

BEEF FINISHING ON PASTURE: Estimated revenue, operating expenses, prorated fixed costs and returns to land, overhead & management for 75 head of cattle finished on 75 acres of temporary and permanent pastures, with a starting weight of 575 lb. gaining 1.5 lb/day for 350 days

Budget 21-8
Dec 2013

Category	Description	Unit	Price	Quantity	Value	Comments
OPERATING INPUTS						
Feeder Calves, steers	75 head at 575 lb.	Cwt.	\$159.00	431.3	\$68,569	
Feeder Calves, heifers		Cwt.		0.0	\$0	
Perennial Pasture ^a	0.75 acre/head	Acre	\$116.46	50.0	\$5,823	
Perennial Pasture		Acre		0.0	\$0	
Summer annual pasture ^a	0.25 acre/head	Acre	\$273.61	25.0	\$6,840	
Winter temporary pasture ^a	0.25 acre/head	Acre	\$216.11	25.0	\$5,403	
Supplementary feed	Hay, byproducts	Head	\$50.00	73.5	\$3,675	
Minerals		Lb.	\$0.30	3,638	\$1,091	
Vet and medicine		Head	\$10.00	73.5	\$735	
Fence, water repair	% of initial investment	%	8.0%	42,975	\$3,438	
Facilities Repair	% of initial investment	%	1.0%	2,640	\$26	
Equipment operating	From Table 2				\$863	
Sales Com. & transport		Head	\$30.00	73.5	\$2,205	
Annual operating capital ^b	Interest rate, annual	%	5.50%	73,483	\$3,654	
TOTAL OPERATING COSTS					\$102,323	
PRO-RATED FIXED COSTS^c						
Fence and facilities, from Table 1					\$4,510	
Machine & equipment, livestock, from Table 1					\$928	
Mach. & equip., summer annual pastures ^a		Acre	\$11.34	25.0	\$284	
Mach. & equip., winter annual pastures ^a		Acre	\$11.34	25.0	\$284	
Perennial pasture establishment, from Table 1 ^a					\$3,072	
TOTAL OWNERSHIP COSTS					\$9,076	
LABOR COSTS						
Machinery operator labor, From Table 2					\$786	
Livestock labor	Work, check cattle	\$/hr.	\$12.00	40	\$480	
TOTAL LABOR COST					\$1,266	
TOTAL COST					\$112,665	
GROSS REVENUE^d						
Feeder cattle, Steers	73.5 head at 1078 lb ^e	Cwt.	\$130.00	792.33	\$103,003	
Feeder cattle, Heifers		Cwt.			\$0	
TOTAL REVENUE					\$103,003	
RETURNS OVER OPERATING EXPENSES					\$680	
RETURNS TO LAND, OVERHEAD, LABOR, AND MANAGEMENT					-\$8,397	
RETURNS TO LAND, OVERHEAD AND MANAGEMENT					-\$9,663	
COST SUMMARY						
Average sales price required to recover operating costs, \$/cwt. of pay weight					\$129.14	
Average sales price required to recover total cost, \$/cwt. of pay weight					\$142.20	
Cost per pound of gain, \$/cwt. sold					\$1.22	

^a Pasture costs are taken from budgets, 87-2, 88-8 and 88-9. Annual pastures are double cropped.

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

^c Assumes the annual cost of the facilities is shared and pro-rated to this enterprise.

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

^e 2% death loss. Sale weight is 1100 lbs. less 2% shrink = 1078 lbs/head.

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

Category	Life	Initial Cost	Salvage Value	Depreciation ^a	Interest ^b	Tax & Ins. ^c	Total	Share to Enterprise ^d	Share to Enterprise
	Years	\$	\$	\$	\$	\$	\$	%	\$
Interest & Tax Rates ==>					5.5%	1.40%			
Facilities									
Perimeter Fence	25	18,800	0	752	496	263	1,512	100.0%	1,512
Perm. Internal Fence	25	13,000	0	520	343	182	1,045	100.0%	1,045
Temp. Electric Fence	3	250	0	83	5	4	91	100.0%	91
Water Supply	10	11,175	0	1,118	307	156	1,581	100.0%	1,581
Corral & Chute	15	8,000	0	533	205	112	851	33.0%	281
Feed Bunks	5	0	0	0	0	0	0	0.0%	0
Other	1	0	0	0	0	0	0	0.0%	0
Cattle Feeding									
Tractor	15	23,150	4,630	1,235	603	324	2,161	10.0%	216
+ equipment	15	500	100	27	13	7	47	50.0%	23
Pasture and Cattle Mangement									
Tractor	15	23,150	4,630	1,235	603	324	2,161	10.0%	216
+ bushhog	15	4,225	845	225	110	59	394	50.0%	197
1/2 T Pickup or 4-Wheeler	10	12,000	3,000	900	305	168	1,373	20.0%	275
Other	1	0	0	0	0	0	0	0.0%	0
Pasture establishment ^e	7	16,662	0	2,380	458	233	3,072	100.0%	3,072
Pasture establishment	7	0	0	0	0	0	0	100.0%	0
TOTAL									8,509

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

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

^c Property taxes and insurance on facilities and equipment = Initial investment X tax + insurance rates specified.

^d Facilities and equipment might be shared with other enterprises. Cost share might be available to offset some investment costs.

^e Pasture establishment costs are from Budget 87-1, NCSU Forage Enterprise Budgets

Table 2. Operating expense for machinery and equipment

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 ==>											
Tractor	55	2%	463.00	46.30	2.42	9.08	10.44	10.0	150.66	120.00	271
+ equipment		1%	5.00	2.50	0	0.00	0.00	10.0	2.50		3
Tractor	55	2%	463.00	46.30	2.42	9.08	10.44	10.0	150.66	120.00	271
+ bushhog		1%	42.25	21.13	0	0.00	0.00	10.0	21.13		21
1/2 T Pickup or 4-Wheeler		2%	240.00	48.00	2.5	9.38	10.78	45.5	538.55	546.00	1,085
Other	0	1%	0.00	0.00	0	0.00	0.00	0.0	0.00	0.00	0
TOTAL									863	786	1,649

^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.

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 basic budget. Similarly, the table also shows the effects of total costs that are 10 percent higher and lower.

RETURNS TO LAND, OVERHEAD AND MANAGEMENT:

		REVENUE		
		-10% Lower	Base Budget	10% Higher
	-10%	-\$8,696	\$1,604	\$11,904
COST	Base	-\$19,963	-\$9,663	\$638
	+ 10%	-\$31,229	-\$20,929	-\$10,629