

## MARKET GOAT PROJECT



# Idaho 4-H Livestock Costs and Returns Estimate

#72596

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### BACKGROUND AND ASSUMPTIONS

This costs and returns estimate (enterprise budget) gives the average costs and returns for a 4-H market goat project (table 1). All resources (feed, labor, etc.) are valued at current market prices or at their opportunity costs. Opportunity cost is defined as the value of a resource (time, money, equipment, etc.) in its most profitable use other than raising the market goat. For example, labor is given a value of \$7.25 per hour, the minimum wage you could earn working at McDonalds instead of working on your 4-H project.

The estimate assumes goats are purchased in May at about 40 pounds for \$80 per head. Goats are fed a grower ration and alfalfa hay until early June when the ration is changed to a finisher ration and alfalfa hay until mid August. The average weight gain from the beginning weigh-in (typically in late May) to the ending weigh-in (70 days) is approximately 0.35 pounds per day.

### REVENUE

Revenue is the goat finish weight in pounds multiplied by the price received per pound, or simply the price per head. Figure 1 shows the range of prices received for market goats sold at county and state fairs in 16 southeastern Idaho counties in 2011 (\$123–\$840). It also shows the probability (chance) that you would be able to sell a goat at or above a certain price. For example, there is a 50% probability that a goat will sell for \$375 or more. Likewise there is a 6% chance that a goat will sell for more than \$650.

### OPERATING COSTS

Operating costs, also called variable costs, are those expenses directly related

**Table 1.** 4-H market goat enterprise budget, 1 goat.

	Unit	Total number or units	Price or cost/unit	Total value	Your value
<b>REVENUE</b>					
Market goat	pounds	75	\$5.15	\$386.00	_____
<b>Total revenue</b>				<b>\$386.00</b>	_____
<b>OPERATING (VARIABLE) COSTS</b>					
Purchased goat	head	1	\$80.00	\$80.00	_____
Feed					_____
Grower/Finisher ration	cwt	2.00	\$34.00	\$68.00	_____
Hay	bale	1.00	\$4.00	\$4.00	_____
Salt	block	1	\$3.00	\$3.00	_____
Health	\$	1	\$7.00	\$7.00	_____
Marketing	\$	1	\$25.00	\$25.00	_____
Hauling	\$	1	\$30.00	\$30.00	_____
Supplies	\$	1	\$20.00	\$20.00	_____
Equipment repair	\$	1	\$10.00	\$10.00	_____
Opportunity costs					_____
Labor	hours	70	\$7.25	\$507.50	_____
Interest on operating capital	\$	247	8.0%	\$19.76	_____
<b>Total operating costs</b>				<b>\$774.26</b>	_____
<b>Income above operating costs</b>				<b>-\$388.26</b>	_____
<b>OWNERSHIP (FIXED) COSTS</b>					
Livestock Facilities				\$35.00	_____
Equipment				\$70.00	_____
Overhead				\$0.00	_____
<b>Total ownership costs</b>				<b>\$105.00</b>	_____
<b>TOTAL COSTS</b> (operating costs + ownership costs)				<b>\$879.26</b>	_____
<b>NET PROFIT</b> (total revenue – total costs)				<b>-\$493.26</b>	_____

to the production of your market goat. They increase when you raise more goats and decrease when you raise fewer.

**Feed** costs include the purchase price plus delivery costs. Goats are fed approximately 4% of their body weight in grower ration for the first 30 days. A finisher ration is fed at 3.5% of their body weight for the final 40 days (table 2).

**Health** costs include vaccinations and treatment for parasite control.

**Marketing** fees are assessed for each animal sold in the county fair livestock auction. Typically called a sale commission, this fee helps cover auction expenses.

**Labor** costs are an estimate of the value of the time you spend working on your 4-H project. The opportunity cost of labor is calculated at \$7.25 per hour, the minimum wage.

**Hauling** covers costs to transport the animal to and from weigh-ins and to the fair.

**Supplies** include costs for show shampoos, grooming products, and stall decorations.

**Equipment repair** covers costs incurred to repair and maintain equipment.

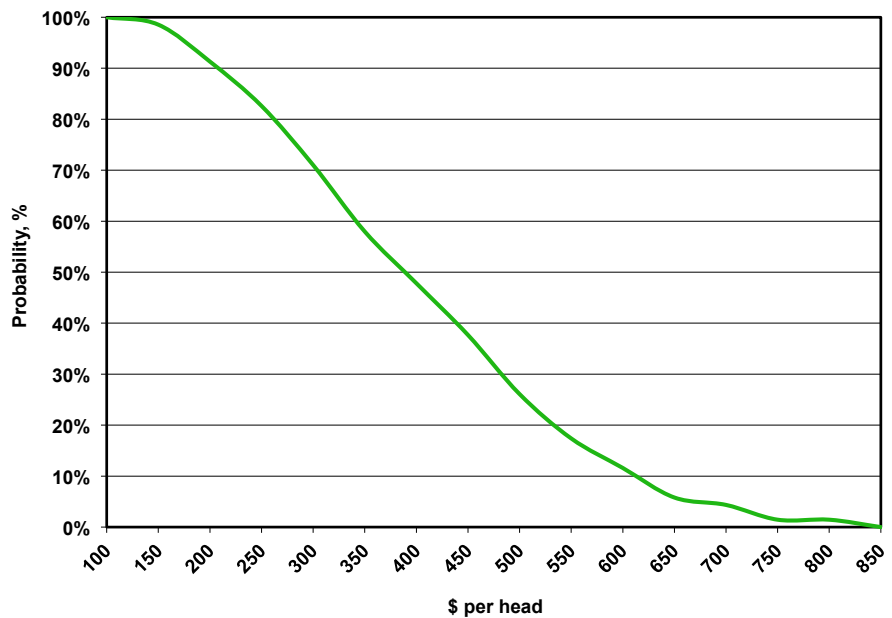
**Interest on operating capital** is either the actual cost of a loan used to pay your operating expenses (usually a percentage of the amount of money you borrow, the interest rate) or the opportunity cost if you use your own money to pay for the project. The opportunity cost or interest rate used here is 8 percent.

### OWNERSHIP COSTS

Ownership costs, also called fixed costs, are expenses that must be paid even if you don't complete the project. These costs could include property taxes and insurance on buildings, facilities, and equipment. Raising more than one goat or sharing facilities and equipment will allow ownership costs to be spread out over more animals.

**Livestock facility** expenses include the cost of corrals, shelter, barn, etc. These expenses are depreciated, or spread out, over the expected life of the facility. For example, a pen that cost \$500 new may have a useful life of 10 years. Dividing that \$500 cost by 10 years would give you a cost of \$50 per year for the pen.

**Equipment** expenses include clippers, halter, blanket, brushes, fitting stand, combs, hoses, feeders, pitch forks, wheelbarrow, etc. Equipment costs are depreciated, or spread out, over the life of the equipment. For example, clippers that cost \$150 may have a useful life of 10 years, so \$15 of the purchase price



**Figure 1.** The probability (chance) of selling a goat at or above a given price, southeastern Idaho fairs, 2011.

**Table 2.** 4-H market goat monthly feed requirements, in pounds.

	Grower/Finisher ration	Hay
May	48	10
June	62	20
July	68	10
Aug	22	5
Sept	0	0
Oct	0	0
Nov	0	0
Dec	0	0
Jan	0	0
Feb	0	0
March	0	0
April	0	0
<b>Total</b>	<b>200</b>	<b>45</b>

**Table 3.** 4-H market goat cash flow budget.

	May	June	July	Aug	Sept	Oct	Nov-Dec	Jan-Feb	March-April	Total
<b>CASH INFLOWS</b>										
Market goat				\$386.00						\$386.00
Total inflow				\$386.00						\$386.00
<b>CASH OUTFLOWS</b>										
Purchased goat	\$80.00									\$80.00
Feed										
Grower/Finisher ration	\$17.00	\$34.00	\$17.00							\$68.00
Hay	\$4.00									\$4.00
Salt	\$3.00									\$3.00
Health	\$7.00									\$7.00
Marketing				\$25.00						\$25.00
Hauling		\$15.00		\$15.00						\$30.00
Supplies			\$20.00							\$20.00
Equipment repair			\$10.00							\$10.00
Total outflow	\$111.00	\$49.00	\$47.00	\$40.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$247.00
<b>OPERATING SURPLUS</b>	-\$111.00	-\$49.00	-\$47.00	\$346.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$139.00

(\$150 ÷ 10 years) would be allocated to each year of use. (In other words, the clippers depreciate \$15 per year.) Equipment may also be borrowed or shared with the club leader or other members, and then you can also share the costs.

**Overhead** includes rent, utilities, or other miscellaneous costs.

**CASH FLOW BUDGET**

The cash flow budget traces the flow of cash into and out of the project. It shows the months when you will need cash to pay for the project and the months when you will receive income (table 3).

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