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ABSTRACT

After nearly half a decade of low income and debt service problems, farm financial conditions began to improve in the mid-1980s. Higher livestock returns, lower production costs, rising land prices, increased lender stability, and fewer tax-driven incentives to borrow and invest are among the factors that eased farm financial stress in 1987. Real net income in 1987 was more than 75 percent higher than during the recession years from 1980 to 1983. Cash income of livestock farmers, who fared better than crop farmers, climbed about $9 billion between 1985 and 1987. However, 1 out of 10 commercial farms (those producing $40,000 or more in 1 year) still faced the risk of loan default going into 1988. Those most at risk are livestock farmers with high debt, cash grain farmers with moderate debt, and cash grain farmers with low debt and crop failure. Although it is too early to assess the economic effects of the 1988 drought, it is apparent that agriculture's recent financial improvement will lessen its financial repercussions. In particular, cash flow and balance sheet gains that accrued in 1987 are providing farmers with more of a financial cushion than existed in 1985-1986. (MN)

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# Recent Financial Gains Helping Farmers Withstand Drought

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**It is too early to fully assess the economic effects of the drought, but it is apparent that agriculture's recent financial improvement will lessen the financial repercussions of the 1988 drought. In particular, cash flow and balance sheet gains that accrued in 1987 provide farmers more of a financial cushion than existed in 1985-86.**

*Higher livestock returns, lower production costs, rising land prices, increased lender stability, and fewer tax-driven incentives to borrow and invest are among the factors that eased farm financial stress in 1987. Real net income in 1987 was more than 75 percent higher than during the recession years of 1980–83. Interest rates for production loans declined to 11–12 percent, compared with 14–15 percent in the mid-1980's. Farmers' financial positions improved as Midwestern land values strengthened, credit costs and some production costs declined, Government payments grew, and prices slowly rose as greater exports shrank surpluses. Cash income of livestock farmers, faring better than crop farmers, climbed around $9 billion between 1985 and 1987. Farming has weathered most of the debt-service problems of the early 1980's income recession, but 1 out of 10 commercial farms (farms producing $40,000 or more in 1 year) still faced risk of loan default going into 1988.*

This report reviews farm sector improvements in 1987. It examines trends in Government payments and the upturn in farm exports, it compares the economic well-being of livestock farms with those of cash grain farms, it compares farm financial conditions in the regions, and it examines key farm financial measures. It analyzes the decline in commodity stocks, a reversal in overall trend. The report also identifies those farms that could face loan default problems because of the drought.

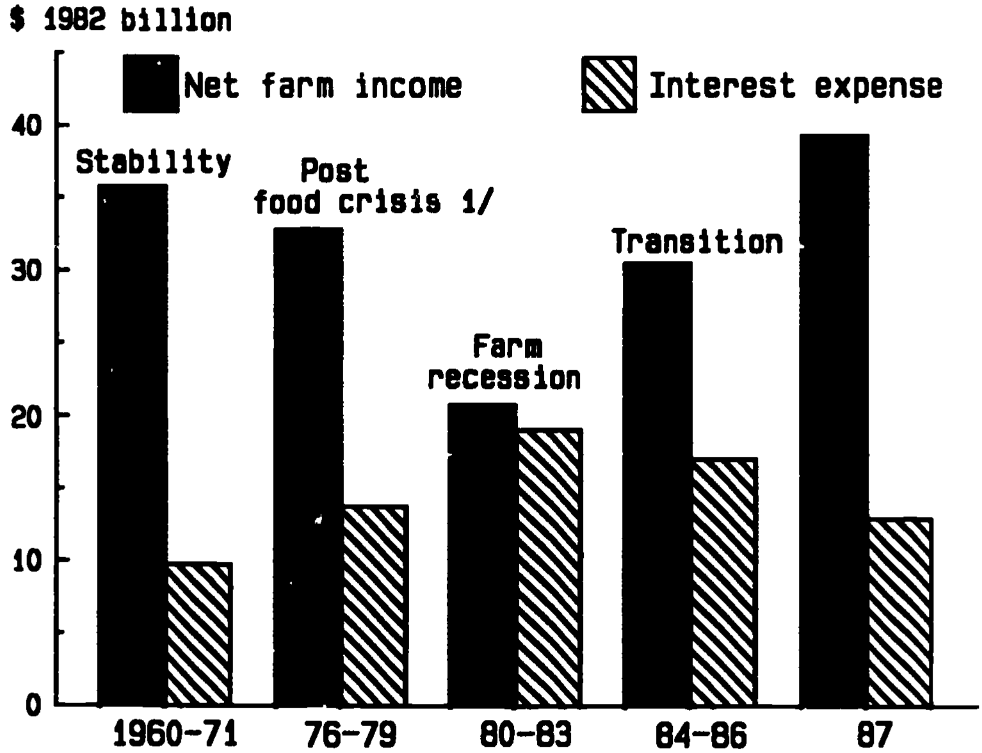
## FARM INCOME STRENGTHENED FOLLOWING 1980–83

Farm financial conditions began to improve in the mid-1980's after nearly half a decade of low income and debt service problems. Farm incomes began rising in 1984–85 as production expenses fell, Government payments increased, crop yields rose, and credit costs dropped. Net farm income in 1986 and 1987 was higher than in any year in the first half of the decade (fig. 1). Livestock farmers captured 80–90 percent of the income increase in 1985–87.

Net farm income in 1987 regained the real income levels of the 1960's (see fig. 1). Record-high Government payments, $17 billion in 1987 compared with $4 billion in 1982, contributed to the income recovery. Real farm income began falling in 1976–79, bottomed out during the 1980–83 "farm recession," and began increasing in 1984–85.

Figure 1

Recent improvement in farm income and interest expense




1/ The period that followed U.S. grain and soybean shortages of 1972-75.

Between 1982 and 1987, inflation-adjusted interest expense fell sharply from $21 billion to $13 billion. Lower credit costs helped farmers improve incomes.

The drop in interest expenses followed a more than 10-year spiral upward. Interest on farm debt increased from $8 billion in 1970 to $21 billion in 1982, measured in inflation-adjusted dollars. Measured in actual dollars, interest on farm debt moved from $3.2 billion to $21 billion from 1970 to 1982, while farm debt in the same period climbed from $48.8 billion to $189.5 billion.

## FINANCES OF CROP FARMERS IMPROVED IN 1987

Crop farmers' financial positions improved in 1987 as a result of lower farm overhead, record-high Government payments, rising exports, declining Government-owned stockpiles, lower credit costs, and shrinking production costs.

Crop farmers shared in the decline in production expenses between 1984 and 1987, when all farmers' production expenses dropped $20 billion, nearly 17 percent. Fuel, fertilizer, and chemical costs alone fell $5 billion. Government acreage reduction programs decreased the number of tillable acres, lowering fertilizer and fuel use which, in turn, helped lower farmers' expenses. Farmers also spent less on machinery. These major changes, combined with higher Government payments, enabled most crop farmers to survive several years of low commodity prices (table 1).

### Exports Rising, Stocks Shrinking

By the end of 1987, rising exports and shrinking stockpiles helped improve the situation for crop farmers (fig. 2). By the end of 1988, U.S. farmers will have recaptured about 60 percent (32 million metric tons) of the export volume lost in 1980–86. Notably lower commodity stocks were slowly raising crop prices in the first quarter of 1988.

A drop in the dollar's value, which makes U.S. farm goods cheaper abroad, and recent heavy use of Federal export subsidies helped boost export growth. Export value rose 6 percent, and export volume climbed 18 percent in 1987. Higher commodity prices will likely increase export value 20 percent in 1988.

Stocks are declining as growth in exports, a modest increase in domestic use, continued programs to idle farmland, and the 1988 drought are more than offsetting high crop yields of 1985–87. Before the drought settled in, 1988 wheat and soybean reserves were projected to be smaller than 1985 reserves. Record–high participation in Government acreage reduction programs will contribute to a 500–million–bushel (11–percent) drop in corn stocks in 1987–88. An additional decline of 2 billion bushels of corn stocks is forecast for 1988–89, mainly because of the drought.

### Land Retirement Helping Stabilize Farm Finances

The Conservation Reserve Program (CRP) may help stabilize farm finances by lowering production, easing longrun surplus problems. By 1990, 40–45 million acres of highly

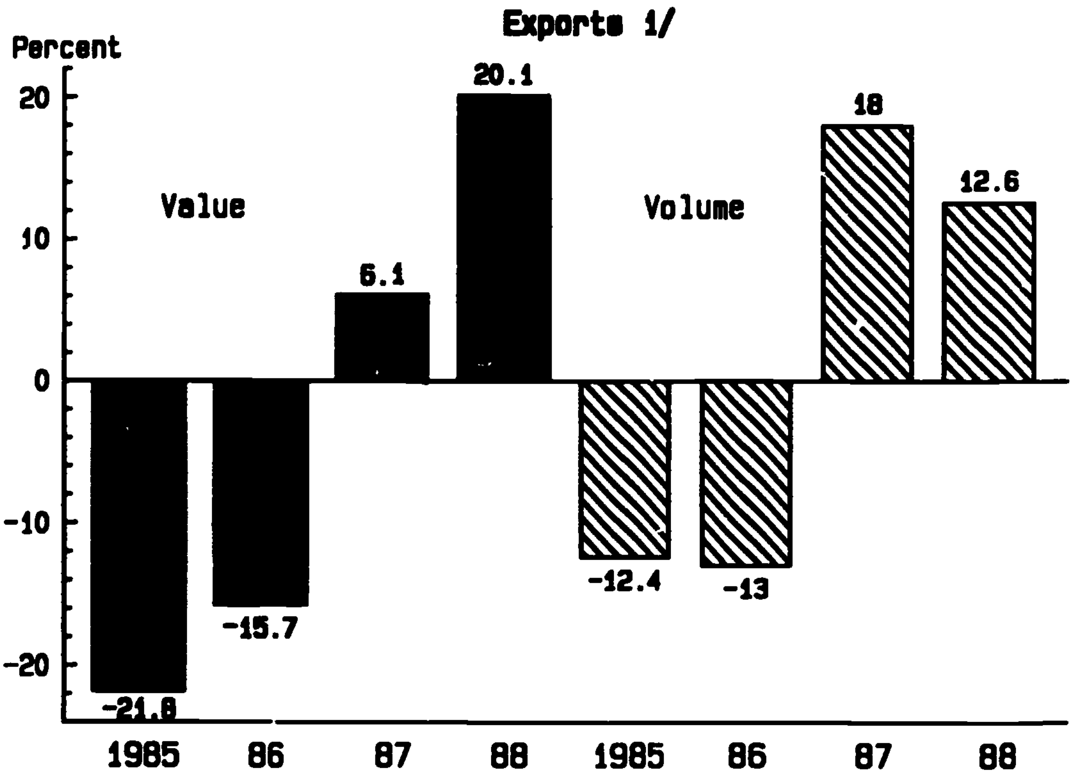
Table 1—Drops in expenditures and rises in Government payments partly offset lower crop prices

| Item | 1984 | 1985 | 1986 | 1987F | 1988F |
|---|---|---|---|---|---|
| | | | Billion dollars | | |
| Total expense | 143 | 134 | 122 | 123 | 123–126 |
| Capital expenditures | 13 | 10 | 9 | 8 | 9–11 |
| Direct Government payments | 8 | 8 | 12 | 17 | 11–13 |
| | | | Dollars per bushel | | |
| Corn price | 3.05 | 2.50 | 1.96 | 1.56 | 1.98 1/ |
| Wheat price | 3.46 | 3.19 | 2.71 | 2.55 | 2.93 1/ |
| Soybean price | 7.02 | 5.42 | 5.00 | 5.09 | 6.29 1/ |

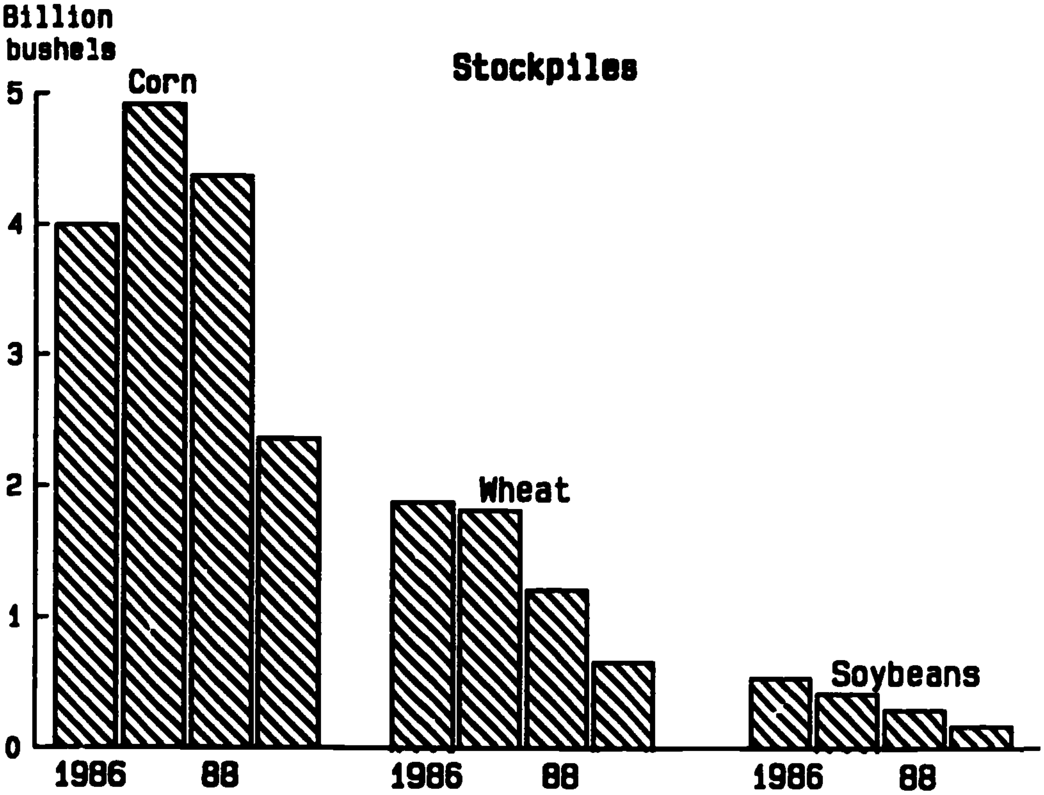
F = forecast. 1/ January–June, 1988.

Figure 2

## Rises in farm exports and declines in commodity stockpiles improve supply-demand situation




1/ Numerals shown are percentage changes from previous year.




Note: Marketing years.

erodible land are scheduled to be idled. Land targeted for CRP enrollment gradually will be withdrawn from production, moderating the wide swings in idled acreage that at times have resulted from acreage reduction programs in the 1980's. The CRP phase-in, which sets yearly totals of erodible land to be idled, should reduce stockpiles and lighten the task of adjusting longrun supplies.

### Farmers Successfully Cut Costs

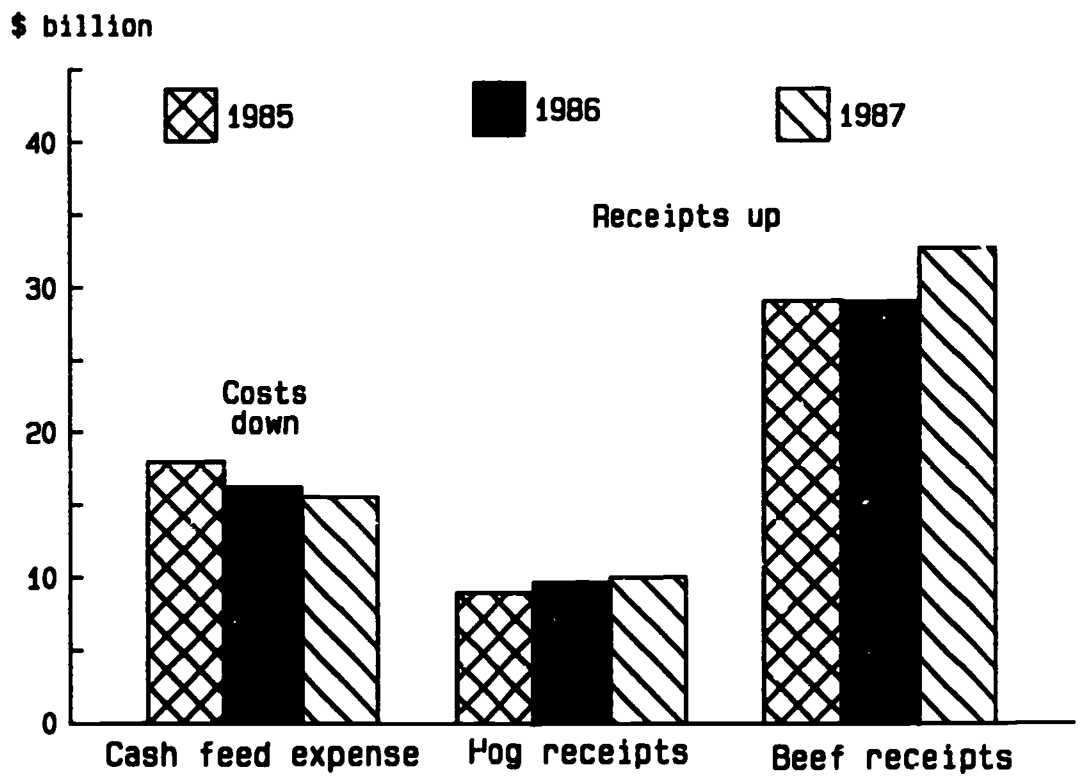
Measures farmers took to confront the recession included cutting overhead and lowering debt. Farmers who survived the income and debt crises of the early 1980's are now more flexible and competitive than were typical farmers of the late 1970's. After the boom-and-bust period of 1972-85, farmers changed financial strategies: from reaping benefits of land price inflation and emphasizing tax savings on equipment investment to trimming production costs and cutting debt. For example, farmers spent $4 billion less on machinery in 1987 than in 1984 and used their improved incomes to pare debt.

## LIVESTOCK SECTOR MADE GAINS IN 1986-87

Livestock farmers captured 80-90 percent of the $10-billion increase in net cash income that accrued to all farmers in 1985-87. Low feed costs and high livestock prices from the fourth quarter of 1985 through 1987 boosted hog and beef farmers' receipts (fig. 3). All livestock farms made large income gains in 1986, but hog, dairy, and beef farms posted the best gains in 1987, mostly because of rising livestock prices and lower feed costs (table 2).

Figure 3

Lower costs and higher receipts benefited hog and beef farmers



Although low feed grain prices caused great financial stress among Midwestern crop farmers during the mid-1980's, livestock farmers' income in this region recently rose. Because there is a large concentration of livestock farms in the Upper Midwest, this region's rally in livestock income signaled an industry turnaround. Annual net cash incomes climbed nearly $3 billion in the western Corn Belt (Iowa, Illinois, Minnesota, Missouri, and Wisconsin) and around $1.5 billion in the Northern Plains (Kansas, Nebraska, North Dakota, and South Dakota) between 1984 and 1987.

High Government payments and rising receipts enabled financially stressed Midwestern farmers, many of whom are livestock farmers who raise their own feed, to repay more than $6 billion of farm business and household debt each year between 1984 and 1987.

Nationwide, the financial condition of livestock farmers improved the fastest of all producers. Their feed and interest expenses declined while livestock prices rose, improving their profit margins (table 3). USDA survey results show that in 1986 the typical beef farmer's debt dropped more than $40,000 and the typical hog farmer's debt dropped more than $20,000. Insolvency characterized only 1 in 20 commercial-size hog and beef farmers in early 1987. The hog sector had strong returns by early 1986, and the beef sector was in the black by early 1987. Having experienced higher profits in 1986-87, dairy, hog, and beef farmers will be financially better able to adjust to drought-related feed price increases in 1988.

## FARM DEBT CRISIS RECEDED IN 1987

Farm debt has shrunk since the mid-1980's both in dollars and as a share of income, boosting farmers' ability to maintain profits. Debt will likely have fallen $53-$58 billion (nearly one-third) between 1983 and the end of 1988 (table 4).

The proportion of farmers' gross income used to make debt payments dropped to about 15 percent in 1987 from over 20 percent in the early 1980's. And key financial measures show an improved farm debt position. The debt/asset ratio fell to 17-19 percent in 1988 after pushing past 22 percent in 1985. The interest/gross income ratio dropped to 9 percent in 1987 after climbing to 14 percent early in the decade.

### GLOSSARY

*Cash flow* is gross cash farm income plus off-farm income less cash farm expenses, capital expenditures, and a family living allowance.

*Debt/asset ratio* is the ratio of debts to assets. It is characterized as no debt, low debt (0-40 percent), high debt (40-70 percent), very high debt (70-100 percent), and technically insolvent (more than 100 percent).

*Debt service* is the ability of farmers to meet their cash flow requirements including interest, principal payments, cash capital replacement, and family living expenses. It equals cash flow before interest expense divided by interest expenses plus estimated payments due on outstanding loans.

*Interest/gross income ratio* is a measure of interest's share of gross cash income. It expresses the proportion of gross cash income needed to service interest expense.

*Net farm income* is a production-based income measure that includes receipts, cash expenses, depreciation, and change in inventory.

Several major factors eased farm financial difficulties by the end of 1987:

- *Lower interest rates.* Many producers went deep in debt in the late 1970's and early 1980's when interest rates were high or rising. Today's farmers who have annual production loans, variable interest rate mortgages, and refinanced loans (constituting more than 50 percent of farm debt) are benefiting from interest rates that are 2-4 percentage points below the 14- 15-percent range of the mid-1980's.

Table 2--Net cash income from hogs, dairy, and beef showed strong gains, 1985-87

| Item | Farm type: Hogs | Dairy | Beef | Poultry | Corn, soybean, wheat | Vegetables, fruits, nursery |
|---|---|---|---|---|---|---|
| | Million dollars | | | | | |
| 1985 | 1,790 | 3,640 | 6,400 | 7,470 | 8,620 | 10,670 |
| 1986 | 2,820 | 5,010 | 7,680 | 9,140 | 7,470 | 11,750 |
| 1987 | 3,380 | 6,040 | 10,290 | 8,090 | 6,590 | 13,620 |
| | Percent | | | | | |
| Change, 1985-87 | 89 | 66 | 61 | 8 | -24 | 28 |

Source: USDA, Farm Income Forecast Project.

Table 3--Financial performance of beef and hog operations, January 1, 1985-87

| Item | Beef operations 1985 | Beef operations 1986 | Beef operations 1987 | Hog operations 1985 | Hog operations 1986 | Hog operations 1987 |
|---|---|---|---|---|---|---|
| | Percent | | | | | |
| Share of farms with potential loan losses | 14 | 16 | 16 | 23 | 22 | 12 |
| Share of farms with debts greater than assets | 3 | 7 | 5 | 9 | 12 | 5 |
| | Dollars | | | | | |
| Average debt outstanding | 171,280 | 187,760 | 144,890 | 132,750 | 142,010 | 119,560 |
| Commodity receipts and Government payments less cash expense | -8,230 | -33,160 | 4,300 | 12,950 | 28,700 | 36,920 |

Source: USDA Farm Costs and Returns Surveys.

- *Fewer tax-driven incentives to borrow and invest.* The 1986 Tax Reform Act repealed the investment tax credit and cut the top tax rate to 28 percent, dampening borrow and invest business strategies and reducing incentives to sustain heavy farm debt.

- *Improved cost situation.* Total farm production expenses fell $20 billion between 1984 and 1987, mostly due to lower fuel and chemical prices, reduced plantings, and stringent cost containment.

- *Higher livestock earnings.* Cash income of livestock farmers climbed around $9 billion between 1985 and 1987. Hog and beef returns were especially strong by early 1987. Higher livestock farm returns partly offset lower cash grain farm income.

- *Land price recovery.* Rising land prices in 1987 helped improve many farmers' economic positions. In the early and middle parts of the decade, low land values eroded farmers' equity, but a 3-percent rise in 1987 helped restore equity. While land values rose 9 percent in the Corn Belt, other regions, such as the South, had no increases in land value.

- *Increased lender stability.* The lender writeoff problem eased in 1987 because most lenders had already written off the bulk of their losses. The Agricultural Credit Act of 1987 should stabilize the Farm Credit System and make credit more available.

Lenders wrote off an estimated $11 billion in bad loans between 1984 and 1986, and an estimated additional $2-3.5 billion in bad loans in 1987, for a cumulative estimated total of $13-15 billion (fig. 4). Except for loans held by the Farmers Home Administration (FmHA), about 80-90 percent of bad farm loans not related to the drought have now been digested. If the predrought trends of stabilizing farm incomes and land values continue, they are likely to slow loan losses among Farm Credit System and commercial lenders. The FmHA probably will have higher losses than other farm lenders because of the higher risk nature of its lending program.

Table 4--Agriculture's improving ability to service debt

| Item | 1982 | 1983 | 1984 | 1985 | 1986 | 1987 | 1988 |
|---|---|---|---|---|---|---|---|
| | | | | Billion dollars | | | |
| Business debt 1/ | 189.5 | 192.7 | 190.8 | 175.2 | 155.0 | 143.0 | 132-142 |
| Interest expense | 21.0 | 20.6 | 20.3 | 17.9 | 16.2 | 15.0 | 13-15 |
| | | | | Percent | | | |
| Debt service's share of gross income 2/ | 23 | 22 | 21 | 18 | 17 | 15 | 13-15 |
| Interest's share of gross income 3/ | 14 | 14 | 13 | 11 | 11 | 9 | 8-9 |

1/ Excludes Commodity Credit Corporation (CCC) debt. 2/ Proportion of gross cash income needed to service farm debt. 3/ Proportion of gross cash income needed to service interest expense.

Sources: Economic Indicators of the Farm Sector: National Financial Summary, 1982-86, and USDA projections.

## LOAN DEFAULT PROBLEMS REMAINED PERSISTENT

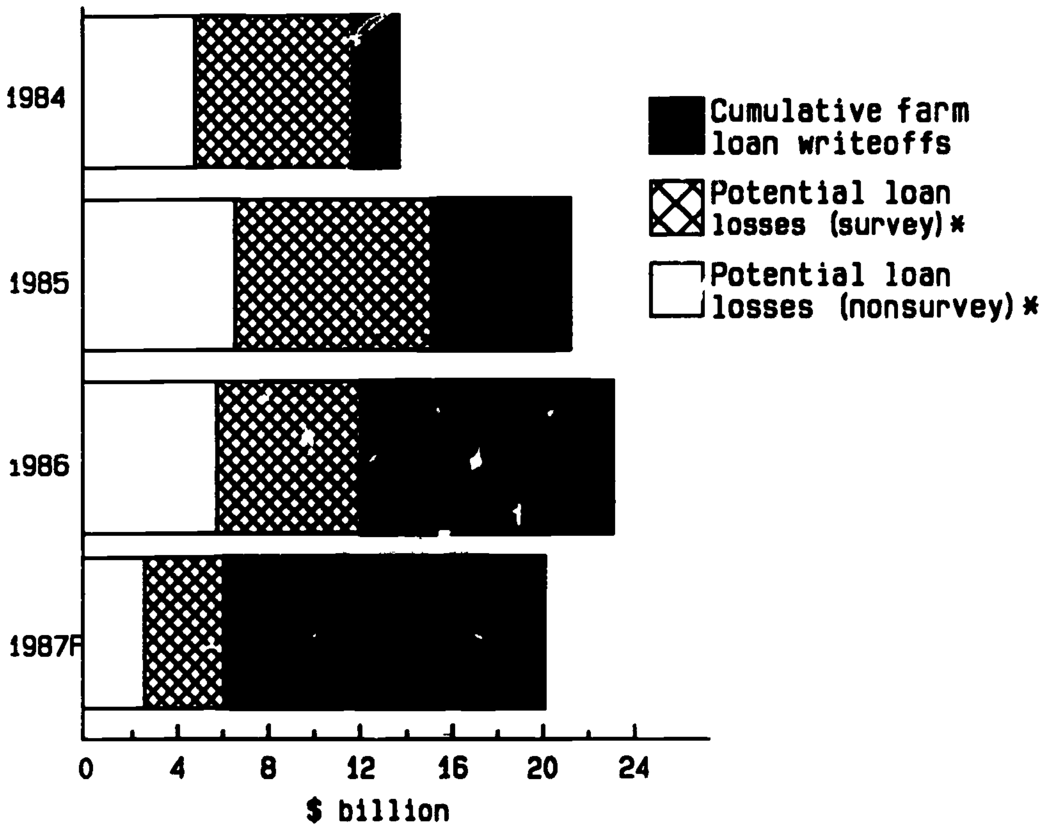
The share of commercial farms facing continued loan default risk dropped from 17 percent to 16 percent between 1985 and 1987 as many financially stressed farmers quit farming and some farms were consolidated (table 5). Some commercial farms were reclassified as noncommercial when poor grain prices lowered income. On the other hand, higher livestock earnings pulled some livestock farmers out of financial difficulty.

Financial problems are expected to persist because of the drought, because some farms are so deep in debt that it will take them several years to regain financial stability, and because earnings gains are unevenly distributed. The Northern Plains, Mountain, Pacific, and Northeast regions were recovering financially by early 1987. The Corn Belt and Lake States continued to have a high degree of default risk through early 1987, and the Southern Plains' and Southeast's risks of default had worsened (fig. 5).

More than 60 percent of financially stressed commercial farms are in the Corn Belt, Lake States, and Northern Plains States. These regions contained 10 of the 12 States with more than 3,000 stressed commercial farms per State in 1985–87 (table 6).

Figure 4

### Cumulative and potential farm loan losses




F=forecast.

*Survey denotes information derived from USDA Farm Costs and Returns Survey. Nonsurvey denotes information derived from sources other than USDA Farm Costs and Returns Survey.

Table 5--Regional trends in commercial farms with loan default risk

| Region | Total commercial farms with loan default risk in-- 1985 | 1987 | Share of commercial farms with loan default risk in-- 1985 | 1987 |
|---|---|---|---|---|
| | --------Number-------- | | ------Percent------ | |
| Improved financial conditions: Mountain, Northwest, Pacific, and Northern Plains | 41,800 | 29,500 | 16.1 | 12.7 |
| Stabilized financial conditions: Corn Belt and Lake States | 55,100 | 49,100 | 19.1 | 18.5 |
| Worsened financial conditions: Appalachia, Delta, Southeast, and Southern Plains | 25,600 | 25,500 | 14.8 | 19.2 |
| United States | 122,500 | 104,100 | 17.0 | 16.0 |

Note: January 1 of each year.
Source: Analysis of USDA Farm Costs and Returns Surveys. These surveys represent more than 90 percent of commercial farm operations with annual sales or expenses of $40,000 or more.

Table 6--States with more than 3,000 commercial-size farms having default risk

| State | State ranking* 1985-87 Average | 1987 | Commercial farms with loan default risk, 1985-87 Average | | Commercial farms with debts exceeding assets, 1985-87 |
|---|---|---|---|---|---|
| | | | | ---------Percent--------- | |
| Iowa | 1 | 1 | 12,581 | 20 | 8 |
| Minnesota | 2 | 2 | 11,511 | 24 | 10 |
| Wisconsin | 3 | 4 | 7,689 | 18 | 5 |
| Texas | 4 | 3 | 6,097 | 17 | 6 |
| Missouri | 5 | 5 | 5,741 | 24 | 12 |
| Nebraska | 6 | 10 | 5,393 | 17 | 6 |
| Kansas | 7 | 7 | 5,233 | 18 | 8 |
| Illinois | 8 | 6 | 4,778 | 12 | 4 |
| Indiana | 9 | 8 | 4,073 | 18 | 5 |
| South Dakota | 10 | 9 | 4,080 | 19 | 6 |
| North Dakota | 11 | 11 | 3,793 | 18 | 4 |
| Oklahoma | 12 | 14 | 3,212 | 18 | 6 |

*States with 3,000 or more commercial-sized farms at risk of default. States with the greatest number of such farms are ranked highest.
Note: January 1 of each year.
Sources: USDA Farm Costs and Returns Surveys. Commercial farms have annual sales or expenses of $40,000 or more.

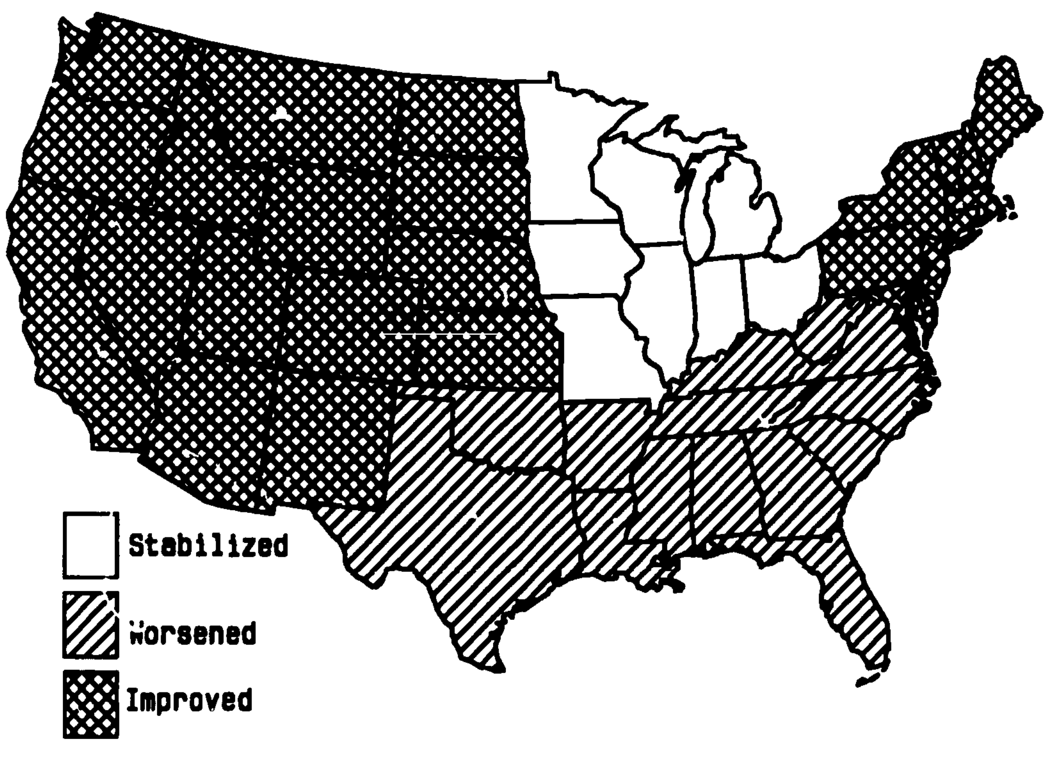
One of 4 commercial farms in both Minnesota and Missouri was stressed, and 1 of 10 farms in these States had greater debts than assets in 1985-87. Corn/soybean farms (a major Midwestern farm type) showed signs of persistent financial problems (table 7). The 1987 upturn in Midwestern land prices will lessen the default problems of many drought-stricken corn/soybean farms, however.

Table 7--Financial performance of corn/soybean farms, January 1, 1985-87

| Item | Corn/soybean farms 1985 | 1986 | 1987 |
|---|---|---|---|
| | | Percent | |
| Share of farms with loan default risk | 18 | 17 | 20 |
| Share of farms with debts greater than assets | 6 | 9 | 9 |
| | | Dollars | |
| Average debt outstanding | 146,080 | 151,650 | 136,740 |
| Commodity receipts and Government payments less cash expense | 20,350 | 28,530 | 25,260 |

Source: USDA Farm Costs and Returns Surveys.

Figure 5
Regional default risk among commercial farms, 1987




## SOME STABLE FARMS STILL VULNERABLE TO STRESS

If debt repayments and debt restructuring continue, crop and commodity prices stabilize or strengthen, and land values hold steady or rise as anticipated, the postdrought farm sector should stay on the longrun path to recovery. But several groups of currently financially stable farms are at risk:

- *Livestock farms with high debt.* Strong incomes for beef, dairy, hog, and poultry farms since 1986 enabled most livestock farmers to keep repaying high debts (40–70 percent of assets). But lower livestock, poultry, or milk prices, combined with higher feed expenses, could greatly increase the financial burdens of many commercial livestock farmers.

- *Cash grain farms with moderate debt.* Many corn, soybean, and small grain farmers with moderate debt loads (40 percent of assets or less) who successfully serviced their debt despite lower crop prices, could run into trouble. Low yields due to drought, fuel and fertilizer price hikes, and a drop in Government commodity program payments—if not offset by commodity price increases or disaster relief—could put many cash grain farmers into default.

- *Cash grain farms with low debt and crop failure.* Farmers with debt/asset ratios under 40 percent could run into financial difficulty if production drops because of drought (which also hit many farmers in 1983) or other bad weather, or if production costs begin to rise rapidly.

While the 1988 drought could cripple the finances of currently stable farms, present projections for commodity prices, interest rates, and production costs suggest many of these farms will be able to maintain and some even strengthen their financial position through the end of the decade.

## FOR ADDITIONAL INFORMATION...

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