WHITE AND MINORITY SMALL FARM OPERATORS IN THE SOUTH

James A. Lewis

UNITED STATES DEPARTMENT OF AGRICULTURE

ECONOMIC RESEARCH SERVICE

AGRICULTURAL ECONOMIC REPORT NO. 353

WHITE AND MINORITY SMALL FARM OPERATORS IN THE SOUTH. James A. Lewis, Natural Resource Economics Division, Economic Research Service, U.S. Department of Agriculture. Agricultural Economic Report No. 353.

ABSTRACT

Small farm operators constituted half of all southern farm operators in 1969. Each sold less than $2,500 worth of agricultural products; collectively, they contributed about 4 percent of the South's total agricultural sales. Yet, small farmers controlled an important portion of the South's agricultural resources. They operated over 15 percent of all the South's land in farms and owned more than 20 percent of land owned by farm operators. They owned land and buildings valued at over $12.3 billion or 18.4 percent of total farm property value for the South. They held about 19 percent of the value of all machinery and equipment and supplied over 20 percent of all land rented to others by farm operators.

Minority farm operators were almost 8 percent of all farm operators in the South. These farm operators were unique in that they differed from their white counterparts in most measures identified in this report.

This report identifies, compares, and contrasts resources and characteristics of small farm operators in the 13 southern States. Small farmers are described by race and economic class.

Keywords: Small farmers, Minorities, Economic class.

CONTENTS

Washington, D.C. 20250 **December 1976**

HIGHLIGHTS

Small farmers–referred to in this report as those with less than $2,500 in annual farm product sales–contributed only about 4 percent of the total value of southern farm products sold in 1969, the period of this study. They comprised 49 percent of all southern farm operators.

Their control of agricultural resources, however, was more significant. They operated over 15 percent of all the South's land in farms and owned more than 20 percent of the land owned by farm operators. Small farmers also owned over $12.3 billion or 18.4 percent of the total farm property value for the South in 1969. They owned about 19 percent of the total value of machinery and equipment. Just over 20 percent of land rented to other farm operators came from the small farm group.

Minority farm operators, mostly blacks, represented almost 8 percent of all farm operators in the South and controlled about 2.4 percent of all land in farms.

Minority small farmers occupied a more dominant position in total minority agricultural operations than did white small farmers as a portion of total white operations. Minority small farmers controlled 44 percent of all land in farms held by minorities, owned 51 percent of all land owned by minority farmers, held 46 percent of the value of land and buildings owned by minorities, and owned 46 percent of the value of machinery and equipment of all minority farm operators. White small farmers, on the other hand, controlled 14 percent of all land in farms held by whites, owned 20 percent of land owned by white farmers, held 17 percent of the value of land and buildings, and owned 18 percent of the value of machinery and equipment of all white farm operators.

Both white and minority small farmers tended to operate only land which they owned. In contrast, larger farm operators frequently rented additional land.

Minority farm operators had relatively more of the land which they controlled in harvested cropland than did white farm operators. Harvested cropland represented just under 39 percent of all land controlled by white farm operators compared to almost 49 percent for minority farm operators.

About 44 percent of all land in farms operated by whites was classified in a miscellaneous land use category. Minority farm operators had 24 percent of all land in farms in the miscellaneous category. Much of this land was permanent pastureland.

Minority operators were generally older and they worked fewer days off farm than did white farmers regardless of the economic class of their farms. Most operators, white and minority, resided on their farms in 1969.

Minority farmers tended to be engaged in the production of crops such as tobacco and cotton. White farmers were more likely to operate poultry, dairy, and

livestock farms with tobacco and cash-grain farms ranking second and third, regardless of economic class.

Government farm program payments were a greater percentage of total farm-related income for minority farm operators than for white farm operators; however, among farmers in both groups, most of the total farm-related income was received from agricultural product sales. Minority small farmers received about a third of all government program payments received by all minority operators. White small farmers received just under 8 percent of total payments to all white farmers.

Minority farm operators used relatively more of their production expenses for fertilizer, labor, and fuel than did white operators. Both groups had over a quarter of their total farm production expenses in a miscellaneous category which included cash rent, repairs, operating expenses, depreciation, taxes, and interest.

White farm operators had a lower ratio of livestock owned to sold than did minority farm operators regardless of economic class.

In almost every crop production activity, white farm operators had a higher yield per acre than did minority farm operators. This reflects the fact that minority farm operators generally had smaller farms and were engaged in relatively more labor consuming crop production activities.

WHITE AND MINORITY SMALL FARM OPERATORS IN THE SOUTH-

James A. Lewis
Agricultural Economist

INTRODUCTION

This study, based on previously unpublished 1969 Census of Agriculture data, describes the status of white and minority small farmers in the South.[1] Small farmers, in this report, are those with less than $2,500 worth of farm product sales in 1969. Some may question whether the small farmers featured in this study are really farmers.[2] Small farmers, although they are 49 percent of all farmers, contributed under 4 percent of total farm product sales in 1969. While these farmers are not significant producers of food and fiber, they do own and control an important portion of the agricultural resources. The existence of such potential capacity in the form of resources, combined with many small operating units, is important to agricultural policy.

This report identifies, compares, and contrasts resources and characteristics of farm operators by race[3] and economic class of farm. Such comparative analysis recognizes that "problems of the people differ because of differences among them in age, race, education, geographic location and other attributes."[4] Information in this report contributes background material for researchers, policymakers, and others concerned with small farmers and minorities in the South.

The number of farms operated by white and minority farmers steadily declined during the 1959-69 period (table 1). The rate of decline was greater

---

[1]Texas, Oklahoma, Arkansas, Louisiana, Mississippi, Alabama, Tennessee, Kentucky, Florida, Georgia, North Carolina, South Carolina, and Virginia comprise the South in this study.

[2]The question may arise simply from the definition of small farm in HR-11733, a bill introduced in the 2nd Session of the 94th Congress to amend the Rural Development Act of 1972. This bill identified small farmers as those with less than $20,000 gross annual farm sales and less than $5,000 off-farm income (in 1975 dollars). Just over 86% of white farm operators and 98% of minority farm operators in the South had less than $20,000 gross sales in 1969. The group referred to as small farmers in this report are, therefore, a portion of the group defined as small farmers in HR-11733.

[3]About 95% of minority farm operators in the South are blacks.

[4]*The People Left Behind,* Report by the President's National Commission on Rural Poverty, U.S. Govt. Print. Off., Washington, D.C., Sept. 1967, p. 13.

Table 1 – Number of farms, land in farms, and average size of farm

Year	White			Minority		
	Farms	Land in farms	Average size farm	Farms	Land in farms	Average size farm
	Million	*Million acres*	*Acres*	*Number*	*Million acres*	*Acres*
1959	1.3	333	256	263,000	13.8	52
1964	1.1	327	297	183,000	10.3	56
1969	1.0	317	317	89,000	7.8	87
			Percentage decline			
1959–1969	23.1	4.8		66.1	44.5	

Source: U.S. Bureau of Census, Census of Agriculture, 1964, *Statistics by Subjects,* Chapter 8, Color, Race, and Tenure of Farm Operator, U.S. Govt. Print. Off., Washington, D.C., 1968, Table 11, and U.S. Bureau of Census, Census of Agriculture 1969, *General Report,* Vol. II, Chapter 3, Farm Management, Farm Operators, U.S. Govt. Print. Off., Washington, D.C., 1973, Table 35.

among minority farmers than among white farmers. This may be explained in part by changes in tobacco production, and by mechanization of cotton and peanut production.[5] Minority farmers have traditionally been engaged in producing cotton and tobacco. High rates of decline in the number of farms operated by minorities in the past may also be due to the migration of minorities to urban areas:

> . . . The economic status and opportunities of rural blacks are still so inferior to that of the urban population, despite some improvement of rural conditions, that urban areas continue to exert a strong pull for people motivated to improvement of their status.[6]

Land in farms also declined for both white and minority farm operators from 1959 to 1969. The rate of decline for land in farms operated by whites was only 5 percent, compared to 44 percent for land in farms operated by minorities.

Since the decline in farm numbers was relatively greater than the decrease of land in farms, the average size of farm for white and minority operators has increased (table 1). The trend toward an increase in average size of farm has probably continued from 1969 to the present due to the decreasing number of farms, although the rate of decline has slowed considerably in the last few years.

The rate of decrease in the white farm population has been quite low (about

[5]Calvin L. Beale, "Migration Patterns of Minorities in the United States," *Amer. J. Agr. Econ.*, Vol. 55, No. 5, Dec. 1973, p. 938.

[6]Calvin L. Beale, "Rural-Urban Migration of Blacks: Past and Future," *Amer. J. Agr. Econ.*, Vol. 53, No. 2, May 1971, p. 307.

1 percent annually) in recent years, nearing a point of stabilization.[7] However, the average annual rate of decline for the minority farm population was 9 percent from 1970 to 1975, which was about the same rate of annual decline as during the 1960-70 period. This would indicate that some adjustments in the minority farm population are still taking place.[8]

> . . . Because of the imperfections in the natural flow of people out of agriculture and out of the rural South, there is considerable support among regional and manpower economists for relocation projects to "rationalize" labor markets by moving workers from surplus to labor shortage areas. . . . Although relocation projects clearly are not likely to be panaceas for the problems of the rural South, they can play a role, along with other manpower programs, in helping to counteract labor market imperfections. . . . Another suggestion for solving the problems of labor surplus areas is rural industrialization, which has taken place at a surprisingly high rate in the South.[9]

Population growth in nonmetropolitan areas has actually exceeded that of metropolitan areas in recent years.[10] This has been especially true in the South, due to factors such as growth of manufacturing in rural areas; development of recreation and retirement activities; and growth of community colleges, technical education centers, and colleges and universities in rural areas. However, areas predominantly populated by blacks and those heavily dependent on agriculture (40 percent or more of their employment in farming) continue to experience net outmigration. Although the rate of outmigration of these counties has slowed considerably, they have not yet shifted to net growth areas.

FARMS AND RESOURCES CONTROLLED

Among all farm operators in 1969, ownership and control of resources were more equally distributed than were sales of agricultural products. Value of products sold, a proxy for market power, was more highly concentrated than was land in farms or value of land and buildings (table 2). Measures of resource ownership and control used here are items such as number of farm operators, number of landowners, amount of land in farms, amount of land owned, value of land and buildings, and value of machinery and equipment.

---

[7]U.S. Bureau of Census, "Farm Population of the United States: 1975," *Current Population Reports*, Series Census-ERS, P-27, No. 47, U.S. Govt. Print. Off., Washington, D.C., Sept. 1976.

[8]More detail on demographic trends of the rural population during the period up to 1970 is contained in: Vera J. Banks and Calvin L. Beale, *Farm Population by Race, Tenure, and Economic Scale of Farming, 1966 and 1970*, U.S. Dept. Agr., AER-228, June 1972.

[9]F. Ray Marshall, "Some Rural Economic Development Problems in the South," *Amer. Econ. Rev.*, Vol. LXII, No. 2, May 1972, pp. 208-209.

[10]Calvin L. Beale, *The Revival of Population Growth in Nonmetropolitan America*, U.S. Dept. Agr., ERS-605, June 1975.

Table 2 – Selected measures of and percentage distribution of resource ownership and control by economic class[1] for farm operators, 1969

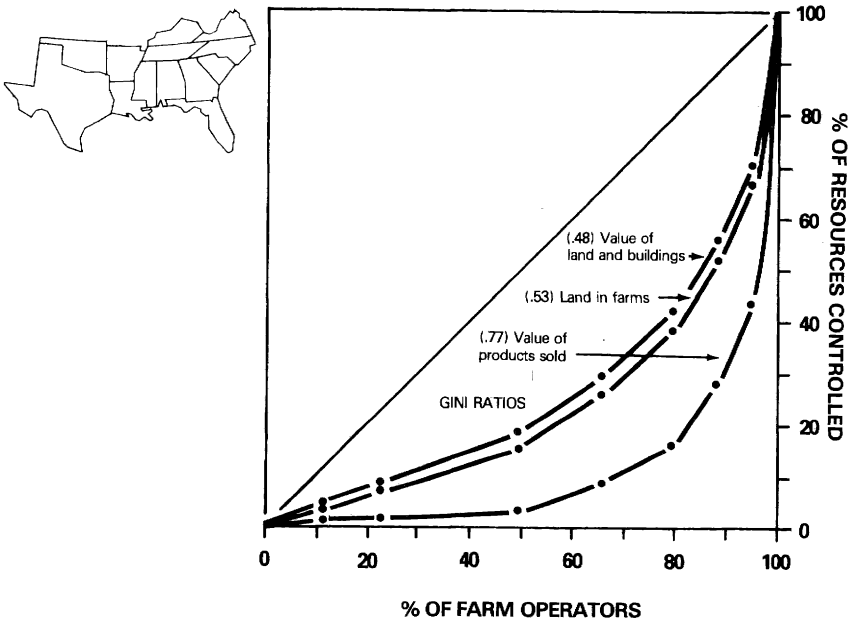
Item	Unit	All farms	Commercial farms					Noncommercial farms		
			Class 1	Class 2	Class 3	Class 4	Class 5	Class 6	Part-time	Part-retirement
		Percent								
Value of products sold	Mil. dol.	12,779	55.6	16.1	11.1	7.9	4.9	.9	2.1	.9
Number of farm operators	No.	1,117,336	5.4	6.6	8.9	13.2	16.5	11.0	26.7	11.9
Number of landowners[2]	Do.	989,517	5.4	6.3	8.4	12.2	16.2	11.1	27.5	12.8
Land in farms	1,000 acres	324,989	32.6	15.1	13.8	12.1	10.8	3.3	8.1	3.8
Land owned[2]	Do.	229,536	27.9	13.1	12.7	12.7	12.7	4.5	10.3	5.7
Value of land and buildings	Mil. dol.	66,943	29.3	14.6	13.5	12.1	11.5	3.8	10.4	4.2
Value of machinery and equipment	Do.	7,355	26.3	15.4	13.9	12.6	11.8	4.4	11.3	3.9

[1]Definitions of economic class of farms, in annual farm product sales:
Class 1 – $40,000 or more.
Class 2 – $20,000 – $39,999.
Class 3 – $10,000 – $19,999.
Class 4 – $ 5,000 – $ 9,999.
Class 5 – $ 2,500 – $ 4,999.
Class 6 – $ 50 – $ 2,499 farm product sales and an operator under 65 years who worked off the farm less than 100 days.
Part-time – $50 – $ 2,499 farm product sales and an operator under 65 years who worked off the farm more than 100 days.
Part-retirement – $50 – $2,499 farm products sales and an operator 65 years or older.

[2]Number of farm operators who reported land owned and the acreage of land owned.

Source: U.S. Bureau of Census, Census of Agriculture, 1969, Vol. 1, Area Reports, Pt. 26, Sect. 1, Summary Data, U.S. Govt. Print. Off., Washington, D.C., 1972.

FIGURE 1
CONCENTRATION OF SELECTED RESOURCE MEASURES IN THE SOUTH, 1969



Concentration curves in figure 1 show the equality of ownership and control of selected resource measures. Gini ratios, which reflect the degree of concentration, are shown in parentheses under each of the respective measures. Value of products sold was the most highly concentrated measure (Gini ratio of .77). Land in farms had a Gini ratio of .53, whereas value of land and buildings appears to be the least concentrated measure (Gini ratio of .48). The curves in figure 1 reflect information presented in table 2.[11]

[11]The total number of units for all farms in table 2 is the denominator and represents 100% for each item measured.

Farm operators who had less than $2,500 in annual sales accounted for very little of total agricultural output. But, they owned and controlled a much more significant proportion of resources such as their labor, land, and wealth (table 2). Wunderlich found that:

> The distribution of land among those who farm is about the same today as it was two decades ago even though farm numbers have dropped from 5-1/2 million to less than 2-1/2 million. The issue in concentration in agriculture, therefore, may not be the distribution of holdings within agriculture but between agriculture and the rest of the economy and society.[12]

Much of the increased concentration in agriculture which has occurred in the past is due to the decline in number of farms. As a result, average farm size increases and fewer members of the total population control the land resources.

> If the trend continues, land used for food and fiber will be controlled and probably owned by a small portion of the population. Agricultural policies incorporating assumptions of widely held resources will need reexamination. How many people should hold the power to feed and clothe us?[13]

Answering this last question, while exceeding the scope of this report, is very important. Description of the status and characteristics of a portion of the farm population may contribute to a better understanding and an improved information base about those who own and control rural resources. Small farmers and minorities are a unique subset of the farm population. Their role in the rural scene is of no small consequence as they are a constituency and clientele of agriculture.

Over 324.9 million farmland acres in the South were owned and controlled by about 1.1 million farm operators in 1969 (table 3). Minorities represented 7.9 percent of all farm operators and controlled 2.4 percent of all land in farms (computed from tables 2 and 3). Small farmers were almost half of all operators; they controlled about 20 percent of all land in farms.

Class 1-5 (commercial) farms averaged the largest number of acres (fig. 2). White farm operators had almost twice as large farms as minority farmers regardless of economic class. About 223.5 million acres of land were owned by 918,000 white farm operators, compared to almost 6.1 million acres owned by 71,500 minority farm operators (table 3). Both white and minority farmers rented more land from others than they rented to others. The total difference of 95.4 million acres between land rented to and from others was owned by persons not classified as farm operators. Accounting for nonfarm landlords is not possible from these data except by an aggregate acreage contribution, nor is it possible to determine how many landlords there were by race.[14]

---

[12]Gene Wunderlich, "Who Owns America's Land: Problems in Preserving the Rural Landscape." Paper presented to the Amer. Assoc. for the Adv. of Sci., Dec. 1972, p. 15.

[13]*Ibid.*

[14]The latest study providing information on rural landowners in the South is: Robert F. Boxley, *White and Nonwhite Owners of Rural Land in the Southeast*, U.S. Dept. Agr., ERS-238, June 1965. Boxley found that nonfarmers represented 43% of all white owners and that they owned 37% of all land owned by whites. Nonfarmers represented 51% of minorities and they owned 39% of all land owned by minorities. Many of the nonfarm-

(Footnote continued on p. 8.)

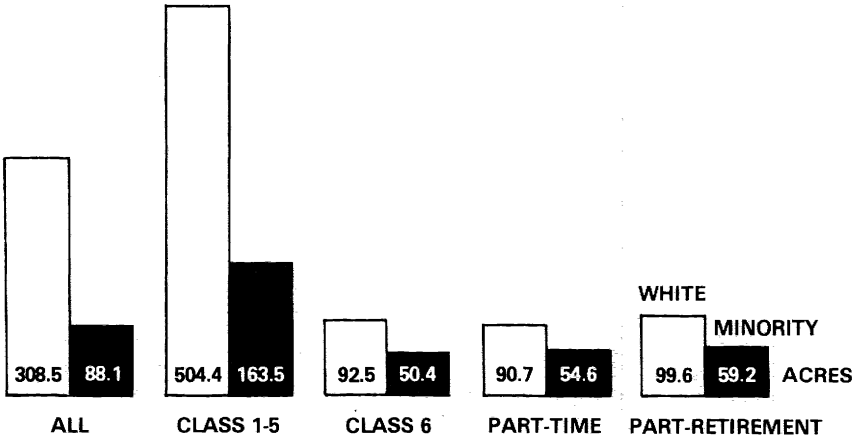
Table 3 – Farms, land controlled, and value of land, buildings, and machinery, 1969[1]

Item	All farms		Commercial farms (class 1-5)		Noncommercial farms							
					All noncommercial farms		Class 6 farms		Part-time farms		Part-retirement farms	
	White	Minority	White	Minority	White	Minority	White	Minority	White	Minority	White	Minority
							Percent					
Farms (number)	1,028,081	89,285	52.1	29.6	47.8	70.3	10.1	21.9	26.7	26.6	11.0	21.7
Land in farms (1,000 acres)	317,122	7,868	85.2	55.1	14.4	43.6	3.0	12.5	7.8	16.5	3.5	14.5
Value of land and buildings (mil. dol.)	64,816	2,126	81.9	51.9	17.4	46.3	3.5	13.5	10.1	18.1	3.8	14.2
Land owned (farms)	917,974	71,541	50.2	26.6	49.7	73.2	10.3	21.4	27.4	27.8	11.9	24.0
(1,000 acres)	223,458	6,078	79.9	47.1	19.7	50.8	4.2	14.2	10.1	18.4	5.3	18.2
Land rented from others (1,000 acres)	117,675	2,374	93.6	72.7	6.0	27.2	1.2	9.1	4.0	12.0	0.7	6.0
Land rented to others (1,000 acres)	24,010	583	77.7	44.2	22.1	52.9	5.5	17.4	10.2	17.6	6.3	17.8
Value of machinery and equipment (mil. dol.)	7,046	309	81.2	54.1	18.5	45.7	3.9	14.3	10.9	19.6	3.6	11.8

[1]The denominator used to compute percentages across rows in this report is always "all farms" for the respective racial groups. For example, of the total 89,285 minority farm operators, 29.6% were in Class 1-5 and 70.3% were in the noncommercial class (which is the sum of Class 6, part-time and part-retirement classes). Of all minority operators, 21.9% were Class 6, 26.6% were part-time, and 21.7% were part-retirement. In cases where column percentages were calculated totals will be presented.

Source: U.S. Bureau of Census, Census of Agriculture, 1969 (unpublished data for minorities, published data for all operators, computed for whites), in form of State Table 9: Summary of Selected Economic Class Groups, Volume 1, Area Reports, Part 26, Section 1, Summary Data, U.S. Govt. Print. Off., Washington, D.C., 1972, for Virginia, North Carolina, South Carolina, Georgia, Florida, Alabama, Mississippi, Tennessee, Kentucky, Arkansas, Oklahoma, Texas, and Louisiana.

FIGURE 2
AVERAGE SIZE OF FARM BY ECONOMIC CLASS AND RACE OF FARM OPERATORS FOR THE SOUTH,1969



AVERAGE SIZE OF FARM (BY ECONOMIC CLASS)

Source: See source, table 3.

Minority small farmers were a relatively more important portion of the total minority farm population than were white small farm operators of the total white farm population (see table 3). For example, minority small farm operators sold relatively more products and controlled relatively more wealth in land, buildings, machinery, and equipment value than did white small farm operators as proportions of their respective total farm populations.

This does not mean, however, that there are more minority farm operators in the small farm category. White farmers outnumbered minority farmers in every economic class for every characteristic shown in table 3.

(Continued)

ers rented land to others; these landlords represented 23% of all landowners and 28% of all rural land.

There are two other important points with regard to information on land ownership and control which should be made. First, land in farms in the South represented only 61% of the total land area. Anderson *et.al.* stated that 1.5% of the land area is in urban uses (Perspectives on Agricultural Land Policy, *J. of Soil and Water Cons.*, Vol. 30, No. 1, Jan-Feb. 1975, p. 36). Combined State and Federal land comprised less than 10% of the land area. Therefore, almost 28% of rural land in the South has not been identified in the context of who owns and controls this resource. Secondly, of the rented land in farms, 76% was owned by landlords who did not operate farms. This represented 28% of all land in farms. These landlords aiso owned and controlled a substantial amount of other land not used in farming; we know very little about this land. See: U.S. Bureau of Census, Census of Agriculture, 1969. Vol. V, Special Reports, Pt. II, *Farm Finance*, U.S. Govt. Print. Off., Washington, D.C., 1974, and Bruce B. Johnson, *Farmland Tenure Patterns in the United States*, U.S. Dept. Agr., AER-249, Feb. 1974.

FARMLAND USE

Minority farmers had relatively more of the land they controlled in cropland than did whites (table 4). Since table 4 data are grouped by economic class, the correct reference is to land controlled, not necessarily owned. Minority farm operators had a higher proportion of their land in cropland than did white farm operators (about 50 percent compared to 40 percent: computed as harvested cropland, cropland pasture, plus other cropland). The amount of harvested cropland as a portion of all land in farms was relatively greater for minority farmers than for white farmers in each economic class.

Minority farm operators had relatively more of their land in cropland pasture than did white farm operators. In the small farm groups, however, relatively more of land operated by white farmers was cropland pasture than that of minority farm operators. More minority controlled land was in the "other cropland" category than was white controlled land in each economic class.

Minority farm operators held relatively more of their land in woodland than did white farmers (27 percent compared to 17 percent, in the aggregate). White and minority small farm operators had about the same proportion of their land as woodland including pasture (just over 30 percent).

White farm operators in the class 1-5 group had relatively more of their total land in farms as harvested cropland and "all other land" (22 and 47 percent), while white small farmers tended to have relatively more land in cropland pasture and woodland (24 and 32 percent). The "all other land" category is a miscellaneous category used to account for land not included in the other categories.[15]

Over 43 percent of all land in farms controlled by white farm operators was in "all other land," compared to 24 percent of the land in farms held by minority farm operators. This accounts for about 138 million acres of land controlled by white farm operators and 1.8 million acres controlled by minority farm operators.

TENURE OF OPERATOR

Tenure categories presented in this report indicate only whether or not a farm operator rents land. For example, full owners operate only land which they own; part owners operate land which they own plus land which they rent from others (some landlords are farmers and some are not);[16] and tenants op-

[15] H. Thomas Frey, *Major Uses of Land in the United States: Summary for 1969*, U.S. Dept. Agr., AER-247, Dec. 1973. Frey provides detailed statistics on land use for all farms. He estimates 39% of all land in farms is permanent pasture in the South. Permanent pasture is included in the other land category in this report. Most white farm operators are livestock operators and, hence, had more pastureland.

[16] See Johnson, *op. cit.*, fn. 15.

Table 4 – Distribution of farmland use, 1969

Land use	All farms		Commercial farms (class 1-5)		Noncommercial farms							
					All noncommercial farms		Class 6 farms		Part-time farms		Part-retirement farms	
	White	Minority	White	Minority	White	Minority	White	Minority	White	Minority	White	Minority
	Percent											
Harvested cropland[1]	20.2	24.9	22.2	33.0	8.1	15.4	8.7	18.6	7.9	15.1	7.9	13.1
Cropland used only for pasture or grazing[2]	12.4	14.9	10.4	11.1	24.8	20.2	23.7	18.7	25.4	20.8	24.2	20.9
All other cropland[3]	6.3	9.1	6.1	8.4	8.3	10.2	9.0	10.5	7.7	10.4	8.7	9.7
Woodland including woodland pasture[4]	17.4	26.9	14.9	23.3	32.0	31.1	31.1	30.1	32.3	30.7	32.3	32.5
All other land[5]	43.5	24.0	46.3	24.1	26.7	23.1	27.3	21.9	26.5	22.8	26.7	23.6
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

[1] *Harvested cropland*–land from which crops were harvested, land from which hay (including wild hay) was cut, and land in small fruits, orchards, vineyards, nurseries, and greenhouses.

[2] *Cropland used only for pasture or grazing*–all land used only for pasture or grazing that could have been used for crops without additional improvement, and all land planted to crops that was pastured before crops reached maturity. All cropland used for rotation pasture and land in government diversion programs which was pastured is included.

[3] *All other cropland*–cropland used for soil improvement crops, land on which all crops failed, cultivated summer fallow, idle cropland, and land planted to crops to be harvested after the census year.

[4] *Woodland*–woodlots or timber tracts, natural or planted, and cutover and deforested land with young growth which has or will have value for wood production, ditches, ponds, and wasteland.

[5] *All other land*–pastureland *other than* cropland and woodland pasture, land covered by sagebrush and mesquite; and land occupied by buildings, roads, ditches, ponds, and wasteland.

Source: See source, table 3.

erate only farm land which they rent from others (although they may own land, they do not operate it for farm purposes).[17]

Full owners own and control *all* of the land which they farm. Part owners have ownership rights over a *portion* of the land which they farm and they possess control over the use of land which they rent in the short run. Tenants have *no* ownership rights over land which they farm. They do, however, possess short-run control over the land. Leases and other contractual arrangements on rented farmland determine what property rights are conveyed to part owner and tenant operators and for what time period. Farm operators, regardless of tenure category, have only one common attribute which can be identified from these categories–they all possess the surface rights on land which they operate.

The trend in the United States over the past two decades has been toward increased leasing of land for agricultural production, primarily through increased number of acres operated by part owners.[18] Part owners have also increased as a portion of all farm operators, while full owners and tenants have declined in relative numbers since the turn of the century.[19] The majority of all farm operators are full owners. However, larger farm operators (class 2 and above) are more likely to be part owners.[20]

In 1969, most white and minority farm operators farmed only land which they owned (table 5). About two-thirds were full owner-operators. Part owners represented about a fifth of all farm operators. Tenant farmers represented 28 percent of class 1-5 minority farm operators, but only 14 percent of white commercial farm operators. Most small farmers were full owner-operators. Part owners represented 10 percent and tenants 8 percent of all small farmers. Operators who rented land in addition to operating land which they owned represented almost a third of commercial farmers regardless of race. Additional data which identify tenure categories of blacks and other minorities are presented in table 6.

Relatively more minority farm operators than white operators were tenants. Minority farm operators may be precluded from ownership opportunities due to "impersonal economic forces"[21] such as price competition for farmland, limited collateral, and lack of credit. These are problems normally associated with low income. The concentration of minorities in the lower economic classes of farm operators is closely related to patterns of tenure, operator characteristics, and type of farm. This is not to say, for example, that because one is a certain type of farmer that a low income would necessarily be expected. It does say, however, that upon grouping farm operators by economic class and inspecting

---

[17]In the Nation, tenants owned 4.5 million acres in 1969. See: U.S. Bureau of Census, Census of Agriculture, 1969, Vol. II, *General Report*, Chapter 3, Farm Management, Farm Operators, U.S. Govt. Print. Off., Washington, D.C., 1975, table 12.

[18]Johnson, *op. cit.*, p.4.

[19]D. David Moyer *et.al., Land Tenure in the United States: Development and Status*, U.S. Dept. Agr., AIB-338, June 1969.

[20]Johnson, *op. cit.*, table 28, p. 36.

[21]Robert S. Browne, *Only Six Million Acres: The Decline of Black-Owned Land in the Rural South*, Black Econ. Res. Cen., New York, June 1973, p. 22. Also see: Lester M. Salamon, *Black-Owned Land: Profile of a Disappearing Equity Base*, Rpt. to Off. of Minority Bus. Enterprise, U.S. Dept. Com., Washington, D.C., Apr. 1974, p. 34.

Table 5 – Tenure of operators by economic class and race, 1969

Tenure of operator	All farms		Commercial farms (class 1-5)		Noncommercial farms							
					All noncommercial farms		Class 6 farms		Part-time farms		Part-retirement farms	
	White	Minority	White	Minority	White	Minority	White	Minority	White	Minority	White	Minority
	Percent											
Full owners[1]	67.2	61.6	53.1	41.8	82.6	70.3	81.0	64.6	80.1	67.9	90.2	79.2
Part owners[2]	21.5	18.1	32.3	30.7	9.8	12.7	10.0	13.2	11.4	15.2	5.8	9.1
Tenants[3]	11.1	20.2	14.5	28.4	7.5	16.9	8.9	22.1	8.5	16.8	3.9	11.6
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

[1] *Full owners* operate only land they own.

[2] *Part owners* operate land they own and also land they rent from others or work on shares of the output for others.

[3] *Tenants* operate only land they rent from others or work on shares of the output for others. They do not operate for agricultural purposes any land which they may own.

Source: See source, table 3.

Table 6 – Minority farm operators by economic class and tenure, 1969

Race and tenure of operator	All farms	Commercial farms (class 1-5)	Noncommercial farms			
			All noncommercial farms	Class 6 farms	Part-time farms	Part-retirement farms
	Number		*Percent*			
Blacks:						
Full owners	52,067	18.8	80.8	23.2	29.4	28.5
Part owners	15,236	49.0	50.9	16.6	22.8	11.3
Tenants	17,166	40.0	59.9	24.6	22.4	12.8
Other minorities:						
Full owners	2,944	35.0	64.8	18.9	28.2	17.6
Part owners	921	73.3	26.6	6.4	16.1	4.0
Tenants	951	67.9	32.0	10.7	15.9	5.3

Source: See source, table 3.

general measures of their characteristics, we can observe certain patterns. The most striking such comparison with regard to race and economic class surfaces in the type of farm operation.

TYPE OF FARM

Minority farm operators have traditionally raised cotton, tobacco, and peanuts. The crop raised depends primarily upon geographic location of the farm. While white farm operators have shifted their operations to livestock, dairy, and poultry farming, minority farm operators have been relatively slow to adapt to the changing economy.[22] Failure of these operators to respond to market signals might indicate deficient capital, small-scale operations, inability to interpret available information due to lack of educational advantages, lack of information, failure to recognize the availability of information, or unwillingness to break from traditional production processes.

Poultry, dairy, and livestock farms represented the largest proportion of white operated farms regardless of economic class (table 7). Poultry, dairy, and livestock operations also ranked first for minority operated farms in the aggregate (28 percent for minority operated farms compared to 42 percent for white operated farms). The second and third primary enterprises for minority operated farms were tobacco and cotton farms; whereas, the second and third ranked enterprises were tobacco and cash-grain for all white operated farms.

[22]See *Supra*, fn. 32.

Table 7 – Types of farms, 1969

Type of farm	All farms		Commercial farms (class 1-5)		Noncommercial farms							
					All noncommercial farms		Class 6 farms		Part-time farms		Part-retirement farms	
	White	Minority	White	Minority	White	Minority	White	Minority	White	Minority	White	Minority
	Percent											
Cash-grain	9.4	8.6	11.5	7.9	7.1	8.6	7.5	8.6	6.9	8.8	6.9	8.5
Tobacco	15.1	19.6	15.2	36.4	15.7	12.5	19.7	13.8	14.0	12.3	15.9	11.2
Cotton	5.2	18.0	6.5	12.9	5.9	20.1	8.4	24.0	4.8	17.8	6.0	18.9
Other field crop	1.8	4.2	2.9	6.8	1.1	3.0	1.5	3.4	0.9	2.8	1.2	2.8
Vegetable	0.8	2.0	0.9	1.8	0.9	1.9	1.1	2.1	0.7	1.8	0.9	1.6
Poultry, dairy, and livestock	50.2	28.0	49.3	21.0	47.5	30.9	40.4	26.3	50.9	33.9	46.4	31.9
Fruit and nut	1.6	0.4	2.0	0.6	1.0	0.2	0.7	0.2	1.1	0.2	1.1	0.3
General	7.6	7.6	9.3	11.2	5.9	5.9	6.3	6.3	5.9	5.7	6.3	5.9
Miscellaneous	8.0	12.0	2.1	1.4	14.6	16.4	14.1	14.8	14.7	16.1	15.1	18.5
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: See source, table 3.

Table 8 – Rank of farms by order of occurrence, 1969[1]

Commercial	
White	Minority
1. Poultry, dairy, and livestock	1. Tobacco
2. Tobacco	2. Poultry, dairy, and livestock
3. Cash-grain	3. Cotton
Noncommercial	
White	Minority
1. Poultry, dairy, and livestock	1. Poultry, dairy, and livestock
2. Tobacco	2. Cotton
3. Cash-grain	3. Tobacco

[1]Miscellaneous farms not included.

Source: Table 7.

Table 8 presents a ranking by type of farm for white and minority commercial and noncommercial farms. The ranking of type for white operators did not vary between economic classes. This was not true for minority operated farms. Tobacco farms ranked first among class 1-5 minority operated farms while poultry, dairy, and livestock were second and cotton farms were third. For minority operated small farms, poultry, dairy, and livestock farms ranked first, cotton was second, and tobacco was third. About 30 percent of minority operated farms were poultry, dairy, and livestock enterprises whether in the commercial or noncommercial economic classes.

Cotton farms did not rank in the top three types of farms for white operated farms while they did for minority operated farms. On the average, only about 7 percent of white operated farms were classified as cotton farms while almost 18 percent of minority operated farms were classified as cotton farms. Type of farm and economic class highlight the major distinguishing features between white and minority farm operators.

AGE, RESIDENCE, AND DAYS WORKED OFF FARM

Minority farm operators were older than other farmers on the average regardless of economic class (table 9). Average age for all class 1-5 farm operators was 51.4 years, compared to 53.6 for class 1-5 minority farm operators (see fn. 1 of table 9). In the noncommercial farm groups, the difference in average age between all farm operators and minority farm operators was 3.4 years.

Minority farm operators were more likely to be resident operators than were white farmers. Part-time farmers, whether white or minority, had the highest relative incidence of off-farm residence of operators.

Table 9 – Age, residence, and days worked off farm by farm operators, 1969

Item	All farms		Commercial farms (class 1-5)		Noncommercial farms							
					All noncommercial farms		Class 6 farms		Part-time farms		Part-retirement farms	
	White	Minority	White	Minority	White	Minority	White	Minority	White	Minority	White	Minority
						Years						
Average age[1]	52.5	55.5	51.4	53.6	53.7	57.1	51.7	52.4	46.7	49.3	71.5	71.8
						Percent						
On-farm residence	74.8	79.6	76.8	82.1	72.4	78.5	73.8	78.3	67.6	72.9	82.9	85.7
Off-farm residence	25.2	20.3	23.1	17.8	27.6	21.4	26.1	21.6	32.3	27.0	17.0	14.2
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1-49 days worked off farm	14.4	19.5	20.1	24.8	10.5	18.1	58.3	54.1	–	–	37.4	43.4
50-99 days worked off farm	7.5	11.9	10.7	16.4	5.7	10.7	41.6	45.8	–	–	11.7	12.6
100-199 days worked off farm	14.7	23.8	14.8	19.5	14.7	25.0	–	–	16.9	35.7	13.1	13.7
200 plus days worked off farm	63.2	44.5	54.9	39.1	69.0	46.0	–	–	83.0	64.2	37.6	30.2
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
						Number						
Total number reporting days worked off farm	601,126	48,036	248,112	10,044	352,912	37,989	37,304	6,939	274,756	23,793	40,852	7,257

[1] Average age for white farm operators is actually the average age of all farm operators because it was not possible to compute average age of white farmers from these data.

Source: See source, table 3.

Relatively more white operators worked off their farms 100 days or more than did minority farmers.[23] Minority farmers who worked 100 days or more off farm represented 68 percent of all minority farmers who worked off farm. Just over 48,000 minority farmers reported off-farm work while over 601,000 white operators reported off-farm work. Other totals are shown in table 9.

Relatively more small farm operators worked off farm 100 days or more than did their commercial counterparts regardless of race. This is partly the result of part-time farmers, by definition; however, over 50 percent of part-retirement farmers worked off farm more than 100 days. More white farm operators reporting work off farm might indicate either less time required on the farm due to better and more efficient use of machinery and equipment or their greater off-farm employment opportunities.

Over 58 percent of all white farmers and about 54 percent of all minority farmers reported off-farm work. A significant proportion of the class 1-5 operators worked 200 or more days off the farm (over 54 percent of white and 39 percent of minority farmers), indicating that many operators are part-time farmers. These people were not classified as part-time because their agricultural sales exceeded $2,500.

FARM-RELATED INCOME

Southern farmers sold $12.7 billion worth of agricultural products in 1969; this represented over 92 percent of total farm-related income (table 10). Other farm-related income could have been received from customwork, recreation enterprises, or government farm program receipts. Customwork included plowing, planting, spraying, harvesting, or market preparation of products for others. Recreation receipts were from charges for hunting, fishing, picnicking, camping, boarding, or lodging.

---

[23]Data were not available to display actual income received from off-farm work by operators. However, other studies have addressed off-farm income. In 1964, income from off-farm work averaged $3,323 for white and $1,312 for minority farm operators. Average value of products sold from agricultural production was $8,490 for white and $2,705 for minority farm operators. See: Moyer *et.al., op. cit.,* p. v, and Table 5, p. 18. In the current time period, the "farm-nonfarm income contrast is particularly sharp among Negro and other races, whose median farm family income was only $4,570, compared with $7,678 for comparable nonfarm families. The median income of farm families with heads of Negro or other races was also in sharp contrast with that of white farm families ($10,377), being about half as great." U.S. Bureau of Census, "Farm Population." *Current Population Reports,* Series Census–ERS P-27, No. 45, U.S. Govt. Print. Off., Washington, D.C., Sept. 1974, p. 7. The same source (p. 3) states that: "In 1973 more than a fifth of all multiple job holders in the country had at least one job in agriculture. Of this group, 70 percent combined a primary job as a nonagricultural wage and salary worker with self-employment in agriculture as a secondary job. Thus if a farm operator with dual employment loses his nonfarm job, he is still counted as employed on the basis of his farm work.. . . In the South, where low-income farms (those with sales of less than $2,500) are most prevalent, farm residents are more likely to have nonfarm jobs as their principal employment than is true of farm residents of the combined Northern and Western States. In 1973, 53 percent of the Southern farm resident labor force were engaged in nonagricultural industries. Among residents on farms outside the South,

(Footnote continued on p. 19.)

Table 10 – Percent of farm-related income from all farm sources, 1969

Farm-related income source	All farms		Commercial farms (class 1-5)		Noncommercial farms							
					All noncommercial farms		Class 6 farms		Part-time farms		Part-retirement farms	
	White	Minority	White	Minority	White	Minority	White	Minority	White	Minority	White	Minority
	1,000 dollars						*Percent*					
Crops	5,029,112	187,165	37.4	57.6	33.1	51.1	38.7	56.2	30.8	48.3	33.1	48.7
Forest products	92,549	3,085	0.6	0.9	0.9	0.9	0.8	0.8	0.8	0.9	0.9	1.1
Livestock and poultry products	7,355,681	111,758	54.5	34.3	50.1	29.9	43.1	24.1	52.9	32.5	50.2	32.2
Custom work	154,726	5,082	1.1	1.1	3.0	3.6	3.5	3.5	3.2	4.2	1.9	3.1
Recreation	17,801	765	0.1	0.1	0.5	0.6	0.7	0.6	0.4	0.6	0.4	0.6
Government farm programs	870,202	24,301	6.2	5.8	12.3	13.9	12.9	14.5	11.6	13.2	13.1	14.1
Gross income	13,520,073	332,156	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: See source, table 3.

Only farm-related income is presented in table 10. It is not possible to estimate income derived from nonfarm sources by the operator or to account for family income contributed by relatives from data in this report.[24] However, it has been stated that 649,000 or 58 percent of all farm operators reported having worked off farm. Just over 77 percent of these people worked 100 days or more off their farm. This additional income from off-farm work contributed to family income; but data were not available to reflect such income sources. However, farm-related income to operators from customwork, recreation facilities, and government payments is presented.

White farmers accounted for 97 percent of all product sales for crops, forest products, and livestock and poultry products in the South. Total farm-related income of white farm operators was derived relatively more from livestock and poultry products than was total farm-related income of minority farm operators. This reflects the different classifications by type of farm.

Commercial farm operators had about 93 percent of their total farm-related income from agricultural products regardless of race. For small farm operators (white and minority), a higher proportion of their total farm-related income came from customwork and government program payments. White small farmers' agricultural product sales were 84 percent of their total farm-related revenues while minority farmers had almost 82 percent from the same source. Fourteen percent of the minority operators' farm-related income came from government program payments (12 percent of white operator's farm-related income came from this source). Table 11 shows that not all farm operators reported income from the different sources. However, many farmers did receive income from multiple sources since column totals exceed 100 percent.

Minority small farmers were relatively more important as a portion (16 percent) of farm product sales by all minority operators than were white small farmers as a portion (3.6 percent) of all white farm operators (table 12).

Minority small farm operators represented about 70 percent of all minority operators and received 34 percent of total government farm program payments received by all minority farmers. White small farm operators represented about 49 percent of all white operators and received about 8 percent of government

---

(Continued)

only 45 percent were so employed . . . Three-fifths of whites were self-employed, a proportion that has remained essentially unchanged since 1960. On the other hand, among Negro and other minority races, the proportion self-employed has declined as wage and salary employment has increased. In 1973, three-fifths of the farm resident Negro and other races employed in agriculture were working for wages and salary; in 1960 about two-fifths were so classified. This decline of self-employment as a class of work is due primarily to the rapid decrease in farms operated by the minority races."

[24]Donald K. Larson, "Economic Class of Farm and the Farm Family Welfare Myth," contributed paper to Amer. Agr. Econ. Assoc. meeting, College Station, Tex., Aug. 1974. This paper analyzed special tabulations from the 1970 IRS Sole Proprietorship Tax Model and found that on the average operators with under $2,500 gross farm sales had about $8,800 supplemental off-farm family income. This analysis was recently published: Donald K. Larson, "Economic Class as a Measure of Farmer's Welfare," *Amer. J. Agr. Econ.*, Vol. 57, No. 4, Nov. 1975, pp. 657-664. It was not possible to identify racial groups using IRS information; however, studies using census data have distinguished population groups by race. See fn. 23.

Table 11 – Percent of farms reporting farm-related income, 1969

Farm-related income source	All farms		Commercial farms (class 1-5)		Noncommercial farms							
					All noncommercial farms		Class 6 farms		Part-time farms		Part-retirement farms	
	White	Minority	White	Minority	White	Minority	White	Minority	White	Minority	White	Minority
	Percent											
Crops	60.7	71.3	73.7	89.6	46.7	63.5	53.7	69.3	43.5	61.0	48.1	60.8
Forest	4.6	4.4	6.3	5.8	2.9	3.8	2.9	3.7	2.8	3.5	3.1	4.2
Livestock and poultry products	70.7	51.1	78.0	58.7	61.2	47.9	57.2	44.8	62.9	50.0	60.8	48.4
Customwork	8.1	6.8	11.7	8.4	4.2	6.2	5.5	7.2	3.8	5.9	3.7	5.7
Recreation	1.3	1.2	1.8	1.4	.8	1.1	.9	1.1	.8	1.2	1.0	1.3
Government farm program	37.4	37.0	46.6	41.3	27.5	35.2	28.1	36.6	26.8	33.7	28.8	35.4
All farms[1]	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

[1]Totals do not add to 100 because some operators reported receiving income from multiple farm-related sources.

Source: See source, table 3.

Table 12 – Distribution of farm-related income and farms reporting receipts, 1969

Farm-related income source		All farms		Commercial farms (class 1-5)		Noncommercial farms							
						All noncommercial farms		Class 6 farms		Part-time farms		Part-retirement farms	
		White	Minority	White	Minority	White	Minority	White	Minority	White	Minority	White	Minority
							Percent						
Market value of agricultural products sold	(mil. dol.)	12,477	302	95.9	83.5	3.6	16.1	0.8	5.4	2.0	6.2	0.8	4.4
	(farms)	1,028,081	89,285	52.1	29.6	47.8	70.3	10.1	21.9	26.7	26.6	11.0	21.7
Crops	(mil. dol.)	5,029	187	96.2	83.6	3.6	16.2	0.9	6.0	1.8	5.9	0.8	4.2
	(farms)	624,878	63,681	63.1	37.3	36.7	62.7	8.9	21.3	19.1	22.8	8.7	18.5
Forest products	(mil. dol.)	93	3	93.5	80.3	5.3	18.6	1.1	5.8	2.8	6.7	1.3	6.0
	(farms)	48,256	3,950	69.8	39.3	30.0	60.6	6.4	18.5	16.2	21.4	7.4	20.7
Livestock and poultry products	(mil. dol.)	7,356	112	95.8	83.3	3.7	15.7	0.7	4.3	2.1	6.6	0.8	4.7
	(farms)	719,687	45,651	58.1	34.1	41.8	65.8	8.2	19.2	24.0	26.1	9.6	20.6
Customwork	(mil. dol.)	155	5	89.2	56.9	10.6	43.0	2.8	13.8	6.2	19.0	1.5	10.0
	(farms)	83,255	6,159	75.2	36.1	24.8	63.9	6.9	22.7	12.8	23.0	5.1	18.2
Recreation	(mil. dol.)	18	7	84.0	51.0	15.8	8.8	5.1	16.5	7.5	18.0	3.1	14.2
	(farms)	14,007	1,125	69.3	33.1	30.6	66.6	6.6	19.3	15.8	25.1	8.1	22.3
Government farm programs	(mil. dol.)	870	24	92.1	65.7	7.7	34.0	1.8	12.0	3.9	12.5	1.9	9.5
	(farms)	385,311	33,042	64.7	33.1	35.2	66.8	7.5	21.7	19.1	24.3	8.5	20.7

Source: See source, table 3.

payments received by all white farm operators. Minority small farm operators also received relatively more of the customwork and recreation revenues than did their white counterparts.

Some studies are optimistic about the profitability of small farms; others are not. Although type of farm varies among regions, most of the enterprise changes needed (identified in the studies which were more optimistic) involved improved managerial practices and not necessarily farm size expansions. Some of these changes precipitate from research and extension efforts which provided operators with needed information.[25] Optimism for small farmers' productive potential is not universally accepted. In the mid-1960's, Beale stated:

> The Department of Agriculture figures as a rule of thumb that a farmer must sell at least $10,000 of products annually if he expects to make a minimum net income of $2,500, and that he needs $2,500 of net income to maintain a minimum decent level of living.[26]

In today's economy, these rule-of-thumb estimates have at least doubled.

Small farmers frequently do not possess control over enough resources to be viable units of production.[27] Yet, not all farmers, small or large, incur either profits or losses. In 1969, about 40 percent of all farm operators in the South reported losses.[28] Approximately half of the small farm operators reported net losses, whereas, about 20 percent of commercial farmers reported losses. It is difficult to make firm conclusions about the viability of small farms since about half reported earning a profit.

---

[25]See, for example, *Supra.*, fn. 37, and: Lanney W. Bateman, Odell L. Walker, and Raleigh A. Jobes, "On Part-Time Farming," *Southern J. Agr. Econ.*, Vol. 6, No. 2, Dec. 1974, pp. 137-142; William M. Crosswhite, *Part-Time Farming and Preservation of Open Space in the PenJerDel Region*, Dept. Agr. Econ., Agr. Exp. Sta., Univ. Del., 1961; Howard W. Laedwig and Vance W. Edmondson, "An Interim Evaluation for Low-Income Farmers," Texas A&M Univ., B-1122; F. Ray Marshall, *Rural Workers in Rural Labor Markets*, Olympus Pub. Co., Salt Lake City, 1974; *Some Problems Impeding Economic Improvement of Small Farm Operations: What the Department of Agriculture Could Do*, Rpt. to Congress by the Comptroller General of U.S., Aug. 15, 1975, RFD-76-2; Fred J. Stewart, "Potential for Increased Net Incomes on Small Farms in Four Eastern Kentucky Counties," unpublished Ph.D. dissertation, Dept. Agr. Econ., Univ. Ky., 1975; Fred J. Stewart, "Potential for Net Income on Small Farms in Appalachian Kentucky," paper presented to Amer. Agr. Econ. Assoc. meeting, Columbus, Ohio, Aug. 1975; Ronald L. Thompson, "Description and Analysis of Limited Resource Farmers in Michigan," unpublished Ph.D. dissertation, Mich. State Univ., 1975; Christopher Wardle and Richard N. Boisvert, "Farmland Non-farm Alternatives for Limited Resource Dairy Farmers in Central New York," A.E. Res. 74-6, Cornell Univ., 1974.

[26]Calvin L. Beale, "The Negro in American Agriculture," in *The American Negro Reference Book*, ed. John P. Davis, Prentice-Hall, Englewood Cliffs, N.J., Nov. 1966, p. 179.

[27]Warren R. Bailey, *The One Man Farm*, U.S. Dept. Agr., ERS-519, Aug. 1973; Kenneth R. Krause and Leonard R. Kyle, *Mid-Western Corn Farms: Economic Status and the Potential for Large and Family-Sized Units*, U.S. Dept. Agr., AER-216, Nov. 1971; J. Patrick Madden, *Economies of Size in Farming*, U.S. Dept. Agr., AER-107, Feb. 1967, and Radoje Nikolitch, *Family Size Farms in Agriculture*, U.S. Dept. Agr., ERS-499, Feb. 1972.

[28]U.S. Bureau of Census, Census of Agriculture, 1969, Vol. II, General Report, Chapter 7, *Value of Products, Economic Class, Contracts*, U.S. Govt. Print. Off., Washington, D.C., 1973, table 9, p. 26. Census includes West Virginia, Maryland, and Delaware as a part of the South.

Disagreement over the potential productivity of small farms is due in part to varying perspectives.[29] Some studies concentrate on specific production units, others on generalized market structure analysis. Some focus on impacts and effects of rural development, while others approach the subject strictly from a concern for human resources. This study does not attempt to resolve any of the productivity questions; it only highlights human, physical, and a portion of the financial resources which are involved.

Data on farm-related income per farm were computed for those farm operators who reported such receipts (table 13). The per farm figures are computed by dividing dollars received from each source of income by the number of operators who reported having income from that particular source. For example, there were 624,878 white operators who reported receiving $5,029 million from sales of crops. Average income per farm from crop sales by these operators was consequently $8,048. This same procedure was followed to compute income per farm from each source in each economic class.

Class 1-5 white farm operators had about twice as much income per farm from the various sources as did class 1-5 minority farm operators.[30] This would tend to support the hypothesis that, within the class 1-5 group, minority farm operators would be clustered in the lower classes (3, 4, and 5) with under $20,000 gross annual sales. White operators would be expected to have a distribution skewed toward the lower sales classes also, but with relatively more representation in the high sales group.

In the small farm group, there does not appear to be as great a difference between crop sales per farm for whites relative to minority farm operators. However, minority small farmers had less income reported per farm for every source in each economic class.

Since there is a distinct gap in receipts between white and minority operators who reported farm-related income, it could be that different methods of production exist or that differences in operator objectives exist by race as well as by economic class.[31] Past studies of size economies and production possibilities

---

[29] An interesting related issue is the feasibility of organic farming. It too is surrounded in controversy. Some feel that organic farming may be a feasible alternative to boost productivity and improve the comparative advantage of small farms. See: *A Comparison of the Production, Economic Returns and Energy Intensiveness of Corn Belt Farms that do and do not Use Inorganic Fertilizer and Pesticides*, Center for the Biology of Natural Systems, St. Louis, Mo., CBNS-AE-4, July 1975.

[30] Incomes of black farm families grew at a more rapid rate from the 1959 base year than did incomes of white farm families over the decade of the 1960's; however, the income gap between black and white farm families widened from 1959 to 1969. The "... black rural farm family median income increased 8.1 percent annually between 1959 and 1969, 2.6 percentage points faster than for whites. However, to maintain the $2,170 income gap of 1960, median income of black farm families would have to have grown at 10 percent annually ... Thus, the difference in median income between white and black farm families was $960 more in 1969 than in 1959." (Thomas A. Carlin, "Income and Occupations of Southern Rural Blacks: Changes During the 1960's," paper presented at the Amer. Agr. Econ. Assoc. meeting, Edmonton, Alberta, Canada, Aug. 1973, p. 6).

[31] William Lin, *et.al.*, "An Empirical Test of Utility vs. Profit Maximization in Agricultural Production," *Amer. J. Agr. Econ.*, Vol. 56, No. 4, Aug. 1974, pp. 497-508. This study found that the profit maximization objective was poorly correlated with actual and

(Footnote continued on p. 25.)

Table 13 – Farm-related income per farm,[1] 1969

Farm-related income source	All farms		Commercial farms (class 1-5)		Noncommercial farms							
					All noncommercial farms		Class 6 farms		Part-time farms		Part-retirement farms	
	White	Minority	White	Minority	White	Minority	White	Minority	White	Minority	White	Minority
	Dollars											
Crops	8,048	2,941	12,257	6,595	788	763	849	835	769	764	765	679
Forest products	1,917	781	2,570	1,570	340	240	347	247	340	247	336	226
Livestock and poultry products	10,220	2,448	16,881	5,989	907	586	889	553	910	628	916	565
Customwork	1,858	825	2,206	1,302	802	555	762	502	908	683	586	459
Recreation	1,264	680	1,532	1,049	656	499	969	583	606	490	498	435
Government farm programs	2,258	735	3,210	1,458	494	374	544	407	467	378	511	336

[1]Computed only for those farms which reported a given income source. See table 12.

Source: See source, table 3.

have assisted in further clarifying and identifying major operational capabilities of operators which are evident within the same economic classes. Many operators have off-farm family income which contributes to an improved standard of living. The degree to which family income, wealth, welfare, and lifestyle objectives differ from farm production objectives are additional factors which contribute to varying human and physical resource allocations.

FARM PRODUCTION EXPENSES

Relative expenditures for production inputs did not differ significantly among economic classes of white farm operators (table 14). The same was true for minority farm operators. However, there was a significant difference in relative production expenditures between white and minority farm operators in the same economic class. These differences in relative production expenses can be partly explained by the fact that whites are engaged in livestock enterprises whereas minority farmers are engaged in relatively more intensive crop production activities. Comparisons made here are not on the basis of absolute expenditures but are on the basis of percent distribution of total expenses within each economic class. For example, white farm operators spent 19.4 percent of all their farm expenses for livestock and poultry and 21.7 percent for feed. Minority farm operators spent 7.4 percent for livestock and poultry and 15.5 percent for feed. Minority farm operators spent relatively more on commercial fertilizer, gasoline, petroleum, oil, and hired labor than did white operators.

Labor intensive production processes for crops such as cotton and tobacco may explain greater percentages spent on hired labor by minority farm operators. Fertilizer, gasoline, petroleum, and oil expenses were a greater portion of both white and minority small farm operators' production expenses than for commercial operators.

The largest portion of production expenses were classified as "all other expenses" regardless of race of the operator or economic class of the farm. In addition to cash rent, repairs, and current operating expenses, the "all other expenses" included outlays for depreciation, taxes, interest, and insurance.

OPERATIVE ASSETS

Just over 87 percent of all minority farm operators (93 percent for all whites) reported having machinery and equipment of one type or another on their farm (table 15). In the aggregate, 74 percent of all white farm operators reported hav-

(Continued)

planned crop patterns of farm operators. Formulations of utility objectives were more consistent with actual outcomes. The authors conclude that this may explain why standard linear programming results are often regarded as unrealistic by farmers, and why supply response models tend to overstate actual outcomes. Following the profit maximization objective resulted in high risk scenarios which are frequently unacceptable to the individual operator. The profit maximization objective is not a precise surrogate for utility maximization.

Table 14 – Distribution of farm production expenses, 1969

Expense item	All farms		Commercial farms (class 1-5)		Noncommercial farms							
					All noncommercial farms		Class 6 farms		Part-time farms		Part-retirement farms	
	White	Minority	White	Minority	White	Minority	White	Minority	White	Minority	White	Minority
	Percent											
Commercial fertilizer	7.0	11.2	6.8	10.7	10.2	13.0	10.7	14.1	9.9	12.5	10.8	12.6
Lime	0.3	0.4	0.3	0.4	0.9	0.5	0.8	0.5	0.9	0.5	0.8	0.5
Other agricultural chemicals	2.6	3.1	2.7	3.3	1.2	2.3	1.4	2.8	1.1	2.2	1.1	1.9
Gasoline, petroleum, and oil	5.3	10.8	5.0	9.1	11.5	17.1	12.9	17.6	10.4	16.4	13.3	17.4
Hired labor	10.0	12.2	10.1	12.2	7.1	11.8	8.4	12.7	6.4	11.1	7.8	12.0
Contract labor and customwork	4.5	4.7	4.4	4.6	5.6	5.1	5.5	5.0	5.5	5.1	6.2	5.0
Livestock and poultry	19.4	7.4	19.7	7.5	14.5	7.1	12.4	6.3	16.0	8.1	11.8	6.5
Feed for livestock and poultry	21.7	15.5	21.9	16.3	17.5	12.6	15.7	10.5	17.7	13.7	18.4	13.5
Commercial mixed feeds	16.0	10.1	16.5	11.4	7.0	5.4	6.5	4.6	7.1	5.8	7.5	5.5
Seeds, bulbs, plants, and trees	2.2	3.5	2.2	3.4	2.3	4.2	2.6	4.5	2.2	4.1	2.5	4.1
All other production items	26.7	30.7	26.6	32.2	29.5	26.0	29.1	25.7	29.7	26.1	29.6	26.0
Total[1]	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	Dollars per farm											
Total production expenses[1]	10,469	2,694	18,999	7,067	1,110	834	1,062	848	1,205	893	923	747

[1]Computed on basis of all farms in each economic class. Commercial mixed feeds are a portion of feed for livestock and poultry; therefore, columns do not equal 100%.

Source: See source, table 3.

ing a tractor, while almost 58 percent of minority farm operators reported having a tractor. Relatively more class 1-5 white and minority farm operators reported having units of operative assets shown in table 15 than did small farm operators regardless of race. Tractors, trucks, and automobiles, basic units of production and transportation for any operation, appeared more often than did any of the other operative assets regardless of race of the operator or economic class of the farm. Relatively fewer of the small farmers reported having tractors, trucks, or automobiles compared to the class 1-5 farmers.

There was close to one operative asset per farm for those operators who reported having each item of machinery and equipment, with the exception of tractors for white and minority farm operators, and cornpickers, cornheads, and picker-shellers for minority farm operators (table 16). These calculations have been made on the basis of number of machinery and equipment items reported, divided by the number of farm operators who reported having such items.

White farm operators had larger sized farms on the average and also had relatively more trucks and tractors per farm than did minority farm operators. Since smaller farms by economic class also had fewer acres, we might expect fewer input requirements for capital assets. However, since there was approximately one unit per farm for each operative asset reported, there may have been under-utilization of capital on smaller farms. This is an indication that capital, as measured here, is not divisible. Even though the averages shown indicate fractional units per farm, we know this is not possible.

Class 1-5 white operators had 3.7 times the value of machinery and equipment of white small farm operators, and class 1-5 minority operators had 2.5 times the value of machinery and equipment of minority small farm operators (table 16).

Minority farm operators were relatively more involved in crop production activities than white farm operators who were more frequently livestock and poultry producers. Type of farm may explain the greater number of cornpickers, cornheads, and picker-shellers per farm for minority farm operators. It also helps explain the relatively greater expense per farm for gasoline, petroleum, and oil by minority farm operators.

LIVESTOCK AND POULTRY

White farm operators owned more livestock and poultry than did minority farm operators; they also sold more in the aggregate (tables 17 and 18), as would be expected from the type of farm classification. Of those reporting ownership and sales of livestock and poultry, white small farm operators represented a less significant component of all white farms than did the minority small farm operators of the minority total.

The ratio of livestock owned to sold (table 19) is a general indication of the degree to which operators who reported owning certain livestock units participated in market transactions (the lower the ratio, the more active in market sales was the farm operator). This ratio compares the livestock units owned as

Table 15 – Percent of all farms reporting machinery and equipment on place, 1969

Item	All farms		Commercial farms (class 1-5)		Noncommercial farms							
					All noncommercial farms		Class 6 farms		Part-time farms		Part-retirement farms	
	White	Minority	White	Minority	White	Minority	White	Minority	White	Minority	White	Minority
	Percent											
Automobiles	64.2	56.8	70.3	63.8	57.6	53.9	53.9	55.3	53.3	59.3	54.6	47.8
Trucks	70.8	55.4	81.6	67.7	59.1	50.2	58.0	49.0	62.4	54.3	52.2	46.3
Tractors	74.4	57.7	85.3	77.7	62.5	49.2	60.9	49.2	65.6	54.3	56.8	42.8
Garden tractors	5.1	1.9	6.0	2.8	3.9	1.5	3.2	1.2	4.6	1.9	3.0	1.2
Grain and bean combines	7.6	3.0	13.8	7.9	.9	.9	1.3	1.2	.8	.9	.7	.6
Cornpickers, cornheads, and picker-shellers	7.2	2.4	12.1	6.0	1.8	.8	2.3	1.0	1.8	1.0	1.5	.4
Pickup balers	12.7	3.4	19.7	8.2	5.1	1.3	1.3	5.2	5.5	1.6	3.7	1.1
All farms reporting machinery and equipment	93.0	87.8	96.4	94.5	89.2	84.9	88.6	84.9	90.4	88.2	86.8	81.1

Source: See source, table 3.

Table 16 – Machinery and equipment per farm, 1969

Item	All farms		Commercial farms (class 1-5)		Noncommercial farms							
					All noncommercial farms		Class 6 farms		Part-time farms		Part-retirement farms	
	White	Minority	White	Minority	White	Minority	White	Minority	White	Minority	White	Minority
	Number per farm											
Automobiles	1.2	1.2	1.2	1.2	1.2	1.1	1.2	1.1	1.2	1.2	1.1	1.1
Trucks	1.3	1.1	1.5	1.2	1.1	1.0	1.1	1.0	1.1	1.0	1.0	1.0
Tractors	1.6	1.3	2.0	1.5	1.1	1.1	1.2	1.1	1.1	1.1	1.1	1.1
Garden tractors	1.0	1.1	1.0	1.1	1.0	1.0	1.0	1.1	1.0	1.0	1.0	1.0
Grain and bean combines	1.2	1.1	1.2	1.1	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Cornpickers, cornheads, and picker-shellers	1.0	1.4	1.1	1.4	1.0	1.2	1.0	1.3	1.0	1.1	1.0	1.3
Pickup balers	1.0	0.9	1.0	0.8	1.0	0.9	1.0	0.9	1.0	1.0	1.0	0.9
	Dollars per farm											
Total value of machinery and equipment[1]	7,370	3,957	11,089	6,678	2,963	2,660	3,021	2,754	3,096	2,883	2,573	2,274

[1]Computed for those farms which reported.

Source: See source, table 3.

Table 17 – Livestock and poultry units owned, 1969

Item	All farms		Commercial farms (class 1-5)		Noncommercial farms							
					All noncommercial farms		Class 6 farms		Part-time farms		Part-retirement farms	
	White	Minority	White	Minority	White	Minority	White	Minority	White	Minority	White	Minority
	Thousands						*Percent*					
Cattle and calves	34,668	652	86.0	55.7	13.6	42.4	2.5	11.2	8.0	17.6	3.0	13.6
Cows and heifers that had calved	16,764	332	86.7	59.6	12.9	37.8	2.4	10.0	7.6	15.8	2.8	11.8
Milk cows	2,185	58	92.8	57.8	6.4	41.4	1.8	12.4	2.8	13.7	1.7	15.2
Hogs and pigs	8,952	546	90.4	59.7	7.5	40.0	1.9	12.3	5.0	16.9	1.4	10.6
Litters of pigs farrowed Dec. 1 of preceding year and Nov. 30 no. of litters	1,705	103	90.2	61.2	8.7	38.5	2.0	11.9	5.1	16.4	1.5	10.1
Sheep and lambs	4,929	30	94.2	86.1	5.4	12.5	1.0	3.1	2.8	4.5	1.6	4.8
Horses and ponies	765	27	67.7	39.6	31.9	59.5	5.3	16.6	22.1	23.9	4.4	18.8
Chickens, 3 months or older	160,492	4,570	98.0	88.9	1.6	10.8	0.4	3.4	0.6	3.6	0.5	3.6
Hens and pullets of laying age excluding started pullets	124,810	3,511	97.8	88.3	1.8	11.4	0.4	3.6	0.7	3.8	0.6	3.9
Broilers and other meat type chickens less than 3 months old	391,063	5,689	99.7	99.3	0.2	0.6	1	0.3	0.1	0.1	1	0.1

[1]Less than .1%.

Source: See source, table 3.

Table 18 – Livestock and poultry units sold, 1969

Item	All farms		Commercial farms (class 1-5)		Noncommercial farms							
					All noncommercial farms		Class 6 farms		Part-time farms		Part-retirement farms	
	White	Minority	White	Minority	White	Minority	White	Minority	White	Minority	White	Minority
	Thousands						*Percent*					
Cattle and calves	22,373	297	90.5	65.9	9.1	32.8	1.7	8.5	5.3	13.7	2.1	10.5
Hogs and pigs	14,338	602	92.3	67.3	6.8	32.3	1.5	9.8	4.0	14.1	1.2	8.4
Feeder pigs sold	3,165	137	85.3	59.0	14.2	40.7	3.1	11.5	8.6	17.8	2.3	11.4
Sheep and lambs	3,664	21	95.4	88.5	4.3	11.4	0.8	4.3	2.2	3.8	1.3	3.2
Horses and ponies	90	2	78.0	63.8	21.5	35.8	3.2	9.1	15.6	13.0	2.6	13.6
Chickens, 3 months or older	166,736	3,151	99.4	98.7	0.3	1.1	1	0.2	0.1	0.3	1	0.5
Hens and pullets of laying age excluding started pullets	93,172	2,368	99.0	98.5	0.5	1.3	0.1	0.2	0.2	0.3	0.1	0.7
Broilers and other meat type chickens less than 3 months old	1,851,143	28,861	99.9	99.9	1	1	1	1	1	1	1	1

[1] Less than .1%.

Source: See source, table 3.

Table 19 – Ratio of livestock and poultry owned to sold, 1969

Item	All farms		Commercial farms (class 1-5)		Noncommercial farms							
					All noncommercial farms		Class 6 farms		Part-time farms		Part-retirement farms	
	White	Minority	White	Minority	White	Minority	White	Minority	White	Minority	White	Minority
	Ratio											
Livestock and poultry	1.55	2.19	1.47	1.85	2.31	2.83	2.30	2.87	2.35	2.81	2.08	2.83
Hogs and pigs	.62	.91	.61	.80	.78	1.12	.80	1.14	.78	1.09	.76	1.14
Sheep and lambs	1.35	1.41	1.33	1.37	1.69	1.55	1.67	1.03	1.71	1.67	1.67	2.08
Horses and ponies	8.48	13.71	7.35	8.51	12.60	22.76	13.96	25.10	12.00	25.12	14.50	18.94
Chickens 3 months old or older	.96	1.45	.95	1.31	4.38	13.62	4.16	21.30	3.79	16.49	5.75	8.97
Hens or pullets of laying age except started pullets	1.34	1.48	1.32	1.33	4.28	12.98	3.99	30.80	3.68	15.43	5.73	7.72
Broilers and other meat-type chickens less than 3 months	.21	.20	.21	.20	.67	4.99	.36	3.36	1.00	32.82	1.08	5.47

Source: See source, table 3.

of December 31, 1969, with the total number sold from January 1 to December 31, 1969. It is therefore possible to obtain ratios less than one by selling more units than those owned at the end of the year. Relatively high turnover items were hogs and pigs, chickens, and broilers; whereas items requiring longer periods before sale such as livestock, sheep and lambs, horses, ponies, and hens had ratios greater than one.

Minority farm operators had higher ratios of livestock items owned to sold relative to white farm operators in every economic class for almost every item. Minority farm operators were not as active in the livestock and poultry market relative to their total inventory as were white farm operators. A similar situation was found by Beale prior to 1969:

> In contrast the nonwhite farmer has only minor representation in the sectors of agriculture that have been expanding in the South, such as livestock, dairy or poultry farming and truck crops. Throughout the South agricultural colleges and other shapers of farming trends have long been preaching the theme of a "green revolution" to Southern farmers–that is, a conversion of lands to hay crops and improved pastures and the raising of more livestock. This movement clearly came of age in the 1950's, for the 1959 census revealed that the South as a region for the first time had more livestock farms than cotton farms. But for the Negro farmer it is almost as though such a change had never occurred. Only 4 percent of the nonwhite Southern farmers were livestock specialists (cattle, hogs, and sheep), and only an additional one percent were dairymen or poultrymen.
>
> Nothing more sharply distinguishes white from nonwhite farmers in the South than the different degree of reliance on livestock. Ninety percent of the total value of products sold by nonwhite farmers in 1959 consisted of crops and only 10 percent of livestock and livestock products. On Southern white-operated farms, 52 percent of the total product value was from crops and 48 percent from livestock–almost an even balance.[32]

Heavy dependence on crops by minority farm operators continued up to 1969. White farm operators, on the other hand, actually became relatively more dependent upon livestock and poultry sales than in previous years. Although minority farm operators had close to 30 percent classified as poultry, dairy, and livestock farms, they still did not become as intensive in these type enterprises as did white farm operators in 1969.

CROPS HARVESTED

As a percentage of all minority farmers' crop production, the small farm operators were a significant economic force (table 20). Minority small farmers produced as much as 30 percent of the cotton output by all minority farmers, but they also produced as little as 4 percent of the greenhouse products.

White farm operators obtained higher yields in every economic class for each crop with the exception of wheat for grain (table 21). Wheat production in

[32]Beale, *op. cit.*, 1966, p. 178.

Table 20 – Crops harvested, 1969

Item		All farms		Commercial farms (class 1-5)		Noncommercial farms							
						All noncommercial farms		Class 6 farms		Part-time farms		Part-retirement farms	
		White	Minority	White	Minority	White	Minority	White	Minority	White	Minority	White	Minority
		Thousands						*Percent*					
Corn for grain	(acres)	6,398	464	88.9	60.9	10.4	38.8	2.8	13.2	5.1	13.9	2.5	11.5
	(bushels)	332,393	17,725	92.6	73.0	6.8	26.7	1.8	9.1	3.4	10.0	1.6	7.5
Corn for silage	(acres)	1,042	25	94.6	66.8	4.0	32.3	0.9	10.3	2.2	13.4	0.8	8.5
Sorghum for grain or seed	(acres)	6,799	63	98.4	93.4	1.3	6.5	0.3	1.8	0.7	3.2	0.3	1.4
	(bushels)	317,518	2,467	98.4	95.5	0.8	4.4	0.1	1.1	0.4	2.2	0.1	1.1
Sorghum for silage and dry fodder	(acres)	923	8	91.5	70.3	7.7	28.0	1.4	6.6	4.1	11.3	2.1	10.0
Other small grains for grain	(acres)	4,264	47	95.9	86.8	3.2	12.5	0.6	3.2	1.7	4.7	0.8	4.4
Soybeans	(acres)	12,494	457	97.2	83.3	2.5	16.6	0.6	5.6	1.4	6.6	0.5	4.2
	(bushels)	270,691	8,701	97.4	85.3	2.4	14.6	0.5	4.8	1.3	5.9	0.4	3.8
Hay excluding sorghum hay	(acres)	9,346	164	82.5	64.6	17.0	34.6	3.3	8.9	9.3	14.4	4.2	11.1
	(tons)	16,323	255	86.9	71.8	12.6	27.1	2.4	6.9	7.1	11.6	3.1	8.6
Wheat for grain	(acres)	8,196	58	96.3	85.5	3.5	14.2	0.7	4.0	1.8	5.7	0.9	4.5
	(bushels)	216,834	1,650	97.0	87.5	2.7	12.3	0.5	3.5	1.4	4.9	0.7	3.8
Cotton	(acres)	9,657	433	97.1	67.7	2.6	32.1	0.7	12.4	1.3	1.1	0.5	8.5
	(bales)	7,661	329	97.2	69.4	2.5	30.4	0.7	12.1	1.2	10.2	0.5	8.0
Peanuts	(acres)	1,329	88	97.3	83.7	2.5	16.2	0.6	6.0	1.3	5.7	0.4	4.4
	(pounds)	2,310,800	128,194	98.4	89.4	1.4	10.5	0.3	3.8	0.7	4.0	0.2	2.6
Tobacco	(acres)	732	71	90.4	84.4	9.4	15.1	2.6	5.5	4.6	5.5	2.2	4.0
	(pounds)	1,414,534	113,832	90.6	87.6	9.3	12.3	2.6	4.5	4.5	4.4	2.1	3.3
Irish and sweet potatoes	(acres)	224	27	92.6	63.1	6.4	36.6	2.1	17.5	2.6	11.4	1.6	7.6
Vegetables, sweet corn, and melons	(acres)	807	41	95.5	72.0	3.4	27.3	1.0	10.7	1.6	9.6	0.8	6.9
Berries	(acres)	15	0.8	85.3	82.5	13.8	17.3	3.7	6.6	6.6	6.0	3.4	4.6
Land in orchards	(acres)	1,622	16	94.7	78.7	4.9	20.8	0.8	5.2	2.9	8.6	1.0	6.9
Other crops	(acres)	1,368	39	96.4	77.6	3.2	22.2	0.7	7.9	1.7	8.2	0.7	6.0
Greenhouse products	(square feet)	52,310	303	99.2	96.2	0.4	3.7	0.1	1.9	0.2	1.1	0.1	0.6

Source: See source, table 3.

Table 21 – Yields for harvested crops, 1969

Item	All farms		Commercial farms (class 1-5)		Noncommercial farms							
					All noncommercial farms		Class 6 farms		Part-time farms		Part-retirement farms	
	White	Minority	White	Minority	White	Minority	White	Minority	White	Minority	White	Minority
	Bushels per acre											
Corn for grain	51.9	38.2	54.1	45.8	34.0	26.4	33.5	26.3	34.7	27.5	33.1	24.9
Sorghum for grain or seed	46.7	39.2	46.7	40.0	26.8	26.6	26.4	22.7	26.9	27.2	26.7	30.7
Wheat for grain	26.4	28.3	26.6	28.9	20.9	24.4	20.6	25.1	21.1	24.4	21.0	23.7
Soybeans	21.6	19.0	21.7	19.4	20.2	16.7	19.7	16.1	20.3	17.1	20.3	16.9
	Tons per acre											
Hay excluding sorghum hay	1.7	1.5	1.8	1.7	1.2	1.2	1.2	1.2	1.3	1.2	1.2	1.2
	Bales per acre											
Cotton	.79	.76	.79	.78	.74	.71	.76	.74	.74	.70	.72	.71
	Pounds per acre											
Peanuts	1,738.2	1,449.9	1,757.5	1,548.5	999.1	941.4	989.3	916.5	994.9	1,020.1	1,024.8	872.1
Tobacco	1,932.4	1,596.1	1,935.5	1,647.5	1,903.6	1,306.6	1,912.8	1,316.9	1,892.9	1,296.8	1,914.5	1,306.2

Source: Computed from table 20.

Texas accounted for this yield difference. In all other States, white farm operators had higher yields in terms of bushels per acre for wheat than did minority farm operators. The range was from a low of 23 bushels per acre for white operators in Texas to a high of 43 bushels per acre for white operators in Virginia. Yields of wheat for grain varied from 18 bushels per acre in Louisiana to 34 bushels per acre in North Carolina on farms operated by minorities. The wheat yield for minority farm operators in Texas was 26.4 bushels per acre on an average of 71 acres per farm reporting. White farm operators in Texas had 23 bushels per acre for wheat on an average of 111 acres per farm. The difference in yield of wheat per acre between white and minority farm operators was due to the relatively poor yields by white operators in Texas rather than any abnormally high yields for minority farm operators in Texas. Beale found that:

> Among the white farmers, owners (full or part) generally obtain somewhat better yields than do tenants. Applying conventional logic, this seems fitting, considering the higher ability and greater experience that one associates with those who have acquired farms compared with those who are landless.
>
> But the conventional picture of the relationship between the tenure classes does not apply to nonwhite farmers. Among these men it is the tenants who show considerably greater yields of all three crops than do the owners. . .
>
> The answer to the riddle is at least two-fold. First, Negro croppers typically occupy much of the best land owned by white landlords, compared with the poorer average quality of land that Negroes have been able to buy or to rent on a fixed rent or semi-independent basis. Secondly, the croppers' land is managed by the landlord, whereas the Negro owner or cash renter is his own boss.
>
> The implication of the riddle is that the Negro owner-farmers—from whom most future Negro farmers will be drawn—do not compete well with white farmers in the same type of farming. To some extent economies of scale may operate. The Negro farm with its small typical size may be analogous to small family-run businesses in other industries competing with larger firms. But poorer land and smaller size considered, there seems to be a residual factor of poorer average farming know-how and managerial performance.[33]

Since the yield per acre for minority farm operators was lower than that for white operators in most every crop except wheat, it is possible that the quality of land operated by minorities may have been less than that operated by whites. Managerial abilities may also have differed.

[33] *Ibid.*, p. 184-185.

APPENDIX

Source of Data

Unpublished 1969 Census of Agriculture tabulations for minority farm operators in the South were obtained from the Bureau of Census.[34] Unpublished data on minorities were combined with published data to facilitate comparison of white minority characteristics in addition to contrasting economically small farms with those in higher sales categories.

Extent of Coverage

On the average, about 96 percent of the farm operators with over $2,500 sales were included in the census (table 22). Over 68 percent of farm operators with less than $2,500 sales were included in the census.[35] In this report, data are presented for all operators as reported by census.

The census mailing list was compiled from Internal Revenue Service forms, Agricultural Stabilization and Conservation Service files, and from the mailing list of the previous census in 1964. The total potential mailing list from the sources contained about 5 million names and addresses for the United States. All operators with over $2,500 sales were sent a census questionnaire, whereas those with under $2,500 were sampled at a rate of 1 in 2 for the census. There were about 900,000 names on the census file for the United States which were not selected in the 50-percent sample. The estimated total number of farms in the United States was just over 2.7 million, so the initial mailing list of 5 million names and addresses contained some duplications. It was possible to have an overcount in the census in addition to not including some operators in the survey. However, overcounts resulting from duplication are only 2.7 percent for the South (table 22).

Most of those not included in the census were in the under $2,500 sales group. Primarily this was due to their names and addresses not appearing on any of the mailing lists assembled and their failure to respond to the survey. Of those who were on the mailing lists assembled and were sampled, the response

---

[34]Data format was in the form of State Table 9: Summary of Selected Economic Class Groups found in Vol. 1, Sec. 1 of published census reports. Table format contained a detailed listing of farm operator characteristics for class 6, part-time, and part-retirement categories in each State.

[35]See: U.S. Bureau of Census, Census of Agriculture, 1969, Vol. V, *Special Reports*, Part 16, Evaluation of Coverage, U.S. Govt. Print. Off., Washington, D.C., 1974.

Table 22 – Evaluation of coverage of the 1969 Census of Agriculture

Region	Estimated total farms	Estimated total included in census	Estimated total overcounted in census	Estimated total missed in census
	Number		*Percent*	
South, all farms	1,080,895	80.6	2.6	22.0
$2,500 and over	474,032	96.1	3.8	7.1
Less than $2,500	606,953	68.4	1.6	33.2

Source: U.S. Bureau of Census, Census of Agriculture, 1969, Vol. V, *Special Reports*, Part 16. Evaluation of Coverage, U.S. Govt. Print. Off., Washington, D.C., 1974, table 7, pp. 22-23.

rate was lower for the under $2,500 sales group. In five follow-up mailings for the over $2,500 group the response rate averaged 75 percent each time. There were two follow-up mailings for the under $2,500 sales group and the response rate averaged 45 percent. Information presented in table 22 has been adjusted to account for the effects of nonresponse.

Census coverage was lowest in the South (80.4 percent) relative to all other U.S. regions (Northeast, 81.8 percent; North Central, 90.5 percent; and West, 82.9 percent). This was due to the large number of farms with under $2,500 sales in the South. However, the coverage was quite high (96 percent) for those with over $2,500 sales regardless of region and it was over 68 percent for those with less than $2,500 sales. Census data are quite comprehensive and percentage differences identified using census information are statistically significant at high levels of confidence.[36]

Each farm is reported as an operational unit. Therefore, numbers represent only a single respondent and not the farm population. For example, not all farm operators reported that they worked off farm. Of the total 1.1 million farm operators, just over 649,000 responded that they had any work off their farm. However, of the 649,000 just over 77 percent spent 100 days or more in off-farm work. In all instances, data in this report are for the number of operators who responded.

Selected Farm Definitions

In order to have been included as a farm in the 1969 Census of Agriculture, an operation must have met one of two criteria: either be 10 acres in size and have $50 or greater annual sales, or have less than 10 acres and a minimum of $250 gross sales of agricultural products. A small farm (also termed noncommercial farm in this report) is one with gross sales of less than $2,500 in 1969.

[36]A 1% difference is significant at the 90% level of confidence for two groups with 3,000 observations. For nomograms on percentage distribution differences, see: Roger W. Strohbehn and Gene Wunderlich, *Land Ownership in the Great Plains States*, 1958, U.S. Dept. Agr., SB-261, Apr. 1960.

Commercial farms were those with $2,500 and over in gross sales of farm products (census category class 1-5).

Data were not available for a detailed list of operator characteristics for every economic class farm by race. Therefore, class 1-5 operations are reported in the aggregate, although it is recognized that significant differences exist between different size farms within this category.[37] Limiting the scope of the analysis to noncommercial farms as those with under $2,500 sales tends to understate distributional characteristics and asset holdings of small farm operators.[38]

Land in farms can be computed in two ways. First, land in farms is equal to the net balance of land owned *plus* land rented or leased from others *less* land rented or leased to others. Land in farms is also equivalent to the sum of harvested cropland, cropland used for pasture or grazing, all other cropland, woodland, and all other land.

Farms are classified by type (dairy, poultry, cash-grain, etc.) on the basis of sales from one source relative to total sales of all products sold on the farm. Farm classifications by type are an indication of the principal source of income from agricultural products, usually 50 percent or more of total farm sales.

[37]The small farm definition varies from one source to another. Different studies have included classifications by economic class of $10, $15, or $20 thousand annual sales depending on objectives and regional characteristics. Just over 79% of all U.S. farm operators had under $20,000 sales and 65% had less than $10,000 sales in 1969. Studies include: Earl O. Heady and Stephen T. Sonka, *Farm-Size Structure and Off-Farm Income and Employment Generation in the North Central Region*, N. Cen. Reg. Center for Rural Dev., Iowa State Univ., Feb. 1975; Nelson L. LeRay, *Full-Time and Part-Time Farmers in a Low Income Area*, Dept. Rural Soc., Cornell Univ. in cooperation with Econ. Res. Serv., U.S. Dept. Agr., Bul. No. 67-3, Dec. 1967; K.C. Schneeberger and J.G. West, "Marginal Farms–A Micro Development Opportunity," *Southern J. Agr. Econ.*, Vol. 4, No. 1, July 1972, pp. 97-100; K.C. Schneeberger, J.G. West, D.C. Osborn, and J. Hartmen, "Expanding Agricultural Production: The Small Farmer Case," contribution from the Mo. Agr. Sta., J. Series No. 7022, May-June 1974.

[38]Frequently, the reader may note that percentage distributions across economic classes in this report do not total to 100%. This is explained in part by rounding and secondly by the exclusion of the census category of abnormal farms from this report. Abnormal farms include institutional farms, experimental and research farms, and Indian reservations. Institutional farms include those operated by hospitals, penitentiaries, schools, grazing associations, or government agencies. Abnormal farms were not included in this report since they represented less than one-tenth of a percent of all farms.