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A.E. Res. 84-18

LIVESTOCK
COSTS AND RETURNS
FROM
FARM COST ACCOUNTS
(FINAL REPORT)

24 FARMS-1983
NEW YORK STATE

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REPORTS
from
FARM COST ACCOUNTS

24 Farms, 1983

Enterprise data from the 1983 New York Farm Cost Account Project have been published in the following reports. Additional copies may be obtained from County Extension offices or directly from the Department of Agricultural Economics, Cornell University, Ithaca, New York 14853-0398.

Overhead Costs	A.E. Res. 84-17
Livestock Costs and Returns	A.E. Res. 84-18
Field Crops Costs and Returns	A.E. Res. 84-19
Fruit and Vegetable Crops Costs and Returns	A.E. Res. 84-20

Special Note - These publications are the final reports in a series that has spanned 70 years of continuous research documenting costs and returns for enterprises commonly found on New York farms.

LIVESTOCK COSTS AND RETURNS, A.E. Res. 84-18

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INTRODUCTION

The New York Farm Cost Account Project is a research project which serves as a means of obtaining primary cost data for enterprises common on New York farms. It provides data on labor requirements and costs, machinery costs, and production costs for crop and livestock enterprises. The data are published from detailed enterprise records kept by New York farmers in cooperation with the Department of Agricultural Economics at Cornell University. These publications provide College and field staff, as well as farmers and others interested in agriculture, with a continuous record of economic changes taking place on New York farms.

The farms are located in most of the farming areas of the State. They are generally well-managed, full-time, commercial farm businesses. They provide an indication of economic factors experienced by commercial farm businesses in New York.

The reports present the results of individual enterprises and the averages of the enterprise costs and returns for all farms. They show not only the averages of cost and returns but also indications of the variations and reasons for them. The factors for individual enterprises are arranged according to size of enterprise. The annual averages of the various factors are not averages of average costs but are weighted by the size of the enterprise.

Acknowledgements

The project was under the supervision of Darwin Snyder, who also did the field work necessary to complete the records. Editing and processing the data, closing the books, completing the analysis, and preparing these reports were done by Barbara Wilcox and Florence Blodgett with assistance from Mary Chaffee and Cindy Farrell.

The material on pages 2, 3, and 4 of this report was taken from A.E. Res. 84-10, Dairy Farm Management Business Summary, New York, 1983 by Stuart F. Smith and Linda D. Putnam.

Special acknowledgement is due the group of farmers who are willing to keep the detailed records so essential to such a system of enterprise cost accounting. Without their continuing efforts and willingness to provide this information, this important and accurate source of farm data would not exist.

Inflation, appreciation, supply and demand all have a direct effect on the inventory values on New York dairy farms. Machinery prices have risen steadily during the past six years. Dairy cow prices have changed most dramatically as the demand for replacements jumped in 1978 and 1979 but has declined rapidly since 1980. Real estate values dropped two percent in 1983.

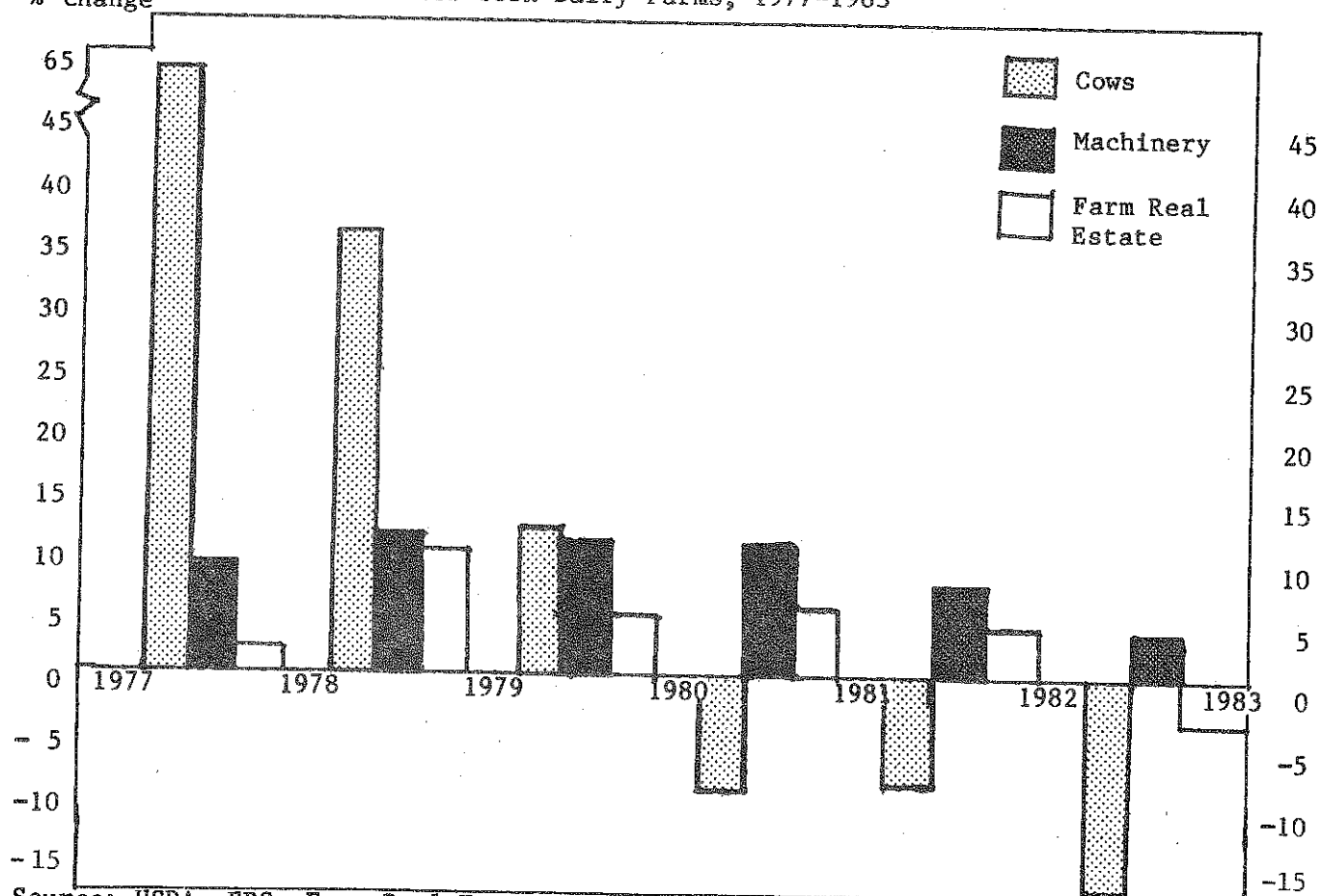
Table 1. UNIT VALUES OF NEW YORK DAIRY FARM INVENTORY ITEMS, 1977-1983

Year	New York Dairy Cows		Machinery*	N.Y. Farm Real Estate	
	Value/Head	1977=100		Value/Acre	1977=100
1977	\$ 495	100	100	\$587	100
1978	800	162	109	600	102
1979	1,105	223	122	670	113
1980	1,240	251	136	708	119
1981	1,120	226	152	749	126
1982	1,010	204	165	786	132
1983	850	172	174	770	129

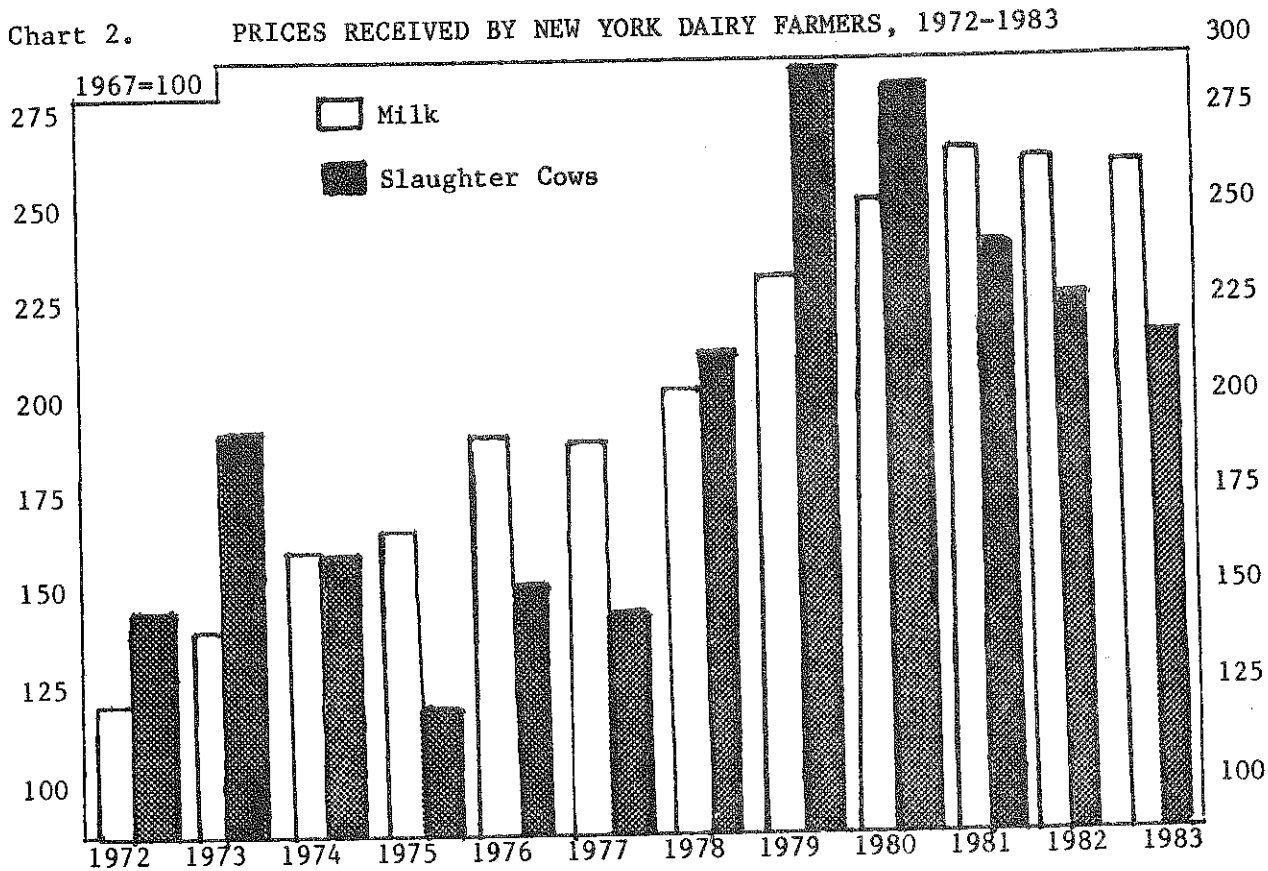
*Annual average for U.S.

Table 1 shows New York year end (December) price received for dairy cows (replacements), an index of the same cow prices, an index of U.S. machinery prices, the average per acre value of New York farmland and buildings reported in April, and an index of the real estate prices.

Chart 1. ANNUAL CHANGES IN DAIRY COW, FARM MACHINERY, & FARM REAL ESTATE VALUES
New York Dairy Farms, 1977-1983
% change



Source: USDA, ERS, Farm Real Estate Market Developments Outlook & Situation. USDA, Agricultural Prices.



The prices dairy farmers receive for milk, cattle, and other commodities they sell have a major effect on dairy farm profits. Chart 2 shows what has happened to average milk and slaughter cow prices paid to New York farmers since 1972. Milk prices have increased at a more constant rate showing declines in 1977, 1982 and 1983. Slaughter cow prices have shown wide fluctuations over the period but have not moved in the same direction for more than four consecutive years; since 1979 prices have been declining.

Table 2. PRICES RECEIVED BY NEW YORK DAIRY FARMERS, 1971-1983

Year	All Milk	Slaughter Cows	Calves	Monthly Farm Price Per 100 Lbs. of Milk, 1983	
	(cwt.)	(cwt.)	(cwt.)		
1971	6.12	21.20	36.20	January	13.80
1972	6.33	24.50	44.80	February	13.80
1973	7.32	32.80	54.60	March	13.50
1974	8.35	27.10	40.80	April	13.30
1975	8.71	20.60	26.20	May	13.10
				June	12.90
1976	9.83	25.40	34.50	July	13.30
1977	9.75	25.00	37.50	August	13.80
1978	10.50	35.30	58.20	September	14.00
1979	11.90	49.80	88.80	October	14.20
1980	13.00	46.30	78.00	November	14.10
				December	14.20
1981	13.80	41.30	66.20		
1982	13.70	38.60	58.80		
1983*	13.67	38.00	60.41		

*Preliminary

Source: USDA, Agricultural Prices, New York.

Table 3. PRICES PAID BY FARMERS FOR SELECTED ITEMS, 1973-1983

Year	Index 1977=100					
	Feed	Fert.	Fuel & Energy	Wage Rates	Taxes	Interest
1973	86	56	57	69	77	55
1974	104	92	79	79	81	65
1975	100	120	88	85	87	77
1976	103	102	93	93	94	88
1977	100	100	100	100	100	100
1978	98	100	105	107	100	117
1979	110	108	137	117	107	143
1980	123	134	188	126	115	174
1981	134	144	213	137	123	211
1982	122	144	210	143	131	233
1983*	153	137	202	147	140	236

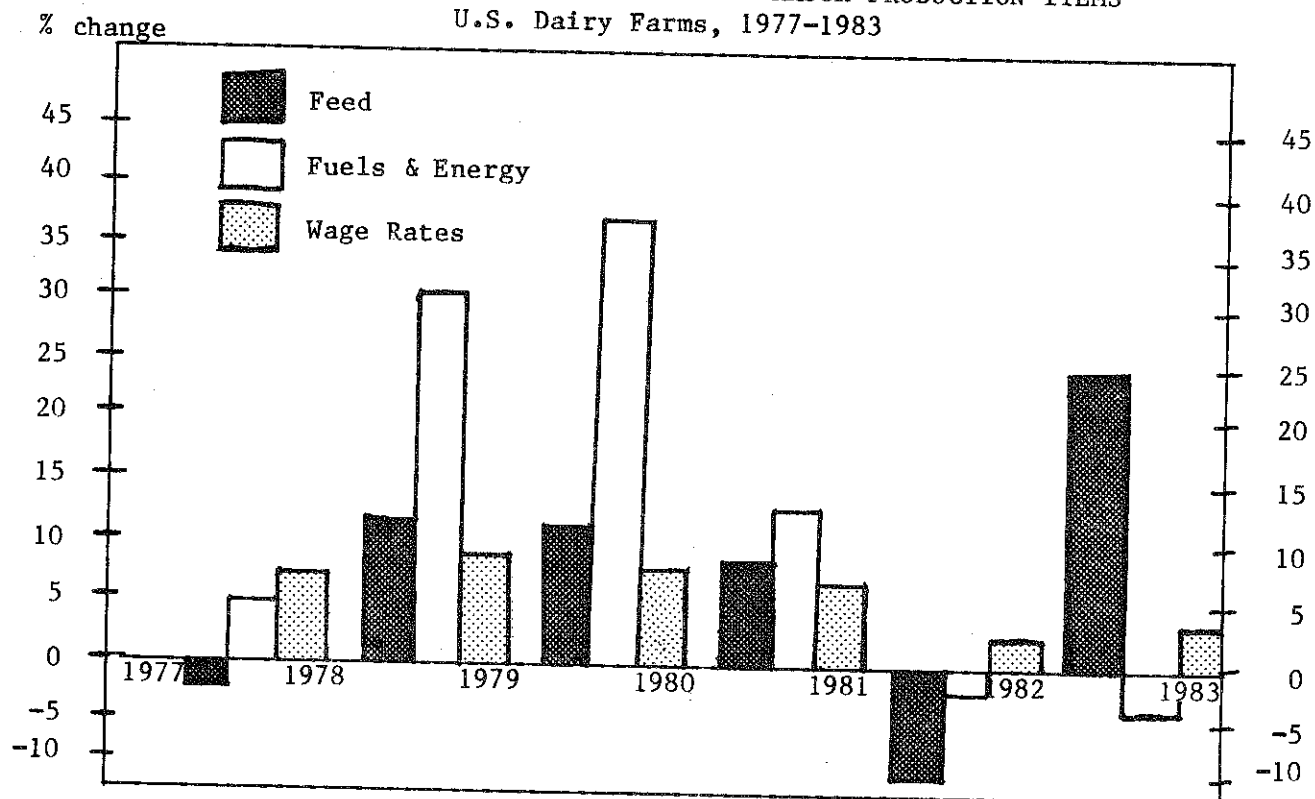
*Preliminary

SOURCE: USDA Agricultural Prices

The prices dairy farmers pay for a given quantity of goods and services has a major influence on farm production costs. The astute manager will keep close tabs on unit costs and substitute the most economical goods and services for those that are too expensive.

Table 3 shows the unit cost indexes of selected goods and services used on New York dairy farms. The changes in feed prices, fuels and energy costs, and wage rates between years are illustrated in Chart 3.

Chart 3. ANNUAL CHANGES IN PRICES OF THREE MAJOR PRODUCTION ITEMS
U.S. Dairy Farms, 1977-1983



Feed costs increased 25 percent in 1983 after declining nine percent in 1982. Fuel and energy prices dropped for the second consecutive year. Wage rates continued to increase.

Growing Conditions

Table 1. TEMPERATURE, PRECIPITATION, AND GROWING SEASON
Selected Stations, New York, 1941-70 and 1983

Station	Average temperature		Precipitation				Length of growing season*	
	May - Sept.		May - Sept.		Total Annual		growing season*	
	1941-70	1983	1941-70	1983	1941-70	1983	1947-67	1983
	degrees		inches				days	
Albany	65.7	65.3	15.4	15.2	33.4	46.3	---	145
Alfred	61.8	60.1	17.2	16.6	36.7	36.7	125	98
Binghamton	63.3	65.4	17.9	15.1	37.4	42.6	154	164
Brockport	64.9	66.5	15.1	11.8	28.3	31.1	---	156
Canton	63.0	63.0	16.5	15.8	34.5	41.7	127	97
Geneva	64.6	65.4	14.6	11.9	32.3	30.3	---	155
Glens Falls	---	65.2	17.8	21.0	39.3	54.4	---	145
Ithaca	63.8	63.2	17.2	11.9	34.8	35.6	145	123
Lowville	62.5	61.9	16.5	19.2	38.5	44.6	123	135
Utica	63.5	66.3	18.1	15.5	40.6	41.8	157	151

* Days between the last temperature of 32 degrees in the spring and the first in the fall.

Source: Climatological Data, NOAA, Environmental Data Service, Annual Summary, New York, 1983, Vol. 95, No. 13.

Weather is a factor to be considered when studying a farm business for a specific year. The growing conditions have a marked effect on the crops for that year. It is for this reason that data are presented on the growing conditions for 1983 and for the period 1941-70. Several stations throughout the State are listed.

The length of the 1983 growing season was significantly shorter than normal in most areas of the State. A very wet April preceded the five month growing season which experienced an average but highly variable amount of precipitation. Most stations reported higher than normal rainfall for the year, especially in eastern areas. Temperatures were near normal for the season but also varied throughout the State during the season.

Table 2. GROWING SEASON RAINFALL
Selected Stations, New York, 1941-70 and 1983

	May		June		July		August		September	
	1941-70	1983	1941-70	1983	1941-70	1983	1941-70	1983	1941-70	1983
Albany	3.26	6.26	3.00	1.95	3.12	1.34	2.87	3.41	3.12	2.28
Alfred	3.76	3.57	3.76	4.85	3.73	2.19	3.00	3.63	2.93	2.31
Binghamton	3.83	4.05	3.59	4.08	3.83	2.20	3.61	3.21	3.02	1.53
Brockport	2.55	2.76	2.65	1.77	2.28	1.42	3.00	3.96	2.75	1.91
Canton	3.37	3.93	2.91	1.92	3.43	3.14	3.47	3.96	3.31	2.84
Geneva	3.02	3.01	3.10	3.44	3.06	0.50	2.82	2.91	2.59	2.04
Glens Falls	3.63	7.19	3.77	1.64	3.68	3.38	3.42	6.86	3.31	1.95
Ithaca	3.55	2.83	3.40	3.03	3.67	0.92	3.49	3.62	3.08	1.54
Lowville	3.42	3.35	2.94	3.94	3.26	1.05	3.58	8.65	3.31	2.25
Utica	3.52	4.03	3.55	1.64	4.17	2.09	3.54	5.11	3.32	2.64

Source: Climatological Data, NOAA, Environmental Data Service, Annual Summary, New York, 1983, Vol. 95, No. 13.

YIELDS FOR CROPS AND LIVESTOCK
New York State and Farm Cost Account Averages

Item	Unit	New York State*				Cost Account
		1957-61	1967-71	1977-81	1983	1983
Hay, alfalfa mix.	tons	2.2	2.6	2.7	2.8	2.4
Corn silage	tons	11	14	14	14	13
Corn grain	bu.	57	85	90	90	92
Oats	bu.	52	60	60	57	NA
Wheat	bu.	32	39	40	46	56
Milk per cow	lbs.	7,914	10,361	11,742	12,437	16,595

*Source: New York Agricultural Statistics, 1983; Crop Reporting Service, USDA.

FARM COST ACCOUNT SUMMARY, 1983
Crop Enterprises

Crop	Number of enter- prises	Average acres per enter- prise	Yield per acre	Hours of labor per acre*	Return per		Profit per acre	Profit on enter- prise
					Hour of labor	Dollar of cost		
<u>Forage:</u>								
Hay	15	74	2.4 tn	8	1.32-	0.77	54-	4,020-
Hay crop silage	18	176	5.8 tn	4	3.67	0.95	11-	1,944-
Corn silage	19	127	13.0 tn	5	7.06	1.00	1	172
<u>Grain:</u>								
Corn for grain	6	68	92 bu	2	16.77	1.07	21	1,444
High moist. corn	15	131	3.5 tn	3	7.88	1.02	5	626
Wheat, winter	6	148	56 bu	2	9.00-	0.84	36-	5,349-
<u>Fruit:</u>								
Apples	6	75	756 bu	115	11.65	1.27	483	36,182
Red tart cherries	5	32	7,008 lb	64	38.31	2.57	2,059	65,920

*To grow and harvest the crop.

ENTERPRISE RATES OF RETURN
FARM COST ACCOUNT RECORDS, 1980-83

Enterprise	Return per hour of labor				Return per dollar of cost			
	1980	1981	1982	1983	1980	1981	1982	1983
	\$	\$	\$	\$	\$	\$	\$	\$
<u>Livestock:</u>								
Dairy cows	10.64	7.89	8.65	8.69	1.11	1.04	1.07	1.05
Dairy heifers	5.94	0.25	1.49	3.88-	0.99	0.87	0.91	0.78
<u>Forage:</u>								
Hay	0.02	1.70	2.98	1.32-	0.81	0.86	0.91	0.77
Hay crop silage	5.82	2.79	2.20-	3.67	1.00	0.94	0.85	0.95
Corn silage	5.86	5.97	3.38	7.06	0.99	0.99	0.96	1.00
<u>Grain:</u>								
Corn for grain	23.76	12.79-	5.14-	16.77	1.28	0.77	0.84	1.07
High moisture corn	22.68	0.45	6.63-	7.88	1.23	0.92	0.86	1.02
Wheat, winter	22.46	15.26	16.29-	9.00-	1.21	1.10	0.77	0.84
<u>Fruits:</u>								
Apples	5.52	8.97	4.50	11.65	0.91	1.13	0.83	1.27
Red tart cherries	17.29	13.76	6.94	38.31	1.62	1.35	1.03	2.57

Dairy Cows -

According to New York Crop Reporting Service figures, the value of an average dairy cow reached an all time high of \$1,250 per cow in November 1980. From that point, cow values have steadily declined to \$850 per cow at the end of 1983. Average values declined over \$100 per cow during each of the three years from 1981 to 1983.

Cull beef prices averaged about \$37 per hundredweight in January 1983. From that point prices increased to a high of \$42 in June and then declined steadily to \$32 in November. The cull beef price in December 1983 averaged \$32.90 per hundredweight. Bob calf prices followed a similar pattern. They started at \$60 per hundredweight in January and finished the year at \$53 per hundredweight in December. Overall, the average price for cull cows was down \$1 per hundredweight from 1982 and the bob calf average price was about the same.

These dairy enterprises represent commercial herds where herd dispersals are not a factor. Cow values were held at a constant, conservative level (except for changes in quality) for the year to prevent changing cow values from affecting enterprise profits. However, profits were affected by changes in cull beef and bob calf prices as dairymen disposed of livestock in the normal conduct of their herd management practices.

DAIRY COWS, 1983
COSTS AND RETURNS PER DAIRY COW
3,584 COWS ON 21 COST ACCOUNT FARMS

ITEM	AVERAGE PER COW
COSTS:	
DEPRECIATION - - - - -	\$ 169
FEED - 3,883 LBS OF DRY GRAIN - - - - -	\$ 401
2.3 TONS OF HIGH MOISTURE CORN - - - - -	173
0.5 TONS OF HAY - - - - -	34
4.9 TONS OF HAY CROP SILAGE - - - - -	154
8.2 TONS OF CORN SILAGE - - - - -	195
PASTURE AND ALL OTHER FEED - - - - -	52
TOTAL FEED COST PER COW - - - - -	1,009
LABOR - 52 HOURS - - - - -	338
TRACTOR, TRUCK - - - - -	33
EQUIPMENT - - - - -	108
BEDDING - - - - -	17
BREEDING - - - - -	29
VET AND MEDICINE - - - - -	42
MILK HAULING - - - - -	80
MILK TESTING - - - - -	14
SUPPLIES - - - - -	40
UTILITIES - - - - -	37
INSURANCE - - - - -	6
INTEREST ON VALUE OF COW - - - - -	63
BUILDING USE - - - - -	89
MILK ASSESSMENT - - - - -	83
ALL OTHER - - - - -	111
TOTAL OTHER THAN DEPREC, FEED, LABOR - - - - -	752
TOTAL COSTS - - - - -	\$2,268
RETURNS:	
16,595 POUNDS OF MILK SOLD - - - - -	\$2,267
63 POUNDS OF MILK USED ON FARM - - - - -	8
CALVES - - - - -	75
OTHER RETURNS - - - - -	27
TOTAL RETURNS - - - - -	\$2,377
PROFIT: - - - - -	\$ 109
OTHER FACTORS - AVG PER CWT OF MILK:	
ALL GRAIN COST	\$ 3.45
TOTAL FEED COST	6.08
LABOR COST	2.04
TOTAL COST	\$13.05
RETURNS	13.71
MILK PRODUCED PER HOUR OF LABOR	322 LB
RETURN PER HOUR OF LABOR	\$ 8.69
RETURN PER DOLLAR OF COST	1.05

FACTORS FROM 22 DAIRY COW ENTERPRISES
21 COST ACCOUNT FARMS, 1983
(ARRANGED BY NUMBER OF COWS)

FARM NO	HERD SIZE NO	MILK PER COW LB	LABOR PER COW HR	MILK PER HR OF LABOR LB	FEED PER COW					VET MED COST/ COW \$
					DRY GRAIN LB	HIGH MSTR CORN TN	HAY TN	HAY CROP SILG TN	CORN SILG TN	
834	680	17,078	40	423	2,647	3.3	0.2	6.3	5.6	15
827	403	15,851	51	314	2,700	2.2	0.2	4.4	10.0	45
812	299	20,397	45	453	6,943	0.0	0.0	4.3	13.7	65
806	273	16,135	39	413	3,516	2.4	0.1	4.1	11.8	28
824	217	15,788	46	345	2,479	2.8	0.3	3.0	6.3	87
830	204	17,677	48	365	4,108	3.1	1.2	7.8	5.1	48
804	156	14,080	44	319	4,974	0.0	0.3	3.3	11.1	40
821	151	14,172	43	327	4,026	4.9	0.7	1.2	14.6	30
105	133	14,698	53	279	2,977	4.2	0.6	4.4	4.9	61
835	130	14,148	49	288	4,508	2.3	0.4	6.8	7.4	50
112	121	17,979	56	321	3,983	3.1	0.5	3.7	6.9	37
105	112	15,948	81	197	3,357	1.9	0.5	3.6	10.7	82
111	106	17,115	76	224	2,566	3.6	0.4	11.0	1.4	24
208	100	15,525	59	263	6,400	0.0	0.3	7.0	7.6	45
203	98	17,462	60	292	6,490	0.0	0.0	7.8	7.8	68
836	87	15,308	64	239	6,138	0.0	2.2	0.0	8.4	30
867	69	19,896	86	232	3,826	3.6	2.0	2.7	1.8	68
153	62	17,508	61	287	4,581	2.3	0.9	4.6	6.5	26
117	55	14,562	68	214	873	3.2	2.4	4.5	4.5	18
146	48	14,931	132	113	5,542	0.5	0.7	3.7	5.4	42
127	42	19,471	55	357	7,714	0.0	1.3	3.9	10.2	43
111	38	16,942	79	214	3,632	4.3	0.6	4.7	8.7	25

1983 GROUP AVERAGES, ACCORDING TO NUMBER OF COWS:

THIRDS

HIGH	319	16,906	44	383	3,618	2.2	0.3	5.0	8.6	41
MED	119	15,745	58	269	4,202	2.7	0.4	5.4	7.9	49
LOW	57	16,881	76	221	4,633	1.9	1.6	3.1	6.3	37

ANNUAL AVERAGES, ALL ENTR. WEIGHTED BY NUMBER OF COWS:

1983	163	16,595	52	322	3,883	2.3	0.5	4.9	8.2	42
1982	154	15,706	55	287	3,775	2.4	0.5	4.6	7.5	43
1981	155	15,493	51	304	3,891	2.2	0.5	5.6	7.7	41
1980	155	15,894	51	311	3,686	2.2	0.6	4.3	7.2	34
1979	150	15,372	51	303	4,521	1.8	0.7	3.6	8.0	37

* STANCHION BARNS

See note on page 8.

FACTORS FROM 22 DAIRY COW ENTERPRISES
21 COST ACCOUNT FARMS, 1983
(READ ACROSS BOTH PAGES)

AVG COST PER COW FOR		AVG PER CWT OF MILK		AVERAGE PER COW			RETURN PER HOUR OF	PER \$ OF COST	PROFIT ON ENTER- PRISE	FARM NO
FEED	LABOR	COST	RETURN	COST	RE- TURN	PRO- FIT	LABOR			
\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	
984	288	11.40	13.34	2,074	2,404	330	15.32	1.16	224,718	834
856	461	13.80	13.57	2,300	2,263	37-	8.37	0.98	15,174-	827
1,156	431	11.69	13.37	2,522	2,867	345	17.24	1.14	103,028	812
1,010	305	13.53	14.85	2,243	2,456	213	13.27	1.10	58,210	806
763	292	11.68	12.88	1,922	2,112	190	10.52	1.10	41,163	824
1,250	274	13.54	13.68	2,522	2,547	25	6.18	1.01	5,072	830
843	336	13.74	14.76	1,976	2,120	144	10.89	1.07	22,435	804
1,355	226	16.28	14.78	2,364	2,150	214-	0.29	0.91	32,234-	821
995	294	13.68	13.46	2,124	2,092	32-	0.89	0.98	4,244-	105
1,111	254	15.41	13.46	2,312	2,036	276-	.45-	0.88	35,901-	835
1,088	234	12.23	13.20	2,276	2,450	174	7.29	1.08	21,117	112
1,005	389	16.30	13.59	2,793	2,361	432-	0.53-	0.85	48,414-	105
968	466	12.72	14.62	2,241	2,566	325	10.38	1.15	34,511	111
1,079	292	15.64	15.15	2,498	2,422	76-	3.66	0.97	7,559-	208
1,080	268	14.89	14.61	2,664	2,614	50-	3.65	0.98	4,890-	203
718	496	12.38	13.14	1,999	2,116	117	9.56	1.06	10,124	836
1,067	396	12.13	13.37	2,523	2,768	245	7.49	1.10	16,913	867
1,077	320	11.69	12.81	2,122	2,319	197	8.49	1.09	12,220	153
847	364	12.69	13.35	1,907	2,003	96	6.77	1.05	5,280	117
791	521	14.20	13.17	2,182	2,028	154-	2.79	0.93	7,398-	146
1,328	257	14.13	13.86	2,863	2,809	54-	3.73	0.98	2,250-	127
1,095	488	14.80	14.20	2,583	2,481	102-	4.87	0.96	3,893-	111

1983 GROUP AVERAGES, ACCORDING TO NUMBER OF COWS:

										THIRDS
980	343	12.47	13.63	2,215	2,412	197	12.22	1.09	62,779	HIGH
1,096	298	14.59	14.07	2,394	2,312	82-	3.69	0.97	9,702-	MED
960	411	12.89	13.35	2,264	2,341	77	6.39	1.03	4,428	LOW

ANNUAL AVERAGES, ALL ENTR. WEIGHTED BY NUMBER OF COWS:

1,009	338	13.05	13.71	2,268	2,377	109	8.69	1.05	17,856	1983
920	336	12.79	13.67	2,108	2,246	138	8.65	1.07	21,331	1982
1,001	323	13.38	13.89	2,158	2,237	79	7.89	1.04	12,346	1981
881	320	11.74	13.15	1,957	2,182	225	10.64	1.11	34,711	1980
796	281	10.47	12.19	1,713	1,978	265	10.77	1.15	39,786	1979

STANCHION BARN HERDS
DAIRY COWS, 1983
COSTS AND RETURNS PER DAIRY COW
730 COWS ON 9 COST ACCOUNT FARMS

ITEM	AVERAGE PER COW
<u>COSTS:</u>	
DEPRECIATION - - - - -	\$ 202
FEED - 4,449 LBS OF DRY GRAIN - - - - -	\$ 471
1.8 TONS OF HIGH MOISTURE CORN - - - - -	140
0.8 TONS OF HAY - - - - -	56
5.9 TONS OF HAY CROP SILAGE - - - - -	188
6.4 TONS OF CORN SILAGE - - - - -	161
PASTURE AND ALL OTHER FEED - - - - -	13
TOTAL FEED COST PER COW - - - - -	1,029
LABOR - 74 HOURS - - - - -	370
TRACTOR, TRUCK - - - - -	24
EQUIPMENT - - - - -	122
BEDDING - - - - -	31
BREEDING - - - - -	37
VET AND MEDICINE - - - - -	48
MILK HAULING - - - - -	91
MILK TESTING - - - - -	19
SUPPLIES - - - - -	40
UTILITIES - - - - -	45
INSURANCE - - - - -	7
INTEREST ON VALUE OF COW - - - - -	85
BUILDING USE - - - - -	122
MILK ASSESSMENT - - - - -	77
ALL OTHER - - - - -	110
TOTAL OTHER THAN DEPREC, FEED, LABOR - - - - -	858
TOTAL COSTS - - - - -	\$2,459
<u>RETURNS:</u>	
16,852 POUNDS OF MILK SOLD - - - - -	\$2,342
120 POUNDS OF MILK USED ON FARM - - - - -	16
CALVES - - - - -	92
OTHER RETURNS - - - - -	1
TOTAL RETURNS - - - - -	\$2,451
<u>PROFIT:</u> - - - - -	\$ 8-
OTHER FACTORS - AVG PER CWT OF MILK:	
ALL GRAIN COST	\$ 3.62
TOTAL FEED COST	6.11
LABOR COST	2.19
TOTAL COST	\$14.04
RETURNS	14.00
MILK PRODUCED PER HOUR OF LABOR	228 LB
RETURN PER HOUR OF LABOR	\$ 4.90
RETURN PER DOLLAR OF COST	1.00

See note on page 8.

FREESTALL BARN HERDS
DAIRY COWS, 1983
COSTS AND RETURNS PER DAIRY COW
2,854 COWS ON 12 COST ACCOUNT FARMS

ITEM	AVERAGE PER COW
<u>COSTS:</u>	
DEPRECIATION - - - - -	\$ 161
FEED - 3,743 LBS OF DRY GRAIN - - - - -	\$ 383
2.4 TONS OF HIGH MOISTURE CORN - - - - -	181
0.4 TONS OF HAY - - - - -	28
4.7 TONS OF HAY CROP SILAGE - - - - -	145
8.6 TONS OF CORN SILAGE - - - - -	204
PASTURE AND ALL OTHER FEED - - - - -	62
TOTAL FEED COST PER COW - - - - -	1,003
LABOR - 46 HOURS - - - - -	330
TRACTOR, TRUCK - - - - -	36
EQUIPMENT - - - - -	104
BEDDING - - - - -	14
BREEDING - - - - -	27
VET AND MEDICINE - - - - -	41
MILK HAULING - - - - -	77
MILK TESTING - - - - -	13
SUPPLIES - - - - -	40
UTILITIES - - - - -	35
INSURANCE - - - - -	5
INTEREST ON VALUE OF COW - - - - -	57
BUILDING USE - - - - -	80
MILK ASSESSMENT - - - - -	84
ALL OTHER - - - - -	112
TOTAL OTHER THAN DEPREC, FEED, LABOR - - - - -	725
TOTAL COSTS - - - - -	\$2,219
<u>RETURNS:</u>	
16,480 POUNDS OF MILK SOLD - - - - -	\$2,248
49 POUNDS OF MILK USED ON FARM - - - - -	7
CALVES - - - - -	71
OTHER RETURNS - - - - -	33
TOTAL RETURNS - - - - -	\$2,359
PROFIT: - - - - -	\$ 140
OTHER FACTORS - AVG PER CWT OF MILK:	
ALL GRAIN COST	\$ 3.41
TOTAL FEED COST	6.07
LABOR COST	2.00
TOTAL COST	\$12.79
RETURNS	13.64
MILK PRODUCED PER HOUR OF LABOR	360 LB
RETURN PER HOUR OF LABOR	\$10.25
RETURN PER DOLLAR OF COST	1.06

FACTORS FROM 22 DAIRY COW ENTERPRISES
21 COST ACCOUNT FARMS, 1983
(ARRANGED BY NUMBER OF COWS)

FARM NO	HERD SIZE NO	MILK PER COW LB	LABOR PER COW HR	MILK PER HR OF LABOR LB	FEED PER COW					VET MED COST/ COW \$
					DRY GRAIN LB	HIGH	HAY			
						MSTR CORN TN	HAY TN	CROP SILG TN	CORN SILG TN	
10 STANCHION BARN HERDS										
105	112	15,948	81	197	3,357	1.9	0.5	3.6	10.7	82
111	106	17,115	76	224	2,566	3.6	0.4	11.0	1.4	24
208	100	15,525	59	263	6,400	0.0	0.3	7.0	7.6	45
203	98	17,462	60	292	6,490	0.0	0.0	7.8	7.8	68
867	69	19,896	86	232	3,826	3.6	2.0	2.7	1.8	68
153	62	17,508	61	287	4,581	2.3	0.9	4.6	6.5	26
117	55	14,562	68	214	873	3.2	2.4	4.5	4.5	18
146	48	14,931	132	113	5,542	0.5	0.7	3.7	5.4	42
127	42	19,471	55	357	7,714	0.0	1.3	3.9	10.2	43
111	38	16,942	79	214	3,632	4.3	0.6	4.7	8.7	25

ANNUAL AVERAGES, ALL ENTR. WEIGHTED BY NUMBER OF COWS:

1983	73	16,852	74	228	4,448	1.8	0.8	5.9	6.4	48
1982	72	15,880	72	221	3,756	2.7	1.1	4.9	5.5	51
1981	72	16,082	73	221	5,161	1.9	1.0	5.8	6.8	50
1980	56	15,094	79	191	3,582	2.2	1.3	4.7	7.3	28
1979	51	14,337	80	180	4,922	1.1	2.4	2.4	5.9	28

12 FREESTALL BARN HERDS

834	680	17,078	40	423	2,647	3.3	0.2	6.3	5.6	15
827	403	15,851	51	314	2,700	2.2	0.2	4.4	10.0	45
812	299	20,397	45	453	6,943	0.0	0.0	4.3	13.7	65
806	273	16,135	39	413	3,516	2.4	0.1	4.1	11.8	28
824	217	15,788	46	345	2,479	2.8	0.3	3.0	6.3	87
830	204	17,677	48	365	4,108	3.1	1.2	7.8	5.1	48
804	156	14,080	44	319	4,974	0.0	0.3	3.3	11.1	40
821	151	14,172	43	327	4,026	4.9	0.7	1.2	14.6	30
105	133	14,698	53	279	2,977	4.2	0.6	4.4	4.9	61
835	130	14,148	49	288	4,508	2.3	0.4	6.8	7.4	50
112	121	17,979	56	321	3,983	3.1	0.5	3.7	6.9	37
836	87	15,308	64	239	6,138	0.0	2.2	0.0	8.4	30

ANNUAL AVERAGES, ALL ENTR. WEIGHTED BY NUMBER OF COWS:

1983	238	16,529	46	360	3,743	2.4	0.4	4.7	8.6	41
1982	224	15,659	50	313	3,781	2.3	0.4	4.5	8.1	41
1981	219	15,345	45	337	3,570	2.3	0.4	5.6	7.9	38
1980	208	16,031	48	336	3,666	2.3	0.5	4.3	7.3	35
1979	208	15,521	47	333	4,463	1.8	0.4	3.8	8.3	38

See note on page 8.

FACTORS FROM 22 DAIRY COW ENTERPRISES
21 COST ACCOUNT FARMS, 1983
(READ ACROSS BOTH PAGES)

AVG COST PER COW FOR		AVG PER CWT OF MILK		AVERAGE PER COW			RETURN PER		PROFIT	
FEED	LABOR	COST	RETURN	COST	TURN	PRO- FIT	OF LABOR	\$ OF COST	ON ENTER- PRISE	FARM NO
\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	

10 STANCHION BARN HERDS

1,005	389	16.30	13.59	2,793	2,361	432-	0.53-	0.85	48,414-	105
968	466	12.72	14.62	2,241	2,566	325	10.38	1.15	34,511	111
1,079	292	15.64	15.15	2,498	2,422	76-	3.66	0.97	7,559-	208
1,080	268	14.89	14.61	2,664	2,614	50-	3.65	0.98	4,890-	203
1,067	396	12.13	13.37	2,523	2,768	245	7.49	1.10	16,913	867
1,077	320	11.69	12.81	2,122	2,319	197	8.49	1.09	12,220	153
847	364	12.69	13.35	1,907	2,003	96	6.77	1.05	5,280	117
791	521	14.20	13.17	2,182	2,028	154-	2.79	0.93	7,398-	146
1,328	257	14.13	13.86	2,863	2,809	54-	3.73	0.98	2,250-	127
1,095	488	14.80	14.20	2,583	2,481	102-	4.87	0.96	3,893-	111

ANNUAL AVERAGES, ALL ENTR. WEIGHTED BY NUMBER OF COWS:

1,029	370	14.04	14.00	2,459	2,451	8-	4.90	1.00	548-	1983
930	359	13.63	13.91	2,236	2,279	43	5.61	1.02	3,167	1982
1,066	358	14.47	14.06	2,426	2,360	66-	4.01	0.97	4,761-	1981
868	384	12.81	13.35	2,026	2,109	83	5.88	1.04	4,589	1980
812	313	11.60	11.96	1,754	1,806	52	4.59	1.03	2,662	1979

12 FREESTALL BARN HERDS

984	288	11.40	13.34	2,074	2,404	330	15.32	1.16	224,718	834
856	461	13.80	13.57	2,300	2,263	37-	8.37	0.98	15,174-	827
1,156	431	11.69	13.37	2,522	2,867	345	17.24	1.14	103,028	812
1,010	305	13.53	14.85	2,243	2,456	213	13.27	1.10	58,210	806
763	292	11.68	12.88	1,922	2,112	190	10.52	1.10	41,163	824
1,250	274	13.54	13.68	2,522	2,547	25	6.18	1.01	5,072	830
843	336	13.74	14.76	1,976	2,120	144	10.89	1.07	22,435	804
1,355	226	16.28	14.78	2,364	2,150	214-	0.29	0.91	32,234-	821
995	294	13.68	13.46	2,124	2,092	32-	0.89	0.98	4,244-	105
1,111	254	15.41	13.46	2,312	2,036	276-	0.45-	0.88	35,901-	835
1,088	234	12.23	13.20	2,276	2,450	174	7.29	1.08	21,117	112
718	496	12.38	13.14	1,999	2,116	117	9.56	1.06	10,124	836

ANNUAL AVERAGES, ALL ENTR. WEIGHTED BY NUMBER OF COWS:

1,003	330	12.79	13.64	2,219	2,359	140	10.25	1.06	33,193	1983
917	329	12.55	13.60	2,074	2,238	164	9.84	1.08	36,701	1982
985	314	13.09	13.85	2,090	2,206	116	9.46	1.06	25,507	1981
883	313	11.58	13.14	1,948	2,198	250	11.80	1.13	52,012	1980
793	277	10.32	12.22	1,707	2,003	296	12.29	1.17	61,442	1979

HEIFERS, 1983
COSTS PER HEIFER EQUIVALENT
1,339 MATURE-HEIFER EQUIVALENTS ON
19 COST ACCOUNT FARMS*

ITEM	AVERAGE PER HEIFER RAISED TO 26.1 MONTHS
VALUE OF CALF AT BIRTH - - - - -	\$ 105
FEED - MILK AND MILK REPLACER- - - - -	\$ 17
1,422 POUNDS OF DRY GRAIN - - - - -	133
0.2 TONS OF HIGH MOISTURE CORN- - - - -	14
0.9 TONS OF HAY - - - - -	66
2.1 TONS OF HAY CROP SILAGE - - - - -	60
6.0 TONS OF CORN SILAGE - - - - -	145
PASTURE AND ALL OTHER FEED- - - - -	60
TOTAL FEED COSTS - - - - -	495
LABOR - 23 HOURS - - - - -	150
TRACTOR, TRUCK - - - - -	33
EQUIPMENT- - - - -	22
BEDDING- - - - -	16
BREEDING - - - - -	16
VET AND MEDICINE - - - - -	11
UTILITIES- - - - -	7
INSURANCE- - - - -	6
INTEREST - - - - -	70
BUILDING USE - - - - -	67
ALL OTHER- - - - -	69
TOTAL OTHER THAN CALF, FEED, LABOR - - - - -	317
TOTAL COSTS - TO RAISE A HEIFER TO 26.1 MONTHS OF AGE	\$1,067

*THERE WERE A TOTAL OF 2,949 HEIFERS OF ALL AGES ON THESE FARMS FOR A PART OR ALL OF THE YEAR. THEY WERE FED A TOTAL OF 34,940 NET HEIFER-MONTHS, WHICH, DIVIDED BY 26.1 MONTHS OF AGE AT FRESHENING EQUALS 1,339 MATURE-HEIFER EQUIVALENTS. (HEIFERS RAISED ON CONTRACT ARE NOT INCLUDED.)

FACTORS FROM 19 HEIFER ENTERPRISES
19 COST ACCOUNT FARMS, 1983
(ARRANGED BY NUMBER OF HEIFERS)

FARM NO	NUMBER OF HEIFERS	LABOR PER HEIFER	AVERAGE AGE AT FRESH- ENING	NET COST* PER HEIFER MONTH	PER HEIFER AT		RETURN HOUR OF LABOR	PER \$ OF COST
					COST	VALUE		
	NO	HR	MO	\$	\$	\$	\$	\$
834	628	8	27	35	996	900	1.44	0.84
827	375	5	27	29	865	900	7.41	0.98
812	269	7	24	37	956	1,000	0.08-	0.87
830	213	14	26	50	1,424	1,000	7.44-	0.73
806	211	11	27	39	1,145	800	14.60-	0.53
824	157	9	26	30	899	850	1.46-	0.84
111	130	20	28	43	1,322	950	3.09-	0.68
835	130	11	25	32	893	975	1.00-	0.85
804	115	9	25	37	1,020	800	3.39-	0.78
821	108	8	26	36	1,034	800	3.94-	0.85
112	102	12	25	38	1,049	1,000	3.33	0.98
105	93	13	28	43	1,591	1,600	10.09-	0.72
105	87	17	24	44	1,115	900	8.04-	0.58
836	73	21	28	38	1,151	800	1.80-	0.57
867	63	14	25	45	1,249	1,000	9.83-	0.67
146	62	16	28	35	1,056	600	10.50-	0.49
153	48	16	27	41	1,203	750	5.15-	0.71
127	46	9	29	38	1,324	1,100	10.39-	0.73
117	39	22	31	36	1,203	1,000	1.48-	0.70

1983 GROUP AVERAGES, ACCORDING TO NUMBER OF HEIFERS:

THIRDS

HIGH	309	9	26	36	1,025	914	3.31-	0.81
MED	109	13	26	39	1,116	948	3.71-	0.77
LOW	55	16	28	39	1,188	859	5.80-	0.64

ANNUAL AVERAGES, ALL ENTR. WEIGHTED BY NUMBER OF HEIFERS:

1983	155	11	26	37	1,067	918	3.88-	0.78
1982	141	11	27	37	1,101	1,001	2.23	0.91
1981	151	11	26	37	1,100	1,051	0.25	0.87
1980	139	11	26	35	1,042	1,105	5.94	0.99
1979	120	12	27	34	1,048	960	3.97	0.96

* Value of calf excluded.