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FEDERAL RESERVE BANK OF CHICAGO

AGRICULTURAL LETTER

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FARM INCOME fell substantially last year, although the decline was cushioned by a marked increase in government outlays to support commodity prices. Preliminary estimates suggest net realized farm income fell to $20 billion in 1977, down nearly $2 billion from the previous year and $10 billion below the 1973 peak. Simultaneously, farm debt registered an unusually large increase of nearly 16 percent, boosting year-end outstandings to a preliminary estimate of nearly $120 billion. The decline in earnings, coupled with record-high debt-servicing obligations and production expenses, has rekindled concerns about farmers' tight cash flows. These concerns are of particular importance in assessing the farm earnings prospects for the current year.

Any assessment of District farmers' earnings lacks precision for a number of reasons. Production costs, for example, vary widely among individual farmers, reflecting both organizational and operational efficiencies and the timing of input purchases. Similarly, per unit receipts can also vary widely, depending on seasonal marketing patterns and commodity price movements. Nevertheless, general trends can be helpful in evaluating likely earning patterns for the current year.

Earnings of farmers in District states varied widely last year, a trend that will continue in the current year. In general, last year's slide in earnings was concentrated among grain farmers who experienced a decline of nearly one-fourth in grain prices (see page 4). The lower grain prices, however, substantially augmented the operating margins of livestock producers, a factor that is frequently overlooked in evaluating the overall health of the agricultural sector.

For dairy farmers and hog producers 1977 marked the second and third consecutive year, respectively, of relatively high earnings. The hog-corn price ratio averaged 20.2 (a level exceeded only once in the past 25 years), while the milk-feed price ratio (bolstered by higher support prices) averaged the highest since 1972. Earnings were further augmented by increased marketings. Assuming corn prices remain close to the $2 per bushel loan rate, both dairy farmers and hog producers will probably experience continued favorable operating margins this year. Dairy farmers will see another April 1 boost in the support price of milk because of the 80 percent of parity and the semiannual adjustments mandated by current legislation. Prospects for increased production suggest hog prices in 1978 may average roughly 15 percent below the $41 per hundredweight registered last year. Nevertheless, lower average feed costs will probably be largely offsetting, although feeding margins may tighten considerably late this year.

Returns to District cattle feeders are expected to be much improved this year, although it will take a long time to offset the prolonged financial squeeze of the past four years. This past squeeze has been reflected in Iowa State University budgets, which cover the costs of feeding yearling cattle. According to those budgets, returns from marketing fed cattle consistently failed to cover total costs by an average of about $45 per head during the first 11 months of last year. However, December 1977 marketings marked the first month in two years—and only the tenth month since August 1973—to turn a profit. Over the longer 52-month period, returns even failed to cover feed and feeder stock costs more than half the time; fortunately, only the first three months of 1977 experienced margins as small.

Although fed cattle marketings are expected to trend higher during the current year, a number of factors support prospects that the decline in cow and nonfed steer and heifer slaughter will be more than offsetting. Hence, total beef production is expected to be down 3 to 5 percent this year, which might be sufficient to edge 1978 average fed cattle prices $3 to $6 per hundredweight above the $40 mark established in 1977. Although feeder cattle prices will likely trend upward this year, the higher fat cattle prices coupled with lower average feed costs portend vastly improved operating margins for cattle feeders in 1978.

Earnings of District crop farmers accounted for a proportionately large share of last year's slide in net farm income and represent a large share of the cash-flow concerns for the current year. Nevertheless, developing an overview of the financial health of District crop farmers is difficult because of the divergent price trends between corn and soybeans last year, occurrences of major weather-related crop losses, and varying land costs. For some crop farmers, last year's 20 percent increase in average soybean prices more than offset the decline of a comparable magnitude in corn prices, particularly for those who were able to sell soybeans at the late spring peak prices. Other farmers, however, were hit by weather-related crop losses in either 1976 or 1977, which curtailed their volume of crop marketings last year.

Perhaps more than any other factor, variations in land costs may have been the predominate influence on crop farmers' earnings last year. In calendar 1977 corn prices received by farmers averaged just over $2 per bushel, while soybean prices averaged slightly more than $7 per bushel. For farmers who were fortunate enough to avoid major weather-related crop losses, these prices were more than sufficient to cover all non-land costs of production. U.S. Department of Agriculture estimates, for example, suggest that the costs of producing corn—excluding land and management—averaged about $1.55 per bushel last year, while similar costs for raising soybeans averaged just over $3 per bushel. The remaining $4 margin for soybeans was probably sufficient in most cases to provide a reasonable return to land and management.

For corn producers, however, the remaining 45 cent per bushel margin between average corn prices and average non-land costs of production clearly was not sufficient to cover *economic costs* of land valued at current market prices. Nor was it sufficient to cover *actual land costs* associated with acreage purchased during the height of the land boom, or with acreage cash-rented. (Although cash-rental rates for land vary widely, rates equivalent to $1 per bushel for corn and $3 per bushel for soybeans are frequently quoted.) But for the many farmers who purchased land several years ago, the 45 cent margin over non-land costs was sufficient to cover actual cash costs of land.

In assessing prospective returns to crop farmers in the current year, the anticipated rebuilding of soybean carryover stocks suggests soybean prices in 1978 might average $1.50 or more below the $7 mark of last year. The availability of the $2 loan rate suggests 1978 corn prices will not likely average any lower than last year. Non-land production costs could decline, but it may be more realistic to assume a 5 cent per bushel increase for both corn and soybeans. Hence, preliminary judgments would suggest that returns to District crop farmers may trend slightly lower again this year, due largely to the anticipated decline in soybean prices.

One major unkown in this analysis of crop farmer returns is how District farmers respond to the tentatively proposed 10 percent feed grain set-aside requirement. Because of the relatively nominal target price payment offered in the 1978 corn program, the more rigorous cross-compliance standards, and the far more structured requirements on eligibile set-aside acreage, many farmers may not participate in the program. Should a sufficient number of farmers be so inclined, the effectiveness of the corn loan rate to establish a floor price could be severely tested later this year.

The prospective earnings of District farmers in 1978 carry implications for lenders and others interested in farmers' cash flows. The possibility of somewhat lower earnings for crop farmers is not encouraging, particularly if 1978 cash flows have to service substantial debt obligations carried over from last year. However, prospects for higher livestock earnings and other factors may be offsetting. For example, lower earnings have reined in the high capital expenditures of farmers. Purchases of farm machinery and equipment declined last year and are expected to trend even lower this year. The land market turned sluggish in the second half of 1977, indicating farmers are not as eager to expand operations. These factors will likely temper the demand for new borrowings, particularly from crop farmers. Moreover, the recent sluggishness in the land market and the particularly depressed returns to grain farmers who cash-rent a large share of their land will likely result in some declines in cash rental rates for farmland.

Another factor that may be partially offsetting to institutional lenders is the increased availability of credit to farmers from other sources. Credit to farmers from the Commodity Credit Corporation rose sharply during the latter part of 1977 in response to the large movement of corn under loan. This trend will likely continue in the early part of this year, offering farmers a source of funds to repay outstanding loans at institutional lenders and/or to meet current operating expenses. Moreover, the sluggishness in farm machinery sales has led manufacturers to expand credit terms as a means of encouraging sales. In some cases farm equipment buyers can get interest-free loans for up to nine months or more. This development will most likely divert a major portion of the initial financing for machinery and equipment purchases away from institutional lenders. Furthermore, life insurance companies are expected to continue their recent expansion in farm mortgage loans. Last year farm mortgage holdings of life insurance companies rose by an estimated 18 percent, representing the largest increase among all institutional lenders. Continued large increases this year could ease new mortgage demand on banks and other lenders, simultaneously providing a source of refinancing for farmers.

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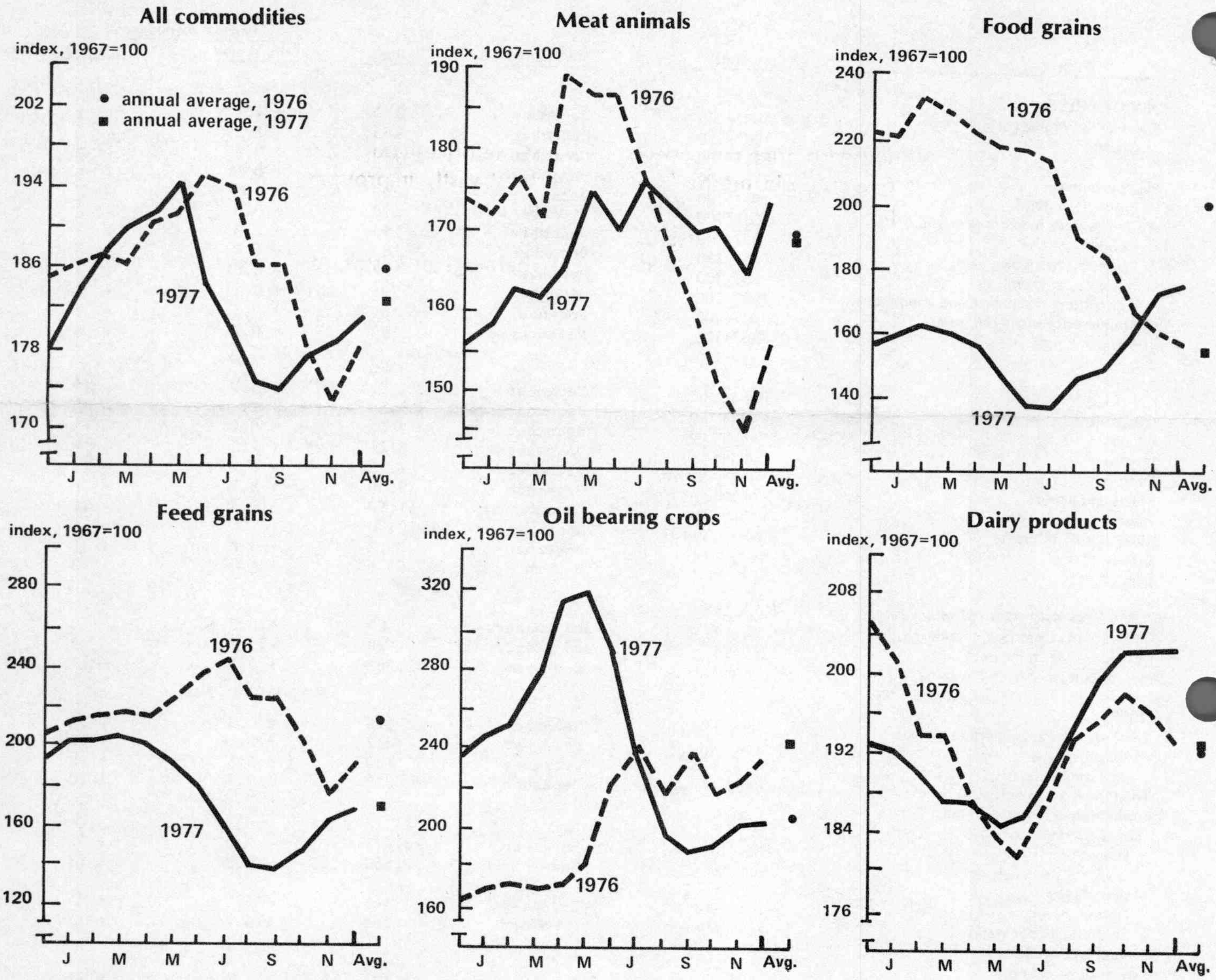
AGRICULTURAL ECONOMIC DEVELOPMENTS

Subject	Unit	Latest period	Value	Percent change from: Prior period	Percent change from: Year ago
INDEX OF PRICES					
Received by farmers	1967=100	December	181	+ 1.1	+ 2
Crops	1967=100	December	183	- 1.1	- 4
Livestock	1967=100	December	180	+ 3.4	+ 7
Paid by farmers	1967=100	December	203	+ 0.5	+ 5
Production items	1967=100	December	200	+ 0.5	+ 4
Wholesale price index *(all commodities)*	1967=100	December	198	+ 0.6	+ 6
Foods	1967=100	December	193	+ 1.3	+ 7
Processed foods and feeds	1967=100	December	189	+ 1.4	+ 6
Agricultural chemicals	1967=100	December	187	- 0.6	+ 2
Agricultural machinery and equipment	1967=100	December	205	+ 0.5	+ 8
Consumer price index *(all items)*	1967=100	November	185	+ 0.5	+ 7
Food at home	1967=100	November	193	+ 0.7	+ 8
CASH PRICES					
Corn	dol. per bu.	December	1.98	+ 5.3	- 12
Soybeans	dol. per bu.	December	5.68	+ 1.2	- 13
Wheat	dol. per bu.	December	2.47	+ 0.4	+ 3
Sorghum	dol. per cwt.	December	3.16	+ 4.3	- 10
Oats	dol. per bu.	December	1.13	+ 2.7	- 25
Steers and heifers	dol. per cwt.	December	39.30	+ 3.1	+ 9
Hogs	dol. per cwt.	December	41.50	+10.7	+ 14
Milk, all sold to plants	dol. per cwt.	December	10.20	0	+ 5
Broilers	cents per lb.	December	20.2	- 3.8	+ 5
Eggs	cents per doz.	December	53.6	+ 4.5	- 23
INCOME *(seasonally adjusted annual rate)*					
Cash receipts from farm marketings	bil. dol.	3rd Quarter	89	-10.6	- 3
Net realized farm income	bil. dol.	3rd Quarter	16	-25.3	- 13
Nonagricultural personal income	bil. dol.	November	1,561	+ 0.7	+ 11
FARM FINANCE					
Total deposits at agricultural banks[1]	1972-73=100	December	176	+ 0.3	+ 10
Time deposits	1972-73=100	December	217	+ 0.9	+ 15
Demand deposits	1972-73=100	December	130	+ 0.8	+ 2
Total loans at agricultural banks[1]	1972-73=100	December	218	+ 0.7	+ 20
Production credit associations					
loans outstanding:					
United States	mil. dol.	November	13,471	- 2.3	+ 12
Seventh District states	mil. dol.	November	2,655	- 1.0	+ 19
loans made:					
United States	mil. dol.	November	1,545	+16.6	+ 4
Seventh District states	mil. dol.	November	280	+16.1	+ 3
Federal land banks					
loans outstanding:					
United States	mil. dol.	November	21,258	+ 1.0	+ 16
Seventh District states	mil. dol.	November	4,317	+ 1.2	+ 24
new money loaned:					
United States	mil. dol.	November	324	+17.7	+ 16
Seventh District states	mil. dol.	November	70	+ 5.1	+ 38
Interest rates					
Feeder cattle loans[2]	percent	3rd Quarter	8.77	+ 0.5	0
Farm real estate loans[2]	percent	3rd Quarter	8.95	+ 0.3	0
Three-month Treasury bills	percent	12/29-1/4	6.16	+ 0.3	+ 40
Federal funds rate	percent	12/29-1/4	6.69	+ 0.6	+ 50
Government bonds *(long-term)*	percent	1/2-1/6	8.00	+ 0.1	+ 10
AGRICULTURAL TRADE					
Agricultural exports	mil. dol.	November	2,082	+22.1	- 2
Agricultural imports	mil. dol.	November	815	- 4.7	- 16
FARM MACHINERY SALES					
Farm tractors	units	November	8,310	-49.1	+ 17
Combines	units	November	1,480	-77.5	+ 20
Balers	units	November	418	-74.2	- 12

[1] Member banks in Seventh District having a large proportion of agricultural loans in towns of less than 15,000 population.

[2] Average of rates reported by district agricultural banks.

1977 farm commodity prices in perspective



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