Chapter 12

Records and Budgeting

Management of a successful goat business can be divided into two basic areas: herd management and business management. Herd management focuses on the productivity and health of the animals and their environment. Business management focuses on whether the farm makes a profit. The goat producer's job is to work with all of the aspects of the farm operation that contribute to the health of the herd and production of high-quality milk, meat, fiber, and/or replacement animals.

You have learned about the wide array of factors that enter into this process, such as housing, facilities, reproduction, breeding, health maintenance, disease prevention, nutrition, milking, meat production, and manure management. At each step, there is important information that the individual must collect, record, and use to make decisions.

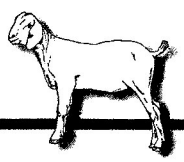
Record Systems

Many people use a record system that they have developed at home. This may be just a standard notebook or file folder system, a computer spreadsheet, or a computer program that has been developed by a company. Whatever system is used, it is important that it be convenient and easy to use; complete with animal ID, parentage of the animal, and performance information; and is adequate for keeping records for several years. For 4-H projects, project and record books are available.

Dairy goat records. The Dairy Herd Improvement Association (DHIA) provides production testing and records-management services. With DHI testing, an individual comes to the farm once a month to record milk weights and take milk samples from each lactating doe. He or she also collects information about kiddings, dry offs, breedings, deaths, and other recent management events. The milk samples are sent to a lab where they are tested for fat and protein content and other characteristics. The collected data can help goat owners manage their herds and can be useful when promoting an animal for sale as breeding stock and when generating genetic proofs for bucks. For information on your local DHI services, contact your local Extension office or dairy producer organization.

Records are important for increasing profitability of a goat operation. Several examples are listed below:

1. Information on milk weights, milk components, and growth performance helps identify which animals are doing well versus those that are not so the owner can try to improve performance.
2. Measuring milk quality (SCC) helps identify areas of concerns relative to sanitation of milking equipment, bedding and housing for the goats, and potential loss of milk due to mammary infection.
3. Performance information (milk yield or growth) is helpful in developing feeding practices for a goat or group of goats.



4. Performance records are needed for deciding which animals should be culled.
5. Reproduction records are necessary so the owner knows when does are expected to kid and for monitoring breeding efficiency.

Profitability

A goat operation's profit begins with the sale of milk, meat animals, fiber, or breeding stock. Sales result in income, but sales alone are not a complete picture of profit. Expenses such as housing and feed have to be subtracted. The general equation for determining profit is:

Profit = Income – Expenses

Let's look at profit using the sale of milk as an example. Gross income (or total sales without any expenses subtracted) is calculated by multiplying units sold and price. When milk is sold, it is priced per 100 pounds or per hundredweight, commonly abbreviated as "cwt." If a producer sells 20 cwt of milk at $20 each, gross income is $400 (20 x 20). If it cost $300 to care for the goat (rent, insurance, electricity, feed, bedding, etc.), the profit equation looks like this:

Profit = $400 (income) – $300 (expenses) = $100

Now for a meat goat example. Live animals are often sold by the pound, so in this case the units sold are pounds, not cwt. If a producer sells a 70 pound live weight wether for $1.50 per pound, gross income is $105 (70 x 1.50). If it cost $75 to raise the goat, the profit equation looks like this:

Profit = $105 (income) – $75 (expenses) = $30

The examples above are only simple illustrations. There are several items that must be recorded to determine total expenses, and a typical herd has more than a single source of income. For your project, you can use your own production budgets and income and expense records to determine if your animals are making a profit.

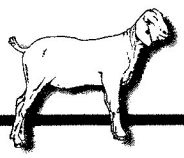
Production Budgets

Production budgets are useful tools for planning and monitoring your goat projects. Examples of production budgets for dairy and meat goats are provided in figures 12.1 and 12.2.

Production budgets are broken down into three major sections. These sections are receipts, variable costs, and fixed costs. Receipts include all of the income generated by the goat operation. Receipts would include milk actually sold, does or bucks culled and sold, the sale of kids for meat or breeding stock, and sale of breeding stock regardless of age. Because you may choose to keep rather than sell a kid, the receipts may not all be cash receipts but may instead reflect the value of the retained kid.

Variable costs are those costs incurred because of your project. These costs include items such as feed, veterinary expenses, breeding fees, bedding, ear tags, and so forth.

Fixed costs are overhead types of expenses. Fixed costs include charges for the facilities that you use to house your animal, equipment used in the care and feeding of the animal, interest on the money you have invested in your animal, and charges for labor and management. While you may not charge for your labor or management for your project animal(s), a goat operation has to cover management and labor expenses if it is going to stay in business.



Sample Dairy Goat Budget (per doe, per year)

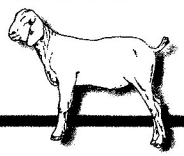
Does averaging two kids. Fixed costs are based on a 100-doe facility (artificial insemination).

Item	Per Doe	Amount	Unit	Price	Total	Your Estimate
Receipts						
Milk Sales		20	cwt	$21.00	$420.00	
Does culled (5% death loss, 40% culled)	0.4	120	pound	$1.20	$57.60	
Male kids sold (8% death loss)	0.92	30	pound	$1.50	$41.40	
Replacements sold (fertile, nonfertile)	0.52		head	$130.00	$67.60	
Total receipts					$586.60	
Variable costs						
Feed						
Concentrates for doe and replacements		13.1	cwt	$10.00	$131.00	
Kids for meat sold at 30 pounds		0.4	cwt	$12.00	$4.75	
Hay		0.g	ton	$95.00	$76.00	
Milk fed to replacements		9.24	gallon	$2.41	$22.30	
Total feed costs					$234.05	
Other variable costs						
Building and equipment repairs				$6.00	$6.00	
Bedding (straw)		0.15	ton	$50.00	$7.50	
Misc. livestock supplies				$8.00	$8.00	
Breeding fees				$15.00	$15.00	
Health program				$10.00	$10.00	
Milk testing (DHIA)				$15.00	$15.00	
Utilities, gasoline, fuel, oil				$15.00	$15.00	
Milk hauling, freight		20	cwt	$2.50	$50.00	
Marketing, advertising, coop dues		20	cwt	$0.05	$1.00	
Total other variable costs					$127.50	
Total variable costs					$361.55	
Fixed costs						
Family and hired labor		22	hour	$5.00	$110.00	
Insurance and taxes				$3.00	$3.00	
Milking equipment depreciation		10	year	$132.00	$13.20	
Building, other equipment depreciation		10	year	$100.00	$100.00	
Total fixed cost					$136.20	
Total costs					$497.75	
Returns						
Returns over variable costs					$225.04	
Net returns					$88.84	

Initial resource requirements

- Land: 10 acres
- Labor (per/head): 22 hours × 100 animals = 2,200 hours
- Capital
  Livestock (per head): $200 × 100 does = $20,000
  Existing building, improvements, fencing: $13,800
  Milking equipment, storage: $8,200

Figure 12.1. Sample budget for commercial dairy goat production for 100 does with milk sold to a milk processor (Agricultural Alternatives: Dairy Goat Production, 1998).



Sample Meat Goat Budget

THE OHIO STATE UNIVERSITY EXTENSION

DOE AND KIDS
Annual Budget
3 kid crops every 2 years [1]
Based on 25 doe/1 buck operation [2]

ITEM	QUANTITY/UNIT		PRICE PER UNIT	Kidding % 130%	170% lamb crop	210%	YOUR BUDGET
RECEIPTS							
Kids [3]	15% kept back	70 lb.	$1.00 /lb	$110	$152	$194	
Cull Doe and Buck [4]							
Doe	15% cull rate	150 lb./doe	10.00 /cwt	2.25	2.25	2.25	
Buck	50%	200 lb./buck	10.00 /cwt	10.00	10.00	10.00	
TOTAL RECEIPTS				123	165	207	
VARIABLE COSTS							
Feed							
Kids							
Pasture [5]	10 kids/acre		44 /acre	9	11	14	
Minerals			1.00 /head	1	1	1	
Does							
Corn [6]	0.5 lb./day	135 days	2.20 /bu	3	3	3	
Pasture [5]	10 does/acre		44 /acre	4	4	4	
Salt and Mineral				2	2	2	
TOTAL FEED COSTS				19	21	24	
Health Program				6	6	6	
Marketing [7]				5	5	5	
Utilities, supplies, and miscellaneous costs				3	3	3	
Int. on Operating Expense [8]			9%	1	2	2	
TOTAL VARIABLE COSTS				34	37	40	
FIXED COSTS							
Labor Charge		4 hours	7.50 /hr	30	30	30	
Doe Replacement [9]	15% cull rate	5% death rate	150 /doe	30	30	30	
Buck Replacement [10]	100% cull rate	5% death rate	200 /buck	8	8	8	
Int. on Breed Stock [11]			9%	15	15	15	
Equipment Charge [12]		$30	20%	6	6	6	
Buildings Charge [13]		$50	17%	9	9	9	
Management Charge [14]		5% of gross revenues		6	8	10	
TOTAL FIXED COSTS				104	106	108	
TOTAL COSTS				138	143	148	
RETURN OVER VARIABLE COSTS (total receipts - total variable costs)				89	128	167	
RETURN OVER TOTAL COSTS (total receipts - total costs)				-15	22	59	
RETURN TO LABOR AND MANAGEMENT [15]				21	60	99	

1 A goat's reproductive cycle allows a doe to kid about every 8 months or 3 times every 2 years. Therefore, this annual budget is based on 1.5 kid crops.

2 25 does and 1 buck is asumed to be a typical size for a meat goat operation in Ohio. This budget represents 1 doe in this size operation.

3 A 10% mortaility rate for kids is assumed and 15% of kids are held back for replacement does. Therefore, a 170% kidding rate will actually yield a 145% rate for kids available for marketing (170% - 10% mortality - 15% replacements = 145% marketable yield). Market price will vary with location and market availability. Prices can range from $0.60-$1.20 /pound. The kid weight is a typical sale weight but can range from 50 - 80 pounds.

4 Cull rate: does = 15%, bucks = 50%. Cull revenue = cull rate x weight x market price. (Doe: 15% x 150 lb. X $10 cwt = $2.25)

5 Pasture costs are based on an annual rental rate for 1 acre of pasture. The rate is determined by the following formula: yield x hay price x 0.25. (2.5 T/acre x $70/T x 0.25 = 43.75 $/acre)

6 Does fed 1/2 pound of supplemental corn for 135 days every year.

7 Marketing costs are the costs associated with the sale of the animal. This may be a fee for putting the animal in an auction or the costs of selling the animal privately.

8 Includes value of feed plus other variable expenses less marketing.

9 Doe replacement cost based on 15% annual replacement rate, 5% death loss and cost of doe of $150. Replacement cost = 15% replacement rate + 5% mortality rate x $150/doe = 30

10 Buck replacement cost based on 100% annual replacement rate, 5% death loss and cost of buck of $200. Replacement cost = 100% replacement rate + 5% mortality rate x $200/buck / 25 does/buck = $8.40. The 100% replacement cost assumes that 2 bucks are owned and one is replaced every year to prevent inbreeding.

11 Interest on breeding stock is the average value of a breeding animal x interest rate. ($150/doe + $400 bucks / 25 does) x 9% = $15. Assumes 2 bucks are owned. See #10 footnote.

12 $30 investment / doe X 20% = $6.00

13 $50 investment / doe x 17% = $8.50

14 The management charge is the value of the operator's management skills used in managing the goat operation.

15 Return to labor and management is the revenue less total expenses except operator labor and management. It is a measure of the returns to the operator's labor and management.

Figure 12.2. Sample budget for meat goat production (Nye and Moore, 2002).