

BEEF WINTERING: Estimated revenue, operating expenses, prorated ownership expenses, and returns to land, overhead and management for 75 beef steers on 50 acres of conventionally fertilized rye or ryegrass pasture for 130 days, under rotational grazing.

Budget 21-1
Dec 2013

| Category | Description | Unit | Price | Quantity | Value | Comments |
|--|--------------------------|--------|----------|----------|-----------------|----------|
| OPERATING INPUTS | | | | | | |
| Feeder Calves, steers | 75 head at 575 lbs. | Cwt. | \$152.00 | 431.3 | \$65,550 | _____ |
| Feeder Calves, heifers | | Cwt. | \$0.00 | 0.0 | \$0 | _____ |
| Pasture ^a | Rye &/or ryegrass | Acre | \$216.11 | 50.0 | \$10,806 | _____ |
| Pasture | | Acre | \$0.00 | 0.0 | \$0 | _____ |
| Supplementary feed | Hay, byproducts, etc. | Head | \$30.00 | 73.5 | \$2,205 | _____ |
| Mineral and Ionophore | .15 lb/hd/day | Lb. | \$0.40 | 1,544 | \$617 | _____ |
| Vaccines, fly control, etc. | | Hd. | \$10.00 | 73.5 | \$735 | _____ |
| Implant | | Hd. | \$1.00 | 73.5 | \$74 | _____ |
| Fence, water repair | Pro-rated share | % | 8.0% | 28,700 | \$2,296 | _____ |
| Facility Repair | Pro-rated share | % | 1.0% | 4,006 | \$40 | _____ |
| Equipment operating | From Table 2 | | | | \$731 | _____ |
| Sales Comm. & transport | | Hd. | \$27.50 | 73.5 | \$2,021 | _____ |
| Annual operating capital ^b | Interest rate, annual | % | 5.50% | 74,302 | \$1,567 | _____ |
| TOTAL OPERATING COSTS | | | | | \$86,642 | _____ |
| PRO-RATED FIXED COSTS^c | | | | | | |
| Fencing & facilities, from Table 2 | | | | | \$3,060 | _____ |
| Machinery & equipment, from table 2 | | | | | \$427 | _____ |
| Machinery & equipment, annual pastures ^a | | Acre | \$11.34 | 50.0 | \$567 | _____ |
| Perennial pasture establishment, from Table 2 ^a | | | | | \$0 | _____ |
| TOTAL OWNERSHIP COSTS | | | | | \$4,054 | _____ |
| LABOR COSTS | | | | | | |
| Machinery operator labor, From Table 2 | | | | | \$540 | _____ |
| Livestock labor | Work, check cattle, etc. | \$/hr. | \$12.00 | 45 | \$540 | _____ |
| TOTAL LABOR COST | | | | | \$1,080 | _____ |
| TOTAL COST | | | | | \$91,776 | _____ |
| GROSS REVENUE^d | | | | | | |
| Feeder Cattle, steers | 73.5 head @ 784lb. | Cwt. | \$165.00 | 576.24 | \$95,080 | _____ |
| Feeder Cattle, heifers | | Cwt. | \$0.00 | 0.00 | \$0 | _____ |
| TOTAL REVENUE | | | | | \$95,080 | _____ |
| RETURNS OVER OPERATING EXPENSES | | | | | \$8,437 | _____ |
| RETURNS TO LAND, OVERHEAD, LABOR & MANAGEMENT | | | | | \$4,383 | _____ |
| RETURNS TO LAND, OVERHEAD AND MANAGEMENT | | | | | \$3,303 | _____ |
| COST SUMMARY | | | | | | |
| Average sales price (\$/cwt.) required to recover operating costs: | | | | | \$150.36 | _____ |
| Average sales price (\$/cwt.) required to recover total cost: | | | | | \$159.27 | _____ |
| Cost per pound of gain (\$/cwt.) | | | | | \$1.81 | _____ |

^a Pasture costs are taken from budget 88-9. If perennial pastures are used, include a pro-rated share of pasture annual and establishment costs based on the appropriate NCSU forage budget for the species.

^b Interest calculated on full cattle purchase cost and 1/2 of other costs, except sales expense, for 5 months.

^c Assumes the annual cost of the facilities is shared and one-half of the total cost is applied to this enterprise.

^d Assumes 2% death loss or 1.5 head. Sale weight is 800 lbs. less 2% shrink = 786 lbs/head.

Cattle prices vary and are affected by the cattle cycle, time of year, weight, frame, fleshiness, breed, and market.

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Table 1. Investment in specialized facilities & equipment and pro-rated share of annual ownership expenses

| Category | Life | Initial | Salvage | Deprec- | Interest ^b | Tax & | Total | Share to | Share to |
|------------------------------------|-------|---------|---------|---------------------|-----------------------|-------------------|-------|------------|-------------|
| | Years | Cost | Value | iation ^a | \$ | Ins. ^c | \$ | Enterprise | Enterprise |
| | | \$ | \$ | \$ | \$ | \$ | \$ | % | \$ |
| Interest & Tax Rates ==> | | | | | 5.5% | 1.40% | | | |
| Facilities: | | | | | | | | | |
| Perimeter Fence | 25 | 15,600 | 0 | 624 | 412 | 218 | 1,254 | 100.0% | 1254 |
| Prem. Internal Fence | 25 | 9,100 | 0 | 364 | 240 | 127 | 732 | 100.0% | 732 |
| Temp. Electric Fence | 3 | 250 | 0 | 83 | 5 | 4 | 91 | 100.0% | 91 |
| Watering system | 10 | 4,000 | 0 | 400 | 99 | 56 | 555 | 100.0% | 555 |
| Corral & Chute | 15 | 8,000 | 0 | 533 | 205 | 112 | 851 | 50.0% | 425 |
| Feed Bunks ^d | 3 | 11 | 0 | 4 | 0 | 0 | 4 | 50.0% | 2 |
| Other facilities | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0% | 0 |
| Feeding Cattle | | | | | | | | | |
| Tractor | 10 | 23,150 | 6,019 | 1,713 | 590 | 324 | 2,627 | 10.0% | 263 |
| + equipment | 10 | 2,500 | 750 | 175 | 64 | 35 | 274 | 10.0% | 27 |
| Pasture and Cattle Management | | | | | | | | | |
| 1/2 T Pickup or 4-wheeler | 10 | 12,000 | 3,000 | 900 | 305 | 168 | 1,373 | 10.0% | 137 |
| Other equipment | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0% | 0 |
| Pasture Establishment ^e | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0% | 0 |
| TOTAL | | | | | | | | | 3487 |

^a Depreciation = (Initial cost - Salvage value) / years of life

^b Interest on average value of investment = ((Initial cost + Salvage value) / 2) X interest rate specified

^c Property taxes and insurance on facilities and equipment = Initial cost X specified property tax plus insurance rate

^d 6 bunks @ \$150.00 each

^e If perennial pastures are used, include appropriate pasture establishment costs for the species based on the NCSU forage budgets

Table 2. Operating expense for machinery and equipment per batch of cattle

| Operation and Item | Horse Power | Repairs & Maint. ^a | Repairs & Maint. | Share to Enterprise | Est. Fuel Use | Fuel Cost | Fuel & Lube ^b | Hours of Use/Year | Total Op. Cost/Year | Labor Cost ^c | Total Expense |
|--|-------------|-------------------------------|------------------|---------------------|---------------|-----------|--------------------------|-------------------|---------------------|-------------------------|---------------|
| | | % | \$/Year | \$ | Gals/hr | \$ | \$/Hour | Hours | \$ | \$ | \$ |
| Fuel cost per gallon & Labor cost per hour ==> | | | | | | 3.75 | | | | 12.00 | |
| Tractor | 55 | 2% | 463.00 | 231.50 | 2.42 | 9.08 | 10.44 | 35.0 | 596.77 | 420.00 | 1,017 |
| + equipment | | 1% | 25.00 | 2.50 | 0 | 0.00 | 0.00 | 35.0 | 2.50 | | 3 |
| 1/2 T Pickup or 4-wheeler | | 2% | 240.00 | 24.00 | 2.5 | 9.38 | 10.78 | 10.0 | 131.81 | 120.00 | 252 |
| Other equipment | | 1% | 0.00 | 0.00 | 0 | 0.00 | 0.00 | 0.0 | 0.00 | | 0 |
| TOTAL | | | | | | | | | 731 | 540 | 1,271 |

^a Repairs and maintenance costs are calculated as a % of the initial cost in Table 1. Percentages are higher for equipment that is bought used.

^b Fuel cost is based on engine horsepower plus lube costs estimated as 15% of the fuel cost.

^c Labor cost or charge includes an additional 15% allowance for inspection, equipment adjustments, cleaning up, travel, etc. Include labor that does not require equipment as "Livestock labor" directly in the budget, e.g, working cattle, moving fence, checking cattle.

Table 3. SENSITIVITY ANALYSIS

This table shows the returns to land, overhead and management (a measure of profit) under various assumptions about costs and returns. Specifically, the cost and returns shown in the enterprise budget on the first page are believed to be fairly representative of conditions in North Carolina. However, there is a wide variation in farm performance from one farm to another and costs and cattle prices can change rapidly from year-to-year. The table shows the effects of returns that are 10 percent higher and lower than for the base budget. Similarly, the table also shows the effects of total costs that are 10 percent higher and lower than in the base budget.

RETURNS TO LAND, OVERHEAD AND MANAGEMENT:

| | | REVENUE | | |
|-------------|------|------------|----------------|------------|
| | | -10% Lower | Base Budget | 10% Higher |
| | -10% | \$2,973 | \$12,481 | \$21,989 |
| COST | Base | -\$6,205 | \$3,303 | \$12,811 |
| | 10% | -\$15,382 | -\$5,874 | \$3,634 |