Fred K. Hines, Bernal L. Green, Mindy F. Petrulis

Vulnerability to Farm Problems Varies by Region

Farmers' financial problems translate to areawide distress, at least in the short run—more for some farming regions, States, and communities than others. The vulnerability of an area to the financial crisis in farming depends on the financial conditions of its farmers, its dependence on farming, especially on export-sensitive crops, and the strength of its nonfarm economy.

We discuss here these factors and show which areas are most affected by them.

The authors are economists in the Agriculture and Rural Economics Division's Agriculture and Community Linkages Section. This article is based on a speech delivered to USDA's Agricultural Outlook Conference, Washington, DC, December 1985.

Farm Debt-Load in Agricultural Heartland

One of the best indicators of a farmer's financial position is the amount of debt carried compared with the value of the farm assets. The value of farm assets, especially farmland, is determined by the profitability of farming. Falling farm prices and rising costs have sharply reduced the profitability of farming in recent years. As a result, the value of farmland has declined and farm debt as a proportion of assets has risen.

The proportion of farmers under severe financial stress, as indicated by high debt loads as of December 31, 1984, was highest in the Northern Plains, Lake States, and Corn Belt, according to USDA's Farm Costs and Returns Survey. In those regions, a fourth of the farms had debts amounting to 40 percent or more of the value of the farm's assets. The high proportion of financially stressed farms in those regions is explained in part by the large number of cash grain and dairy farmers who have been particularly hard hit by lower commodity prices or higher interest costs.

U.S. farmland values rose 37 percent during 1977-81, then declined by 19 percent during 1981-85. The Corn Belt, Northern Plains, and Lake States incurred losses of 33 percent or more (fig. 1). While nationwide percentage increases in farmland values during the earlier period tended to be somewhat uniform, declines since 1981 have been most dramatic in the major States of the Midwest.

In Iowa and Nebraska, the average value per acre of farmland dropped by more than 45 percent. There, as well as in Illinois, Indiana, Kansas, Missouri, and Ohio, declines in land values more than offset the gains of 1977-81. For instance, the average per acre value of farmland in the Corn Belt rose by $652 during 1977-81, and declined by $824 during 1981-85.

The increase in financial distress in the farm economy creates problems not only for farmers but also for farm-related businesses and rural communities. For example, rural banks and credit institutions in farm-dependent areas are faced with a growing volume of problem loans; local businesses suffer losses as farmers are unable to pay for goods and services purchased on credit; and rural communities that rely on farmland for their property tax base face budgetary problems and possible cuts in social services.

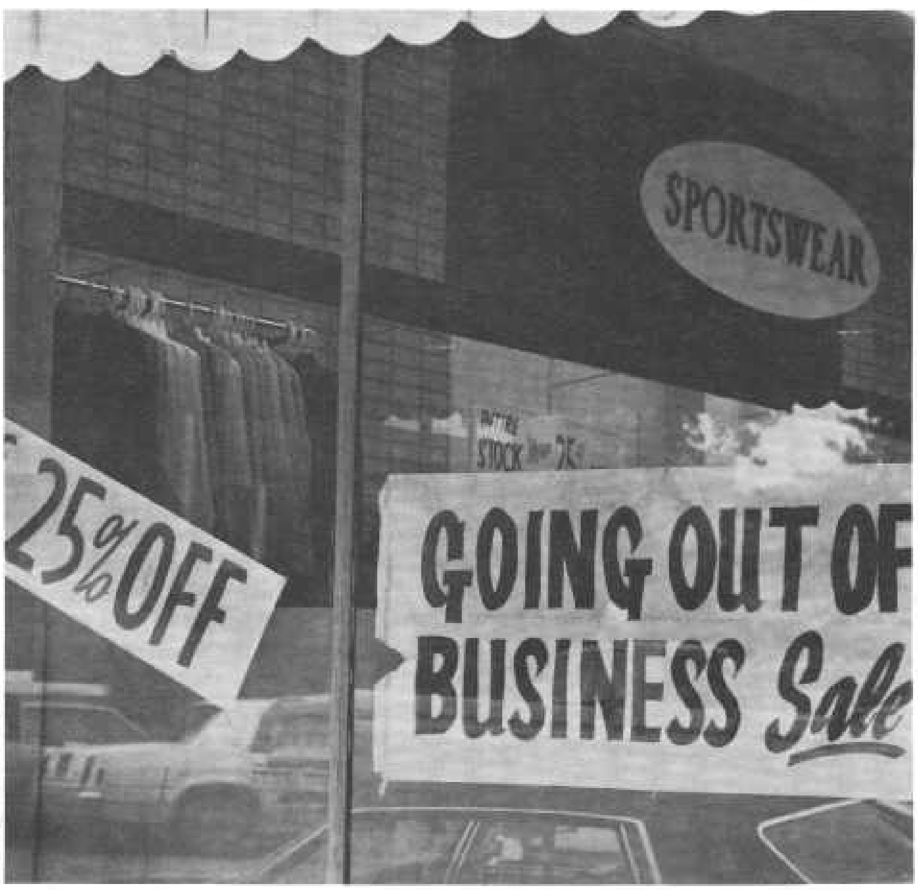


Photo by J. Norman Reid

About 60 percent of farm family income nationally comes from off-farm jobs. Poor farm finances can start a cycle that leads to less nonfarm business in nearby towns, layoffs, and further reductions in income for the farm family.

Farming a Major Industry in Northern Plains and Corn Belt

In 702 nonmetro counties (out of a total of 2,443), farm-related activities constituted at least 20 percent of all county earnings during the 1975-79 period (fig. 2).

These counties are hit harder by deteriorating economic conditions in agriculture than other counties. About a third of the Nation's 2.3 million farmers, and 13 percent of the nonmetro population live in these farm-dependent counties. In value terms, they produce a third of the Nation's farm products. Nearly half of these counties are located in the Northern Plains (185 counties) and the Corn Belt (134 counties). The economies of these farming areas are based upon a capital-intensive farming industry, significantly affected not only by soil productivity and weather, but also by interest rates, foreign exchange rates, and national agricultural policy.

Export Sensitive Commodities Concentrated in Corn Belt, Delta

Decreased foreign demand, partly due to increased production by other countries and the strong U.S. dollar, reduced commodity prices and farm income in the 1980's. States and communities that depend primarily on export-sensitive crops (corn, wheat, soybeans, and cotton) have suffered the most. Reduced exports translated into a slowdown in overall economic activity. This, in turn, led to a loss of jobs (both farm and nonfarm) and increased pressures for people to move out of the distressed areas.

Production of export-sensitive farm commodities is heavily concentrated in the Corn Belt and Delta States. In 1982, seven States produced 75 percent of the U.S. corn crop, 66 percent of the soybean crop, and 57 percent of the wheat crop. Iowa, Illinois, and Indiana produced 48 percent of U.S. corn and 40 percent of U.S. soybeans. Iowa, by itself, produced 20 percent of U.S. corn and 15 percent of the soybeans. Within these major producing States, communities with little economic activity outside the farm sec-

Figure 1
Change in farmland values by farm production region

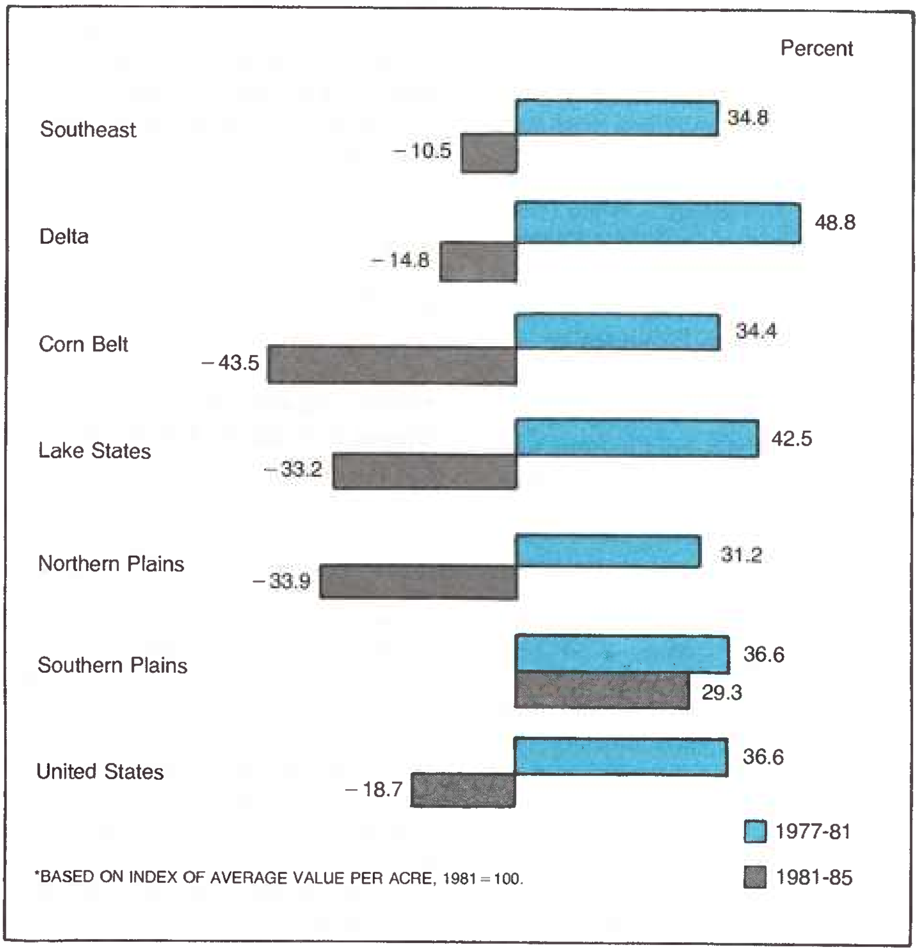
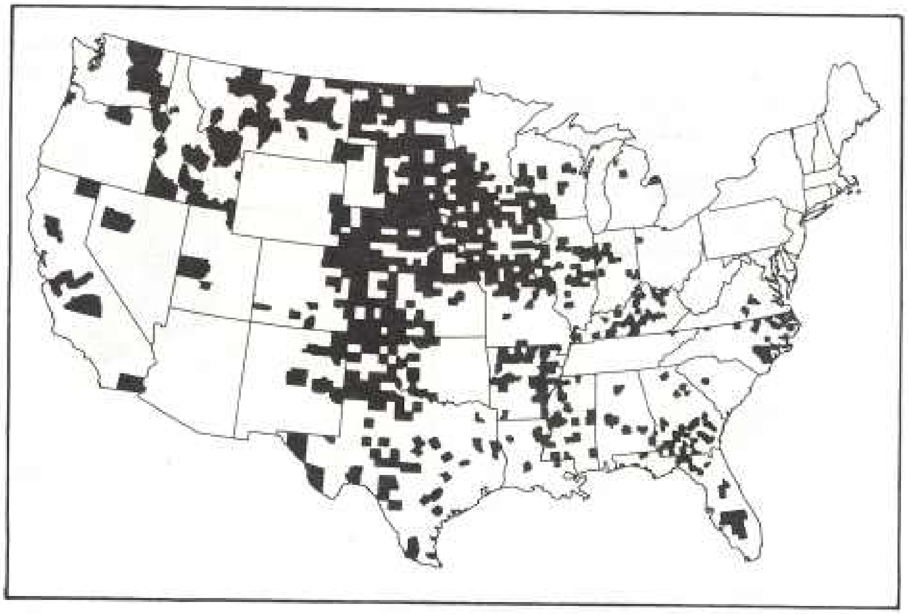


Figure 2
Farming-dependent counties



Counties are defined as those with 20 percent or more of labor and proprietary income from farming 1975-79 tor are hard pressed to find new options for economic growth.

The farm-dependent counties in these States face the most acute financial situation. Export-oriented commodities account for nearly half of all farm sales in these areas (fig. 3). By contrast, export-oriented commodities in the farm-dependent counties of the Southeast account for only about 10 percent of total farm sales.

Strength of Farm Linkages to Other Local Industries

Agriculture's effect on the local nonfarm economy depends not only on the size of the farm sector but also on how closely it is linked to the nonfarm sector. The impact is less where the role of production agriculture in the local economy is small. It is also less where farmers typically bypass local communities to purchase inputs or household items in more distant trade centers, or where most farm products and livestock leave the local area for processing.

For every 100 farm production workers (farm operators and hired farmworkers) in U.S. nonmetro areas, 50 additional workers are directly linked to agricultural inputs, processing, and marketing industries (fig. 4). In the 702 farm-dependent counties, these interindustry linkages within the agricultural complex are only half as strong. This weak link suggests that farmers in these areas look to other areas for many goods and services and these areas produce farm commodities requiring less local processing and marketing activities than farm products in general.

Strong Nonfarm Economy, Stable Population Essential to Survive Crisis

Economic stress stemming from problems in agriculture can be partially offset by off-farm employment. This is especially true for the small and medium-size farm operators who rely on the nonfarm economy for their principal source of employment and income. Farm families' dependence on income earned from off-farm jobs increased in the United States from an average of about 40 percent in 1960 to around 60 percent in 1981. Reliance on off-farm income obviously dampens the impact of farm-related stress.

But the importance of off-farm income varies considerably from one region to another. In the more densely populated regions with a relatively large number of small farms (the Northeast and the South), off-farm income accounted for 64 percent of total farm income in 1979. By contrast, off-farm income provided only 47 percent of farm family income in the sparsely settled Midwest and West.

In 1982, nearly 38 percent of all U.S. farm operators worked 200 days or more in off-farm jobs (fig. 5). But in many farm-dependent areas (particularly in the Northern Plains and Corn Belt), off-farm jobs are hard to find, or, if available, the demands of the farm operation prevent farm operators from taking them.

In farm-dependent counties of the Lake States, a low percentage of farmers have off-farm work, probably because most of these farmers specialize in dairy operations, which require full-time attention. In the farm-dependent counties of the Southeast, on the other hand, the proportion of farmers who worked off the farm was much higher than the national average. Nonfarm alternatives are more prevalent in the Southeast because of changes in the in-

Figure 3
Dependence on export-oriented commodities, 1982

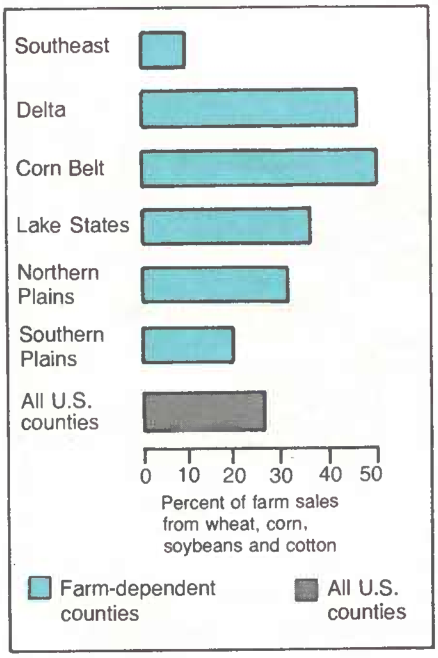


Figure 4
Agriculture-related employment, 1982

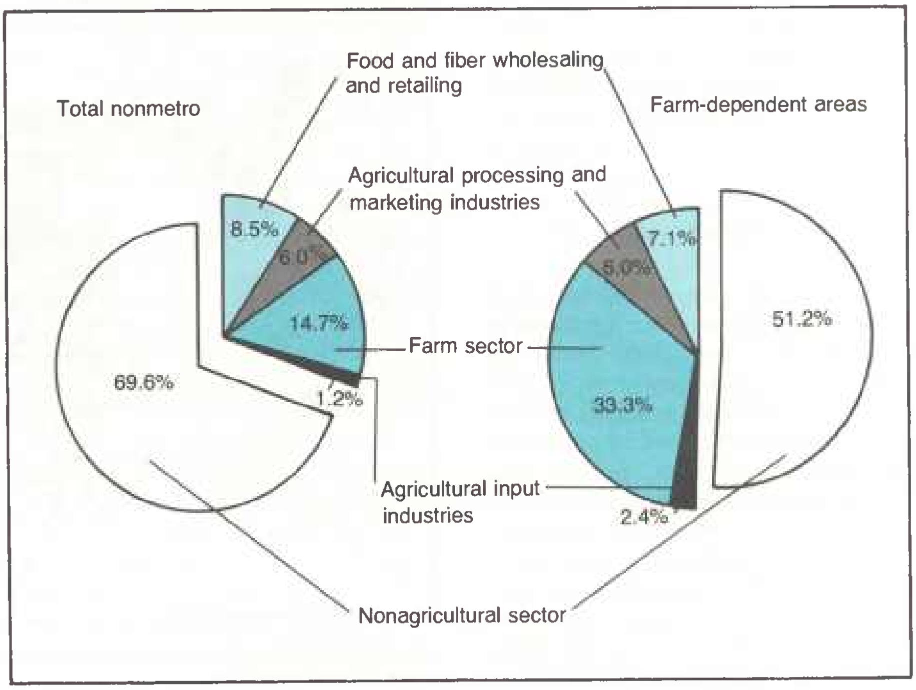


Figure 5
Dependence on off-farm employment, 1982

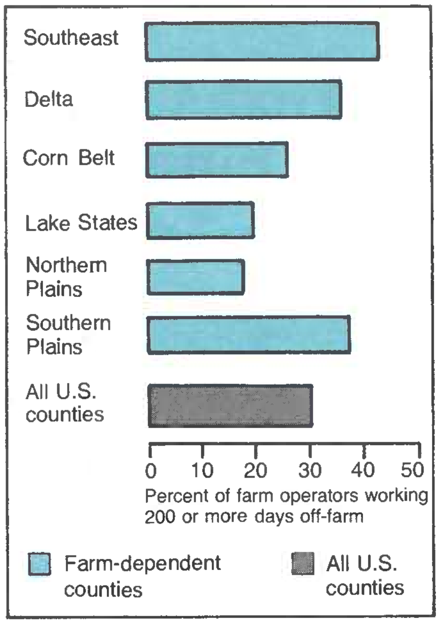
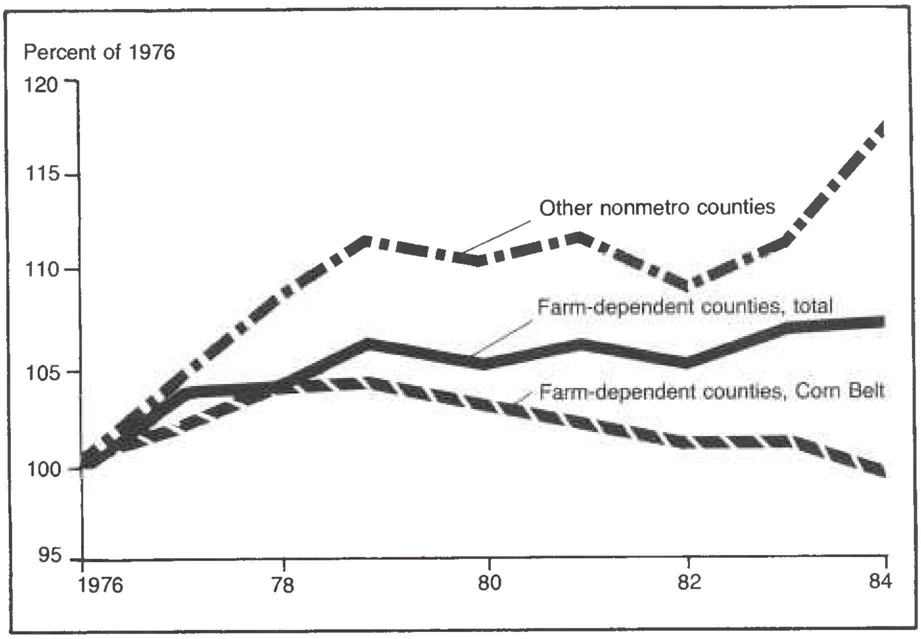


Figure 6
Overall employment growth



dustrial structure there during the 1960's and 1970's.

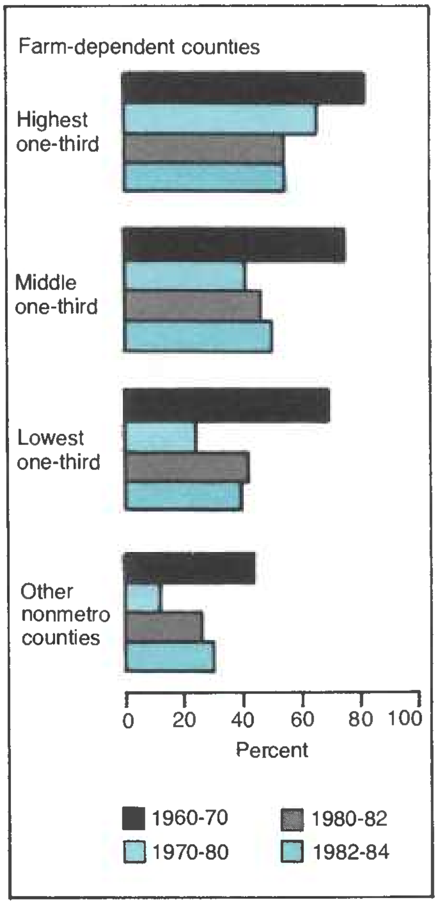
Large numbers of workers have moved out of farming because of the growth of attractive nonfarm jobs. But overall economic growth during the early 1980's was extremely weak in the farm-dependent areas. This is especially true, for example, in the farm-dependent counties of the Corn Belt, where overall employment has declined since 1979 (fig. 6). Thus economic revival in the farm-dependent areas has been stymied not only by the depressed farm sector but also by the slow recovery of manufacturing and other industries from the 1982 recession. Slow growth in nonfarm industries has made it difficult for farmers who rely on the nonfarm economy to keep their nonfarm jobs, and for workers displaced from farming and farm-related businesses to find new jobs.

A major result has been the continued loss of population in many farm-dependent areas. For instance, more than half of the Nation's counties most dependent on farming (the third with the highest proportion of earnings coming from farming) lost population during 1960-70, 1970-80, 1980-82, and 1982-84 periods (fig. 7). Even during the 1982-84 upturn, almost 60 percent of these counties lost population. A substantial proportion (40 percent) of the less farm-dependent counties also recorded population losses during 1982-84. By contrast, among counties not heavily dependent on farming ("other nonmetro counties" in fig. 7), less than 30 percent lost population during the 1970's and early 1980's.

Population change by region presents a more diverse picture (fig. 8). The Lake States have the highest proportion (73 percent) of farm-dependent counties with population losses; the Southeast registered one of the lowest (31 percent). Nevertheless, the general pattern appears to be that the farm-dependent counties have been and still are much more likely to lose population than other nonmetro counties.

How a rural area adjusts to lower commodity prices, lower farmland values, and higher real interest rates is affected by several factors, mainly the area's dependence on farming, its exposure to export-sensitive crops, the strength of its farm sector's links to the local agribusiness sector, and the overall strength of its economy. Rural communities that depend heavily on farming, like those in the Midwest and Delta, are affected the most. But even

Figure 7
Proportion of counties losing population



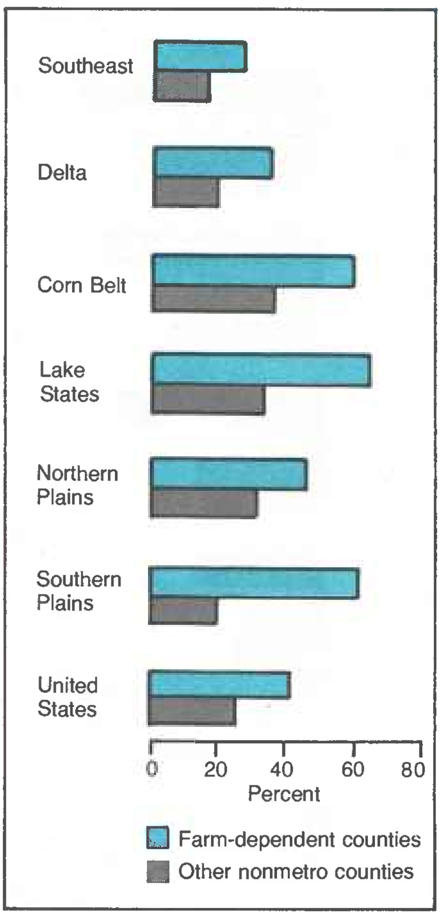
in the Midwest, effects will be uneven because dependence on agriculture is so varied.

Transition to a more diversified economy in farm-dependent counties is made difficult by their small population, their distance from most major urban markets, and their history of population decline, which has left them with a high proportion of elderly.

Over the past 30 years, the economic structure of rural America has become more diversified, significantly reducing its overall vulnerability to changes in natural resource markets, commodity prices, and farm conditions. Most rural areas' economic futures are now tied more to overall national growth than to any one sector's success or failure. That is much less true, however, for farm-dependent rural counties. RDP

Figure 8

Proportion of counties losing population, 1982-84



F. Larry Leistritz, Brenda L. Ekstrom, Arlen G. Leholm, Steve H. Murdock, and Rita R. Hamm

North Dakota and Texas Farmers Who Are in Financial Stress

Many American farmers are facing their most severe financial crisis since the 1930's. An unprecedented proportion of farmers may be forced to quit within the next 5 years.

To see how farmers might adjust to the farm financial crisis and how those adjustments might affect farm-dependent rural communities, we conducted a telephone survey of farmers in North Dakota and Texas. We asked them about their finances, their families (age, number of children, and so on), and their off-farm working experience. After initial screening, 1,953 farmers (933 in North Dakota and 1,020 in Texas) remained who were younger than age 65, considered farming their primary occupation, and sold $2,500 or more of farm products in 1984.

Larry Leistritz is a professor and Brenda Ekstrom is a research assistant in the Department of Agricultural Economics and Arlen Leholm is an associate professor of Agricultural Economics—Extension, North Dakota State University, Fargo. Steve Murdock is a professor and Rita Hamm is a research associate in the Department of Rural Sociology, Texas A&M University, College Station. This article is based on a speech delivered at USDA's Agricultural Outlook Conference in Washington, DC, December 1985.

Good Farm Sales but Poor Bottom Line

About 72 percent of the North Dakota farms (table 1) had gross incomes in the range of $40,000 to $250,000, and 54 percent of Texas farms fell into this range. Although net cash farm income averaged $14,987 in North Dakota and $13,095 in Texas, 22 percent of farm operators in North Dakota and about

Table 1—Gross farm income and net cash farm income of North Dakota and Texas farmers, 1984

Item	North Dakota	Texas
	Dollars	
Gross farm income (average)	105,317	147,907
	Percent	
Distribution of income:		
Less than $40,000	21.1	30.5
$40,000 to $99,999	40.1	28.8
$100,000 to $249,999	31.6	25.5
$250,000 and over	7.2	15.1
	Dollars	
Net cash farm income (average)	14,897	13,095
	Percent	
Distribution of income:		
Zero or negative	22.2	49.8
$1 to $9,999	21.6	21.0
$10,000 to $19,999	24.9	9.2
$20,000 to $49,999	23.8	13.4
$50,000 and over	7.4	6.8