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Farm Population Trends by Farm Characteristics, 1975-80

Vera J. Banks

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ABSTRACT

The number of persons living on larger farms jumped 67 percent between 1975 and 1980, while smaller and midsize farms together lost about 20 percent of their population. Despite the heaviest rates of population loss, smaller farms (annual sales less than \$20,000) still contain about half of the U.S. farm population. Midsize farms (annual sales between \$20,000 and \$99,999) lost about 7 percent of their population during 1975-80 but still contain nearly 33 percent of the U.S. farm population. Although the number of persons living on larger farms (annual sales of \$100,000 and over) increased substantially, they only account for 18 percent of farm residents.

Keywords: Farm population, race, tenure status, value of agricultural sales, type of farm, population trends, population distribution.

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SUMMARY

The number of persons living on larger farms jumped 67 percent between 1975 and 1980, while smaller and midsize farms together lost about 20 percent of their population. Despite the heaviest rates of population loss, smaller farms (annual sales less than \$20,000) still contain about 50 percent of the U.S. farm population. Midsize farms (annual sales between \$20,000 and \$99,999) lost about 7 percent of their population during 1975-80 but still contain nearly 33 percent of the U.S. farm population. Although the number of persons living on larger farms (annual sales of \$100,000 and over) increased substantially they only account for 18 percent of farm residents.

The majority of farm residents live on farms in which they have an ownership interest. Most of these residents are on full-owner operations (the operator owns all the land farmed), but the shift continues toward residence on part-owner operations (the operator both owns and rents part of the land farmed). In 1980, about 50 percent of the farm population resided on farms operated by full owners, about 40 percent lived on farms operated by part-owners, and the remaining 10 percent lived on farms operated by tenants (persons who operate only land they rent from others or who work on shares for others).

The population living in farm operator households (farm operators, their families, and possibly other relatives or unrelated individuals) remained essentially unchanged: about 6.6 million. In contrast, the number of persons living in nonoperator households (hired farm laborers, their families, and possibly rela-

Farm characteristic	Farm population		
	June 1980	June 1975	Percentage change, 1975-80
	----Thousands----		Percent
Total farm population	7,045	7,217	-2.4
Sales category:			
Smaller farms	3,533	4,046	-12.7
Midsize farms	2,217	2,394	-7.4
Larger farms	1,295	777	66.7
Tenure of operator:			
Full owners	3,528	3,817	-7.6
Part owners	2,822	2,582	9.3
Tenants	696	818	-14.9
Operator status:			
Operator households	6,588	6,537	.8
Nonoperator households	457	680	-32.8

tives or unrelated individuals) fell by about 33 percent. The nonoperator population fell among both white and black farm residents.

The majority of both white and black farm residents live on livestock and cash-grain farms. However, whites not living on these two farm types were more likely to be on dairy farms, whereas blacks were more likely to be on tobacco farms. The number of persons living on livestock farms grew during the 5-year study period and reached about 40 percent of the total farm population in 1980. Although the number of persons living on cash-grain farms declined during 1975-80, they still contained 27 percent of all farm people in 1980.

The relative ranking of the farm population among the various farm types continues to shift. Nevertheless, the farm population remains highly concentrated on livestock, cash-grain, and dairy farms. Shifts in production and efficiency can significantly alter the number and distribution of farm residents. Farm people will be most responsive and susceptible to policies and programs relating to livestock and cash-grain farming.

Farm Population Trends by Farm Characteristics, 1975-80

Vera J. Banks

INTRODUCTION

Statistics on the number of persons living on farms in rural areas of the United States, their geographic distribution, and their socioeconomic characteristics are published annually (18,20). 1/ Reports are issued periodically on trends in the farm population by characteristics of farms. This report presents estimates of the 1980 and 1975 farm populations by race, tenure status of operator, value of agricultural products sold, and type of farm. Two earlier reports covered the periods 1966-70 and 1970-75 (1,3).

Farm residents living in the same household as the farm operator and those living in households that do not contain an operator are separately identified. Farm population estimates are presented for the United States and two major geographic regions--the South and the combined North and West. 2/ Although limited in detail, estimates are also given for farm residents of Spanish origin (who may be of any race).

Data for this and the earlier research reports were obtained from the June Enumerative Survey (JES), a 48-State sample survey conducted by the U.S. Department of Agriculture. The JES collects information annually from farmers and ranchers and is designed to provide the basis for estimates of farm numbers, land use, crop acreages, livestock numbers, farm labor, farm population, and related economic factors (22). 3/

The 1980 and 1975 farm population estimates in this report are based on the farm definition adopted for the 1974 Census of Agriculture. Under this current definition, the farm population consists of all persons living in rural territory on places which in the reporting year had, or normally would have had, sales of agricultural products of \$1,000 or more.

1/ Underscored numbers in parentheses refer to literature cited at the end of this report.

2/ The combined North and West includes the Northeast, North Central, and West census geographic regions.

3/ See Source and Reliability on p. 40 for more discussion of this survey.

Some of the research and policy-relevant questions addressed in this analysis are the following:

- o How many people live on small-scale operations which make only minor contributions to the Nation's farm output?
- o What proportion of farm people live on farms of adequate commercial scale to derive a reasonable farm income?
- o How many and what proportion of the farm population are on different types of farms?
- o What is the trend in number, tenure, type, and scale of farming for the black farm population? How does this trend compare with the white farm population?
- o What variations exist in the rate of farm population change for each tenure group by type of farm or value of agricultural sales?
- o Are persons living on a specified farm type more likely to have low income from agricultural products sold than another?

This analysis, based on JES data, provides insights and answers to these and similar questions that cannot be answered by data from either the Census of Population or Census of Agriculture. The Census of Population presents comprehensive data on the demographic, social, and economic characteristics of persons living on farms. In the Census of Agriculture, a statistical profile is produced of the Nation's farming, ranching, and related agricultural activities. The JES provides information on both farm residents and the characteristics of farms on which they live.

OPERATOR AND NON-
OPERATOR FARM POP-
ULATIONS

In June 1980, 7,045,000 persons lived on farms in rural areas of the conterminous United States. ^{4/} This 1980 estimate of the farm population is 172,000 below that of 7,217,000 for 1975. Since first counted in 1920, the farm population has declined almost steadily, although the rate of decline slackened in the seventies compared with the previous decade. Based on the previous farm definition, the rate of loss in the farm population averaged 2.9 percent per year between

^{4/} Farm population estimates in this report exclude Alaska and Hawaii and relate to June only. The data are derived from a different sample survey than that used in the annual Census-USDA farm population reports. Therefore, the numbers relating to national, regional, and racial totals in this report differ slightly from published April-centered annual averages for 1980 and 1975 (2,4,19).

1970-80. ^{5/} This average rate of decline is significantly lower than the 4.8 percent for 1960-70 (19).

The JES distinguishes between the population living in the farm operator's household and the population living rent free in other dwellings on farms. In this report, the population residing in the farm operator's household will be referred to as "operator population," and those persons living in a farm household that did not contain a farm operator or who do not pay cash rent for the house will be termed "nonoperator population." Operator households contain farm operators and their immediate families and may also include other relatives or unrelated individuals. Nonoperator households are most often those of hired farm laborers and their families, but many also consist of other persons, such as relatives or unrelated individuals, who for various reasons are permitted to live in a farm home rent free. The operator and nonoperator populations are examined separately because earlier research found significant differences in their numbers and distributions by race, tenure status of operator, and characteristics of farms.

The vast majority of farm residents live in operator households (94 percent). The proportion of the total farm population classed as operator population remained about 90 percent from the time the data were first collected in 1966 until 1975. However, while the operator population remained stable between 1975 and 1980, persons living in nonoperator households declined significantly (table 1). Thus, the proportion of the total farm population classed as operator rose and that of nonoperator declined accordingly. Traditionally, nonoperator dwellings on farms were primarily occupied by hired farmworkers. However, the hired farm workforce has shifted from primarily farm to primarily nonfarm in residence. In 1949, 65 percent of all hired farmworkers lived on farms; by 1979, the proportion had declined to 17 percent (9).

Black farm residents are much more likely than whites to be classed as nonoperator population. In 1980, about 30 percent of blacks on farms lived in nonoperator households compared with only 6 percent of the white farm population. The population living in other units on farms declined in both racial groups, but the rate of loss was significantly heavier among blacks than among whites.

Declines in the birth rates and accompanying increases in the usually small nonfamily households (those maintained by persons living alone or with other unrelated individuals) have led to a shift toward smaller U.S. household size. The average number of persons in U.S. households fell from 3.14 in 1970 to

^{5/} The previous farm definition, in use since 1960, defined the farm population as all persons living in rural territory on places of 10 or more acres and selling at least \$50 worth of agricultural products in the reporting year, and on places of under 10 acres and selling at least \$250 worth of agricultural products.

Table 1--Farm population in operator and nonoperator households by race, Spanish origin, and region, June 1980 and 1975

Operator status, race, and region	Population		Percentage change, 1975-80	Percentage distribution	
	1980	1975		1980	1975
	---Thousands---		-----Percent-----		
Total farm population	7,045	7,217	-2.4	100.0	100.0
Operator	6,588	6,537	.8	93.5	90.6
Nonoperator	457	680	-32.8	6.5	9.4
White	6,775	6,888	-1.6	100.0	100.0
Operator	6,392	6,357	.6	94.3	92.3
Nonoperator	383	531	-27.9	5.7	7.7
Black	236	271	-12.9	100.0	100.0
Operator	164	147	11.6	69.5	54.2
Nonoperator	71	124	-42.7	30.1	45.8
Spanish origin <u>1/</u>	168	NA	-	100.0	-
Operator	111	NA	-	66.1	-
Nonoperator	57	NA	-	33.9	-
North and West	4,483	4,689	-4.4	100.0	100.0
Operator	4,225	4,353	-2.9	94.2	92.8
Nonoperator	258	337	-23.4	5.8	7.2
White	4,444	4,648	-4.4	100.0	100.0
Operator	4,193	4,326	-3.1	94.4	93.1
Nonoperator	252	323	-22.0	5.7	6.9
Black	14	8	B	B	B
Operator	11	2	B	B	B
Nonoperator	4	6	B	B	B
Spanish origin <u>1/</u>	101	NA	-	100.0	-
Operator	68	NA	-	67.3	-
Nonoperator	32	NA	-	31.7	-
South	2,562	2,528	1.3	100.0	100.0
Operator	2,363	2,184	8.2	92.2	86.4
Nonoperator	199	343	-42.0	7.8	13.6
White	2,331	2,240	4.1	100.0	100.0
Operator	2,199	2,031	8.3	94.3	90.7
Nonoperator	131	209	-37.3	5.6	9.3
Black	221	263	-16.0	100.0	100.0
Operator	154	144	6.9	69.7	54.8
Nonoperator	67	119	-43.7	30.3	45.2
Spanish origin <u>1/</u>	67	NA	-	100.0	-
Operator	42	NA	-	62.7	-
Nonoperator	25	NA	-	37.3	-

NA = Not available.

B = Base less than 50,000.

- = Zero or a number which rounds to zero.

1/ Persons of Spanish origin may be of any race.

2.94 in 1975, then to 2.76 in 1980 (15). The average number of persons in farm households also dropped, particularly among the nonoperator group. Between 1975 and 1980, the average size of nonoperator households on farms dropped from 3.36 persons to 2.89 persons. Operator households declined only slightly in average size, from 3.41 persons to 3.32 persons. Irrespective of operator status, black and Spanish-origin farm households are generally larger than those with a white household head.

Population trends by operator status contrasted for the two major geographic regions. In the combined North and West, where nearly two-thirds of all farm people live, both the operator and nonoperator populations declined from 1975 to 1980. ^{6/} However, the decrease in the operator population was a slight 3 percent compared with a decline of 23 percent among persons in nonoperator households. In the South, on the other hand, population increase in farm operator households was offset by a loss in nonoperator households, thus resulting in relative stability for that region.

Regional differences have narrowed, but the proportion of the farm population living in nonoperator housing remains somewhat higher in the South than in the rest of the country. This principally reflects the concentration of the black farm population in the Southern States. In 1980, almost a third of all blacks on southern farms lived in rent-free housing, basically as farmworkers and their families. In contrast, whites on southern farms were no more likely to be in nonoperator households than were their northern and western counterparts. Persons of Spanish origin, who represent only 2 percent of the total farm population, have higher proportions in nonoperator households than either whites or blacks.

FARM POPULATION BY TENURE STATUS OF FARM OPERATOR

Farm tenure deals with the rights of individuals in the use of land and other resources. The ways in which land, labor, and capital are combined under varying tenure arrangements influence the efficiency of production and the cost of farm products, thus affecting not only farm residents but all members of society (8). The tenure classifications used in the agricultural censuses and this report are restricted to farm operators and their rights on the land operated. These tenure categories are (1) full owners, who operate only land they own, (2) part owners, who operate land they own and also land they rent from others, and (3) tenants, who operate only land they rent from others or work on shares for others. In this study, the nonoperator population is classified by the tenure status of the operator on whose farm they live.

^{6/} Treated here as a single unit for analysis, the farm population in the combined North and West is disproportionately located in the North Central region. In 1980, 70 percent of all farm residents living outside the South were on farms in the North Central region (19).

The majority of farm residents live on farms in which they have an ownership interest. About 90 percent of the farm population resided on full- or part-owner operations in both 1975 and 1980 (table 2). Most farms are full-owner operations, but over the last 30 or so years, the proportion of part-owner farms has gradually increased. From 1975 to 1980, the proportion of persons living on part-owner farms increased from 36 to 40 percent of the farm population. This increase reflects the overall decline in farm numbers and the rise in the number of part-owner operators who combine the security of an owned unit with economies of size provided by rental units to obtain a viable operation. The improved performance of farm machinery and other modern technology to operate on a larger scale has given the modern farmer the capacity to expand and thereby increase total net farm income (14). Good farmland is limited, and the purchase of land requires ever-increasing amounts of capital; thus leasing and renting additional land has become the optimal means for operators to enlarge their operations. Land available for rent by part owners is often owned by retired farmers, by surviving spouses, by sons and daughters who left the parental farm for nonfarm employment, by those who have given up most of their farming activities but retain the land and even their residence on it, and by other nonfarm land-owners. Operators of part-owner farms are much more likely to report farming as their principal occupation than are operators in the other tenure categories. In 1978, 70 percent of all part owners reported that they spent 50 percent or more of their worktime in farming or ranching (16).

Between 1975 and 1980, the number of persons living on part-owner farms increased, while those living on farms in the other tenure groups decreased. Earlier JES studies found that even when population decreased among all tenure groups, the rate of decline was significantly lower among those on part-owner operations. The lower rate of population loss in this tenure group compared with the full-owner and tenant categories reflects the increasing importance of farms operated by part owners.

The improved population retention in the part-owner group should not be interpreted as the effects of new entrants into farming. The high cost of land and capital requirements for buildings, equipment, and machinery, generally, have spurred the exodus from farming and raised barriers to entry. Although the exact proportions are unknown, relative gains in the part-owner group are thought to result mainly from the shifting of operations from one tenure class to another. For example, operators who were previously classed as full owners become part owners as they rent additional land.

Adjustments in farm operational arrangements to a changing agricultural structure have resulted in a downward trend in full tenancy. The proportion of farms operated by tenants has fallen rapidly and steadily since 1935, when tenants reached their peak and accounted for 42 percent of all U.S. farms. Tenant-operated farms represented only 13 percent of all farms in 1978. In particular, the mechanization and modernization of

Table 2--Farm population by tenure of operator, race, Spanish origin, and region, June 1980 and 1975

Tenure of operator, race, and region	Population		Percentage change, 1975-80	Percentage distribution	
	1980	1975		1980	1975
	-----Thousands-----		-----Percent-----		
Total farm population	7,045	7,217	-2.4	100.0	100.0
Full owners	3,528	3,817	-7.6	50.1	52.9
Part owners	2,822	2,582	9.3	40.1	35.8
Tenants	696	818	-14.9	9.9	11.3
White	6,775	6,888	-1.6	100.0	100.0
Full owners	3,413	3,692	-7.6	50.4	53.6
Part owners	2,695	2,454	9.8	39.8	35.6
Tenants	667	743	-10.2	9.8	10.8
Black	236	271	-12.9	100.0	100.0
Full owners	97	97	-	41.1	35.8
Part owners	113	109	3.7	47.9	40.2
Tenants	26	64	-59.4	11.0	23.6
Spanish origin ^{1/}	168	NA	-	100.0	-
Full owners	75	NA	-	44.6	-
Part owners	66	NA	-	39.3	-
Tenants	28	NA	-	16.7	-
North and West	4,483	4,689	-4.4	100.0	100.0
Full owners	2,168	2,383	-9.0	48.4	50.8
Part owners	1,837	1,786	2.9	41.0	38.1
Tenants	478	521	-8.3	10.7	11.1
South	2,562	2,528	1.3	100.0	100.0
Full owners	1,359	1,434	-5.2	53.0	56.7
Part owners	985	797	23.6	38.4	31.5
Tenants	218	297	-26.6	8.5	11.7

NA = Not available.

- = Zero or a number which rounds to zero.

^{1/} Persons of Spanish origin may be of any race.

cotton and tobacco farming caused many landowners to end the employment of tenant labor to produce their crops. Competition for rental land from owner-operators seeking to enlarge their operations continues. Thus, between 1975 and 1980, as in earlier periods, the number of persons living on tenant farms declined at a heavier rate.

The agricultural censuses have consistently shown that blacks operate a significantly higher proportion of tenant farms than do whites, and earlier surveys found a higher proportion of the black farm population living on such farms. As late as 1975, about 20 percent of all black farm residents were on tenant farms compared with about 10 percent of whites. However, significantly heavier population losses among blacks in this tenure group resulted in both racial groups having about the same proportion on tenant-operated farms in 1980 for the first time in history.

The percentage of the farm population residing on part-owner farms has increased for both racial groups, but blacks are still more likely than whites to be on part-owner farms. Examination of the operator and nonoperator populations by race and tenure status reveals that the high proportion of blacks on part-owner farms results from their disproportionate representation in other dwellings on these farms. In 1980, over 40 percent of blacks on part-owner farms lived in rent-free households. Persons living on farms and employed as hired farm laborers are most often quartered in such units and thus are classified in the nonoperator population. Part-owner farms with their large acreage and high market value of agricultural products sold are more likely to have full-time agricultural workers than the other tenure groups. Among farms reporting the use of hired labor in 1978, 54 percent of part-owner farms had regular and year-round agricultural workers compared with 27 percent for all other farms. 7/

Persons of Spanish origin were more likely to live on farms operated by a tenant than were other farm residents, 17 percent compared with 10 percent, nationally. A somewhat higher than average tenancy rate was also found among farm operators of Spanish origin.

Despite a 24-percent increase in the population living on southern part-owner farms, the likelihood of living on a full-owner operation was still somewhat greater in this region than in the rest of the country. This likelihood results, in part, from the heavier representation of part-owner farms in the North and West. In 1978, 31 percent of the farms in the North and West were part-owner operations compared with 26 percent in the South.

The proportion of farm residents living on tenant farms did not differ significantly between the two major geographic regions. Each region had roughly 10 percent in 1980. This similarity is

7/ Persons who did 150 days or more of hired farmwork.

in sharp contrast to the regional differences that existed as late as midcentury. According to the 1950 Agricultural Census, 34 percent of all southern farms were classed as tenant farms compared with 20 percent in the North and West. The 1978 Agricultural Census reported that this wide regional disparity no longer exists.

The trend of population increase among persons living on part-owner farms and the decrease for those in the other tenure groups pertained to persons living in farm operator households only (table 3). Population dropped in all tenure categories in the nonoperator population, but the rate of decline was somewhat lower for persons living in other dwellings on part-owner farms.

**FARM POPULATION
BY VALUE OF AGRICULTURAL PRODUCTS
SOLD**

The farm population is examined on the basis of the total value of agricultural products sold from the farm in the preceding year. ^{8/} This report emphasizes three broad sales categories: (1) smaller farms--those with annual sales of less than \$20,000, (2) midsize farms--those with sales between \$20,000 and \$99,999 annually, and (3) larger farms--those with annual sales of \$100,000 or more.

Value of agricultural sales is widely used as a measure of farm size. However, this output measure, while useful for assessing the consequences of different farm sizes at a given point in time, has limitations in making comparisons over time. Sales value adequately measures total output but is sensitive to inflation and relative commodity price changes. In addition, different kinds of agricultural commodities require different combinations of land, labor, and capital per dollar of sales. Some farms are labor intensive, some are land intensive, and others are capital intensive. Classifying farm size on the basis of sales ignores these very significant differences (6). Thus, caution should be exercised in interpreting shifts in farm numbers and population among the sales groups.

Shifts in farm numbers result from changes in price inflation as well as from such nonprice factors as changing farm size and increased agricultural production. Therefore, some researchers use the Consumer Price Index as a general indicator of variations in price levels, thus providing a basis for determining how much of an indicated increase or decrease in farm numbers is real and how much is due to price changes. The Department of Agriculture's fourth annual report to Congress on the status of the family farm estimates the change in farm numbers due to price changes and nonprice factors by detailed sales classes (13). For the three broad sales groups examined here, all of the net loss between 1974 and 1978 in number of smaller farms and all of the net gain in number of larger farms resulted from

^{8/} Sales value is based on total gross income received from the sale of crops, livestock, poultry, livestock and poultry products, horticultural commodities, and miscellaneous agricultural products.

Table 3--Population in farm households by operator status, tenure of operator, and region, June 1980 and 1975

Operator status, tenure, and region	Population		Percentage change, 1975-80	Percentage distribution	
	1980	1975		1980	1975
	---Thousands---		-----Percent-----		
Operator households:					
Total	6,588	6,537	0.8	100.0	100.0
Full owners	3,379	3,563	-5.2	51.3	54.5
Part owners	2,581	2,277	13.4	39.2	34.8
Tenants	628	697	-9.9	9.5	10.7
North and West	4,225	4,353	-2.9	100.0	100.0
Full owners	2,075	2,257	-8.1	49.1	51.8
Part owners	1,712	1,621	5.6	40.5	37.2
Tenants	438	476	-8.0	10.4	10.9
South	2,363	2,184	8.2	100.0	100.0
Full owners	1,304	1,306	-.2	55.2	59.8
Part owners	869	656	32.5	36.8	30.0
Tenants	190	222	-14.4	8.0	10.2
Nonoperator households:					
Total	457	680	-32.8	100.0	100.0
Full owners	149	254	-41.3	32.6	37.4
Part owners	240	305	-21.3	52.5	44.9
Tenants	68	121	-43.8	14.9	17.8
North and West	258	337	-23.4	100.0	100.0
Full owners	93	127	-26.8	36.0	37.7
Part owners	125	165	-24.2	48.4	49.0
Tenants	40	45	B	15.5	13.4
South	199	343	-42.0	100.0	100.0
Full owners	55	128	-57.0	27.6	37.3
Part owners	116	140	-17.1	58.3	40.8
Tenants	28	75	-62.7	14.1	21.9

B = Base less than 50,000.

both price changes and nonprice factors. In contrast, the increase in number of midsize farms due to growth from price changes was partly countered by a decrease from nonprice factors.

Between 1975 and 1980, the number of persons living on larger farms increased, while population decreased on farms in the two lower sales groups. This is without any adjustment for inflation. Population growth on farms in the higher sales category resulted in their proportionate share of the farm total rising from about a tenth in 1975 to nearly a fifth in 1980 (table 4). The number of residents on these larger farms increased only among whites and persons living in the farm operator's household.

Smaller Farms

Smaller farms--those with sales of less than \$20,000 annually--are a diverse group and are occasionally separated into three types: (1) those where farming is a secondary activity supplementing other income, (2) those where farming is the primary activity supported by off-farm income, and (3) those with no or very small amounts of nonfarm income. For the first type, the owner's primary goal is to maintain a rural residence, often with only minimal farm product sales. Included in this group are the "hobby" or "lifestyle" farms. Others in this group may sell a larger volume of farm products while still relying primarily on nonfarm income. The second type includes those who desire farming as an occupation and hope to expand their farming operation. In the interim, however, they may have substantial nonfarm employment to help accumulate capital for enlargement of the farm. Retired or semiretired farmers, who may have reduced the size of their operation upon or in transition into retirement, are also included in the category. The third group consists of subsistence farms whose operators and families are often underemployed and live below the poverty level (13). Fourteen percent of all farm families were below the poverty level in 1980 (19).

Generally, the lower the value of sales, the higher the contribution the farm operator family receives from off-farm sources. While the nonfarm contribution tends to lessen as value of sales increases, farm operator families with less than \$20,000 in sales received 94 percent of their total income from nonfarm sources in 1979 (table 5). Farm income is likely to exceed that received from off-farm sources only among farm operator families with annual sales of \$40,000 or more. Earlier studies have found that the sources of nonfarm income vary across sales categories. On smaller farms, off-farm income usually comes from nonfarm wages and salaries. By contrast, rents, dividends, and interest are usually the more important nonfarm income sources for farms in higher sales classes (14).

Despite persistently heavier population losses, smaller farms still contain the largest share of the farm population. About half of all persons on farms in June 1980 were on places with sales of less than \$20,000 annually. Between 1975 and 1980, smaller farms incurred a population loss of 13 percent compared

Table 4--Farm population by value of agricultural products sold, race, and Spanish origin, June 1980 and 1975

Value of agricultural products sold and race	Population		Percentage change, 1975-80	Percentage distribution	
	1980	1975		1980	1975
	---Thousands---		-----Percent-----		
Total farm population	7,045	7,217	-2.4	100.0	100.0
Larger farms	1,295	777	66.7	18.4	10.8
\$200,000 and over	570	NA	-	8.1	-
\$100,000-\$199,999	725	NA	-	10.3	-
Midsize farms	2,217	2,394	-7.4	31.5	33.2
\$40,000-\$99,999	1,316	1,341	-1.9	18.7	18.6
\$20,000-\$39,999	901	1,053	-14.4	12.8	14.6
Smaller farms	3,533	4,046	-12.7	50.1	56.1
\$10,000-\$19,999	865	1,017	-14.9	12.3	14.1
\$2,500-\$9,999	1,644	1,757	-6.4	23.3	24.3
\$1,000-\$2,499	1,024	1,272	-19.5	14.5	17.6
White	6,775	6,888	-1.6	100.0	100.0
Larger farms	1,253	703	78.2	18.5	10.2
\$200,000 and over	543	NA	-	8.0	-
\$100,000-\$199,999	711	NA	-	10.5	-
Midsize farms	2,165	2,315	-6.5	32.0	33.6
\$40,000-\$99,999	1,285	1,284	.1	19.0	18.6
\$20,000-\$39,999	880	1,031	-14.6	13.0	15.0
Smaller farms	3,356	3,870	-13.3	49.5	56.2
\$10,000-\$19,999	835	992	-15.8	12.3	14.4
\$2,500-\$9,999	1,561	1,666	-6.3	23.0	24.2
\$1,000-\$2,499	960	1,213	-20.9	14.2	17.6
Black	236	271	-12.9	100.0	100.0
Larger farms	37	57	-35.1	15.7	21.0
\$200,000 and over	25	NA	-	10.6	-
\$100,000-\$199,999	12	NA	-	5.1	-
Midsize farms	38	63	-39.7	16.1	23.2
\$40,000-\$99,999	19	48	B	8.1	17.7
\$20,000-\$39,999	19	15	B	8.1	5.5
Smaller farms	161	152	5.3	68.2	56.1
\$10,000-\$19,999	26	21	B	11.0	7.7
\$2,500-\$9,999	73	77	-5.2	30.9	28.4
\$1,000-\$2,499	61	54	13.0	25.8	19.9
Spanish origin ^{1/}	168	NA	-	100.0	-
Larger farms	54	NA	-	32.1	-
\$200,000 and over	37	NA	-	22.0	-
\$100,000-\$199,999	17	NA	-	10.1	-
Midsize farms	42	NA	-	24.4	-
\$40,000-\$99,999	29	NA	-	17.3	-
\$20,000-\$39,999	12	NA	-	7.1	-
Smaller farms	73	NA	-	42.9	-
\$10,000-\$19,999	10	NA	-	6.0	-
\$2,500-\$9,999	37	NA	-	22.0	-
\$1,000-\$2,499	25	NA	-	14.9	-

NA = Not available.

B = Base less than 50,000.

- = Zero or a number which rounds to zero.

^{1/} Persons of Spanish origin may be of any race.

with a loss of 7 percent on midsize farms, and a 67-percent increase on larger farms. Although the data are not strictly comparable because of the change in farm definition, population loss on smaller farms for the 1970-75 period was also significantly higher, 26 percent compared with 13 percent nationally. The smaller farm category also makes up the highest proportion of U.S. farms, 64 percent of the Nation's 2.5 million farms in 1978. While the majority of farms fall into the smaller farm category, they account for only 22 percent of all land in farms and 8 percent of the total value of sales. These farms are generally small in size. In 1978, the average size of farms with less than \$20,000 in sales was 141 acres; farms with greater sales averaged 841 acres (16).

In contrast to 1975 when about equal proportions of both racial groups were on smaller farms, blacks were more likely than whites to live on such farms in 1980. During the 5-year study period, the white population on these farms lost 500,000 persons, or 13 percent, while blacks had no significant change in number.

Regardless of race, about 68 percent of the southern farm population lived on places with sales less than \$20,000 in 1980, reflecting the concentrated black farm population in the Southern States and the high number of southern farms in the lowest sales class. In 1978, more than half of the Nation's 610,000 farms with sales under \$2,500 were in the 16 Southern States.

Comparatively fewer Spanish-origin farm residents live on smaller farms. In 1980, only 4 out of every 10 Spanish-origin farm residents lived on a place with sales of less than \$20,000 annually.

Table 5--Income per farm operator family by major source and value of sales, 1979

Value of agricultural products sold	Total net cash income	Net cash farm income	Off-farm income	
			Total	Percentage of total
		-----Dollars-----		Percent
All farm operator families	25,479	11,566	13,913	54.6
Less than \$2,500	16,793	-740	17,533	104.4
\$2,500-\$9,999	17,349	1,144	16,205	93.4
\$10,000-\$19,999	18,484	4,014	14,470	78.3
\$20,000-\$39,999	19,436	8,642	10,794	55.5
\$40,000-\$99,999	26,199	17,367	8,832	33.7
\$100,000 and over	72,683	61,912	10,771	14.8

Source: (17).

Only 22 percent of all persons living in nonoperator households in 1980 were on smaller farms. Because of the low value of farm products associated with these farms, these households probably would not contain a large number of hired workers. Persons living in these nonoperator dwelling units are probably relatives or caretakers. In 1978, only 27 percent of the farms with sales of less than \$20,000 reported any use of hired labor. About 62 percent of the remaining farms reported using such labor.

Midsize Farms

The continuous decline in the number of midsize farms--those with sales ranging from \$20,000-\$99,999 annually--may be considered one of the most significant trends in farm size by sales class. USDA analysts regard these farms as:

...too large for part-time farms and too small for full-time farms. Therefore, they are under the greatest adjustment pressure and bear the greatest part of adjustment costs. A few will grow in size. Some will reduce the size of their operations and become part-time farms. Others will phase out as the operator retires or transfers completely to nonfarm employment in search of higher income (13).

Lin and others have projected that the number of farms in this category will continue to decline through the year 2000. These projections further indicate that "...future farm numbers are likely to follow a bimodal distribution--a large proportion of smaller farms, an ever-increasing proportion of larger farms, and a declining segment of medium-size farms (7)."

The historical decline in total number of farms incorporates both a phaseout of smaller operations and an increase in farms in the higher sales classes. Determining the exact dividing point, with respect to value of sales, where farms ceased to decline is difficult, but the consensus is that the point falls within the midsize category. Farms in this class accounted for 29 percent of all agricultural receipts in 1978, most of which were derived from farms with \$40,000-\$99,999 in sales. More than 70 percent of all products sold from midsize farms came from this upper sales subgroup.

Midsize farms contained 2.2 million residents in 1980 (table 4). These farms lost 7 percent of their population during 1975-80 but still contain 31 percent of all farm people. Within the midsize sales class, different population trends were noticed: the number of persons on farms in the upper subgroup (\$40,000-\$99,999) remained essentially unchanged, while those on farms in the lower subgroup (\$20,000-\$39,999) declined by 14 percent. The higher sales subgroup has more farms and more people living on farms than the lower subgroup.

Whites are more likely than blacks to live on midsize farms. In 1980, nearly a third of the white farm population but only one-sixth of the black lived on these farms. Fewer blacks

lived in both subgroups of this sales class. About a fourth of all Spanish-origin farm residents lived on midsize farms.

Unlike residents of smaller farms, which were about equally divided between the South and the combined North and West, persons living on midsize farms were disproportionately located outside the South. Three-fourths of all persons living on farms in this sales category were in Northern and Western States (table 6). This lower representation on southern midsize farms was somewhat more pronounced in the higher sales subgroup. Between 1975 and 1980, regional population trends contrasted on midsize farms. Overall, persons on southern midsize farms showed no significant change in number--roughly 500,000 persons. However, in the North and West, the number of persons on midsize farms declined by a tenth, primarily from the heavy rate of population loss on farms in the lower sales subgroup.

Larger Farms

The number of persons living on farms in the top sales category--those with annual sales of \$100,000 and over--amounted to 1.3 million in 1980 and increased by 67 percent during 1975-80 (table 4). This sales group was the only one of the three broad sales groups examined which experienced population growth during the 5-year study period. Farm numbers in this sales category also increased and are projected to continue to increase through 1990 (7). The bulk of the increase in number of larger farms resulted from rising farm prices: the farm distribution shifts forward as rising prices push farms with a constant volume of output into higher sales classes. Prices received by farmers rose 33 percent between 1975 and 1980.

In 1978, about 223,000 farms reported agricultural product sales worth \$100,000 or more. These farms do not include all farms that might be considered large on the basis of land acreage. On the other hand, they do include some operations on comparatively small plots that are intensively operated, such as greenhouses, broiler houses, or cattle feedlots. While larger farms represented only 9 percent of all farms they accounted for 62 percent of total value of agricultural products sold. Large numbers of farms in this top sales group are found in Iowa, Illinois, California, Texas, and Nebraska. According to the 1978 Census of Agriculture, these five States contained 34 percent of all such farms.

The number of corporate farms more than doubled between 1974 and 1978. But, the proportion of farms operated by corporations remains relatively small. In 1978, only 3 percent of all farms with sales over \$2,500 were incorporated. The great majority of all farm corporations are family held; roughly 9 out of every 10 farm corporations are operated by a family. A recent study of Illinois farmers cited tax savings, ease of property transfer, and business continuity as principal reasons for the increasing number of family-held farm corporations (10). As expected, the relative importance of corporate farms increases as the value of sales of farm products increases.

Table 6--Farm population by value of agricultural products sold, region, and operator status, June 1980 and 1975

Value of agricultural products sold, region, and operator status	Population		Percentage change, 1975-80	Percentage distribution	
	1980	1975		1980	1975
	-----Thousands-----		-----Percent-----		
North and West	4,483	4,689	-4.4	100.0	100.0
Larger farms	1,005	553	81.7	22.4	11.8
\$200,000 and over	421	NA	-	9.4	-
\$100,000-\$199,999	584	NA	-	13.0	-
Midsize farms	1,686	1,884	-10.5	37.6	40.2
\$40,000-\$99,999	1,032	1,044	-1.1	23.0	22.3
\$20,000-\$39,999	655	840	-22.0	14.6	17.9
Smaller farms	1,792	2,253	-20.5	40.0	48.0
\$10,000-\$19,999	504	706	-28.6	11.2	15.1
\$2,500-\$9,999	846	965	-12.3	18.9	20.6
\$1,000-\$2,499	442	582	-24.1	9.9	12.4
South	2,562	2,528	1.3	100.0	100.0
Larger farms	290	225	28.9	11.3	8.9
\$200,000 and over	149	NA	-	5.8	-
\$100,000-\$199,999	141	NA	-	5.5	-
Midsize farms	531	510	4.1	20.7	20.2
\$40,000-\$99,999	284	297	-4.4	11.1	11.7
\$20,000-\$39,999	246	213	15.5	9.6	8.4
Smaller farms	1,742	1,793	-2.8	68.0	71.0
\$10,000-\$19,999	361	312	15.7	14.1	12.3
\$2,500-\$9,999	798	792	.8	31.1	31.3
\$1,000-\$2,499	582	690	-15.7	22.7	27.3
Operator households	6,588	6,537	.8	100.0	100.0
Larger farms	1,068	491	117.5	16.2	7.5
\$200,000 and over	424	NA	-	6.4	-
\$100,000-\$199,999	644	NA	-	9.8	-
Midsize farms	2,087	2,147	-2.8	31.7	32.8
\$40,000-\$99,999	1,225	1,169	4.8	18.6	17.9
\$20,000-\$39,999	862	978	-11.9	13.1	15.0
Smaller farms	3,433	3,898	-11.9	52.1	59.6
\$10,000-\$99,999	829	957	-13.4	12.6	14.6
\$2,500-\$9,999	1,603	1,696	-5.5	24.3	25.9
\$1,000-\$2,499	1,001	1,245	-19.6	15.2	19.0
Nonoperator households	457	680	-32.8	100.0	100.0
Larger farms	227	286	-20.6	49.7	42.1
\$200,000 and over	145	NA	-	31.7	-
\$100,000-\$199,999	81	NA	-	17.7	-
Midsize farms	130	247	-47.4	28.4	36.3
\$40,000-\$99,999	91	172	-47.1	19.9	25.3
\$20,000-\$39,999	39	75	-48.0	8.5	11.0
Smaller farms	100	147	-32.0	21.9	21.6
\$10,000-\$19,999	36	60	-40.0	7.9	8.8
\$2,500-\$9,999	41	60	-31.7	9.0	9.0
\$1,000-\$2,499	23	26	B	5.0	3.8

NA = Not available.

B = Base less than 50,000.

- = Zero or a number which rounds to zero.

Larger farms constitute somewhat less than a tenth of all farms, but more than half of all corporate farms.

The number of persons living on larger farms increased only among whites. The black population on these farms, most of whom were living in nonoperator households, declined. The number of whites living in nonoperator dwellings also declined, but this loss was offset by the substantial growth among whites in operator households. The decline in the nonoperator population on these larger farms that generally employ many hired farmworkers reflects the increasing tendency among farmworkers to commute from a nonfarm residence to their farm jobs. In 1980, about 8 out of 10 wage and salary agricultural workers did not reside on farms. In the late forties, only 35 percent of all hired farmworkers had a nonfarm residence (9,19).

Spanish-origin farm residents have a high proportion of their total population living on larger farms--32 percent in 1980. About 80 percent of the Spanish-origin population on larger farms lived in other dwellings and were classed as nonoperator population.

Although the population on larger farms increased overall, the growth varied regionally. The rate of population growth was almost three times higher in the combined North and West than in the South (table 6). The heavier rate of farm population increase in the Northern and Western States resulted in significant changes in the distribution of farm residents among the three broad sales groups. In 1975, roughly a tenth of the farm total lived on larger farms regardless of region of residence. By 1980, the proportion of all northern and western farm residents living on larger farms had increased to slightly more than a fifth. In the South, however, the proportion of persons living on such farms did not change significantly.

The nonoperator population remains heavily concentrated on large-scale farms. In 1980, half of all persons living in other farm dwelling units were on larger farms. According to the 1978 Agricultural Census, larger farms accounted for more than a third of all hired workers with 150 days or more of farmwork.

Because of the emergence of the part-owner strategy of commercial farm operation, land in farms is not necessarily synonymous with land ownership, as many large operations are a combination of rented and owned land. The remaining tenant operations today are also larger than average in output. The distribution of the farm population, like the distribution of farms, shows a strong negative relationship between value of sales and full ownership and a strong positive relationship between sales and part ownership (fig. 1 and table 7). The likelihood of farm residents living on a full-owner operation decreases as value of sales increases; whereas the likelihood of their living on a part-owner operation increases with sales. Only 23 percent of all persons living on larger farms were on full-owner operations, the majority--62 percent--lived on farms

operated by a part owner. In contrast, persons living on smaller farms in 1980 were more likely to be on a full-owner operation; only 25 percent lived on a farm operated by a part owner. The number of persons living on tenant farms showed a slight positive relationship with value of sales. The observed relationship between sales and tenure status of operator is not affected by region of residence (table 8).

FARM POPULATION BY TYPE OF FARM

Although American agriculture produces a large variety of farm products, the general farm that produces many different products is rapidly decreasing. With advances in production technology and changes in marketing demands, the modern commercial farm is becoming increasingly specialized, and the trend probably will continue. The classification of farms by type represents a description of the major sources of income from farms sales, and it groups together farms having a relatively high degree of uniformity in the kinds and proportions of crops and livestock products sold.

Figure 1

Farm Population by Value of Agricultural Products Sold and Tenure of Operator, 1980

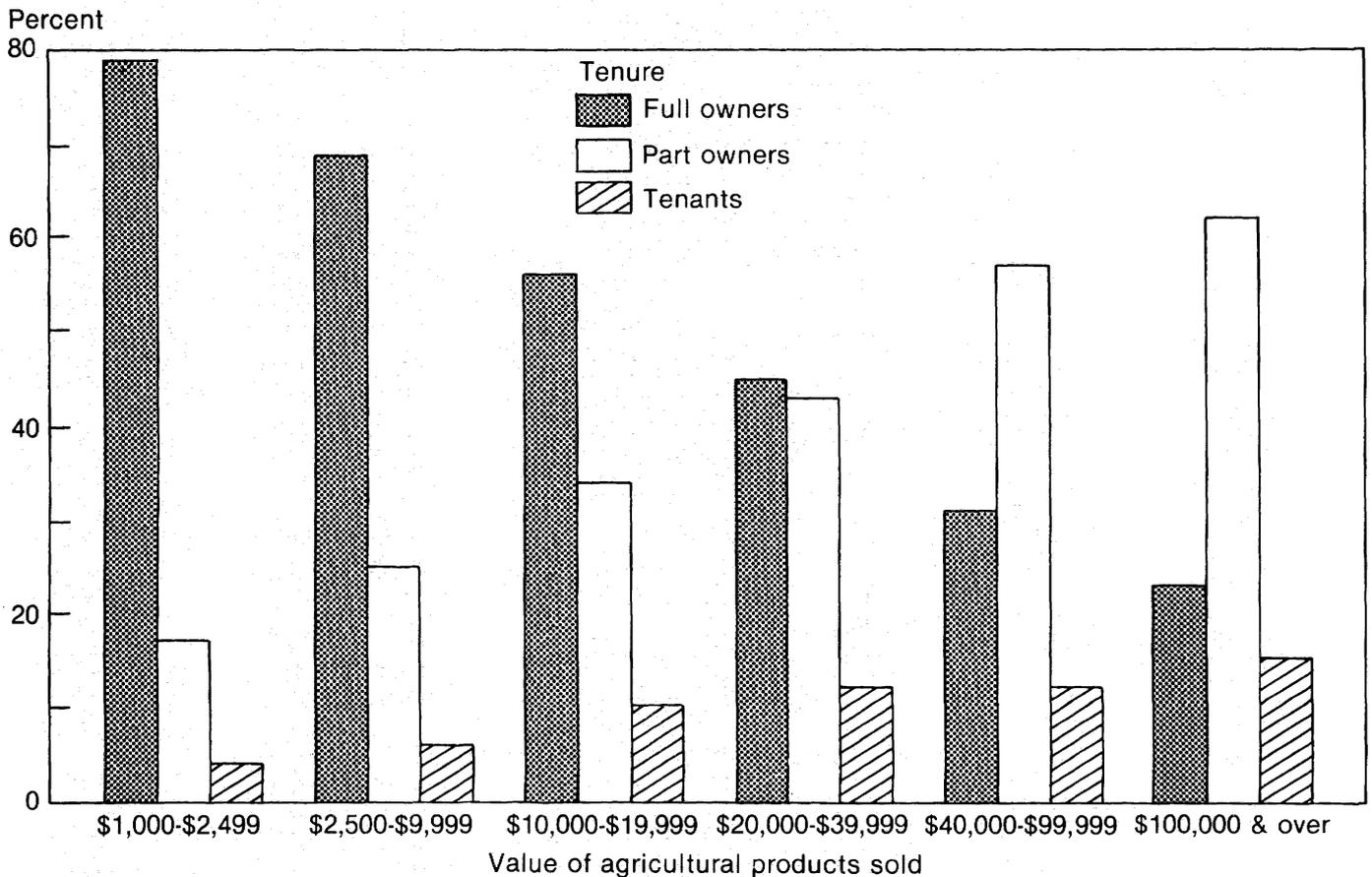


Table 7--Farm population by value of agricultural products sold and tenure of operator, June 1980

Value of agricultural products sold	Tenure of operator							
	Population				Percentage distribution			
	Total	Full owners	Part owners	Tenants	Total	Full owners	Part owners	Tenants
	-----Thousands-----				-----Percent-----			
Total farm population	7,045	3,528	2,822	696	100	50.1	40.1	9.9
Larger farms	1,295	303	804	188	100	23.4	62.1	14.5
\$200,000 and over	570	115	349	106	100	20.2	61.2	18.6
\$100,000-\$199,999	725	188	455	82	100	25.9	62.8	11.3
Midsize farms	2,217	803	1,142	272	100	36.2	51.5	12.3
\$40,000-\$99,999	1,316	402	750	164	100	30.5	57.0	12.5
\$20,000-\$39,999	901	401	392	108	100	44.5	43.5	12.0
Smaller farms	3,533	2,421	876	237	100	68.5	24.8	6.7
\$10,000-\$19,999	865	482	292	91	100	55.7	33.8	10.5
\$2,500-\$9,999	1,644	1,132	412	100	100	68.9	25.1	6.1
\$1,000-\$2,499	1,024	807	172	46	100	78.8	16.8	4.5

Table 8--Farm population by value of agricultural products sold, tenure of operator, region of residence, and race, June 1980

Value of agricultural product sold, region, and race ^{1/}	Tenure of operator							
	Population				Percentage distribution			
	Total	Full owners	Part owners	Tenants	Total	Full owners	Part owners	Tenants
	-----Thousands-----				-----Percent-----			
North and West	4,483	2,168	1,837	478	100	48.4	41.0	10.7
Larger farms	1,005	246	613	146	100	24.5	61.0	14.5
Midsize farms	1,686	630	851	205	100	37.4	50.5	12.2
Smaller farms	1,792	1,293	372	127	100	72.2	20.8	7.1
South	2,562	1,359	985	218	100	53.0	38.4	8.5
Larger farms	290	58	191	42	100	19.7	65.9	14.5
Midsize farms	531	173	291	66	100	32.6	54.8	12.4
Smaller farms	1,742	1,128	503	110	100	64.8	28.9	6.3
White	6,775	3,413	2,695	667	100	50.4	39.8	9.8
Larger farms	1,253	299	772	182	100	23.9	61.6	14.5
Midsize farms	2,165	791	1,109	264	100	36.5	51.2	12.2
Smaller farms	3,356	2,323	814	220	100	69.2	24.3	6.6
Black	236	97	113	26	100	41.1	47.9	11.0
Larger farms	37	4	29	5	B	B	B	B
Midsize farms	38	7	26	5	B	B	B	B
Smaller farms	161	86	58	16	100	53.4	36.0	9.9

B = Base less than 50,000.

^{1/} Value of agricultural products sold for larger farms is \$100,000 and over; for midsize farms, \$20,000-\$99,999; and for smaller farms, \$1,000-\$19,999.

In the JES, a farm is classified as a particular type based on the product, or group of products, having the largest percentage of the total value of sales. This classification differs somewhat from census of agriculture procedures where, in order for a farm to be classified as a particular type, the value of sales from a product, or group of products, has to represent 50 percent or more of total sales. 9/

The classification by type is based on sales for a single reporting year, and the distribution and number of farms by type for a given year may be influenced by abnormal weather conditions, disease or pests affecting production, or shifts in the relative prices of various farm products. See Definitions and Explanations on p. 38 for the types of farms for which data are presented, together with the products, or group of products, on which the classification of farm by type is based.

Data on type of farm provide a basis for the study and analysis of agricultural problems, such as those relating to the development of land use programs, farm adjustment programs and plans, soil conservation programs, and problems dealing with the production and marketing of agricultural commodities. The number, characteristics, and distribution of persons living on the various types of farms are valuable information to those who provide products for production purposes and to those who provide services for farms and farm people.

A study in the midforties by Taylor and others used type of farming areas as the focus for an analytical description of important aspects of rural life. They noted that, "The production of the same farm product or combination of products results in many common activities among the people, and therefore in broadly similar interests, attitudes, and values (12)." They also noted that the roles of towns differed in response to the major types of farms because each has differing seasonal work rhythms, tenure systems, socioeconomic groupings, and methods of marketing farm products and obtaining farm supplies.

The distribution of the farm population by type of farm in 1980 reveals that most farm people live on livestock and cash-grain farms (table 9). These two farm types contained the majority of both white and black farm residents (fig. 2). However, whites not living on these farms were more likely to be living on dairy farms, whereas blacks were more likely to be on tobacco farms. There has been some shifting, but these population concentrations by farm type and race were also observed in the earlier 1970-75 study.

9/ Starting with the 1974 Census of Agriculture, data were published on an expanded classification system for agricultural production published in the 1972 edition of the Standard Industrial Classification (SIC) Manual. In general, the SIC classifications are comparable to the historical type-of-farm classifications.

Table 9--Farm population by type of farm, race, and Spanish origin, June 1980 and 1975

Type of farm and race	Population		Percentage change, 1975-80	Percentage distribution	
	1980	1975		1980	1975
	---Thousands---		-----Percent-----		
Total farm population	7,045	7,217	-2.4	100.0	100.0
Cash-grain	1,874	2,206	-15.1	26.6	30.6
Tobacco	405	554	-26.9	5.7	7.7
Cotton	92	158	-41.8	1.3	2.2
Other field crops	362	264	37.1	5.1	3.7
Vegetables	105	102	2.9	1.5	1.4
Fruit and nut	195	208	-6.2	2.8	2.9
Livestock, except dairy	2,775	2,472	12.3	39.4	34.3
Poultry	137	108	26.9	1.9	1.5
Dairy	922	1,013	-9.0	13.1	14.0
Miscellaneous	178	134	32.8	2.5	1.9
White	6,775	6,888	-1.6	100.0	100.0
Cash-grain	1,819	2,112	-13.9	26.8	30.7
Tobacco	350	464	-24.6	5.2	6.7
Cotton	75	119	-37.0	1.1	1.7
Other field crops	345	250	38.0	5.1	3.6
Vegetables	90	88	2.3	1.3	1.3
Fruit and nut	185	190	-2.6	2.7	2.8
Livestock, except dairy	2,686	2,418	11.1	39.6	35.1
Poultry	134	107	25.2	2.0	1.6
Dairy	918	1,009	-9.0	13.5	14.6
Miscellaneous	175	132	32.6	2.6	1.9
Black	236	271	-12.9	100.0	100.0
Cash-grain	51	82	-37.8	21.6	30.3
Tobacco	49	82	-40.2	20.8	30.3
Cotton	16	34	B	6.8	12.5
Other field crops	15	10	B	6.4	3.7
Vegetables	8	10	B	3.4	3.7
Fruit and nut	5	6	B	2.1	2.2
Livestock, except dairy	82	41	B	34.7	15.1
Poultry	3	1	B	1.3	.4
Dairy	4	4	B	1.7	1.5
Miscellaneous	3	1	B	1.3	.4
Spanish origin ^{1/}	168	NA	-	100.0	-
Cash-grain	33	NA	-	19.6	-
Tobacco	3	NA	-	1.8	-
Cotton	10	NA	-	6.0	-
Other field crops	17	NA	-	10.1	-
Vegetables	12	NA	-	7.1	-
Fruit and nut	11	NA	-	6.5	-
Livestock, except dairy	62	NA	-	36.9	-
Poultry	2	NA	-	1.2	-
Dairy	15	NA	-	8.9	-
Miscellaneous	2	NA	-	1.2	-

B = Base less than 50,000.

NA = Not available.

- = Zero or a number which rounds to zero.

^{1/} Persons of Spanish origin may be of any race.

Livestock farms and cash-grain farms each contained roughly a third of all farm people in 1975. However, changes in production emphasis between 1975 and 1980 resulted in an increase in the percentage of all farm people living on livestock farms, while the proportion on cash-grain farms declined. By 1980, about two-fifths of the entire farm population resided on livestock farms (excluding dairy and poultry). If dairy and poultry operations are added, then over half of all farm people are on livestock enterprises. Population numbers on cotton and tobacco farms, the typical row crop farms of the Old South, declined significantly. The number of residents on these two farm types together declined by 30 percent between 1975 and 1980.

The number of persons residing on cash-grain farms declined without regard to region of residence or operator status (table 10). In contrast, population numbers on livestock farms increased only among those persons living on such farms in the South; the number of persons living on such northern and western farms remained stable. Patterns of population change

Figure 2

Farm Population by Type of Farm and Race, 1980

Type of farm

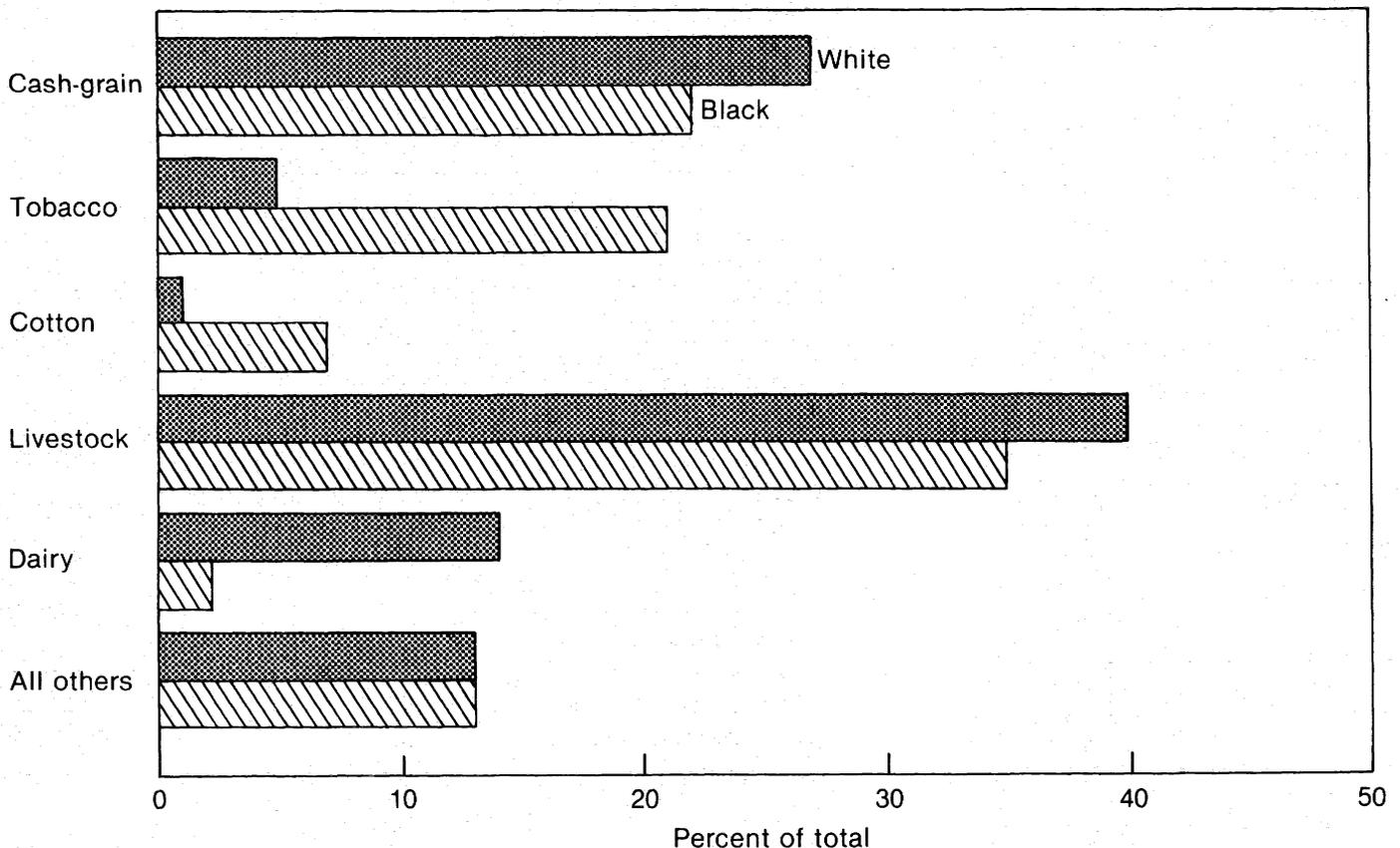


Table 10--Farm population by type of farm, region, and operator status, June 1980 and 1975

Operator status, race, and region	Population		Percentage change, 1975-80	Percentage distribution	
	1980	1975		1980	1975
	---Thousands---		-----Percent-----		
North and West	4,483	4,689	-4.4	100.0	100.0
Cash-grain	1,472	1,683	-12.5	32.8	35.9
Tobacco	18	21	B	.4	.4
Cotton	15	34	B	.3	.7
Other field crops	266	175	52.0	5.9	3.7
Vegetables	68	65	4.6	1.5	1.4
Fruit and nut	156	169	-7.7	3.5	3.6
Livestock, except dairy:	1,516	1,511	.3	33.8	32.2
Poultry	53	45	B	1.2	1.0
Dairy	805	894	-10.0	18.0	19.1
Miscellaneous	115	93	23.7	2.6	2.0
South	2,562	2,528	1.3	100.0	100.0
Cash-grain	402	523	-23.1	15.7	20.7
Tobacco	387	533	-27.4	15.1	21.1
Cotton	77	123	-37.4	3.0	4.9
Other field crops	96	89	7.9	3.7	3.5
Vegetables	37	37	B	1.4	1.5
Fruit and nut	39	38	B	1.5	1.5
Livestock, except dairy:	1,259	961	31.0	49.1	38.0
Poultry	84	64	31.2	3.3	2.5
Dairy	117	118	-.8	4.6	4.7
Miscellaneous	64	41	B	2.5	1.6
Operator households	6,588	6,537	.8	100.0	100.0
Cash-grain	1,779	1,977	-10.0	27.0	30.2
Tobacco	373	517	-27.9	5.7	7.9
Cotton	67	103	-35.0	1.0	1.6
Other field crops	332	224	48.2	5.0	3.4
Vegetables	92	89	3.4	1.4	1.4
Fruit and nut	161	172	-6.4	2.4	2.6
Livestock, except dairy:	2,648	2,270	16.7	40.2	34.7
Poultry	130	102	27.5	2.0	1.6
Dairy	839	964	-13.0	12.7	14.7
Miscellaneous	167	118	41.5	2.5	1.8
Nonoperator households	457	680	-32.8	100.0	100.0
Cash-grain	95	229	-58.5	20.8	33.7
Tobacco	33	37	B	7.2	5.4
Cotton	25	55	-54.5	5.5	8.1
Other field crops	30	39	B	6.6	5.7
Vegetables	13	13	B	2.8	1.9
Fruit and nut	34	35	B	7.4	5.1
Livestock, except dairy:	126	202	-37.6	27.6	29.7
Poultry	7	7	B	1.5	1.0
Dairy	83	49	B	18.2	7.2
Miscellaneous	11	15	B	2.4	2.2

B = Base less than 50,000.

also contrasted among persons on livestock farms by operator status.

Persons living on farms in the combined North and West regions were just as likely to be on a livestock farm as on a cash-grain farm; each contained about a third of the regional total in 1980. In the South, however, livestock farms dominated and accounted for nearly half of the regional total. Cash-grain and tobacco farms were of about equal importance; each contained somewhat less than a sixth of all southern farm people.

Cash-Grain Farms

Cash-grain farms grow principally wheat, corn, soybeans, sorghum, and rice. (Although the soybean is not a grain, it is classified as such in agricultural statistics.) These major field crops are not concentrated in any particular region, but they are dominant in the Corn and Wheat Belts of the North Central States. In 1978, 24 percent of all U.S. farms were classified as cash-grain, and these farms accounted for 27 percent of all land in farms, 44 percent of total cropland, and 50 percent of harvested cropland. Although the number of U.S. farms with sales of \$2,500 or more has increased overall, the census of agriculture indicates that the number of cash-grain farms in this sales class declined from 580,000 in 1974 to 526,000 in 1978. 10/

In 1980, about 1.9 million persons lived on cash-grain farms. More people live on cash-grain farms than on any other type except livestock (table 9). Cash-grain and livestock farms together contain about two-thirds of all farm people. However, the population declined significantly during 1975-80 among persons living on cash-grain farms, while population on livestock farms grew. An undetermined amount of this change reflects shifted emphasis on these farms from grain production or sales to livestock feeding. The number of persons residing on cash-grain farms declined with no difference due to race, operator status, or region of residence.

Three-fourths of all persons living on cash-grain farms reside in the combined Northern and Western States. In this broad region, the number of residents on cash-grain farms did not differ significantly from the number on livestock farms; each type accounted for roughly a third of the total in 1980 (table 10). In contrast, only a sixth of the southern farm population lived on cash-grain farms. In the South, the largest number of farm people live on livestock farms, and about the same proportion of people reside on cash-grain farms as on tobacco farms.

Cash-grain farm residents, like cotton and dairy farm residents, are more likely to live on farms where the operator is a part owner than any of the remaining farm types (table 11). The likelihood of being in this tenure group is greatest in the

10/ In 1978, 68,000 cash-grain farms sold less than \$2,500 worth of agricultural products; comparable data from 1974 are not available.

Table 11--Farm population by type of farm, tenure of operator, and region of residence, June 1980

Type of farm and region	Tenure of operator							
	Population				Percentage distribution			
	Total	Full owners	Part owners	Tenants	Total	Full owners	Part owners	Tenants
	-----Thousands-----				-----Percent-----			
Total farm population	7,045	3,528	2,822	696	100	50.1	40.1	9.9
Cash-grain	1,874	713	902	258	100	38.0	48.1	13.8
Tobacco	405	190	171	44	100	46.9	42.2	10.9
Cotton	92	20	58	13	100	22.3	63.7	14.0
Other field crops	362	193	128	42	100	53.2	35.3	11.6
Vegetables	105	50	45	10	100	47.6	42.9	9.5
Fruit and nut	195	137	33	25	100	70.3	16.9	12.8
Livestock, except dairy	2,775	1,657	911	207	100	59.7	32.8	7.5
Poultry	137	97	29	11	100	70.8	21.2	8.0
Dairy	922	338	516	68	100	36.7	56.0	7.4
Miscellaneous	178	133	28	18	100	74.3	15.5	10.2
North and West	4,483	2,168	1,837	478	100	48.4	41.0	10.7
Cash-grain	1,472	576	685	211	100	39.1	46.5	14.3
Tobacco	18	12	4	2	B	B	B	B
Cotton	15	5	8	2	B	B	B	B
Other field crops	266	157	82	27	100	59.0	30.8	10.2
Vegetables	68	28	31	9	100	41.2	45.6	13.2
Fruit and nut	156	112	28	16	100	71.8	17.9	10.3
Livestock, except dairy	1,516	849	534	133	100	56.0	35.2	8.8
Poultry	53	31	13	8	100	59.6	25.3	15.1
Dairy	805	306	441	58	100	38.0	54.8	7.2
Miscellaneous	115	92	11	11	100	80.4	9.6	10.0
South	2,562	1,359	985	218	100	53.0	38.4	8.5
Cash-grain	402	138	217	47	100	34.3	54.0	11.7
Tobacco	387	178	167	42	100	46.0	43.2	10.9
Cotton	77	16	51	11	100	20.3	65.9	13.7
Other field crops	96	36	46	15	100	37.3	47.5	15.2
Vegetables	37	22	14	1	B	B	B	B
Fruit and nut	39	24	5	10	B	B	B	B
Livestock, except dairy	1,259	808	377	75	100	64.2	29.9	6.0
Poultry	84	65	16	3	100	77.4	19.0	3.6
Dairy	117	32	76	9	100	27.4	65.0	7.7
Miscellaneous	64	40	17	7	100	62.5	26.6	10.9

B = Base less than 50,000.

South where more than half of all cash-grain farm residents live on part-owner operations. Persons living on this farm type also have a very high representation in the total tenant farm population. Nearly two-fifths of all people living on tenant farms in 1980 resided on cash-grain farms.

In terms of value of farm products sold, cash-grain farm residents are almost as likely to live on smaller farms as on mid-size farms (table 12). However, their relative importance within these size categories differs significantly. The cash-grain farm population constitutes more than a third of the total population residing on farms with annual sales of \$20,000-\$99,999. In contrast, they account for only a fifth of the population on farms with sales of less than \$20,000 (fig. 3). Although only a fifth of all cash-grain farm residents live on larger farms, they rank first in the distribution of the population residing on these farms as well as on midsize farms.

Figure 3

Farm Population by Type of Farm and Value of Agricultural Products Sold, 1980*

Type of farm	Larger farms	Midsize farms	Smaller farms
Cash-grain	29	35	20
Tobacco, cotton, and other field crops	12	9	15
Livestock	26	24	54
Dairy	22	24	3
All others	11	8	8

*Value of agricultural products sold for larger farms is \$100,000 and over; for midsize farms, \$20,000-\$99,999; and for smaller farms, \$1,000-\$19,999.

Table 12--Farm population by type of farm and value of agricultural products sold, June 1980 1/

Type of farm and region	Population				Percentage distribution			
	Total	Larger farms	Midsize farms	Smaller farms	Total	Larger farms	Midsize farms	Smaller farms
	-----Thousands-----				-----Percent-----			
Total farm population	7,045	1,295	2,217	3,533	100	18.4	31.5	50.1
Cash-grain	1,874	378	786	711	100	20.2	41.9	37.9
Tobacco	405	19	93	294	100	4.7	23.0	72.6
Cotton	92	47	26	18	100	51.1	28.3	19.6
Other field crops	362	85	72	205	100	23.5	19.9	56.6
Vegetables	105	22	21	61	100	21.0	20.0	58.1
Fruit and nut	195	53	53	89	100	27.2	27.2	45.6
Livestock, except dairy	2,775	333	530	1,912	100	12.0	19.1	68.9
Poultry	137	33	58	45	100	24.1	42.3	32.8
Dairy	922	291	531	100	100	31.6	57.6	10.8
Miscellaneous	178	33	48	98	100	18.5	27.0	55.1
North and West	4,483	1,005	1,686	1,792	100	22.4	37.6	40.0
Cash-grain	1,472	303	665	504	100	20.6	45.2	34.2
Tobacco	18	-	2	16	B	B	B	B
Cotton	15	10	2	3	B	B	B	B
Other field crops	266	64	45	157	100	24.1	16.9	59.0
Vegetables	68	16	19	32	100	23.7	28.6	47.7
Fruit and nut	156	37	46	73	100	23.7	29.5	46.8
Livestock, except dairy	1,516	288	385	843	100	19.0	25.4	55.6
Poultry	53	20	20	13	100	37.7	37.7	24.5
Dairy	805	245	474	86	100	30.4	58.9	10.7
Miscellaneous	115	22	27	66	100	19.1	23.5	57.4
South	2,562	290	531	1,742	100	11.3	20.7	68.0
Cash-grain	402	74	121	207	100	18.4	30.1	51.5
Tobacco	387	19	90	278	100	4.9	23.3	71.8
Cotton	77	37	24	15	100	48.6	31.4	20.0
Other field crops	96	21	27	48	100	21.9	28.1	50.0
Vegetables	37	6	2	29	B	B	B	B
Fruit and nut	39	16	7	17	B	B	B	B
Livestock, except dairy	1,259	45	145	1,069	100	3.6	11.5	84.9
Poultry	84	13	38	32	100	15.9	45.6	38.5
Dairy	117	46	57	14	100	39.3	48.7	12.0
Miscellaneous	64	11	20	32	100	17.8	31.9	50.3

B = Base less than 50,000.

1/ Value of agricultural products sold for larger farms is \$100,000 and over; for midsize farms, \$20,000-\$99,999; and for smaller farms, \$1,000-\$19,999.

Tobacco, Cotton,
and Other
Field-Crop Farms

Both tobacco and cotton farms are geographically concentrated. Nearly all tobacco farms are located in the South; in 1980, North Carolina, Kentucky, South Carolina, Tennessee, Georgia, and Virginia accounted for more than 90 percent of total U.S. tobacco production. Cotton production is highly concentrated in Texas, California, Arizona, and Mississippi, which together produced 81 percent of the 1980 cotton crop (21). On the other hand, other field-crop farms have varying specialities and are dispersed throughout the country. For example, in Idaho, Washington, Maine, and Oregon, the specialty is potatoes; in North Carolina, Virginia, Georgia, Alabama, Texas, and Oklahoma, the specialty is peanuts; and in Hawaii, Florida, and Louisiana, it is sugarcane.

About an eighth of the total farm population lived on these three farm types--tobacco, cotton, and other field-crop--in 1980. Although the number of persons living on these farm types declined by about 12 percent overall between 1975 and 1980, their proportionate share of the total changed little. Individually, growth trends contrasted with heavy population loss on both tobacco and cotton farms and substantial population increase on other field-crop operations.

As a group, tobacco, cotton, and other field-crop farms had a heavy representation among blacks. In 1980, these three farm types accounted for a third of all black farm people, compared with roughly a tenth for whites. The heavy representation of blacks is related to their historic concentration on tobacco and cotton farms. As late as 1969, these two farm types accounted for half of all black-operated farms, and despite significantly heavy rates of decline, they still accounted for a third of the black total in 1978. However, blacks on tobacco farms are more likely to be in operator households, whereas those on cotton farms are more likely to live in nonoperator households. These variations reflect the differences in farm size and the use of hired labor on these two farm types. The 1978 Agricultural Census reported that the average cotton farm consisted of 719 acres compared with just 99 acres for tobacco farms. The labor on the smaller tobacco farm is usually furnished by the farm operator and family members; less than a tenth of all tobacco farms reported the use of regular hired labor in 1978. On the other hand, about two-fifths of all cotton farms reported the use of regular hired labor. These regular hired farm laborers, who work 150 days or more, are often housed in rent-free nonoperator dwellings.

The relative distribution of the population residing on tobacco, cotton, and other field-crop farms is consistent with the distribution of farms by type. In 1959, cotton farms were the most numerous and tobacco ranked second, but beginning in the 1964 Agricultural Census, this order reversed and tobacco farms became more important. By 1974, cotton farms had dropped from second to third rank. The shift in relative importance among these three farm types resulted primarily from the sharp decline in cotton farming as production shifted to fewer but larger operations. The number of cotton farms with sales of

\$2,500 or more declined by about a fourth between 1969 and 1978, while the number of tobacco farms in this category increased by about a fifth and the number of other field-crop farms more than doubled.

Settlement patterns contrasted among these three farm types by value of sales. Nearly three-fourths of all persons on tobacco farms lived on places in the smaller farms sales class. Tobacco farms are typically not large agricultural units, and on the average, market value of agricultural products sold from tobacco farms is lower than on any of the nine specified types. In 1978, the average value of sales per tobacco farm was \$16,679 a year; the national average for all farms was \$43,560. Other field-crop farms had the next lowest average sales, and similarly, about half of all people on these farms were also on places with sales of less than \$20,000 annually. On the other hand, persons on cotton farms are more likely to be on places with annual sales of \$100,000 or more.

Although the population on these three farm types is more likely to be on farms where the operator has an ownership interest, tenancy remains relatively high, especially on cotton farms.

Vegetable, and Fruit and Nut Farms

Vegetable production is concentrated on a relatively small number of large and highly specialized farms. Vegetable farms are widely scattered with significant concentrations in California, Florida, Michigan, New York, Wisconsin, Texas, and New Jersey. In 1978, these States accounted for more than 40 percent of all U.S. vegetable and melon farms. The more numerous fruit and nut farms are also highly specialized, but they are concentrated in just a few localities, more than half are in California and Florida.

In 1978, 35,000 vegetable farms and 90,000 fruit and nut farms represented 1 and 4 percent, respectively, of all U.S. farms. Roughly 300,000 persons lived on these two farm types in 1980. As a group, these farms evidenced population stability between 1975 and 1980. The apparent slight population gain on vegetable farms and the population loss on fruit and nut farms were not statistically significant.

Whites predominated on vegetable, and fruit and nut farms; only 13,000 blacks and 23,000 persons of Spanish origin lived on such farms in 1980. Persons on these types of farms were three times more likely to live in the combined Northern and Western States than in the South, but their proportionate share of the total by regional location differed little.

Vegetable, and fruit and nut farms are similar to tobacco, cotton, and other field-crop farms in that both groups have a relatively high proportion of their population classed as non-operator. In 1980, only 47,000 persons lived in other dwellings on vegetable, and fruit and nut farms, but these persons constituted 16 percent of the total population residing on such farms, a proportion that is higher than on any other type

except cotton. The presence of nonoperator population is highly associated with the presence of farm wagedworkers. Not only are vegetable, and fruit and nut farms likely to use hired labor, but they also hire more workers per farm. A study by Robert Coltrane on expenditures for hired labor by type of farm found that, among operations reporting expenditures, these farms spend considerably more for labor than other farm types. In 1978, a fourth of the total \$7.7 billion reported as hired and contract labor expenses came from vegetable and melon, and fruit and tree nut farms (5).

Contrary to popular notion, smaller farms are not the primary growers of berries, melons, and other fruits and vegetables; larger farms are the major producers of these products. However, these enterprises, with annual sales of \$100,000 or more, contain only 25 percent of the total population residing on such farms (table 12). Half of all persons living on vegetable, and fruit and nut farms were on places in the smaller farm sales category.

Livestock Farms

Livestock farms accounted for 42 percent of all U.S. farms in 1978, and more people lived on these farms than on any other type. Roughly 4 out of every 10 farm residents lived on livestock farms in 1980 (table 9). These farms were also the most populous in 1975, but population growth, mostly at the expense of cash-grain farms, resulted in an increase in their relative importance in the distribution of farm people.

Livestock specializations include cattle and calves, hogs and pigs, sheep and lambs, and goats, but the typical livestock operation specializes in only one kind of animal (13). Livestock farms are generally large in terms of acreage; in 1978, they contained more than half of all land in farms. Marketings from these farms are high, and their sales accounted for 33 percent of the total value of all farm products sold. Livestock farms are concentrated mostly in Texas, Missouri, Iowa, and Oklahoma. In 1978, these four States contained 31 percent of all livestock farms (16).

In 1980, livestock farms had the highest proportion of both white and black farm residents. At the beginning of the study period, the predominance of livestock farm residents pertained only to whites. At that time, cash-grain and tobacco farms were more populous, with each containing about 30 percent of the black total. However, heavy black population loss during 1975-80 on these two farm types substantially reduced their relative importance. Spanish-origin farm residents are also more likely to live on livestock farms than any other type.

In the combined Northern and Western States, neither the number nor the proportion of livestock farm residents differed significantly between 1975 and 1980 (table 10). In comparison, the number of southern livestock farm residents increased significantly over this period, and their share of the region's total rose to nearly half. Despite this population growth, more people live on livestock farms outside the South. In 1980, the

number of farm people was distributed about equally between livestock and cash-grain farms in the combined North and West.

Livestock operations often require large numbers of hired farm laborers, and the nonoperator population is heavily represented on such farms. In 1978, nearly a fifth of all regular and year-round farmworkers were on livestock farms (16).

In 1980, an above-average proportion of livestock farm residents lived on farms where the operator was classified as a full owner (table 11). According to the agricultural census, owned land accounted for 66 percent of the total acreage in livestock farms. Livestock farm residents also made up the largest share--47 percent--of the total full-owner population. However, the dominance of this type did not pertain to persons living on a farm where the operator was either a part owner or a tenant. In the distribution of the part-owner population, livestock and cash-grain farm residents had about equal proportions of the total; in the tenant population, cash-grain farm residents dominated.

In terms of sales value, more than two-thirds of all livestock farm residents lived on places with less than \$20,000 worth of agricultural products sold (table 12). Only tobacco farm residents had a higher proportion of their total in this sales category. In the distribution of the small farm population, livestock farm residents constitute more than half of the total, a concentration heavier than that for any other type by sales class (fig. 3). Part-time farmers, many with sales of less than \$20,000 annually, often engage in livestock production. A large number of U.S. farms raise a small number of cows for beef-calf production. Beef cows, along with hay, are two of the most important commodities raised by small farmers (13). These small, part-time producers, employed primarily in nonfarm work, raise livestock to supplement their nonfarm income. Some livestock operations, such as a cow-calf enterprise that can be operated after regular working hours and on weekends, are ideal for part-time farming (11).

Dairy Farms

Both the number of dairy farms and the number of farms with milk cows have declined substantially. Milk production, which was once almost universal on farms in the United States, has become a very specialized farm activity. Dairying as a sideline activity has virtually disappeared, along with milk production for home use.

The typical dairy farm is one which is proprietor-operated and has sufficient acreage (on the average, 294 acres) to raise most of the feed supply and dairy herd replacement. Dairy farms are concentrated in the North Central and Middle Atlantic States. In 1978, Wisconsin, Minnesota, New York, Pennsylvania, Ohio, and Michigan accounted for 62 percent of all dairy farms (11). Climate and soil in these States are most suited to raising grains and forage for cattle and to provide pastureland for grazing.

In 1980, 922,000 persons lived on dairy farms. Although population on these farms decreased at an above-average rate between 1975 and 1980, their ranking among farm types has not changed significantly. Since the data were first collected in 1973, about an eighth of the total farm population has resided on dairy farms, which rank third in number of persons.

Regardless of geographic location, dairy farming is almost entirely conducted by white farmers. The 1978 Agricultural Census reported only 437 black-operated dairy farms. Less than 1 percent of all persons living on dairy farms were black, and they were most likely to live in nonoperator households. Spanish-origin farm residents were somewhat more likely to live on dairy farms, in contrast to blacks, as occupants of the operator's rather than of the nonoperator's household. Nine percent of the Spanish-origin farm population was located on dairy farms in 1980.

About 9 out of every 10 dairy farm residents lived in the combined Northern and Western States. Thus, in the distribution of farm people by type, dairy farm residents account for a much higher proportion of the farm population in the North and West than in the South. All of the population loss on dairy farms between 1975 and 1980 occurred in the North and West; in the 1973-75 period, population declined on dairy farms regardless of region of residence.

Technological innovations, such as the milking parlor and automatic dairy equipment (bulk milk tank cleaners, pipeline milkers, silo unloaders, and barn cleaners) have resulted in substantial substitution of mechanical power for hired labor on dairy farms (11). Nevertheless, these farms still rank high in use of regular hired laborers. In 1978, 36 percent of all dairy farms reported the use of regular hired labor, and in 1980, 18 percent of the total nonoperator population lived on these farms.

Persons living on dairy farms were highly concentrated in terms of both value of agricultural products sold and the tenure status of the operator. In 1980, 58 percent of the dairy population resided on midsize farms, and 56 percent resided on farms where the operator was a part owner. These concentrations existed regardless of region of residence, but there were significant variations. The probability of the population living on midsize farms was significantly higher for residents in the North and West than for those in the South; the likelihood of the population living on part-owner operations was stronger for residents in the Southern States.

The population on dairy farms makes up a significantly higher proportion of the population on larger and midsize farms than on smaller farms. More than 20 percent of the total population on each of these two upper sales categories lived on dairy farms in 1980. On smaller farms, the dairy farm population represented only 3 percent of the total (fig. 3).

Poultry and
Miscellaneous
Farms

Poultry and eggs were once produced by millions of farms as sideline enterprises. Today, they are principally produced by highly specialized large-scale operations, which are relatively few in number but produce the bulk of poultry and egg supplies (11). In 1978, 45 percent of all poultry and egg farms had sales in excess of \$100,000. Poultry farms accounted for 98 percent of the total value of sales of all poultry and poultry products. Although poultry farms are found throughout the country, they are mostly concentrated in the broiler producing areas of Georgia, Alabama, Mississippi, Arkansas, Delaware, and Maryland (16).

In this study, miscellaneous farms include: (1) those farms producing nursery and greenhouse products; (2) those farms principally selling either forest products, horses and mules, or other miscellaneous livestock products; and (3) those farms selling several types of farm products. In the latter group, the types of products sold in the various parts of the country differed widely.

About 300,000 persons lived on poultry and miscellaneous farms in 1980, representing 4 percent of the total U.S. farm population (table 9). Between 1975 and 1980, the number of persons residing on these two farm types increased by 30 percent, a rate exceeded only among residents of other field-crop enterprises. Regional location was not a significant factor, but the rate of increase among persons residing on these two types of farms in the Southern States was somewhat higher than among those in the combined Northern and Western States (table 10).

Persons on poultry and miscellaneous farms are very likely to live on a full-owner operation because large acreages are not required for poultry operations. Although they account for only 7 percent of the total full-owner population, more than 70 percent of all persons residing on this group of farms lived on places where the operator owned all of the land operated (table 10). In the distribution of their population among the three broad sales classes, poultry farm residents were more likely to live on a midsize farm whereas miscellaneous farm residents were more likely to live on smaller farms.

DISCUSSION

The trend in American agriculture toward fewer, larger, and more efficient farms has been accompanied by a decline in the number of farm residents. As farms become more specialized and production and sales become more concentrated, the distribution of the farm population by characteristics of the farm also changes.

Most farm residents continue to live on farms where there is an ownership interest. The majority of these farms are full-owner operations, but the shift continues toward residence on part-owner farms. This shift reflects the rise in the number of part-owner operators, who combine the security of an owned enterprise with the economies of size provided by rental units to obtain a viable operation.

Larger farms are increasing in number and are projected to continue to increase through 1990. These farms, which account for nearly two-thirds of total farm output and slightly more than one-third of all farmland, do not contain the bulk of the farm population. In 1980, only a fifth of the total farm population resided on larger farms. However, these larger farms were the only ones on the value of sales continuum to experience significant population increase. Both midsize farms and smaller farms continue to experience farm population decline. Smaller farms represent nearly two-thirds of all U.S. farms and contain the largest share of farm population. About half of all farm residents reside on smaller farms. These farms are a diverse group which contributes little to total farm output, and many have a high dependence on nonfarm income.

The relative ranking of the farm population among the various farm types has been and will continue shifting. Nevertheless, the farm population remains highly concentrated on livestock, cash-grain, and dairy farms. The degree of farm population concentration is highly associated with regional variations in farms by type. For example, persons living on farms in the combined Northern and Western States are as likely to reside on a livestock farm as a cash-grain farm. In 1980, each of these two types contained about a third of the regional total. In the South, however, livestock farms are the most populous type. Nearly half of all southern farm residents lived on livestock farms. About 9 out of every 10 dairy farm residents lived in the North and West.

The forces that produce changes in the farm sector directly affect farm people. The demonstrated relationships between specified farm characteristics and farm population indicate that shifts in production and efficiency can significantly alter the number and distribution of farm residents. It is not possible to say how much farm people will be affected by future developments in agriculture, but farm people will be most responsive and susceptible to policies and programs relating to livestock and cash-grain farming.

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APPENDIX

Definitions and Explanations

Population coverage. Population estimates in this report relate to the 48 conterminous States and thus exclude Alaska and Hawaii.

Farm population. The farm population consists of all persons living on places from which \$1,000 or more of agricultural products were sold, or normally would have been sold, in the reporting year. Persons in institutions, summer camps, motels, and tourist camps, and those persons living on rented places where no land is used for farming are classified as nonfarm.

Race. The population is divided into three groups on the basis of race: white, black, and other races. The last category includes Indians, Japanese, Chinese, and any other race except white and black. In this report, estimates are shown separately for whites and blacks, and in the text, the term "race" refers to this division. Estimates for other races are included in estimates for the total but are not shown separately.

For operator households, race relates to the farm operator only, and the race of other members of this household is assumed to be the same as that of the farm operator. For the population in other dwelling units on farms, that is, the non-operator population, race relates to the head of the household.

Persons of Spanish origin. Persons of Spanish origin are those whose ethnic origin or descent was Mexican, Puerto Rican, Cuban, Central or South American, or some other Spanish origin. Persons of Spanish origin may be of any race.

Operator population. Persons living in the farm operator's household.

Nonoperator population. Persons living rent free in other dwellings on farms.

Tenure. The tenure classifications are restricted to farm operators and their rights on the land operated. The tenure of farm operators is based on replies to inquiries about land owned, land rented from others, and land rented to others.

Value of sales. Value of sales is based on gross income received from the sale of crops, livestock, poultry, livestock and poultry products, horticultural commodities, and miscellaneous agricultural products. All sales data relate to 1 year's farm operation. Crop sales represent the crops produced in the preceding year which have been sold or will be sold even though some sales will occur after the end of the calendar year. Sales of livestock and poultry and their products relate to the calendar year of the sale regardless of when raised or produced. In the JES, all Government program payments received in the preceding year are included in the value of sales. It is only in this respect that the sales data in this report differ from those obtained in the Census of Agriculture. Under

census procedures, the income from government payments and loans is not included in the value of sales.

Type of farm. The type-of-farm classification represents a description of the major source of income from farm sales. The JES classifies a farm as a particular type based on the product having the largest percentage of total sales in the reporting year. This classification is somewhat more liberal than in the Census of Agriculture where, to be classified as a particular type, a farm must have sales of a particular product or group of products amounting in value to 50 percent or more of the total value of all farm products sold during the year.

The types of farms, together with the products on which type classification is based, are described as follows:

<u>Type of farm</u>	<u>Commodity or livestock item</u>
Cash grain	Corn, sorghum, small grains, flax, soybeans for beans, cowpeas for peas, dry edible and seed beans, dry peas, and rice
Tobacco	Tobacco
Cotton	Cotton
Other field crops	Peanuts, potatoes (Irish and sweet), sugarcane, broomcorn, popcorn, sugar beets, mint, hops, seed crops, hay, silage, and forage
Vegetable	All vegetables and melon crops
Fruit and nut	Berries, other small fruits, citrus, tree fruits, grapes, and nuts
Livestock	Cattle, calves, hogs, sheep, goats, wool, and mohair
Poultry	Chickens, eggs, turkeys, ducks, and other poultry products
Dairy	Milk and cream, plus sales of dairy cattle
Miscellaneous	Nursery and greenhouse products, forest products, mules, horses, bees and honey, and government payments

Rounding. The individual figures in this report are rounded to the nearest thousand without adjustment to group totals, which are independently rounded. Percentages are rounded to the

nearest tenth of a percent; therefore, the percentages in a distribution do not always add to exactly 100 percent.

Source and
Reliability
of the Estimates

Source of data. Estimates in this report are based on data obtained in the 1980 and 1975 June Enumerative Surveys of the Statistical Reporting Service, U.S. Department of Agriculture. The JES is conducted annually in the 48 conterminous States. In 1980, the basic area frame sample included about 15,600 area segments. The number varies by State according to land area and importance and diversity of agriculture. The area segments (sampling units) are completely enumerated; they included about 126,000 separate tracts, each represented by a different operator, who is contacted in person for information. In both 1975 and 1980, information was obtained from about 22,000 farm households associated with these sample segments.

Reliability of the estimates. Since the estimates are based on a sample, they may differ somewhat from figures that would be obtained if a complete census count had been taken. As in any survey work, the results are subject to error of response and of reporting as well as to sampling variability.

The standard error of estimates, which measures variations that occur by chance because a sample rather than the whole of a population is surveyed, was computed for each population characteristic. All statements of comparison made in the text of this report are statistically significant at the 95 percent confidence level. This means that the chances are at least 19 in 20 that a difference identified in the text indicates a difference in the populations that is greater than chance variation arising from the use of samples.

The sample design and the varying sampling rates do not permit a concise generalized table showing approximate order of magnitude of standard error for estimated numbers. The 1980 U.S. farm population total in this report was 7,045,000. The standard error for this estimate was 44,000. The chances are 68 out of 100 that the estimates would differ from a complete census count by less than this amount. The chances are 95 out of 100 that the estimate would differ from a complete census count by less than 88,000 (twice the standard error).

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Figure 1
Percent of Population Living on Farms by Race: 1920 to 1982

