AgEcon SEARCH
RESEARCH IN AGRICULTURAL & APPLIED ECONOMICS

The World's Largest Open Access Agricultural & Applied Economics Digital Library

This document is discoverable and free to researchers across the globe due to the work of AgEcon Search.

Help ensure our sustainability.

Give to AgEcon Search

AgEcon Search
http://ageconsearch.umn.edu
aesearch@umn.edu

*Papers downloaded from **AgEcon Search** may be used for non-commercial purposes and personal study only. No other use, including posting to another Internet site, is permitted without permission from the copyright owner (not AgEcon Search), or as allowed under the provisions of Fair Use, U.S. Copyright Act, Title 17 U.S.C.*

FEDERAL RESERVE BANK OF CHICAGO

AGRICULTURAL LETTER

ISSN 0002 - 1512

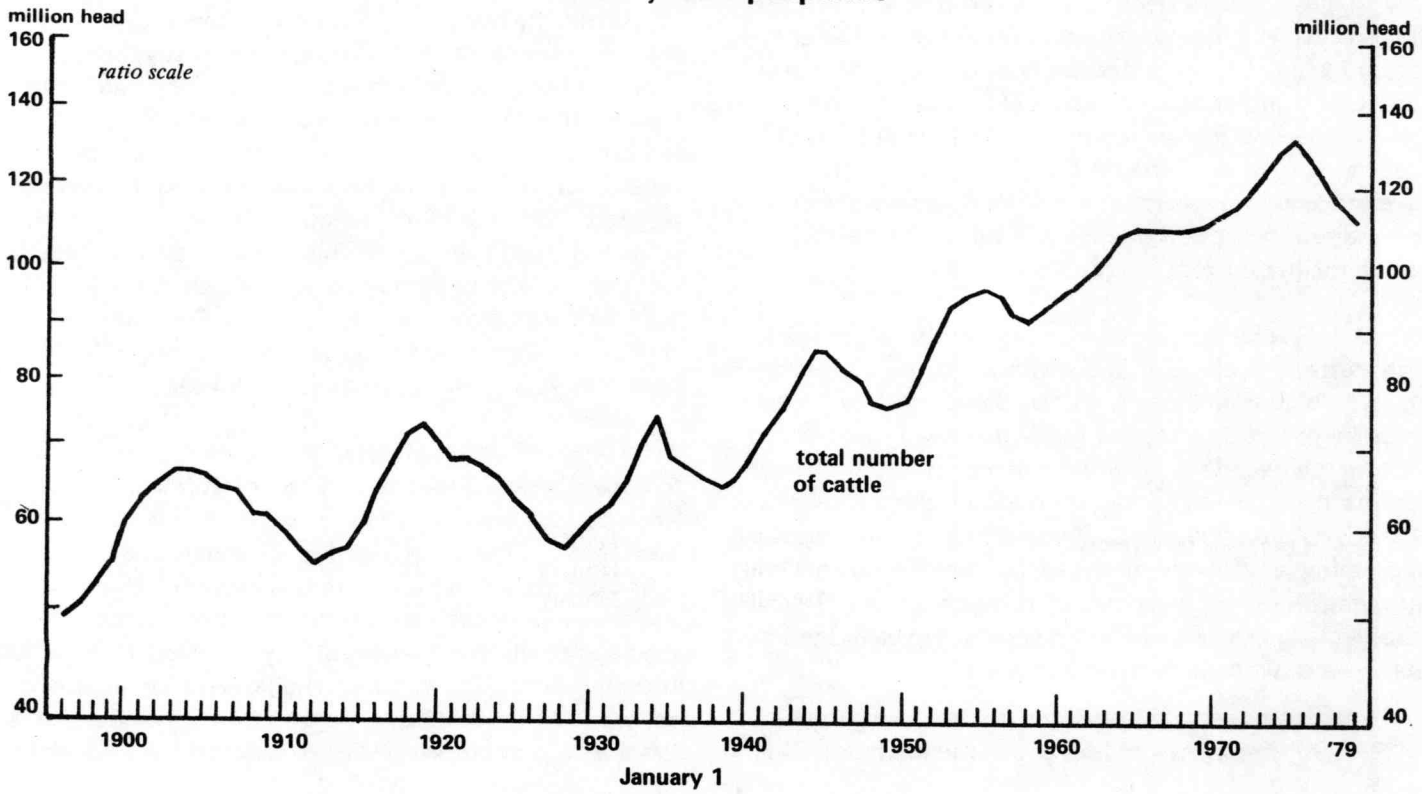
February 23, 1979 Number 1493

CATTLE CYCLES have a long history. But the latest cycle has exhibited some unusual characteristics, particularly during the contraction phase. It has already encompassed the past 12 years—the longest since the 16-year cycle that ended in 1928—and will probably extend one more year. The contraction phase has extended over the last four years and marked the sharpest rate of decline in cattle numbers of all recorded cyclical downturns since the late 1800s. The unparallelled decline underlies the past two years of decreasing beef production, a trend that may extend through 1981.

Cattle cycles are typically measured from one cyclical low point in inventory numbers to the next. USDA estimates of the January 1 inventory of all cattle extend back to 1867. From 1867 through 1889, cattle numbers doubled, although there is no data to mark the beginning of that expansion. Hence, the first fully measurable cycle started in 1896. Since then, there have been seven cattle cycles—including the current one. The length of these cycles has ranged from nine to 16 years. Although cycles have averaged nearly 12 years in length, the four cycles preceding the current one lasted only nine to 11 years.

Past cycles have reflected considerable variation during both the expansion and contraction phases. In each of the past seven cycles, the expansion phase has lasted six to eight years. But the relative expansion, and the rate of expansion, has varied widely. The relative expansion in cattle numbers in the past two cycles (1958-67 and 1967-79) was roughly 20 percent from trough to peak, compared with the average of over 30 percent in the five previous cycles. And the rate of expansion, as measured by the compound annual rate of increase, averaged 2.5 percent during the expansion phase of the past two cycles. This compares with an average of more than 4 percent during the five cycles from 1896 to 1958.

Cattle cycles in perspective



Although growth in cattle numbers was comparatively small (and slow) during the expansion phase of the current cycle, the growth that did occur was on a base that had been virtually unaffected by the nominal contraction that ended the previous cycle. Because of the nominal downturn in the mid-1960s, the peak in cattle numbers during the current cycle was abnormally high relative to the peaks in the previous cycles. In retrospect, the financial consequences of overbuilding cattle numbers during the current cycle would probably have been less if market forces during the cyclical downturn of the previous cycle had encouraged more contraction.

Selected characteristics of past cattle cycles

	Expansion phase			Contraction phase		
		Percent increase			Percent decline	
Cycle*	Length in years	Total	Annual rate	Length in years	Total	Annual rate
1896-1912	8	35.0	3.8	8	-16.2	-2.2
1912-28	6	31.2	4.6	10	-21.5	-2.4
1928-38	6	29.7	4.4	4	-12.3	-3.2
1938-49	7	31.1	3.9	4	-10.2	-2.7
1949-58	6	25.7	3.9	3	- 5.6	-1.9
1958-67	7	19.5	2.6	2	- 0.2	-0.1
1967-79	8	21.4	2.5	4	-16.0	-4.3

*The cycles extend from one cyclical low point in inventory numbers to the next. The inventories are determined as of January 1.

The contraction phase of the current cattle cycle, although lasting only four years so far, has already depleted cattle numbers by 16 percent. That represents the biggest relative decline since the downturn in the 1912-28 cycle, which was spread over ten years. The compound annual rate of decline during this contraction phase has approximated 4.3 percent, by far the sharpest rate of decline for any complete (or four-year partial) contraction in any previous cycle. (If cattle numbers decline again this year, but at a negligible rate, the compound annual rate of decline will still be 3.5 percent or more for the current downturn.)

A major factor contributing to the sharp decline in the current cycle is the disruption in the long-term growth of commercial feedlots. Based on beginning-year inventories, cattle on feed rose nearly two-thirds during the decade of the fifties and more than 70 percent during the sixties. That rapid buildup helped minimize the contraction phase of the two previous cattle cycles by sustaining a growing demand for feeder cattle. The growing demand short-circuited much of the cyclical rise in slaughter of calfs and cows that typically accompanies a downturn in cattle numbers.

Feedlot inventories continued to rise during the early 1970s, hitting a peak in 1973 at 14.4 million head. During the next two years, however, feedlot inventories declined 30 percent to a ten-year low. And although inventories have since trended higher, the number on feed at the beginning of this year—at 13.3 million head—was about the same as at the beginning of the decade. This interruption in the growth of commercial feedlot activity greatly compounded the contractual decline in the current cycle.

The disruption in feedlot activity in the seventies reflects several factors, including meat price controls, periods of acute grain shortages, elimination of investor tax incentives, an easing in grading standards, and the impact of the 1974/75 recession on consumer meat demand. The meat price controls of 1973 generated expectations of higher prices when controls were removed. Farmers responded by delaying their marketings of livestock. Consumers reacted by stockpiling meat. When controls were removed, the short-run market demand was undermined by consumers eating into their own stockpiles. And coupled with the glut in marketings, livestock prices fell sharply. The problems of low livestock prices were augmented in the summer of 1974 when feed prices skyrocketed because of a myriad of weather problems that sharply reduced feed grain production. And the severity of the 1974/75 recession left a lingering effect on consumer demand for beef. These developments triggered the massive liquidation of the cattle herd that pushed annual cattle and calf slaughter during the 1975/77 period 22 percent above the annual average for the first half of this decade.

While the effects of the special factors that disrupted growth in feedlot activity during the mid-seventies have now run their course, the liquidation of the cattle herd has progressed to a point that near-term growth in feedlot activity will be limited until the cow herd is rebuilt. The extent of this liquidation is striking in several respects. Cow numbers are down 16 percent from the peak, led by a 19 percent decline in beef cows. Last year's calf crop, at 43.8 million head, was 14 percent below the 1974 record and the smallest in 11 years. Because of fewer cows, the calf crop is expected to decline another million head this year, perhaps marking a 16-year low.

The contraction phase of the current cycle appears to have slowed appreciably in recent months, but it will likely be 1980 before total inventory numbers start trending higher. Cow slaughter fell 27 percent below the year-before pace in the fourth quarter. For all last year, it was down 14 percent. But despite the slowing, there is no indication yet that cattlemen have started to rebuild breeding herds. For instance, the January 1 inventory of heifers held for beef-cow replacements was 6 percent less than a year before and the smallest since 1965 when

comparable measures were first adopted. This evidence virtually dispels any hope of a significant buildup in the beef cow herd this year.

These developments suggest the past two years of declining beef production will continue through next year and possibly through 1981. Beef prices will therefore remain under considerable pressure. The extent of the pressure will be determined in large part by the available supplies of pork and poultry and by the willingness of consumers to switch to alternative meats while beef supplies are tight.

Gary L. Benjamin
Agricultural Economist

Foreign investment in U.S. farmland has been the subject of much recent debate. General recognition of the lack of good data on the extent of foreign claims on U.S. agricultural land led to the passage last October of the Agricultural Foreign Investment Disclosure Act of 1978. This act was designed to provide a means for determining the current extent of foreign ownership interests in farmland and for monitoring future transactions involving foreign interests. The act did nothing to prohibit foreign purchases of farmland, but it did establish general reporting guidelines. In a recent announcement, the USDA adopted final regulations designed to clarify and implement the reporting provisions of the act. The information collected will be assimilated by the USDA and presented in periodic reports to Congress and the President.

The rules adopted by the USDA stipulate who must file, when, where, and what information makes an acceptable filing. The rules also set the penalties that could be assessed for failure to file or for intentional falsification of a report. According to the regulations, a foreign interest in U.S. agricultural, forestry, or timber land must be reported if more than an acre of land in total is involved or if annual gross sales of agricultural products from the land are as much as $1,000. If the land in question is currently idle, foreign claims to it must still be reported if the land was used for agricultural purposes within the past five years. Interests that must be reported include ownership, future transfers, leaseholds of ten years or more, and noncontingent rights to future possession. (Noncontingent rights are presumably ownership interests that are known to exist but are not currently possessory.)

The interests of foreign individuals, governments, and other legal entities (and the owners of a significant interest therein) must be reported. The filing may be performed by the foreign entity or a domestic representative. Even domestic legal entities that have foreigners owning a 5 percent or larger interest are required to file. Reports are to be filed with the ASCS office in the county in which the land is located or the ASCS office responsible for administering the programs carried out on the land.

Any type of foreign interest—except a security interest such as a mortgage or other debt-securing device—in U.S. agricultural land on February 1, 1979, must be reported by August 6, 1979. Foreign interests acquired or transferred after February 1 must be reported within 90 days. The information required to meet the filing obligation is rather extensive, but includes such things as the foreigner's name and address, his interest in the land, legal description and the acreage involved, purchase price, and the agricultural purposes for which the land is to be used.

Penalties for failure to comply with the filing requirements could be very stiff. The Secretary of Agriculture will periodically appoint a board to determine if reporting violations have been made. In case of a violation, the board will make a preliminary estimate of the fair market value of the violator's interest in the land and recommend to the Secretary of Agriculture the amount of the civil fine to be levied. The secretary then imposes a fine, which cannot exceed one-fourth of the fair market value of the foreigner's interest in the land—as redetermined by the board—on the day of the secretary's assessment of the penalty.

Although the disclosure act was designed to establish a system for collecting reportable information, many observers believe the ability to monitor foreign investment interests addresses only part of the issue. Many people—for a multitude of reasons—feel foreign ownership of U.S. farmland should be controlled or even prohibited. As a result, the interest surrounding the issue has not dissipated greatly and, in fact, additional legislation has been introduced, which will address different aspects of the issue. One such bill recently introduced in the Senate (S208), if passed, would tax the gain from the sale or exchange of farm real estate by foreigners. This bill is presumably an attempt to limit tax advantages that some foreigners may have in bidding for farmland.

Don A. Langford
Agricultural Economist

Selected agricultural economic developments

Subject	Unit	Latest period	Value	Percent change from Prior period	Percent change from Year ago
Index of prices received by farmers	1967=100	January	232	+ 4.5	+25
Crops	1967=100	January	210	+ 2.4	+12
Livestock	1967=100	January	252	+ 6.3	+36
Index of prices paid by farmers	1967=100	January	233	+ 3.1	+11
Production items	1967=100	January	230	+ 2.2	+13
Producer price index* *(finished goods)*	1967=100	January	205	+ 1.4	+10
Foods	1967=100	January	193	+ 1.3	+ 9
Processed foods and feeds	1967=100	January	215	+ 1.6	+13
Agricultural chemicals	1967=100	January	201	– 0.1	+ 8
Agricultural machinery and equipment	1967=100	January	222	+ 0.4	+ 7
Consumer price index** *(all items)*	1967=100	December	203	+ 0.4	+ 9
Food at home	1967=100	December	218	+ 0.8	+12
Cash prices received by farmers					
Corn	dol. per bu.	January	2.10	+ 0.5	+ 5
Soybeans	dol. per bu.	January	6.68	+ 2.9	+16
Wheat	dol. per bu.	January	3.02	+ 0.3	+19
Sorghum	dol. per cwt.	January	3.53	– 2.8	+12
Oats	dol. per bu.	January	1.23	+ 2.5	+ 4
Steers and heifers	dol. per cwt.	January	63.00	+ 8.8	+56
Hogs	dol. per cwt.	January	50.60	+ 5.4	+15
Milk, all sold to plants	dol. per cwt.	January	11.80	0	+16
Broilers	cents per lb.	January	27.0	+ 8.4	+18
Eggs	cents per doz.	January	60.5	– 1.8	+22
Income *(seasonally adjusted annual rate)*					
Cash receipts from farm marketings	bil. dol.	4th Quarter	118.0	+ 9.3	+18
Net realized farm income	bil. dol.	4th Quarter	31.7	+18.3	+35
Nonagricultural personal income	bil. dol.	December	1,755	+ 0.8	+12

*Formerly called wholesale price index.

**For all urban consumers.

FEDERAL RESERVE BANK OF CHICAGO
Public Information Center
P. O. Box 834
Chicago, Illinois 60690
Tel. no. (312) 322-5112

FEDERAL RESERVE BANK OF CHICAGO
AGRICULTURAL LETTER

FIRST-CLASS MAIL
U.S. POSTAGE
PAID
Chicago, Il.
Permit No. 1942

MR. PAUL R. HASBARGEN AGL
DEPT. OF AG. & APPLIED ECON.
UNIVERSITY OF MINNESOTA
231 CLASSROOM BLDG.
ST. PAUL, MINNESOTA 55108