



# Southwest British Columbia Small-Scale Farm Enterprise Budget: **Radish**



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This enterprise budget presents costs and returns for a 0.05 acre of radish grown on a small-scale mixed vegetable farm in southwest British Columbia, Canada. The sample values are typical of small-scale short season 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 radish crop area is 0.05 acre, consisting of five beds, each measuring 4' x 100' (400 square feet per bed) grown on a small-scale mixed-vegetable farm.
- 2) Radish takes two 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 radish to the total annual sales of 16 crops, grown on a 2-acre mixed vegetable farm, is used to allocate marketing costs to the radish enterprise.
- 7) The proportion of the farm's total cultivated acreage used to grow radish is used to allocate fixed costs to the radish 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.

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**Vancity**

| REVENUE |                        |         |             |                  |                 |
|---------|------------------------|---------|-------------|------------------|-----------------|
| Item    | Quantity per 0.05 Acre | Unit    | \$ per unit | \$ per 0.05 Acre | \$ per 100' Bed |
| Radish  | 1,600.00               | bunches | \$3.00      | \$4,800.00       | \$960.00        |

| ANNUAL VARIABLE COST   |                        |            |             |                  |                 |
|--|------------------------|------------|-------------|------------------|-----------------|
| Item   | Quantity per 0.05 Acre | Unit       | \$ per unit | \$ per 0.05 Acre | \$ per 100' Bed |
| <b>Seeds and Plants</b>  |                        |            |             |                  |                 |
| Seed   | 56.00                  | 1000 seeds | 1.80        | 100.80           | 20.16           |
| <b>Fertility and Nutrients</b>   |                        |            |             |                  |                 |
| Compost (Chicken manure)   | 400.00                 | pounds     | 0.10        | 40.00            | 8.00            |
| Lime   | 100.00                 | pounds     | 0.30        | 30.00            | 6.00            |
| <b>Other Materials</b>   |                        |            |             |                  |                 |
| Row cover  |                        |            |             | 180.00           | 36.00           |
| Rubber bands   |                        |            |             | 10.00            | 2.00            |
| <b>Land Preparation</b>  |                        |            |             |                  |                 |
| Custom plowing   |                        |            |             | 12.00            | 2.40            |
| Apply pre-plant amendments (lime, manure) – regular labour                               | 2.5                    | hours      | 12.00       | 30.00            | 6.00            |
| Apply pre-plant amendments (lime, manure) – operator labour                              | 2.5                    | hours      | 15.00       | 37.50            | 7.50            |
| Prepare for planting (form beds, lay row cover, irrigation set-up, etc) – regular labour | 2                      | hours      | 12.00       | 24.00            | 4.80            |
| Prepare for planting (form beds, lay row cover, irrigation set-up, etc) –operator labour | 1                      | hours      | 15.00       | 15.00            | 3.00            |
| <b>Planting</b>  |                        |            |             |                  |                 |
| Seeding – regular labour   | 2                      | hours      | 12.00       | 24.00            | 4.80            |
| <b>Pest Management</b>   |                        |            |             |                  |                 |
| Weeding – regular labour   | 12                     | hours      | 12.00       | 144.00           | 28.80           |
| <b>Other Activities</b>  |                        |            |             |                  |                 |
| Irrigating (manage drip or overhead) – regular labour                                    | 0.5                    | hours      | 12.00       | 6.00             | 1.20            |
| <b>Post-Harvest Activities</b>   |                        |            |             |                  |                 |
| Harvesting – regular labour  | 72                     | hours      | 12.00       | 864.00           | 172.80          |
| Post-harvest handling (wash, sort, pack, store) – regular labour                         | 36                     | hours      | 12.00       | 432.00           | 86.40           |
| <b>Miscellaneous Expenses</b>  |                        |            |             |                  |                 |
| Repair and maintenance   |                        |            |             | 48.50            | 9.70            |
| Fuel   |                        |            |             | 23.09            | 4.62            |
| Interest on working capital  |                        |            |             | 16.84            | 3.37            |
| Marketing  |                        |            |             | 657.95           | 131.59          |
| <b>TOTAL LABOUR COST</b>   |                        |            |             | <b>1,588.50</b>  | <b>317.70</b>   |
| <b>TOTAL MATERIAL COST</b>   |                        |            |             | <b>360.80</b>    | <b>72.16</b>    |
| <b>TOTAL MISCELLANEOUS COST</b>  |                        |            |             | <b>746.39</b>    | <b>149.28</b>   |
| <b>TOTAL VARIABLE COST</b>   |                        |            |             | <b>2,695.69</b>  | <b>539.14</b>   |

| <b>ANNUAL FIXED COST</b>       |                         |                        |
|--------------------------------|-------------------------|------------------------|
| <b>Item</b>                    | <b>\$ per 0.05 Acre</b> | <b>\$ per 100' Bed</b> |
| <b>Machinery</b>               |                         |                        |
| Tractor                        | 29.06                   | 5.81                   |
| Rototiller                     | 7.60                    | 1.52                   |
| Manure spreader                | 15.63                   | 3.13                   |
| Pick-up truck                  | 80.21                   | 16.04                  |
| Trailer                        | 1.88                    | 0.38                   |
| <b>Equipment and tools</b>     | 14.26                   | 2.85                   |
| <b>Irrigation</b>              | 27.29                   | 5.46                   |
| <b>Building and shelter</b>    | 15.44                   | 3.09                   |
| <b>Overhead charges</b>        |                         |                        |
| Land rent                      | 21.00                   | 4.20                   |
| Soil test                      | 2.63                    | 0.53                   |
| Farm liability insurance       | 22.05                   | 4.41                   |
| Motor vehicle insurance        | 54.60                   | 10.92                  |
| Office expenses                | 13.13                   | 2.63                   |
| Electricity                    | 25.20                   | 5.04                   |
| Water                          | 26.25                   | 5.25                   |
| Telephone and internet         | 13.13                   | 2.63                   |
| <b>TOTAL ANNUAL FIXED COST</b> | <b>369.34</b>           | <b>73.87</b>           |

|                                      |                         |                        |
|--------------------------------------|-------------------------|------------------------|
| <b>TOTAL COST</b>                    | <b>\$ per 0.05 Acre</b> | <b>\$ per 100' Bed</b> |
| <b>TOTAL FIXED AND VARIABLE COST</b> | <b>3,065.03</b>         | <b>613.01</b>          |

| <b>NET RETURNS</b>               |                         |                        |
|----------------------------------|-------------------------|------------------------|
| <b>Item</b>                      | <b>\$ per 0.05 Acre</b> | <b>\$ per 100' Bed</b> |
| <b>Return Over Variable Cost</b> | <b>2,104.31</b>         | <b>420.86</b>          |
| <b>Return Over Fixed Cost</b>    | <b>4,430.66</b>         | <b>886.13</b>          |
| <b>Return Over Total Cost</b>    | <b>1,734.97</b>         | <b>346.99</b>          |

| <b>MACHINERY INFORMATION</b> |             |                            |                            |                            |
|------------------------------|-------------|----------------------------|----------------------------|----------------------------|
| <b>Item</b>                  | <b>Type</b> | <b>Purchase Price (\$)</b> | <b>Trade-in Value (\$)</b> | <b>Useful Life (Years)</b> |
| Tractor                      | 23 HP       | 16,000.00                  | 1500.00                    | 20                         |
| Rototiller                   | 48" (new)   | 4,000.00                   | 1500.00                    | 15                         |
| Manure spreader              | used        | 5,000.00                   | 0.00                       | 10                         |
| Pick-up truck                | new         | 35,000.00                  | 0.00                       | 15                         |
| Trailer                      | used        | 1,000.00                   | 0.00                       | 20                         |

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