



FRAME

fundamental resources for
agricultural micro-entrepreneurs



Module 3: Finance and Profit

Extension
UtahStateUniversity.



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Module 3: Finance and Profit

- Part 1: Profit and budget
- Part 2: Profit analysis





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Part 1: Profit and budget

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Hobby vs. Business



You **WANT** to run a business for **FUN**

Profit is not main concern

Other reasons:

- Teach skills to children or community members
- Produce food in a certain way
- Fun

You **WANT** to make a **PROFIT**

Profit is the main concern

How can I effectively run a business to provide income?



What Does It Cost?

- **Variable** - When I make another jar of jam, my total cost will increase
 - Ingredients, supplies, labor, etc.
- **Fixed** – Stays the same whether I make another jar or not
 - Rent of preparation space
 - Website costs
 - Depreciation, interest, long-term loans

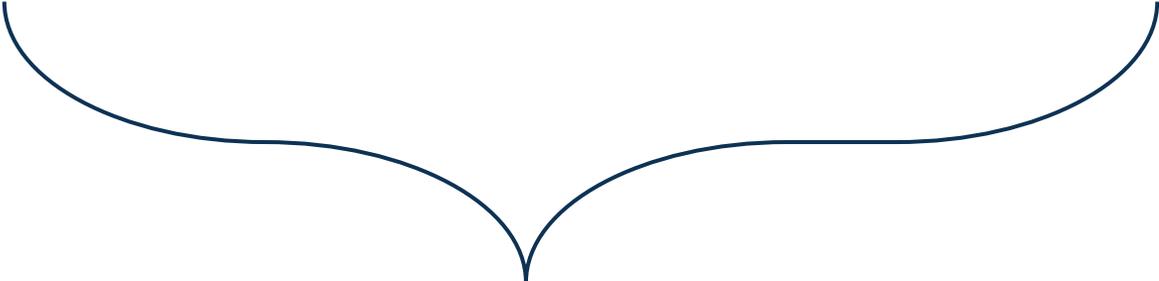


What Is Profit?

$$\text{Profit} = (\text{Price} - \text{Variable Cost}) \text{ Quantity} - \text{Fixed Cost}$$



Margin Per Unit



**Funds left to cover
fixed cost & profit**



Analyze Margins

$$\text{Margin} = (\text{Price} - \text{Variable Cost}) * \text{Quantity}$$

- Do you have a low margin?
- Is price greater than variable costs?
- What happens if cost increases by 10%? 20%?
- What happens if price drops by 10%? 20%?



Analyze Fixed Cost

$$\text{Profit} = (\text{Price} - \text{Variable Cost}) \text{Quantity} - \text{Fixed Cost}$$

- Are fixed costs too high?
- How many units to cover fixed costs (fixed cost / margin)?
- Do you have equipment that sits idle for long periods of time?
- Is your 30-quart Hobart Mixer the envy of your competitors?
- How many Mixers can you use at the same time?



Situation	Strategy	Examples
Negative Margin	Quit and do something else	Other markets, more convenience product
Low Margin	Increase Price Decrease Variable Costs	Charge more, focus on higher value markets, more effective use of labor
Sufficient Margin	Look at Fixed Costs	
High Fixed Costs	Decrease Fixed Costs Increase Revenue from FC Increase Volume	Sell equipment Rent equipment Look for different kitchen space
Average Fixed Costs	Increase Volume	Produce and sell more product
Low Fixed Costs	Good Job!	

Enterprise Budget

The physical and financial planning for a specific enterprise (jam, salsa, etc.)

Estimates the expenses and receipts for a set period of time.



Basic Parts of an Enterprise Budget

- A section of quantity, price, and income
- A section containing variable costs
- A section of fixed/overhead costs
- An estimate of profit or net income per unit or some other variable.



Example of an Enterprise Budget

Enterprise Budget Raspberry Jam						
Revenue	Unit	Quantity	Price	Total	Per Unit Total	% of Revenue
<i>Individual product</i>	<i>size of unit</i>	<i>number sold</i>	<i>price per unit</i>	<i>Total revenue</i>		
Raspberry Jam	8 oz. Jar	500	\$5.00	\$2,500.00	\$5.00	100%
Total Revenue				\$2,500.00	\$5.00	100%
Expenses						
Inputs						
Raspberries	lbs	100.00	\$3.50	\$350.00	\$0.70	14%
Sugar	lbs	100.00	\$0.60	\$60.00	\$0.12	2%
Pectin	ozs	87.50	\$1.15	\$100.63	\$0.20	4%
Lemon Juice	ozs	25.00	\$0.08	\$2.00	\$0.00	0%
Jars and Lids	each	500.00	\$0.65	\$325.00	\$0.65	13%
Labels			\$25.00	\$25.00	\$0.05	1%
Total Inputs				\$862.63	\$1.73	35%
Labor						
Production	hours	0	\$12.00	\$0.00	\$0.00	0%
Selling	hours	0	\$12.00	\$0.00	\$0.00	0%
Total Labor				\$0.00	\$0.00	0%
Marketing						
Transportation	miles	250	\$0.48	\$120.00	\$0.24	5%
Booth Rental	weeks	5	\$40.00	\$200.00	\$0.40	8%
Application Fee		1	\$35.00	\$35.00	\$0.07	1%
Credit Card Processing Fees			\$97.75	\$97.75	\$0.20	4%
Misc			\$200.00	\$200.00	\$0.40	8%
Total Marketing				\$652.75	\$1.31	26%
Facilities						
Kitchen Rental	hours	0	20	\$0.00	\$0.00	0%
Kitchen storage rental (cooling)	monthly	0	35	\$0.00	\$0.00	0%
Total Facilities				\$0.00	\$0.00	0%
Total Variable Costs				\$1,515.38	\$3.03	61%
Gross margin						39%
Fixed Costs						
Licenses/fees			\$100.00	\$100.00	\$0.20	4%
Food handlers permit			\$15.00	\$15.00	\$0.03	1%
Non-cash fixed expense			\$100.00	\$100.00	\$0.20	4%
Total Fixed Costs				\$215.00	\$0.43	9%
Total Expenses				\$1,730.38	\$3.46	69%

Revenue from an individual product is totaled on top.

Expenses for the individual product are broken down into different sections.

Variable expenses were broken down by

- Inputs
- Labor
- Marketing
- Facilities

This is not the only way to lay out the variable expenses, as long as all expenses are included for the individual product.



Analyze Profit

Enterprise Budget Raspberry Jam						
Revenue	Unit	Quantity	Price	Total	Per Unit Total	% of Revenue
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Price per Unit = \$5.00
 Total Variable Cost = \$1,515
 Variable Cost per Unit = \$3.03
 Margin per unit = \$1.97

Will increasing quantity increase profit?
 What could be done to increase margin?
 What about fixed cost?

Adjustments can be made on paper!!



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Part 2: Profit analysis

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Sensitivity Analysis

- You made your best guess
- Determine what will happen if you are wrong
- Look at the good, the bad, and the ugly
- Changing one assumption may cause bigger changes in results



What Happens If...

- Things happen that can affect your net profit
- Knowing the relationship of revenue, costs, and profit allows you to predict net income
- Help make adjustments and prepare for the year



Doing It

- Need to know revenue (value of sales) for a typical year
- How much you paid for
 - Expenses
 - Labor
 - Overhead (electricity, phone, insurance, etc.)
- Convert to percentages of revenue



How Can I Start Selling My Raspberry Jam?



Raspberry Jam Example

Sensitivity Analysis: A Place To Start

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change these cells to reflect the operation

Use these cells to examine the effect of percentage changes.

			% change	New Result	
Revenue	100%	\$ 2,500		\$ 2,500.00	100%
Expenses					
Ingredients		\$ 513		\$ 513.00	
Supplies	61%	\$ 350		\$ 350.00	61%
Labor		\$ -		\$ -	
Marketing		\$ 653		\$ 652.75	
Gross Margin	39%				39%
Overhead		\$ 215		\$ 215.00	
Total Expenses		\$ 1,731		\$ 1,730.75	
Net Income before taxes		\$ 769		\$ 769.25	
Income taxes	10.0%	\$ 77		\$ 76.93	Percent change in net income
Net Income		\$ 692		\$ 692.33	0%

MyFi – Financial Assistant

- MyFi Assist –an app for “My Financial Assistant”
 - Free
 - Available in iOS and Android
 - Can be personalized to your situation



What Can My Business Afford?

- Investing in capital is a way to further a business's objectives and reach its goals. But is it affordable?
- Example: Buying packaging equipment
 - Can help to package faster and save on labor costs
- Will the efficiency of having packaging equipment offset the payment?
- Use MyFi Assist to figure your monthly payment and how much of product you would have to sell to make the payment.



Personal Preferences

Choose or change your item
and its value below:

Turn Preferences on/off

On

Off

1. What is your item?

Jars of jam

Examples: hours worked, head of calves, bales of hay, etc.

2. What is the value of this item?

\$10

Example: the value of each **hour worked** is **\$10**

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Personal Preferences Packaging Example

- Input jars of jam as the item of interest.
- In this example, each jar is valued at \$10
- What is the monthly payment of packaging equipment bought for \$10,000?
- The interest on the loan is 6%, and there is no down payment.
- Plan to pay the loan off in 4 years.



Paying for a Loan

When you use a loan or a credit card to buy something, you will pay back the amount of the loan plus interest and any fees. Fill in the information in the gray boxes below to find out the total cost of buying using credit.

What is the annual interest rate?

6%

How many years will you take to pay the loan back?

4 years

How much do you owe or does the item cost?

\$10,000

What is the amount of your down payment if any?

\$0

Calculate

Your monthly payment will be **\$234.85**

The total amount you will pay in interest is **\$1,272.81**

After making all your payments you will pay **\$11,272.81**

Your interest cost is equivalent to 13% of the original cost.

You will need: **23.5 Jars of jam each month**
281.8 Jars of jam each year

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Personal Preferences Jam Example

- You would like to purchase packaging equipment and need to borrow \$10,000 now. You will pay it off with monthly payments over 4 years. The interest rate is 6% annually.
- Use MyFi Assist, “Paying for a Loan”
 - Calculate the monthly payment
 - Calculate how many jars of jam you would have to sell to make the equipment payment.
 - What is the total you will pay for the equipment?



Your monthly payment will be **\$234.85**

The total amount you will pay in interest is **\$1,272.81**
After making all your payments you will pay **\$11,272.81**

Your interest cost is equivalent to 13% of the original cost.

You will need: **23.5 Jars of jam each month**
281.8 Jars of jam each year

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- The monthly payment for the packaging equipment is \$235.
- 24 jars of jam per month must be sold in order to make the payment.
- Can the business justify buying this packaging equipment?

This did not consider the cost of producing those items. It allows thinking about a purchase in terms of the product you are selling.

