

BEEF FARM BUSINESS SUMMARY

September 1984

A.E. Ext. 84-25

NEW YORK STATE 1983

Stuart F. Smith
Linda Markert

Department of Agricultural Economics
New York State College of Agriculture and Life Sciences
A Statutory College of the State University
Cornell University, Ithaca, New York 14853

1983 BEEF FARM BUSINESS SUMMARY

The information in this report was compiled from data submitted by twelve New York State beef producers through the help and cooperation of Cooperative Extension agents. Only four farms submitted data for 1983. Data submitted by eight farms for 1981 were revised and updated using changes in costs and prices that have occurred over the two year period. The updated farm data were then combined with data from the 1983 cooperators. The twelve farms do not represent a scientific sample of New York's beef farm industry and the averages published in this report are not intended to represent the average of all New York beef farms.

The objectives of this Beef Farm Management project and this report are:

1. Help the participating cooperators summarize and analyze their beef enterprises.
2. Provide a format that other cow-calf producers can follow in summarizing and analyzing their businesses.
3. Present some basic data and guidelines that may be helpful to potential beef producers, cooperative extension agents and others advising beef farmers.

Table of Contents

	<u>Page</u>
SUMMARY OF THE BEEF FARM BUSINESS	1
Resources Used in the Business	1
Farm Receipts	2
Farm Expenses	3
Farm Income	4
BUSINESS ANALYSIS	5
Size of Business	5
Herd and Crop Management	5
Financial Management	6
Comparison with Prior Years	8

SUMMARY OF THE BEEF FARM BUSINESS

Resources Used in the Business

The quantities of land, labor, management, and capital used on the twelve beef farms are shown in Table 1. The farms were small averaging only 124 acres of tillable land, 0.74 worker equivalent years per farm, 27 beef cows, and 56 beef animals.

Table 1. AVERAGE FARM RESOURCES
Average of Twelve New York Beef Farms, 1983

Item	My Farm	Average	Range
Land:			
Tillable acres owned	_____	94	0-375
Tillable acres rented	_____	30	0-140
Total tillable acres	_____	124	15-375
Acres of pasture	_____	49	0-150
Total acres owned	_____	200	2.5-423
Labor and Management:			
Months of operator's labor	_____	6.3	2-12
Months of hired labor	_____	1.5	1-12
Months of unpaid family labor	_____	1.0	0-3
Worker equivalent, years	_____	0.74	0.33-1.33
Operators per farm	_____	0.86	0.17-1
Years experience as cattle producer	_____	14	7-30
Herd Size:			
Number of beef cows	_____	27	0-61
Number of beef animals	_____	56	8-141
Capital Investment:			
	Beginning of Year		End of Year
	My Farm	Average	My Farm
	_____	_____	_____
Land & buildings	\$ _____	\$ 97,983	\$ _____
Machinery & equipment	_____	15,484	_____
Livestock	_____	23,097	_____
Feed & supplies	_____	10,826	_____
Total Farm Inventories	\$ _____	\$147,390	\$ _____
			\$ 98,942
			18,664
			28,587
			11,342
			\$157,535

Farm Receipts

The largest average receipt was from the sale of slaughter cattle. Ten of the twelve farms sold slaughter cattle. Five farms sold feeder cattle and five reported sales of cattle for breeding purposes.

Table 2. AVERAGE FARM RECEIPTS
Average of Twelve New York Beef Farms, 1983

Item	My Farm	Average	Percent of Total
Slaughter cattle sales	\$ _____	\$ 8,279	32
Feeder calves sold	_____	1,465	6
Cull cows	_____	1,005	4
Breeding stock	_____	5,350	20
Other livestock	_____	787	3
Crop sales	_____	522	2
Custom work	_____	90	1
Government payments	_____	1,641	6
Refunds	_____	257	1
Miscellaneous receipts	\$ _____	<u>544</u>	<u>2</u>
Total Cash Receipts	\$ _____	\$19,940	77
Increase in livestock inventory	_____	5,547	21
Increase in feed & supplies	_____	<u>648</u>	<u>2</u>
Total Farm Receipts	\$ _____	\$26,135	100
Livestock enterprise receipts	\$ _____	\$22,433	

Nonfarm receipts, such as income from off-farm employment, were excluded from total cash receipts. Refunds and dividends that could not be specifically identified were included as farm receipts. Gas lease payments were also included.

The increase in livestock inventory is a noncash receipt attributed to a four percent growth in livestock numbers and a 20 percent increase in average value per head.

Farm Expenses

Total cash expenses averaged \$17,959 per farm, total farm expenses averaged \$21,789, and variable costs allocated to livestock enterprises averaged \$11,511 per farm.

Table 3. AVERAGE FARM EXPENSES
Average of Twelve New York Beef Farms, 1983

Item	My Farm	Average	Percent of Total
Hired labor	\$ _____	\$ 1,725	10
Feed purchased	_____	4,336	24
Gasoline & oil	_____	1,333	7
Machinery repairs	_____	771	4
Farm auto expense	_____	322	2
Machinery hire	_____	438	3
Vet & medicine	_____	251	1
Breeding fees	_____	217	1
Feeders purchased	_____	460	3
Marketing & other livestock expense	_____	386	2
Fertilizer & lime	_____	1,219	7
Seed, spray & other crop expense	_____	785	4
Land, building & fence repair	_____	420	2
Taxes (farm share of real estate)	_____	1,287	7
Insurance (farm share)	_____	484	3
Rent	_____	220	1
Electricity & telephone (farm share)	_____	577	3
Interest paid	_____	2,306	13
Miscellaneous expenses	_____	440	3
 Total Cash Expenses	 \$ _____	 \$17,959	 100
Breeding stock purchased	_____	200	
Machinery depreciation	_____	2,889	
Building depreciation	_____	450	
Decrease in livestock inventory	_____	225	
Decrease in feed & supplies	_____	66	
 Total Farm Expenses	 \$ _____	 \$21,789	
 Livestock enterprise variable costs	 \$ _____	 \$11,511	

Farm Income

Net cash farm income is the money available to make principle payments and contribute toward family living and savings. Farm income includes all farm receipts including increases in the value of livestock inventories, and all farm expenses including capital expenditures for breeding livestock and depreciation on machinery and buildings. No charge is included for unpaid family labor, management or the use of equity capital.

Table 4. FARM INCOME AND PROFIT MEASURES
Average of Twelve New York Beef Farms, 1983

Item	My Farm	Average
Total cash farm receipts	\$ _____	\$19,940
Total cash farm expenses	_____	<u>17,959</u>
Net Cash Farm Income	\$ _____	\$ 1,981
Total farm receipts	\$ _____	\$26,135
Total farm expenses	_____	<u>21,789</u>
Farm Income	\$ _____	\$ 4,346
Livestock enterprise receipts	\$ _____	\$22,433
Variable livestock enterprise costs	_____	<u>11,511</u>
Return Over Variable Costs	\$ _____	\$10,922
Farm income	\$ _____	\$ 4,346
Value of operator's labor & mgt (\$1,200/mo)	_____	<u>7,500</u>
Return on Equity Capital (\$136,000)	_____	\$-3,154
Rate of return on equity capital	_____ %	-2%

Return over livestock enterprise variable costs were computed by estimating the variable costs associated with the livestock enterprise and deducting them from livestock enterprise receipts. Variable costs exclude depreciation, taxes, insurance, interest paid on real estate and operating costs offset by nonlivestock enterprise receipts.

Return on equity capital is computed by deducting the value of operator's labor and management estimated by the cooperators from farm income.

BUSINESS ANALYSIS

Size of Business

The average size of these twelve beef farms is identified in Table 1. All but one farm had beef cows. The eleven farms with beef herds averaged 27 cows, 20 calves, seven replacement heifers, and 1.5 bulls.

Herd and Crop Management

A good indication of cow-calf herd management performance is the ability to produce and raise close to one calf per cow annually. These beef producers weaned 8.4 calves per 10 cows.

Crop production is reported as tons of dry matter. The hay crop averaged 1.9 tons of dry matter per acre. The hay crop includes dry hay, hay crop silage, and green chop. Forage dry matter includes corn silage which averaged 3.13 tons of dry matter per acre.

Table 5. HERD AND CROP MANAGEMENT
Average of Twelve New York Beef Farms, 1983

Item	My Farm	Average
Calves born per cow	_____	.94
Calves weaned per cow	_____	.84
Calves weaned as percent born	_____ %	92%
Average weaning weight	_____ lbs.	438 lbs.
Average weight slaughter cattle sold	_____ lbs.	913 lbs.
Tons hay crop dry matter per acre	_____	1.9
Tons forage dry matter per acre	_____	2.1
Tons dry matter harvested per cow	_____	5.7
Tillable acres per cow	_____	4.7
Pasture acres per cow	_____	2.0

The dry matter harvested (5.7 tons per cow per farm) on these farms is approximately twice that required to carry a cow-calf herd through the barn feeding season. Although some of this additional production was used to feed other beef animals and livestock on these farms, the average beef farmer in this study is not fully utilizing forage and land resources available for maximum beef production.

Financial Management

Table 6. BEEF FARM BALANCE SHEET & FINANCIAL MEASURES
Average of Twelve New York Beef Farms, 1983

Item	My Farm	Average
Farm Assets:		
Total farm inventories	\$ _____	\$150,914
Cash & accounts receivable	_____	1,238
Coop stocks & certificates	_____	1,872
Total Farm Assets	\$ _____	\$154,024
Farm Liabilities:		
Real estate mortgage	\$ _____	\$ 10,884
Liens on cattle & equipment	_____	2,646
Other secured intermediate loans	_____	3,376
Notes & other farm accounts	_____	872
Total Farm Liabilities	\$ _____	\$ 17,778
Farm Net Worth	\$ _____	\$136,246
Farm Equity	_____ %	88%
Debt per beef animal	\$ _____	\$ 301
Annual debt payments planned	\$ _____	\$ 3,741
Debt repayment as percent of livestock sales	_____ %	22%

The farms in this study show a very strong net worth and equity position. Eighty-eight percent of farm assets are owned by the farmer, borrowed capital accounts for the other 12 percent.

The average level of debt on these farms is relatively low at \$301 per beef animal. The planned schedule is to pay \$3,741 of interest and principle in 1983. The amount available for interest, principle payments, and contribution to family living was approximately \$4,300 in 1983.

The direct and opportunity costs of using capital in the farm is an important consideration for the beef producers. On the average these beef producers had \$2,800 invested in farm inventories per beef animal on the farm. Farm investments ranged from less than \$1,000 per head on a feedlot to over \$20,000 per head on a small cow-calf enterprise. The largest part or 63 percent of the total farm investment was in land and buildings. Much of the real estate investment is fixed for the part-time beef producers for they would continue to live on the farm even if they were to discontinue the beef enterprise.

Table 7. COST AND RETURN CONTROL MEASURES
Average of Twelve New York Beef Farms, 1983

Item	My Farm	Average
Capital investment per beef animal	\$ _____	\$2,800
Machinery investment per beef animal	\$ _____	\$333
Real estate investment per beef animal	\$ _____	\$1,770
Feed purchased per head	\$ _____	\$77
Cash machinery expenses per head	\$ _____	\$51
Total cash expenses per head	\$ _____	\$320
Cattle & calf sales per cow	\$ _____	\$709
Slaughter sales per head sold	\$ _____	\$1,277
Value of beef produced per beef animal	\$ _____	\$386

Feed costs varied greatly between farms and was related to the number of slaughter animals produced. Feed cost ranged from less than \$1 to \$500 per head. Cash machinery expenses exclude depreciation and interest on machinery investment. Cash machinery costs ranged from \$25 per head to over \$70 per head on the farms with machinery.

Cattle and calf sales per cow was computed excluding farms without a cow-calf enterprise. The sales include all receipts from beef sales on these farms. Slaughter sales per head sold is total receipts from slaughter cattle sales divided by the number of head sold. Value of beef produced per beef animal is total sales from beef cattle plus the increase in beef cattle inventory, divided by the average number of beef animals in the beef enterprise.

Comparison with Prior YearsSize

Average number of cows	27	25	27
Average number of calves	22	20	21
Average number of beef animals	65	54	56
Average number sold for slaughter	5	7	7
Total tillable acres	104	106	124
Months of total labor per farm	9	9	9
Months of operator's labor per farm	6	7.5	6.3

Herd Management

Calves born per cow	.90	.94	.94
Calves weaned per cow	.90	.80	.84
Calves weaned as percent born	91%	88%	92%
Average weaning weight (lbs.)	437	442	438
Average weight slaughter cattle (lbs.)	900	899	913

Crop Management

Tons hay per acre	1.0	1.7	1.9
Tons forage dry matter per acre	1.3	1.9	2.1
Tons dry matter harvested per cow	4.8	5.5	5.7
Tillable acres per cow	3.9	4.2	4.7
Pasture acres per cow	2.8	2.4	2.0

Financial Management

Capital investment per beef animal	\$ 2,800	\$ 2,400	\$ 2,800
Total cash expenses per head	207	340	320
Cattle & calf sales per cow	339	408	709
Net cash farm income	177	3,925	1,981
Farm income	1,985	7,545	4,346
Return over variable costs	3,082	12,683	10,922
