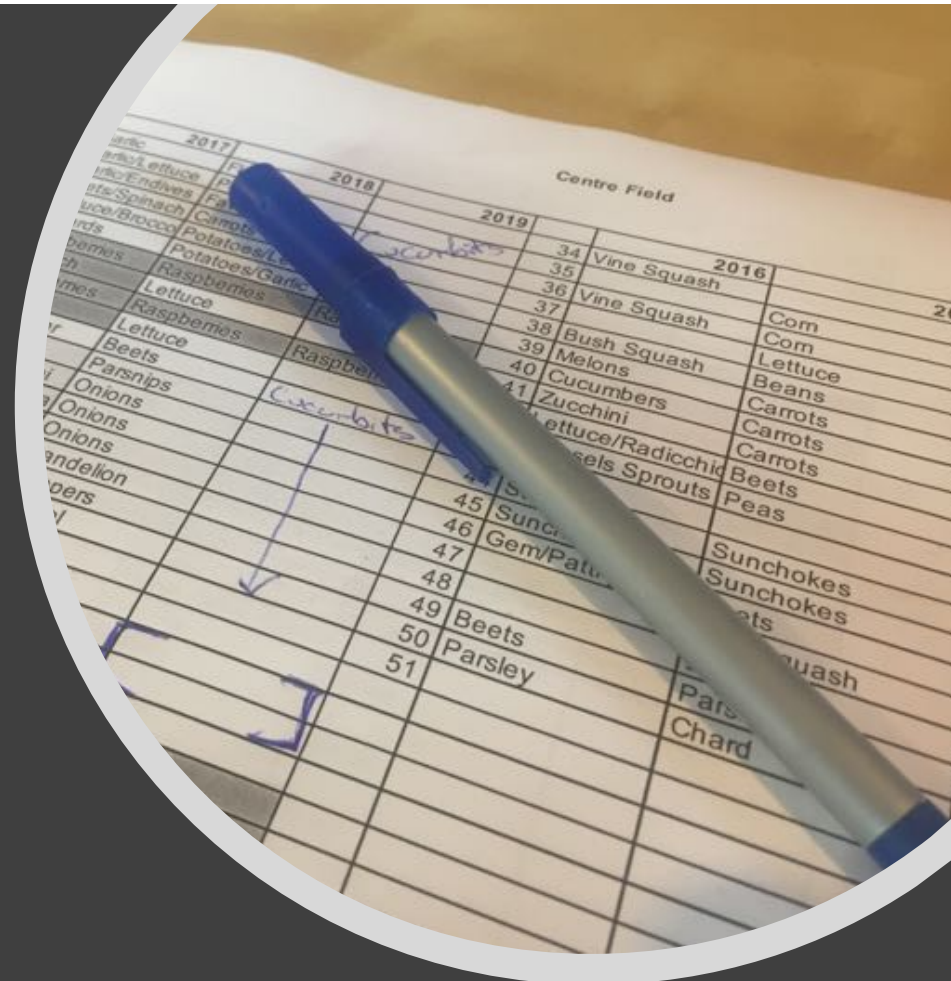


# Cost of Production Analysis



# Objectives for today

- Understand what the Cost of Production is and how it is used.
- Differentiate between fixed costs and variable costs.
- Differentiate between production costs and marketing costs
- Learn ways to calculate the Cost of Production on your farm.
- Strategize how to reduce your cost of production and increase profitability.
- Prepare to compare your costs with other growers.





## What is Cost of Production?

- The cost to produce a standard unit of each crop



# Popularity vs Profitability

- Popular does not equal profitable
- What is the "Basement price"?
- What are the Profit Centres for a farm business?






Each crop has different  
production costs







## Production Costs vs. Marketing Costs

- What does it cost to produce a crop?
- What does it cost to market a crop?
- Can a business differentiate between the two?





## Benefits of working with Production Costs

- Ability to value your production time
- Easier to set wholesale price
- Treat Production and Marketing as separate tasks
- Value your time for each task



# Exercise

Can you differentiate your production costs from marketing costs?



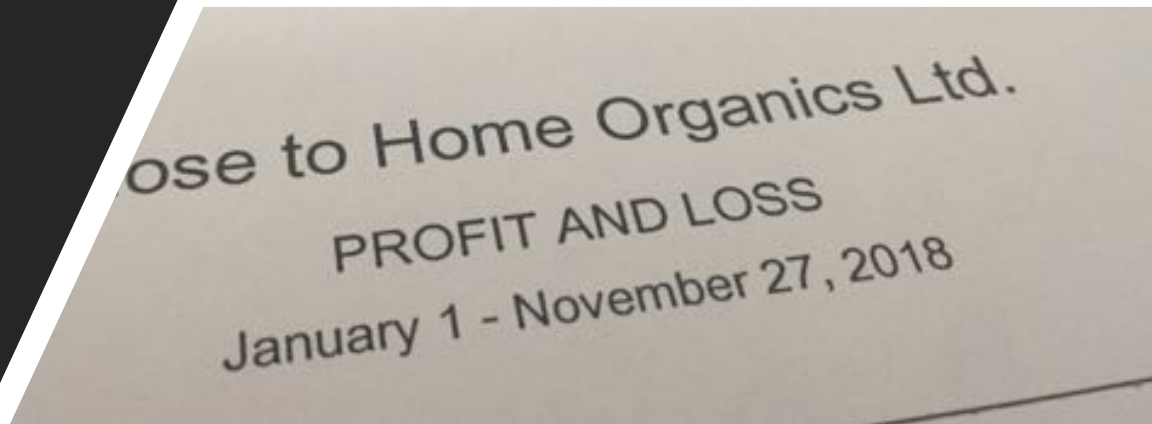
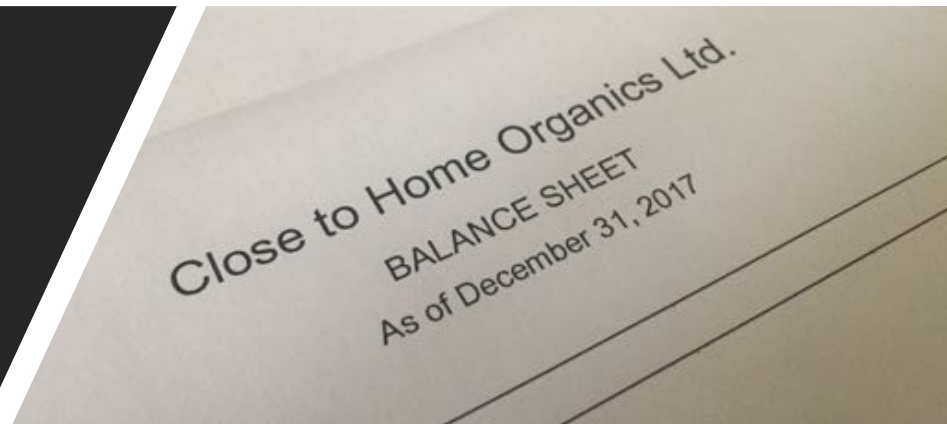
# Fixed Costs vs Variable Costs

- Fixed costs remain the same, regardless of use
- Variable costs will change, depending on volume produced, production practices



# Where can you find your Fixed Costs?

- Balance Sheet
  - Assets
- Profit and Loss (Income statement)
  - Rent
  - Maintenance
  - Office

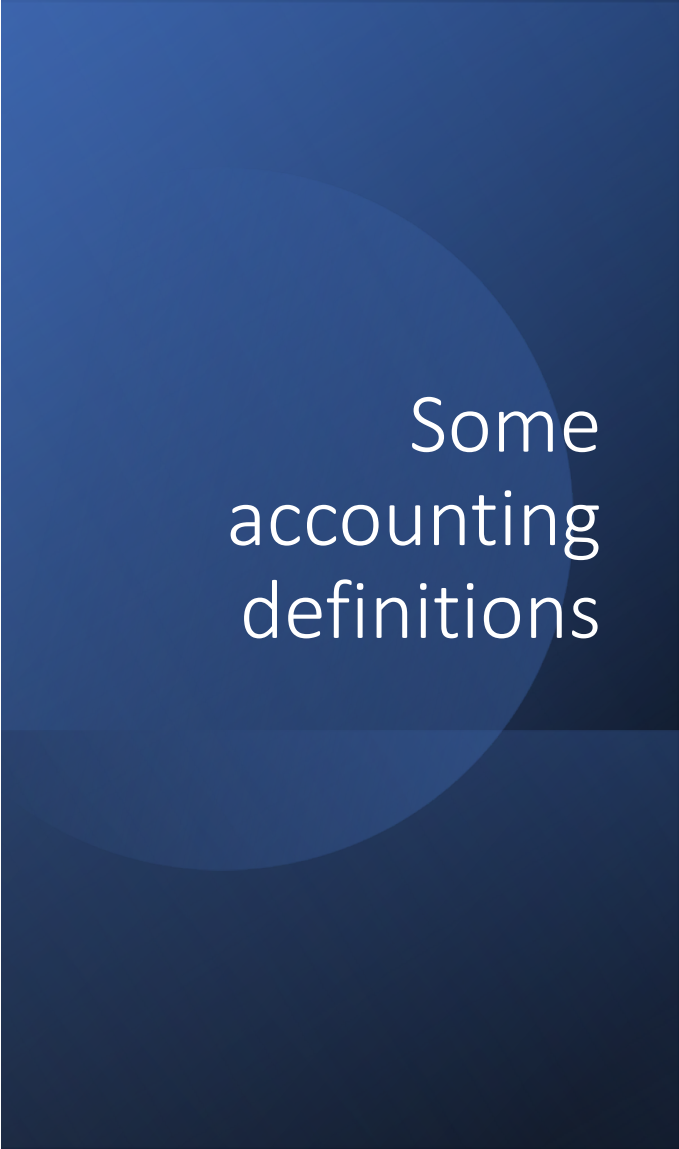




# Exercise: Identify your fixed costs

- What costs does your business have, regardless of what you produce?





## Some accounting definitions

- Direct Costs: the costs directly associated with a product
- Fixed Costs: overhead the business has
- Contribution: the amount a product contributes to fixed costs after direct costs are paid
- Profit: Amount earned beyond direct costs and fixed costs





We will review two  
methods

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1. Rough Unit Cost
2. Enterprise Budgets



## Method 1: Rough Unit Cost

- Add up costs (including profit)
- Divide by acreage, beds or bed feet
- Divide by yield of each crop per acre, bed or bed feet



# Rough Unit Cost

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## **Advantages**

- Quick
- Relatively Easy
- Requires less complicated record-keeping

## **Disadvantages:**

- Less accurate than a detailed analysis: doesn't differentiate between fixed and variable costs
- Not all crops have the same costs and thus, have different profitability.





## Exercise: Calculate Rough Unit Cost

- Add up costs (including profit)
- Divide by acreage, beds or bed feet
- Divide by yield of each crop per acre, bed or bed feet



## Method 2: Using Enterprise Budgets

- Establish a unit of yield
- Establish a unit of production space
- Calculate yield for production space
- Assess variable costs to each crop based on usage
- Add fixed costs and desired profit





# What does this look like?

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- Develop detailed revenue and expense projections for each crop
- Compare your yields against industry standards
- A spreadsheet that helps you set your price



# Enterprise Budgets

## **Advantages**

- Get a much better idea of profitability
- Zero-in on profit centres

## **Disadvantages**

- Time-consuming
- Requires detailed record keeping



## How to use?

- Set prices
- Match Plantings to Sales
- Improve Yields
- Invest in Equipment
- Increase Scale
- Trim Waste
- Peer Groups





# Setting prices

- Use your Cost of Production as a “Basement Price”
- Basement Price might be your wholesale price
- Try to add a 50% mark-up for Direct-to-Consumer sales





## Match Plantings to Sales

- Prices reflect costs and what you actually sell
- Capture your cost of production to ensure profitability



## Improve Yield

- Get a better sense of how a small investment in inputs can impact yields
- Large yield increases from small input adjustments increases profitability







## Invest in Equipment

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- Identify areas of high labour costs
- Which crops are popular but have inefficient production practices?
- Use your numbers to make decisions on equipment



# Increase Scale

If you know your numbers and see opportunity for growth, increasing scale might be an option

# Trim Waste



Eliminate unprofitable crops or search for efficiencies



Control variable costs



Maximize fixed costs



# Peer Groups

1

Compare your  
numbers with  
colleagues

2

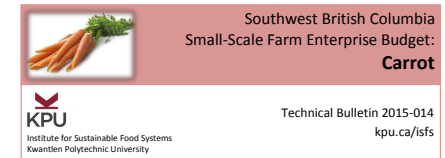
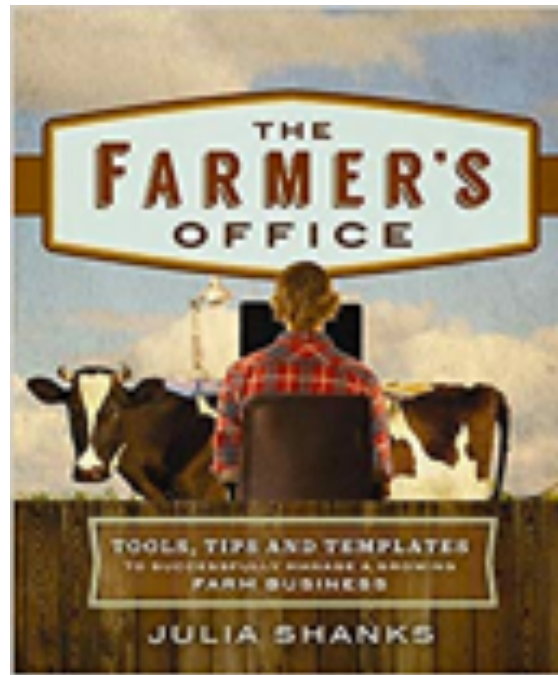
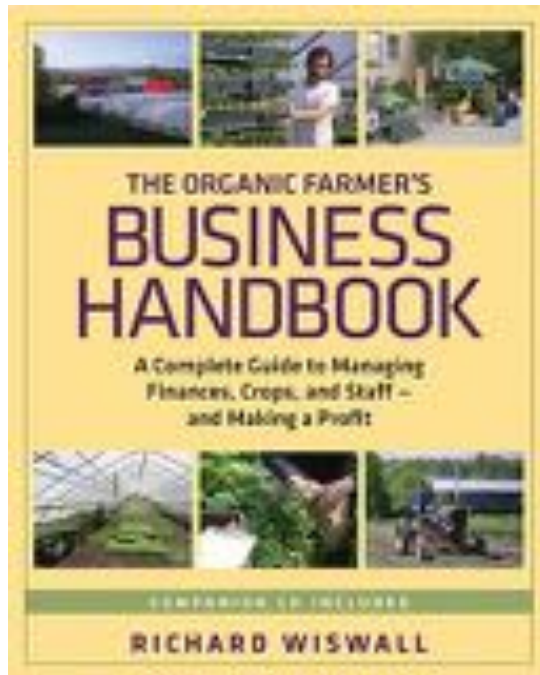
Create a culture  
of collaboration

3

Have confidence  
in your pricing

4

Consider shared  
tools and  
implements



*Ermias Afeworki, Walopak Polosub, Caroline Chiu and Kent Mullinix*

This enterprise budget presents costs and returns for a 0.5 acre of carrots grown on a small-scale mixed vegetable farm in southwest British Columbia, Canada. The sample values are typical of small-scale root 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 carrot crop area is half an acre, consisting of 54 beds, each measuring 4' x 100' (400 square feet per bed) grown on a small-scale mixed-vegetable farm.
- 2) Carrot takes three 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 carrot 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 carrot enterprise.
- 7) The proportion of the farm's total cultivated acreage used to grow carrots is used to allocate fixed costs to the carrot 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**

# Resources

## Additional Help

- BC Agri-Business Planning Program (Ministry of Agriculture)
  - Up to \$5,000 in consulting services
- Kootenay & Boundary Farm Advisors
- Basin Business Advisor Program

