FRB CHICAGO

# AGRICULTURAL LETTER

FEDERAL RESERVE BANK OF CHICAGO
October, 1993 Number 1845

## Hogs numbers declining

The expansion in hog marketings anticipated for much of this year has fallen well short of expectations. The shortfall has prompted sizable revisions to earlier estimates in the USDA's latest quarterly update on the inventory of hogs and pigs on farms. The latest survey found hog numbers as of September 1 were off 4 percent from a year earlier, with most of the decline coming from the states located in the Seventh Federal Reserve District. This implies pork production will register a year-over-year decline during the fall and winter. While this will tend to push hog prices higher when compared to a year earlier, gains will likely be tempered by seasonally higher levels of hog marketings and competition from ample supplies of beef and poultry.

The number of market hogs on farms was also down 4 percent from last year but near the level of two years ago. Hogs weighing less than 60 pounds tallied 6 percent less, while heavier weight groupings all showed a 3-percent drop. The comparatively large reduction in the number of light-weight hogs stemmed from an unexpected drop in the June-August pig crop. The bulk of the decline was accounted for by a 7 percent year-over-year decrease in sow farrowings that stood in stark contrast to the intentions reported three months earlier. In addition, the first setback in two years in the number of pigs saved per litter provided a minor contribution to the reduction in the pig crop.

The current report contains several significant revisions to earlier estimates. The December-February and March-May pig crops were both adjusted downward, as were the inventory estimates for March 1 and June 1. The revised data imply that hog farmers began scaling back last winter and that further cuts are in store this fall. Reflecting this, the September inventory of hogs held for breeding purposes is reportedly down 5 percent from a year ago. Moreover, producers intend to cut sow farrowings 3 percent during the September-November period.

The combined number of breeding and market hogs posted a particularly sharp year-over-year decline in Seventh District states and accounted for the bulk of the slide in U.S. totals. Wisconsin stood apart from the other District states, however, inasmuch as the downward trend was considerably more restrained. Summer farrowings dropped off in each District state except Wisconsin, but a decline in the number of pigs saved per litter still caused the June-August pig crop in that state to fall slightly below the year-earlier level. In comparison, the pig crops in Iowa and Indiana fell by 20 percent and 16 percent, respectively, and were off about a tenth in Illinois and Michigan. As a result, market hog numbers were down 11 percent in Iowa while Illinois, Indiana, and Michigan registered more moderate declines and Wisconsin showed little change. Furthermore, the number of breeding hogs on farms in District states was off a tenth and a similar reduction is expected in September-November farrowings. Farrowing intentions in Wisconsin ran counter to the other District states and indicated a slight increase was on the horizon.

Outside Seventh District states, the summer pig crop and the number of hogs on farms were virtually unchanged from a year earlier. Intended farrowings for the September-November period are 3 percent above the prior year's actual farrowings. Most of this is due to the continuing expansion in North Carolina, which registered a 16-percent gain in hog numbers from a year earlier.

USDA's September 1 data indicate the ten states with the largest inventory of hogs are the same as a decade earlier and account for nearly 80 percent of hogs in the U.S. Of these states, only North Carolina, Minnesota, and Nebraska show larger hog numbers compared to ten years ago, contributing to a shift in the individual state rankings (see table). Iowa is still firmly entrenched in the top spot, while Illinois remains a distant second. North Carolina more than doubled the size of its herd over the past ten years to move from seventh to third, and appears within striking distance of the number two spot. Indiana held the third ranking a decade ago but now appears destined

**Ten largest states by hog inventory, September 1**

| | Total hogs 9/1/93 | % change from 9/1/83 | Rank Sept. 1 1993 | Rank Sept. 1 1983 |
|---|---|---|---|---|
| Iowa | 15,100 | –3 | 1 | 1 |
| Illinois | 5,900 | –3 | 2 | 2 |
| North Carolina | 5,000 | 117 | 3 | 7 |
| Minnesota | 4,950 | 14 | 4 | 4 |
| Indiana | 4,400 | –8 | 5 | 3 |
| Nebraska | 4,350 | 12 | 6 | 5 |
| Missouri | 2,950 | –20 | 7 | 6 |
| Ohio | 1,760 | –22 | 8 | 8 |
| Kansas | 1,460 | –14 | 9 | 9 |
| Georgia | 1,050 | –22 | 10 | 10 |
| Subtotal | 46,920 | 2 | | |
| United States | 58,950 | n.a. | | |

to soon slip to the sixth position. Though not among the ten largest, Michigan and Wisconsin are important pork-producing states and currently rank twelfth and thirteenth, respectively, in terms of hog numbers.

Commercial hog slaughter in the third quarter was 4 percent below last year's level. The inventory of hogs weighing between 60 and 179 pounds indicates that hog slaughter during the fourth quarter will fall at least 3 percent from the year before. This will contribute to an overall decline of about 2 percent in annual pork production. Furthermore, the number of hogs weighing less than 60 pounds implies that first-quarter marketings in 1994 will also post a year-over-year decline. Moreover, the indicated cutback in farrowings for the September-November period suggests the decline in marketings will continue into the second quarter of 1994.

Hog prices in Iowa-Southern Minnesota markets averaged just over $48 per hundredweight during the summer quarter, eight percent higher than the year before. Prices may trend lower during the remainder of this year due to seasonal increases in slaughter, but will likely remain above year-earlier levels. Potential price strength will also be tempered by expected fourth-quarter gains in beef and poultry production of 5 percent and 4 percent, respectively. Nonetheless, the USDA is currently projecting hog prices will average between $45 to $51 per hundredweight this fall, well above last year's fall average of $42.48.

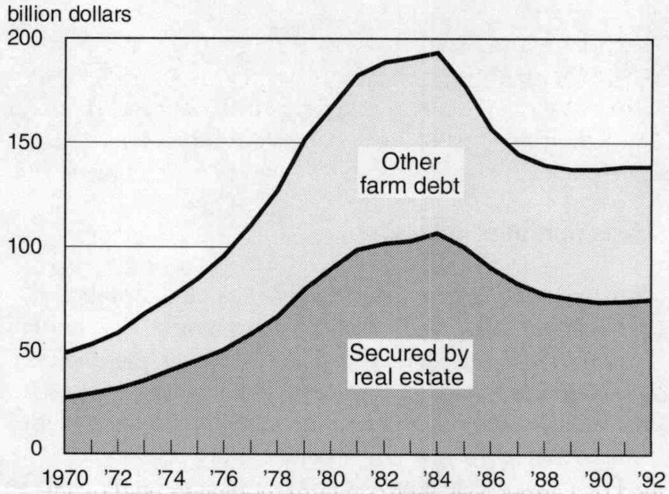
Mike A. Singer

## Farm debt holding steady

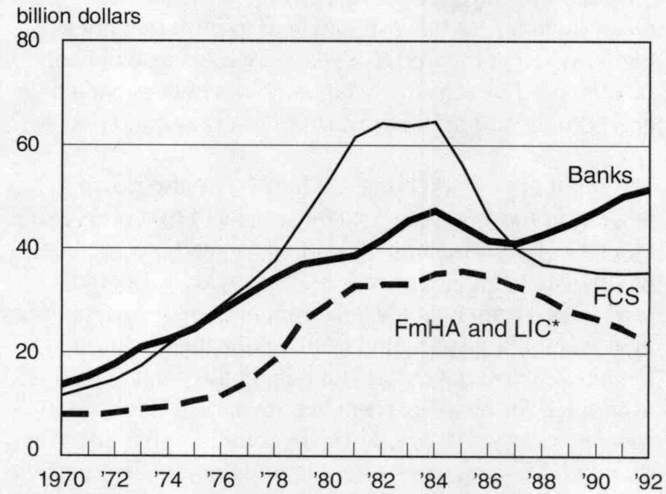
Recent estimates and projections from the U.S. Department of Agriculture reaffirm that farm debt is holding steady at a level well short of the peak set nearly a decade ago. The latest revisions indicate that farm debt as of the end of 1992 totaled $138.6 billion. That level was only nominally above the average of the previous four years and more than 28 percent below the 1984 peak. So far in 1993, mid-year reports from banks and the Farm Credit System (FCS) are consistent with USDA projections that point to little change in farm debt again this year.

While total farm debt has been holding steady in recent years, the trends for various types of farm lenders have varied widely. Banks have been the only institutional farm lender to register consistent gains in farm loan portfolios in recent years. The uptrend pushed the amount of farm debt owed to banks nationwide to $51.6 billion as of the end of last year. But even so, last year's rise of 2.8 percent in farm loans at banks was considerably below the 5.1 percent average annual rise achieved during the 1988-91 period. Farm debt owed to the various entities within the Farm Credit System also edged up last year to reach $35.6 billion.

**Farm debt, U.S.**

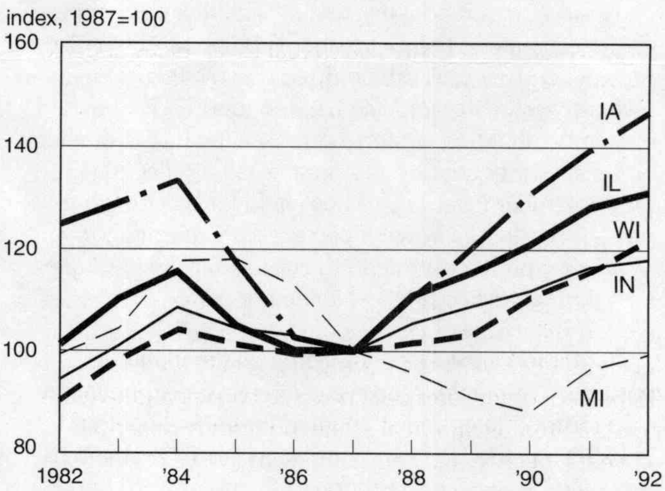



**Farm debt owed to institutional lenders**




*Life insurance companies.

**Farm debt owed to banks in District states**




While modest in magnitude, the increase of less than 1 percent marked the first year-over-year rise in farm loans for the FCS in about a decade.

The farm loan portfolios at the other two institutional lenders serving farmers recorded sizable declines last year. After four consecutive years of declines of over 10 percent, the amount of farm loans owed to the Farmers Home Administration (FmHA) has fallen to a 14-year low of $13.5 billion. Most of the decline stems from a belated write-off of problem loans and a shift in lending practices away from making direct loans towards the providing of federal guarantees on farm loans made by other lenders. The portfolio of farm real estate loans held by life insurance companies also retreated again last year, dropping to $8.7 billion. The reasons for the downturn for life insurance companies the past two years are not entirely clear. However, some believe the emergence of Farmer Mac in guaranteeing farm mortgage pools since late 1991 may be a factor. All of the original farm mortgage pools guaranteed by Farmer Mac were on farm mortgages held by life insurance companies. The pooling arrangements have apparently led to problems in tracking the ownership of the underlying mortgages for purposes making farm debt estimates. As such, the indicated decline in farm mortgages held by life insurance companies may be somewhat illusionary in terms of the implications for outstanding farm debt.

The remaining farm debt is owed to a broad array of entities classified as "individuals and others." This includes loans made to farmers by input suppliers such as seed, feed and fertilizer dealers and farm equipment manufacturers. In addition, it includes the credit extended to farmers through seller-financed real estate transactions. The estimates for this category of lenders are less precise than for other lenders. But in general, the USDA figures show farm debt owed to individuals and others rose about 2.5 percent in 1992 to a five-year high of $29.2 billion.

The growth in farm loans at banks over the past decade has been dominated by a uninterrupted rise in loans secured by farm real estate. Farm real estate loans at banks nationwide increased 2.5 times over the past decade, equivalent to an annual rate of growth of nearly 10 percent. In comparison, nonreal estate farm loans at banks—which are mostly short- and intermediate-term loans to farmers and which have long been the mainstay of bank lending to farmers—trended lower during the mid-1980s before turning upward again in 1988. Despite an average annual rise of 3.6 percent since then, nonreal estate farm loans at banks still lag more than a tenth below the peak level of 1984. With the contrasting growth patterns, some 36 percent of the farm debt owed to banks nationwide is now secured by farm real estate, up from less than 18 percent a decade ago and 33 percent five years ago.

Year-to-year changes in farm debt are mostly influenced by the demand for new loans and the repayment patterns on existing indebtedness. The demand for farm loans would appear to be somewhat soft again this year. Less

**Farm debt owed to banks; Dec. 31, 1992**

| | Million dollars | % change from year-ago | % secured by real estate | % of all farm debt |
|---|---|---|---|---|
| Illinois | 3,588 | 2.2 | 44 | 49 |
| Indiana | 1,760 | 1.2 | 51 | 39 |
| Iowa | 4,591 | 5.2 | 33 | 46 |
| Michigan | 626 | 2.8 | 36 | 24 |
| Wisconsin | 1,902 | 5.5 | 44 | 41 |
| District states | 12,467 | 3.7 | 41 | 43 |
| United States | 51,571 | 2.8 | 36 | 37 |

crop acreage, modest rises in farm input prices, and a scaling back in hog production have probably held the line on the need for new farm operating loans. Alternatively, a slight recovery in farm equipment sales and—in some areas—a pick-up in farm real estate transactions may have led to an increase in borrowings to finance farm capital expenditures. Slower loan repayments by farmers who suffered the brunt of the flood-related crop losses may also add to this year's rise in farm debt in much of the Midwest. But elsewhere, higher commodity prices and improved cash earnings could translate into somewhat stronger farm loan repayment rates.

The latest USDA projections suggest that farm debt by the end of this year will lie somewhere between $137 and $143 billion. The implications of little or no increase in farm debt in 1993 are consistent with the mid-year reports for the major institutional lenders. For example, preliminary reports for both the Farm Credit System and life insurance companies as of the end of June show virtually no change in outstanding farm loans versus a year earlier. Moreover, the year-over-year rise in farm loans at banks nationwide had narrowed to 1.6 percent as of the end of June. For banks in District states, the mid-year report shows essentially no change on farm loans as declines among banks in Illinois, Indiana, and Michigan offset gains for Iowa and Wisconsin.

Gary L. Benjamin

*AGRICULTURAL LETTER* (ISSN 0002-1512) is published monthly by the Research Department of the Federal Reserve Bank of Chicago. It is prepared by Gary L. Benjamin, economic adviser and vice-president, Mike A. Singer, economist, and members of the Bank's Research Department, and is distributed free of charge by the Bank's Public Information Center. The information used in the preparation of this publication is obtained from sources considered reliable, but its use does not constitute an endorsement of its accuracy or intent by the Federal Reserve Bank of Chicago.

To subscribe, please write or telephone:

Public Information Center
Federal Reserve Bank of Chicago
P.O. Box 834
Chicago, IL 60690-0834
Tel. no. (312) 322-5111

## Selected agricultural economic indicators

| | Latest period | Value | Percent change from: Prior period | Year ago | Two years ago |
|---|---|---|---|---|---|
| **Prices received by farmers** *(index, 1977=100)* | September | 145 | 2.1 | 4 | –1 |
| **Crops** *(index, 1977=100)* | September | 128 | 4.1 | 9 | –7 |
| Corn *($ per bu.)* | September | 2.19 | –2.7 | 1 | –6 |
| Hay *($ per ton)* | September | 77.60 | 0.3 | 12 | 11 |
| Soybeans *($ per bu.)* | September | 6.11 | –6.7 | 14 | 8 |
| Wheat *($ per bu.)* | September | 3.09 | 4.7 | –3 | 10 |
| **Livestock and products** *(index, 1977=100)* | September | 161 | –0.6 | 1 | 3 |
| Barrows and gilts *($ per cwt.)* | September | 49.00 | 1.2 | 14 | 4 |
| Steers and heifers *($ per cwt.)* | September | 74.80 | –0.5 | –1 | 4 |
| Milk *($ per cwt.)* | September | 12.70 | 1.6 | –6 | 1 |
| Eggs *(¢ per doz.)* | September | 56.1 | –8.5 | –6 | –9 |
| **Consumer prices** *(index, 1982-84=100)* | September | 145 | 0.2 | 3 | 6 |
| Food | September | 141 | 0.2 | 2 | 4 |
| **Production or stocks** | | | | | |
| Corn stocks *(mil. bu.)* | September 1 | 2,113 | N.A. | 92 | 39 |
| Soybean stocks *(mil. bu.)* | September 1 | 292 | N.A. | 5 | –11 |
| Wheat stocks *(mil. bu.)* | September 1 | 2,156 | N.A. | 2 | 6 |
| Beef production *(bil. lb.)* | August | 2.06 | 4.1 | 4 | –1 |
| Pork production *(bil. lb.)* | August | 1.39 | 5.7 | 1 | 7 |
| Milk production* *(bil. lb.)* | September | 10.1 | –4.0 | –1 | 2 |
| **Receipts from farm marketings** *(mil. dol.)* | June | 12,538 | –7.3 | 1 | 5 |
| Crops** | June | 5,159 | 8.5 | –6 | 1 |
| Livestock | June | 7,024 | –10.3 | 4 | 5 |
| Government payments | June | 356 | –62.3 | 87 | 65 |
| **Agricultural exports** *(mil. dol.)* | August | 2946 | –4.4 | –5 | 4 |
| Corn *(mil. bu.)* | August | 99 | 8.2 | –27 | –34 |
| Soybeans *(mil. bu.)* | August | 25 | –43.0 | –37 | –25 |
| Wheat *(mil. bu.)* | August | 103 | –4.9 | –1 | 1 |
| **Farm machinery sales** *(units)* | | | | | |
| Tractors, over 40 HP | September | 3,857 | 13.7 | 4 | 4 |
| 40 to 100 HP | September | 2,633 | 4.5 | –3 | 6 |
| 100 HP or more | September | 1,224 | 40.5 | 22 | –1 |
| Combines | September | 762 | 23.9 | –7 | 12 |

N.A. Not applicable
*21 selected states.
**Includes net CCC loans.


**AGRICULTURAL LETTER**
FEDERAL RESERVE BANK OF CHICAGO
Public Information Center
P.O. Box 834
Chicago, Illinois 60690-0834
(312) 322-5111


PRESORTED FIRST CLASS

LOUISE LETNES LIBRARIAN
231 CLASSROOM OFFICE BUILDING
DEPT OF AGRIC & APPLIED ECON
1994 BUFORD AVE
SAINT PAUL MN 55108-6038