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ABSTRACT

Based on the new farm definition (places of 10 or more acres if at least $50 worth of agricultural products were sold in the reporting year, and places of under 10 acres if at least $250 worth of agricultural products were sold), 6,501,000 persons, or 3% of the nation's population, lived on farms for the 12-month period centered on April 1978. Although the change in definition caused a reclassification of approximately 1.5 million persons from rural farm to rural nonfarm for 1978, use of the previous definition indicated no significant change in farm population from the preceding year, possibly signaling that the more than fifty year decline in farm population has finally come to an end. About 1.4% of the farm population was of Spanish origin, compared to 5.7% of the nonfarm population. Blacks on farms represented 5.4% of the total farm population and 1.4% of all Blacks. The farm population has a higher proportion of Whites than the nonfarm population. The median age of farm residents in 1978 was 33.8 years, as compared with 29.5 years for nonfarm residents. The farm population had about the same proportion of children as the nonfarm population, a lower proportion of young adults, and higher proportion of middle-aged and elderly persons. The median income of farm families, $12,235 in 1977, continued to lag behind that of nonfarm families. In 1978, 3 out of every 4 agricultural wage workers were nonfarm residents. (NEC)

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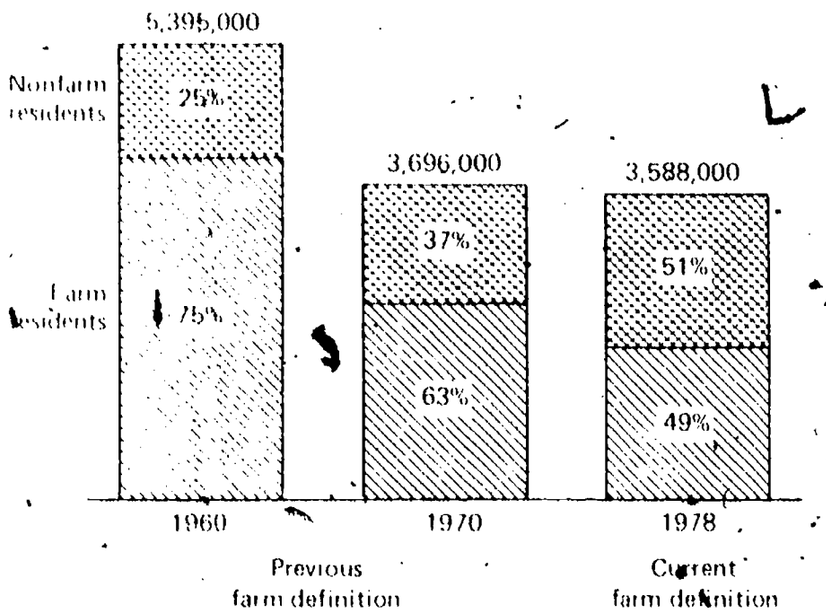
Farm Population

Series P-27, No. 52
Issued September 1979

Farm Population of the United States: 1978

FIGURE 1.
Residence of Persons Employed in Agriculture: 1960, 1970, and 1978



Source: U.S. Department of Agriculture and Department of Commerce.

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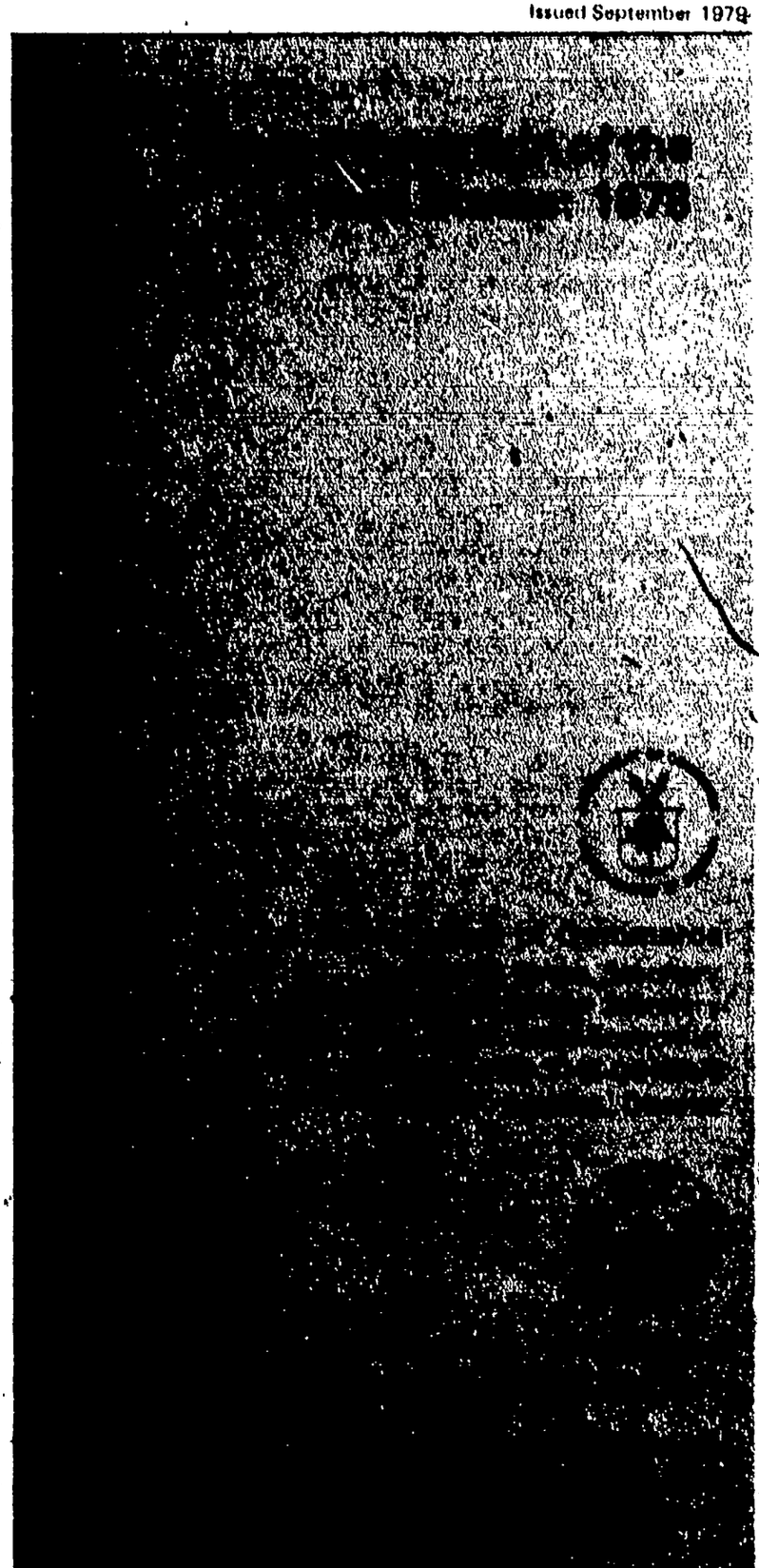

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APPENDIX TABLES

SYMBOLS USED IN TABLES

—	Represents zero.
B	Base less than 75,000.
. . .	Not applicable.

Farm Population of the United States: 1978

INTRODUCTION

The number of persons living on farms in rural areas averaged 6,501,000 for the 12-month period centered on April 1978. However, this determination depends upon the definition of a farm. As the Nation has developed and grown over the years and agriculture has changed, it has been necessary from time to time to change the definition of a farm. In view of increases in price levels and other changes in the structure of agricultural operations, various individuals and organizations, including members of the Census Advisory Committee on Agriculture Statistics, the Office of Management and Budget, the Department of Agriculture, and the Department of Commerce, agreed in the mid-1970's that a change in the definition of a farm was justified. A new definition of a farm was adopted for the 1974 Census of Agriculture, and is now being used in various surveys of the Bureau of the Census and the Department of Agriculture.

Farm population estimates for 1978 are presented using both the new (current) definition and the previous farm definition for the first time in this report, prepared cooperatively by the Bureau of the Census, U.S. Department of Commerce, and the Economics, Statistics, and Cooperatives Service, U.S. Department of Agriculture. Under the new 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. The previous definition, in use since 1960, defined farms as places of 10 or more acres if at least $50 worth of agricultural products were sold in the reporting year, and places of under 10 acres if at least $250 worth of agricultural products were sold.

Based on the new farm definition, the number of persons living on farms in rural areas averaged 6,501,000 for the 12-month period centered on April 1978. About 1 person out of every 33, or 3 percent of the Nation's 218 million people, had a farm residence (table A).

The farm share of the total U.S. population has declined fairly steadily for more than half a century. In 1920, when the farm population was first identified separately, 30 percent of the Nation's population resided on farms. The proportion had fallen to 15 percent by 1950, to 5 percent

Table A. Population of the United States, Total and Farm: April 1970 to 1978

(Numbers in thousands)

Year	Total resident population[1]	Farm population	
		Number of persons[2]	Percent of total population
CURRENT DEFINITION			
1978	217,644	6,501	3.0
PREVIOUS DEFINITION			
1978	217,644	8,005	3.7
1977	215,958	7,806	3.6
1976	214,282	8,253	3.9
1975	212,542	8,864	4.2
1974	211,018	9,264	4.4
1973	209,468	9,472	4.5
1972	207,802	9,610	4.6
1971	205,677	9,425	4.6
1970	203,235	9,712	4.8

[1] Estimates for 1971 through 1978, prepared by the Bureau of the Census; official census count for 1970.

[2] Five-quarter averages centered on April; see "Definitions and Explanations" in appendix.

by 1970, and has now dropped to 3 percent using the current definition.

The change in definition caused a reclassification of approximately 1.5 million persons from rural farm to rural nonfarm for 1978. If the previous definition were still being used, there would have been an estimated 8,005,000 farm residents in 1978. However, this estimate is not significantly different in a statistical sense from the 1977 estimate, thus indicating no significant change in farm population (using the previous definition) from the preceding year. It is possible that this finding could be a signal that the long-term decline in farm population has finally come to an end. But, if so, it will require data for several additional years to confirm such a finding. (The apparent but statistically insignificant increase in the farm population between 1977 and 1978 under the previous definition, as shown in table A, is due in part to a change in the CPS sample design; see appendix B.)

DEMOGRAPHIC AND SOCIAL CHARACTERISTICS OF THE FARM POPULATION

Race and Spanish origin. The farm population has a higher proportion of Whites than the nonfarm population and lower proportions of Blacks and persons of Spanish origin (table B). The estimated number of farm residents of Spanish origin under the current definition was 90,000 in 1978—roughly 1 percent of the Spanish origin total. Only about 1.4 percent of the farm population was of Spanish origin, compared to 5.7 percent of the nonfarm population. Blacks on farms numbered 350,000 in 1978—1.4 percent of all Blacks—and represented only 5.4 percent of the total farm population. The change in farm definition did not significantly alter the racial or Spanish origin composition of the farm population.

Age and sex. The median age of farm residents in 1978 was 33.8 years, as compared with 29.5 years for nonfarm residents (table C). The farm population had about the same proportion of children and teenagers as the nonfarm population, a lower proportion of young adults (20 to 34 years), and higher proportions of middle aged (35 to 64 years) and elderly persons. Neither the age distribution nor the median age of the farm population were significantly affected by the definitional change.

Farm males outnumbered farm females by 291,000 in 1978. There were 109 males on farms for every 100 females, whereas there were only 93 males per 100 females in the nonfarm population. Under the previous farm definition, the sex ratio of the farm population was 107, which is not statistically different from the 109 under the current definition. The lower representation of females in the farm population, as compared with the nonfarm population, is most pronounced in the late teens and early 20's and again after age 60 when women have the highest probabilities of being single and widowed, respectively. The relatively high sex ratios for farm residents at these ages probably reflect a tendency toward increased outmigration of young farm women as they reach maturity, and of older farm women upon widowhood. Women on farms, in comparison with nonfarm women, are more likely to be married with husband present and less likely to be single, separated, divorced, or widowed.[1]

ECONOMIC CHARACTERISTICS OF THE FARM POPULATION

Labor force participation. In 1978, 3.3 million persons or more than three-fifths of the farm population 14 years old and over were in the labor force, either employed or seeking work (table D). The 1978 farm resident labor force under the

[1] See **Current Population Reports**, Series P-27, No. 51, "Farm Population of the United States: 1977."

Table B. Farm and Nonfarm Population, by Race and Spanish Origin: 1978

(Numbers in thousands. Figures are five-quarter averages centered on April)

Race	Total	Farm	Nonfarm	Percent distribution		
				Total	Farm	Nonfarm
CURRENT DEFINITION						
All races	[1]213,467	6,501	206,966	100.0	100.0	100.0
White	184,806	6,064	178,742	86.6	93.3	86.4
Black	24,757	349	24,408	11.6	5.4	11.8
Spanish origin[2]	11,791	90	11,701	5.5	1.4	5.7
PREVIOUS DEFINITION						
All races	[1]213,467	8,005	205,462	100.0	100.0	100.0
White	184,806	7,482	177,324	86.6	93.5	86.3
Black	24,757	416	24,341	11.6	5.2	11.8
Spanish origin	11,791	109	11,682	5.5	1.4	5.7

[1] The total U.S. population figure here differs from that shown in table A because the latter refers to the total resident population, whereas this and other tables refer to the civilian noninstitutional population.

[2] Persons of Spanish origin may be of any race.

Table C. Farm and Nonfarm Population, by Age and Sex: 1978

(Numbers in thousands. Five-quarter averages centered on April. For meaning of symbols, see text)

Age	Farm			Nonfarm			Percent distribution					
							Farm			Nonfarm		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
CURRENT DEFINITION												
All ages	6,501	3,396	3,105	206,966	99,606	107,360	100.0	100.0	100.0	100.0	100.0	100.0
Under 20 years	2,218	1,160	1,058	69,281	35,089	34,194	34.1	34.2	34.1	33.5	35.2	31.8
20 to 34 years	1,109	598	510	51,069	24,679	26,392	17.1	17.6	16.4	24.7	24.8	24.6
35 to 64 years	2,405	1,234	1,169	64,704	30,891	33,814	37.0	36.3	37.6	31.3	31.0	31.5
65 years and over	771	402	368	21,909	8,950	12,960	11.9	11.8	11.9	10.6	9.0	12.1
Median age	33.8	33.0	34.5	29.5	28.4	30.6	...	...	...	...	...	...
PREVIOUS DEFINITION												
All ages	8,005	4,145	3,860	205,462	98,857	106,605	100.0	100.0	100.0	100.0	100.0	100.0
Under 20 years	2,692	1,409	1,283	68,807	34,840	33,969	33.6	34.0	33.2	33.5	35.2	31.9
20 to 34 years	1,325	703	621	50,853	24,574	26,281	16.6	17.0	16.1	24.8	24.9	24.7
35 to 64 years	2,975	1,515	1,459	64,136	30,610	33,524	37.2	36.6	37.8	31.2	31.0	31.4
65 years and over	1,014	518	495	21,666	8,834	12,833	12.7	12.5	12.8	10.5	8.9	12.0
Median age	34.8	33.9	35.4	29.4	28.4	30.5	...	...	...	...	...	...

Table D. Employment Status of the Farm and Nonfarm Population 14 Years Old and Over, by Sex: 1978

(Numbers in thousands. Figures are five-quarter averages centered on April)

Sex and employment status	Current definition		Previous definition	
	Farm	Nonfarm	Farm	Nonfarm
Both sexes	5,186	161,421	6,419	160,189
In labor force	3,273	98,417	3,966	97,724
Percent of total	63.1	61.0	61.8	61.0
Employed	3,199	92,002	3,861	91,341
Unemployed	73	6,414	105	6,383
Percent of labor force	2.2	6.5	2.6	6.5
Not in labor force	1,913	63,004	2,453	62,465
Male	2,715	76,377	3,328	75,764
In labor force	2,211	57,187	2,645	56,753
Percent of total	81.4	74.9	79.5	74.9
Employed	2,179	53,903	2,596	53,486
Unemployed	32	3,284	49	3,267
Percent of labor force	1.4	5.7	1.9	5.8
Not in labor force	504	19,190	683	19,011
Female	2,472	85,044	3,091	84,425
In labor force	1,061	41,229	1,321	40,970
Percent of total	42.9	48.5	42.7	48.5
Employed	1,020	38,099	1,265	37,854
Unemployed	41	3,131	56	3,116
Percent of labor force	3.9	7.6	4.2	7.6
Not in labor force	1,411	43,815	1,770	43,455

current definition was about 700,000 lower than it would have been under the previous definition. The rate of labor force participation, however, remained essentially unchanged. Nationally, the level of labor force participation among farm residents was higher than among persons living in nonfarm areas. However, this higher likelihood of a farm resident being in the labor force pertained only to farm males. Farm women were less likely to be either working or looking for a job than their nonfarm counterparts.

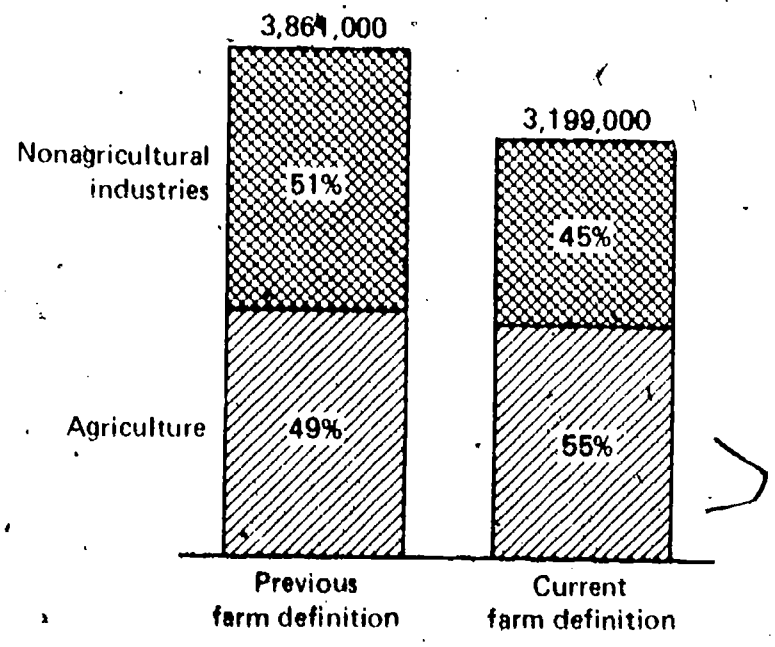
There was some evidence that persons living on farms in the combined Northern and Western States were more likely to be in the labor force than were Southern farm residents. About 60 percent of all persons 14 years old and over living on farms in the South were either working or looking for a job in 1978. In comparison, persons on farms outside the South had a labor force participation rate of 65 percent.

Agricultural and nonagricultural employment. The number of people employed solely or primarily in agriculture in the United States averaged 3.6 million in 1978. Total agricultural employment, of course, was not affected by the change in the farm definition. However, the definitional change did result in 130,000 agricultural workers being classified as nonfarm residents under the current definition who would have been farm residents under the previous definition. Under the new definition, farm resident agricultural workers comprised 49 percent of the total agricultural workforce (figure 1). Eighty percent of the employed persons removed from the farm population by the definitional change worked in nonagricultural jobs, thus indicating a lower association with farming for the reclassified group. As a consequence, agricultural employment as a percentage of total employment of farm people shifted from 49 percent to 55 percent (figure 2).

Southern farm residents are somewhat more likely to have nonfarm jobs as their principal employment than are farm residents of the North and West. In 1978, about half of the workers living on Southern farms were primarily engaged in nonagricultural pursuits; among residents on farms outside the South, only 40 percent were so employed (table 4). This regional disparity is apparently associated with the disproportionately high incidence of low income farm residents in the South who sought supplemental nonfarm income. Data from the 1974 Census of Agriculture reveal that the Southern States contain 57 percent of all farms with agricultural product sales of $1,000 to $2,500 but only 40 percent of the total number of farms in the United States. The same pattern emerges when farm operators are examined in terms of their principal occupation, that is, whether or not the farm operator spent 50 percent or more of his worktime in farming or other occupations. According to the agricultural census, 47 percent of all Southern farm operators reported they spent half or more of their worktime in 1974 at occupations other than farming. By contrast, in the combined Northern and Western States, only 31 percent of the farm operators indicated that farming was not their principal occupation.

Unemployment. The rate of unemployment (the proportion of the civilian labor force currently without a job and looking for work) continues to be low in the farm population. In

FIGURE 2.
Farm Residents Employed in Agriculture and Nonagricultural Industries: 1978



USDA

1978, 2.2 percent of those in the labor force living on farms were unemployed, the comparable rate for the nonfarm civilian population was 6.5 percent. Lower farm unemployment rates occurred under both farm definitions (table D). The frequency of holding two or more jobs among persons employed in agriculture is thought to contribute to lower unemployment among farm residents.

There is evidence of racial disparity in farm rates of unemployment, however, both the White and Black rates of unemployment were lower than the corresponding rates for the nonfarm population. In 1978, the rates of unemployment for White and Black farm residents were 2 percent and 8 percent, respectively. Although not shown in the data tables, the comparable nonfarm rates were 6 percent for Whites and 14 percent for Blacks.

Class of worker. Although the 1978 agricultural work force was about equally divided between farm and nonfarm residents, there were significant differences by class of worker. Self-employed and unpaid family workers in agriculture continue to be mainly farm residents. In contrast, wage and salary farm workers are more likely to live off farms and commute to work. In 1978, 3 out of every 4 agricultural wage workers were nonfarm residents (tables E and F). The class of worker distribution among both farm and nonfarm resident agricultural workers was essentially the same under the current and previous definitions.

Of the 1.8 million farm residents employed in agriculture, self employment was the major class of work. This dominance of self employment occurred irrespective of region of

Table E. Farm Residents 14 Years Old and Over Employed in Agriculture, by Class of Worker and Sex: 1978

(Numbers in thousands. Figures are five-quarter averages centered on April)

Class of worker	Both sexes	Male	Female	Percent distribution		
				Both sexes	Male	Female
CURRENT DEFINITION						
Total agricultural workers...	1,774	1,430	344	100.0	100.0	100.0
Self-employed workers.....	1,086	996	90	61.2	69.7	26.2
Wage and salary workers.....	383	322	61	21.6	22.5	17.7
Unpaid family workers.....	305	112	193	17.2	7.8	56.1
PREVIOUS DEFINITION						
Total agricultural workers...	1,905	1,531	374	100.0	100.0	100.0
Self-employed workers.....	1,169	1,067	102	61.4	69.7	27.3
Wage and salary workers.....	411	345	66	21.6	22.5	17.6
Unpaid family workers.....	325	119	206	17.1	7.8	55.1

Table F. Nonfarm Residents 14 Years Old and Over Employed in Agriculture, by Class of Worker and Sex: 1978

(Numbers in thousands. Figures are five-quarter averages centered on April)

Class of worker	Both sexes	Male	Female	Percent distribution		
				Both sexes	Male	Female
CURRENT DEFINITION						
Total agricultural workers.	1,814	1,434	380	100.0	100.0	100.0
Self-employed workers.....	556	490	67	30.7	34.2	17.6
Wage and salary workers.....	1,173	919	254	64.7	64.1	66.8
Unpaid family workers.....	85	25	60	4.7	1.7	15.8
PREVIOUS DEFINITION						
Total agricultural workers...	1,683	1,333	350	100.0	100.0	100.0
Self-employed workers.....	473	419	54	28.1	31.4	15.4
Wage and salary workers.....	1,144	896	248	68.0	67.2	70.9
Unpaid family workers.....	65	19	47	3.9	1.4	13.4

Table G. Income in 1977 of Farm and Nonfarm Families

(Families as of March 1978. For meaning of symbols, see text)

Family income	Current definition		Previous definition	
	Farm	Nonfarm	Farm	Nonfarm
Total families.....thousands..	1,775	55,440	2,172	55,042
Families by 1977 income.....	100.0	100.0	100.0	100.0
Less than $4,000 or loss.....	14.1	6.0	13.4	6.0
$4,000 to $9,999.....	26.5	21.0	25.6	21.0
$10,000 to $14,999.....	18.9	18.4	19.0	18.4
$15,000 to $19,999.....	14.7	17.9	15.7	17.9
$20,000 and over.....	25.9	36.6	26.3	36.7
Median family income (1977 dollars):				
1977.....	$12,235	$16,126	$12,637	$16,140
1976.....	...	...	12,415	16,037
1975.....	...	...	12,211	15,571
1974.....	...	...	13,040	15,965
1973.....	...	...	13,699	16,572
1972.....	...	...	12,823	16,266
1971.....	...	...	10,764	15,614
1970.....	...	...	10,576	15,624

Source: Data from March 1978 Current Population Survey.

residence (table 5). There were, however, significant differences in the class of worker distribution by sex. Self employment was the leading class of work among farm males (70 percent), whereas farm females were most often unpaid family workers (56 percent). The 1.4 million persons living on farms and working in nonagricultural industries in 1978 were predominantly wage and salary workers regardless of region of residence or sex.

Income. Under both farm definitions, the median income of farm families lagged behind that of nonfarm families. In 1977, the median income of farm families under the current definition was $12,235, substantially lower than the $16,126 for nonfarm families (table G). The indicated difference of $400 in the medians under the current and previous farm definitions is not statistically significant.

CHARACTERISTICS OF THE RECLASSIFIED POPULATION

The change in farm definition resulted in a substantial reduction in the number of persons living on farms. The preceding discussion indicated that, except in the area of em-

Table H. Age, Race and Spanish Origin of the Population Reclassified as Nonfarm Under the Current Farm Definition, by Sex: 1978

(Numbers in thousands. Figures are five-quarter averages centered on April. For meaning of symbols, see text)

Age, race, and Spanish origin[1]	Both sexes	Male	Female	Percent distribution		
				Both sexes	Male	Female
All ages.....	1,504	749	755	100.0	100.0	100.0
Under 20 years.....	474	249	225	31.5	33.2	29.9
20 to 34 years.....	216	105	111	14.4	14.0	14.7
35 to 64 years.....	570	281	290	37.9	37.4	38.5
65 years and over.....	243	116	127	16.2	15.4	16.9
Median age.....	38.1	37.4	38.9	...	...	...
All races.....	1,504	749	755	100.0	100.0	100.0
White.....	1,418	707	710	94.3	94.4	94.0
Black.....	67	31	36	4.5	4.1	4.8
Spanish origin[1].....	19	8	11	1.3	1.1	1.5

[1] Persons of Spanish origin may be of any race.

Table I. Employment Status of the Population 14 Years Old and Over Reclassified as Nonfarm Under the Current Farm Definition, for Regions: 1978

(Numbers in thousands. Figures are five-quarter averages centered on April)

Employment status	United States	North and West	South	Percent distribution: United States	Percent distribution: North and West	Percent distribution: South
Total	1,233	614	618	100.0	100.0	100.0
In labor force	693	372	322	56.2	60.6	52.1
Not in labor force	540	243	296	43.8	39.6	47.9
In labor force	693	372	322	100.0	100.0	100.0
Employed	662	355	306	95.5	95.4	95.0
Agriculture	131	70	62	18.9	18.8	19.3
Nonagricultural industries	530	286	245	76.5	76.9	76.1
Unemployed	32	16	15	4.6	4.3	4.7

ployment, the reclassification of 1.5 million persons from farm to nonfarm residents did not significantly alter the social and economic characteristics of the farm population. An examination of the group that shifted from farm to nonfarm offers a means of further evaluating the effects of the definitional change.

Tables H, I, and J present a profile of the reclassified population. This group was primarily White, with lower proportions of Blacks and persons of Spanish origin than the other nonfarm population; its race and ethnic composition very closely resembled that of the farm population in 1978. The reclassified group had an older age structure than either the farm population or the remainder of the nonfarm population. The median age was 38.1 years for the reclassified population, compared with 33.8 years for the farm population and 29.4 years for the nonfarm population, with almost 1 out of 6 persons aged 65 years or older (table H).

In 1978, persons living on places that were reclassified as nonfarm under the current definition were less likely to be working or seeking employment than were persons on places qualifying as farms (table I). This lower labor force participation was exhibited only among males, however. There was no significant difference in the level of labor force participation for reclassified females (table D, by subtraction). Although supporting data are not available, the indicated higher proportion not in the labor force in the reclassified population is thought to be a reflection of the retired status of many individuals engaged in very marginal agricultural activities.

Although the level of labor force participation of the reclassified population was lower than that of either the farm or the remaining nonfarm population, there were about 700,000 persons in this work force. Of these workers, only about one-fifth were primarily engaged in farming, regardless of region of residence; most of the members of the reclassified group were supported chiefly by off-farm work. This is further substantiated by the income characteristics of this group. By definition, the 398,000 reclassified families were on places with agricultural sales of under $1,000. Yet nearly one-half of these families had incomes of $15,000 or more in 1977 and nearly two-thirds had incomes of $10,000 or more, thus reflecting a high dependence on income from nonfarm sources. Median family income for the reclassified group was $14,500, a significantly higher level than the $12,235 median for farm families (table J).

Table J. Income in 1977 of Families Reclassified as Nonfarm Under the Current Farm Definition

(Families as of March 1978)

Family income	Total
Families.....thousands	398
Families by 1977 income	100.0
Less than $4,000 or loss	10.3
$4,000 to $9,999	22.1
$10,000 to $14,999	19.6
$15,000 to $19,999	19.8
$20,000 and over	28.4
Median family income	$14,500

Source: Data from March 1978 Current Population Survey.

RELATED REPORTS

Comparable figures for 1977 appear in **Current Population Reports**, "Farm Population of the United States: 1977," Series P-27, No. 51, and earlier reports published annually beginning in 1961.

Beginning with 1972, the data are not strictly comparable with data for earlier years because of adjustments in sample design and survey procedures occasioned by 1970 census data. Application of 1972 procedures to data for March 1970 lowered the farm population 14 years old and over by about

75,000. In 1976, revisions were made in the processing procedure for determining farm-nonfarm residence of the rural population. The revisions lowered the total farm population by an estimated 130,000. The effects are discussed in detail in "Farm Population of the United States: 1976," Series P-27, No. 49.

Although not fully comparable with the Current Population Survey, farm population figures for 1970 for the United States, States, and counties appear in chapter C of **1970 Census of Population**, Volume I, **Characteristics of the Population**; characteristics of the farm population by States are presented in chapter D.

Table 1. Farm Population, by Race and Spanish Origin and Sex, for Broad Age Groups: 1978

(Current farm definition. Numbers in thousands. Figures are five-quarter averages centered on April)

Race and age	Both sexes	Male	Female	Percent distribution		
				Both sexes	Male	Female
All races	6,501	3,396	3,105	100.0	100.0	100.0
Under 14 years	1,315	681	634	20.2	20.1	20.4
14 years and over	5,186	2,715	2,472	79.8	79.9	79.6
White	6,064	3,165	2,899	100.0	100.0	100.0
Under 14 years	1,198	624	574	19.8	19.7	19.8
14 years and over	4,866	2,541	2,325	80.2	80.3	80.2
Black	349	186	163	100.0	100.0	100.0
Under 14 years	98	46	52	28.1	24.7	31.9
14 years and over	252	140	112	72.2	75.3	68.1
Spanish origin[1]	90	53	37	100.0	(B)	(B)
Under 14 years	26	15	11	28.9	(B)	(B)
14 years and over	64	38	26	71.1	(B)	(B)

[1] Persons of Spanish origin may be of any race.

Table 2. Farm Population, by Age and Sex: 1978

(Current farm definition. Numbers in thousands. Figures are five-quarter averages centered on April)

Age	Both sexes	Male	Female	Percent distribution		
				Both sexes	Male	Female
All ages	6,501	3,396	3,105	100.0	100.0	100.0
Under 14 years	1,315	681	634	20.2	20.1	20.4
14 to 19 years	903	479	424	13.9	14.1	13.7
20 to 24 years	469	269	200	7.2	7.9	6.4
25 to 29 years	320	175	144	4.9	5.2	4.6
30 to 34 years	320	154	166	4.9	4.5	5.3
35 to 39 years	381	189	192	5.9	5.6	6.2
40 to 44 years	359	183	176	5.5	5.4	5.7
45 to 49 years	387	192	195	6.0	5.7	6.3
50 to 54 years	450	219	231	6.9	6.4	7.4
55 to 59 years	460	248	211	7.1	7.3	6.8
60 to 64 years	368	203	164	5.7	6.0	5.3
65 years and over	771	402	368	11.9	11.8	11.9

Table 3. Metropolitan-Nonmetropolitan Residence of the Farm and Nonfarm Population, by Race: 1978

(Current farm definition. Numbers in thousands. Figures are five-quarter averages centered on April)

Race and residence	Total	Farm	Nonfarm
ALL RACES			
United States	[1]213,467	6,501	206,966
Inside SMSA's[2]	143,046	1,129	141,917
Percent	67.0	17.4	68.6
Outside SMSA's	70,421	5,372	65,049
Percent	33.0	82.6	31.4
WHITE			
United States	184,806	6,064	178,742
Inside SMSA's	121,650	1,084	120,566
Percent	65.8	17.9	67.5
Outside SMSA's	63,156	4,980	58,176
Percent	34.2	82.1	32.5
BLACK			
United States	24,757	349	24,408
Inside SMSA's	18,463	33	18,430
Percent	74.6	9.5	75.5
Outside SMSA's	6,294	316	5,978
Percent	25.4	90.5	24.5

[1]The total U.S. population figure shown here differs from that shown in table A because the latter refers to the total resident population, whereas this and other tables refer to the civilian noninstitutional population.

[2]SMSA's refers to standard metropolitan statistical areas as designated in the 1970 census publications; see "Definitions and Explanations."

Table 4. Employment Status of the Farm Population 14 Years Old and Over, by Race and Sex, for Regions: 1978

(Current farm definition. Numbers in thousands. Figures are five-quarter averages centered on April. For meaning of symbols, see text)

Race and employment status	United States			North and West			South			Percent distribution								
										United States			North and West			South		
	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female
All races	5,186	2,715	2,472	3,361	1,764	1,596	1,826	951	875	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
In labor force	3,273	2,211	1,061	2,182	1,476	707	1,090	735	355	63.1	81.4	42.9	64.9	83.7	44.3	59.7	77.3	40.6
Not in labor force	1,914	504	1,410	1,178	289	890	736	215	520	36.9	18.6	57.0	35.0	16.4	55.8	40.3	22.6	59.4
In labor force	3,273	2,211	1,061	2,182	1,476	707	1,090	735	355	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Employed	3,199	2,179	1,020	2,141	1,459	682	1,059	720	339	97.7	98.6	96.1	98.1	98.8	96.5	97.2	98.0	95.5
Agriculture	1,774	1,430	344	1,269	1,010	260	504	420	84	54.2	64.7	32.4	58.2	68.4	36.8	46.2	57.1	23.7
Nonagricultural industries	1,426	749	676	870	448	422	555	300	254	43.6	33.9	63.7	39.9	30.4	59.7	50.9	40.8	71.5
Unemployed	73	32	41	42	17	25	32	15	17	2.2	1.4	3.9	1.9	1.2	3.5	2.9	2.0	4.8
White	4,866	2,541	2,325	3,295	1,731	1,564	1,572	810	762	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
In labor force	3,098	2,091	1,007	2,146	1,453	694	952	639	313	63.7	82.3	43.3	65.1	83.9	44.4	60.6	78.9	41.3
Not in labor force	1,768	450	1,318	1,149	279	870	620	171	449	36.3	17.7	56.7	34.9	16.1	55.6	39.4	21.1	58.9
In labor force	3,098	2,091	1,007	2,146	1,453	694	952	639	313	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Employed	3,042	2,067	975	2,111	1,440	670	932	627	305	98.2	98.9	96.8	98.4	99.1	96.5	97.9	98.1	97.4
Agriculture	1,690	1,354	336	1,256	998	257	434	356	78	54.6	64.8	33.4	58.5	68.7	37.0	45.6	55.7	24.9
Nonagricultural industries	1,352	713	639	855	442	413	498	271	226	43.6	34.1	63.5	39.8	30.4	59.5	52.3	42.4	72.2
Unemployed	56	24	32	36	12	24	20	12	9	1.8	1.1	3.2	1.7	0.8	3.5	2.1	1.9	2.9
Black	252	140	112	7	5	3	244	136	109	100.0	100.0	100.0	(B)	(B)	(B)	100.0	100.0	100.0
In labor force	139	98	42	5	3	1	134	94	40	55.2	70.0	37.5	(B)	(B)	(B)	54.9	69.1	36.7
Not in labor force	113	42	70	3	1	2	110	41	68	44.8	30.0	62.5	(B)	(B)	(B)	45.1	30.1	62.4
In labor force	139	98	42	5	3	1	134	94	40	100.0	100.0	(B)	(B)	(B)	(B)	100.0	100.0	(B)
Employed	128	94	34	4	3	1	124	91	33	92.1	95.9	(B)	(B)	(B)	(B)	92.5	96.8	(B)
Agriculture	71	65	6	4	3	1	67	62	5	51.1	66.3	(B)	(B)	(B)	(B)	50.0	66.0	(B)
Nonagricultural industries	57	29	29	-	-	-	56	28	28	41.0	29.6	(B)	(B)	(B)	(B)	41.8	29.8	(B)
Unemployed	11	4	7	-	-	-	11	3	7	7.9	4.1	(B)	(B)	(B)	(B)	8.2	3.2	(B)

Table 5. Farm Residents 14 Years Old and Over Employed in Agriculture and Nonagricultural Industries, by Class of Worker, Race, and Sex, for Regions: 1978

(Current farm definition. Numbers in thousands. Figures are five-quarter averages centered on April. For meaning of symbols, see text)

Race, sex, and class of worker	Agricultural workers			Nonagricultural workers			Percent distribution					
							Agricultural workers			Nonagricultural workers		
	United States	North and West	South	United States	North and West	South	United States	North and West	South	United States	North and West	South
ALL RACES												
Both sexes	1,774	1,269	504	1,426	870	555	100.0	100.0	100.0	100.0	100.0	100.0
Self-employed workers	1,086	798	288	136	85	52	61.2	62.9	57.1	9.5	9.8	9.4
Wage and salary workers	383	229	154	1,276	776	500	21.6	18.0	30.6	89.5	89.2	90.1
Unpaid family workers	305	242	62	13	11	3	17.2	19.1	12.3	0.9	1.3	0.5
Male	1,430	1,010	420	749	448	300	100.0	100.0	100.0	100.0	100.0	100.0
Self-employed workers	996	732	264	93	57	36	69.7	72.5	62.9	12.4	12.7	12.0
Wage and salary workers	322	188	134	656	391	264	22.5	18.6	31.9	87.6	87.3	88.0
Unpaid family workers	112	90	22	-	-	-	7.8	8.9	5.2	-	-	-
Female	344	260	84	676	422	254	100.0	100.0	100.0	100.0	100.0	100.0
Self-employed workers	90	66	24	43	27	16	26.2	25.4	28.6	6.4	6.4	6.3
Wage and salary workers	61	41	19	620	385	236	17.7	15.8	22.6	91.7	91.2	92.9
Unpaid family workers	193	153	41	13	10	3	56.1	58.8	48.8	1.9	2.4	1.2
WHITE												
Both sexes	1,690	1,256	434	1,352	855	498	100.0	100.0	100.0	100.0	100.0	100.0
Self-employed workers	1,064	794	270	130	79	51	63.0	63.2	62.2	9.6	9.2	10.2
Wage and salary workers	327	221	106	1,209	765	444	19.3	17.6	24.4	89.4	89.5	89.2
Unpaid family workers	299	241	58	13	11	3	17.7	19.2	13.4	1.0	1.3	0.6
Male	1,354	998	356	713	442	271	100.0	100.0	100.0	100.0	100.0	100.0
Self-employed workers	975	728	247	92	57	35	72.0	72.9	69.4	12.9	12.9	12.9
Wage and salary workers	271	182	89	621	385	236	20.0	18.2	25.0	87.1	87.1	87.1
Unpaid family workers	109	89	19	-	-	-	8.1	8.9	5.3	-	-	-
Female	336	257	78	639	413	226	100.0	100.0	100.0	100.0	100.0	100.0
Self-employed workers	89	66	23	38	22	16	26.5	25.7	29.5	5.9	5.3	7.1
Wage and salary workers	57	40	17	588	380	208	17.0	15.6	21.8	92.0	92.0	92.0
Unpaid family workers	191	152	39	13	10	3	56.8	59.1	50.0	2.0	2.4	1.3
BLACK												
Both sexes	71	4	67	57	-	56	(B)	(B)	(B)	(B)	(B)	(B)
Self-employed	17	1	16	1	-	1	(B)	(B)	(B)	(B)	(B)	(B)
Wage and salary workers	50	3	47	56	-	55	(B)	(B)	(B)	(B)	(B)	(B)
Unpaid family workers	5	-	5	-	-	-	(B)	(B)	(B)	(B)	(B)	(B)
Male	65	3	62	29	-	28	(B)	(B)	(B)	(B)	(B)	(B)
Self-employed workers	16	1	15	1	-	1	(B)	(B)	(B)	(B)	(B)	(B)
Wage and salary workers	47	2	45	28	-	28	(B)	(B)	(B)	(B)	(B)	(B)
Unpaid family workers	3	-	3	-	-	-	(B)	(B)	(B)	(B)	(B)	(B)
Female	6	1	5	29	-	28	(B)	(B)	(B)	(B)	(B)	(B)
Self-employed workers	1	-	1	-	-	-	(B)	(B)	(B)	(B)	(B)	(B)
Wage and salary workers	3	1	2	28	-	27	(B)	(B)	(B)	(B)	(B)	(B)
Unpaid family workers	2	-	2	-	-	-	(B)	(B)	(B)	(B)	(B)	(B)

Appendix A. Definitions and Explanations

Population coverage. With the exception of the total population shown in table A, all figures in this report relate to the civilian noninstitutional population. The total population shown in table B (213,467,000) differs from the estimated April 1, 1978 total civilian population (215,968,000) chiefly in excluding the institutional population.

Farm population. In the Current Population Survey, the farm population as currently defined consists of all persons living in rural territory on places from which $1,000 or more of agricultural products were sold, or normally would have been sold, in the reporting year (for the CPS the preceding 12 months). Persons in institutions, summer camps, motels, and tourist camps, and those living on rented places where no land is used for farming, are classified as nonfarm.

Under the previous farm definition, in use since 1960, the farm population consists of all persons living in rural territory on places of 10 or more acres if at least $50 worth of agricultural products were sold from the place in the reporting year. It also includes those living on places of under 10 acres if at least $250 worth of agricultural products were sold from the place in the reporting year.

Farm residence under the current and previous farm definitions was determined in the Current Population Survey by the responses to two questions. Owners (and renters) are first asked "Does this place (you rent) have 10 or more acres?" They are then asked "During the past 12 months, how much did sales of crops, livestock and other farm products from this place amount to?" The respondents are given a choice of four answers: "$1,000 or more," "$250 to $999," "$50 to $249," and "Under $50."

Farms located within the boundaries of urban territory, comprising a small minority of all farms, are not treated as farms for population census purposes, and their population is not included in the farm population. Urban territory includes all places with a population of 2,500 or more and the densely settled urbanized fringe areas around cities of 50,000 or more. Beginning with the 1972 estimate, the estimated farm population is limited to the rural territory as determined in the 1970 Census of Population. In the Current Population Surveys of 1963 through 1971, the urban-rural boundaries used were those of the 1960 Census of Population and did not take into account the annexations and other substantial expansions of urban territory that were incorporated into the 1970 Census of Population. The net effect was to classify an unknown number of persons as rural farm in the Current Population Surveys of 1970 and 1971 who were treated as urban (and hence nonfarm) in the 1970 census as well as in the Current Population Surveys beginning in 1972.

Nonfarm population. The nonfarm population comprises all persons living in urban areas and all rural persons not on farms.

Five-quarter averages centered on April. April-centered annual averages of the farm population for the years 1970 through 1978 were computed by using data for the five quarters centered on the April date for which the estimate was being prepared. For example, for April 1978, quarterly estimates for the months of October 1977, and January, April, July, and October 1978, were used with a weight of one-eighth given to each of the two October estimates and a weight of one-fourth to each of the estimates for the other 3 months. One reason for the choice of April as the date for centering population estimates is that this is the decennial census month.

April-centered annual averages for persons under 14 years by race and sex, and for persons 14 years old and over, by race, sex, age, labor force characteristics, and region were also computed for 1978 by using data for the specified characteristics for the five quarters centered on April 1978.

Metropolitan-nonmetropolitan residence. The population residing in standard metropolitan statistical areas (SMSA's) constitutes the metropolitan population. The metropolitan population in this report is based on SMSA's as defined in the 1970 population census publications and does not include any subsequent additions or changes. For the 1970 census, except in New England, an SMSA was defined as a county or group of contiguous counties which contains at least one city of 50,000 inhabitants or more, or "twin cities" with a combined population of at least 50,000. In addition to the county, or counties, containing such a city or cities, contiguous counties were included in an SMSA if, according to certain criteria, they were essentially metropolitan in character and were socially and economically integrated with the central county. In New England, SMSA's consist of towns and cities, rather than counties.

Geographic regions. The major regions of the United States for which data are presented represent groups of States, as follows:

North and West: Northeast, North Central, and West regions combined.

Northeast: Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont.

North Central: Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, Wisconsin.

West: Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, Wyoming.

South: Alabama, Arkansas, Delaware, District of Columbia, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, West Virginia.

Age. The age classification is based on the age of the person at last birthday.

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.

Persons of Spanish origin. Persons of Spanish origin in this report were determined on the basis of a question that asked for self-identification of the person's origin or descent. Respondents were asked to select their origin (or the origin of some other household member) from a "flash card" listing ethnic origins. Persons of Spanish origin, in particular, were those who indicated that their origin was Mexican, Puerto Rican, Cuban, Central or South American, or some other Spanish origin.

Labor force and employment status. The definitions of labor force and employment status in this report relate to the population 14 years old and over.

Labor force. Persons are classified as in the labor force if they were employed as civilians, unemployed, or in the Armed Forces during the survey week. The "civilian labor force" is comprised of all civilians classified as employed or unemployed.

Employed. Employed persons comprise (1) all civilians who, during the specified week, did any work at all as paid employees or in their own business or profession, or on their own farm, or who worked 15 hours or more as unpaid workers on a farm or in a business operated by a member of the family, and (2) all those who were not working but who had jobs or businesses from which they were temporarily absent because of illness, bad weather, vacation, or labor-management dispute, or because they were taking time off for personal reasons, whether or not they were paid by their employers for time off, and whether or not they were seeking other jobs. Excluded from the employed group are persons whose only activity consisted of work around the house (such as own home housework, painting or repairing own home, etc.) or volunteer work for religious, charitable, and similar organizations.

Unemployed. Unemployed persons are those civilians who, during the survey week, had no employment but were available for work and (1) had engaged in any specific job-seeking activity within the past 4 weeks, such as registering at a public or private employment office, meeting with prospective employers, checking with friends or relatives, placing or answering advertisements, writing letters of application, or being on a union or professional register; (2) were waiting to be called back to a job from which they had been laid off; or (3) were waiting to report to a new wage or salary job within 30 days.

Not in the labor force. All civilians who are not classified as employed or unemployed are defined as "not in the labor force." This group who are neither employed nor seeking work includes persons engaged only in own home housework, attending school, or unable to work because of long-term physical or mental illness; persons who are retired or too old to work; seasonal workers for whom the survey week fell in an off season; and the voluntarily idle. Persons doing only unpaid family work (less than 15 hours) are also classified as not in the labor force.

Agriculture. The industry category "agriculture" is somewhat more inclusive than the total of the two major occupation groups, "farmers and farm managers" and "farm laborers and supervisors." It also includes (1) persons employed on farms in occupations such as truck driver, mechanic, and bookkeeper, and (2) persons engaged in certain activities other than strictly farm operation such as cotton ginning, contract farm services, veterinary and breeding services, hatcheries, experimental stations, greenhouses, landscape gardening, tree service, trapping, hunting preserves, and kennels.

Nonagricultural industries. This category includes all industries not specifically classed under agriculture.

Multiple jobs. Persons with two or more jobs during the survey week were classified as employed in the industry in which they worked the greatest number of hours during the week. Consequently, some of the persons shown in this report as engaged in nonagricultural activities also engaged in agriculture and vice versa.

Class of Worker

Self-employed workers. Persons who worked for profit or fees in their own business, profession, or trade, or who operated a farm either as an owner or tenant.

Wage and salary workers. Persons who worked for any governmental unit or private employer for wages, salary, commission, tips, pay "in kind," or at piece rates.

Unpaid family workers. Persons who worked 15 hours or more per week without pay on a farm or in a business operated by a person to whom they are related by blood or marriage.

Income. Total money income is the algebraic sum of the amounts received in the preceding calendar year from each of the following sources: (1) Money wages or salary; (2) net income from nonfarm self-employment; (3) net income from farm self-employment; (4) Social Security or railroad retirement; (5) dividends, interest (on savings or bonds), income from estates or trusts, or net rental income; (6) public assistance or welfare payments; (7) unemployment and workmen's compensation, government employee pensions, or veterans' payments; (8) private pensions, annuities, alimony, regular contributions from persons not living in this household, and other periodic income.

Receipts from the following sources are not included as income: (1) Money received from the sale of property, such as stocks, bonds, a house, or a car (unless the person was engaged in the business of selling such property, in which case the net proceeds would be counted as income from self-employment); (2) withdrawals of bank deposits; (3) money borrowed; (4) tax refunds; (5) gifts; and (6) lump-sum inheritances or insurance payments.

Family income. The total income of a family is the algebraic sum of the amounts received by all income recipients in the family.

In the income distribution for families, the lowest income group (less than $4,000) includes those families who were classified as having no income in the income year and those reporting a loss in net income from farm and nonfarm self-employment or in rental income. Many of these were living on income "in kind," savings, or gifts; or were newly constituted families, or families in which the sole breadwinner had recently died or had left the household. However, many of the families who reported no income probably had some money income which was not recorded in the survey.

It should be noted that although the income statistics refer to receipts during the preceding year, the composition of families refers to the time of the survey. The income of the family does not include amounts received by persons who were members of the family during all or part of the income year if these persons no longer resided with the family at the time of enumeration. On the other hand, family income includes amounts reported by related persons who did not reside with the family during the income year but who were members of the family at the time of enumeration.

Median. The median is the value which divides a distribution into two equal parts; one-half of the cases falling below this value and one-half of the cases exceeding this value.

Symbols. A dash "—" represents zero or a number which rounds to zero. The symobl "B" means that the base for the derived figure is less than 75,000, and three dots "..." mean not applicable.

Rounding. The individual figures in this report are rounded to the nearest thousand. With few exceptions, the individual figures have not been adjusted 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 100.0 percent. The totals, however, are always shown as 100.0. Percentages are based on the rounded absolute numbers.

CHANGE IN SAMPLE SIZE

The 1978 five-quarter average data from the Current Population Survey are based on an expanded sample of households. The expansion of the basic monthly CPS sample was from about 55,000 housing units to 65,500 units. The sample expansion was initiated in conjunction with the Comprehensive Employment Training Act (CETA) to obtain estimated annual averages of the number of unemployed in each of the 50 States and the District of Columbia. The expanded sample was designed to obtain these estimates with a fixed reliability requirement (a 10-percent coefficient of variation on an estimate of the number of unemployed assuming a 6-percent unemployment rate).

The CETA supplement has been in existence since July 1975, but was not incorporated into the five-quarter average farm population data until 1978. A comparison was made between the estimates obtained from the CPS and the CPS-CETA combined samples for several months of late 1977. The comparison indicated that inclusion of the supplement probably raised the estimate of farm population by 2.5 to 4 percent—about 200,000 to 300,000 persons. The difference in the estimates is within sampling error, and the sample expansion had little impact on the regional distribution, age, race, sex, or employment characteristics of the farm population.

Appendix B. Source and Reliability of the Estimates

SOURCE OF DATA

Estimates in this report were primarily derived from data obtained from the Current Population Survey (CPS) of the Bureau of the Census. Most of these CPS estimates are April-centered five-quarter averages. Data on income characteristics of farm and nonfarm families, however, are monthly estimates obtained from supplementary questions to CPS. Additional data, as identified in the text, were obtained from the 1974 Census of Agriculture.

Current Population Survey (CPS). The monthly CPS deals mainly with labor force data for the civilian noninstitutional population. Questions relating to labor force participation are asked about each member 14 years old and older in each sample household. In addition, supplementary questions are asked each March about household and family characteristics. Estimates developed from the supplementary questions and included in this report include persons in the Armed Forces living off post or with their families on post.

The present CPS sample was initially selected from the 1970 census files and is updated continuously to reflect new construction where possible (see section, "Nonsampling Variability", below). The monthly CPS sample is spread over 461 areas with coverage in each of the 50 States and the District of Columbia. A supplementary sample of housing units in 24 States and the District of Columbia was incorporated with the monthly CPS sample beginning in March 1977. The expanded CPS sample is located in 614 areas comprising 1,113 counties, independent cities and divisions in the nation. The 614 sample areas used since March 1977 include 461 areas from the monthly CPS and 153 supplementary areas.

Samples for previous sample designs were selected from files from the most recently completed census. The following table provides a description of some aspects of the CPS sample designs in use during the referenced data-collection periods.

The estimation procedure used for the monthly CPS data involves the inflation of the weighted sample results to independent estimates of the civilian noninstitutional population of the United States by age, race, and sex. These independent estimates were based on statistics from decennial censuses; statistics on births, deaths, immigration, and emigration; and statistics on the strength of the Armed Forces. The estimation procedure for the data from the March supplement involved a further adjustment so that husband and wife of a household received the same weight.

RELIABILITY OF THE ESTIMATES

Since the CPS estimates in this report are based on a sample, they may differ somewhat from the figures that would have been obtained if a complete census had been taken using the same questionnaire, instructions, and enumerators. There are two types of errors possible in an estimate based on a sample survey—sampling and nonsampling. The standard errors provided for this report primarily indicate the magnitude of the sampling error. They also partially measure the effect of some nonsampling errors in response and enumeration, but do not measure any systematic biases in the data. The full extent of nonsampling error is unknown. Consequently, particular care should be exercised in the interpretation of figures based on a relatively small number of cases or on small differences between estimates.

Description of the Current Population Survey

Time period	Number of sample areas[1]	Households eligible		Housing units visited, not eligible[2]
		Interviewed	Not interviewed	
Supplemental sample	153	8,500	500	1,500
August 1972 to present	461	45,000	2,000	8,000
August 1971 to July 1972	449	45,000	2,000	8,000
January 1967 to July 1971	449	48,000	2,000	8,500

[1] With the exception of the supplemental sample, these sample areas were chosen to provide coverage in each State and the District of Columbia.

[2] These are housing units which were visited, but were found to be vacant or otherwise not eligible for interview.

Nonsampling variability. As in any survey work, the results are subject to errors of response and nonreporting in addition to sampling variability. Nonsampling errors can be attributed to many sources, e.g., inability to obtain information about all cases in the sample, definitional difficulties, differences in the interpretation of questions, inability or unwillingness to provide correct information on the part of respondents, inability to recall information, errors made in collection such as in recording or coding the data, errors made in processing the data, errors made in estimating values for missing data, and failure to represent all units within the sample (undercoverage).

Undercoverage in the CPS results from missed housing units and missed persons within sample households. Overall undercoverage, as compared to the level of the decennial census, is about 5 percent. It is known that CPS undercoverage varies with age, sex, and race. Generally, undercoverage is larger for males than for females and larger for Blacks and other races than for Whites.

Ratio estimation to independent age-sex-race population controls, as described previously, partially corrects for the bias due to survey undercoverage. However, biases exist in the estimates to the extent that missed persons in missed households or missed persons in interviewed households have different characteristics than interviewed persons in the same age-sex-race group. Further, the independent population controls used have not been adjusted for undercoverage in the 1970 census, which was estimated at 2.5 percent of the population with similar undercoverage differentials by age, sex, and race as are observed in CPS.

The approximate magnitude of two sources of undercoverage of housing units is known. Of the 83,000,000 housing units in the U.S., about 600,000 new construction housing units other than mobile homes are not represented in the CPS sample because they were assigned building permits prior to January 1970, but construction was not completed by the time of the census, (i.e., April 1970). Most conventional new construction, for which building permits were issued after 1969, is represented. About 290,000 occupied mobile homes are not represented in CPS; these units were either missed in the census or have been built or occupied since the census. These estimates of missed units are relevant to the present sample only and not to earlier designs where the extent of undercoverage was generally less. The extent of other sources of undercoverage of housing units is unknown but believed to be small.

In most cases the schedule entries for income are based on the memory or knowledge of one person, usually the wife of the family head. The memory factor in data derived from field surveys of income probably produces underestimates because the tendency is to forget minor or irregular sources of income. Other errors of reporting are due to misrepresentation or to misunderstanding as to the scope of the income concept.

Sampling variability. The standard errors given in the following tables are primarily measures of sampling variability, that is, of the variation that occurred by chance because a sample rather than the entire population was surveyed. The sample estimate and its estimated standard error enable one to construct confidence intervals, ranges that would include the average results of all possible samples with a known probability. For example, if all possible samples were selected, each of these surveyed under essentially the same general conditions and using the same sample design, and an estimate and its estimated standard error were calculated from each sample, then:

1. Approximately 68 percent of the intervals from one standard error below the estimate to one standard error above the estimate would include the average result of all possible samples.
2. Approximately 90 percent of the intervals from 1.6 standard errors below the estimate to 1.6 standard errors above the estimate would include the average result of all possible samples.
3. Approximately 95 percent of the intervals from two standard errors below the estimate to two standard errors above the estimate would include the average result of all possible samples.

The average estimate derived from all possible samples is or is not contained in any particular computed interval. However, for a particular sample, one can say with a specified confidence that the average estimate derived from all possible samples is included in the confidence interval.

All the statements of comparison appearing in the text are significant at a 1.6 standard error level or better, and most are significant at a level of more than 2.0 standard errors. This means that for most differences cited in the text, the estimated difference is greater than twice the standard error of the difference. Statements of comparison qualified in some way (e.g., by use of the phrase, "some evidence") have a level of significance between 1.6 and 2.0 standard errors.

Note when using small estimates. Summary measures such as medians, rates and percent distributions are shown in the report only when the base is 75,000 or greater. Because of the large standard errors involved, there is little chance that summary measures would reveal useful information when computed on a smaller base. Estimated numbers are shown, however, even though the relative standard errors of these numbers are larger than those for corresponding percentages. These smaller estimates are provided primarily to permit such combinations of the categories to serve each data user's needs.

Comparability with other data. Caution should be used in comparing CPS estimates from 1977 and 1978, when the expanded sample was used, to those from 1976 and earlier years. Some relatively large differences in estimates of population in metropolitan and nonmetropolitan areas have been observed between the 461 and 614 area samples. These differences reflect a relatively large increase in variance on those estimates and do not provide reliable measures of actual changes in the population.

STANDARD ERROR TABLES AND THEIR USE

In order to derive standard errors that would be applicable to a large number of estimates and could be prepared at a moderate cost, a number of approximations were required. Therefore, instead of providing an individual standard error for each estimate, generalized sets of standard errors are provided for various types of characteristics. As a result, the sets of standard errors provided give an indication of the order of magnitude of the standard error of an estimate rather than the precise standard error.

The figures presented in tables B-1, B-2, B-3, and B-4 provide approximations to the standard errors of various estimates for families and for persons. Estimated standard errors cannot be obtained from tables B-1, B-2, B-3, and B-4 without the use of the factors in table B-5. The factors in table B-5 must be applied to the generalized standard errors in order to adjust for the combined effect of sample design and the estimating procedure on the value of the characteristic. The standard error tables with which each factor should be used are also indicated in table B-5. Standard errors for intermediate values not shown in the generalized tables of standard errors may be approximated by interpolation.

Table B-1. Standard Errors of Estimated Numbers of Persons or Families in the Farm Population

(68 chances out of 100. Numbers in thousands)

Size of estimate	Standard error
25	8
50	11
100	16
250	25
500	35
1,000	49
2,500	78
5,000	109
10,000	152
15,000	184

Note: For a particular characteristic, see table B-5 for the appropriate factor to apply to the above standard errors. For standard errors for regional data (North and West, South), multiply the standard errors obtained above by 1.4.

Two parameters (denoted "a" and "b") are used to calculate standard errors for each type of characteristic; they are presented in table B-5. These parameters were used to calculate the standard errors in tables B-1, B-2, B-3, and B-4 and to calculate the factors in table B-5. They also may be used to calculate the standard errors for estimated numbers and estimated percentages directly. Methods for direct computation are given in the following sections.

Table B-2. Standard Errors of Estimated Numbers of Persons or Families in the Total or Nonfarm Population

(68 chances out of 100. Numbers in thousands)

Size of estimate	Standard error
25	5
50	7
100	10
250	16
500	23
1,000	33
2,500	52
5,000	73
10,000	102
15,000	123
25,000	155
50,000	204
100,000	241
150,000[1]	223

[1]To derive the standard errors for an estimate greater than 150,000,000 use formula 2.

Note: For a particular characteristic, see table B-5 for the appropriate factor to apply to the above standard errors. For standard errors for regional data (North and West, South), multiply the standard errors obtained above by 1.4.

Standard errors of estimated numbers. The approximate standard error, σ_x, of an estimated number shown in this report can be obtained in two ways. It may be obtained by use of the formula

$$\sigma_x = f\sigma \qquad (1)$$

where f is the appropriate factor from table B-5 and σ is the standard error on the estimate obtained by interpolation from table B-1 or B-2. Alternatively, standard errors may be approximated by formula 2 from which the standard errors were calculated in tables B-1 and B-2. Use of this formula will provide more accurate results than the use of formula 1 above.

$$\sigma_x = \sqrt{ax^2 + bx} \qquad (2)$$

Here x is the size of the estimate and a and b are the parameters in table B-5 associated with the particular type of characteristic.

Standard errors of estimated percentages. The reliability of an estimated percentage, computed using sample data for both numerator and denominator, depends on both the size of the percentage and the size of the total upon which this percentage is based. Estimated percentages are relatively more reliable than the corresponding estimates of the numerators of the percentages, particularly if the percentages are 50 percent or more. When the numerator and denominator of the percentage are in different categories, use

the factor or parameters indicated by the numerator. The approximate standard error, $\sigma_{(x,p)}$, of an estimated percentage can be obtained by use of the formula

$$\sigma_{(x,p)} = f\sigma \qquad (3)$$

In this formula f is the appropriate factor from table B-5 and σ is the standard error on the estimate from table B-3 or B-4. Alternatively, the standard errors may be approximated by formula 4, from which the standard errors in tables B-3 and B-4 were calculated; direct computation will give more accurate results than use of the standard error table and the factors.

$$\sigma_{(x,p)} = \sqrt{\frac{b}{x} \cdot p\,(100 - p)} \qquad (4)$$

Here x is the size of the subclass of persons or families which is the base of the percentage, p is the percentage ($0 \leq p \leq 100$), and b is the parameter in table B-5 associated with the particular type of characteristic in the numerator of the percentage.

Table B-3. Standard Errors of Estimated Percentages of Persons or Families in the Farm Population

Base of percentages (thousands)	Estimated percentages					
	1 or 99	2 or 98	5 or 95	10 or 90	25 or 75	50
25	3.1	4.4	6.8	9.4	13.6	15.7
50	2.2	3.1	4.8	6.6	9.6	11.1
100	1.6	2.2	3.4	4.7	6.8	7.8
250	1.0	1.4	2.2	3.0	4.3	5.0
500	0.7	1.0	1.5	2.1	3.0	3.5
1,000	0.5	0.7	1.1	1.5	2.1	2.5
2,500	0.3	0.4	0.7	0.9	1.4	1.6
5,000	0.2	0.3	0.5	0.7	1.0	1.1
10,000	0.2	0.2	0.3	0.5	0.7	0.8
15,000	0.13	0.2	0.3	0.4	0.6	0.6

Note: For a particular characteristic, see table B-5 for the appropriate factor to apply to the above standard errors. For standard errors for regional data (North and West, South), multiply the standard errors obtained above by 1.4.

Table B-4. Standard Errors of Estimated Percentages of Persons or Families in the Total or Nonfarm Population

Base of percentages (thousands)	Estimated percentages					
	1 or 99	2 or 98	5 or 95	10 or 90	25 or 75	50
25	2.1	2.9	4.5	6.2	9.0	10.4
50	1.5	2.1	3.2	4.4	6.4	7.4
100	1.0	1.5	2.3	3.1	4.5	5.2
250	0.7	0.9	1.4	2.0	2.8	3.3
500	0.5	0.7	1.0	1.4	2.0	2.3
1,000	0.3	0.5	0.7	1.0	1.4	1.6
2,500	0.2	0.3	0.5	0.6	0.9	1.0
5,000	0.15	0.2	0.3	0.4	0.6	0.7
10,000	0.10	0.15	0.2	0.3	0.5	0.5
15,000	0.08	0.12	0.19	0.3	0.4	0.4
25,000	0.07	0.09	0.14	0.2	0.3	0.3
50,000	0.05	0.07	0.10	0.14	0.2	0.2
100,000	0.03	0.05	0.07	0.10	0.14	0.16
150,000	0.03	0.04	0.06	0.08	0.12	0.13
200,000	0.02	0.03	0.05	0.07	0.10	0.12
216,000	0.02	0.03	0.05	0.07	0.10	0.11

Note: For a particular characteristic, see table B-5 for the appropriate factor to apply to the above standard errors. For standard errors for regional data (North and West, South), multiply the standard errors obtained above by 1.4.

Table B-5. Parameters and Factor to be Used to Obtain Standard Errors for Each Type of Characteristic

Type of characteristic	Parameters		f factors	Standard error tables
	a	b		
FIVE-QUARTER AVERAGES				
Farm Population				
Race, age, sex, and employment subsets:				
Total farm population, agriculture employment, or nonagriculture employment:				
All races	-0.000014	2455	1.0	B-1,B-3
Spanish origin	-0.000017	3316	1.2	B-1,B-3
Unemployed:				
Total or White	-0.000006	1054	0.7	B-1,B-3
Black and other races	-0.000053	1211	0.7	B-1,B-3
Spanish origin	-0.000008	1497	0.8	B-1,B-3
Total or Nonfarm Population				
Population (race, age, sex):				
Total or White	0.0	0.0	0.0	B-2,B-4
Black and other races	0.0	0.0	0.0	B-2,B-4
Spanish origin	-0.000022	3884	1.9	B-2,B-4
Employment Subsets				
Agriculture employment:				
All races	-0.000017	2050	1.4	B-2,B-4
Spanish origin	-0.000027	3720	1.9	B-2,B-4
Nonagriculture employment:				
Total or White	-0.000008	1081	1.0	B-2,B-4
Male	-0.000013	935	0.9	B-2,B-4
Female	-0.000010	801	0.9	B-2,B-4
Black and other races	-0.000069	1081	1.0	B-2,B-4
Male	-0.000115	935	0.9	B-2,B-4
Female	-0.000079	801	0.9	B-2,B-4
Spanish origin	-0.000010	1456	1.2	B-2,B-4
Unemployed:				
Both sexes, male or female	-0.000004	552	0.7	B-2,B-4
Regional or Metropolitan-Nonmetropolitan Residence				
Farm:				
Total or White	-0.000017	5036	1.4	B-1,B-3
Black and other races	-0.000262	8765	1.9	B-1,B-3
Total or nonfarm:				
Total or White	-0.000010	2212	1.4	B-2,B-4
Black and other races	-0.000160	3849	1.9	B-2,B-4
MONTHLY LEVEL				
Family Income				
Total farm population	-0.000012	2285	1.0	B-1,B-3
Total nonfarm population	-0.000008	1063	1.0	B-2,B-4

Note: For regional (North and West, South) data cross tabulated with other data, apply a factor of 2.0 to the parameters for the characteristic of interest.

Illustration of the use of standard error tables. Table E of the report shows that according to the current farm definition, there were 1,774,000 farm residents 14 years old and over employed in agriculture. Table B-5 shows that for Total Farm Population, Agriculture Employment, the appropriate factor is 1.0, and this factor is to be used with the standard error obtained from table B-1. Interpolation in table B-1 shows the standard error σ_x on an estimate of this size to be approximately 64,000. Applying the factor 1.0 and using formula 1 would also yield a standard error of 64,000. The 68-percent confidence interval as shown by the data is from 1,710,000 to 1,838,000. Therefore, a conclusion that the average estimate derived from all possible samples lies within a range computed in this way would be correct for roughly 68 percent of all possible samples. Similarly we could conclude that the average estimate derived from all possible samples lies within the interval from 1,646,000 to 1,902,000 (using twice the standard error) with 95-percent confidence. As an alternative, using formula 2 and the parameters a = −0.000014 and b = 2455 from table B-5 gives an estimate of the standard error to be 66,000.

Table E also shows that of these 1,774,000 farm residents employed in agriculture, 344,000 or 19.4 percent are female.

Table B-5 shows the b parameter for this characteristic to be 2455; using formula 4, the standard error on an estimate of 19.4 percent is

$$\sqrt{\frac{2455}{1{,}774{,}000}\ (19.4)\ (100.0 - 19.4)} = 1.5 \text{ percent}$$

Consequently, the 68-percent confidence interval is from 17.9 to 20.9 percent. Therefore, a conclusion that the average estimate derived from all possible samples lies within a range computed in this way would be correct for roughly 68 percent of all possible samples. Similarly, we could conclude with 95-percent confidence that the average estimate derived from all possible samples lies within the interval from 16.4 to 22.4 percent, i.e., 19.4 ± (2 x 1.5) percent. As an alternative, tables B-3 and B-5 can be used to compute an estimated standard error of 1.5 x 1.0 = 1.5 percent on the estimate of 19.4 percent.

Standard error of a difference. For a difference between two sample estimates, the standard error is approximately equal to

$$\sigma_{(x-y)} = \sqrt{\sigma_x^2 + \sigma_y^2} \qquad (5)$$

where σ_x and σ_y are the standard errors of the estimates x and y; the estimates can be of numbers, percents, ratios, etc. This will represent the actual standard error quite accurately for the difference between two estimates of the same characteristic in two different areas, or for the difference between separate and uncorrelated characteristics in the same area. If, however, there is a high positive correlation between the two characteristics, the formula will overestimate the true standard error.

Illustration of the computation of the standard error of a difference between estimated percentages. Table E of this report shows that according to the current farm definition, 22.5 percent of all male farm residents employed in agriculture (1,430,000), were wage and salary workers. The corresponding percentage for all females employed in agriculture (344,000) was 17.7 percent. Thus, the apparent difference in percents of male and female wage and salary workers who are farm residents and employed in agriculture is 4.8 percent. Using formulas 4 and 5, the standard error of the estimated difference of 4.8 percent is about

$$\sqrt{(1.7)^2 + (3.2)^2} = 3.6 \text{ percent}$$

This means the 68-percent confidence interval around the difference is from 1.2 to 8.4 percent. Therefore, a conclusion that the average difference derived from all possible samples lies within a range computed in this way would be correct for roughly 68 percent of all possible samples. However, with 95-percent confidence, the average difference derived from all possible samples would lie within the interval from −2.4 to 12.0 percent, i.e., 4.8 ± (2 x 3.6) percent. Since this interval includes zero, we cannot conclude with 95 percent confidence that the percentage of male farm residents who were employed in agriculture as wage and salary workers is different from the corresponding percentage for females.

Standard error of a median. The sampling variability of an estimated median depends upon the form of the distribution as well as the size of its base. An approximate method for measuring the reliability of a median is to determine an interval about the estimated median, such that there is a stated degree of confidence that the average median derived from all possible samples lies within the interval. The following procedure may be used to estimate the 68-percent confidence limits of a median based on sample data.

1. Determine, using the standard error tables and factors or formula 4, the standard error of the estimate of 50 percent from the distribution.
2. Add to and subtract from 50 percent the standard error determined in step 1.
3. Using the distribution of the characteristic, calculate the confidence interval corresponding to the two points established in step 2.

A 95-percent confidence interval may be determined by finding the values corresponding to 50 percent plus and minus twice the standard error determined in step 1.

Illustration of the computation of a confidence interval for a median. Table G of this report shows that the median income for farm families according to the current definition of a farm is $12,235. The size, or base, of the distribution from which this median was determined is 1,775,000 families.

1. Using formula 4, the standard error of 50 percent on a base of 1,775,000 is about 1.8 percent.

2. To obtain a 95-percent confidence interval on an estimated median, add to and subtract from 50 percent twice the standard error found in step 1. This yields percent limits of 46.4 and 53.6.

3. Since 40.6 percent of the families had income below $10,000 and 18.9 percent had income between $10,000 and $14,999, the dollar value of the lower limit may be found by linear interpolation to be:

$$\$10{,}000 + (\$15{,}000 - \$10{,}000)\left(\frac{46.4 - 40.6}{18.9}\right) = \$11{,}534$$

Similarly, the dollar value of the upper limit may be found by linear interpolation to be about

$$\$10{,}000 + (\$15{,}000 - \$10{,}000)\left(\frac{53.6 - 40.6}{18.9}\right) = \$13{,}439$$

The 95-percent confidence interval on the estimated median is from $11,543 to $13,439. Therefore, a conclusion that the average estimated income, derived from all possible samples, lies within this range would be correct for roughly 95 percent of all samples.

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