

MARKET HOG PROJECT



Idaho 4-H Livestock Costs and Returns Estimate

#72995

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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 hog 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 hog. 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 pigs are purchased in April at about 75 pounds for \$150 per head and fed a grower ration until July 1. Pigs are fed a finisher ration from July to mid August. The average weight gain from the beginning weigh-in (typically in late April) to the ending weigh-in (100 days) is approximately 1.85 pounds per day.

REVENUE

Revenue is the hog 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 hogs sold at county and state fairs in 16 southeastern Idaho counties in 2011 (\$350–\$3,102). It also shows the probability (chance) that you would be able to sell a hog at or above a certain price. For example, there is a 50% probability that hogs will sell for \$730 or more. Likewise there is a 6% chance that hogs will sell for more than \$1,550.

OPERATING COSTS

Operating costs, also called variable costs, are those expenses directly related to the production of your market hog. They increase when you raise more hogs

Table 1. 4-H market hog enterprise budget, 1 hog.

	Unit	Total number or units	Price or cost/unit	Total value	Your value
REVENUE					
Market hog	pounds	260	\$3.17	\$823.00	_____
Total revenue				\$823.00	_____
OPERATING (VARIABLE) COSTS					
Purchased pig	head	1	\$150.00	\$150.00	_____
Feed					
Grower ration	cwt	4.50	\$30.00	\$135.00	_____
Finisher ration	cwt	4.00	\$30.00	\$120.00	_____
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	100	\$7.25	\$725.00	_____
Interest on operating capital	\$	497	8.0%	\$39.76	_____
Total operating costs				\$1,261.76	_____
Income above operating costs				-\$438.76	_____
OWNERSHIP (FIXED) COSTS					
Livestock facilities				\$35.00	_____
Equipment				\$70.00	_____
Overhead				\$0.00	_____
Total ownership costs				\$105.00	_____
TOTAL COSTS (operating costs + ownership costs)				\$1,366.76	_____
NET PROFIT (total revenue – total costs)				-\$543.76	_____

and decrease when you raise fewer.

Feed costs include the purchase price plus delivery costs. Hogs are fed approximately 4% of their body weight in grower ration for the first 90 days and 4% of their body weight in finisher ration 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 your time spent 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 costs 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 hog 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, driving devices, brushes, combs, hoses, sorting panel, feeders, pitchforks, 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 (\$150 ÷ 10 years) would be allocated to each year of use. (In other words, the

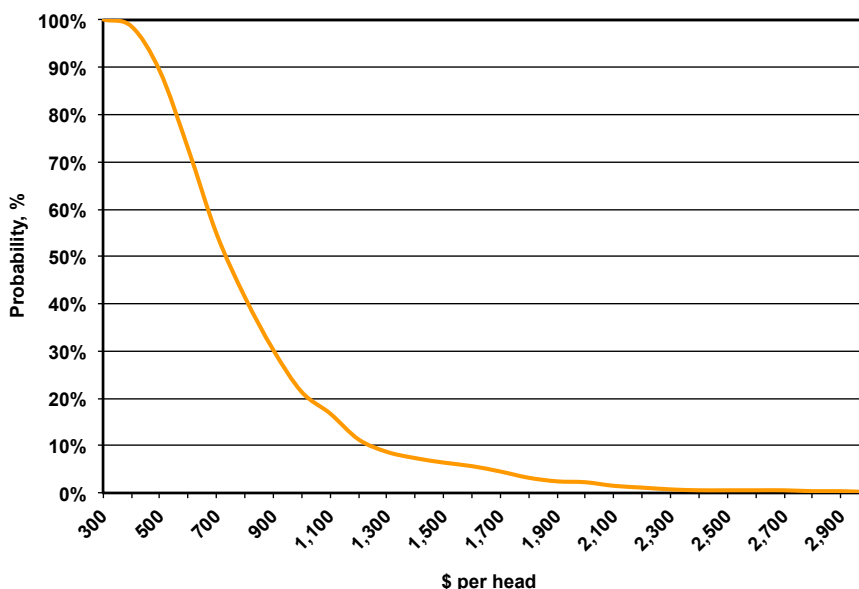


Figure 1. The probability (chance) of selling a hog at or above a given price, southeastern Idaho fairs, 2011.

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

	Grower ration	Finisher ration
April	90	0
May	156	0
June	222	0
July	0	288
Aug	0	104
Sept	0	0
Oct	0	0
Nov	0	0
Dec	0	0
Jan	0	0
Feb	0	0
March	0	0
Total	468	392

Table 3. 4-H market hog cash flow budget.

	April	May	June	July	Aug	Sept-March	Total
CASH INFLOWS							
Market hog					\$823.00		\$823.00
Total inflow	\$0.00	\$0.00	\$0.00	\$0.00	\$823.00	\$0.00	\$823.00
CASH OUTFLOWS							
Purchased hog	\$150.00						\$150.00
Feed							
Grower ration	\$30.00	\$45.00	\$60.00				\$135.00
Finisher ration				\$90.00	\$30.00		\$120.00
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	\$202.00	\$45.00	\$60.00	\$120.00	\$70.00	\$0.00	\$497.00
OPERATING SURPLUS	-\$202.00	-\$45.00	-\$60.00	-\$120.00	\$753.00	\$0.00	\$326.00

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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