
Apply pre-plant amendments (lime, compost) – operator labour	0.75	hours	15.00	11.25	1.02
Planting					
Transplanting (potting up, moving, transplanting) – regular labour	10	hours	12.00	120.00	10.91
Pest Management					
Weeding – regular labour	16	hours	12.00	192.00	17.45
Other Activities					
Irrigating (set up, manage drip) – regular labour	5	hours	12.00	60.00	5.45
Post-Harvest Activities					
Harvesting (picking, washing, grading) – regular labour	120	hours	12.00	1,440.00	130.91
Miscellaneous Expenses					
Repair and maintenance				112.77	10.25
Fuel				10.35	0.94
Interest on working capital				34.86	3.17
Marketing				632.58	57.51
TOTAL LABOUR COST				1,834.50	166.77
TOTAL MATERIAL COST				134.00	12.18
TOTAL MISCELLANEOUS COST				790.55	71.87
TOTAL VARIABLE COST				2,759.05	250.82

ANNUAL FIXED COST		
Item	\$ per 0.1 Acre	\$ per 100' Bed
Machinery		
Tractor	44.81	4.07
Rototiller	9.52	0.87
Discer	4.55	0.41
Manure spreader	12.99	1.18
Delivery van	57.14	5.19
Pick-up truck	19.05	1.73
Equipment and tools	25.00	2.27
Irrigation	130.90	11.90
Building and shelter	170.51	15.50
Overhead charges		
Land rent	42.00	3.82
Soil test	2.73	0.25
Farm liability insurance	16.36	1.49
Motor vehicle insurance	55.91	5.08
Office expenses	27.27	2.48
Electricity	19.09	1.74
Water	27.27	2.48
Telephone and internet	13.64	1.24
Bookkeeping fees	163.64	14.88
Professional fees (accountant, lawyers, etc)	19.09	1.74
TOTAL ANNUAL FIXED COST	861.46	78.31

TOTAL COST	\$ per 0.1 Acre	\$ per 100' Bed
TOTAL FIXED AND VARIABLE COST	3,620.51	329.14

NET RETURNS		
Item	\$ per 0.1 Acre	\$ per 100' Bed
Return Over Variable Cost	4,440.95	403.72
Return Over Fixed Cost	6,338.54	576.23
Return Over Total Cost	3,579.49	325.41

MACHINERY INFORMATION				
Item	Type	Purchase Price (\$)	Trade-in Value (\$)	Useful Life (Years)
Tractor	25 HP (new)	23,000.00	0.00	20
Rototiller	48" (new)	4,000.00	0.00	15
Discer	used	3,000.00	0.00	30
Manure spreader	used	4,000.00	0.00	10
Sprayer	used	5,000.00	0.00	10
Delivery van	Isuzu 2002 (used)	24,000.00	0.00	15
Pick-up truck	used	8,000.00	0.00	15

ACKNOWLEDGMENTS

The authors would like to express our sincere appreciation to all the farmers who contributed information used to develop this enterprise budget. We would also like to thank Chris Bodnar, co-owner of Close to Home Organics Ltd, and Heather Pritchard, farm program manager at Farm Folk City Folk, for helping us connect with experienced farmers. Kwantlen Polytechnic University's Michael Bomford (Sustainable Agriculture & Food Systems) and Caitlin Dorward (Institute for Sustainable Food Systems), reviewed and revised this document. Finally, we would like to acknowledge the financial support provided by Vancouver City Savings Credit Union.