

Who Make Up the U.S. Farm Population?

It seems like it should be a truism—the farm population is the people who live on farms. And it used to be. But now, many people who live on farms don't work there and many people who work on farms don't live there; even the farm operator often lives elsewhere now. Here are some alternative ways of identifying farm people.

Farm people are generally thought of as persons living on farms. At the beginning of the 20th century, when the country was chiefly agrarian, most farm residents also worked on farms. Thus, equating farm residence with farmwork posed few problems. But now, many people who live on farms work elsewhere and many people who work on farms live elsewhere.

Farm residents today, in fact, are just as likely to have a nonfarm job as a farm job. This weakening relationship between farm residence and farmwork can be illustrated with a few statistics: in 1982, about 1 out of every 5 farmers did not live on their farms; that was true for only 1 out of 20 in 1940. And more than four-fifths of all hired farmworkers now live off the farm, compared with less than a third in the mid-1940's.

Despite those changes, the Nation's current farm population statistics still reflect the traditional residential separation of farm and nonfarm households. They have not caught up with agriculture's changing demographics. But accurate information is needed. Programs designed to serve farmworkers, for example, would fall far short of reaching their target population if they reached only those living on farms. Likewise, producers and sellers of farm equipment and supplies would miss many potential buyers if they limited their advertising and marketing to farm residents.

To try to come up with a broader identification of people associated with farm-

ing, rather than just those who live on farms, in this article, I describe some alternatives on the basis of residence, occupation, and income. Using special tabulations from the March 1983 Current Population Survey (CPS) of the Bureau of the Census, I show how these alternatives compare with one another as well as with the standard definition of farm population.

What we see is that all the alternatives considered have some shortcomings and that, while one or another may be better for some purposes, no one definition is so clearly superior to the others that we can conclude that it and it alone best describes the U.S. farm population.

The Alternatives

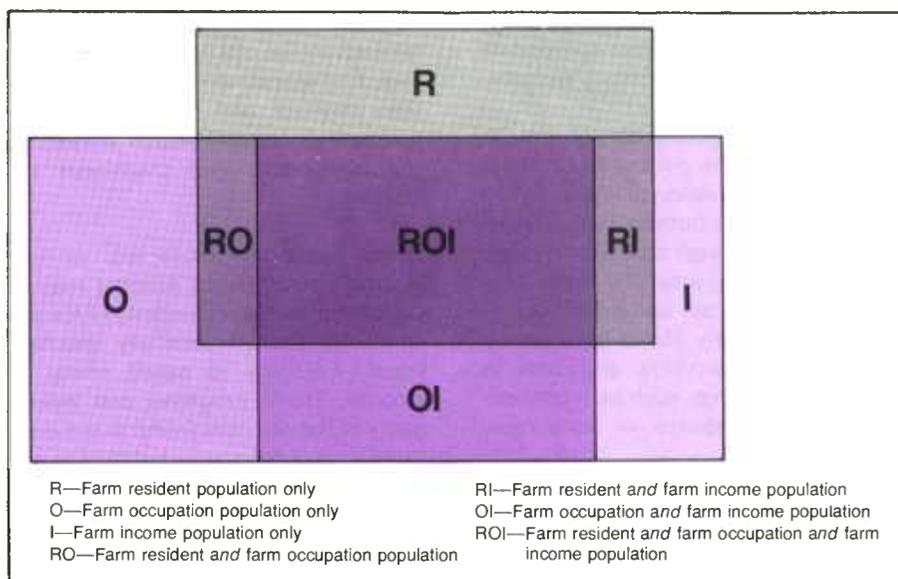
The standard definition of the U.S. farm population is the **farm resident population**, defined as all persons living in households on farms regardless of occupation or income.

An alternative definition is the **farm occupation population** defined as all persons living in households where at least one member is employed in a farm-

related occupation, whether as farm operator, farm manager, or farmworker. A household is also included if at least one unemployed member indicated their last full-time job was in one of those farm-related occupations. This definition avoids a problem of the standard definition, since it requires that someone in the household is in the labor force and working, or last worked, in farming. There is no residence requirement. Thus, it captures the large population in nonresident operator and—especially—hired farmworker households. But it has a major shortcoming in that although the data are available monthly from the CPS, employment refers only to a respondent's principal occupation (the activity performed the most hours during the survey week). Thus, it identifies households only when someone works solely or primarily as a farmer, farm manager, or farmworker. Thousands of households with farming as a secondary activity are excluded, by definition.

A second alternative is the **farm income population**, defined as all persons in households where at least one member receives some farm self-employment income—that is, net money income (gross receipts minus operating expenses)—from the operation of a farm on one's own account, as an owner, a renter, or a sharecropper. Again, there is no residence requirement. This definition avoids a problem of the standard definition by eliminating households where no one is involved in farming. Although farm operators are the main recipients of farm self-employment income, gross receipts from

Farm-related populations show heavy overlap



farm self-employment include more than the money value of agricultural products sold. Other income sources, only marginally associated with the operation of a farm, are included such as receipts from rental of farm equipment to others, receipts from the sale of wood, sand, gravel, and so forth.

A major shortcoming of this definition is that it excludes households whose members receive earnings only from farm wage and salary jobs. Such cash earnings are not considered as income from farming, thus the definition excludes many hired farmworker families unless the household also has a member receiving some farm self-employment income. Another drawback is that the data needed to identify the farm income population are available only once a year. Using such data would introduce more sampling variation than in the residential and occupational data collected monthly.

A third alternative is the *total farm-related population*, defined as all persons in farm-related households, which encompasses farm residence, farm occupation, or farm income. This definition avoids a problem of the standard definition in that all households involved in farming are included in this composite. A shortcoming is that this definition too inherits a part of the inability to identify households with farming as a secondary activity. Households on farms with farming as a secondary occupation are included, but most such households are not on farms. And, because the farm income population is one of the three components, the total farm-related population can be derived only annually.

The Farm Resident Population

The number of persons living on farms peaked at 32.5 million in 1916, just before the entry of the United States into World War I. The farm resident population has declined almost steadily since then, except for brief interruptions during the Great Depression and following World Wars I and II. Lowered labor requirements in agriculture, increased employment opportunities in nonagricultural industries, and the unfavorable disparity between farm and nonfarm income fostered this decline. Another factor was the trend toward smaller families.

According to the March 1983 CPS, 5.6 million persons lived in farm resident

households (table 1). The largest share of the farm resident population is in the Midwest. The South, once the most populous farm region, ranks second. Relatively small percentages of farm residents are in the West and Northeast.

In contrast to earlier years, farm residents no longer account for most agricultural employment. In March 1983, farm residents made up only 44 percent of all agricultural workers. As recently as 1970, 63 percent of the agricultural work force lived on farms.

Families living on farms average lower incomes than those not living on farms: \$18,800 versus \$23,700 in 1982. Farm resident families are also more likely than nonfarm families to be poor: 19 percent of farm families had incomes below the poverty level, compared with 15 percent for nonfarm families.

The Farm Occupation Population

In March 1983, 7.4 million persons lived in households with at least one person in

About the Study

This article presents a brief description of research underway in the Population Section, Economic Research Service, U.S. Department of Agriculture. The larger study is a more detailed analysis of population characteristics and the overlaps and differences in the alternative definitions. A fuller description of the results of that research, conducted by Vera J. Banks, Judith Z. Kalbacher, and Margaret A. Butler, will be issued later.

a farm occupation (table 1). The farm occupation population is the largest of the alternative farm-related populations. The largest share of the farm occupation population lives in the South. The difference between this population's regional distribution and that of farm residents is due to the concentration of farmworker households in the South and West. Regional variations in the number of farm-

Table 1—Status of farm-related populations, March 1983

Characteristic	Farm-related population			
	Total	Farm resident	Farm occupation	Farm income
		<i>Thousands</i>		
Total persons	11,283	5,611	7,379	6,276
		<i>Percent</i>		
Region:				
Northeast	7.1	5.6	8.0	6.1
Midwest	34.4	45.4	31.7	42.5
South	38.8	35.0	38.0	36.4
West	19.7	14.0	22.3	15.0
		<i>Thousands</i>		
Total families	3,164	1,617	1,910	1,774
		<i>Percent</i>		
Family income (1982):				
Under \$2,500 or loss	5.8	7.5	7.9	8.3
\$2,500 to \$4,999	3.0	3.7	3.8	2.5
\$5,000 to \$9,999	13.9	13.8	16.1	11.0
\$10,000 to \$14,999	14.5	14.0	17.5	12.3
\$15,000 to \$19,999	13.9	14.2	15.1	13.6
\$20,000 to \$29,999	22.2	22.5	20.4	22.2
\$30,000 to \$39,999	13.4	13.8	9.1	15.1
\$40,000 and over	13.3	10.5	10.1	15.0
		<i>Dollars</i>		
Median family income	19,600	18,800	16,700	20,900
		<i>Percent</i>		
Families below the poverty level	18.3	18.6	24.2	16.7

workers depend primarily on the dominant types of farming and length of growing and harvesting seasons in an area. The South and West produce a large proportion of the Nation's fruit and vegetable crops, which require large numbers of workers for production and harvest. High proportions of hired workers also characterize the old plantation areas still found in the lower South. The Midwest has the largest share of farmers—over two-fifths, but accounts for only a fourth of all farmworkers.

As expected, the farm occupation population has a different employment pattern than the farm resident population whose work force is divided about equally between farm and nonfarm jobs. By definition, each household in the farm occupation population has at least one member with a farming occupation. In March 1983, two-thirds of all employed persons in this population worked solely or primarily in farming.

The concentration of hired farmworkers in lower income categories causes farm occupation families to have a median income about an eighth lower than that of farm resident families. About a fourth of farm occupation families live in poverty.

The Farm Income Population

In March 1983, the population living in farm income households totaled 6.3 million (table 1). The regional distribution of this population, with more than two-fifths in the Midwest, closely resembles that of the farm resident population. In contrast to the farm occupation population, workers in the farm income population are somewhat more likely to be involved in nonfarm than farm jobs: 52 percent reported nonfarm employment in March 1983. With half of the families having an income of \$20,000 or more, median income is higher among farm income families than either farm resident or farm occupation families.

The Total Farm-Related Population

The inclusion of all farm-related households (residence or occupation or income) results in a maximum total farm-related population of 11.3 million persons (table 1). This level has not been observed in the traditional farm resident population since the mid-1960's. But even defined this broadly, the total farm-related popu-

Table 2—Groups in the farm-related population

Type and household description	Number of persons	Example of typical household
	<i>Thousands</i>	
R—Farm resident only	1,521	Live on farm. Principal occupation—nonfarm or retired.
O—Farm occupation only	2,972	Live off farm. Principal occupation—farmworker, commute.
I—Farm income only	1,565	Live off farm. Secondary occupation—farm operator, commute.
RO—Farm resident and farm occupation	515	Live on farm. Principal occupation—farmworker.
RI—Farm resident and farm income	816	Live on farm. Secondary occupation—farm operator.
OI—Farm occupation and farm income	1,133	Live off farm. Principal occupation—farm operator.
ROI—Farm resident and farm occupation and farm income	2,759	Live on farm. Principal occupation—farm operator.

lation still represents only a small part of the national total—5 percent.

The regional distribution of the total farm-related population resembles that of the largest alternative, the farm occupation population. Its employment pattern, with slightly more persons working in nonfarm jobs, is similar to that of the farm income population. And its income and poverty levels are close to those of the farm resident population.

What types of households and people make up the total farm-related population? Does one of the identifiers contribute significantly more to the total than others? Identities and explanations of the various components of the total farm-related population are summarized in table 2.

The total farm-related population is about equally divided between farm and nonfarm residents (5.6 million versus 5.7 million, respectively). The two major components in the total farm-related population are the people living off farms in hired farmworker households (O), and the people living in farm operator or farm manager households on farms (ROI). Each of these components accounts for about a fourth of the total. The populations contributing the least to the total are both found on farms: in households where a member is solely or primarily a farm wageworker (RO), and in house-

holds where the operator is mainly employed at nonfarm work and farming is the secondary activity (RI). These two populations combined account for only a tenth of the total farm-related population.

With so many different components, there are obviously overlaps within the total farm-related population (see figure). In each of the alternative farm-related populations, the greater part of the total overlaps another. Within this overlapping area, the largest portion is that shared by all three alternatives (ROI). The proportion of the population living in ROI households ranges from more than a third of the farm occupation population to half of the farm resident population.

The greatest overlap between any two of the alternatives is between occupation and income (OI). This reflects the fact that farm operators and their families make up about half of the farm occupation population and farm operators dominate among persons receiving some farm self-employment income. The least overlap is between residence and occupation (RO). This reflects the fact that the great majority of farm wageworkers, who with their families make up the other half of the farm occupation population, do not live on farms.

A farm occupation is the least likely of the alternatives to be overlapped. Two-fifths of the population in farm occupation

households qualified on occupation only (O). This is not because they are earning no income from farming, but the income received is wages, excluding them from the farm income category.

Alternatives Can Focus on Target Populations

For efficient development and implementation of various programs, such as those administered by the Farmers Home Administration or the Extension Service, government officials as well as various farm organizations (farmer cooperatives, suppliers, and marketers) need information on number, location, and characteristics of farm people. With more and more farm-related people living off farms, we must consider ways of identifying them other than by the traditional means. Policies and programs will be more effectively administered if the targeted populations are well defined. In addition to the traditional farm resident population, the farm occupation population and the farm income population are alternative ways of identifying farm-related people, or the three can be pooled to obtain a composite concept.

Each of the alternative concepts has some shortcomings. They are, however, easy to identify and very flexible. They may be used individually or in various groupings developed to best suit the desired end result. If the purpose of a program or policy is to reach persons involved in farming, whether they live on a farm, work in farming, or receive some farm income, these proposed alternatives identify the target populations. **RDP**

For Additional Reading...

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John Kitchen and Frank Zahn

Interest Rates, Farm Prices, and the U.S. Farm Sector

What do interest rates have to do with prices for farm products? In a word, everything. It's a roundabout route, but interest rates are a prime factor behind changes in the demand for and supply of farm products. They affect demand, especially foreign demand, through exchange rates and thereby the prices foreigners pay. They affect supply through farmers' costs of production and thereby the price the farmers must get to stay in business.

Until about about a decade ago, the farm economy, and hence, a large segment of the rural economy was insulated from forces that affected the overall or "macro" economy—or so everyone thought. When analysts began to realize that maybe it was not so insulated, the connections seemed to be all to the good. Foreign countries were buying as much grain as American farmers could produce and farm incomes soared higher than they had ever been before—or since.

Now that the euphoria of the 1970's has passed, analysts can see that the current farm situation is a direct result of changes in the macroeconomic policies of the 1970's and 1980's. And, the farm sector is linked not only with the national economy, but with the world economy as well. The growth of international trade since World War II and the related emergence of well-developed international credit markets mean that the U.S. economy is an integral part of the global economy. The U.S. economy, including the farm sector, now competes more directly with other countries in world markets.

This article explains how interest rates have been the primary channel for transmitting changes in national and interna-

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tional macroeconomic policy to the U.S. farm sector.

What Is Macroeconomic Policy?

Macroeconomic policy has two basic components: monetary policy and fiscal policy. Monetary policy affects the growth of money available for spending in the economy. It is mostly controlled by the Board of Governors of the Federal Reserve System. Fiscal policy affects total spending directly, through government spending, or indirectly, through the after-tax income of consumers and businesses. It is mostly controlled by the Congress and the President. The objective of both policies is to encourage the growth in total spending in the economy that will pro-

Editor's note:

Articles in earlier issues of RDP have dealt with the different aspects of the current farm situation—its effects on rural communities, regions most likely to be affected, rural banks caught in the squeeze, and some of the causes leading up to the present state. All those articles looked at events from the perspective of the "micro" economy (what economists say when they mean small groups of people—a farmer, a small town, rural banks).

This article takes a different tack. It looks at the origins of the farm crisis in terms of the "macro" economy, that is, national and world economies. What makes this such a fresh look is that, for decades, policymakers had worked from the assumption that the farm sector was relatively isolated from the macro economy. Now, it seems, that apparent immunity was just happenstance. The U.S. farm sector in the 1980's is very much influenced not only by the general U.S. economy, but by overseas economic events as well.

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