

NC STATE UNIVERSITY

BEEF COW-CALF: Estimated revenue, operating expenses, annual ownership expenses, and returns to land, overhead and management for 50 cows on 75 acres of a conventionally fertilized cool season perennial grass/ladino clover pasture, rotationally grazed.

Budget 20-1
Jul-08

Category	Description	Unit	Price	Quantity	Value	Comments
OPERATING INPUTS						
Permanent pasture ^a	1.5 acre/cow	Acre	\$109.95	75.0	\$8,246	
Permanent pasture	Perennial crop	Acre	\$0.00	0.0	\$0	
Temporary pasture	Annual crops	Acre	\$0.00	0.0	\$0	
Temporary pasture	Annual crops	Acre	\$0.00	0.0	\$0	
Supplemental feed	Hay, mixed feed, etc.	Hd.	\$225.00	50.0	\$11,250	
Minerals	.15 lb/hd/day	Lb.	\$0.30	2,738	\$821	
Vaccines, fly control, etc.	Calves	Hd.	\$10.00	44.0	\$440	
Implant	1 time/head	Hd.	\$1.00	22.0	\$22	
Breeding	50 head	Hd.	\$50.00	50.0	\$2,500	
Replacements	6 head/yr.	Hd.	\$1,100.00	5.0	\$5,500	
Vet & Medical	50 head	Hd.	\$15.00	50.0	\$750	
Fence & Water Repair	% of initial investment	%	8.0%	32,990	\$2,639	
Facilities Repair	% of initial investment	%	1.0%	6,000	\$60	
Equipment operating	From Table 2				\$1,096	
Sales Com. & transport		Hd.	\$25.00	49.0	\$1,225	
Annual operating capital ^b	Interest rate, annual	\$	7.5%	12,539	\$940	
TOTAL OPERATING COSTS					\$35,490	
OWNERSHIP COSTS						
Fencing, facilities, cows					\$8,003	
Machine & equipment					\$1,377	
Pasture establishment	Depreciation and interest				\$2,724	
TOTAL OWNERSHIP COSTS					\$12,104	
LABOR COSTS						
Machinery operator labor, From Table 2					\$846	
Livestock labor	Work, check cattle	\$/hr.	\$9.00	175	\$1,575	
TOTAL LABOR COST					\$2,421	
TOTAL COST					\$50,016	
GROSS REVENUE^c						
Steers	22 head @ 575 lb.	Cwt.	\$103.00	126.50	\$13,030	
Heifers	22 head @ 525 lb.	Cwt.	\$95.00	115.50	\$10,973	
Cull cows	6 head @ 1,200 lb.	Cwt.	\$55.00	72.00	\$3,960	
TOTAL REVENUE					\$27,962	
RETURNS OVER OPERATING EXPENSES					(\$7,528.33)	
RETURNS TO LAND, OVERHEAD, LABOR, & MANAGEMENT					(\$19,632.55)	
RETURNS TO LAND, OVERHEAD & MANAGEMENT					(\$22,053.55)	
RETURNS TO LAND, OVERHEAD & MANAGEMENT PER COW					(\$441.07)	
RETURNS TO LAND, OVERHEAD & MANAGEMENT PER ACRE					(\$294.05)	

^a Annual operating costs are taken from Budget 87-2. Assumes annual stocking rate of 1 1/2 acre/cow.

^b Interest calculated on one-half of operating input costs, except sales expense.

^c Revenues assume a weaned calf crop of 88% of cows exposed. Weight is sale weight after shrink.

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

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BEEF COW-CALF

Budget 20-1
Jul-08

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	DITI	Enterprise	Enterprise
		\$	\$	\$	\$	\$	\$	%	\$
Interest and Tax Rates==>					7.50%	1.40%			
Facilities:									
Perimeter Fence	25	18,360	0	734	689	257	1,680	100.0%	1,680
Perm. Internal Fence	25	9,180	0	367	344	129	840	100.0%	840
Temp. electric fence	3	200	0	67	8	3	77	100.0%	77
Water Supply	10	5,250	0	525	197	74	795	100.0%	795
Corral & Chute	20	6,000	300	285	236	84	605	100.0%	605
Other facilities	1	0	0	0	0	0	0	0.0%	0
Hay feeding:									
Tractor	15	20,500	5,330	1,011	969	287	2,267	25.0%	567
+ bale spear	15	500	130	25	24	7	55	100.0%	55
Pasture & livestock management:									
Tractor	15	20,500	5,330	1,011	969	287	2,267	10.0%	227
+ bushhog	15	2,175	566	107	103	30	241	100.0%	241
Pickup or 4-wheeler	10	10,600	2,650	795	497	148	1,440	20.0%	288
Other self propelled	1	0	0	0	0	0	0	0.0%	0
Other equipment	1	0	0	0	0	0	0	0.0%	0
Pasture establishment ^d	15	23,056	0	1,537	865	323	2,724	100.0%	2,724
Beef Cows ^e	10	45,000	45,000	--	3,375	630	4,005	100.0%	4,005
TOTAL									12,104

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

^e Beef cows are not depreciated. Cost of maintaining the herd are captured through replacement purchases and cull cow sales.

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 =====>						4.00				9.40	
Tractor	55	2%	410.00	102.50	2.42	9.68	11.13	30.0	436.46	282.00	718
+ bale spear		1%	5.00	5.00	0	0.00	0.00	30.0	5.00		5
Tractor	55	2%	410.00	41.00	2.42	9.68	11.13	10.0	152.32	94.00	246
+ bushhog		1%	0.00	0.00	0	0.00	0.00	10.0	0.00		0
Pickup or 4-wheeler		2%	212.00	42.40	2.0	8.00	9.20	50.0	502.40	470.00	972
Other self propelled		1%	0.00	0.00	0	0.00	0.00	0.0	0.00	0.00	0
Other equipment		1%	0.00	0.00	0	0.00	0.00	0.0	0.00		0
TOTAL									1,096	846	1,942

^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 the reported 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 fairly representative believed to be of conditions in North Carolina. However, there is a wide variation in farm 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.

RETURNS TO LAND, OVERHEAD AND MANAGEMENT:

		REVENUE		
		-10%	Base	10%
		Lower	Budget	Higher
-10%		-\$19,848	-\$17,052	-\$14,256
COST	Base	-\$24,850	-\$22,054	-\$19,257
+ 10%		-\$29,851	-\$27,055	-\$24,259

