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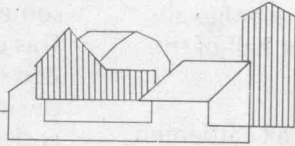
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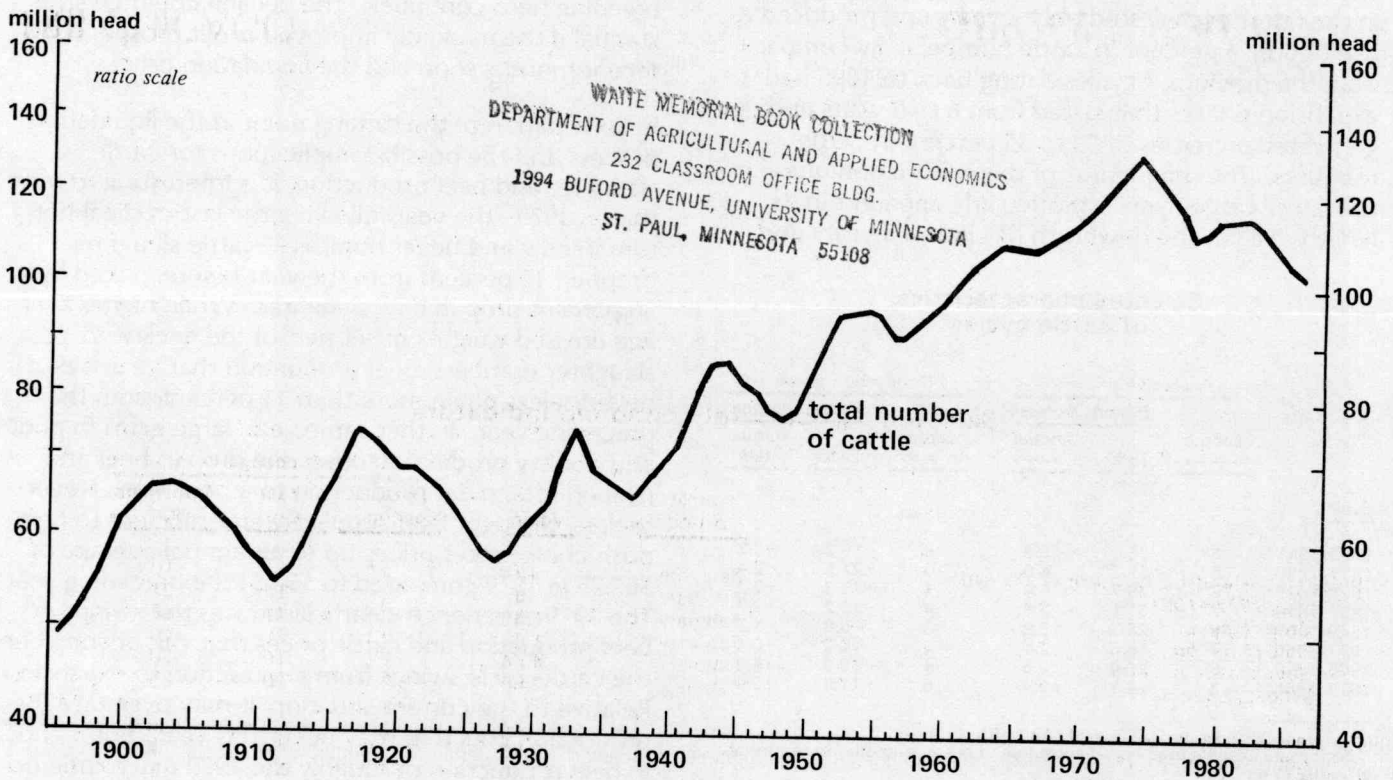
Cattle prospects improved for 1987

Prospects for U.S. cattlemen have improved in the wake of a five-year liquidation process that has trimmed prospective beef supplies. A recent USDA report noted that the nation's cattle herd had declined to 102 million head as of the end of 1986. While somewhat higher than analysts had expected, the latest tally was more than 3 percent below the year-earlier level, nearly 12 percent below the last cyclical high of five years ago, and the smallest inventory since the early 1960s. As a result of the smaller inventory, cattle slaughter and beef production is expected to decline this year, particularly if prospects for improved returns to cattlemen end the recent liquidation phase and rekindle an upturn in the breeding herd. While increases in production of alternative meats may offset much of the prospective decline for beef, cattle prices are expected to average higher this year. Higher

cattle prices, coupled with continuing declines in feed costs portend much improved returns for cattlemen.

The five-year decline in cattle numbers reflects adjustments made by the industry during a period of considerable financial stress. During much of that period, returns to cattlemen were depressed by low cattle prices, high feed costs, and high interest rates. Interest rates soared in the early 1980s and, although trending downward since peaking in 1981, have remained at unusually high levels most of the time since then. Feed costs soared initially following a drought in 1980 and jumped again in 1983 when it became apparent that the combination of drought and a new PIK program would sharply cut the feed grain harvest that year and greatly reduce available forage and hay supplies. According to the USDA's index of prices paid by farmers for feed, it was only about a year ago that

Cattle cycles in perspective



feed prices dropped back to (and below) average annual levels that prevailed during the latter half of the 1970s.

High feed and interest expenses affected all cattlemen, but returns to feedlot operators were initially squeezed the most. The problems of feedlot operators were further aggravated by relatively high costs for feeder cattle in the late 1970s and early 1980s, a consequence of the curtailed feeder cattle supplies that followed the extensive liquidation of the cattle herd during the latter half of the 1970s. Prices of all types of cattle rose to fairly high levels in the early 1980s. But for most cattlemen, the higher prices were not sufficient to offset high production costs. And for a variety of reasons, including rapidly growing supplies of relatively low cost poultry meat and an aging population with more dietary concerns, consumers were unwilling to bid beef and cattle prices high enough to stop the liquidation. These same factors continued to undermine consumer preferences for beef in more recent years while production costs were declining. And with the liquidation of the cattle herd temporarily augmenting beef supplies, cattle prices declined sharply, extending the period of low returns to cattlemen.

Over the years, cattle numbers have exhibited a definite, recurring cyclical pattern. But compared to past cycles, the latest has been unique in both the expansion and the contraction phases. The expansion phase in the latest cycle lasted only 3 years and produced a rise of only 4 percent in cattle numbers. By comparison, the previous 7 cycles dating back to 1895 had expansion phases that lasted from 6 to 8 years and generated increases of 20 to 35 percent in cattle numbers. The uniqueness of the contraction phase in the latest cattle cycle is particularly apparent in its length. So far, the downturn has lasted 5 years and

some analysts believe it could extend through 1987. This compares to contraction phases that lasted from 2 to 4 years in the five preceding cattle cycles and is the longest cyclical decline since the 10-year slide that ended in 1927.

The consequences of two large cyclical contractions in cattle numbers, separated by only a modest cyclical upturn, are remarkable. Compared to the ending 1974 record high, cattle numbers are down 23 percent and the lowest since 1962. The cattle-to-population ratio has fallen to .42, the lowest since at least the turn of the century and well below the range of .5 to .62 that prevailed from 1930 through 1982.* Cow numbers are down 22 percent and the lowest since the current series on cow estimates began in the mid-1960s. Last year's calf crop, although up nominally from the year before, was otherwise the lowest since 1961.

Commercial beef production on an annual basis has risen steadily since 1979. For the past five years, the uptrend has been sustained by the liquidation process which results in proportionately high slaughter rates for cows and heifers otherwise needed to maintain the breeding herd. In 1986, beef production rose to 24.2 billion pounds, up 3 percent from the 1985 level and the highest since 1977. Further gains in beef production are not likely. Because of the smaller cattle inventory, beef production will probably decline at least moderately this year, even if liquidation of the breeding herd continues. The decline could be substantial if the markedly improved profit prospects of recent months soon end the liquidation process.

In anticipation of the turning point in the liquidation process and the possible implications for cattle slaughter and beef production, it is interesting to note that in 1979—the year following the last cyclical bottom in cow and heifer numbers—cattle slaughter dropped 15 percent from the year before, paced by a 30 percent drop in cow slaughter. While higher average dressed weights offset part of the decline in slaughter numbers, beef production that year was nevertheless down more than 11 percent from the preceding year. In that same year, large gains in pork and poultry production offset the drop in beef and pushed total meat production to a new high. Nevertheless, the tight beef supplies were sufficient to help push choice steer prices up to an annual average of \$67.75 in 1979 compared to \$52.34 the preceding year. The 1979 experience clearly illustrates the swings in beef production and cattle prices that can occur when the cattle cycle swings from contraction to expansion. Relative to the current situation, it may overstate the production cuts that may occur this year. But if cuts in beef production of roughly the 1979 magnitude do not occur this year, further declines are likely to follow in 1988.

Selected characteristics of cattle cycles

Cycle*	Expansion phase			Contraction phase		
	Length in years	Percent increase		Length in years	Percent decline	
		Total	Annual rate		Total	Annual rate
1895-1911	8	35.0	3.8	8	-16.2	-2.2
1911-1927	6	31.2	4.6	10	-21.5	-2.4
1927-1937	6	29.7	4.4	4	-12.3	-3.2
1937-1948	7	31.1	3.9	4	-10.2	-2.7
1948-1957	6	25.7	3.9	3	-5.6	-1.9
1957-1966	7	19.5	2.6	2	-0.2	-0.1
1966-1978	8	21.4	2.5	4	-16.0	-4.3
1978-1986**	3	4.1	1.4	5	-11.6	-2.4

*Each cycle extends from one cyclical low in the year-ending inventory of all cattle to the next.

**1986 represents the last inventory measure and may not necessarily represent the end of the latest contraction phase.

Forecasting the turning point in the cattle cycle is difficult. However, there are signs that the liquidation of the breeding herd has slowed. Cow and heifer slaughter as a percent of total cattle slaughter has dropped below the high levels of the past three years but remains above the level that historically has signaled a rise in cattle numbers. The number of heifers in feedlots being finished out for slaughter has recorded proportionately large declines in recent months, especially heavy-weight heifers. Beef cow numbers, which were at a 20-year low at the beginning of last year, apparently rose slightly in 1986, despite an unusually low number of beef replacement heifers. (Last year's decline in total cow numbers stemmed from the whole-herd Dairy Buy-out Program, which led to a 6 percent drop in dairy cow numbers.) Moreover, the calving rate—the annual calf crop expressed as a percentage of the beginning cow inventory—rose from 88.9 percent in 1985 to 91.9 percent last year, a rate close to the minimum historically linked to an upturn in cattle numbers.

Generally abundant supplies of forage and grassland, if sustained by weather patterns through this year, and improving feeder cattle prices will likely encourage further efforts to rebuild the beef cow herd. This rebuilding, coupled with the March ending of the liquidation phase of the Dairy Buy-out Program, portends a sizeable decline in cow slaughter in 1987 and at least a moderate decline in slaughter of other forage-fed cattle, especially heifers. Despite these prospects, early 1987 trends show a mixed picture. During the 5 weeks ending February 7, cow slaughter was down 15 percent from the year before but heifer slaughter was up 4 percent.

Slaughter of cattle finished in feedlots is also likely to decline this year, at least during the first half. As of the start of the year, the inventory of cattle in feedlots, at just under 11 million head, was down nearly 5 percent from the year before and, except for the beginning 1982 and 1975 levels, was the lowest since 1965. Moreover, the available supply of feeder cattle was down nearly 6 percent from a year earlier and probably the lowest ever. With relatively low feed prices and interest rates reducing the costs of carrying cattle in feedlots, and the possibility of good range and forage conditions providing other options for adding more finish to young cattle, there is likely to be aggressive bidding on feeder cattle this year. But the numbers moving into feedlots will probably hold below year-ago levels. And the number of finished cattle moving from feedlots to slaughter plants in the first half of this year could decline 3 to 6 percent, with a proportionately large part of the cut coming in the second quarter.

For all of this year, the USDA expects beef production will be down 7 percent. Other analysts are somewhat more conservative, projecting declines of 4 to 6 percent. But all acknowledge the possibility of declines of as much as 10 percent or more if the rebuilding of the cow herd gets underway in earnest early this year.

While beef production will be down in 1987, a continuing sharp upturn in poultry production and an apparent turnaround in pork production will limit the decline in total meat production. Poultry production, following gains of 6 percent in each of the past two years, is projected by the USDA to rise 7 percent this year. Pork production, which fell 5 percent last year is projected to rise 1.4 percent this year, with virtually all of the increase coming in the second half. These projections, coupled with possible declines of 5 to 10 percent in beef production, suggest that per capita production of all meats this year could range from unchanged to down 2.5 percent from last year's record-high outcome. With these supply conditions, and with ongoing promotional efforts to improve consumer beef demand, fed cattle prices for most of the year are expected to fluctuate within the \$60-per-hundredweight range. In comparison, choice steer prices the past two years averaged about \$58 per hundredweight.

Gary L. Benjamin

*The unusually low cattle-to-population ratio should not be interpreted to mean that per capita beef consumption has also dropped accordingly. While down from the mid-1970s peak, per capita beef consumption remains well above levels that prevailed prior to the late 1960s. Compared to the first half of this century, per capita beef consumption has been maintained at much higher levels by the growth of commercial feedlots and by the growing proportion of beef cattle to dairy cattle. These developments have permitted a much faster turnover of the cattle inventory into consumable beef.

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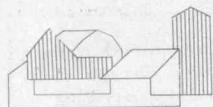
Selected Agricultural Economic Indicators

	Latest period	Value	Percent change from		
			Prior period	Year ago	Two years ago
Prices received by farmers (1977=100)					
Crops (1977=100)	February	121	0.0	-1	-10
Corn (\$ per bu.)	February	97	-2.0	-12	-21
Oats (\$ per bu.)	February	1.36	-7.5	-41	-48
Soybeans (\$ per bu.)	February	1.43	-2.1	23	-15
Wheat (\$ per bu.)	February	4.64	-1.1	-10	-20
	February	2.53	0.0	-20	-25
Livestock and products (1977=100)	February	144	1.4	8	-1
Barrows and gilts (\$ per cwt.)	February	49.50	4.0	14	1
Steers and heifers (\$ per cwt.)	February	62.20	4.2	10	-1
Milk (\$ per cwt.)	February	13.10	-1.5	6	-4
Eggs (¢ per doz.)	February	58.3	-1.7	-5	11
Prices paid by farmers (1977=100)					
Production items	January	159	0.6 [†]	-1	-3
Feed	January	143	0.7 [†]	-4	-7
Feeder livestock	January	99	0.0 [†]	-13	-20
Fuels and energy	January	164	2.5 [†]	11	1
	January	158	5.3 [†]	-21	-19
Producer Prices (1967=100)					
Agricultural machinery and equipment	January	292	0.6	-2	0
Fertilizer materials	January	341	0.4	1	1
Agricultural chemicals	January	197	-0.2	-9	-16
	January	475	-0.8	3	5
Consumer prices (1967=100)					
Food	January	333	0.6	1	5
	January	329	1.1	4	7
Production or stocks					
Corn stocks (mil. bu.)	December 1	10,303	N.A.	20	55
Soybean stocks (mil. bu.)	December 1	1,980	N.A.	1	23
Beef production (bil. lbs.)	January	2.10	6.6	-2	2
Pork production (bil. lbs.)	January	1.24	2.0	-2	-3
Milk production (bil. lbs.) ^{††}	January	9.93	1.6	-4	4

N.A. Not applicable

[†] Prior period is three months earlier.

^{††} 21 selected states.



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