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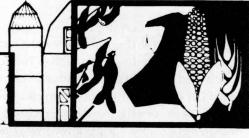
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#### FEDERAL RESERVE BANK OF CHICAGO

# AORICULTURAL



ISSN 0002 - 1512

December 26, 1980

Number 1541

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Division of Agricultural Economics

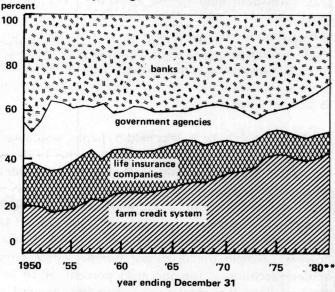
#### THE BALANCE SHEET OF THE FARMING SECTOR

recorded a slower rise in assets this year, but the rise in farm debt was apparently comparable to the large gains of recent years. Preliminary estimates by the USDA suggest the value of assets in the farm sector rose less than 9 percent this year. The projected increase is considerably below the average annual rise of 12.7 percent during the latter half of the 1970s but still sufficient to boost the value of farm assets to within a notch of the \$1 trillion mark. Total farm debt, if the USDA's current projections hold, will rise nearly 15 percent this year to more than \$180 billion. Such an increase would mark the fourth consecutive year that farm debt has risen by 14 percent or more.

Real estate accounts for 73 percent of the value of assets in the farm sector, while nonreal estate assets—including machinery, household furnishings, and inventories of crops and livestock—account for an additional 23 percent. The remaining 4 percent represents a partial accounting of the financial assets held by farmers. The USDA estimates indicate both real estate and nonreal estate asset values rose about 9 percent this year, while the value of financial assets rose about 5 percent. Since the end of 1974, real estate and nonreal estate assets in the farm sector have both doubled in value, while the value of financial assets has risen a little more than a third.

Farm debt estimates point to a 17 percent increase in outstanding real estate debt between the end of last year and the end of this year and a 12 percent rise in nonreal estate farm debt. If correct, these projections imply the smallest annual increase in nonreal estate farm debt since 1975. The projected increase in real estate farm debt, in contrast, would be the largest annual rise since 1920 and substantially above the average rise of 12 percent the previous five years. The \$96.1 billion estimate of farm real estate debt as of the end of this year marks an increase of 108 percent since the end of 1974. Nonreal estate farm debt, currently pegged at \$84.4 billion, is 138 percent higher than six years ago.

#### Percent of farm debt owed to reporting institutional lenders\*



\*Reporting lenders account for 78 percent of the roughly \$180.5 billion in outstanding farm debt. The remainder is distributed among nonreporting lenders and individuals for whom rigorous benchmark data is less readily available.

\*\*Preliminary USDA estimates.

Government agencies dominated this year's rise in farm debt. Farm real estate debt held by the Farmers Home Administration (FmHA), according to the USDA's current projections, rose 37 percent this year, while their holdings of nonreal estate farm debt rose 45 percent. In the past four years, total farm debt held by the FmHA has risen fourfold. In that short span, the FmHA's share of farm debt held by reporting institutional lenders has risen from 7 percent to nearly 16 percent. If the farm debt held by the Commodity Credit Corporation and the Small Business Administration is also included, the government agency share of institutionally held farm debt now approaches 21 percent—the highest since the late 1950s when surplus grain stocks rendered the CCC a major farm lender.

Farm debt held by the cooperative farm credit system, according to current estimates, rose 19 percent this year to about \$58 billion. The increase varied widely,

however, between the farm mortgages held by federal land banks and the nonreal estate farm loans held by production credit associations. FLB outstandings are projected to rise 23 percent this year, while the projection for PCA outstandings shows an increase of 12 percent. The farm credit system—which represents a borrower-owned cooperative that raises funds through the sale of securities in national money markets and lends almost exclusively to farmers—accounts for 41 percent of all institutionally held farm debt, up from 33 percent a decade ago.

The rise in farm debt held by banks and life insurance companies was comparatively nominal this year. Farm debt held by life insurance companies—which is almost exclusively farm mortgages—is estimated to have risen less than 6 percent this year, sharply below the 18 percent average annual rise of the previous three years. Life insurance companies account for roughly 9 percent of all institutionally held farm debt, down from 15 percent a decade ago.

The growth in farm debt held by banks, which had been slowing during the latter half of the 1970s, is estimated to have been limited to 1 percent or 2 percent this year. The slow growth has apparently reduced banks' share of all institutionally held farm debt to about 29 percent, down from their typical share of around 40 percent during the 1960s and most of the 1970s. Banks, however, remain the dominant nonreal estate farm lender—accounting for about 43 percent of all institutionally held nonreal estate farm debt compared to 29 percent for the farm credit system and 28 percent for government agencies.

The wide variations in farm debt growth among lending institutions this year reflects the volatile con-

ditions evident in financial markets. Government agency lending was dominated by various emergency and disaster loan programs that are available to help cushion the impact on farmers from drought, low earnings, and a perceived shortage of credit from commercial lenders. The large growth recorded by FLBs reflected their comparatively favorable interest rates and a sizable pickup in their refinancings of short-term loans held by other lenders. Such refinancings in the second and third quarter were double the year-earlier levels and equivalent to 17 percent of all loans made by FLBs. The slow growth by banks and life insurance companies reflected liquidity pressures earlier this year. In addition, loan demand at banks and life insurance companies was particularly soft at the high loan interest rates these institutions were requesting because of their sharply higher cost of funds and/or the higher returns they could achieve in alternative investments.

For the year ahead, farm asset values are likely to register a bigger rise, while the rise in farm debt may be comparable to the large increases of recent years. Higher farm incomes are expected to result in a bigger increase in farm real estate values and—if accompanied by lower interest rates—a marked recovery in capital expenditures by farmers. USDA projections suggest farm real estate values may rise 11 to 16 percent next year. Nonreal estate asset values are expected to rise at least a tenth, paced by the anticipated pickup in machinery and equipment purchases. The anticipated rise in capital expenditures and further large gains in production expenses are expected to boost nonreal estate farm debt well over a sixth next year. Farm real estate debt is projected to rise about 13 percent.

Gary L. Benjamin

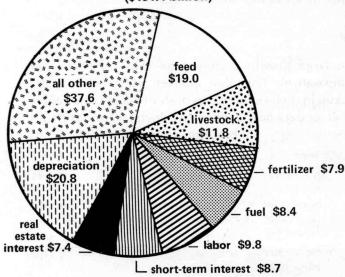
FARM PRODUCTION EXPENSES in the farm income accounts have risen sharply since 1978. Production expenses for 1979, at \$118.6 billion, were 18 percent higher than in 1978. For 1980 expenditures are likely to be up an additional 11 percent to \$131.6 billion. Current projections for 1981 indicate farmers may incur another increase of 10 percent to 13 percent in production expenses.

Production expenses have nearly tripled over the last decade. Most of this increase was reflected in the prices farmers paid for commodities and services. The index of prices paid (1967=100) was 113 in December 1970. At the end of this year, the index is likely to be near 300. The accompanying change in the value of some expense items has been dramatic. Fuel and energy-

related expenses, owing mainly to a surge in prices that began in 1974, have gone from \$1.7 billion in 1970 to an estimated \$8 billion in 1980. Interest expenses for both nonreal estate and real estate debt have jumped from \$3.5 billion to over \$16 billion this year as farmers have increasingly financed operations. Feed and livestock expenses, the major farm-origin inputs, have increased to \$19 billion and \$12 billion, respectively, this year from \$8 billion and \$4 billion in 1970.

Over the years the relative proportions of individual expense categories have changed considerably. Farm origin inputs along with expenses for hired labor, taxes, and net rent to nonoperator landlords have decreased relative to expenses for interest, fertilizer, seeds, fuel,

#### U.S. farm production expenses, 1980\* (\$131.4 billion)



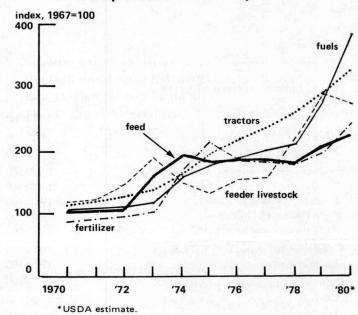
\*From the USDA's farm income accounts.

machine hire and pesticides. Feed expenses have dropped from 18 percent of total farm production expenses in 1970 to around 14 percent in 1980. Hired labor expenses will likely be about 7 percent of all expenses in 1980, down from 10 percent in 1970. On the other hand, interest expenses have increased from 7.6 percent of farm production expenses in 1970 to an estimated 12.3 percent in 1980. Fuel costs, while still only a small proportion of the total, have nevertheless grown from 4 percent of expenses in 1970 to over 6 percent this year.

Prices paid by farmers have registered steady gains through most of 1980, portending a 10 percent to 12 percent increase in farm production expenses. Feed expenditures may be up more than a tenth over last year to \$19 billion, reflecting higher prices and some increase in total feed use. But expenses for purchased livestock—which peaked at \$12.7 billion last year—may drop below \$12 billion due to lower feeder cattle prices and the decline in placements of cattle on feed. Sharply higher prices may boost fertilizer expenditures one-fifth higher this year, despite less usage.

Prices paid by farmers for fuel and energy have shown the strongest gain over the year. Expenditures for fuel and energy, which rose 35 percent in 1979, may be up a third this year even though some decline in the use of fuel and energy at farm level is anticipated for the year. Interest expenses will also be up substantially. Higher rates along with increases in loans outstanding will both contribute to the rise. Interest on nonreal estate debt—which gained 34 percent in 1979—may be up another third from last year to almost \$9 billion. Real estate interest expenses may rise a fifth to over \$7 billion for 1980.

### Fuels and energy lead the increase in expenditures for farm inputs



The year ahead may be a repeat of the large increase in production expenses. The USDA is currently projecting a rise of 10 percent to 13 percent in farm production expenditures for 1981. But unlike 1980, farm origin inputs may increase substantially as the price of feeder cattle and feed increase. Feed expenses could be up 15 percent or more due to higher feed prices that will offset the expected decline in feed purchased. Expenses for livestock may be up a tenth or more, reflecting significant increases in feeder cattle and feeder pig prices.

Price increases for petroleum-based inputs are expected to moderate in 1981. But the uncertainty in the Persian Gulf, the recent price hike announced by OPEC, and the decontrol of gasoline prices may result in stronger gains. Even with conservation in total farm energy use, fuel expenditures could exceed the one-fifth increase now projected by the USDA. Prices for fertilizer and farm chemicals will likely move up, but at a slower rate.

Based on the USDA's tentative estimate for interest rates, interest expenses could be 2 percent below last year. Any increase in nonreal estate borrowings would be offset by a projected 20 percent decline in average interest rates on nonreal estate debt. Real estate interest expenses, on the other hand, may increase with a pick-up in transfers of land at higher prices and with average rates on long-term debt remaining high. However, should interest rates not decline substantially, interest expenses on nonreal estate debt could hold above last year's level, too.

#### Selected agricultural economic developments

Subject	Unit	Latest period	<u>Value</u>	Percent change from	
				Prior period	Year ago
Index of prices received by farmers	1967=100	November	265	+ 1.9	+11
Crops	1967=100	November	273	+ 5.4	+21
Livestock	1967=100	November	259	- 1.5	+ 3
Index of prices paid by farmers	1967=100	November	290	+ 0.7	+12
Production items	1967=100	November	287	+ 1.1	+12
Producer price index* (finished goods)	1967=100	November	253	+ 0.4	+12
Foods	1967=100	November	247	+ 0.4	+ 7
Processed foods and feeds	1967=100	November	257	+ 0.6	+13
Agricultural chemicals	1967=100	November	253	+ 0.4	+12
Agricultural machinery and equipment	1967=100	November	266	+ 1.3	+ 9
Consumer price index** (all items)	1967=100	November	256	+ 0.9	+13
Food at home	1967=100	November	262	+ 0.8	+11
Cash prices received by farmers					
Corn	dol. per bu.	November	3.20	+ 7.0	+41
Soybeans	dol. per bu.	November	8.42	+ 9.6	+34
Wheat	dol. per bu.	November	4.34	+ 3.6	+10
Sorghum	dol. per cwt.	November	5.62	+ 4.9	+41
Oats	dol. per bu.	November	1.80	+ 9.1	+29
Steers and heifers	dol. per cwt.	November	65.00	- 3.3	- 6
Hogs	dol. per cwt.	November	45.30	- 4.0	+31
Milk, all sold to plants	dol. per cwt.	November	14.00	+ 2.2	+ 9
Broilers	cents per lb.	November	30.2	- 4.7	+21
Eggs	cents per doz.	November	65.5	+12.0	+13
ncome (seasonally adjusted annual rate)					
Cash receipts from farm marketings	bil. dol.	3rd Quarter	143	+ 6.1	+ 9
Net farm income	bil. dol.	3rd Quarter	23	- 0.4	-25
Nonagricultural personal income	bil. dol.	October	2,145	+ 1.1	+11

<sup>\*</sup>Formerly called wholesale price index.

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<sup>\*\*</sup>For all urban consumers.