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**ABSTRACT**

Farming-dependent counties are some of the most economically distressed parts of nonmetropolitan America because their inability to diversify economically has left them vulnerable to changes in natural resource markets, commodity prices, and farm conditions. The Midwest has been hit hardest. The greatest proportion of highly leveraged farms is in the Northern Plains, Lake States, and Corn Belt, where more than 25% of the farms are saddled with debt/asset ratios of 40% or more. Many of the 702 farming-dependent counties among the 2,443 nonmetro counties have been unsuccessful in attracting enough nonfarm jobs to fully offset farm job losses. Those that have succeeded are more densely settled, have more young residents, and are economically diverse. Farm financial stress brought about a steady population loss in 60% of the nation's nonmetro farming-dependent counties between 1980 and 1984, sharply contrasting with population drops in only 29% of other nonmetro counties. Because the farm crisis and the resulting stress for rural governments may turn out to affect entire regions, an argument exists for the Federal Government to play a role in helping to restructure the farm sector and to assist those farmers who must leave farming. (JHZ)

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# How Is Farm Financial Stress Affecting Rural America?

Mindy Petrulis, Bernal L. Green, Fred Hines,  
Richard Nolan, Judith Sommer

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### **Abstract**

Recent farm financial stress has hit the Midwest the hardest because farming there is specialized and the Midwest's overall economy has not rebounded from the 1980-82 recessions. Though the number of farmers working off the farm is growing nationally, more plentiful nonfarm jobs in the Northeast and South have helped offset farmers' financial stress. Economically diversified and densely settled areas with younger residents have fared best, while heavily farming-dependent areas have fared worst and lost population. This report contains indepth comparisons of rural America's current economic health by region and by reliance on farming.

Keywords: Agribusiness, farm-nonfarm linkages, debt/asset ratios, diversification, metro, nonmetro, population, region.

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## Summary

Farming-dependent counties are some of the most economically distressed parts of nonmetropolitan America because their inability to diversify economically has left them vulnerable to changes in natural resource markets, commodity prices, and farm conditions. The Midwest has been hit hardest. This report contains in-depth comparisons of rural America's current economic health by region and by reliance on farming.

In the last few years, the farm sector has faced excess capacity, low commodity prices, dependence on export-oriented crops coupled with shrinking foreign markets, downward pressure on farmland values, and persistently high debt levels. Nonmetro farming-dependent areas are feeling the impact the most because their economies can no longer offer adequate alternatives to displaced farmers and can ill afford the retail and service job losses bound to accompany outmigration. The report suggests that these areas will need help from State and Federal Governments to provide a stable environment for economic growth and to smooth adjustment to population decline.

Among the report's major findings:

### *Farm sector distress*

- The greatest proportions of highly and very highly leveraged farms are in the Northern Plains, Lake States, and Corn Belt. More than 25 percent of the farms there are saddled with debt/asset ratios of 40 percent or more; a high proportion also has serious cash flow problems.
- Farmland values have dropped the most (30 percent or more) in the Corn Belt, Lake States, Northern Plains, and Delta States. Post-1981 declines have been most dramatic in the major farm States of the Midwest.
- Farm financial stress has hit the Midwest (particularly the Corn Belt) the hardest, because farming there is specialized and its overall economy has not recovered as quickly from the 1980-82 recessions as the rest of the country.
- Dependence on major export-oriented farm commodities, whose exports have dropped 42 percent since their 1981 peak, continues to be greatest in the Midwest and the Delta States.
- Farming-dependent communities located closer to processing centers and urban markets appear to be fending off farm fiscal stress better than those more remote.

### *Nonfarm income*

- Nationally, off-farm income is on the rise, increasing from 40 percent of total farm family income in 1960 to 60 percent since 1981. The nonfarm sector appears to provide more of a safety net for economically stressed farm families in the Northeast and South than in the West and Midwest.

### ***Economic diversification***

- Many of the 702 farming-dependent counties among the 2,443 nonmetro U.S. counties have been unsuccessful in attracting enough nonfarm jobs to fully offset farm job losses. Those that have succeeded are more densely settled, have more young residents, and are economically diverse.

### ***Outmigration***

- Farm financial stress translated into a steady population loss in 60 percent of the Nation's nonmetro farming-dependent counties during 1980-84, sharply contrasting with population drops in only 29 percent of other nonmetro counties. The proportion of farming-dependent counties losing population ranged from 73 percent in the Lake States to 26 percent in Appalachia.

# How Is Farm Financial Stress Affecting Rural America?

Mindy Petrusis, Bernal L. Green,  
Fred Hines, Richard Nolan,  
and Judith Sommer\*

## Introduction

U.S. agriculture faces serious financial problems today. Many U.S. farmers are saddled with historically high debt/asset ratios. Some are so deeply in debt that costs of servicing loans will be too high for them to continue operating at recent levels. For regions, States, and communities that rely heavily on farming, financial stress of farmers translates to areawide distress, at least in the short run.

This report describes how American rural communities are faring in the wake of the farm sector's financial crisis. The report chronicles the role that agriculture has played in the economic development of the Nation and identifies regions which have most successfully provided nonfarm jobs to displaced farm operators. It identifies factors leading to the current farm crisis and indicates the dimensions of the problem. Pinpointing the location and characteristics of today's farming-dependent regions and counties, the report compares links between farming and farm-related industries in America's farm production regions. The report pulls together some of the latest information on factors which affect a region's or community's vulnerability to the current crisis in agriculture and on areas which are most ably diversifying their economic bases.

## Historical Perspective

History records the transformation of the Nation's economy from one based largely on agriculture to one which relied increasingly on manufacturing, and now to one oriented more toward service-producing industries. For over 200 years, millions of Americans raised on

farms or in small farm-based communities left their birthplace to find employment in urban industrial centers. The first official U.S. Census of 1790 found that 95 percent of Americans lived in rural areas. By 1980, only about 25 percent of Americans lived in rural areas, and the majority of these 59 million people followed economic pursuits outside agriculture. In fact, less than 10 percent of the rural population lived on farms, and these 5.6 million farm residents represented only 2.5 percent of the American population.

American agriculture has played a pivotal role in the Nation's economic development. Technological advances in farming have made U.S. farmers more productive but also more dependent on purchased inputs and processing and marketing services from the nonfarm economy. The efficiency gains greatly reduced demand for agricultural labor, creating a surplus of farm-born and farm-reared workers. This labor surplus provided resources for rapid growth of the nonfarm economy. However, labor demands varied among regions, and not all areas of the country were equally successful in providing nonfarm jobs for displaced farmers. Also, nonfarm demand for labor has varied over time. The growth of the large manufacturing cities in the Northeast and Lake States during the late 19th and early 20th centuries exemplifies the early successes that some areas had in creating new jobs for people leaving farming. Later, scattered metropolitan areas of the Midwest, South, and West also grew and attracted surplus labor from American farms and farm-based communities.

During most of the post-World War II period, many rural areas experienced employment decline or slow growth. In the 30 years between 1940 and 1970, the increase in total nonmetropolitan (nonmetro) employment was only three-fourths of the increase from 1970 to 1980 (table 1). Although many rural jobs opened up in manufacturing, construction, and government and service-producing industries, job losses in agriculture and other

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**Table 1—Employment change in nonmetro United States from 1940-80, by component<sup>1</sup>**

Industry	1940-50	1950-60	1960-70	1970-80
	<i>Million employees</i>			
Total	2.08	0.26	2.07	5.99
Resource-based	-1.11	-2.34	-1.32	.18
Service and government	1.82	1.68	2.20	4.41
Manufacturing and construction	1.36	.92	1.20	1.40

<sup>1</sup>Nonmetro status is based on designations applied by the U.S. Office of Management and Budget in 1974 (5).

Source: (21).

natural resource industries such as forestry and mining were largely offsetting. During this period, nonmetro areas were simply unable to generate sufficient jobs to absorb additions to their labor force. As a result, many rural people migrated to metropolitan (metro) areas to find employment. For example, in the 1950's, U.S. nonmetro areas gained only one manufacturing job for every three they lost in the natural resource industries.

By the 1960's, gains in manufacturing were beginning to balance losses in the natural resource industries. Finally, in the late 1960's and early 1970's, a large number of rural communities began to gain sufficient nonfarm jobs to more than offset their losses in farm employment. This turnaround in the total employment picture resulted from growth in manufacturing and service-producing jobs in rural America. Increases during the 1970's occurred in government and other service industries, manufacturing, construction, and even in the natural resource industries. Manufacturing employment continued to increase rapidly in nonmetro areas during the 1960's and 1970's while it faltered in metro areas. Associated with the rapid employment growth was the well-publicized revival of rural population growth (1).<sup>1</sup> In fact, the population growth rate was 1½ times higher in rural areas and small towns than in metro areas during the 1970's.

## Current Farm Financial Situation

The current financial distress among farmers, farm lenders, and farm-based regions and communities is rooted in excesses induced by the inflationary conditions of the 1970's and exaggerated expectations of worldwide demand for farm products. These excesses made it ex-

<sup>1</sup>Italicized numbers in parentheses refer to items in the References at the end of this report.

tremely difficult or impossible for many farmers to adjust to the radically different economic conditions of the 1980's.

Throughout the 1970's, U.S. agricultural capacity expanded rapidly as farmers took advantage of accelerating inflation and very low-to-negative real interest rates (real interest rate is the nominal interest rate minus the inflation rate) (fig. 1). During that decade, the value of the dollar declined, making American products for export progressively cheaper; agricultural exports more than quintupled (fig. 2). Farmers responded to these favorable conditions by borrowing heavily to invest in new capital equipment, new and costly production techniques, and increasingly expensive farmland. Farm debt rose, on average, more than 10 percent annually and tripled by 1980. Land values rose even faster, creating the expectation on the part of both farmers and lenders that investment in agriculture would always be highly profitable and relatively free of risk. In this environment of rapid expansion, U.S. agricultural production surged and agribusinesses and farm-based communities and regions prospered.

By the early 1980's, the forces that had driven economic expansion had reversed direction. Worldwide recession and the dollar's rise in value reduced the export demand for U.S. products. At the same time, relatively high loan rates for U.S. farm commodities, which set a floor under domestic prices of Government-supported farm commodities, provided incentives to other countries to substantially increase their grain supply. Former foreign customers entered the world market as U.S. competitors.<sup>2</sup> By 1985, these economic forces combined to sharply lower farm commodity prices and cut U.S. farm exports by 33 percent from their peak of 1981. On the cost side, farmers were hurt as stringent monetary controls curbed inflation, real interest rates climbed to unprecedented levels of 8-10 percent, and prices paid by farmers for farm inputs (including interest, taxes, and wage rates) began to exceed the prices they received for farm products (17).<sup>3</sup> As net farm income fluctuated and real net farm income declined at a steeper rate in 1980-85 than in the previous 5-year period, land values fell (15). The situation developed because of expectations that returns to farming would—or could—be even lower in the future. The debt levels that some farmers had reached during the 1970's were no longer sustainable by their farming operations nor were they acceptable to their lenders in the changed economic environment of the 1980's.

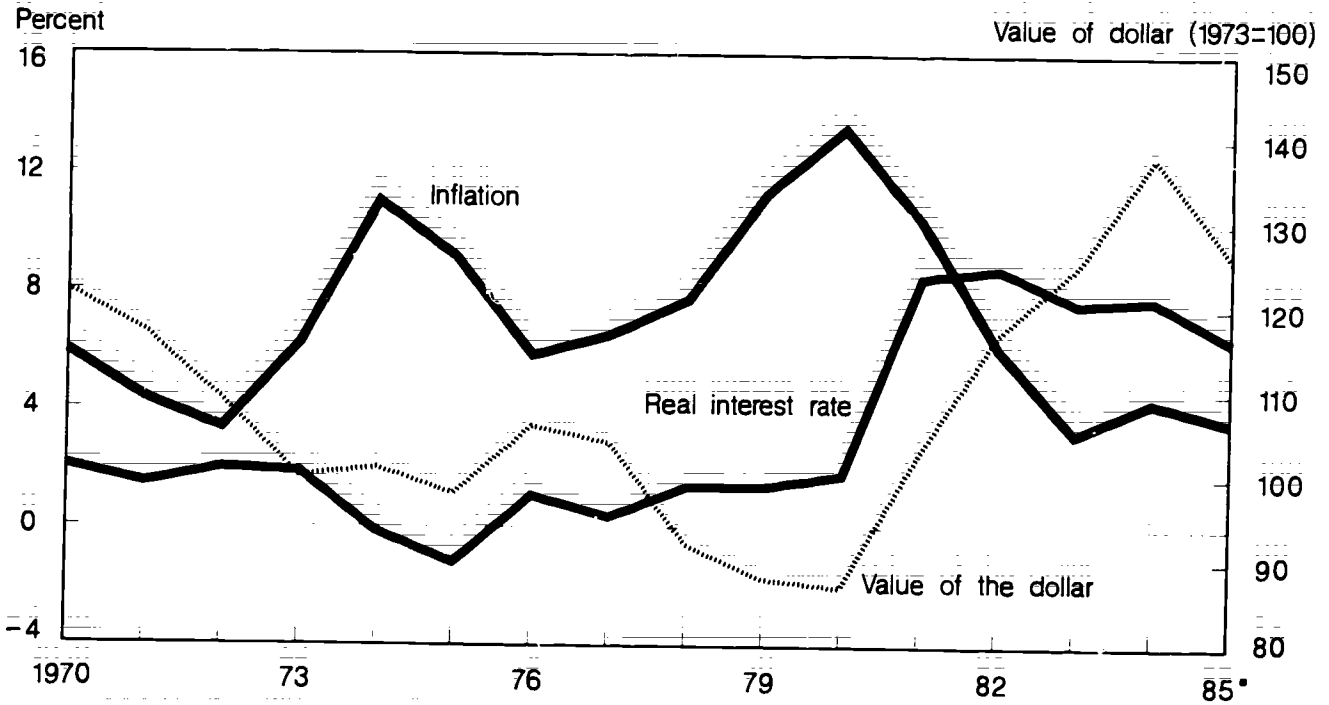
<sup>2</sup>For an evaluation of the effects of the dollar's appreciation on U.S. prices, exports, and grain stocks, see (8).

<sup>3</sup>See (12) for a discussion of the macroeconomics of agriculture and its effects on rural America.



Figure 1

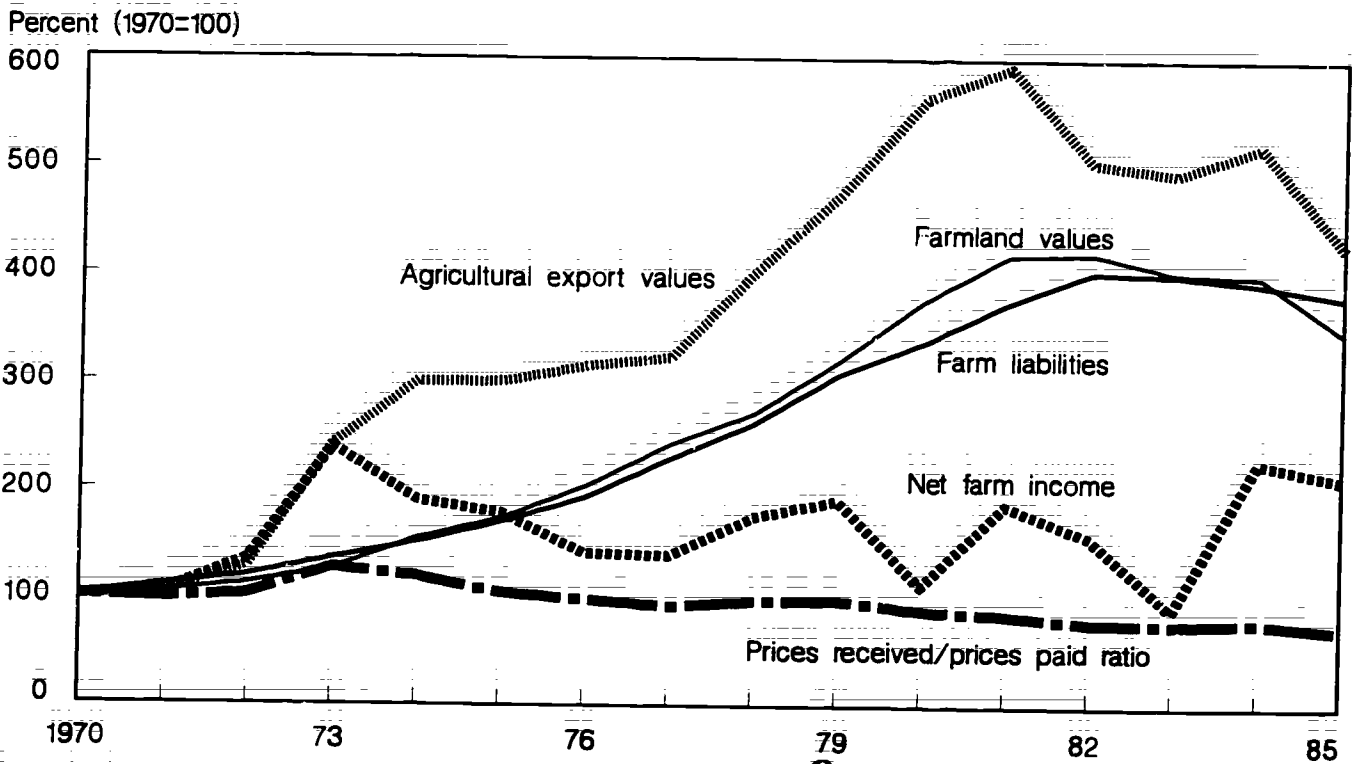
# Major Economic Indicators of the U.S. Economy



Notes: Inflation is defined as the percent change in the consumer-price index. Real interest rate equals the prime rate minus the inflation rate. Value of the dollar refers to the trade-weighted exchange rate of the U.S. dollar.  
• The value of the dollar for 1985 is the level reached in December.  
Sources: (2,3).

Figure 2

# Major Economic Indicators of U.S. Agriculture



Sources: (14,19).

By 1986, farmland values had declined 27 percent from their 1981 peak for the Nation as a whole, and values in some farming-dependent States and regions fell by almost 60 percent. As a result, many farmers who had borrowed heavily in the late 1970's to buy high-priced land and machinery found themselves approaching insolvency. For example, on January 1, 1986, nearly 9 percent of U.S. farmers were very highly leveraged with a debt/asset ratio of over 70 percent, and some were operating under extreme financial stress.

The sharp deterioration of financial conditions in the farm economy is now forcing some farmers to curtail operations or to discontinue farming entirely. Of course, the decline in the number of farmers has been an important trend through most of the agricultural history of the United States. What distinguishes today's displacement from some earlier ones are the changed characteristics and economic positions of the farmers who are leaving agriculture. The rapid decline in the number of farms and farm population between 1950-70 was caused mainly by mechanization and other labor-saving innovations. That development encouraged some farm families to acquire more land from existing small farmers whose heirs or replacements were attracted to urban areas by the availability of higher paying jobs. Today, displacement extends to the larger and more efficient farm operators who made investment decisions based on the favorable economic environment of the 1970's, a situation drastically different from today's environment of low farm prices, declining land values, and pessimism about the future of export markets. Because much of the economic distress now is concentrated in about 11 percent of farm operations, displacement has chiefly involved ownership changes of some existing farms rather than substantial declines in the total number of farms.

### What Makes an Area Vulnerable?

The effects of the current financial stress in U.S. agriculture on rural regions and communities depend mostly on such factors as—

- the economic health of the farm sector in the region or community;
- the region's or community's dependence on farming as a source of employment and family income;
- the strength of local links between farming and agriculture; and
- the stability of the region's or community's general economy.

## The Farm Sector's Economic Health

Three major indicators of the economic health of a region's or State's farm sector are farm debt/asset ratios, changes in the value of farmland, and the importance of *export-sensitive* farm commodities to the local farm sector.

### Debt/Asset Ratios

The ratio of debts to assets is one of the major indicators of a farm's overall financial soundness. Typically, farms are considered to be highly leveraged if their debt/asset ratios reach 40 percent. At this stage, farmers begin to have problems meeting repayments on debt principal, but they still have adequate net worth to collateralize loans. At debt/asset ratios of 70 percent, many farmers have problems meeting both their principal and interest commitments. As their net worth declines because of falling land values, many of these farmers approach insolvency.<sup>4</sup>

USDA's *Farm Costs and Returns Survey*, conducted in the spring of 1986, showed that the Northern Plains, Lake States, and Corn Belt have the highest proportion of highly and very highly leveraged farms (fig. 3). In each of these farm production regions, more than 25 percent of the farms are saddled with debt/asset ratios of 40 percent or more (table 2). These regions also have some of the highest proportions (ranging from 12-20 percent) of farmers with the most serious financial problems, not only high debt/asset ratios but also cash flow difficulties. The high proportion of farms under potential and actual financial stress in the Midwest may be partly explained by the region's large number of medium-sized farms, which tend to have higher debt/asset ratios, and by the high number of farmers specializing in cash grains and dairy products.<sup>5</sup> Producers in the Corn Belt and Northern Plains depend heavily on cash grain farming and therefore have been especially hard hit by farm commodity price declines induced by the strong dollar and weakening international markets for U.S. grains and oilseeds. In the Lake States, financial stress is high because of concentrated dairy farming which has been affected since 1982 by falling milk prices and, consequently, by declines in land and herd values. The critical factor, however, has been the sharp drop in farmland values which has reduced asset values and thereby increased debt/asset ratios.

<sup>4</sup>By definition, farmers are technically insolvent when their debt/asset ratios exceed 100 percent.

<sup>5</sup>In this report, the Midwest refers to three farm production regions: the Corn Belt, Northern Plains, and Lake States.

Figure 3

# The 10 Farm Production Regions of the Continental United States

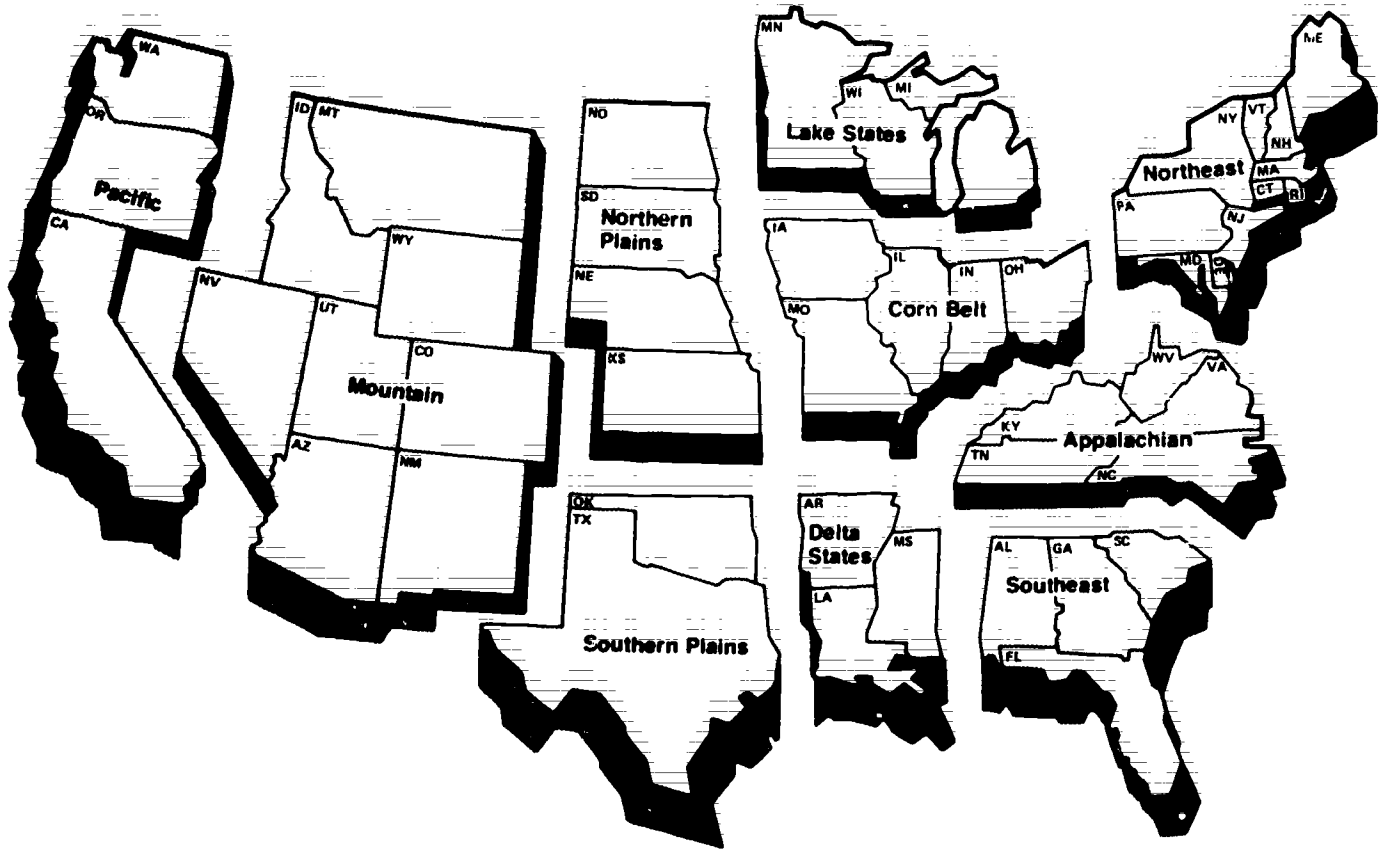


Table 2—Distribution of troubled or potentially troubled farms by region, January 1, 1986

Region	Potential financial stress			Actual financial stress
	Highly leveraged (40-70 percent debt/asset ratio)	Very highly leveraged (70-100 percent debt/asset ratio)	Highly leveraged, very highly leveraged, and technically insolvent <sup>1</sup>	High debt/asset ratios (over 40 percent) and negative cash flow <sup>2</sup>
	Percent			
United States <sup>3</sup>	12.7	4.6	21.3	11.2
Northeast	9.3	3.3	14.0	6.6
Appalachia	6.7	1.1	9.3	5.7
Southeast	9.8	3.4	15.8	7.9
Delta	7.7	3.0	16.5	11.3
Corn Belt	15.6	5.6	26.3	11.7
Lake States	19.1	7.3	32.8	19.8
Northern Plains	17.6	8.8	33.2	17.1
Southern Plains	9.0	3.2	15.2	8.0
Mountain	16.0	4.9	23.8	12.2
Pacific	10.5	4.0	16.6	7.8

<sup>1</sup>Technically insolvent refers to farms with debt/asset ratios over 100 percent.

<sup>2</sup>Cash flow refers to net cash operating income of farm households and reflects estimated principal repayments, nonfarm income, and estimated family living allowances.

<sup>3</sup>U.S. totals do not include Alaska and Hawaii.

Sources: (4, 7).

## Changes in the Value of Farmland

Nationally, U.S. farmland values rose 42 percent during 1977-81, and then fell 27 percent during 1981-86. The largest declines, 30 percent or more, occurred in the Corn Belt, the Lake States, the Northern Plains, and the Delta States (table 3). Although State-to-State percentage increases in farmland values during the earlier period tended to be fairly uniform, declines since 1981 have been most dramatic in the major farm States of the Midwest (16, 20). In Iowa, Minnesota, and Nebraska, the average value per acre of farmland has dropped more than 50 percent. In these States and in Illinois, Indiana, Kansas, and Ohio, the land value declines more than offset the gains made during 1977-81. States that depend less on farming have had much smaller declines in farmland values since 1981. Except for Delaware, Maryland, and Pennsylvania, the Northeast actually experienced steady increases in farmland value.

Recent declines in land values are an integral part of the financial distress in the farm economy because farmland accounts for about 75 percent of total farm assets. Lower land values create difficulties not only for farmers but also for farm-related businesses and rural communities. For example, rural banks and credit institutions in farming-dependent areas are faced with a growing volume of problem loans; some local businesses suffer losses because farmers are unable to pay for goods and services purchased on credit; and rural communities that rely on farmland for their property tax base may face budgetary problems and even cuts in publicly provided goods and services.<sup>6</sup>

## Dependence on Export-Sensitive Farm Commodities

Growth in U.S. farm exports spurred investment in the farm sector during the mid- to late 1970's. During 1975-81, the value of farm exports doubled. Farm commodities that contributed heavily to this growth with large percentage increases were corn (79 percent), wheat (52 percent), soybeans (116 percent), and cotton (128 percent). These commodities accounted for 50 percent of the growth in U.S. farm exports from 1975 to 1981. Since their peak of 1981, exports of these major commodities have declined 42 percent.

Slackening foreign demand, partly due to increases in world production and stepped-up domestic production in importing countries, has cut both the volume and prices of exported U.S. commodities and consequently reduced farm income. For example, in fiscal year 1985, wheat production in importing countries increased while world consumption began to decline, thus dampening the demand for imports (18). At the same time, U.S. wheat exports dropped 32 percent to 28.5 million tons, and the U.S. share of the export market continued to fall. Shipments to the USSR declined the most (62 percent), dropping the Soviets to second place among purchasers of U.S. wheat and elevating Japan to first place. However, Japan, too, has scaled back its purchases. A record harvest in the People's Republic of China in 1984/85 allowed the Chinese to cut total wheat purchases to 77

<sup>6</sup>For a discussion and an assessment of the impacts that declining farmland values have on local government spending, see (13).

Table 3—Farm real estate values from 1977-86: Average value per acre of farmland and buildings by region<sup>1</sup>

Region	1977	1981	1986	1977-81	1981-86
	Dollars			Percentage change <sup>2</sup>	
United States <sup>3</sup>	474	819	596	42.1	-27.2
Northeast	887	1,365	1,413	35.0	3.5
Appalachia	650	1,093	984	40.5	-10.0
Southeast	636	1,126	996	43.5	-11.5
Delta	543	1,146	796	52.6	-30.5
Corn Belt	1,098	1,776	902	38.2	-49.2
Lake States	669	1,243	702	46.2	-43.5
Northern Plains	325	535	323	39.3	-39.6
Southern Plains	318	510	329	37.6	3.7
Mountain	174	308	248	43.5	-19.5
Pacific	595	1,243	1,105	52.1	11.1

<sup>1</sup>Farm real estate values are as of February 1.

<sup>2</sup>Based on index of average value per acre, 1981 = 100.

<sup>3</sup>U.S. totals do not include Alaska and Hawaii.

Sources: (16, 20).

percent of the previous year's volume and U.S. wheat purchases to only 30 percent of the fiscal year 1984 level. Further, with competitors such as Canada, Argentina, and Australia aggressively pursuing the wheat trade with lower prices, the U.S. position has deteriorated significantly. In States and communities where producing wheat and other export-sensitive farm commodities is the major activity, reduced exports have translated into a slowdown in overall economic activity. The slowdown, in turn, has led to decreased employment opportunities, both farm and nonfarm, and increased pressures for population outmigration.

In every farm production region, dependence on export-sensitive farm commodities increased between 1978 and 1982. During this period, the percentage of total gross sales from the four major commodities more than doubled in the Southern Plains and Pacific regions and increased by more than half in the Delta and Mountain States. However, the Midwestern and Delta States continue to have the greatest overall dependence on export-oriented farm commodities. About 25 percent of all the nonmetro counties in these areas are highly dependent on commodities whose export markets expanded rapidly during the 1970's but shrank substantially during the 1980's.<sup>7</sup> In the Delta region, export-oriented commodities accounted for 40 percent of all farm sales in 1982; in the Midwest, sales of those commodities ranged from 49 percent of all farm sales in the Corn Belt to 25 percent in the Lake States (table 4). In contrast, sales of export-oriented commodities amounted to only about 14 percent of total farm sales in the Southeast, 12 percent in the Pacific States, and 7 percent in the Northeast.

A few States produce most of the export-sensitive farm commodities. In 1982, for instance, seven States produced 75 percent of the U.S. corn crop (table 5). Seven States also produced 66 percent of the soybean crop, 57 percent of the wheat crop, and 89 percent of the cotton crop. The Corn Belt States of Iowa, Illinois, and Indiana produced 48 percent of U.S. corn and 40 percent of U.S. soybeans. Iowa, whose entire economy depends highly on farming and farm-related activities such as farm machinery manufacturing, produced 20 percent of U.S. corn and 15 percent of U.S. soybeans. Other examples are Kansas and North Dakota, which together produced 28 percent of the U.S. wheat crop, and California and Texas, which together accounted for 49 percent of the U.S. cotton crop. Within these major producing States, those communities that have little economic activity outside the farm sector are currently hard pressed to find new options for economic growth.

<sup>7</sup>We define counties highly dependent on export-oriented farm commodities as those in which value of farm sales from wheat, corn, soybeans, and cotton account for 50 percent or more of total farm sales value.

## Farming-Dependent Counties

Farming-dependent areas, delineated as counties, States, or regions, can either be defined in terms of the relative importance of local employment in farming and farm-related industries (farm input industries plus processing and marketing industries) or in terms of the relative importance of farm income to the local economy. For example, States in the Northern Plains and in the western Corn Belt depend to a large extent on employment in farming and in agribusiness industries (fig. 4). In Iowa, Nebraska, North Dakota, and South Dakota, employment in the agriculture complex exceeds 30 percent.

In nonmetro America during 1975-79, there were 702 counties out of a total of 2,443 in which farm-related earnings constituted at least 20 percent of all county earnings (fig. 5).<sup>8</sup> Thirteen percent of the nonmetro population, including about 25 percent of the Nation's 2.3 million farmers, live in these counties. Some of these 702 counties, concentrated in the western Corn Belt and Great Plains, derived over 60 percent of their earned income from farming. Their economies are based on a heavily capitalized farming industry which depends on agricultural conditions such as soil productivity and type of enterprise and is vulnerable to changing interest rates, foreign exchange rates, and national agricultural policy decisions.

Many farming-dependent counties have not succeeded in attracting a sufficient number of nonfarm jobs to fully offset losses in farm employment. Between 1950 and 1970, a period of heavy movement out of agriculture, nonmetro areas nationally were able to create more than enough jobs to offset losses in the natural resource industries (mainly agriculture) (fig. 6). By contrast, farming-dependent counties of the Midwestern States fared poorly: total employment declined as new jobs in manufacturing, construction, and other nonfarm industries failed to match those lost in farming.

Between 1970 and 1980, the population of farming-dependent counties grew only 8 percent, which is quite low compared with a 17-percent growth rate in other nonmetro counties (table 6). Moreover, as farm financial conditions worsened during 1980-84, over 50 percent of the farming-dependent counties lost population. It therefore appears that general demographic changes are closely linked to agriculture in farming-dependent areas. Also, the pattern of small, widely dispersed population groups which typifies the farming-dependent counties makes it difficult for many of these communities to provide an

<sup>8</sup>For the methodology to delineate farming-dependent counties, see (11).

adequate public infrastructure to support job growth in nonagricultural industries.

Farming-dependent counties receive, on average, over 33 percent of their earnings from farming compared with less than 10 percent for other nonmetro counties. Moreover, farming-dependent counties obtain only 10 percent of their income from manufacturing. Because the nonfarm sector in these farm-based economies is growing little, if any, many farm families have difficulty finding off-farm jobs to supplement their farm earnings. This situation becomes especially critical when income from farming is declining and farm families are unable to maintain total household income.

### What Limits Growth in Farming-Dependent Areas?

Some counties traditionally tied to farming have not fared as well as others in spawning new industries, often because of their attributes. What restrains their growth? Factors restricting growth in the nonfarm sector of farming-dependent communities include—

- physical capital oriented toward farming that has limited use in other sectors of the economy;
- human capital with skills specialized for the needs of the farm sector that is not necessarily transferable to nonfarm jobs;
- a high proportion of elderly residents; and
- a small and geographically dispersed population base.

These conditions make it particularly difficult for farm-based rural communities to diversify economic activity and participate more fully in the general recovery of the U.S. economy.

### Farming's Links to the Economy of Rural Areas

The overall effect of agriculture on the local nonfarm economy depends on the size of the farm sector and how closely it is linked to the nonfarm sector. The effect will be small where agricultural production plays a minor role in the local economy. It will also be small where farmers typically bypass local communities to buy inputs or household items in larger, more distant trade centers,

or where crops and livestock leave the local area for processing.

The food and fiber system accounts for nearly 33 percent of the jobs in nonmetro America (table 7).<sup>9</sup> Of the 6.3 million nonmetro jobs associated with agriculture, about 45 percent, or 2.8 million, are in farming.<sup>10</sup> Most of the other food and fiber jobs are found in agricultural input industries (4 percent), agricultural marketing and processing industries (18 percent), and food and fiber wholesaling and retailing (26 percent).

<sup>9</sup>The food and fiber system includes employment in farming and in all businesses required to support the production and eventual delivery of food, clothing, shoes, and tobacco to domestic and foreign consumers. For a description of agriculturally related industries, see the appendix table.

<sup>10</sup>Data from the 1980 *Census of Population* show only 7.2 percent of the nonmetro employment in agriculture, compared with 14.2 percent from the Bureau of Economic Analysis (BEA), U.S. Department of Commerce series, cited here. There are two major differences between the two series that probably explain most of this discrepancy. The BEA data identify jobs by where they are located rather than by where their incumbents live. The Census Bureau practice is the opposite. Therefore, the large numbers of nonmetro residents who commute to metro areas to work in nonagricultural jobs are counted in the nonmetro job total in the Census data and reduce the agriculture percentage. Also, the Census Bureau identifies only principal employment. Thus, the large minority of farm people who spend a majority of their work time in nonfarm jobs do not show up in agricultural employment in the Census data but do so in the BEA data, which identify all agricultural employment whether it is secondary or not.

Table 4—U.S. producer dependence on export-oriented commodities

Region	Value of farm sales from wheat, corn, soybeans, and cotton	
	1978 <sup>1</sup>	1982
	<i>Percent</i>	
United States <sup>2</sup>	21.5	26.2
Northeast	7.3	7.4
Appalachia	18.4	19.3
Southeast	10.0	14.1
Delta	25.8	39.6
Corn Belt	45.1	49.0
Lake States	24.1	24.9
Northern Plains	25.8	30.0
Southern Plains	7.5	17.8
Mountain	10.4	17.7
Pacific	5.7	12.2

<sup>1</sup>Sales data for corn, wheat, and soybeans are unavailable for 1978. Estimated sales for 1978 were obtained by using the 1982 proportion of corn, wheat, and soybeans in total grain sales and applying this percentage to the value of grain sales in 1978.

<sup>2</sup>U.S. totals do not include Alaska and Hawaii.

Source: (23).

Table 5—Major producing States of export-oriented farm commodities, 1982

Corn				Wheat			
Rank <sup>1</sup>	State	Cumulative percentage of United States		Rank <sup>1</sup>	State	Cumulative percentage of United States	
		Production	Acreage			Production	Acreage
1	Iowa	20	18	1	Kansas	16	16
2	Illinois	39	35	2	North Dakota	28	30
3	Indiana	48	43	3	Oklahoma	35	39
4	Nebraska	57	53	4	Montana	42	46
5	Minnesota	65	61	5	Washington	48	50
6	Ohio	71	67	6	Texas	53	57
7	Wisconsin	75	71	7	Minnesota	57	61

Soybeans				Cotton			
Rank <sup>1</sup>	State	Cumulative percentage of United States		Rank <sup>1</sup>	State	Cumulative percentage of United States	
		Production	Acreage			Production	Acreage
1	Illinois	17	14	1	California	25	13
2	Iowa	32	16	2	Texas	49	60
3	Indiana	40	33	3	Mississippi	64	70
4	Missouri	47	41	4	Arizona	74	75
5	Minnesota	55	48	5	Louisiana	81	81
6	Ohio	61	54	6	Arkansas	85	85
7	Arkansas	66	60	7	Alabama	89	88

<sup>1</sup>Rankings apply only to production.

Source: (24).

Figure 4

### Percent of Total Employed in Farming and Agribusiness Industries, 1982

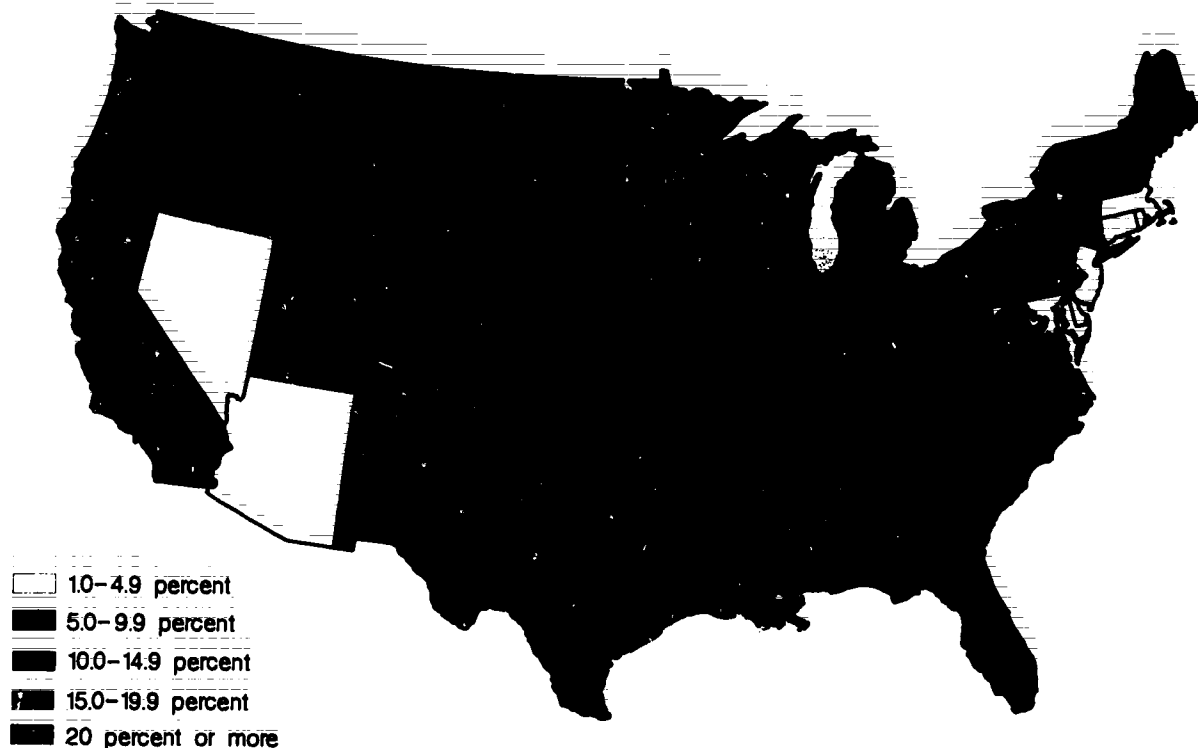
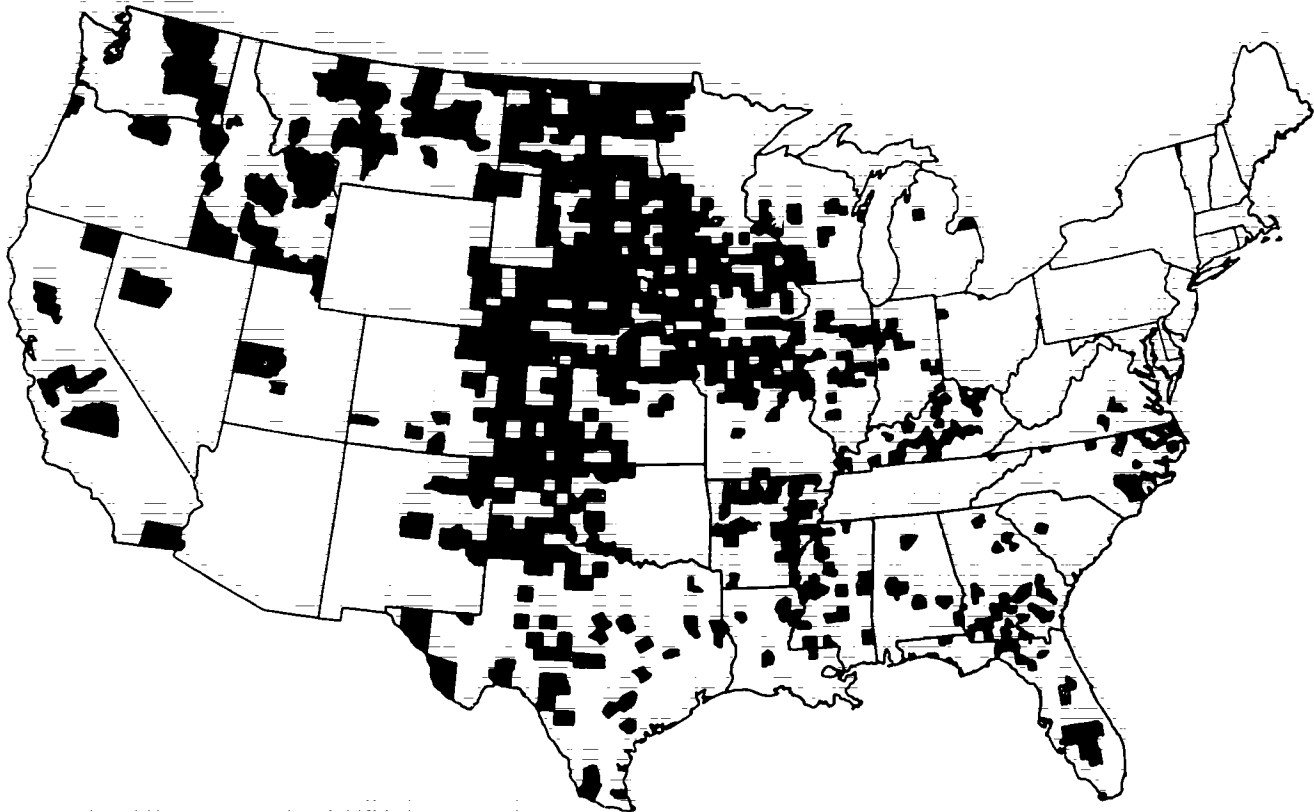


Figure 5

# Farming-Dependent Counties<sup>1</sup>

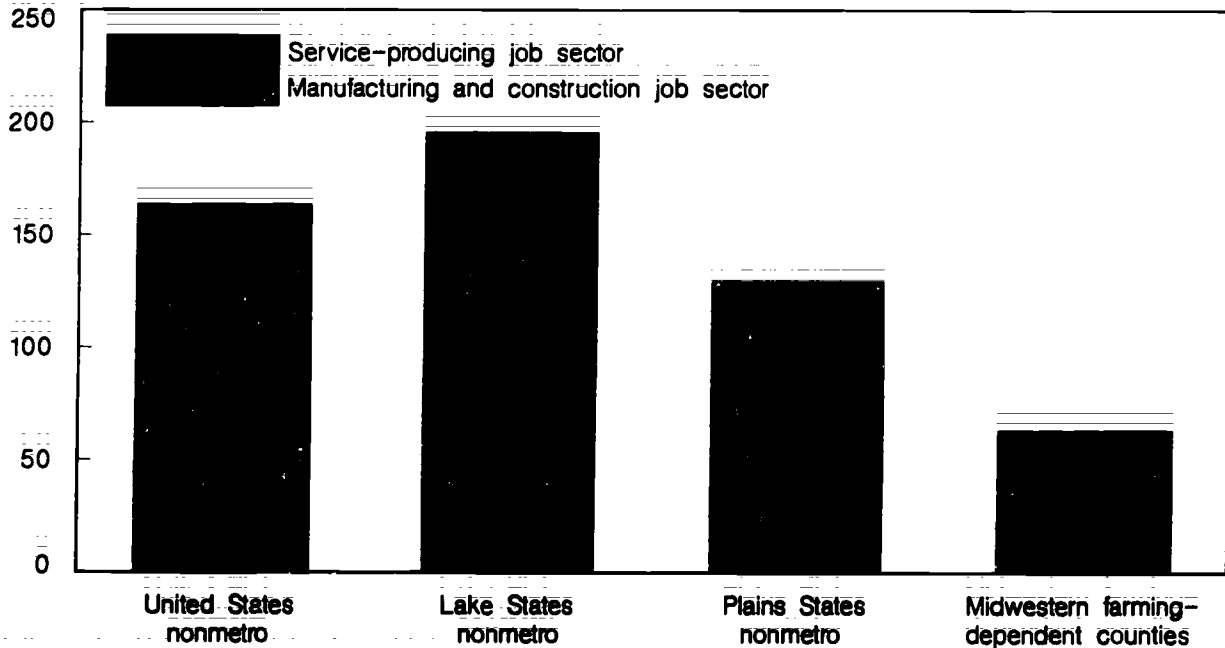


<sup>1/</sup> Farming-dependent counties are defined as those which derived 20 percent or more of labor and proprietary income from farming over the 5 year period from 1975-79.  
Source: (11).

Figure 6

## Nonresource-based Industry Jobs Created per 100 Lost in Resource-based Industries, 1950-70<sup>1</sup>

Number of jobs



<sup>1/</sup> Resource-based industries are agriculture, forestry, fisheries, and mining.  
Source: (6)

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Table 6—Selected demographic and economic variables: Farming-dependent counties versus other nonmetro counties

Variables	Unit	Farming-dependent counties <sup>1</sup>			Other nonmetro counties
		Most highly dependent <sup>2</sup>	Highly dependent	Moderately dependent	
<b>Demographic:</b>					
Population change					
1960-70	Pct.	-9.3	-4.4	-0.7	5.9
1970-80	do.	.3	7.8	11.6	17.0
1980-84	do.	0	3.1	3.2	3.8
Average population, 1980	Thou.	6.8	12.4	16.6	31.1
Population per square mile, 1980	No.	10	19	25	51
Population aged 25 and over who completed high school, 1980	Pct.	60	58	56	57
Population aged 65 and over, 1980	do.	16.3	15.6	15.4	13.3
<b>Economic structure:</b>					
Income derived from					
Farming, 1975-79	Pct.	46	32	23	8
Manufacturing, 1979	do.	5	10	16	25
Farmers who worked 200 days or more off-farm, 1982	do.	21	26	30	39
<b>Economic well-being:</b>					
Per capita personal income, 1980	Dol.	8,389	7,396	7,256	7,311
Per capita transfer payments, 1979 <sup>3</sup>	do.	1,025	1,038	1,071	1,071
Per capita Federal outlays for commodity agriculture, 1980	do.	362	172	140	34
Per capita total Federal outlays, 1980	do.	1,648	1,429	1,393	1,495

Note: Population growth rates are based on weighted averages.

<sup>1</sup>Labor and proprietor income (LPI) from farming accounted for 29 percent or more of total county LPI during 1975-79. There are 234 counties in each of the three groups of farming-dependent counties and 1,741 other nonmetro counties.

<sup>2</sup>LPI derived from farming in the top third group was 37 percent or more of total county income. For the middle third, it was 27 to 37 percent. For the bottom third, LPI was 20 to 27 percent.

<sup>3</sup>These kinds of transfer payments include Social Security and Medicare. They exclude Federal farm subsidy payments.

Table 7—Agricultural employment links in the nonmetro areas of U.S. farm production regions, 1982

Region	Farm sector <sup>1</sup>	Direct agricultural links			Final consumption links	Total agriculturally related employment <sup>2</sup>
		Input industries	Processing and marketing industries	Total agri-business	Food and fiber wholesaling and retailing	
<i>Percentage of total employment</i>						
United States <sup>3</sup>	14.7	1.2	6.0	7.2	8.5	32.7
Northeast	6.9	.5	5.2	5.7	9.1	27.4
Appalachia	13.8	.7	10.3	11.0	7.2	34.3
Southeast	12.6	1.0	11.8	12.8	7.6	35.5
Delta	15.3	1.2	7.1	8.3	7.3	33.0
Corn Belt	16.4	1.9	3.9	5.8	8.4	33.4
Lakes States	17.6	1.6	3.9	5.5	9.6	35.6
Northern Plains	21.9	2.5	4.3	6.8	8.3	38.3
Southern Plains	19.6	1.2	3.8	5.0	8.5	34.9
Mountain	11.2	1.4	2.3	3.7	10.5	26.4
Pacific	15.4	1.0	2.5	3.5	10.8	31.7

<sup>1</sup>Includes agricultural services, farm proprietors, and agriculture wage and salary workers.

<sup>2</sup>Total includes employment in secondary or indirectly related agribusinesses.

<sup>3</sup>U.S. totals do not include Alaska and Hawaii.

The agricultural complex is most important in the nonmetro economies of the Northern Plains where the farm sector, agricultural input industries, agricultural processing and marketing industries, and food and fiber wholesaling and retailing businesses accounted for about 38 percent of local nonmetro employment in 1982. In the other regions, this percentage ranges from a high of about 36 percent in the Lake States and the Southeast to a low of about 26 percent in the Mountain region.

Agricultural production has strong links to industries that provide inputs to farmers and to the transporting, processing, and marketing industries. In both the Midwest and South, the agribusiness sector is heavily concentrated in the nonmetro areas of the Northern Plains and the Delta States (table 8). Some 75 percent of all jobs in agricultural input industries in the Northern Plains are located in nonmetro counties, compared with 50 percent in the Lake States and 46 percent in the Corn Belt. The nonmetro counties also claim 62 percent of the total jobs in the agricultural processing and marketing industries in the Northern Plains, compared with about 35 percent in the Lake States and the Corn Belt. In the Northern Plains, 50 percent of the jobs in the food- and fiber-related wholesale and retail trade are situated in nonmetro areas, although nationally these businesses tend to be highly concentrated in metro areas. In the South, the agricultural complex is most heavily concentrated in nonmetro areas of the Delta, where the nonmetro counties account for 60 percent of the region's agriculturally related employment. The nonmetro share of the jobs found in the Delta's agriculturally related in-

dustries ranges from 71 percent in processing and marketing industries, to 63 percent in input industries, to 37 percent in the food- and fiber-related wholesale and retail trade. In the other farm production regions of the South, nonmetro areas account for 49 percent of Appalachia's agribusiness employment and about 34 percent of the agribusiness jobs in the Southeast and Southern Plains.

In many areas of the country, farm-related industries such as food processing and marketing are important employers not only in nonmetro but also in metro areas. In the Northern Plains, for instance, 75 percent of all the jobs in farm input industries are located in nonmetro counties, while in the more industrialized Lake States, 62 percent of all jobs in food processing and marketing operate in metro areas. Thus, while farm dependency appears to be highly concentrated geographically among nonmetro areas, many urban jobs across the United States are also tied to the farm sector.

Because of the importance of the agribusiness complex to many local economies, changes in farm conditions may substantially affect industries associated with agriculture. Some areas and industries will benefit; others will be damaged. For example, local or national conditions conducive to lower commodity prices will decrease agricultural production and weaken the demand for purchased inputs. Those agricultural centers that specialize in manufacturing agricultural inputs such as fertilizers, pesticides, and farm machinery would suffer. More specifically, a weaker demand for farm machinery would

Table 8—Nonmetro share of agriculturally related employment by region, 1982

Region	Farm sector <sup>1</sup>	Agricultural input industries	Agricultural processing and marketing industries	Food and fiber wholesaling and retail trade	Total agriculturally related employment <sup>2</sup>
<i>Percent</i>					
United States <sup>3</sup>	64.9	48.0	34.0	18.4	32.7
Northeast	37.7	25.0	13.0	9.1	11.5
Appalachia	73.2	57.1	51.4	31.6	49.1
Southeast	59.7	60.1	50.0	17.3	34.9
Delta	83.2	63.4	70.9	36.5	60.1
Corn Belt	71.8	46.3	34.3	20.8	36.5
Lake States	68.4	50.4	37.6	22.6	37.9
Northern Plains	91.4	74.9	62.0	49.8	71.1
Southern Plains	71.8	51.0	27.9	16.9	33.6
Mountain	76.8	71.8	41.8	33.3	45.8
Pacific	29.3	21.8	7.1	8.0	12.3

<sup>1</sup>Includes agricultural services, farm proprietors, and agriculture wage and salary workers.

<sup>2</sup>Total includes employment in secondary or indirectly related agribusinesses.

<sup>3</sup>U.S. totals do not include Alaska and Hawaii.

diminish job opportunities for both rural nonfarm residents and small-scale farmers in an area such as northern Iowa that relies on off-farm employment for a major portion of its income. On the other hand, agricultural service centers specializing in transporting, processing, and marketing food may benefit since lower commodity prices will make U.S. commodities more competitive abroad and boost the volume of products moving through the export chain.

Our limited current knowledge of economic links in rural areas, between the farm sector and the total local economy, and nationwide, between rural and urban areas, does not allow us to quantify them. However, we can be sure that selective changes in agricultural conditions such as commodity programs will produce differential geographic effects. For example, Congress formulated the 20-percent set-aside provision in the 1986 feed grains program to reduce agricultural production. Such provisions will reduce, however, not only corn production but also local job opportunities in agricultural input industries. Such effects may be especially significant for places such as Minnesota's corn and soybean growing areas where the farm sector and the agricultural input and processing industries account for about 30 percent of the total local employment.

In areas less dependent on local agribusiness jobs, on the other hand, such farm program provisions will affect individual farmers but may have only limited effects on local economies. An example is the urban-dominated corn and soybean growing areas of Illinois where agricultural input and processing industries account for about 3 percent of total local employment.<sup>11</sup>

### The Local and Regional Economy's Economic Health

Economic stresses stemming from problems in agriculture can be offset, to some extent, by growth of off-farm economic opportunities. This dynamic is especially true for small- and medium-sized farm operators and members of their households, who rely on the nonfarm economy for most of their employment and income.

How plentiful are the secondary job opportunities for farm operators across the country? One measure of off-farm employment opportunities is the number of days that a farm operator works off the farm. For example,

<sup>11</sup>For a description of the importance of agriculturally related employment among multicounty agricultural trading regions specializing in various types of agriculture, see (10).

<sup>12</sup>This measure is only a partial indicator of off-farm economic opportunities since a farm operator is only one contributor to total farm household income. There are no readily available data on the employment status of the other members of a farm household.

in 1982, 35 percent of all U.S. farm operators worked 200 days or more in off-farm jobs (table 9). But in many farming-dependent areas, such off-farm employment opportunities are not prevalent, or if they are, the demands of the farm operation prevent operators from participating. Off-farm opportunities are lacking in the farming-dependent counties of the Northern Plains and the western Corn Belt where the percentage of farm operators reporting off-farm work was substantially below the U.S. average. In farming-dependent counties of the Lake States, the low percentage of farmers with off-farm jobs probably resulted from farm structure that specializes in dairy operations which are highly labor intensive. In the four subregions of the South, on the other hand, the proportion of farmers who worked off-farm was much higher than nationwide. This high participation in outside employment reflects the prevalence of nonfarm alternatives brought about by industrialization of the South during the 1960's and 1970's.

### Off-Farm Income Rising in Rural Regions

A more comprehensive measure of off-farm economic opportunities is the percentage of total farm family income earned from off-farm sources. The relative importance of total U.S. farm family income earned from nonfarm sources increased from an average of about 40 percent in 1960, to 55 percent in 1979, to around 60 percent since 1981. This growing reliance on off-farm income dampens the effect of farm-related stress for many communities, States, and regions. The nonfarm sector appears to provide more of a safety net for economically stressed farm families in the more densely populated regions containing smaller farms such as in the Northeast and the South, where off-farm earnings

Table 9—U.S. farm operator dependence on off-farm employment, 1982

Region	Operators working 200+ days off-farm
	Percent
United States <sup>1</sup>	34.6
Northeast	33.6
Appalachia	39.2
Southeast	42.6
Delta	37.3
Corn Belt	32.6
Lake States	27.5
Northern Plains	20.5
Southern Plains	43.1
Mountain	31.5
Pacific	39.1

<sup>1</sup>U.S. total does not include Alaska and Hawaii.

Source: (23).

accounted for 64 percent of total farm family income in 1979, than in the sparsely settled Midwest and West, where 47 percent of total farm family income came from off-farm sources (table 10).

Industrial and professional wages and salaries form the largest component of off-farm income, accounting for 65 percent of nonfarm earnings for farmers and their families in 1979 (table 11). Other major nonfarm income sources include interest and dividends (14 percent), retirement and public assistance (9 percent), and non-farm business (9 percent). Wages and salaries from non-farm jobs are a relatively less important source of income (about 10 percentage points lower) for farmers and their families in the Northern Plains, Southern Plains, and the West than in the other farm production regions. Where geographic areas have large and growing nonfarm sources of income and employment, as in the Northeast and the South during the 1970's, adverse effects of declines in farm and farm-related activities can be offset, at least partly, by growth in other sectors.

### Sluggish Recovery in Farming-Dependent Areas

The continued outmigration of large numbers of workers from farming historically occurred because of farm productivity gains and the lure of plentiful nonfarm jobs. However, during the early 1980's, overall economic growth has been extremely weak in most farming-dependent States and regions. The depressed farm sector coupled with the sluggish recovery of other industries (especially manufacturing) from the 1980 and the 1981-82 recessions has slowed economic revival in these

Table 10—Farm and off-farm income as a percentage of total net cash income by region, 1979

Region	Net cash income	Source of net cash income	
		Farm	Off-farm
	Million dollars	Percent	Percent
United States <sup>1</sup>	59,735	45.3	54.7
Northeast	4,236	37.9	62.1
Appalachia	6,767	30.5	69.5
Southeast	5,015	40.3	59.7
Delta	3,442	40.2	59.8
Corn Belt	12,518	47.0	53.0
Lake States	5,671	52.3	47.7
Northern Plains	5,206	62.0	38.0
Southern Plains	6,659	34.9	65.1
Mountain	3,721	51.5	48.5
Pacific	6,501	56.5	43.5

<sup>1</sup>U.S. totals do not include Alaska and Hawaii.

Source: (22).

areas. Slow growth in nonagricultural industries has made it difficult for farmers who rely on the nonfarm economy to supplement their farm income and, at the same time, has prevented workers displaced from farming and farm-related businesses from finding other jobs. For instance, during the 1979-82 downturn, total employment in the Corn Belt's nonmetro counties fell 5.7 percent while total employment in the U.S. economy rose 0.8 percent (table 12). Then, in the 1982-84 upturn, nonmetro employment growth in the Corn Belt continued to lag the overall employment growth rate of the U.S. economy (1.6 percent versus 5.3 percent). Moreover, the unemployment rate in the Corn Belt's nonmetro areas continued to exceed the national rate by almost 2 percentage points in 1982 and 1984; and, the unemployment rate probably is underestimated in the farming-dependent areas.<sup>15</sup>

State employment figures for the Corn Belt, Northern Plains, and Lake States indicate the pervasive nature of diminished economic performance in these regions, particularly in Corn Belt States. Although U.S. employment increased 11.1 percent during the 3-year period ending October 1985, employment in much of the Corn Belt increased less than 50 percent of the national rate after declining dramatically from the business cycle peak in January 1980 (table 13). In Iowa, for example, where meat processing and farm machinery manufacturing are closely linked to agriculture, manufacturing employment was up only 3.5 percent in October 1985 from the recessionary levels 3 years earlier.

### Population Dwindling in Farming-Dependent Areas

A major trend has been the continued population loss in many farming-dependent areas. In fact, the top one-third of the counties most dependent on farming had the highest proportion of counties losing population during 1970-79, 1970-80, 1980-82, and 1982-84 (table 14). During 1980-82 and 1982-84, almost 60 percent of these counties lost population. A substantial proportion (40 percent) of the counties that depend less heavily on farm income also recorded population losses during 1982-84. These high proportions contrasted sharply with other parts of nonmetro America, where only 9 percent

<sup>15</sup>For an assessment of employment and underemployment statistics for nonmetro areas, see (9). Nilsen found that metro-nonmetro differences in economic structure result in labor force statistics that frequently portray conditions in nonmetro areas to be better than they actually are. For example, more nonmetro residents are self-employed. However, as a part-time activity, self-employment earnings are low. Yet a significant proportion of the nonmetro labor force is self-employed in a secondary job. Workers who are laid off from or quit their primary jobs will not be counted in unemployment statistics based on household data (such as Current Population Survey), since such workers will normally be self-employed.

Table 11—Off-farm income of farm households by source and region, 1979

Region	Industrial and professional wages and salaries	Farmwork	Nonfarm business	Interest and dividends	Retirement, disability, and public assistance	Total <sup>1</sup>
	Percent					
United States <sup>2</sup>	64.8	3.3	8.8	14.1	9.0	100.0
Northeast	67.3	2.5	10.2	12.6	7.4	100.0
Appalachia	68.2	2.0	8.0	11.5	10.3	100.0
Southeast	66.3	3.1	7.9	12.8	9.8	100.0
Delta	67.3	2.5	7.7	11.9	10.7	100.0
Corn Belt	67.9	3.9	7.7	12.9	7.6	100.0
Lake States	68.5	3.2	6.8	12.2	9.2	100.0
Northern Plains	58.8	4.7	9.3	18.7	8.5	100.0
Southern Plains	61.9	2.8	8.4	16.8	10.0	100.0
Mountain	57.9	4.5	11.9	17.3	8.5	100.0
Pacific	55.3	4.8	13.2	18.4	8.2	100.0

<sup>1</sup>Detail may not add to total due to rounding.  
<sup>2</sup>U.S. totals do not include Alaska and Hawaii.

Source: (22).

Table 12—Employment and unemployment change in non-metro counties and in the United States, 1979-84

Region	Employment change		Unemployment rate		
	1979-82	1982-84	1979	1982	1984
Percent					
United States <sup>1</sup>	0.8	5.3	5.8	9.7	7.5
Northeast	-1.8	4.2	7.0	10.6	8.1
Appalachia	-2.9	4.5	6.4	12.4	10.2
Southeast	1.5	5.1	6.3	11.7	8.9
Delta	-1.1	2.2	6.8	11.8	11.2
Corn Belt	-5.7	1.6	5.7	11.8	9.6
Lake States	-2.3	2.2	6.5	12.3	10.2
Northern Plains	-1.2	1.5	3.1	5.8	4.9
Southern Plains	11.0	3.5	4.0	6.8	6.7
Mountain	5.1	3.8	5.7	10.2	8.0
Pacific	-1.2	2.9	9.6	15.1	12.8

<sup>1</sup>Includes nonmetro and metro areas.

Source: (25).

of the counties lost population during the 1970's and 29 percent during 1982-84.

When population change is compared among farm production regions, a more diverse picture emerges. A high proportion of farming-dependent counties in the Corn Belt, Northern Plains, and Lake States lost population during 1982-84 (table 15). The Lake States stand out as having the highest proportion (73 percent) of farming-dependent counties experiencing population losses com-

pared with Appalachia, which registered one of the lowest proportions (26 percent). Still, the general pattern appears to indicate that the farming-dependent counties have been and are much more prone to losing population than other nonmetro counties.

### Implications

Numerous factors have caused lower commodity prices, lower farmland values, higher real interest rates, and resource reallocations in the farm sector. For farmers, many of these factors such as climate, soil type, local industrial structure, and national and international economic conditions are beyond their control. Similarly, rural communities that depend heavily on farming have many specialized human and business assets that may not be readily usable in other parts of the economy. However, it is likely that major economic dislocations in rural America will be largely confined to the Midwest and to the Delta subregion of the South. Even in the Midwest the effects will be extremely uneven, because reliance on agriculture is so varied. Adjustments clearly will be most severe for those who live in the several hundred sparsely settled specialized farming areas that are highly concentrated in a few States.

The transition to a more diversified economy in farming-dependent counties will be difficult at best. The difficulties arise from their small population bases, their concentration in areas far from most major urban markets, and a pattern of outmigration that has left them with a relatively high proportion of elderly.

**Table 13—Recent employment trends in Midwestern States**

State	Employment change from July 1981 (peak before the 1981-82 recession) to October 1985		Employment change from November 1982 (trough of the 1981-82 recession) to October 1985	
	Total	Manufacturing	Total	Manufacturing
	<i>Percent</i>			
United States	7.3	-5.8	11.1	6.4
Illinois	-3.2	-20.0	3.3	-1.3
Iowa	1.0	-11.8	2.8	3.5
Ohio	1.2	-10.9	6.0	3.8
Michigan	1.2	-5.3	9.1	16.2
North Dakota	2.8	1.9	.4	7.5
Wisconsin	3.3	-8.1	8.2	15.7
Nebraska	3.8	-8.7	7.0	7.0
South Dakota	4.8	-11.0	6.4	-5.3
Missouri	4.4	.9	4.8	-6.8
Kansas	2.6	-5.4	7.9	11.7
Indiana	7.1	-5.9	13.1	11.3
Minnesota	9.1	.3	12.5	12.0

Source: (25).

**Table 14—Proportion of nonmetro counties losing population, 1960-84**

Years	Farming-dependent counties <sup>1</sup>			Other nonmetro counties
	Most highly dependent	Highly dependent	Moderately dependent	
	<i>Percent</i>			
1960-70	87	79	69	42
1970-80	63	41	25	9
1980-82	58	45	41	28
1982-84	58	47	40	29

<sup>1</sup>Labor and proprietor income (LPI) from farming accounted for 20 percent or more of total county LPI during 1975-79. There were 234 counties in each of the three groups of farming-dependent counties and a total of 1,741 other nonmetro counties.

During the past 30 years, the economic structure of rural America as a whole has become more diversified, significantly diminishing its overall vulnerability to changes in natural resource markets, commodity prices, and farm conditions. The economic future of most rural citizens is now tied more to overall national economic growth than to the success or failure of any one business sector. This is not, however, the case for the residents of farming-dependent rural counties or for other individuals whose economic fortunes are tied directly to agriculture.

Until now, major disruptions of farming-dependent communities have been averted because much of the economic distress in the agriculture sector has been concentrated in only 11 percent of farm operations. Although many

**Table 15—Proportion of nonmetro counties losing population, 1982-84**

Region	Counties	
	Farming-dependent	Other nonmetro
	<i>Percent</i>	
United States	48	29
Northeast	*	22
Appalachia	26	24
Southeast	31	20
Delta	41	23
Corn Belt	67	42
Lake States	73	40
Northern Plains	53	39
Southern Plains	49	23
Mountain	24	32
Pacific	21	34

\*The Northeast has only one county where farm LPI amounted to 20 percent or more of total county LPI during 1975-79.

farmers in this group are under pressure to leave farming, the actual losses (bankruptcies and foreclosures) are not as dramatic as might be suggested by the number who are under severe financial stress (negative cash flow and debt equal to over 40 percent of their assets). Even if a large proportion of the highly stressed farm operators were to leave farming in any one year, this displacement would not be nearly as great as the annual loss of farms that took place throughout the 1950's. In

fact, the present restructuring of agriculture has involved mostly ownership changes of existing farms rather than substantial declines in the total number of farms. As a result, it appears that up until now rural communities have been able to absorb many of the displaced farmers either through existing jobs or through the creation of new ones.

Further restructuring in the agricultural sector seems unavoidable, at least in the short run. Although both interest rates and the value of the dollar abroad dropped substantially in 1986, major problems such as excess capacity, low commodity prices, diminished export markets, and high debt levels continue to plague the farm economy. If these trends accelerate, more farm sales, foreclosures, and bankruptcies are inevitable. And, more farm operators will have to face difficult economic adjustments in the immediate future. This bloc of farmers will be made up of large operators and, perhaps, an increasing number of the smaller operators who rely on off-farm employment for a major part of their household income.

In the more farming-dependent areas, these adjustments can be most difficult for communities that lack a diversified economic base and the potential for job growth. Their limited capacity to absorb more displaced farmers may translate into not only a loss of farm families but

also additional job and population losses in the local service and retail sectors. The resulting financial stress for rural governments would mean that without outside help from State and Federal Governments, many will be unable to provide a stable environment for economic growth, or even manage population decline effectively.

Because the problems may turn out to be widespread and affect entire regions, an argument exists for the Federal Government to play a role in helping to restructure the farm sector and to ease the adverse effects. For example, one possible option might be broadening USDA's direct responsibility for farmers' welfare to encompass the transition of marginal farmers to other occupations. Programs to help displaced farmers find new jobs could include a Federal presence in providing education and training, helping ex-farmers start new businesses, and easing capital losses associated with leaving agriculture. A determination by USDA not to abandon producers as soon as they stop active farming would fulfill a long-time commitment to these people who, because they have been farmers, are not well served by the Nation's social safety net programs such as unemployment compensation. Moreover, Federal involvement could lessen disruption and promote the orderly movement of surplus human and physical capital resources out of agriculture, benefiting the rest of the farm sector and the Nation as a whole.

## References

- (1) Beale, Calvin L. *The Revival of Population Growth in Nonmetropolitan America*. ERS-605. U.S. Dept. Agr., Econ. Res. Serv., June 1975.
- (2) Board of Governors of the Federal Reserve System. *Federal Reserve Bulletin*. Monthly issues.
- (3) Council of Economic Advisors. *Economic Report of the President*. Feb. 1986.
- (4) Duncan, Marvin, and David Harrington. "Farm Financial Stress: Extent and Causes." *The Farm Credit Crisis: Policy Options and Consequences*. Texas Agricultural Extension Service, The Texas A & M University System, College Station. Bulletin-1532, Feb. 1986.
- (5) Hines, Fred K., David L. Brown, and John Zimmer. *Social and Economic Characteristics of the Population in Metro and Nonmetro Counties*. AER-272. U.S. Dept. Agr., Econ. Res. Serv., Mar. 1975.
- (6) \_\_\_\_\_, Mindy Petrulis, and Stan Daberkow. "An Overview of the Nonmetro Economy and the Role of Agriculture in Nonmetro Development." *Proceedings of the Conference on Interdependencies of Agriculture and Rural Communities in the 21st Century: The North Central Region*. North Central Rural Development Center, Iowa State University, Ames, 1980.
- (7) Johnson, James D., and others. *Financial Characteristics of U.S. Farms, January 1, 1986*. AIB-500. U.S. Dept. Agr., Econ. Res. Serv., Aug. 1986.
- (8) Longmire, Jim, and Art Morey. *Strong Dollar Dampens Demand for U.S. Farm Exports*. FAER-193. U.S. Dept. Agr., Econ. Res. Serv., Dec. 1983.
- (9) Nilsen, Sigurd R. *Assessment of Employment and Unemployment Statistics for Nonmetropolitan Areas*. RDRR-18. U.S. Dept. Agr., Econ. Res. Serv., Dec. 1979.
- (10) Petrulis, Mindy. "Effect of U.S. Farm Policy on Rural America," *Rural Development Perspectives*, Vol. 1, Issue 3, June 1985.
- (11) Ross, Peggy J., and Bernal L. Green. *Procedures for Developing a Policy-Oriented Classification of Nonmetropolitan Counties*. ERS Staff Report No. AGES850308. U.S. Dept. Agr., Econ. Res. Serv., Aug. 1985.
- (12) Schuh, G. Edward, and David Orden. "The Macroeconomics of Agriculture and Rural America." Paper presented at the American Agricultural Economics Association meetings, Ames, Iowa, Aug. 1985.
- (13) Stinson, Thomas. Draft committee print prepared by the Subcommittee on Intergovernmental Relations of the Committee on Governmental Affairs, U.S. Senate. "Governing the Heartland: Can Rural Communities Survive the Farm Crisis." May 1986.
- (14) U.S. Department of Agriculture, Statistical Reporting Service. *Agricultural Statistics 1984*. 1984.
- (15) \_\_\_\_\_, Economic Research Service. *The Current Financial Condition of Farmers and Farm Lenders*. AIB-490. Mar. 1985.
- (16) \_\_\_\_\_. *Agricultural Land Values and Markets—Outlook and Situation Report*. Bulletin CD-90. Aug. 1985.
- (17) \_\_\_\_\_. *1985 Agricultural Chartbook*. AH-652. Dec. 1985.
- (18) \_\_\_\_\_. *Foreign Agricultural Trade of the United States*. Nov./Dec. 1985.
- (19) \_\_\_\_\_. *Agricultural Outlook*. AO-118. Apr. 1986.
- (20) \_\_\_\_\_. *Agricultural Resources—Agricultural Land Values and Market Situation and Outlook Report*. AR-2. June 1986.
- (21) U.S. Department of Commerce, Bureau of the Census. *Census of Population*. Decennial issues.
- (22) \_\_\_\_\_. 1978 Census of Agriculture, Vol. 5, Special Reports, Part 6: 1979 Farm Finance Survey. July 1982.
- (23) \_\_\_\_\_. *Census of Agriculture*. 1982.
- (24) \_\_\_\_\_. 1982 Census of Agriculture, Vol. 2, Subject Series, Part 3. *Ranking of States and Counties*. Feb. 1985.
- (25) U.S. Department of Labor, Bureau of Labor Statistics. *Employment and Earnings*. Monthly issues.



## Appendix table—Agribusiness classification

<i>Industries</i>	<i>Standard Industrial Classification code<sup>1</sup></i>
<b>Agricultural Input Industries</b>	
<b>Primary industries:<sup>2</sup></b>	
Chemical and fertilizer mining	147, 1492
Agricultural chemicals	287
Farm machinery	3523
Farm supplies and machinery wholesale trade	5083, 5191
Farm credit agencies and commodity dealers	613, 622
<b>Secondary industries:<sup>3</sup></b>	
Water well drilling	178
Prefabricated metalwork and buildings	3444, 3448
Pumps and pumping equipment	3561
Miscellaneous repair shops	7692, 7699
<b>Agricultural Production</b>	
<b>Primary industries:<sup>2</sup></b>	
Farm proprietors	NA
Farm wage and salary employment	NA
Agricultural services	07-09
<b>Agricultural Processing and Marketing Industries</b>	
<b>Primary industries:<sup>2</sup></b>	
Food and kindred products	20
Tobacco	21
Apparel and textiles	221, 223-5, 2261, 2269, 228, 2292, 2298-9, 231-8, 2397
Leather	31
Warehousing	4221, 4222
Farm-product raw materials wholesaling	515
<b>Secondary industries:<sup>3</sup></b>	
Miscellaneous textile products	2295, 2393, 2395
Containers	2441, 2449, 262, 263, 2641, 2643, 2645-6, 2651-5, 3221, 3262, 3274
<b>Chemicals</b>	2823-4, 2893
Primary and fabricated metal products	3315-7, 334, 3411, 3466, 3497
Food products machinery	3551
Miscellaneous manufacturing	3962-4, 3993

See footnotes at end of table.

Continued—

## Appendix table—Agribusiness classification—Continued

<i>Industries</i>	<i>Standard Industrial Classification code<sup>1</sup></i>
<b>Food and Fiber Wholesaling and Retailing</b>	
Primary industries: <sup>2</sup>	
Wholesale trade	513-4, 518, 5194
Retail trade	54, 56, 58
Secondary industries: <sup>3</sup>	
Printing and publishing	271-2, 274, 2751-2, 2754, 2791, 2793-5

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NA = Not applicable.

<sup>1</sup>The U.S. Office of Management and Budget developed the Standard Industrial Classification code as a method for industries to conform with the composition and structure of the economy covering the entire field of economic activities.

<sup>2</sup>Primary industries are defined as those industries which used all of their work force in the production necessary to satisfy the U.S. final demands for food and fiber in 1972.

<sup>3</sup>Secondary industries are defined as those industries which used between 50 and 100 percent of their work force in the production necessary to satisfy the U.S. final demands for food and fiber in 1972.

## OTHER PUBLICATIONS OF INTEREST ON RURAL ISSUES

***The U.S. Farm Sector: How Is It Weathering the 1980's?*** by David Harrington and Thomas A. Carlin.

Finds that 28 percent of all farms (those with gross annual sales of \$40,000 or more) had positive after-tax rates of return to equity in 1985. But, overall, the farm economy has deteriorated since 1981 when farmland values began to decline. By 1984, farming households earned only about 80 percent as much as the national average, compared with their historic high in 1973 when they earned almost 50 percent more than the national average. As many as 15 percent of all farm operators who were in business before 1980 may leave farming for financial reasons before the current economic adjustments end.

AIB-506. April 1987. 32 pp. \$1.50. SN: 001-019-00506-8.

***Federal Outlays by Type of Nonmetro County***, by Bernal L. Green.

Groups Federal payments into six categories to examine how the payments were distributed among eight types of nonmetro counties in FY 1980. "Income transfers" (which include Social Security) constituted the highest Federal payments to nonmetro areas; agricultural payments (which include commodity and other farm programs) constituted the lowest. Per capita income transfers were highest in "retirement" counties (counties that attract retirees), suggesting that the economic base of these counties may be more stable than that of counties that depend mainly on farming, manufacturing, or mining.

RDRR-65. January 1987. 24 pp. \$1.25. SN: 001-019-00493-2.

***How Well Can Alternative Policies Reduce Rural Substandard Housing?*** by Donald L. Lerman.

Examines where substandard housing is concentrated and compares building new housing with subsidizing existing housing. Also looks at a combined program of new construction in low-vacancy areas and subsidies in high-vacancy areas as a cost-effective way to reduce rural substandard housing conditions.

RDRR-64. December 1986. 12 pp. \$1.00. SN: 001-019-00485-1.

***Social and Economic Characteristics of the Population in Metro and Nonmetro Counties, 1970-80***, by David A. McGranahan, John C. Hession, Fred K. Hines, and Max F. Jordan.

Reports that rapid growth in manufacturing, increasing numbers of working women with children, and a steep rise in single-parent families were leading changes in the economic and social profile of rural counties during the 1970's. Documents changes in the economic and social characteristics of both metro and nonmetro residents from 1970-80. Although median family income in nonmetro areas continues to improve compared with metro areas, nonmetro median income was only 79 percent of metro income in 1979, compared with 69 percent in 1959.

RDRR-58. September 1986. 72 pp. \$3.75. SN: 001-019-00442-8.

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