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Effects of the 1988 Drought on Farm Finances

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In this report...*Following the 1988 drought, nine States in the Upper Midwest received 70 percent of Federal crop damage payments and 40 percent of the livestock feed disaster payments which were made through August 1989. Net farm income dropped in this region while rising in the rest of the country. However, farms in both the severe drought region and the rest of the country continued to improve their solvency position. The number of debt-free farms increased in the drought region, and the number of farms experiencing financial distress slightly decreased. Total direct Government payments (including disaster payments) and Commodity Credit Corporation (CCC) loans were lower in 1988 than in 1987. The average farm in the drought region survived financially by selling off inventories and by taking advantage of higher commodity prices to redeem CCC loans.*

Major portions of the continental United States suffered a severe drought in the summer of 1988. For the Northern Plains, Corn Belt, and Southeast regions, the 1988 drought was the most severe since 1936. Losses to agricultural production were so great that the Federal Government made financial aid available to farms suffering major losses due to weather conditions. The Disaster Assistance Act of 1988 (P.L. 100-387) provided that producers of commercial crops who lost 35 percent or more of their 1988 crop were eligible for disaster payments. Eligible livestock producers included those in a declared livestock emergency area who suffered a substantial loss in livestock feed normally produced on their farms. At the end of August 1989, payments of $3.4 billion authorized by the Disaster Assistance Act of 1988 had been disbursed to farms. This study evaluates the effects of the 1988 drought on farm finances.

Findings

- Net farm income decreased in the drought region and increased in the nondrought region.
- In spite of the drought, farms in all areas of the country continued to improve their solvency position (measured by debt/asset ratio) in 1988.
- The number of farms which are considered financially vulnerable continued to decrease in 1988 in both the drought and nondrought regions.
- Farms in the drought region received lower direct Government payments in 1988 than in 1987 despite disaster relief.
- The average farm in the drought region survived financially by selling off inventories and by taking advantage of higher commodity prices to redeem CCC loans.

Drought and Nondrought: Comparisons

Nine States from Montana to Michigan received 70 percent of the disaster payments for crop damage and 40 percent of that for livestock feed. This study compares financial conditions in these drought States with those of nondrought States.

The effects of the drought were unevenly distributed. Individuals in some States suffered substantial losses even though total disaster payments in that State were small. Average farm financial conditions for such a State would tell little about the effects of the drought, since most farms would be unaffected by it. Therefore, a nine-State region in which all States received large disaster payments, and in which their constituent counties suffered severe or extreme drought, was chosen to represent drought damage.

This region was selected on the basis of the Palmer Index for August 6, 1988. The Palmer Index (or Drought Severity Index) combines precipitation, soil moisture, and temperature data into a single index. Areas assigned index numbers of -3.0 to -3.9 are considered in severe drought, and areas with numbers of -4.0 or less are considered in extreme drought.

The region chosen—referred to as the drought region throughout this report—is made up of Illinois, Indiana, Iowa, Michigan, Minnesota, Montana, North Dakota, South Dakota, and Wisconsin (fig. 1). As classified by the Palmer Index, almost every county in these States was considered to be undergoing a severe or extreme drought. These States received 70 percent of the 1988 Federal crop damage disaster payments and 40 percent of the livestock feed disaster payments, as of August 1989. Figure 2 shows the large reductions in crop yield that the drought caused in these States. The remaining 39 contiguous States are referred to as the nondrought region in this report.

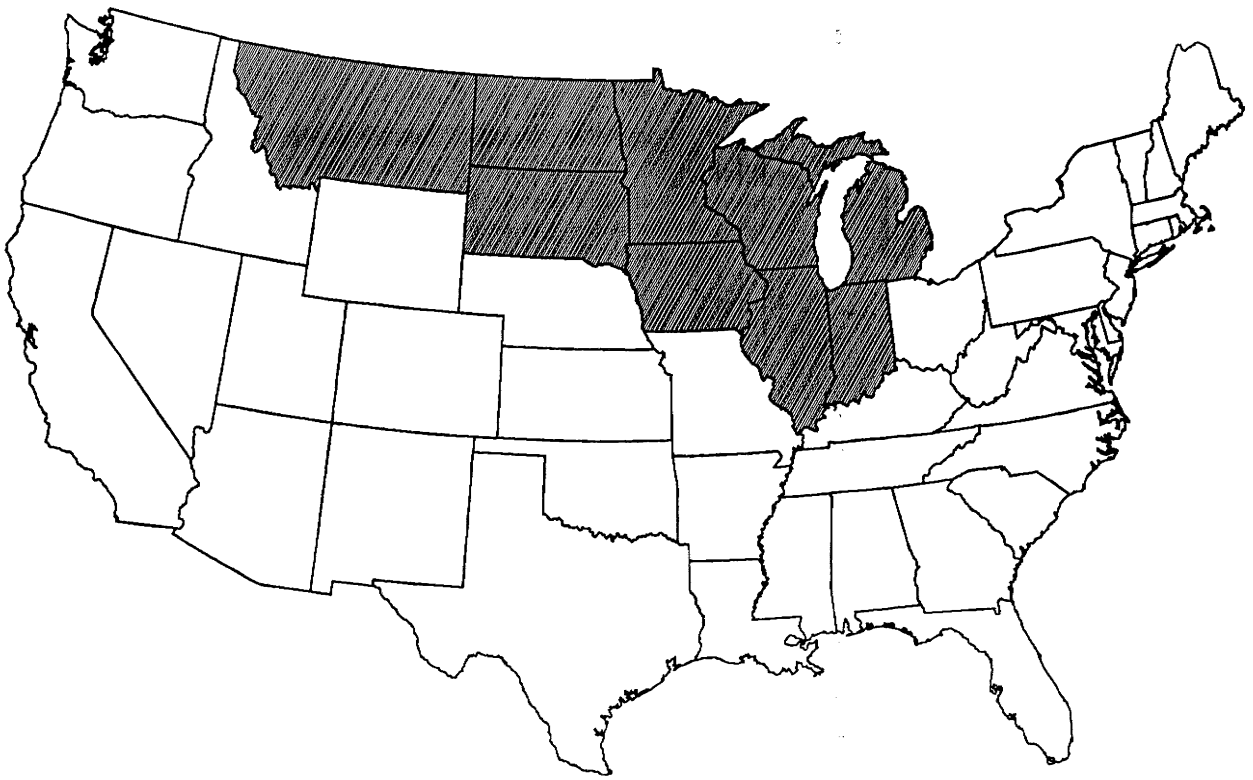
The financial effect of the drought should be assessed by evaluating the difference in finances between the actual (drought) data and farm finances if the drought had not occurred. The simultaneous effects that a widespread, severe drought inflicts on yields and prices make such a task difficult. An evaluation of production which would have occurred without the drought, given the large annual variation, cannot be easily made. Commodity prices which would have been obtained without the drought are even more difficult to calculate. Therefore, two methods of comparisons will be employed here. The first will compare the drought region in 1988 with the same region in 1987. An alternate method will make comparisons between the drought region in 1988 and the nondrought region in the same year.

This study is limited to commercial farms. A commercial farm is defined as a farm receiving at least $40,000 in gross income from farm operations, or with $40,000 or more in farm expenses. The expense measure was used in order to include farms which suffered large production losses from the drought. The financial position of commercial farms is affected much more strongly by a drought than is that of smaller farms, for smaller farms receive a large share of their income from off-farm activities. The analysis is limited to commercial farms to ensure that the financial effects of the drought are not being confused with other nonfarm factors.

All data for this study are taken from the Farm Costs and Returns Survey (FCRS). The FCRS has been conducted annually by the Economic Research Service (ERS) and the National Agricultural Statistics Service (NASS) since the first survey was made for the calendar year 1984. The survey is designed to collect, among other data, detailed income and expense information at the farm level. The survey is conducted by personal interview of the farm operators. Farms are selected for the sample according to a statistical procedure which ensures that the sample is representative of all U.S. farms. The number of farms surveyed annually ranges from 11,000 to over 13,000.

Figure 1
Extreme drought region, 1988

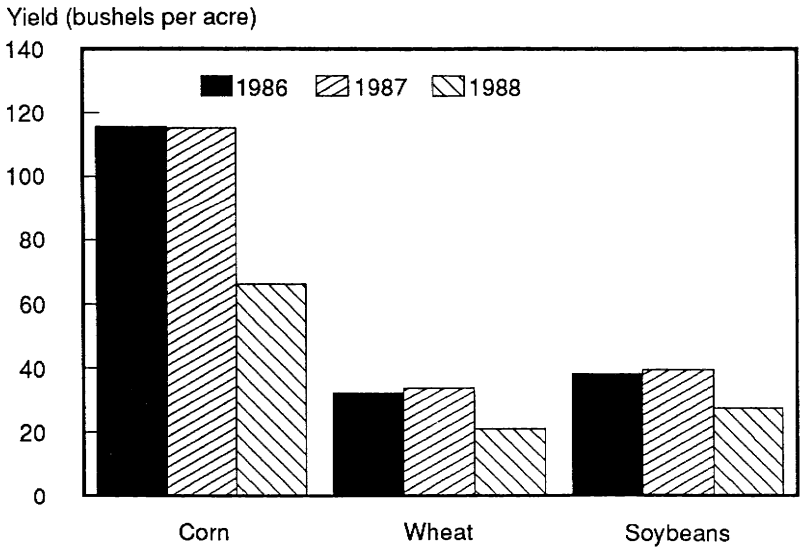
These nine States got 70 percent of disaster payments for crops and 40 percent of that for livestock feed.



Defined as severe or extreme under the Palmer Index of August 6, 1988.

Figure 2
Major crop yields in the drought region

Due to inventories and higher prices, the financial losses were less than might have been expected.



Source: National Agricultural Statistics Service, USDA.

Financial Dynamics of Drought Profited Some

Farms with inventories were better off than those without them. Also, farmers with normal crops profited from scarcity.

Net cash farm income is the financial indicator most sensitive to changes in levels of production or prices. Therefore, the annual distribution of net cash farm income among farms is a useful way to analyze effects of the drought. (Net cash farm income is defined as the difference between gross farm income and total expenses. It is limited to cash income and cash expenses.)

The absence or presence of inventories produced two different distributions (among other less common distributions) of net cash farm income. In the first instance, farms had little or no inventories, and the distribution of net income was therefore different from that of a normal year. Since cash receipts during a drought year will be reduced, but expenses will remain at the same level, a lower net cash income resulted for those farms which had little in inventory before they suffered the effects of the drought. But, farms that had substantial carry-over of past production inventories could use these to make up for drought losses. In this case, the distribution of net cash farm income was the same as in a normal year. Where farms have production inventories, they can offset some drought losses by selling inventories at high commodity prices. If many farms are able to follow this strategy, the distribution of net cash farm income in a drought year will approximate that of a normal year, although the mean may increase or decrease. In the 1988 drought, farmers with substantial inventories on hand were able to profit from the price effects of the drought.

Also, farmers fortunate enough to harvest a normal crop made a larger profit per unit than they would have achieved otherwise. This came about because commodity prices were forced up by reductions in supply due to the severity and geographical extent of the 1988 drought.

An extreme, widespread drought like that which occurred in 1988 increases two groups of farmers: those with large expenses compared with income (for example, those farms which have experienced crop damage and have no inventories) and those with a large net cash farm income (farms which have substantial inventories to draw upon and/or little yield reduction). The number of farms between these extremes will decrease.

Figure 3 gives a hypothetical distribution of net farm income in a "normal" year compared with net farm income in a drought year, assuming the same mean. Net farm income provides a long-term measure of farm earnings and profitability. Both curves represent the same number of farms, but the curve labeled drought is lower and wider than the normal distribution. The left-hand end of the drought distribution curve reflects the increased number of farmers who had normal expenses, but suffered crop damage and lower income. The right-hand end of the drought curve is thicker than normal because farmers who had a crop were able to take advantage of higher than normal prices, increasing the number of farms with high net farm incomes. Figure 3 shows that the mean net farm income will be the same for both the drought and normal years. The effects of the drought on net cash farm income would not show up in a simple comparison of means. Therefore the comparison of means is not an appropriate measure for evaluating the effects of the drought where there are no inventories.

However, where substantial inventories exist or drought damage is small, comparison of means is a useful measure of the effects of a drought. Pre-existing farm inventories in a drought year produce an income distribution similar to that of a normal year.

Figure 4 shows the actual distribution of net farm income in 1987 and 1988, with the nondrought and drought years compared. The distribution of net farm income (a measure which includes inventory change, depreciation, imputed rental value of dwellings, and other noncash items) for these 2 years provides a comparison between nondrought and drought years. The distribution is very similar for the 2 years, with a small difference in the means.

When the two figures—hypothetical and actual—are compared, the distributions in figure 4 show none of the possible differences illustrated in figure 3. This indicates that a comparison of means will contain most of the information about differences between variables.

Figure 3
Hypothetical distribution of net farm income

The hypothetical model shows that the mean is not a vital measure.

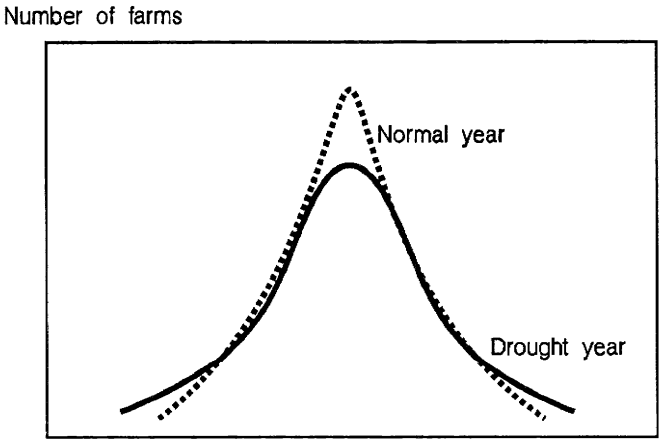
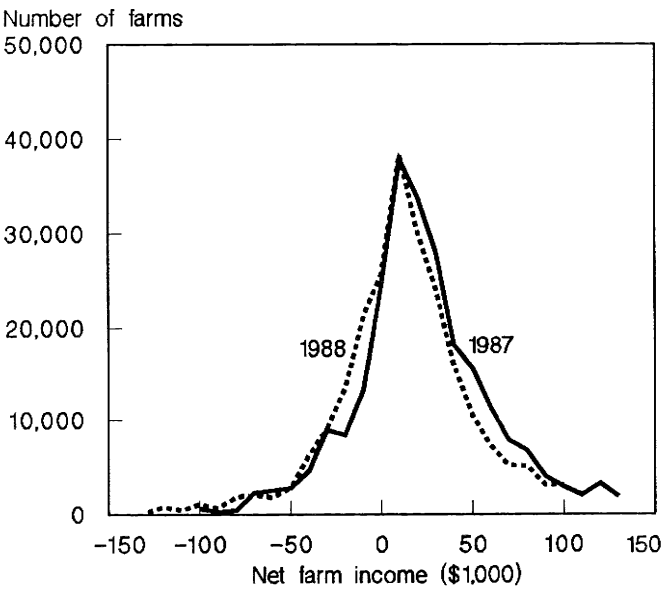


Figure 4
Actual distribution of net farm income

The distribution is similar for both years, with a small difference in mean.



Source: U.S. Dept. Agr., Farm Costs and Returns Survey.

Farm Income Decreased in the Drought Region

All economic size groups and major production specialties in the drought region showed a decline in income.

Net cash farm income is defined as the difference between gross cash income and cash expenses (cash flow). Net farm income includes inventory change, depreciation, imputed rental value of dwellings, and other noncash income items associated with a farm operation (cash flow plus capital consumption). The marked similarity in the pattern of net cash income and net farm income in both the drought and nondrought regions indicates that while the 1988 drought reduced net cash income, it did not have a significant effect on the ability of farms to survive financially in the long run. Table 1 shows that although farm operations suffered income losses, the drought did not cause widespread catastrophic financial damage.

Average net farm income for all commercial farms in the United States increased from $45,845 in 1987 to $49,636 in 1988. However, average net farm income for the drought region dropped from $38,122 in 1987 to $28,899 in 1988 (table 1). Farmers in the nondrought areas were able to take advantage of higher prices and saw annual average net farm income rise from $50,967 in 1987 to $62,822 in 1988.

Net farm income rose in the nondrought region in 1988 on specialty farms with cash grain or beef, hogs, and sheep but fell in the drought region on all specialty farms. By sales class, net farm income rose for the highest and lowest classes in the nondrought region but fell for the middle sales classes in the nondrought region and all sales classes in the drought region.

Table 1—Comparison of net farm income and net cash farm income, commercial farms

The patterns of net farm and net cash farm incomes are not greatly dissimilar.

Item	Net farm income			Net cash farm income		
	1986	1987	1988	1986	1987	1988
			Dollars			
Nondrought area:						
All farms	28,076	50,967	62,822	40,085	45,768	57,829
Production specialty—						
Cash grain	17,383	34,223	38,713	31,315	33,118	34,661
Beef, hogs, sheep	8,740	44,573	69,727	15,055	32,137	57,869
Dairy	30,446	48,308	41,506	40,584	43,961	43,278
Sales class—						
$500,000 or over	147,208	297,828	463,458	250,951	318,800	482,049
$250,000-$499,999	85,594	92,623	81,871	108,278	89,837	82,878
$100,000-$249,999	25,924	47,254	46,530	36,447	46,211	43,903
$40,000-$99,999	10,547	26,558	31,436	12,938	19,684	24,828
Drought area:						
All farms	21,622	38,122	28,899	35,720	40,784	31,194
Production specialty—						
Cash grain	17,957	37,086	25,803	36,007	39,281	27,294
Beef, hogs, sheep	27,734	48,384	27,359	35,680	48,648	27,283
Dairy	18,979	29,254	27,128	31,708	32,857	34,733
Sales class—						
$500,000 or over	126,722	185,925	111,693	181,680	196,378	89,277
$250,000-$499,999	47,038	83,116	59,421	80,759	96,186	68,617
$100,000-$249,999	22,586	38,482	32,745	39,120	43,867	32,303
$40,000-$99,999	12,505	23,223	14,244	19,375	23,066	13,297

Drought Region Maintained Profitability

The share of profitable farms in the drought region remained high.

Historically, the region affected by the 1988 drought has had a higher proportion of farms with positive net cash income than has the Nation as a whole. In 1988, the proportion of farms with positive net cash income dropped in both the drought and nondrought regions. However, the historical relationship held in 1988, even though the proportion with positive net cash income in the drought region dropped slightly more than in the nondrought region. Although normal cash expenses were incurred for the production of low yields, high commodity prices and sales of inventory enabled farmers to generate enough cash income to maintain the relatively higher proportion of positive net cash farm incomes in the drought region.

Although still remaining higher than in the nondrought region, the share of farms with positive net cash farm income decreased somewhat in the drought region in 1988. The fraction of farms with positive net cash income in the nondrought region dropped 3 percent to 72 percent in 1988. In the drought region, that fraction which had positive net cash income dropped 10 percent to 76 percent. In the nondrought region, the proportion of farms with positive net cash farm income in 1988 fell below the 1987 level and matched the 1986 level (table 2). But, the drought region in 1988 experienced a lower proportion of positive net cash income farms than in both preceding years.

The marked similarity of the patterns of net cash farm income and net farm income shows again that the drought did not inflict long-term financial damage.

Table 2—Comparison of proportion of farms with positive net income and net cash income

Here, also, the patterns of net farm and net cash farm incomes diverge only slightly.

Item	Net farm income			Net cash farm income		
	1986	1987	1988	1986	1987	1988
			Percent			
Nondrought area:						
All farms	67	78	78	72	74	72
Production specialty—						
Cash grain	65	79	78	74	78	81
Beef, hogs, sheep	58	75	72	61	69	59
Dairy	78	85	81	84	79	85
Sales class—						
$500,000 or over	71	74	78	81	80	83
$250,000-$499,999	74	81	83	83	85	85
$100,000-$249,999	73	81	82	79	85	83
$40,000-$99,999	70	82	77	76	78	75
Drought area:						
All farms	71	80	73	83	84	76
Production specialty—						
Cash grain	66	79	70	80	82	74
Beef, hogs, sheep	75	81	69	83	87	72
Dairy	77	86	82	90	89	89
Sales class—						
$500,000 or over	79	80	71	88	83	72
$250,000-$499,999	69	79	73	86	86	85
$100,000-$249,999	72	82	73	87	86	81
$40,000-$99,999	73	82	77	82	86	78

Drought Area Farms Exhibited Range of Income Declines from 7 to 30 Percent

But, depending on specialty, the nondrought region also suffered through higher feed prices.

Most farms in the drought region are specialty farms, defined as farms with 50 percent or more of gross income coming from production of a single commodity. The specialties found here are cash grain, livestock (beef, hogs, and sheep), and dairy products. In the drought region, farms in all three of these specialties showed a decline in profitability from 1987, with average net farm income from cash grain farms dropping 30 percent, while that of beef, hogs, and sheep went down 43 percent, and that of dairy products, 7 percent.

But, dairy farms in the nondrought regions showed an even larger decrease (14 percent) in net farm income than did those dairy farms in the drought region. Perhaps this decrease was caused by reduced feed availability nationwide, made worse by a higher proportion of feed being used in the nondrought area. Forces other than the drought may have determined dairy income. This question, however, is beyond the scope of this study.

Net farm income of cash grain producers increased slightly while net farm income of beef, hog, and sheep producers increased 56 percent in the nondrought region. In 1986 and 1987, net farm income statistics for cash grain and livestock kept the same relation to each other between the drought and nondrought regions. These changes in the historical pattern appear related to the drought.

In both the drought and nondrought regions, the proportion of cash grain, livestock, and dairy farms with positive net farm income decreased in each specialty. The proportion of cash grain and livestock farms in the drought region with positive net farm income decreased more than the proportion of those in the nondrought region. But, the general decrease shows that the nondrought region also suffered, whether directly or indirectly, through higher feed prices.

Government Payments Declined

Even with drought disaster payments, total direct Government payments declined from $16.8 billion in 1987 to about $14 billion in 1988.

The proximate cause for the decline in Government payments was higher commodity prices which led to deficiency payments decreasing from $11.5 billion in 1987 to $9.8 billion in 1988 (payments received in the calendar year). In the nondrought region, average direct payments were reduced by 21 percent from $24,506 in 1987 to $19,254 in 1988. The average direct payment in the drought region decreased 14 percent, from $25,231 in 1987 to $21,773 in 1988.

The share of farms receiving direct Government payments in the drought region was 82 percent, compared with only 54 percent in the nondrought regions (table 3). The difference is attributable to the concentration of cash grain and livestock farms in the drought region. Nationally, cash grain farms have a high rate of participation in Government programs. In the drought region, 97 percent of cash grain farms received direct payments, and 94 percent did in the nondrought region. Of the beef, hog, and sheep farms in the drought region, 81 percent received direct Government payments, and only 46 percent in the nondrought region.

For specialty farms in the drought region, average direct Government payments ranged from $31,175 for wheat to $11,040 for dairy farms. Government payments as a percentage of gross cash income were larger for wheat and corn farms than for farms with other specialties. Wheat farms received the largest average payment, and this payment made up 28.7 percent of their average gross cash income. There is a similar pattern for average payment and income share for corn farms, which received 24.8 percent of their gross cash income in direct Government payments. Government payments constituted a much smaller share of gross cash income received by livestock operations. Beef farms averaged 7.5 percent of gross cash income from Government payments, hog farms averaged 8.0 percent, and dairy farms received only 5.8 percent of their gross cash income from such payments.

The average farm in the drought region took advantage of higher commodity prices and redeemed CCC loans. The average per farm change in the value of CCC loans in 1988 was -$6,453 for the drought region, and $745 for the nondrought region. Price increases for wheat and corn above the loan rate led to market sales and CCC redemptions. The result was a drop in the value of average CCC loans for wheat farms of $28,232 and corn farms of $15,388. Livestock operations in the drought area also reduced the value of CCC loans: for beef farms, CCC loans changed -$3,900; for hog farms, -$6,141; and for dairy farms, -$1,981.

Table 3—Government payments: Nondrought area and drought area with drought area specialty farms, 1988

Grain payments greatly exceeded those for livestock in the drought area.

Area/specialty	Average direct payments	Payments as percentage of gross cash income	Change in value of CCC loans	Percentage of farms receiving direct payments
	Dollars	*Percent*	*Dollars*	*Percent*
Nondrought area	19,254	5.8	745	53.9
Drought area	21,773	12.5	-6,453	81.5
Wheat	31,175	28.7	-28,232	94.8
Corn	24,724	24.8	-15,388	92.9
Beef	22,610	7.5	-3,900	80.8
Hog	16,634	8.0	-6,141	80.2
Dairy	11,040	5.8	-1,981	69.0

Debt/Asset Ratios: Drought Did Not Increase Debt

Farms in all areas improved their solvency position. The share of no-debt farms increased in the drought region.

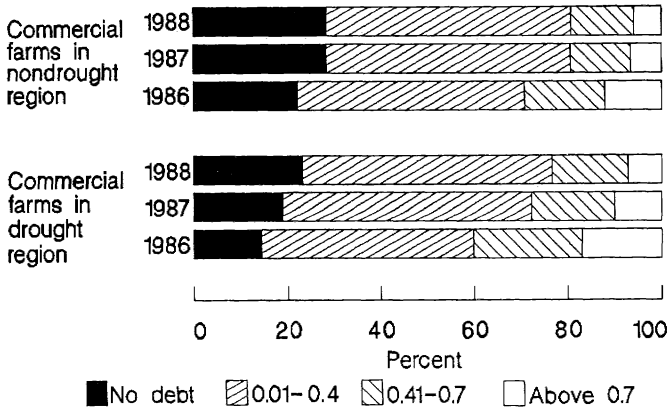
Farms in all areas of the country continued to improve their solvency position (measured by debt/asset ratio) in 1988, despite drought conditions.

Figure 5 makes clear that the distribution of farms by debt/asset ratio is very similar between drought and nondrought regions. The trend toward improved solvency position continued in both regions, with the rate of improvement actually higher in the drought region. The average debt/asset ratio in the drought region was 0.21, compared with 0.14 in the nondrought region. The share of farms with no debt in the drought region increased by almost 23 percent, while the share in the nondrought region remained constant.

The proportion of debt held by farms with high levels of debt (debt/asset ratio over 0.7) compared to assets continued to decrease (fig. 6). Farms in the drought region outperformed those in the nondrought region by decreasing the share of debt held by farms with high debt by 34 percent. The share of debt held by farms with high debt/asset ratios in the drought region decreased more than in the nondrought region. The continued improvement in solvency position in the drought region shows that in the short run most farms did not increase debt to survive the drought.

Figure 5
Distribution of farms by debt/asset ratio category

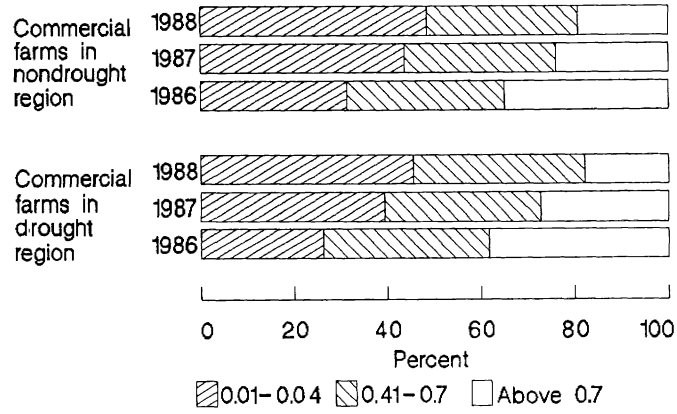
Farms in both drought and nondrought areas improved their solvency position.



Source: U.S. Dept. Agr., Farm Costs and Returns Survey.

Figure 6
Distribution of debt by debt/asset ratio category

High levels of debt continued to decrease in drought as well as nondrought areas.



Source: U.S. Dept. Agr., Farm Costs and Returns Survey.

Farm Financial Characteristics Differed Little Between Drought and Nondrought Regions

Vulnerable farms in the drought region paid slightly more interest per dollar of gross income and had more debt per farm than those in nondrought States.

Vulnerable farms in the nondrought region paid 17 cents of each dollar of gross income for interest on debt, while vulnerable farms in the drought region paid slightly more—20 cents. Vulnerable farms in the drought region had CCC loans almost equal to the value of their crop inventory, an indication of maximum borrowing (table 4).

In the drought region, there was very little difference between the major specialty farms in the interest/gross income ratio: for cash grain the ratio was 0.10, 0.08 for dairy, 0.08 for beef, and 0.07 for hogs.

The average rate of return on hog production in the drought region was 0 percent. The other specialties fared somewhat better, with dairy at 0.02, cash grain at 0.04, and beef at 0.05 percent. Hog producers faced both increased feed costs and falling prices. Beef producers absorbed increased feed costs but benefited from strong prices, as did cash grain farms to an even greater extent.

Table 4—Average financial characteristics by net farm income and debt/asset ratio position, 1988

Vulnerable farms in the drought region paid only 3 percentage points more on their debt than those in the nondrought region.

Item	Favorable		Vulnerable		All farms	
	Nondrought	Drought	Nondrought	Drought	Nondrought	Drought
			Percent			
Percentage of farms	64.76	58.95	6.29	9.22	100.00	100.00
			Dollars per farm			
Financial:						
Crop sales	77,668	44,648	52,575	39,385	74,584	44,068
Livestock sales	69,196	70,147	99,818	68,558	75,187	74,795
Gross cash farm income	168,609	131,695	167,435	124,100	171,641	135,999
Noncash adjustments	24,220	18,940	1,427	-2,199	18,958	11,931
Gross farm income[1]	192,829	150,635	168,862	121,901	190,599	147,930
Total expenses	125,939	101,138	229,430	156,274	148,949	121,571
Net farm income	66,890	49,497	-60,568	-34,373	41,650	26,359
Nonfarm income	29,584	15,836	30,052	16,746	31,521	15,864
Farm assets	748,407	528,299	457,999	395,533	738,906	508,759
Land and buildings	457,930	309,669	268,759	234,278	465,480	299,210
Farm equipment	84,266	83,806	66,384	73,189	80,455	84,988
Livestock inventory	63,022	56,495	62,107	48,339	63,509	54,426
Crop inventory	25,500	31,068	12,886	18,276	21,264	28,094
Purchased inputs	4,513	4,555	5,622	3,746	4,405	4,716
Other assets	63,759	39,532	25,296	15,403	60,316	34,429
Farm operator debt	59,625	58,784	308,860	256,448	107,158	109,808
Commodity Credit Corporation:						
Crop loans	3,716	5,158	2,978	18,147	3,558	8,307
Net worth	688,782	469,514	149,139	139,085	631,748	398,950
			Ratios			
Debt to asset	0.08	0.11	0.67	0.65	0.15	0.22
Return on assets	.07	.06	-.12	-.08	.04	.03
Operator expenses/gross income	.68	.67	1.27	1.14	.79	.79
Interest/gross income	.04	.05	.17	.20	.06	.08
			Bushels per acre			
Yields:						
Corn	92	75	70	66	89	72
Wheat	45	35	44	28	44	34
Soybean	28	30	23	27	28	29

[1]This excludes contracting.

Summary: Drought Scarcely Changed Farms' Financial Pattern

Farms in both drought and nondrought regions showed a stable financial position in 1988, despite the drought.

In summary, the effects of the drought—even as extreme and widespread as was this 1988 drought—were less harmful than might have been supposed. Farms in both the drought region and the rest of country showed a stable pattern of financial performance in 1988 after achieving substantial gains in 1987 (table 5).

The financial position of a farm is measured here by a combination of income classifications and debt/asset ratio classifications. A farm with a favorable financial position has positive income and a low debt/asset ratio (0.0 to 0.4). A vulnerable farm has negative income and a high debt/asset ratio (above 0.4). The share of farms considered vulnerable decreased sharply from 1986 to 1987, but edged back up in 1988.

In the net farm income category of table 5, the share of farms in a favorable financial position remained at about 68 percent in the nondrought region and 62 percent in the drought region. The net cash farm income measure showed a slight decrease as a consequence of a drought-constricted cash flow.

Even with lower incomes, farmers in the drought region continued to improve their debt position (as measured by debt/asset ratio). A major factor in their improvement was the continued upward trend in land values. Higher land values lower the debt/asset ratio, and improve the overall debt position by this measure. The same trend may be seen in the nondrought region, although to a lesser extent. Even though there was a slight increase in the share of vulnerable farms in 1988, the level remained substantially below the share in 1986 and earlier years in the 1980's.

The distribution of farms in the nondrought region as measured by the combined income/solvency indicator remained approximately the same in 1987 and 1988. Distribution of farms by financial position in the drought region showed a very similar pattern to that of the nondrought region. The majority of farms are in a favorable financial position, with less than 8 percent vulnerable. The 1988 distribution by financial position remains about the same as that in 1987 in both regions, no matter which income measure is used.

Although net farm income decreased in the drought region, farms in all areas of the country continued to improve their solvency position (measured by debt/asset ratio) in 1988. Lower direct Government payments were made to farms in the drought region in 1988 than in 1987 in spite of disaster relief. The average farm in the drought region survived financially by drawing down inventories and by taking advantage of higher commodity prices to redeem CCC loans.

Table 5—Distribution of farm operators by financial position

A stable financial position marked both drought and nondrought regions.

Item	Nondrought region farms				Drought region farms			
	Favorable	Marginal income	Marginal solvency	Vulnerable	Favorable	Marginal income	Marginal solvency	Vulnerable
				Percent				
Net farm income:								
1986	56.0	15.0	18.1	10.9	49.1	10.8	26.3	13.8
1987	69.1	11.8	14.4	4.7	62.8	9.4	21.5	6.2
1988	68.0	12.7	14.1	5.2	62.2	14.6	15.4	7.9
Net cash farm income:								
1986	57.3	13.7	19.9	9.1	54.3	5.5	31.5	8.6
1987	64.8	16.0	13.7	5.4	63.3	9.0	22.9	4.9
1988	61.5	19.1	13.8	5.5	62.8	14.0	16.9	6.4

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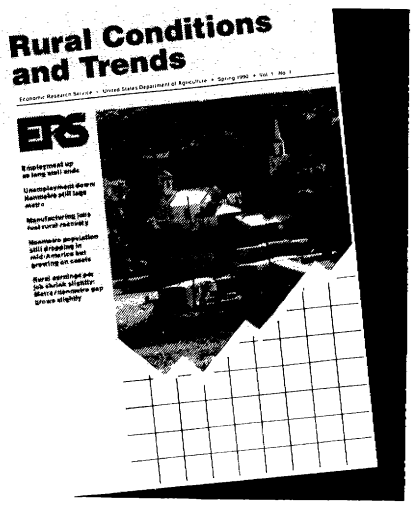

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