

# 2014 Idaho Livestock Costs and Returns Estimate



EBB-SF1-14

## Sheep - Farm Flock

Ewes on Pasture and Lambs on Drylot

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## 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 average costs and returns per ewe and total costs and returns for a typical 100-head sheep farm flock pasture operation. Livestock prices are based on the 5-year average price for livestock in this region. The forage source is summer pasture; winter feeding is required. Lambs are weaned before ewes are moved out to summer pasture, fattened in drylot, and sold in June.

### LIVESTOCK INVESTMENT

The livestock investment consists of 100 ewes and 3 rams. Ewes have a useful life of 7 years after they are placed into the breeding herd. The culling rate is 12% and the ewes have a 3% death loss. Ewe replacements are raised on the farm and have a 6% death loss rate and a 6% cull rate. The weaned lamb crop is 150% of ewes wintered. The lamb death loss rate in drylot is 1%.

### MACHINERY AND EQUIPMENT

Machinery and equipment investment is 30% use of a pickup, 5% use of a tractor and scraper, and 100% use of miscellaneous equipment and tools. Values on machinery and equipment are calculated at 50% of new replacement cost to reflect typically aged, but functional farm equipment.

### BUILDINGS AND IMPROVEMENTS

Buildings and improvements include a lambing shed, lambing and holding pens, fencing, feed bunks, grain storage facilities, and watering tubs. The sheep enterprise uses about 15% of the farm water system.

Shed construction uses treated posts and 1- by 12-inch rough lumber with a treated canvas exterior. A total of 15 4' by 4' jugs are supplied with free-flowing water through notched aluminum pipe. Pen facilities include five 16- by 16-foot pens that will house 10 ewes with singles or 6 ewes with twins, two 16- by 30-foot medium group pens, and two 48- by 120-foot pens for large groups of ewes and lambs. Straw is placed in the sheds to provide dry bedding for lambs and ewes. Buildings and improvements are valued at 80% of new replacement cost.

### MANAGEMENT PRACTICES

Lambing begins in late January and continues through February. Lambs are weaned in March and moved into drylot where they are fattened and then marketed in June. The animals are fed an average 1.5 pounds of hay and 2 pounds of grain per day for 120 days. Lambs are creep fed before starting on hay and grain ration in March.

On April 15, ewes are placed on irrigated or improved pasture until late November. On approximately December 1, ewes are gathered and placed in drylot until mid-April when they will again be placed on pasture. From December 1 through lambing, ewes are given a feed ration consisting of hay and barley. Free choice mineral salt with selenium is also available. During winter feeding, ewes receive an average of 5 pounds of hay and 0.75 pound of barley per day. The price on all feed consumed is the purchase price plus transportation costs.

Marketing occurs in April and June. Cull animals are marketed primarily in April and lambs in June. The costs of marketing include transportation to market, 3% of gross value for sales commission and 5% for shrink.

Veterinary care is administered to maintain herd health. Generally, each ewe is given vibrio and multi-clostridial vaccinations before lambing season and is then wormed in August. Replacement ewes receive essentially the same treatment as the ewes plus an additional multi-clostridial vaccination in the fall. Lambs receive a vaccination for enterotoxemia at 4 and 6 weeks after birth. Treatment for coccidiosis for ewes, replacements, and lambs is administered through salt intake. In addition, selenium is included in the salt mixture the year round at about 30 parts-per-million (ppm).

Labor for this operation is provided by the operator and his family valued at \$23.47 per hour and by part-time help valued at \$10.62 per hour. These costs include all applicable state and federal taxes.

**Table1: Sheep - Farm Flock Budget**  
**Ewes on Pasture**  
**Lambs on Drylot**

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|   | Weight<br>Each | Unit | Total Number<br>of Head<br>or Units | Price or<br>Cost/Unit | Total Value | Value or<br>Cost/Head | Your Value |
|---|----------------|------|-------------------------------------|-----------------------|-------------|-----------------------|------------|
| <b>1. Gross Receipts</b>                  |                |      |                                     |                       |             |                       |            |
| Fat lambs                                 | 130.00         | lb   | 150                                 | 1.56                  | 30,420.00   | 304.20                | _____      |
| Cull Replacement Ewe                      | 140.00         | lb   | 1                                   | 0.65                  | 91.00       | 0.91                  | _____      |
| Cull ewes                                 | 160.00         | lb   | 12                                  | 0.31                  | 595.20      | 5.95                  | _____      |
| Cull rams                                 | 225.00         | lb   | 1                                   | 0.54                  | 121.50      | 1.22                  | _____      |
| Wool - ewe, Suffolk                       | 9.00           | lb   | 100                                 | 0.50                  | 450.00      | 4.50                  | _____      |
| Wool - ram, Suffolk                       | 11.00          | lb   | 3                                   | 0.50                  | 16.50       | 0.17                  | _____      |
| Total Receipts                            |                |      |                                     |                       | \$31,694.20 | \$316.94              | _____      |
| <b>2. Operating Costs</b>                 |                |      |                                     |                       |             |                       |            |
| Selenium salt                             |                | lb   | 1503.00                             | 0.14                  | 210.42      | 2.10                  | _____      |
| Feed barley                               |                | cwt  | 307.84                              | 10.43                 | 3210.74     | 32.11                 | _____      |
| Corn                                      |                | cwt  | 153.60                              | 10.30                 | 1582.03     | 15.82                 | _____      |
| Pasture                                   |                | AUM  | 154.50                              | 25.00                 | 3862.50     | 38.62                 | _____      |
| Alfalfa grass hay                         |                | ton  | 48.40                               | 210.00                | 10,163.16   | 101.63                | _____      |
| Marketing                                 |                | head | 100.00                              | 4.00                  | 400.00      | 4.00                  | _____      |
| Shearing - ewe                            |                | head | 100.00                              | 4.25                  | 425.00      | 4.25                  | _____      |
| Shearing - ram                            |                | head | 3.00                                | 8.50                  | 25.50       | 0.26                  | _____      |
| Wool Assessment                           |                | head | 100.00                              | 0.93                  | 93.00       | 0.93                  | _____      |
| Hauling                                   |                | head | 100.00                              | 1.46                  | 146.00      | 1.46                  | _____      |
| ASI checkoff (assuming 1.5 lambs per ewe) |                | head | 0.00                                | 1.37                  | 0.00        | 0.00                  | _____      |
| Veterinary Medicine                       | \$             |      | 494.28                              | 1.00                  | 494.28      | 4.94                  | _____      |
| Machinery (fuel, lubrication, repair)     | \$             |      | 101.33                              | 1.00                  | 101.33      | 1.01                  | _____      |
| Vehicles (fuel, repair)                   | \$             |      | 1061.13                             | 1.00                  | 1061.13     | 10.61                 | _____      |
| Equipment (repair)                        | \$             |      | 62.50                               | 1.00                  | 62.50       | 0.63                  | _____      |
| Housing and Improvements (repair)         | \$             |      | 1144.54                             | 1.00                  | 1144.54     | 11.45                 | _____      |
| Hired Labor                               |                | hour | 510.00                              | 10.62                 | 5416.20     | 54.16                 | _____      |
| Owner Labor                               |                | hour | 96.00                               | 23.47                 | 2253.12     | 22.53                 | _____      |
| Interest on Operating Capital             | \$             |      | 10,084.81                           | 0.05                  | 479.03      | 4.79                  | _____      |
| Total Operating Costs                     |                |      |                                     |                       | \$31,130.47 | \$311.30              | _____      |
| <b>3. Income Above Operating Costs</b>    |                |      |                                     |                       | \$563.73    | \$5.64                | _____      |
| <b>4. Ownership Costs</b>                 |                |      |                                     |                       |             |                       |            |
| Capital Recovery:                         |                |      |                                     |                       |             |                       |            |
| Purchased Livestock                       | \$             |      | 400.52                              | 1.00                  | 400.52      | 4.01                  | _____      |
| Housing and Improvements                  | \$             |      | 1983.08                             | 1.00                  | 1983.08     | 19.83                 | _____      |
| Machinery                                 | \$             |      | 95.24                               | 1.00                  | 95.24       | 0.95                  | _____      |
| Equipment                                 | \$             |      | 409.42                              | 1.00                  | 409.42      | 4.09                  | _____      |
| Vehicles                                  | \$             |      | 709.73                              | 1.00                  | 709.73      | 7.10                  | _____      |
| Interest on Retained Livestock            | \$             |      | 13,777.00                           | 0.04                  | 499.42      | 4.99                  | _____      |
| Taxes and Insurance                       | \$             |      | 148.42                              | 1.00                  | 148.42      | 1.48                  | _____      |
| Overhead                                  | \$             |      | 500.00                              | 1.00                  | 500.00      | 5.00                  | _____      |
| Total Ownership Costs                     |                |      |                                     |                       | \$4745.82   | \$47.46               | _____      |
| <b>5. Total Costs</b>                     |                |      |                                     |                       | \$35,876.29 | \$358.76              | _____      |
| <b>6. Returns to Risk and Management</b>  |                |      |                                     |                       | -\$4182.09  | -\$41.82              | _____      |



**Table 4: Investment Summary.****EBB-SF1-14**

|  | Purchase Price     | Salvage/Cull Value | Livestock Share | Useful Life | Annual Taxes and Insurance | Annual Capital Recovery <sup>1</sup> |
|--|--------------------|--------------------|-----------------|-------------|----------------------------|--------------------------------------|
| <b>Buildings, Improvements and Equipment</b> |                    |                    |                 |             |                            |                                      |
| Lambing shed                                 | \$6200.00          | \$0.00             | 100             | 25          | \$18.60                    | \$406.37                             |
| Water system                                 | \$7400.00          | \$0.00             | 15              | 20          | \$3.33                     | \$83.31                              |
| Grain storage                                | \$8300.00          | \$800.00           | 100             | 20          | \$27.30                    | \$596.71                             |
| Electric fence                               | \$4400.00          | \$0.00             | 100             | 20          | \$13.20                    | \$330.24                             |
| Corral                                       | \$6200.00          | \$0.00             | 100             | 15          | \$18.60                    | \$566.44                             |
| Miscellaneous                                | \$2100.00          | \$0.00             | 100             | 10          | \$6.30                     | \$261.82                             |
| Feeders                                      | \$1250.00          | \$100.00           | 100             | 10          | \$4.05                     | \$147.60                             |
| <b>Total</b>                                 | <b>\$35,850.00</b> |                    |                 |             | <b>\$91.38</b>             | <b>\$2392.50</b>                     |
| <b>Purchased Livestock</b>                   |                    |                    |                 |             |                            |                                      |
| Rams   | \$1779.00          | \$360.00           | 100             | 4           |                            | \$400.52                             |
| <b>Total</b>                                 | <b>\$1779.00</b>   |                    |                 |             |                            | <b>\$400.52</b>                      |
| <b>Retained Livestock</b>                    |                    |                    |                 |             |                            |                                      |
| Ewes   | \$16,200.00        | \$8600.00          | 100             |             |                            | \$449.50 <sup>2</sup>                |
| Ewe replacements                             | \$1836.00          | \$918.00           | 100             |             |                            | \$49.92 <sup>2</sup>                 |
| <b>Total</b>                                 | <b>\$18,036.00</b> |                    |                 |             |                            | <b>\$499.42<sup>2</sup></b>          |
| <b>Machinery and Vehicles</b>                |                    |                    |                 |             |                            |                                      |
| Tractor - 30hp                               | \$14,000.00        | \$3000.00          | 10              | 20          | \$5.10                     | \$95.24                              |
| Pickup 3/4 ton                               | \$22,600.00        | \$5100.00          | 25              | 8           | \$51.94                    | \$709.73                             |
| <b>Total</b>                                 | <b>\$36,600.00</b> |                    |                 |             | <b>\$57.04</b>             | <b>\$804.96</b>                      |

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

<sup>2</sup> Interest on average investment.

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