

BEEF SUMMER GRAZING: Estimated revenue, operating expenses, prorated fixed costs and returns to land, overhead & management for 70 steers on 28 acres of bermuda grass pasture fertilized with lagoon effluent with a limited N-fertilization regime, with a starting weight of 575 lb., gaining 1.5 lbs./day for 140 days.

Budget 21-4
Dec 2013

Category	Description	Unit	Price	Quantity	Value	Comments
OPERATING INPUTS						
Feeder Calves, steers	70 head at 575 lb.	Cwt.	\$165.00	402.5	\$66,413	_____
Feeder Calves, heifers		Cwt.	\$0.00	0.0	\$0	_____
Perennial Pasture ^a	0.4 acres per head	Acre	\$0.00	28.0	\$0	_____
Temporary pasture ^a	Summer annual	Acre	\$0.00	0.0	\$0	_____
Concentrate/supplement	3 lb/hd/day	Ton	\$240.00	14.4	\$3,457	_____
Concentrate/supplement		Ton	\$0.00	0.0	\$0	_____
Minerals and Ionophore		Hd/day.	\$0.40	9,604	\$3,842	_____
Implant, deworm, fly control		Hd.	\$10.00	68.6	\$686	_____
Fence Repair	% of initial investment	%	8.0%	13,164	\$1,053	_____
Facilities Repair	% of initial investment	%	1.0%	9,125	\$91	_____
Equipment operating	From Table 2				\$811	_____
Sales Com. & transport		Hd.	\$27.50	68.6	\$1,887	_____
Annual operating capital ^b	Interest rate, annual	%	5.50%	71,383	\$1,506	_____
TOTAL OPERATING COSTS					\$79,745	_____
PRO-RATED FIXED COSTS^c						
Fence and facilities	Depreciation, interest, tax and insurance				\$1,102	_____
Machinery & equipment	Depreciation, interest, tax and insurance				\$953	_____
Pasture establishment ^a	Depreciation and interest				\$937	_____
TOTAL OWNERSHIP COSTS					\$2,992	_____
LABOR COSTS						
Machinery operator labor, From Table 2					\$540	_____
Livestock labor	Work, check cattle	\$/hr.	\$12.00	25	\$300	_____
TOTAL LABOR COST					\$840	_____
TOTAL COST					\$83,577	_____
GROSS REVENUE^d						
Feeder cattle, Steers	68.6 head at 785 lb ^e .	Cwt.	\$159.00	527.7	\$83,911	_____
Feeder cattle, Heifers		Cwt.	\$0.00	0	\$0	_____
					\$83,911	_____
RETURNS OVER OPERATING EXPENSES					\$4,165.56	_____
RETURNS TO LAND, OVERHEAD, LABOR, AND MANAGEMENT					\$1,173.20	_____
RETURNS TO LAND, OVERHEAD AND MANAGEMENT					\$333.20	_____
COST SUMMARY						
Average sales price (\$/cwt.) required to recover operating costs:					\$151.11	_____
Average sales price (\$/cwt.) req. to recover total cost:					\$158.37	_____
Cost per pound of gain (\$/cwt.):					\$1.37	_____

^a Assumes the pasture cost is borne by the swine unit for waste utilization. Farms without swine should include include the appropriate pasture costs for the species based on the NCSU forage budgets.

^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 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 760 lbs. less 2% shrink = 745 lbs/head.

BEEF GRAZING

Table 1. 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	Share to Enterprise
	Years	\$	\$	\$	\$	\$	\$	%	\$
Interest & Tax Rates ==>					5.5%	1.40%			
Facilities:									
Perimeter Fence	25	10,904	0	436	288	153	877	50.0%	438
Perm. Internal Fence	25	2,260	0	90	60	32	182	50.0%	91
Temp. Electric Fence	3	200	0	67	4	3	73	50.0%	37
Watering system	10	1,600	0	160	40	22	222	50.0%	111
Corral & Chute	15	8,000	0	533	205	112	851	50.0%	425
Feed Bunks ^d	3	1,125	0	375	21	16	411	50.0%	206
Feeding Cattle									
Tractor	15	23,150	6,019	1,142	605	324	2,071	10.0%	207
+ equipment	15	2,500	750	117	66	35	217	10.0%	22
Pasture and Cattle Management									
Tractor	15	23,150	6,019	1,142	605	324	2,071	10.0%	207
+ bushhog	15	4,225	1,268	197	111	59	367	10.0%	37
1/2 T Pickup or 4-wheeler	10	12,000	3,000	900	305	168	1,373	20.0%	275
Other equipment	1	0	0	0	0	0	0	0.0%	0
Pasture Establishment ^e	15	8,665	0	578	238	121	937	100.0%	937
TOTAL									2,992

^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 Pasture establishment costs are from Budgets 87-1 and 87-2, N.C. Enterprise Budget Guidelines

Table 2. Operating expense for machinery and equipment per batch of cattle ¹

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	10.0	335.86	120.00	456
+ equipment		1%	25.00	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	4.23	0	0.00	0.00	10.0	4.23		4
1/2 T Pickup or 4-wheeler		2%	240.00	48.00	2.5	9.38	10.78	25.0	317.53	300.00	618
Other equipment		1%	0.00	0.00	0	0.00	0.00	0.0	0.00		0
TOTAL									811	540	1,351

^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 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
COST	-10%	\$300	\$8,691	\$17,082
	Base	-\$8,058	\$333	\$8,724
	+ 10%	-\$16,416	-\$8,025	\$367