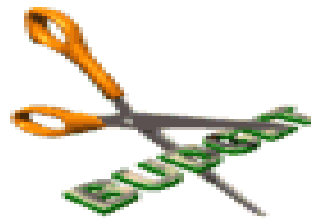


# GETTING STARTED IN THE MEAT GOAT BUSINESS

Bulletin I, Vol. II



## An Enterprise Budget For Meat Goat Producer's: Its Characteristics and Importance



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Enterprise Budgets  
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## Introduction

Where farming is concerned, enterprise budgets are estimates of all income and expenses associated with a crop or livestock enterprise. The enterprise budget is the foundation of a successful crop or livestock production program. The information contained in this budget can be used as a general guide for the producer. In addition, agencies and individuals including extension specialists, government agencies and financial institutions can use the information for providing technical assistance, tax reporting and determining eligibility for credit. In almost every case, bankers would request a copy of your enterprise budget in order to determine your creditworthiness. Nowadays, enterprise budgets are very common and easily available to anyone interested. However, because production costs are unique to individual situations, these budgets are only general guidelines therefore producers are encouraged to develop budgets based on their individual situation.

The following budget items and their associated revenue and income values are only intended as a guide towards helping the reader understand the layout of a typical enterprise budget. These figures do not reflect what an individual producer will realize from his/her respective enterprise. Enterprise budgets for limited resource producers vary from producer to producer and are usually built around certain assumptions. Some of these are as follows: Factors of production (Land, Labor, Capital and management) are owned or provided by the producer. Labor and management are non-wage factors provided by the producer and his/her family. Twin births are expected at kidding with an anticipated 5 % mortality rate. Market weight of animals sold for meat is 35 – 70 pounds.

## The Enterprise Budget: An Example.

### ESTIMATED COSTS AND RETURNS FOR A 50 ACRE MEAT GOAT OPERATION 2006

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#### Herd size

Does:	50				
Bucks:	2				
Acres in forage:	20				
Expected Mortality rate:	5%				Market price: \$1.30/lb
live weight					

ITEM	UNIT	QUANT.	PRICE/COST PER UNIT (\$)	TOTAL PER YR. (\$)	TOTAL/HD PER YR. (\$)
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## 1. Gross Receipts

Market animals	head	95	91.00	8645.00	166.25
Breeding females	head	26	70.00	1820.00	35.00
Cull Animals	head	7	60.00	0420.00	08.08

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<b>Total Receipts</b>				10885.00	209.33
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## 2. Variable Costs

### Feed

Pasture (Bermuda grass)	acre	20	88.83	1776.60	034.17
Hay	ton	10	75.00	0750.00	014.52
Concentrate	cwt.	26.5	11.00	0291.50	005.61
Salt & Minerals	head	52	01.50	0078.00	001.50

### Veterinary Costs

Deworming (6x)	head	52	4.90	0254.80	004.90
Vaccination (2x)	dose	104	0.40	0041.60	000.80
Antibiotics	year	1	25.00	0025.00	000.48
Facilities & Equip.	head	52	02.03	0105.56	002.03
Supplies	head	52	04.00	0208.00	004.00
Market & Transport	year	1	75.00	0075.00	001.44
Miscellaneous	head	52	03.00	0156.00	003.00

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<b>Total Variable Costs</b>				3762.06	0072.45
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## 3. Fixed Costs

Interest on capital	percent	5.25	1754.95	1754.95	0033.75
<u>Starting animals</u>					
Does (crossbreeds)	head	50	0125.00	6250.00	0125.00
Bucks (Boer)	head	2	0375.00	0750.00	0375.00

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<b>Total Fixed Costs</b>				8754.95	0533.75
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## **BUDGET TERMS AND EQUATIONS**

**Fixed costs:** Also called overheads, are those costs that do not change as you increase or decrease production. These include the cost of facilities such as buildings, equipment, land rent, investment, depreciation and salaried labor.

**Variable costs:** Are those costs that change as you increase or decrease production. Examples include packaging material, fuel, fertilizer, **pasture establishment, feed (hay concentrate and minerals) herd health (deworming, vaccination, antibiotics) seasonal labor (hired).**

**Total cost:** Is the sum of fixed and variable costs multiplied by the quantity produced.

$$\mathbf{TC = (FC + VC) \times Q}$$

Where:

TC = Total cost

FC = Fixed cost

VC = Variable cost and

Q = Total output (e.g. number of market kids produced)

**Average fixed cost:** Is the fixed cost per unit produced. It is calculated by dividing fixed costs by the number of units (animals) produced.

$$\mathbf{AFC = TFC \div Q}$$

Where:

AFC = Average fixed cost

TFC = Total fixed cost and

Q = Total product (pounds or kilograms)

**Average variable cost =** The variable cost per unit of output.

$$\mathbf{AVC = TVC \div Q}$$

Where:

AVC = Average variable cost

TVC = total variable cost and

Q = Total output (number of goats produced)

**Marginal cost:** Is the extra cost incurred by producing one more unit of a product (e.g. an additional goat).

$$\mathbf{MC = \Delta TC \div \Delta Q}$$

Where:

MC = Marginal cost

$\Delta TC$  = Change in total cost and

$\Delta Q$  = Change in output (number of goats produced)

**Revenue:** Is the returns (income) from the sale of your animals.

$$\mathbf{R = TP \times P}$$

Where:

TP = Total product (number of market kids) and

P = Product price (dollars / lb or kg).

**Marginal Revenue:** Is the change in total revenue from selling an additional animal.

$$\mathbf{MR = \Delta TR \div \Delta Q}$$

Where:

MR = Marginal revenue

$\Delta TR$  = Change in total revenue and

$\Delta Q$  = Change in output

**Profit:** Is Total Revenue - Total cost

$$\Pi = TR - TC$$

Where:

$\Pi$  = Profit

TR = Total revenue (income) and

TC = Total cost

**Mark-up pricing:** Is a pricing method whereby the price of your product is derived by adding a certain percentage (say 5 %) of the cost of producing the product to the price of the product. The percentage that is added is known as the mark up.

### **BREAK EVEN ANALYSIS**

Break even analysis is an extremely important tool for farm businesses. Through break even analysis, farmers can find answers to common production oriented questions such as:

- How long will it take before I can start realizing a profit from my enterprise?
- How many units must I produce and sell in order to cover my operating costs?
- What price should I charge for my product in order to cover my expenses?
- What volume of sales is necessary to cover my expenses?

Break Even Analysis provides answers to all the above questions and also makes the producer aware of the consequences or benefits of making even minor changes in production. Most of all, it helps with the development of a total farm plan. The following definitions and equations are intended to help producers use information from their enterprise budgets to perform break even calculations.

**Break Even Point:** Is the point at which the costs of producing a product are equal to the revenue earned from the sale of that product.

The break even quantity (number of animals to produce and sell) can be derived from the following equation:

#### **1. Break Even Quantity**

$$Q = \frac{TFC}{P - AVC}$$

Where:

Q = The number of units (goats) produced.

TFC = Total Fixed Cost

P = Unit price of product \$/lb (kg)

AVC = Average Variable Cost

**2. Break Even Revenue:** Can be calculated as:

$$\mathbf{R = TFC \div 1-(AVC \div P)}$$

Where:

R = Revenue in dollars

P = Unit price of product \$/lb (kg)

AVC = Average Variable Cost

**3. The Break Even Price:** Is calculated as:

$$\mathbf{P = AVC + TFC \div S}$$

Where:

P = Unit price of product \$/lb

AVC = Average Variable Cost/annum

TFC = Total Fixed Cost/annum

S = Sales volume/annum

### **SOME EXAMPLES**

Using the equations provided for performing break even calculations, we will substitute information from the enterprise budget provided on page 2 into the relevant equations to determine break even prices, revenue and production units (quantity).

**1.  $P = AVC + TFC \div S$**

**$P = 72.45 + 8754.95 \div 95 = \$92.92/\text{goat}$  or  $\$1.33/\text{lb}$  for a 70 pound goat.**

You should really charge \$1.33 (\$92.92) for a 70 pound meat goat in order to break even

**2.  $R = TFC \div 1-(AVC \div P)$**

**$R = 8754.95 \div 1-(72.45 \div 91) = \$43,774.75$**

This is the revenue you must earn in order to cover your expenses.

**3.  $Q = TFC \div P - AVC$**

**$Q = 8754.95 \div 91 - 72.45 = 472.0$  goats.**

This means you must produce and sell 472 goats in order to break even. Given that you can only produce a maximum of 95 kids per year, it will take approximately 4.97 or 5 years before you can start making a profit. Notice that if you multiply  $472 * \$92.92$  (the price you should be getting per goat in order to break even) your total revenue will be approximately \$43858.24. CONGRATULATIONS! You are now in the profit zone.

## **REDUCING THE TIME TO BREAK EVEN**

There are several things you can do to reduce the required break even volume hence the time to making a profit.

1. **Lower direct costs.** The following are just a few of the steps you can take to lower direct costs.

- Use improved technology. This cuts down on waste, saving time, labor and money
- Improve labor efficiency. Get more output per labor input. Substitute labor for capital items if necessary.
- Spend carefully. Buy only absolutely necessary items.

## 2. **Raise prices**

- In niche enterprises such as meat goat production, a 4 to 5 percent change in price usually go unnoticed. Here is a basic example of how a 5 percent increase in price can change your entire farm outlook.

The current market price is \$1.30/lb (\$91.00) for a 70 pound meat goat. A 5 % increase would reflect a price increase of \$0.065 or approximately \$1.37/lb (\$95.90) for a 70 pound meat goat.

Your new break even quantity would be as follows:

$$\mathbf{Q = 8754.95 \div 95.90 - 72.45 = 373 \text{ goats.}}$$

Considering that you have the potential of producing 95 market goats per year, you are now only required to produce and sell 373 seventy pound meat goats in order to break even. Better yet, your time to break even and start making a profit has been reduced to 3.9 or approximately 4 years.



## **SUMMARY**

Remember that you are in the business to make a profit, not just to break even. However, careful budgeting combined with knowledge of your break even limits can help you accomplish this goal. Be prepared to make adjustments. Do not be afraid to take risks. It is always okay to get out of the business if your estimations show that it will not work for you. However, by simply reallocating your efforts to the appropriate items within your enterprise, you can successfully achieve your goals.