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RETAIL MEAT PRICES IN PERSPECTIVE Δ/Δ

By James E. Nix, ---

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Economics, Statistics, and Cooperatives Service.

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SUMMARY

The beef cattle industry is at a critical point in the current cattle inventory cycle. Producers sustained heavy financial losses during most of the last 4 years as their costs held at relatively high levels while cattle prices were low. These losses, combined with droughts in many areas of the United States, caused a large reduction of the cattle herd. That reduction provided consumers with record large beef supplies at relatively low prices. The total cattle inventory was reduced from 132 million head in 1975 to 116.3 million on January 1, 1978. A further reduction is expected this year. Initially, a herd sell-off increases beef supplies; sustained, it lowers the calf crop and resulting beef supplies. Beef production is now declining and beef prices are rising. This is putting producers back into a favorable financial situation.

Although beef prices have been rising for only a few months, they are attracting much attention because of their importance in the consumer's food budget. Just when prices are beginning to signal producers to start rebuilding their herds, proposals are being put forth to thwart further price increases. Any such government actions should be carefully examined for their potential in stimulating continued herd sell-offs. Because, if herd reduction does not stop soon, the annual per capita consumption of beef during one of the next three years could drop below the lowest level of the past decade. Since consumers have demonstrated strong preference for beef, anything that further reduces supplies will exert even more upward pressure on beef prices and total food costs.

Hog production can be expanded in a year or so; current pork prices should induce an expansion in pork supplies during 1979. Broiler production is expanding in response to current prices and producers can alter supplies further in a few months. Increased availability of these principal competitors of beef will lead to some moderation of the increase in all meat prices. While hamburger and other ground beef products will be in relatively short supply with prices increasing faster than for other meats, increased use of vegetable protein extenders may help alleviate that situation. Also, if the demand for ground beef is strong enough, higher grade beef can be ground.

During 1976 and 1977, relatively stable meat prices served to hold the consumer's food bill in check. Now meat prices will pull the food index up while supplies are down and herds are being rebuilt. Then the pendulum will swing toward the consumer as increased meat supplies moderate prices of other food products.

RETAIL MEAT PRICES IN PERSPECTIVE

James E. Nix 1/

The recent rise in meat prices, particularly beef, has caused much concern because of meat's importance in the American diet. Red meats and poultry accounted for about 15 percent of the retail weight equivalent of food consumed in the United States during the past 5 years. However, since meat costs more per pound than most other foods, consumer expenditures for red meats and poultry account for about one-third of total food expenditures. Beef accounts for a major part of both the weight of meat consumed and the expenditures for meat.

Since meat, particularly beef, is such an important part of the American diet, changes in its availability and prices have great economic consequences for consumers as well as producers. U.S. beef production is declining and live cattle and retail beef prices are rising. These developments have significant implications for food costs during the next few years. This paper attempts to place in perspective events of the past decade, their causes and consequences, and from that base look forward to possible conditions during the next few years.

Prices, Biology, and the Production Cycle

Beef and pork production has typically occurred in cycles. The beef cycle lasts over twice as long as the pork cycle, largely because of biological factors. Historically, there has been about a 4-year cycle for hogs and a 10-year cycle for cattle. External factors also impact from time to time to alter the length or amplitude of the cycle.

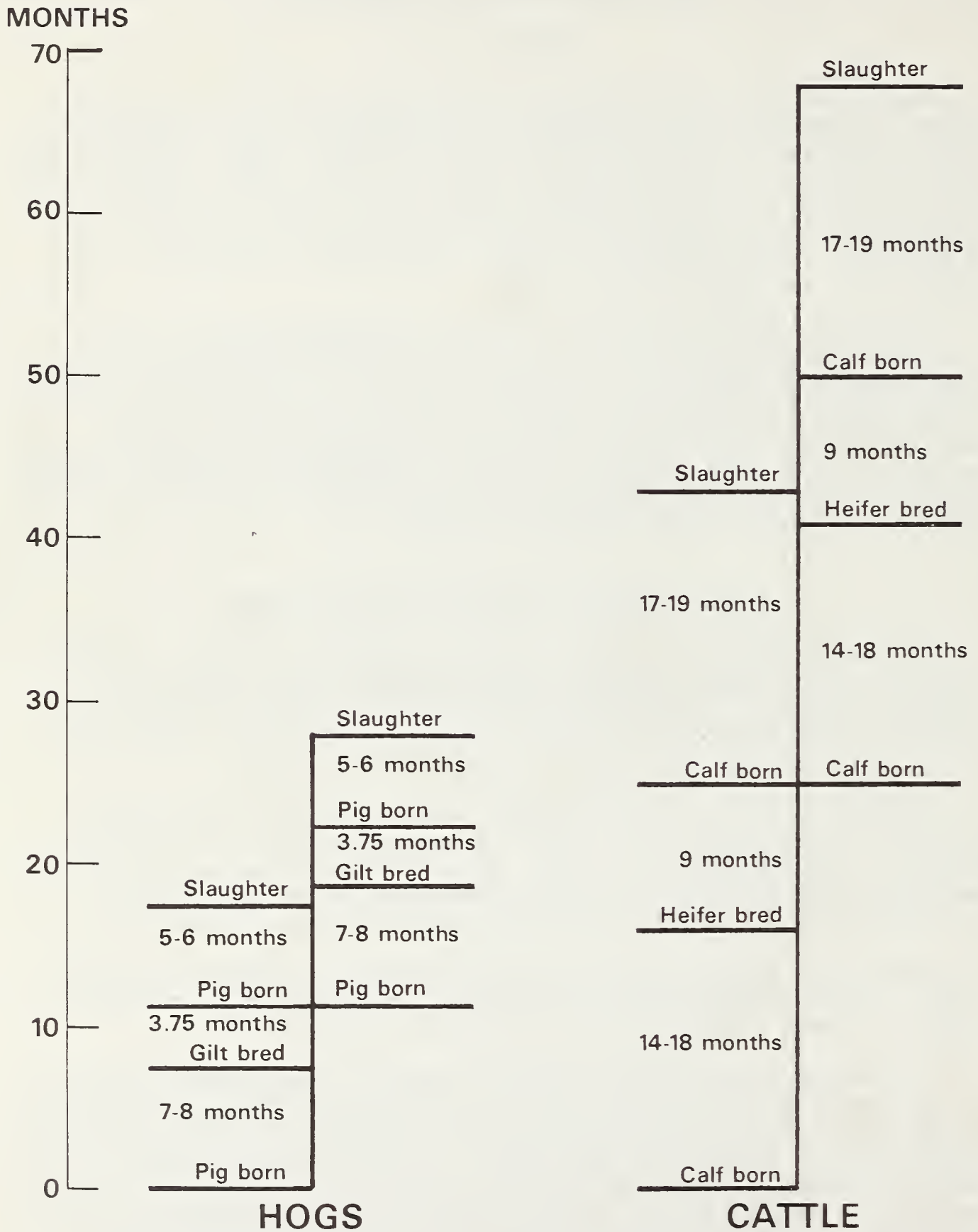
Livestock prices are the producers' signals, telling them whether to expand or reduce production. Higher prices are signals to increase production, low prices to cut back. Thus, high prices are self-correcting; they signal for an increase in production which brings prices down. Conversely, low prices signal for less production which brings prices up.

These price signals and biological lags cause livestock production cycles. If prices have been high (signaling an expansion of output) and then turn lower, it takes time for producers to adjust.

For the hog producer this adjustment period is much shorter than for the cattle raiser (but much longer than for broilers which can turn around in 3 months). The hog producer may have already made decisions to expand output and have his gilts or sows bred. But the time from breeding until their pigs reach slaughter weight is no more than 10 months. The time from when the cattleman's heifer is bred until her offspring reaches slaughter weight can be about 27 months (figure 1). Furthermore, if her first offspring is retained to further increase the herd rather than going to

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FIGURE 1. PRODUCTION LAGS DUE TO BIOLOGICAL LAGS

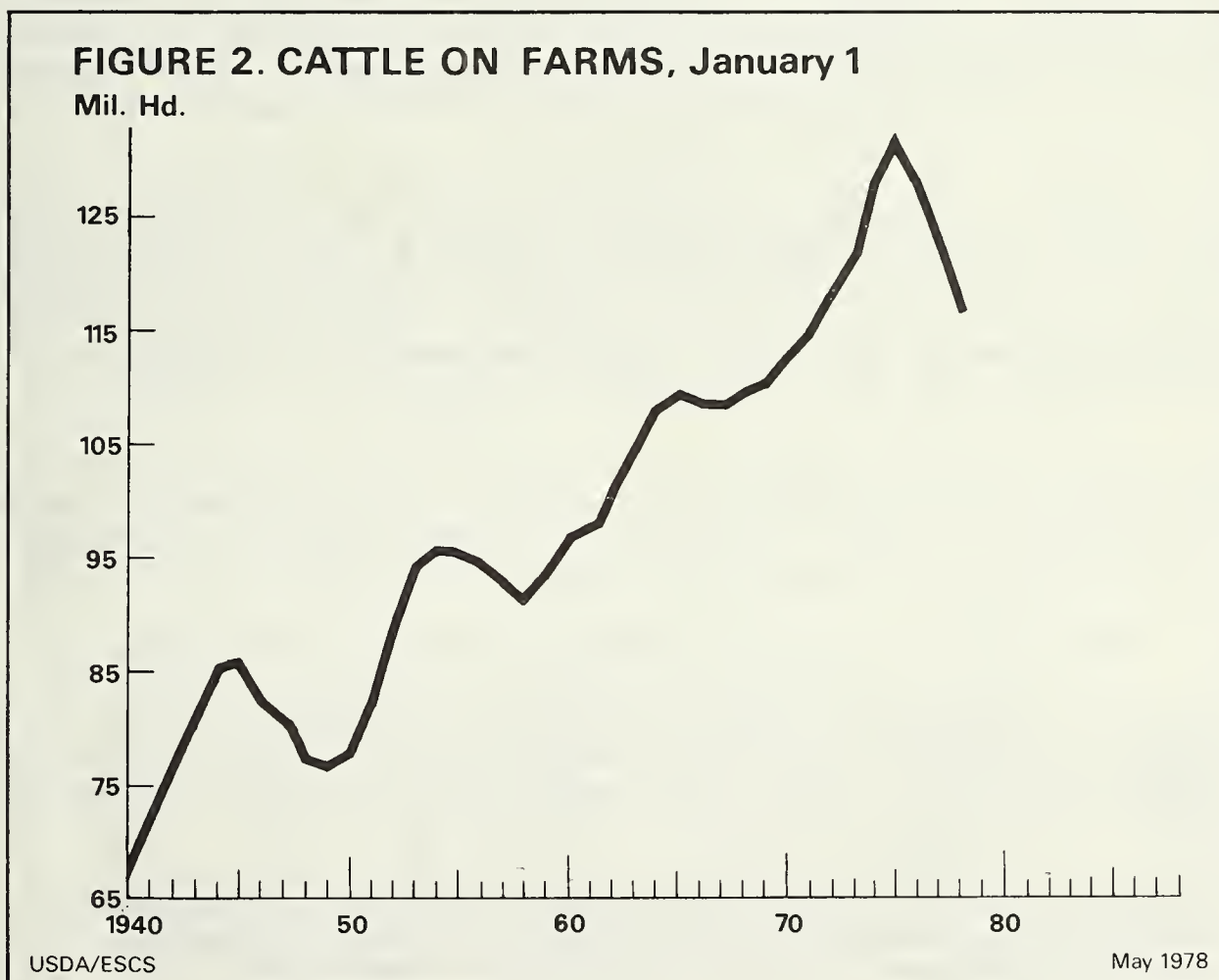


slaughter, it could be about 5-1/2 years from the time the first calf is retained to increase output, until that heifer's offspring reaches slaughter. Thus, beef production continues to increase well beyond the time when price signals change. This happened in the 1974-76 period. Beef production kept increasing despite the lower cattle prices and the large financial losses to cattlemen.

Now the cattle inventory cycle is approaching a turning point. The downward movement of cattle numbers will soon be ending with herd rebuilding to follow. When cattle numbers are near the low point of the cycle, prices rise to signal producers to expand output. This is where we are now. But there will be a time lag in the expansion effort, because of the biological considerations.

The Past Decade in Perspective

The forces of the cattle cycle have been particularly evident during the past decade. Beef producers responded to favorable cattle prices during the late 1960's and early 1970's and expanded their cattle herds. The expansion continued, due to biological thrust, after prices declined to unfavorable levels for producers. The total cattle and calf inventory increased from 108.8 million head in 1967 to a record 132 million in 1975. Meanwhile, the beef cow herd increased from 33.8 million head to 45.7 million (figure 2).



Total beef and veal production rose from 21 billion pounds in 1967 to a record 26.8 billion pounds in 1976. It rose each year except in 1973 when external factors such as the consumer beef boycott and the price freeze on beef disrupted normal production-consumption patterns (table 1).

A shift also occurred in the type of beef produced. In the 1960's and early 1970's, consumers demonstrated their preference for grain-fed beef by substantially increasing their consumption of Choice grade beef. This preference, together with the relatively low and stable grain prices, spurred expansion in the cattle feeding industry. Placements of cattle on feed increased sharply, reaching a record 27.4 million head in 1972. Choice 900-1100 pound steers at Omaha rose from \$25.29 per 100 pounds in 1967 to \$35.78 in 1972. Retail beef prices also rose steadily during this period.

Then in the 1973-74 period, grain prices rose sharply. Placements of cattle on feed dropped 17 percent below the high levels of 1971-72. This caused a substantial adjustment in the cattle industry. About 77 percent of the total commercial cattle slaughter in 1972 came from feedlots. But the expanding cattle herd and the slump in placements of cattle on feed left a large number of cattle outside feedlots, on the pastures and ranges. Thus, fed cattle slaughter declined and more cattle went to slaughter directly from pastures. In 1975, only 52 percent of the commercial cattle slaughter came from feedlots. This caused a major shift in the type of beef available to consumers. Fed beef supplies, for which consumers had shown a preference, declined while the production of ground beef rose, since cattle slaughtered directly from pastures supply a bigger proportion of ground beef (or manufacturing grade meat) to the slaughter mix.

As reduction of the cattle herd got well underway in 1975, production of ground beef increased even more and stayed at a high level through 1977. This kept beef prices low relative to the cost of production, and cattlemen continued to liquidate their herds. Droughts, reduced forage supplies in some areas, and two severely cold winters compounded the cattlemen's problems and they sent even more cattle to slaughter.

Now the cattle herd is much smaller, down from 132 million head in 1975 to 116.3 million at the beginning of this year. The beef cow herd is down from 45.7 million in 1975 to 38.7 million. Beef production is declining and further declines are anticipated as herd rebuilding gets underway.

Performance of the Meat Industry During the Past Decade

There are many decision points involved in the meat industry. Performance of each sector of the industry at these decision points affects the supply and price of meats. Each sector must cover costs and return profits if it is to remain viable in the long run.

Shifts in consumer demand can cause adjustments in various sectors. The severity of adjustment depends on whether a shift in demand is permanent or short-term. That is often hard to determine.

Table 1 -- Production and consumption of red meat and poultry, 1970-77

Item	1970	1971	1972	1973	1974	1975	1976	1977
<u>Million pounds</u>								
Total production:								
Beef	21,685	21,902	22,419	21,277	23,138	23,976	25,969	25,279
Veal	588	546	459	357	486	873	853	834
Pork	14,699	16,006	14,422	13,223	14,331	11,779	12,688	13,247
Lamb and mutton	551	555	543	514	465	410	371	351
Total red meat	37,523	39,009	37,843	35,371	38,420	37,038	39,881	39,711
Poultry	10,197	10,295	10,803	10,693	10,826	10,627	11,810	12,143
Total meat	47,720	49,304	48,646	46,064	49,246	47,665	51,691	51,854
Total consumption:								
Beef	22,926	23,084	23,962	22,813	24,489	25,398	27,549	27,038
Veal	581	545	465	376	493	876	854	836
Pork	14,661	16,127	14,712	13,298	14,493	11,852	12,668	13,200
Lamb and mutton	657	645	684	557	483	430	396	371
Total red meat	38,825	40,401	39,823	37,044	39,958	38,556	41,467	41,445
Poultry	9,774	9,961	10,513	10,249	10,478	10,383	11,189	11,621
Total meat	48,599	50,362	50,336	47,293	50,436	48,939	52,656	53,066
<u>Pounds</u>								
Per capita consumption:								
Beef	113.7	113.0	116.1	109.6	116.8	120.1	129.3	125.9
Veal	2.9	2.7	2.2	1.8	2.3	4.2	4.0	3.9
Pork	72.7	79.0	71.3	63.9	69.1	56.1	59.5	61.5
Lamb and mutton	3.3	3.1	3.3	2.7	2.3	2.0	1.9	1.7
Total red meat	192.6	197.8	192.9	178.0	190.5	182.4	194.7	193.0
Poultry	48.4	48.8	50.9	49.2	50.0	49.1	52.5	54.1
Total meat	241.0	246.6	243.8	227.2	240.5	231.5	247.2	247.1

Consumer Demand

The primary determinants of the long-run demand for a product are consumer tastes, preferences, attitudes, and incomes. Current incomes and relative prices of other products affect short-run demand.

Consumers have shown a strong preference for more meat during the past decade. Per capita consumption of red meats and poultry averaged about 223 pounds annually during 1965-67. By 1975-77, the average rose to about 242 pounds because of increases for beef and poultry.

Retail meat prices trended upward during the past decade even when per capita consumption was rising (figure 3). Prices for individual meats fluctuated around this upward trend, reflecting short-run changes in supply and demand. Rising consumer incomes and a strong preference for meat generated a strong demand for meat.

The upward trend in meat prices has been largely due to an overall rise in consumer prices. When deflated by the Consumer Price Index, beef prices rose from 1971 through 1973, but then declined through 1977. On a deflated basis, retail beef prices in the first quarter of 1978 were lower than they were from 1971 through mid-1976 (table 2).

Short-run shifts in demand sometimes persist. Hamburger consumption has increased sharply during the past few years. Is this a short-run shift because of the period's plentiful supplies of this type of beef or will it continue as a long-run shift in tastes induced by a short-run supply change? It is probably somewhat of a mixture, considering the prevalence of the new "hamburger society."

Demand for meat apparently is very strong in early 1978. Relatively large quantities of meats are being consumed at prices considerably above those of a year ago. Demand is expected to continue strong over the next few years as consumer incomes keep rising and a preference for meat is maintained.

Marketing

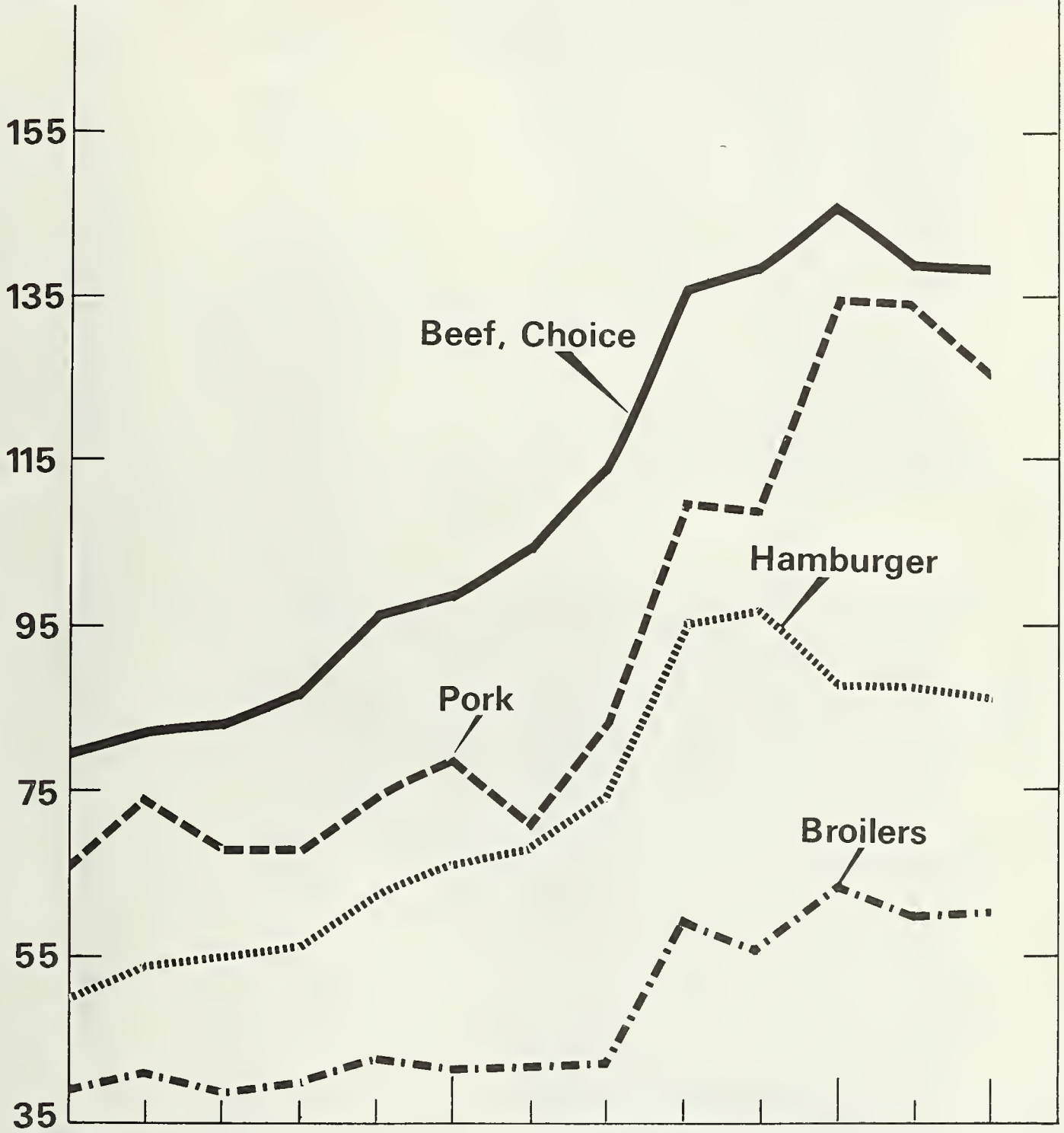
Marketing includes all of those processes that take place from the time the animals are first sold until the consumer buys the meat. Thus, many processes or decision points are involved, all of which must return a profit.

Marketing processes are not immune from inflation, and marketing costs have risen over the past decade. Improved efficiency has enabled some firms carrying out the marketing functions to survive while others have gone out of business.

The farm-retail price spread for beef and for pork has increased sharply during the past decade (figure 4). However, rather than being an indication that those firms in the marketing channel have fattened their

FIGURE 3. RETAIL MEAT PRICES

¢ PER LB.



1965

1970

1975

1977

USDA/ESCS

May 1978

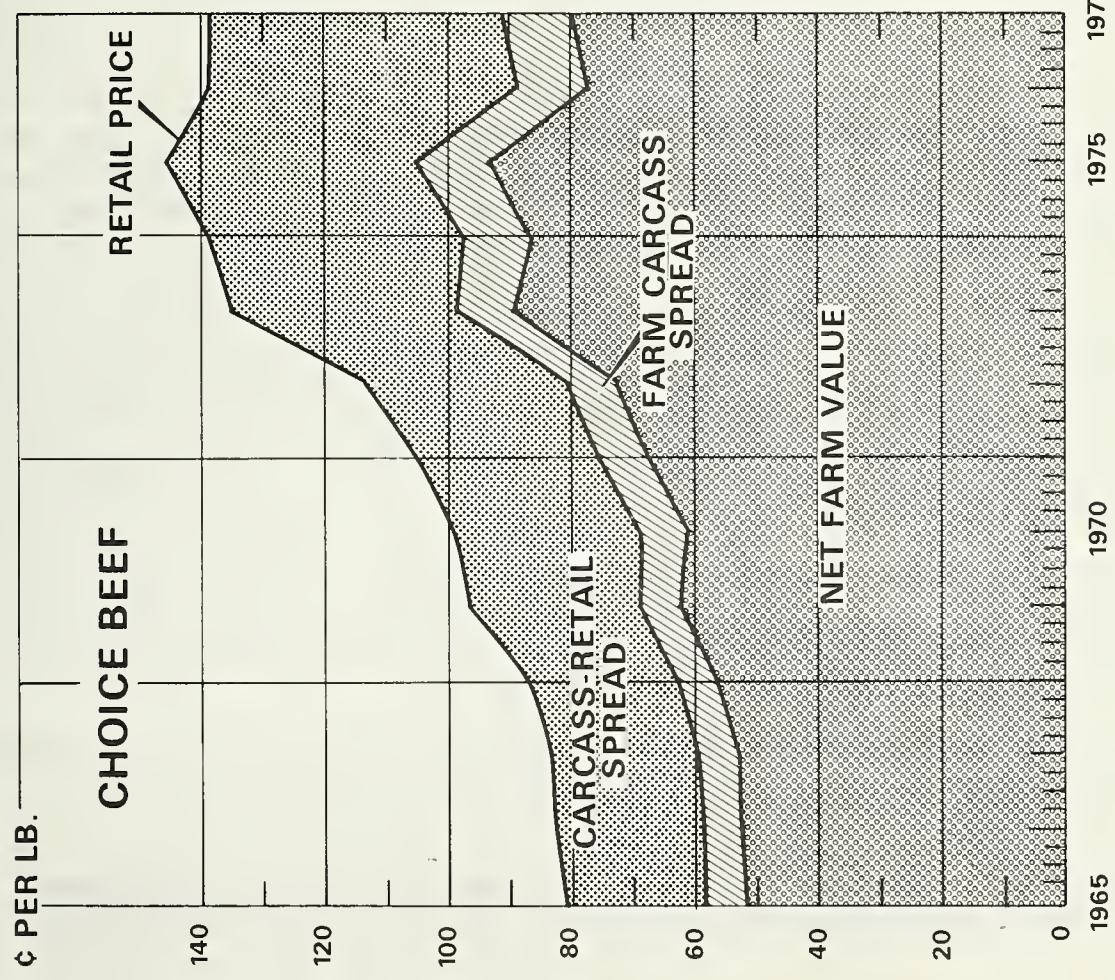
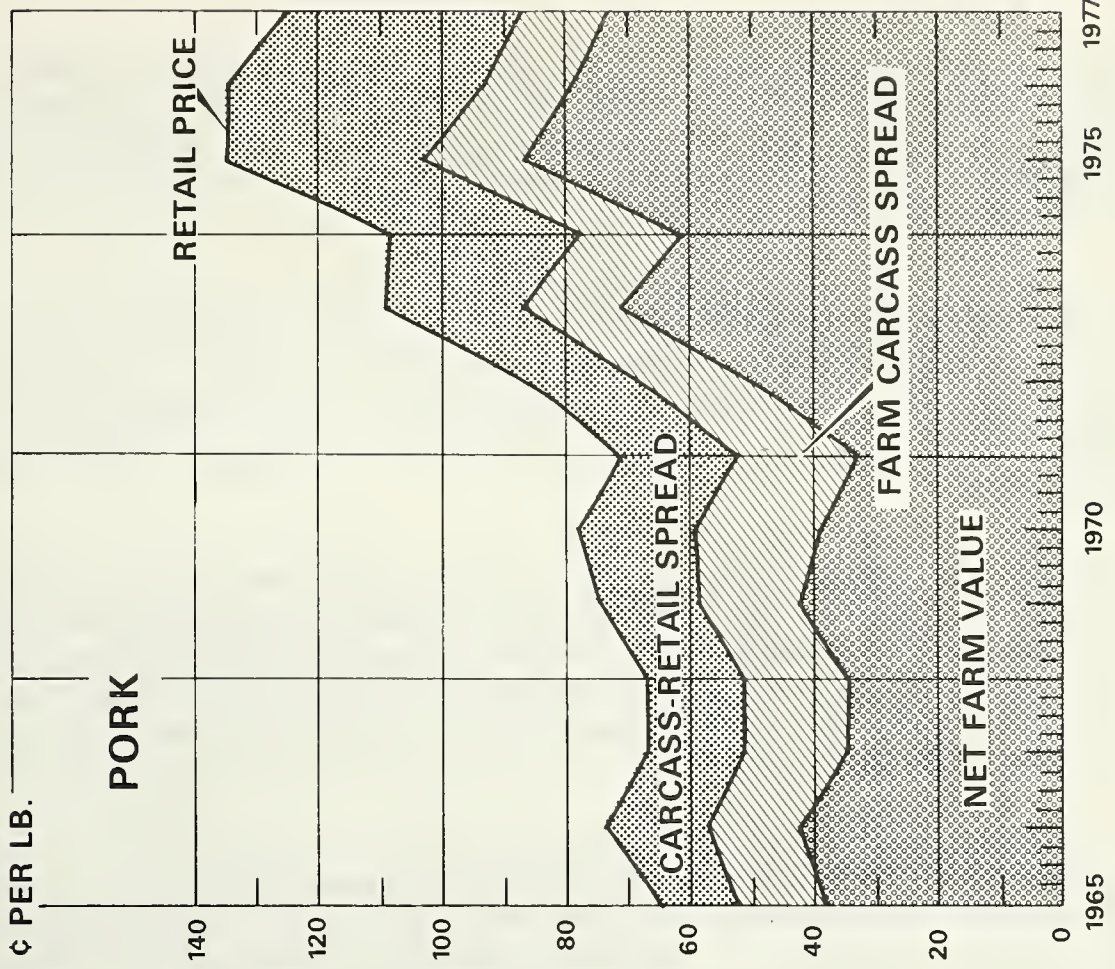
Table 2 --Quarterly average choice beef price, deflated beef prices, and per capita consumption, U.S., 1971-first quarter 1978

Year and quarter	Average retail price	Consumer price index (all items)	Deflated beef price in 1967	Quarterly per capita consumption
	Cent/lb.	1967=100	Cents/lb.	Pounds
1971: I	100.2	119.5	83.85	27.7
II	104.8	120.8	86.75	28.1
III	105.4	122.0	86.39	29.3
IV	106.6	122.7	86.88	27.9
1972: I	114.4	123.7	92.48	28.2
II	112.3	124.7	90.06	28.9
III	115.3	125.8	91.65	29.4
IV	113.2	126.9	89.20	29.6
1973: I	129.2	128.7	100.39	28.0
II	135.8	131.5	103.27	26.2
III	141.8	134.4	105.51	26.8
IV	135.1	137.6	98.18	28.6
1974: I	145.1	141.4	102.62	28.3
II	134.5	145.4	92.50	28.8
III	141.0	149.9	94.06	29.4
IV	134.5	154.2	87.22	30.3
1975: I	129.6	157.0	82.55	30.3
II	146.5	159.5	91.85	28.4
III	156.4	162.9	96.01	30.2
IV	151.4	165.5	91.48	31.2
1976: I	142.1	167.1	85.04	32.8
II	141.5	169.2	83.63	31.2
III	136.1	171.9	79.17	33.5
IV	136.0	173.8	78.25	31.8
1977: I	135.1	176.9	76.37	31.7
II	136.6	180.7	75.59	30.9
III	138.8	183.3	75.72	32.0
IV	142.7	185.3	77.01	31.3
1978: I	151.3	188.3	80.35	30.5

1/ Carcass weight equivalent.

PRICE SPREADS

FIGURE 4.



USDA

NEG. ESCS 2575-78(5)

NEG. ESCS 2586-78(5)

profits, it is an indication of the rising cost of doing business and of the increased desire of consumers to have more conveniences included with the meat products they purchase. With rising labor, energy, and other costs, charges for marketing meat can be expected to rise further, adding to the retail price.

The price at which the retailer can sell the meat and the cost of marketing the meat determine the price that can be paid for live animals. Thus, the producer price becomes a residual. But this residual price must be high enough to give the producer a profit or he reduces his output in the long run.

Producers

Farmers face a derived demand for their product. They are of necessity price takers. They do not have control over livestock prices in the short run because once livestock have reached slaughter weights, the time period which they can be held from the market is very short--a few weeks at best. Their only control is to vary the level of supply, a lengthy process, particularly for beef.

Producers' profits vary with the price of their product and what it costs to produce it. Considering the strong demand for meat in the late 1960's and early 1970's and the low and relatively stable feed costs, profits for cattlemen were reasonable and attractive to expansion. Other livestock and poultry producers were also in relatively good operating situations.

But during 1973, production costs for livestock and poultry producers changed dramatically. By the summer of 1974, corn prices were about 3 times the level of the summer of 1971. Most other input prices also rose, adding to the spiraling cost of production. This shocked the livestock industry.

Pork producers underwent a massive liquidation in 1974; in 1975 pork production dropped to its lowest level in many years and hog prices rose sharply. This attracted some producers back into the business even though feed costs were still high relative to the pre-1973 period. Pork production has continued to increase since 1975. But increases for 1977, and those anticipated for this year, have been less than would have been expected under similar economic conditions. Extremely cold winters for the past 2 years, larger than normal death losses, and disease problems have probably had a big influence in limiting increases in pork production. Hog producers' current profits are very favorable and should result in expanded pork output next year.

Several factors cause variation in the cost of producing livestock. Among these are size of operation, region of production, and the level of input prices.

In 1976, estimates for the North Central States (the major U.S. hog producing area) showed a total direct cost of \$37.06 per 100 pounds of hog

produced. Of this, \$32.92 were cash costs and \$4.14 noncash costs (table 3). Total costs (including overhead, management, and land) for an ongoing operation were \$45.51. Of this, \$33.45 were cash costs and \$12.06 noncash costs. During 1976, 1977, and thus far in 1978, slaughter hog prices have almost always been above the 1976 total cash cost estimate and in many months above the total cost estimate of \$45.51.

The sharply higher corn prices also raised cattle feeding costs. Except for a few brief periods since 1974, cattle feeders generally operated in the red until just the last few months. But for fed cattle marketed over the past 2 or 3 months, profits have been large because feeder cattle were purchased last fall at prices considerably below current levels.

Large negative returns have characterized cattle feeding operations during the past few years. Based on cost and return estimates for a Corn Belt cattle feeding operation, returns were negative for cattle marketed in 15 of the last 23 quarters (table 4). Monthly estimates show that returns are improving and will probably be good for cattle marketed into this summer. But with feeder cattle prices rising, cattle feeder profits may be squeezed by yearend.

In 1974, with a weak demand for cattle to go into feedlots and with a continued buildup in the supply of feeder cattle, prices for feeder cattle dropped sharply. They remained at low levels through 1977. These low feeder cattle prices compounded producer losses, and after 4 years of losses many were in severe financial trouble. Many dropped out of business during this period.

This extended period of losses resulted in the massive liquidation of the cattle herd since 1975. Liquidation has continued into 1978 despite the sharp runup in cattle prices since the first of the year. Cattle producers need more than a few months of favorable prices just to regain the losses of the past few years. An extended period of higher prices will be required to get them to step up beef production sharply.

In 1976, estimated nonland costs of producing feeder cattle in the Great Plains Region totaled \$55.67 per hundredweight (table 5). Total nonland cash costs were \$25.74. During the past 4 years, feeder cattle prices have generally exceeded the total nonland cash costs, but they have not come close to the total nonland cash and other costs until this year.

From this reduced cattle inventory will come less beef. Furthermore, as herd rebuilding gets underway, beef production will be further reduced by the holding of heifers to expand the herd rather than sending them to slaughter, as cattlemen did for the past several years.

What does this mean for the future?

Prospective Developments

Meat prices have risen sharply in 1978 across the board. Poultry prices have followed the upward movement in the retail prices of red meats even though poultry production is up sharply.

Pork production is not increasing, contrary to what almost everyone anticipated last fall. Larger pork supplies had been expected to temper some of the rise in beef prices. Only modest increases in pork production are anticipated for 1978, but much more could come in 1979.

Poultry production is expected to be up sharply in 1978. This will give consumers an alternative to the smaller beef supplies.

Beef prospects are not particularly bright for the consumer for the next few years. However, from the producer's viewpoint they look very encouraging.

Beef production is almost sure to decline during the remainder of this year unless the herd reduction becomes more severe; that would yield even smaller supplies in the future. With this expected lower level of production, prices will probably continue to trend upward over the next few years. However, the year-to-year rates of increase probably will not match the increase of 1978.

At this phase of the cattle cycle, it is important that prices remain attractive to producers to signal them that it is time to rebuild herds. Given the prospects for higher beef prices it may be tempting to take steps to bring them down. However, with the extended period of losses that cow-calf producers have been through, a sharp break in prices might cause them to think that the period of prosperity has not yet arrived and they might continue to liquidate the cattle herd. If that happens, even smaller supplies and higher prices are in store.

Under the present meat import Law, beef imports for 1978 can rise a little above the 1977 level, but they will drop substantially in 1979 and remain at a relatively low level through 1981 unless quotas are suspended by the President. In some years when beef prices rose sharply, meat import quotas were suspended to allow more meat to be imported. Such a suspension at this time might alleviate some of the pressure on retail meat prices, but it could also discourage the rebuilding of the cattle herd.

Even after cattlemen decide to expand production, there will be an extended period before the actual increase in production shows up at the supermarket. Therefore, for the next 3 years or more, beef production will probably continue to decline. However, as competing meat supplies increase, as broilers are already doing, consumers will undoubtedly shift more to these meats and away from beef. The relative prices of meats, consumers' preferences, and the level of their incomes will largely determine the level of meat prices. If consumers turn more toward meats other than beef, that will moderate beef prices despite smaller supplies.

Higher meat prices will also make it attractive to use more vegetable protein extenders. The use of these extenders will likely increase, the extent dependent on the relative price of the extenders as well as consumer acceptance.

Table 3--Hog production costs per hundredweight in farrow-to-finish enterprises all sizes, by cost item, North Central Region, 1976 1/

Cost item	Cost per hundredweight <u>2/</u>		
	Cash <u>3/</u>	Noncash <u>3/</u>	Total
	Dollars		
Feed	25.42	0.01	25.43
Grains	16.03	0	16.03
Commercial feeds	9.37	0	9.37
Pasture	.02	.01	.03
Other production costs	4.44	.16	4.60
Veterinary and medicine	.82	0	.82
Custom feed processing	.02	0	.02
Bedding	.07	.16	.23
Livestock hauling and marketing <u>4/</u>	.10	0	.10
Fuels, lubrication, and electricity	1.34	0	1.34
Machinery and equipment repairs	1.70	0	1.70
Miscellaneous expense	.39	0	.39
Labor <u>5/</u>	.69	3.89	4.58
Interest on operating capital <u>6/</u>	.64	.08	.72
General farm overhead	1.73	0	1.73
Total direct costs	32.92	4.14	37.06
Ownership costs (DITI) <u>7/</u>	.50	7.79	8.29
Machinery	.12	1.50	1.62
Buildings and equipment	.32	4.92	5.24
Livestock	.06	1.37	1.43
Management	0	3.17	3.17
Total costs excluding land	33.42	15.10	48.42
Land allocation <u>8/</u>	.03	.42	.45
Land taxes	.03	0	.03
Interest	0	.42	.42
Total costs for new entrant	33.45	15.52	48.97
Total costs for ongoing operation <u>9/</u>	33.45	12.06	45.51

1/ Prices are the averages received or paid by producers. 2/ Hundredweight of live hogs is a composite of all types of hogs produced in the enterprise, including cull breeding stock. All costs are based on this unit of production. 3/ Cash costs are the actual cash outlays for production items, the market value of readily salable items like grain, plus taxes and insurance. Interest on direct expenses is apportioned between cash and noncash; interest on all durable assets is listed as an opportunity cost as if the producer has full equity. 4/ Livestock hauling, and marketing expenses are low because sales were credited at area direct prices, hence no marketing charges, and most producers hauled with owned equipment. 5/ Includes all labor with hired labor shown as a cash cost. 6/ Interest is charged on the cost (or assigned value) of all direct inputs and arbitrarily divided between cash and noncash in proportion to their shares of total direct costs. 7/ Depreciation, interest, taxes, and insurance; repairs are included above. 8/ Land is priced at estimated 1976 market value. Included is the site for buildings and lots, and pasture. 9/ Investments in machinery, buildings, equipment, and land adjusted to values at average data of acquisition instead of 1976 replacement values for computation of depreciation and interest on investment.

Source: "Costs of Producing Hogs in the United States-1976," prepared by the Economics, Statistics, and Cooperatives Service, USDA, Senate Committee on Agriculture and Forestry, Committee print 25-503, April 1978.

Table 4--Costs and net margins for a Corn Belt cattle feeding operation,
1972-first quarter 1978 ^{1/}

Year and quarter	Total costs: per head	Selling price per cwt. to cover		Choice steers, Omaha	Net margin per cwt.	Net margin per head
		Feed and feeder costs:	All costs			
Dollars						
1972: I	360.85	29.91	34.37	36.26	1.89	19.84
II	375.55	31.20	35.77	35.12	-.65	-6.82
III	391.90	32.64	37.32	43.28	5.96	62.58
IV	411.32	34.37	39.17	45.84	6.67	70.04
1973: I	464.72	39.08	44.26	48.57	4.31	45.26
II	506.15	42.77	48.20	40.47	-7.73	-81.16
III	568.34	48.46	54.13	45.46	-8.67	-91.04
IV	516.02	43.52	49.14	40.01	-9.13	-95.86
1974: I	536.82	45.39	51.13	43.91	-7.22	-75.81
II	468.99	38.98	44.67	38.19	-6.48	-68.04
III	479.99	40.10	45.71	35.72	-9.99	-104.90
IV	460.50	38.27	43.86	48.03	4.17	43.78
1975: I	422.92	34.79	40.28	48.64	8.36	87.78
II	456.19	37.86	43.45	46.05	2.60	27.30
III	468.86	38.97	44.65	38.71	-5.94	-62.37
IV	466.52	38.55	44.43	41.42	-3.01	-31.60
1976: I	477.82	39.56	45.51	37.30	-8.21	-86.20
II	516.78	43.06	49.22	39.00	-10.22	-107.31
III	487.49	40.19	46.43	37.88	-8.55	-89.78
IV	452.66	37.28	43.11	40.77	-2.34	-24.57
1977: I	475.34	39.26	45.27	40.47	-4.80	-50.40
II	489.50	40.39	46.62	42.42	-4.20	-44.10
III	452.56	36.91	43.10	45.77	2.67	28.03
IV	456.10	37.24	43.44	---	---	---
1978: I	515.07	42.41	49.05	---	---	---

^{1/} All costs are valued at prices paid in the month the cattle were placed in feedlot. Costs represent the quarter in which cattle were placed in feedlot while the steer prices and net margins reflect selling prices two quarters later.

Source: "Livestock and Meat Situation," Economics, Statistics, and Cooperatives Services, USDA. Various issues.

Table 5--Cost of raising feeder cattle, 1976--Great Plains region

Item	Costs per cow			Costs per cwt. feeder sold ^{1/}		
	Cash	Noncash	Total	Cash	Noncash	Total
	Dollars					
Private pasture and range	11.58	---	11.58	3.76	---	3.76
Public grazing	1.84	---	1.84	.60	---	.60
Hay	25.39	9.68	35.07	8.24	3.14	11.38
Silage	4.90	2.19	7.09	1.59	.71	2.30
Grain and concentrates	1.93	---	1.93	.63	---	.63
Protein supplements	13.21	---	13.21	4.29	---	4.29
Salt and minerals	1.98	---	1.98	.64	---	.64
Subtotal, feed	60.83	11.87	72.70	19.75	3.85	23.60
Veterinary and medicine	3.61	---	3.61	1.17	---	1.17
Livestock hauling	1.13	---	1.13	.37	---	.37
Marketing	1.85	---	1.85	.60	---	.60
Fuel, lube, and electricity	8.49	---	8.49	2.76	---	2.76
Machinery and bldg. repair	9.22	---	9.22	2.99	---	2.99
Subtotal, other production items	24.30	---	24.30	7.89	---	7.89
Hired labor	7.79	---	7.79	2.53	---	2.53
Interest on operating capital	1.96	.82	2.78	.64	.27	.91
General farm overhead	6.72	---	6.72	2.18	---	2.18
Total direct costs	101.60	12.69	114.29	32.99	4.12	37.11
Machinery and equipment, DITI ^{2/}	.95	7.00	7.95	.31	2.27	2.58
Buildings and facilities, DITI	1.30	7.91	9.21	.42	2.57	2.99
Livestock, DITI ^{3/}	---	30.10	30.10	---	9.77	9.77
Subtotal, ownership costs	2.25	45.01	47.26	.73	14.61	15.34
Operator and family labor	---	20.01	20.01	---	6.50	6.50
Management	---	14.49	14.49	---	4.70	4.70
Land taxes	10.54	---	10.54	3.42	---	3.42
Total nonland costs	114.39	92.20	206.59	37.14	29.93	67.07
Less cull cow credit	35.12	---	35.12	11.40	---	11.40
Net total nonland costs ^{4/}	79.27	92.20	171.47	25.74	29.93	55.67

^{1/} Sum of designated costs per cow divided by 3.08 hundredweight per cow of steer and heifer feeder calves and yearlings sold.

^{2/} Applicable depreciation, interest, taxes, and insurance. Repairs are included above.

^{3/} Depreciation on herd bulls only. Assumes that all bred cows are raised from heifer calves born on each operation, so the costs of raising replacements is included in the per-cow costs, and salvage values are recovered through the sale of culls.

^{4/} Specified cost less the cash cull cow credit.

Source: Preliminary unpublished estimates prepared by Economics, Statistics, and Cooperatives Service, USDA.

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