

Feedlot Budget: 5000-head

Idaho Cattle Feedlot

Calf to Slaughter

Ben Eborn, Meranda Small, and Les Nunn



Background and Assumptions

Economic costs are used in the University of Idaho costs and returns estimates. All resources are valued based on market price or opportunity cost. This budget presents both the typical costs and returns per head and the total costs and returns for a 5,000-head cattle feedlot operation.

Livestock Investment

The capacity of the feedlot is 5,000 head but is used at only 65 percent of capacity. The percentage of capacity used represents the utilization only for the period cattle are on feed. Cattle are fed throughout the year. The turnover rate is 1.8, meaning that 1.8 groups of cattle are cycled through the feedlot annually, or about 5,850 animals. Death loss is approximately 1 percent.

Steer calves come into the program at 500 pounds and are fed through to 1,350 pounds finish weight. Heifer calves are placed on feed at 425 pounds and fed through to 1,275 pounds. Sixty-five percent of animals on feed are steers and 35% are heifers.

Most feedlot operations buy and sell cattle on a regular basis throughout the year. To simplify calculations, we assumed in this budget that calves are purchased in October, then fattened and sold in June.

Machinery, Equipment, and Facilities

Machinery and equipment investments include two feed trucks with mixer boxes, two front-end loaders, two 2-ton trucks, and a ½-ton pickup. The feedlot has 6,000 feet of feed bunk-space, 10,000 feet of fence, a water

system, working facilities, feed processing and storage facilities, shop and machinery storage, and office, scales and scale house.

Feeding

Feed rations typically consist of alfalfa hay, corn silage, grain (corn, barley, or wheat), salt/minerals, and often one or more by-products including potato waste, dairy waste, sugarbeet waste, dried distillers grain, straw and others.

The feed program is implemented in two stages. For the first 60 days, calves are fed a starter ration. Steer performance over the first 60-day period is estimated at 2.7 pounds average daily gain (ADG).

The finish ration is fed for approximately 200 days. Prices on all ration ingredients include transportation costs. Steer performance over this period is about 3.5 pounds ADG. Calves are started on the finish ration at about 660 pounds and steers are fed through to 1,350 pounds. Heifers are fed to about 1,275 pounds

Veterinary supplies and services include the cost of vaccine, wormer, antibiotics, and implants to promote cattle growth.

Labor

Labor for this operation is provided by three full-time and three part-time employees and valued at \$14.50 per hour. Labor is also provided by the owner and valued at \$24.00 per hour. The

hired labor rate includes payroll taxes and employee benefits paid by the owner.

Budget Format

In addition to the Background and Assumptions pages, this publication has three tables presenting a variety of costs and returns information.

Table 1 shows both expected revenue and expenses. Expenses are broken into two main categories: operating and ownership. Operating expenses are those that typically vary with the level of production and involve inputs that are used in a single production cycle. Ownership expenses include a systematic cost recovery over the useful life for inputs used in the production process that have a useful life of more than one year.

Tables 2 is a monthly summary of the cash flow of revenues and expenses based on when the operation occurs and when inputs are purchased.

Table 3 is a monthly summary of feed requirements.

Table 4 lists the purchase price, salvage value, and capital recovery of buildings, improvements, equipment, machinery, and vehicles used in this operation.

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Table 1: Idaho Cattle Feedlot, 5,000 Head - 2018

EBB-FL1-18

Calf to Slaughter

No. of Head: 5000

| | Weight Each | Unit | Total Number of Head or Units | Price or Cost/Unit | Total Value | Value or Cost/Head | Your Value |
|--|----------------|------|-------------------------------------|-----------------------|--------------------|-----------------------|------------|
| GROSS RETURNS | | | | | | | |
| Fed Steers | 1,350 | lbs | 3,764 | 1.15 | 5,843,610 | 1,168.72 | |
| Fed Heifers | 1,275 | lbs | 2,027 | 1.14 | 2,946,245 | 589.25 | |
| TOTAL GROSS RETURNS | | | | | \$8,789,855 | \$1,757.97 | |
| OPERATING COSTS | | | | | | | |
| Steers | 500 | lbs | 3,802 | 1.75 | 3,326,750 | 665.35 | |
| Heifers | 450 | lbs | 2,048 | 1.70 | 1,566,720 | 313.34 | |
| Starter Ration | | ton | 4,225 | 94.00 | 397,150 | 79.43 | |
| Finish Ration | | ton | 25,500 | 79.50 | 2,027,250 | 405.45 | |
| Marketing | | head | 5,791 | 20.22 | 117,075 | 23.41 | |
| Source & Age Verification | | head | 5,791 | 4.00 | 23,164 | 4.63 | |
| Veterinary Medicine | | head | 5,850 | 12.00 | 70,200 | 14.04 | |
| Machinery (Fuel, Lube, Repair) | | \$ | 1 | 10,000.00 | 10,000 | 2.00 | |
| Vehicles (Fuel, Repair) | | \$ | 1 | 40,000.00 | 40,000 | 8.00 | |
| Equipment (Repair) | | \$ | 1 | 2,000.00 | 2,000 | 0.40 | |
| Buildings & Improvements (Repair) | | \$ | 1 | 75,000.00 | 75,000 | 15.00 | |
| Hired Labor | | hour | 10,080 | 14.50 | 146,160 | 29.23 | |
| Owner Labor | | hour | 1,920 | 24.00 | 46,080 | 9.22 | |
| Interest on Operating Capital | | \$ | 3,923,774 | 6.50% | 255,045 | 51.01 | |
| TOTAL OPERATING COSTS | | | | | \$8,102,594 | \$1,620.52 | |
| NET RETURNS ABOVE OPERATING COSTS | | | | | \$687,260 | \$137.45 | |
| OWNERSHIP COSTS | | | | | | | |
| Capital Recovery: | | | | | | | |
| Buildings & Improvements | | \$ | 1 | 108,466 | 108,466 | 21.69 | |
| Machinery | | \$ | 1 | 15,598 | 15,598 | 3.12 | |
| Equipment | | \$ | 1 | 7,137 | 7,137 | 1.43 | |
| Vehicles | | \$ | 1 | 19,743 | 19,743 | 3.95 | |
| Taxes & Insurance | | \$ | 1 | 6,020 | 6,020 | 1.20 | |
| General Overhead | | \$ | 1 | 125,000 | 125,000 | 25.00 | |
| TOTAL OWNERSHIP COSTS | | | | | \$281,964 | \$56.39 | |
| TOTAL COSTS | | | | | \$8,384,558 | \$1,676.91 | |
| NET RETURNS ABOVE TOTAL COSTS | | | | | \$405,297 | \$81.06 | |

Table 4: Investment Summary.**EBB-FL1-18**

| | Purchase Price | Salvage/Cull Value | Livestock Share | Useful Life | Annual Taxes & Insurance | Annual Capital Recovery ¹ |
|--|-----------------------|---------------------------|------------------------|--------------------|-------------------------------------|---|
| Buildings, Improvements and Equipment | | | | | | |
| Land for Feedlot | 100,000 | 100,000 | 100 | 100 | 350.00 | \$5,500.00 |
| Pens & Lots | 340,000 | 34,000 | 100 | 15 | 1,190.00 | \$32,355.43 |
| Working Facilities | 20,000 | 2,000 | 100 | 15 | 70.00 | \$1,903.26 |
| Buildings | 130,000 | 13,000 | 100 | 25 | 455.00 | \$9,437.27 |
| Feed Processing/Storage | 630,000 | 63,000 | 100 | 20 | 2,205.00 | \$50,911.18 |
| Water System | 20,000 | 2,000 | 100 | 20 | 70.00 | \$1,616.23 |
| Truck & Livestock Scales | 100,000 | 10,000 | 100 | 30 | 350.00 | \$6,742.49 |
| Misc. Tools & Equipment | 75,000 | 7,500 | 100 | 15 | 262.50 | \$7,137.23 |
| Total | \$1,415,000 | | | | \$4,952.50 | \$115,603.09 |
| Machinery and Vehicles | | | | | | |
| Frontend Loader | 170,000 | 30,000 | 100 | 15 | 595.00 | \$15,597.58 |
| Feed Truck | 35,000 | 7,000 | 100 | 8 | 122.50 | \$4,805.19 |
| Feed Truck | 35,000 | 7,000 | 100 | 8 | 122.50 | \$4,805.19 |
| Truck 2 ton | 25,000 | 5,000 | 100 | 6 | 87.50 | \$4,278.58 |
| Truck 2 ton | 25,000 | 5,000 | 100 | 8 | 87.50 | \$3,432.28 |
| Pickup 1/2 ton 4x4 | 15,000 | 4,000 | 100 | 6 | 52.50 | \$2,421.97 |
| Total | \$305,000 | | | | \$1,067.50 | \$35,340.80 |

¹ Annual capital recovery is the method of calculating depreciation and interest recommended by the National Task Force on Commodity Costs and Returns Measurement Methods.

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