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Volume III SPECIAL REPORTS

Part 1

Multiple-Unit Operations

Prepared under the supervision of

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MULTIPLE-UNIT OPERATIONS •

CHARACTERISTICS • COMPARISONS WITH ALL FARMS •



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PREFACE

Volume III, Special Reports, comprises a group of special compilations and summaries of data from the 1954 Census of Agriculture and related surveys. Part 1 of Volume III, "Multiple-unit Operations," presents statistics for specified counties and State economic areas in 12 Southern States and Missouri on the number and characteristics of multiple-unit operations, farms in multiple units, and farms not in multiple units. Comparable data from the 1950 Census of Agriculture are also shown.

Farming units operated by croppers, even though these cropper units are parts or subunits of larger operating units, have been considered as separate farms in the various Censuses of agriculture. The compilation of data on the basis of multiple units provides statistics for operating units larger than farms. Information presented in this report was obtained for specified counties in the Southern States and Missouri by the use of a special Landlord-Tenant Questionnaire in addition to the Agriculture Questionnaire.

This compilation of data for multiple units was made as a part of the 1954 Census of Agriculture. The 1954 Census of Agriculture was taken in conformity with the Act of Congress (Title 13, United States Code) approved August 31, 1954, which includes provision for the mid-decade Censuses of agriculture.

The collection of the data was carried out by Census enumerators directed by supervisors appointed by the Director of the Census and working under the direction of Jack B. Robertson, then Chief, Field Division. Ernest R. Underwood, then special Assistant to the Director, was responsible for the recruitment of the field staff. The planning of the Census and the compilation of the statistics were supervised by Ray Hurley, Chief, Agriculture Division, and Warder B. Jenkins, Assistant Chief. They were assisted by Hilton E. Robison, Orvin L. Wilhite, Hubert L. Collins, Benjamin J. Tepping, Lois Hutchison, Carl R. Nyman, J. Thomas Breen, Robert A. Overton, M. Vincent Lindquist, Russell V. Oliver, Charles F. Frazier, Gladys L. Eagle, Orville M. Slye, Gaylord G. Green, Harold N. Cox, and Henry A. Tucker.

The editing and coding of the Landlord-Tenant Questionnaire, the preparation of the tables and other material, and much of the analysis for this report were done under the supervision of William A. Wright.

September 1956

III

UNITED STATES CENSUS OF AGRICULTURE: 1954

REPORTS

Volume I.—Counties and State Economic Areas. Statistics for counties include number of farms, acreage, value, and farm operators; farms by color and tenure of operator; facilities and equipment; use of commercial fertilizer; farm labor; farm expenditures; livestock and livestock products; specified crops harvested; farms classified by type of farm and by economic class; and value of products sold by source.

Data for State economic areas include farms and farm characteristics by tenure of operator, by type of farm, and by economic class.

Volume I is published in 33 parts as follows:

Part	State or States	Part	State or States	Part	State or States
1	New England States: Maine. New Hampshire. Vermont. Massachusetts. Rhode Island. Connecticut.	8	West North Central: Minnesota.	21	East South Central—Continued Alabama.
2	Middle Atlantic States: New York. New Jersey. Pennsylvania.	9	Iowa.	22	Mississippi.
3	East North Central: Ohio.	10	Missouri.	23	West South Central: Arkansas.
4	Indiana.	11	North Dakota and South Dakota.	24	Louisiana.
5	Illinois.	12	Nebraska.	25	Oklahoma.
6	Michigan.	13	Kansas.	26	Texas.
7	Wisconsin.	14	South Atlantic: Delaware and Maryland.	27	Mountain: Montana.
		15	Virginia and West Virginia.	28	Idaho.
		16	North Carolina and South Carolina.	29	Wyoming and Colorado.
		17	Georgia.	30	New Mexico and Arizona.
		18	Florida.	31	Utah and Nevada.
		19	East South Central: Kentucky.	32	Pacific: Washington and Oregon.
		20	Tennessee.	33	California.

Volume II.—General Report. Statistics by Subjects, United States Census of Agriculture, 1954. Summary data and analyses of the data for States, for Geographic Divisions, and for the United States by subjects as illustrated by the chapter titles listed below:

Chapter	Title	Chapter	Title
I	Farms and Land in Farms.	VII	Field Crops and Vegetables.
II	Age, Residence, Years on Farm, Work Off Farm.	VIII	Fruits and Nuts, Horticultural Specialties, Forest Products.
III	Farm Facilities, Farm Equipment.	IX	Value of Farm Products.
IV	Farm Labor, Use of Fertilizer, Farm Expenditures, and Cash Rent.	X	Color, Race, and Tenure of Farm Operator.
V	Size of Farm.	XI	Economic Class of Farm.
VI	Livestock and Livestock Products.	XII	Type of Farm.

Volume III.—Special Reports

Part 1.—Multiple-unit Operations. This report will be similar to Part 2 of Volume V of the reports for the 1950 Census of Agriculture. It will present statistics for approximately 900 counties and State economic areas in 12 Southern States and Missouri for the number and characteristics of multiple-unit operations and farms in multiple units.

Part 2.—Ranking Agricultural Counties. This special report will present statistics for selected items of inventory and agricultural production for the leading counties in the United States.

Part 3.—Alaska, Hawaii, Puerto Rico, District of Columbia, and U. S. Possessions. These areas were not included in the 1954 Census of Agriculture. The available current data from various Government sources will be compiled and published in this report.

Part 4.—Agriculture, 1954, a Graphic Summary. This report will present graphically some of the significant facts regarding agriculture and agricultural production as revealed by the 1954 Census of Agriculture.

Part 5.—Farm-mortgage Debt. This will be a cooperative study by the Agricultural Research Service of the U. S. Department of Agriculture and the Bureau of the Census. It will present, by States, data based on the 1954 Census of Agriculture and a special mail survey to be conducted in January 1956, on the number of mortgaged farms, the amount of mortgage debt, and the amount of debt held by principal lending agencies.

Part 6.—Irrigation in Humid Areas. This cooperative report by the Agricultural Research Service of the U. S. Department of Agriculture and the Bureau of the Census will present data obtained by a mail survey of operators of irrigated farms in 28 States on the source of water, method of applying water, number of pumps used, acres of crops irrigated in 1954 and 1955, the number of times each crop was irrigated, and the cost of irrigation equipment and the irrigation system.

Part 7.—Popular Report of the 1954 Census of Agriculture. This report is planned to be a general, easy-to-read publication for the general public on the status and broad characteristics of United States agriculture. It will seek to delineate such aspects of agriculture as the geographic distribution and differences by size of farm for such items as farm acreage, principal crops, and important kinds of livestock, farm facilities, farm equipment, use of fertilizer, soil conservation practices, farm tenure, and farm income.

Part 8.—Size of Operation by Type of Farm. This will be a cooperative special report to be prepared in cooperation with the Agricultural Research Service of the U. S. Department of Agriculture. This report will contain data for 119 economic sub-regions, (essentially general type-of-farming areas) showing the general characteristics for each type of farm by economic class. It will provide data for a current analysis of the differences that exist among groups of farms of the same type. It will furnish statistical basis for a realistic examination of production of such commodities as wheat, cotton, and dairy products in connection with actual or proposed governmental policies and programs.

MULTIPLE-UNIT OPERATIONS

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INTRODUCTION

(VII)

MULTIPLE-UNIT OPERATIONS

Introduction.—The landholdings of many landlords comprise two or more farms according to the Census Bureau definition of a farm. If a landlord has two or more sharecroppers or other classes of tenants, the portion operated by each is considered a separate Census farm. Likewise, if a portion is retained by the landlord for his own use, that, also, is a separate farm.

There are many landlords in the South having two or more farms, as defined by the Census, who think of all of their landholdings as representing one operational unit. This may be because the landlord follows an over-all rotation practice for the cropland; because of a community use of the pastureland by livestock of the landlord and tenants; because of the joint use of machinery and work stock owned by the landlord; or because of other joint ventures such as the purchase of, or sharing in the cost of, fertilizer, feed, seed, and other supplies. The landlord's concept that all of his land comprises one operational unit is given support if he supervises the activities of his tenants, especially the seeding, cultivating, and harvesting of crops. If the landlord makes the decisions in respect to marketing the crops, even though he has only a part interest in them, he has a stronger reason for thinking of all of his land as one unit. An operational unit which does not, in the mind of the landlord, coincide with the Census definition of a farm, is usually, but not always, one in which the landlord provides the capital and management and the tenant provides the labor for carrying on the farming operations. In most cases, such tenants are sharecroppers.

The argument has been advanced that sharecroppers are hired laborers and, therefore, are not farm operators. Comparisons of geographic, economic, and social data, based on averages or percentages for all farms with croppers included, are significantly affected by data for croppers in the areas in which sharecroppers predominate.

Sharecroppers are more than hired laborers since they share in production costs, risks, and rewards. Even though the landlord provides the initial outlay for operating capital, the tenant eventually pays for his share of such costs unless the agreed upon share of the crop which the tenant receives is fixed at a smaller percentage to compensate the landlord for his larger contribution. If the crop is a poor one or prices are low, the cropper's cash receipts are reduced substantially. On the other hand, if the crop is a bumper one and prices are good, the cropper should be in a better economic position than if he had received cash wages only. Moreover, it is not unusual for a cropper who supplies little or no out-of-pocket expenses for production to be partially or wholly on his own in respect to conducting all operations in connection with making a crop. It seems reasonable, then, for the Census to consider sharecroppers to be tenant-farm operators. It follows that the land assigned to each should be treated as a separate Census farm. However, the Census has recognized the need for statistics regarding the characteristics and operations of those larger over-all operating units which appear to contain two or more Census-defined farms. Therefore, supplemental reporting forms have been used in several of the enumerations to get additional facts about what have recently been termed "multiple-unit operations" or "multiple units."

The concept of an operational unit which differs from a Census-defined farm is difficult to establish for general and com-

parable application. Field tests indicated that subjective criteria regarding the operational unit, such as the extent of an over-all rotation practice and the amount of supervision exercised by the landlord over the farming operations and over the marketing of the crops, cannot be applied effectively. On the other hand, objective criteria, such as the furnishing of work animals and/or tractor power by the landlord and the kind of rent paid, can be more easily understood and applied. It is these latter criteria which the Census has used in order to furnish supplemental data for operational units which differ from Census-defined farms.

Among individual landlords, contributions to production, whether in capital or management, may vary greatly for their respective tenants. Thus, a given landlord may rent land to one or more tenants for cash and not concern himself with the cropping operations; he may rent his land on a share basis to tenants who furnish their own work stock or tractor power, tillage tools, and harvesting equipment; or he may arrange to have his land worked on shares by persons who are not financially able to assume any costs of production other than those represented by their own labor and that of other members of their family. Some of these persons sharing in the crop production, whether or not financially able to bear production costs other than labor, may be given no supervision; others may be given limited supervision; while still others are instructed or supervised daily in their current activities. Generally, the greater the contribution by the landlord, the greater is the need for him to maintain control over the production and marketing activities, especially those concerned with the growing of the cash crops.

Factors giving rise to multiple-unit operations.—The type of operational unit, which comprises two or more Census-defined farms, is not widely found outside the South, except possibly in a limited number of father-son operations. Even in the South, there is a great variation among States, and among counties within a State, in the frequency of occurrence of operational units which might be thought of as comprising two or more Census farms. The differences in application of the terms "operational unit" and "Census-defined farm" are most pronounced in cotton- and tobacco-growing areas.

The multiple-unit type of operation was largely an outgrowth of the changeover from slavery to "freedmen" and the rehabilitation of soldiers following the Civil War. This arrangement, growing out of the conditions following the war, permitted the landowner and workers to continue to farm the same land resources. The former slaves, with little opportunity for earning a livelihood except on the land of their former owners or that of nearby owners, continued to look to the plantation owner for direction and subsistence. With neither funds nor credit for paying a cash wage, the plantation owner paid his workers a part of the crop.

After the Civil War, the multiple-unit type of operation soon became common throughout much of the Old South, with landlords employing white as well as Negro tenants. Under the multiple-unit system, the landowner provided the land, management, work stock, and equipment. The worker or tenant provided the labor, his own and that of his family. The landlord made advances to the worker for food and other expenses. Cash

MULTIPLE-UNIT OPERATIONS

expenditures for production were most often shared equally, the tenant's share being paid for by the landlord and representing an advance against the tenant's share of the crop. The crop also was usually shared equally, the landlord deducting from the tenant's share all advances made against the crop.

Because of their high labor requirements, cotton and tobacco have been the crops best suited to joint ventures by landlord and tenant. In their culture, it is not necessary for the landlord to risk the large amounts of capital which would be required under a wage system. Risks of production are shared by the tenants. The landlord, through his management and close supervision of the tenants, can exercise control over farming practices. Handling the entire landholding as one management unit permits some economies of large-scale operation which would not be possible if each tenant operated independently. Sharing in the proceeds from the crop, the tenant is less likely to leave before the crop is marketed. Workers, without funds or managerial experience to set themselves up as independent farm operators, can engage in

farming, sharing in the proceeds from their labor in the same manner as independent tenants.

Impact of mechanization on multiple-unit operations.—The number of multiple-unit operations and the number of subunits (this number coincides closely with the number of Census-defined farms) comprising the larger operational holdings has been decreasing. Acreage allotments, mechanization, and expanding and more attractive opportunities for off-farm employment, particularly in periods of generally declining farm income, have been responsible, in part, for the movement of agricultural workers from the land. But, in the past 5-year period, the decrease in multiple units and subunits has been in the number of units engaged in cotton production while the number growing tobacco has not changed. The figures, shown in the accompanying text table, indicate in a general manner what has occurred in the number of farms (or units) producing cotton and tobacco and the acreage harvested for each of these crops.

Year	United States, total							Multiple unit, total					
	Cotton			Tobacco			Number of croppers ¹	Cotton			Tobacco		
	Farms reporting	Acreage		Farms reporting	Acreage			Subunits reporting	Acreage		Subunits reporting	Acreage	
		Total	Per farm		Total	Per farm			Total	Per unit		Total	Per unit
1964	864,138	18,858,145	21.8	(NA)	1,557,039	(NA)	276,029	241,954	4,127,689	17.1	114,223	440,106	3.9
1949	1,110,876	26,599,263	23.9	531,922	1,532,298	2.9	351,991	301,676	5,772,941	19.1	110,121	404,671	3.7
1944	1,217,547	18,961,891	15.6	490,585	1,030,221	3.3	452,125	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
1939	1,589,723	22,811,004	14.3	498,348	1,853,230	3.7	545,660	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
1934	1,920,123	26,753,697	13.9	422,166	1,237,117	2.9	722,321	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
1929	1,986,726	43,227,488	21.8	432,975	1,888,365	4.4	783,459	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)

NA Not available on a comparable basis.

¹ Totals are for Census years for the South and seven counties of Missouri for all years except 1929 (Census year 1930). For 1930 the total is for the South only.

Increased mechanization of all phases of cotton production has eliminated the need for much manual labor. The shifting of the center of cotton production from the Old South toward the Southwest and the West, where labor has been scarce and where larger acreages and more level land exist, has favored the increased use of machines. Cotton and tobacco have been the crops most closely associated with multiple-unit operations and it now appears that cotton culture is becoming less dependent on joint ventures of landlords and their tenants. The number of man-hours required to produce and harvest a crop seems to be the

most important factor in the past and in the changing situation.

Surveys have been conducted by the United States Department of Agriculture to determine production practices and man-labor, power, machinery, and material requirements for some of the important crops in selected type-of-farming areas throughout the United States. There is a striking contrast in the labor requirements for cotton and tobacco production on the one hand and corn and wheat on the other. Corn and wheat were once harvested with crude hand-tools and the modern corn picker and grain combine evolved through years of change and experimenta-

Crop	Area	Year of survey		Man-hours per acre	Tractor-hours per acre	Horse-(or mule-) hours per acre	Truck-and auto-hours per acre
Cotton.....	Southern Piedmont (North Carolina, South Carolina, Georgia, and Alabama)	1948	Total.....	111.98	1.14	39.14	
			Preharvest.....	56.48	0.99	36.66	
			Harvest.....	55.50	0.15	2.48	
	High Plains of Texas.....	1948 and 1952	Total.....	21.00	4.05		
			Preharvest.....	6.34	2.59		
			Harvest.....	14.66	1.46		
Tobacco (flue-cured).....	High Plains of Texas (irrigated).....	1948 and 1952	Total.....	34.47	4.04		
			Preharvest.....	11.45	2.32		
			Harvest.....	23.02	1.72		
	Eastern North Carolina and South Carolina (cotton, tobacco, and general farming)	1948	Total.....	483.00	2.40	67.80	47.30
			Preharvest.....	134.70	1.80	41.30	
			Harvest.....	348.30	0.60	26.50	47.30
Corn.....	Central Iowa.....	1948	Total.....	6.23	5.07		
			Preharvest.....	4.15	3.83		
			Harvest.....	2.08	1.24		
Wheat.....	High Plains of Texas, Oklahoma, and Southwest Kansas	1949	Total.....	1.77	1.27		
			Preharvest.....	1.04	1.00		
			Harvest.....	0.73	0.27		
	Central Kansas.....	1951	Total.....	2.72	2.08		
			Preharvest.....	2.01	1.86		
			Harvest.....	0.71	0.22		

tion. The data in the accompanying table illustrate the relative requirements, in the recent past, in respect to man-hours, tractor-hours, and work stock-hours per acre for these crops in a few selected areas. (Very favorable areas for mechanized corn and wheat culture were selected purposely.)

Generally speaking, tobacco growing requires four times as many man-hours per acre as does cotton. Cotton requires 5 to 20, or even more, times the man-hours as corn and wheat. The tractor, the mechanical cotton picker, chemical defoliant and weedkillers, and airplane dusting and spraying are taking much of the drudgery out of cotton growing. If and when these improved machines and methods are in general use, the productivity per man-hour for cotton farms will be greatly increased. A comparison of the relative amount of man-labor input for a highly mechanized area in the High Plains of Texas versus eastern areas where more human resources are utilized, indicates significant possibilities for change.

Tobacco is a crop for which the human labor requirements are still large. The number of subunits engaged in its production has not changed materially in recent years. The fact that ears, and even grains, of corn and bolls of cotton are mechanically harvested suggests that a like change may come about for the harvest of the tobacco leaf. A start has been made. Even complete mechanization of tobacco culture is a possibility if a machine can be developed that will economically spear the leaves for barn curing. If this latter step could be bypassed, perhaps by machine shredding of the leaves, the need for much hand labor could be eliminated. The upward trend in farm production, in general, seems to suggest that a reduction may come in the number of cropper farms engaged in tobacco growing.

History of Census enumeration of multiple units.—For Census purposes, each tenant operation has always been considered a separate farm. Therefore, it was but natural that, beginning with the first Census following the Civil War, that of 1870, each of the portions of a plantation occupied by the former slaves should be considered a separate farm.

Statistics for larger operational units in the South were not obtained until the Census of 1910. In that Census, the statistics for farms, as defined by the Census, were supplemented by special statistics for plantations.

In the following Census of Agriculture, that of 1920, there was no special enumeration of plantations or multiple units as such. However, the reports for the 1920 Census presented separately, for the first time, a classification of tenants closely associated with the plantation or multiple-unit type of operation. These tenants were designated as croppers. Although they were described in the reports for that Census as being under a greater degree of supervision by the landlord than regular share tenants, the classification of croppers was made solely on the basis of their being share tenants to whom the landlord furnished all the work animals. Since 1920, croppers have been designated in much the same manner. However, in 1945 and thereafter, the determination of cropper farms has been made largely on the basis of work power furnished, with less attention being given to whether the land was rented on a share basis. In the Census of 1940, the inquiry in respect to power furnished by the landlord was broadened to include tractor power. In the last two censuses the inquiry was worded, "Does the landlord furnish ALL the work animals or tractor power (as a part of his share in the operation of this place)?"

After 1910, no further attempt to enumerate plantations or multiple units as operational units was made until 1940 when special plantation questionnaires were obtained during the enumeration. In 1945, 1950, and 1954, there has been an enumeration of multiple-unit operations. The statistics for multiple units or plantations for the 1954, 1950, 1945, 1940, and 1910 Censuses were prepared for the purpose of supplementing the basic reports of the Census of Agriculture in order to indicate more fully the organization of Southern agriculture. How-

ever, differences in definitions and procedures, and in the area included, have made difficult comparisons of the data for these years and the measuring of changes.

A presentation of the criteria used in the three censuses prior to 1950 for enumerating operational units larger than farms follows. The criteria used in 1950 and 1954 are given separate treatment under succeeding topical headings. The comparability of the data for all years is covered later under the title, "comparability of multiple-unit statistics for 1954 with prior Censuses."

Prior to 1954, a different approach was used in each attempt to enumerate plantation or multiple-unit agriculture. At that time, more consideration was given to size of operation than at present. Apparently, the connotation implied by the word, "plantation," was uppermost in the mind of the planners.

In 1910, the Census Bureau adopted the following definition of what was termed a tenant plantation:

"A tenant plantation is a continuous tract of land of considerable area under the general supervision or control of a single individual or firm, all or a part of such tract being divided into at least five smaller tracts, which are leased to tenants."

For the 1940 Census, a compilation of data for plantations was made, using the following definition:

"A plantation (as here used) comprises a continuous tract or closely adjacent tracts of land on which five or more farm families (including at least one cropper or tenant family) are regularly employed, and which tracts are operated as a single working unit in respect to a central farm headquarters and to the control of labor, cropping systems, and farming operations. Thus, a plantation should include all the land worked from a central farm headquarters with croppers, wage labor, or the operator's family labor, plus any additional land, worked by share or other tenants, that may be part of the operation of the unit or plantation as a whole."

By 1945, the idea of "large size" and "plantation" no longer predominated. There seemed to be more stress on the inclusion of a cropper farm with at least one other subunit. However, the inclusion of a cropper operation was still not a positive requirement. Two or more subunits had to be handled as a single-farm enterprise. The term multiple-unit operation supplanted plantation, though the latter term was used sparingly. The 1945 definition follows:

"A multiple-unit operation is one in which two or more subunits are handled as a single-farm enterprise. It usually involves supervision of cropper or tenant operations and central control of such items as sale of products, work power, machinery and equipment, crop rotation, or purchase of supplies. A multiple-unit operation consists of two or more subunits, one of which must be a cropper or tenant operation under the close supervision of the multiple-unit operator. One of the subunits may consist of land worked by the operator, his family, or wage hands. Plantations should usually be reported as multiple-unit operations."

Preparatory work for the 1950 Census.—It has been generally recognized that there have been wide variations in the organization of the multiple-unit type of landlord holdings. It was also common knowledge that the amount of supervision varied widely from landlord to landlord and, also, among subunits for the same landlord. However, there was not an unanimity as to the ease or the method of differentiating what should be treated as multiple-unit types of operation as distinct from "farms" and even from landlord-tenant holdings.

At the approach of the time for preparing questionnaires and procedures for the 1950 enumeration, it was the belief in the Census Bureau that the best case for a supplementary reporting form for the South was (1) for its use to improve the statistics through reducing the possibility of duplication or omission of information for Census farms and (2) it should provide data at a level of operation comparable with those gathered for other sections of the United States. This seemed to suggest that sharecroppers and the home farms, nothing more, should be grouped in order to approach universal comparability. The restriction of what should constitute a multiple-unit operation, as thus outlined, was not immediately acceptable to some users of Census data.

These persons continued to hold that an operating unit should be something more inclusive.

In 1948, a subcommittee consisting of technicians from the Bureau of the Census and from the Bureau of Agricultural Economics, United States Department of Agriculture, was appointed to do some field testing. Members of this group visited several typical multiple-unit areas. In each of these areas they were joined by representatives of the State Office of Agricultural Estimates of the Bureau of Agricultural Economics, United States Department of Agriculture. In Alabama and Texas, they were also assisted by a specialist from the State Agricultural College. To begin with, there was a general agreement to test whether a multiple unit could be so defined and enumerated that it would include all land operated by closely supervised tenants on a particular landholding plus any land retained and operated by the landlord.

This subcommittee tried numerous questions and approaches to determine which tenants should be included as a part of a multiple unit. The most satisfactory single inquiry was that on work power. This is the type of information upon which the Census has placed most reliance in determining the cropper group of tenants. The characteristics of dependent tenants, other than croppers, varied from area to area and even from landholding to landholding in the same locality. Criteria for their determination, which would work in one area would not work in another. In one variation, dependent tenants were furnished all the fertilizer by the landlord in lieu of work power (i. e., the tenant furnished his own work power), the crop being split 50-50, the same as for croppers. In another variation, the tenant owned the work animals and paid cash rent, but the landlord actually provided the credit for the purchase of the work animals and held a mortgage on such work stock until paid for out of the crop. Also, "furnish" was provided these tenants in the form of cash or credit advances in the same manner as for croppers. The introduction of tractor farming in the plantation area had resulted in a number of variations in the cropper system including a "through and through" operation whereby most operations are performed for the entire acreage without regard to the land assigned to the several tenants. Under such an arrangement, the tractor drivers were usually wage hands and the landlord made a charge for the tractor work performed for each tenant.

The possibility of using the share of crops paid as rent as the basis for determining the closely supervised tenants was not feasible because of the numerous variations from the traditional "half and half" arrangement. Determination of the dependent tenants by the terms used locally for these classes of tenants was impracticable because of the variations and inadequacy of the terms used in different areas. Leaving the determination to the respondent, as in 1945, was not a satisfactory plan. Inquiries on extent of supervision and control of sale of crops were not capable of bringing forth uniform answers. A change in respondent or in the questioner could also bring a change in the answer for the same situation.

Adoption of the landlord-tenant approach for the 1950 and 1954 Censuses.—As a result of the 1948 field testing, the decision was made to use, as the supplemental questionnaire for the 1950 enumeration, one which would require a listing of the entire holding of a landlord provided two or more Census-defined farms were encompassed. In the composition of this reporting form, there were inquiries concerning the furnishing of work power and the sharing in the crops or other method of making the rental payment. Because of the insistence of several persons acting in an advisory capacity, a question was included to ascertain the respondent's idea as to which of his tenant operations were farmed as a separate operating unit. This latter inquiry was the only one which could be variously interpreted by the respondent, or by the enumerator in case the latter was asked as to the intent of the question. For the guidance of the enumerator the following wording was incorporated in the questionnaire. "A separate

operating unit is one which is independent of other units with respect to planning the use of the cropland; to the use of machinery; or the purchase of fertilizer, seed, and supplies. The tenant, cropper, or renter receives little or no supervision from the landlord."

In 1950, after the matching and harmonizing of the two types of questionnaires, the Landlord-Tenant Questionnaire was examined to determine if the landlord holding contained a multiple-unit operation. A preliminary study of the Landlord-Tenant Questionnaires indicated that the replies to the inquiry, "Is this place farmed as a separate operating unit?" could not be used as a satisfactory basis for separating the closely supervised or dependent tenants from those who operated their land independently. If the answers to this inquiry had been accepted, a large number of cash tenants and share tenants paying one-fourth of the crops as rent would have been included in multiple units while many of the croppers, even for these same landlords, would have been excluded.

Therefore, it was decided to use the presence of croppers, as defined by the Census (all work power furnished by the landlord), as the only basis for determining the existence of a multiple unit. It was recognized that under this procedure some dependent tenants would be excluded from the multiple-unit operations. Likewise, a few croppers whose operations were wholly separate as to cropping or rotation practices and who were given little, if any, supervision would be included. However, this procedural method for determining a multiple unit helped to satisfy those who have stressed the lack of geographic comparability resulting from the counting of cropper operations as farms. Furthermore, since the landlord-tenant holding is something more inclusive than a multiple unit, it has been possible to present additional statistics both as to the number of landlord-tenant operations and as to their composition.

The 1954 procedure for enumerating both landlord-tenant operations and multiple-unit operations matched that used in 1950 with the exception that the judgment of the respondent in 1954 was not sought as to whether a given farm was a part of a larger operation unit. (As noted, the office processing in 1950 had to ignore the judgment inquiry in respect to separate operating units. See second paragraph above.) Since the decision as to which operations represented multiple units was made during the office processing in both 1950 and 1954, the statistics as presented herein are reasonably comparable. The few factors making for a lack of comparability are outlined in later paragraphs.

The questionnaires.—In both 1954 and 1950, the Landlord-Tenant Questionnaire was used throughout most of the South and in several Southeastern counties of Missouri. It was used where sharecroppers were most prevalent in cotton-, tobacco-, peanut-, and rice-growing areas. It supplemented rather than replaced the Agriculture Questionnaire required for each Census-defined farm. An Agriculture Questionnaire was required for each cropper or tenant other than cropper even though the landlord handled the entire holding essentially as one operating unit. The Landlord-Tenant Questionnaire was to be filled for the entire landlord holding. Thus, the two reporting forms obtained the same type of information but for different levels of operation.

Facsimiles of the Landlord-Tenant Questionnaire and of the Agriculture Questionnaire for 1954 are shown in the Appendix. There were several variations of the Agriculture Questionnaire in the multiple-unit area. Most of the variations were in the inquiries relating to crops. Inquiries for crops not grown in the State and for crops grown only to a very limited extent were eliminated from the questionnaire for that State. A facsimile of the Agriculture Questionnaire is shown in the Appendix only for Alabama and Mississippi. The same version of the questionnaire was used in these two States. There was only one version of the Landlord-Tenant Questionnaire for the South and Missouri. Since rice and tobacco are not grown in the same areas, a combined inquiry was used for these two crops.

The Landlord-Tenant Questionnaire was designed to serve two main purposes. In addition to providing statistical information for operations by persons who farm their land with tenants, including croppers, it was designed to help in obtaining more accurate reports for the individual Census farms represented in the landlord holding. The 1954 version of the questionnaire, determined, first, the entire acreage under the control of the landlord whether through ownership, rental or lease, or management for others. With this total acreage in the holding as a starting point, information was sought, where possible from the person in charge, separately for each cropper or other tenant and for the residual (or "home farm") portion. Also, for each cropper or other tenant, questions had been formulated to secure the acreage assigned, the method of rental, and whether the enumerator, who was filling the Landlord-Tenant Questionnaire, or some other enumerator, would be required to secure the Agriculture Questionnaire.

In regard to additional information requested for 1954, it was recognized that the person in charge of the over-all landholding could usually give satisfactory answers for only those tenants with whom he shared in the production. For those tenants who paid (or received) a share of the crops, these further questions pertained to work power furnished by the landlord, number of horses and mules owned by the landlord but kept on the tenant-operated land, acres of cropland harvested on the assigned land, and acreage and production of specified crops harvested.

Following the listing of the name and other required information for each tenant, a line was set aside for entering combined totals for tenants. Another line, immediately following, was provided for the enumerator to enter applicable complementary data for the "home farm." There was a final line for the enumerator to enter grand totals, in some columns for the entire holding or operation and in other columns for only the combined operations of the share tenants (including croppers) and the "home farm."

To aid in checking the Landlord-Tenant Questionnaire with the matching Agriculture Questionnaires for the tenants and the "home farm," a column was provided for entering the identifying line number of each household, from the Enumerator's Record Book, for which an Agriculture Questionnaire was required. However, this line number would not be available in those cases when the land operated by a tenant was in another enumeration district. In such cases, the enumerator filling the Landlord-Tenant Questionnaire was asked to enter the name of the township (or district, precinct, ward, or beat) in which the land was located. If the land was in another county, the name of that county was required.

The enumeration.—Each enumerator was provided with an Enumerator's Record Book in which he was required to list the name of the head of each household in his enumeration district. For tracts on which no one was living, he was required to list the name of the person who rented the land, grew crops on shares, or used the land for livestock. If no agricultural use was being made of the land, he was required to list the name of the owner of the land. Exceptions to this procedure were made for built-up residential areas. There were screening questions in this record book to ascertain which tracts of land had agricultural operations and, therefore, would require an Agriculture Questionnaire, in whose name the report should be made, and whether he or some other enumerator should fill the Agriculture Questionnaire.

In those areas where the Landlord-Tenant Questionnaire was used, a slightly different version of the Enumerator's Record Book was used. This version carried one additional inquiry, viz, "What is the total number of persons who rent land from and who work land on shares for this person? ☐ None. No. of persons—." An accompanying instruction reminded the enumerator that (a) if a member of the household operated a farm and if the answer to the question just cited was 1 or more or (b) if no mem-

ber of the household operated a farm and the answer to this question was 2 or more, he should fill a Landlord-Tenant Questionnaire.

The Landlord-Tenant Questionnaire, also, indicated for whom this reporting form was to be filled, in this manner:

FOR WHOM SHOULD THIS QUESTIONNAIRE BE FILLED?

(1) For every person who operates a farm himself, either alone or with the help of his family or wage hands, and also rents farm land to others or has land worked on shares by others,

OR

(2) For every person who does not operate a farm himself, but rents farm land to two or more persons or has farm land worked on shares by two or more persons.

There were instructions on the form to interview the landlord in order to get the required information for this questionnaire. Further, when possible, this questionnaire should be completed before filling the individual Agriculture Questionnaires which were required for each part of the over-all operation. By so doing, the enumerator would be able to copy some of the information which had been obtained from the landlord, and which had been entered on the Landlord-Tenant Questionnaire, onto the Agriculture Questionnaires. This was always possible for the "home farm" and, also, for each tenant unless he farmed other land. There was a specific instruction in the Enumerator's Instruction Book for the enumerator to visit each tenant for whom he was required to fill an Agriculture Questionnaire. This was to insure a report for those items in which the landlord had no proprietary interest. In case an enumerator secured an Agriculture Questionnaire for a tenant on a landlord-tenant holding before the landlord had an opportunity to give the information for the Landlord-Tenant Questionnaire, the instructions stated that the entries on the two forms should be compared. If there were discrepancies, adjustments were to be made in the information secured from the tenant when the tenant in question did not own land and did not have another landlord.

Enumeration of land in more than one enumeration district or county.—Each enumerator was assigned a specific area in which to work. This area was termed an enumeration district. The enumerator to whom a district was assigned was responsible for the complete enumeration of all farms in that district. However, some Census farms and some landlord-tenant operations are located in two or more enumeration districts. In order to count all the land once, but only once, it was necessary to establish rather rigid rules for determining which enumerator would be responsible for enumerating cross-line tracts representing either farms or larger holdings. In other words, one enumerator, not both, was required to fill the Agriculture Questionnaire for a farm which lay in two enumeration districts. Likewise, one enumerator, not both, was required to fill the Landlord-Tenant Questionnaire for a landlord-tenant holding which was in two enumeration districts. This one report, in the first case for a farm and in the second for a larger holding, would cover all the land, including that which was in the other district.

Since two or more Census farms comprise a landlord-tenant holding, it is possible for a landlord-tenant holding to be in two separate enumeration districts and for the land in each of the component Census farms to be wholly within an enumeration district. In such an instance, two enumerators would be charged with the duty of filling the required reporting forms. One enumerator would secure the Landlord-Tenant Questionnaire for the over-all holding and also the Agriculture Questionnaire for any component Census farms wholly in the same district. Another enumerator would need to fill an Agriculture Questionnaire for each component Census farm wholly within his district. This second enumerator, of course, would not be required to fill a Landlord-Tenant Questionnaire.

The Enumerator's Instruction Book for 1954 established the following rules of procedure for an enumerator whenever a part

or all of the land in a holding was in his district but the landlord or some of his tenants lived in another enumeration district.

- (a) If he was to secure the Agriculture Questionnaire for the landlord he should also get the Landlord-Tenant Questionnaire.
- (b) If an Agriculture Questionnaire was not required for the landlord, but the landlord and one or more of the tenants lived in his district, he would get the Landlord-Tenant Questionnaire.
- (c) If the landlord lived outside his district but farmed land where the landlord lived, or if the landlord had tenants where the landlord lived, he was not to secure the Landlord-Tenant Questionnaire.

When all of the land of a landlord-tenant holding (or of the multiple-unit portion thereof) was in the same enumeration district, then the component Census farms would also be wholly within the same district, provided none of the tenants on the land farmed additional acreage. However, a tenant, in a landlord-tenant holding, could also farm additional land. This additional land could be rented from a second landlord or could be owned by the tenant. If a tenant of a landlord-tenant holding farmed more land, he would always be considered a tenant in the data presented for the landlord-tenant holding (or multiple-unit portion) whereas, in the count of Census farms, he would be a part owner if he also farmed some land which he owned.

Problems in the enumeration of multiple-unit operations.—The multiple-unit type of operation has been difficult to define and to enumerate. Its very existence has made it difficult to obtain accurate totals for the various items on the Agriculture Questionnaire for tracts defined as Census farms. In an enumeration restricted to farms, a multiple-unit operator, in answering the questions of the enumerator, may (1) correctly report only for those crops grown on land not assigned to tenants and for livestock and equipment kept on the land retained; or (2) incorrectly include his part of the crops grown for him on shares and the work animals and equipment furnished to and kept by his tenants; or (3) incorrectly report all crops, livestock, equipment, and expenditures for all the land in the multiple-unit holding. His tenants, on the other hand, may (1) correctly report for the crops they grew, for the livestock and equipment kept on the land assigned them, and for any expenditures which they made for such items as fertilizer, feed, and petroleum fuel and, also, those which their landlord made either as the landlord's share or as an advance for production on the tenant's portion of the multiple-unit operation; or (2) incorrectly report only their share of the crops, or only the livestock and equipment they own, or only the portion of expenditures which they paid directly out of pocket; or (3) fail to report any of their operations, assuming these will be included in the landlord's report.

The problem of obtaining accurate totals for geographic areas in which the multiple-unit operations exist has been mentioned in many of the Census reports beginning with that of 1870. The difficulty of this approach has been described in the reports of the 1870 and subsequent censuses of agriculture. The 1870 report states, "The plantations of the old slave States are squatted all over by the former slaves, who hold small portions of the soil, often very loosely determined as to extent, under almost all varieties of tenure. In the instructions . . . efforts were made to impose something like a rule which should govern in the returns . . . but after a weary and unprofitable struggle, the superintendent was fain to accept whatever could be obtained . . . without greatly criticising the form in which it came." (Ninth Census of the United States, 1870, Industry and Wealth, p. 72.)

Special instructions and procedures for the enumeration of farms in the South have been used at the various Censuses in an attempt to prevent duplication and omissions. Usually, the instructions have suggested that the enumerator go first to the landlord to get all the required information regarding the farm operations for the home farm and for each tenant. Such a pro-

cedure was designed to provide for counting all of the land, crops, and the landlord's livestock once and only once. After the enumerator's visit to the landlord, he was instructed to visit each tenant on the landholding in order to obtain other necessary information, such as operator characteristics, livestock owned by the tenant, etc. In addition to the problems arising from the considerable amount of shifting from year to year in tenant operators and in the acreage assigned to tenants, there are other problems for an enumerator. A fixed procedure cannot always be followed. As explained before, a landlord may not live in the enumerator's assigned area, or may not be located conveniently.

Without a supplementary reporting form for the over-all operation, not only has it been difficult to obtain accurate totals, but also, the data obtained have not been adequate to indicate the characteristics and functioning of the larger operational units. On multiple units, part or all of the farm implements and machinery and animals used by the tenants are owned by the landlord and may, or may not, be in the possession of the individual tenants. Expenditures made by the landlord for his tenants may be included in the report for the landlord rather than in the reports for his tenants. No crops, or only feed crops, may be grown on land retained by the landlord. The pastureland, woodland, wasteland, etc., which normally would be associated with the cropland, may all be retained by the landlord. Thus, when the separate tenant operations and operations on land not assigned to tenants are enumerated as individual farms, the separate reports do not appear to represent complete units. Therefore, for the various classifications of farms by size, by tenure of operator, by type, by economic class, or by any other grouping, the totals for some of the items may be distorted for particular groups. This makes comparisons of totals for one item with another difficult to interpret, or subject to incorrect interpretations.

The use of a supplementary reporting form such as the Landlord-Tenant Questionnaire for recording facts about the over-all operations, and obtaining the information from the person considered to be the best informed has resulted in substantial improvement in the data for the Census of Agriculture in the South. However, a brief appraisal of the working and usefulness of the Landlord-Tenant Questionnaire reveals some existing problems. Many enumerators have fully comprehended the nature of the additional form and have performed acceptable jobs in (a) getting a report for the over-all operation on the Landlord-Tenant Questionnaire and separate reports on the Agriculture Questionnaire for the component farms and (b) matching of the data on the two types of forms so that there was accurate counting without duplication.

Quite a few enumerators, in every Census in which the supplementary form has been used, have not understood the supplementary nature of the Landlord-Tenant Questionnaire. To some of them, the filling of two questionnaires for the same land represented duplication in reporting and, hence, should be avoided.

Even though some enumerators did an acceptable job in filling the Landlord-Tenant Questionnaire they failed to always fill in an Agriculture Questionnaire for each of the tenants. In some cases, all of the holding was listed on the Agriculture Questionnaire as one farm, with the landlord as operator. In such cases, it is assumed that the enumerator did not consider the tenants to be farm operators and ignored his instructions and the wording of the inquiries on the Agriculture Questionnaire itself. (These inquiries specifically excluded from the landlord's net acres for his Agriculture Questionnaire all land worked for him on shares.)

In those instances where the land in a landlord-tenant holding extended into two or more enumeration districts, some enumerators did not understand how to divide the enumerating responsibility with other enumerators.

When the headquarters of the over-all holding was in another enumeration district, some enumerators overlooked those tenant-

operated lands in their area when the tenant did not reside thereon.

When a landlord lived in an enumeration district other than the one, or ones, in which his landholding was situated, it was often difficult or not feasible for the enumerator, charged with the responsibility of filling the Landlord-Tenant Questionnaire, to interview the landlord. In such situations, some Landlord-Tenant Questionnaires were not filled by the enumerator.

In some cases, there was confusion as to how many Agriculture Questionnaires were necessary if, after the close of harvest, there had been a change in tenant operators. In an April enumeration, as in 1950, more enumerators than in 1954 (with an October or November enumeration) listed on the Landlord-Tenant Questionnaire both the old and the new tenant. When a change in operators was already an accomplished fact, and the new operator, because of a fixed crop-rotation practice or for some other reason, had been assigned a different acreage from that which was farmed by his predecessor, a report was often made on the Landlord-Tenant Questionnaire for the old tenant and what he grew and a second listing, often showing no cropland, was made for the new tenant. A more difficult enumeration problem arose when one tenant had left the holding and another had not yet been selected as a replacement. If the new operator had not yet been selected, that portion of the holding operated by the departed tenant may have been omitted from the Agriculture Questionnaires for both landlord and tenant.

Office procedures.—When the Landlord-Tenant Questionnaires were received in the processing office, they were sorted into two groups:

- (1) Those with a listing of one or more tenants for whom all work power was furnished by the landlord.
- (2) Those showing no tenants for whom all work power was furnished by the landlord.

The reports for Group 1 were matched with the Agriculture Questionnaires to insure reasonable agreement of the data on the two reports, to complete the reports if either was incomplete or missing, and to eliminate duplication in the information on the Agriculture Questionnaires when that could be detected.

A Landlord-Tenant Questionnaire in Group 2 received little further consideration, except in the matching process when Agriculture Questionnaires not listed on a Landlord-Tenant Questionnaire were found. In such cases, the Agriculture Questionnaire was matched with the Landlord-Tenant Questionnaire and when the Agriculture Questionnaire was for the landlord shown on the Landlord-Tenant Questionnaire, then the information from the Agriculture Questionnaire was entered on the Landlord-Tenant Questionnaire and the Landlord-Tenant Questionnaire was reviewed to determine if it qualified as a multiple-unit operation.

Matching the Agriculture Questionnaires with the Landlord-Tenant Questionnaires was time consuming and a difficult task. A complete matching was not always possible. Enumerators did not always enter the name of the landlord on the Agriculture Questionnaires for tenants. In some cases, the name entered for the landlord was that of his agent or manager. In case the land was subleased, the name often given for the landlord was that of the owner of the land or the first landlord. For a managed operation, the name of the manager was given in some instances and the name of the owner in other instances. Differences in the surname spelling, in the initials, or in the first name added to the difficulty in matching.

Enumerators were instructed to cross-reference each Agriculture Questionnaire listed on the Landlord-Tenant Questionnaire. Enumerators did not always enter cross-reference identification, especially for tenants in other enumeration districts since other enumerators were responsible for getting the Agriculture Questionnaire for those tenants. This made it necessary to match 10 to 20 percent of the Agriculture Questionnaires on the basis of the name of the landlord.

As the Landlord-Tenant Questionnaires and the component Agriculture Questionnaires were matched, the information thereon was compared for all land in farms, cropland harvested, tenure of operator, number of horses and mules, and specified crops. Corrections were made on the Landlord-Tenant and Agriculture Questionnaires in the case of omissions on one or the other of the questionnaires, or when entries apparently represented duplication in the reports of the landlord and/or tenants, or only the landlord's or the tenant's share of crops.

If an Agriculture Questionnaire was found for a tenant not listed on the Landlord-Tenant Questionnaire for a landlord, the name of this tenant and the corresponding information were entered on the Landlord-Tenant Questionnaire. When Agriculture Questionnaires were found for croppers for whose landlord a Landlord-Tenant Questionnaire had not been filled, an over-all questionnaire was prepared in the processing office. Additional Agriculture Questionnaires for tenants with the same landlord, regardless of tenure, were added to the Landlord-Tenant Questionnaire. The "home farm" Agriculture Questionnaire, when located, was also added. In the processing, office-constructed multiple units containing home farms were given the same color-tenure code as the Agriculture Questionnaire for the home farm. The office-constructed multiple units for which no home farm could be located were coded as full owners. Color of the multiple-unit operator was assigned for multiple units with no home farms on the basis of the color reported for the majority of other multiple units in the same locality. When the Agriculture Questionnaire for the home farm showed that all land was not accounted for on the Landlord-Tenant Questionnaire, the balance was allocated to a tenant other than a share tenant.

If there was a disagreement between the Agriculture Questionnaire and the Landlord-Tenant Questionnaire as to whether a tenant was a cropper, and the other information indicated no additional land was being farmed by the tenant, the information on the Landlord-Tenant Questionnaire was accepted and the Agriculture Questionnaire was changed to make the two reports consistent.

The matching was performed on a county basis by making a list of names of landlords found on Agriculture Questionnaires for tenants who could not be located on Landlord-Tenant Questionnaires and, also, a list of tenants shown on Landlord-Tenant Questionnaires for whom an Agriculture Questionnaire could not be found. Upon completion of the matching, Agriculture Questionnaires were prepared in the processing office for tenants and home farms listed on Landlord-Tenant Questionnaires when Agriculture Questionnaires for them could not be located. Approximately 20,000 Agriculture Questionnaires were prepared for such cases. Likewise, Landlord-Tenant Questionnaires were prepared, provided there were Agriculture Questionnaires which, considered together, would make up a multiple-unit operation. A total of 14,186 Landlord-Tenant Questionnaires were prepared for such cases. However, in the office matching, if two or more Agriculture Questionnaires were found for a landlord and no combination of these represented a multiple-unit operation, a Landlord-Tenant Questionnaire was not prepared. Therefore, the number of landlord-tenant operations shown in the tables do not represent the actual number of such holdings.

When a landlord-tenant operation containing a multiple unit was identified, totals for selected items were obtained at the multiple-unit level and the questionnaire was coded for color and tenure of the multiple-unit operator. To obtain totals at the multiple-unit level, information for the croppers was added to that for the home farm. Only these totals, plus a limited amount of data at the landlord-tenant level, were transferred to punchcards. Only one punchcard was used for each questionnaire. The classifications by size of multiple unit, by acres of cropland harvested, by type of farm, and by kind of tenants were made mechanically on the basis of the data entered on the punchcards.

Data for all farms were obtained from the tabulations of the Agriculture Questionnaires. (For a description of the office procedures in editing, coding, and tabulating these data, see the Introduction to Volume II, General Report, 1954 Census of Agriculture.) Data for farms not in multiple units were obtained by subtracting the totals for multiple-unit operations from those for all farms.

The data for multiple units for the 1954 Census include, as cropper subunits, all persons to whom work power was furnished by the landlords.

Office-constructed questionnaires.—The number of Landlord-Tenant Questionnaires constructed in the processing office for both 1954 and 1950 is shown in Summary Table 2. That table also shows the number of questionnaires which were filled by Census enumerators.

The proportion of the office-constructed questionnaires which had no home farm, i. e., those for which no Agriculture Questionnaire for a home farm could be located, is also shown in Table 2.

DEFINITIONS AND EXPLANATIONS

Definitions and explanations are presented only for those items for which the table descriptions are considered inadequate. The definitions consist primarily of a résumé of the questionnaire wording, occasionally supplemented by the more essential parts of instructions and procedures for enumerating and processing the Landlord-Tenant and Agriculture Questionnaires.

The multiple-unit area.—The multiple-unit areas comprise the counties in which croppers account for a significant part of all tenants. The multiple-unit area was established for the 1950 Census by including generally those counties in which there were 50 or more croppers accounting for 10 percent or more of all tenants according to the 1945 Census of Agriculture. Minor changes were made, as will be explained later, in both 1950 and 1954 in the counties included in the area in order to facilitate enumeration and office-processing. For 1954, the multiple-unit area includes 891 counties.

In the multiple-unit area in 1954, there were 1,761,852 farms, or 36.8 percent of the 4,782,416 farms in the United States; and 268,744 croppers, or 97.4 percent of the croppers in the 16 Southern States and 7 counties in Southeastern Missouri. For 1954, the multiple-unit area accounted for 63.5 percent of the cotton acreage, 89.2 percent of the tobacco acreage, 82.4 percent of the peanut acreage harvested for nuts, and 80.5 percent of the rice acreage.

The enumeration of multiple units was made in 1954 in 1,003 counties or in 112 counties more than were included in the multiple-unit area for which data are presented in this report. In 1950 the enumeration was made in 977 counties. In making the enumeration in both 1954 and 1950, the Landlord-Tenant Questionnaire was used in all the counties comprising a Field Supervisor's district in order to simplify the giving of instructions, ordering of supplies, etc. This procedure resulted in the use of the Landlord-Tenant Questionnaire in counties outside the multiple-unit area. Because the counties comprising a Field Supervisor's district were not the same in 1954 as in 1950, the procedures resulted in the enumeration of multiple units in some counties in 1954 that were not included in the area for the enumeration of multiple units in 1950 and vice versa. As a result of changes in areas included in the enumeration, 19 counties were in the multiple-unit area in 1950 but were excluded from the area in 1954, and 8 counties excluded from the multiple-unit area in 1950 were included in 1954. These counties together with data indicating their importance as part of the multiple-unit area are as follows:

County	1950 farms	1950 croppers	
		Total	In multiple units
8 counties included in 1954 but excluded in 1950,			
total.....	13,907	268	(NA)
Kentucky.....	1,855	29	(NA)
Magoffin.....	1,855	29	(NA)
Texas.....	9,581	228	(NA)
Harris.....	3,360	35	(NA)
Jefferson.....	959	14	(NA)
Liberty.....	1,404	9	(NA)
Orange.....	710	1	(NA)
Shelby.....	3,148	169	(NA)
Virginia.....	2,471	11	(NA)
Chesterfield.....	1,422	8	(NA)
Henrico.....	1,049	3	(NA)
19 counties excluded in 1954 but included in 1950,			
total.....	34,319	2,501	2,471
Arkansas.....	8,806	729	834
Conway.....	2,266	44	40
Faulkner.....	3,256	96	95
Pulaski.....	3,284	589	699
Tennessee.....	12,158	763	791
Clay.....	1,345	96	98
De Kalb.....	1,992	187	197
Jackson.....	2,343	169	180
Overton.....	2,650	101	92
Pickett.....	884	37	46
Putnam.....	2,944	173	178
Virginia.....	5,686	198	208
Amherst.....	1,337	91	104
Bath.....	472	4	3
Highland.....	609		
Nelson.....	1,417	64	72
Rockbridge.....	1,751	39	29
Maryland.....	7,769	811	638
Anne Arundel.....	1,465	69	48
Calvert.....	1,218	248	232
Charles.....	1,576	208	136
Prince Georges.....	2,130	172	148
St. Marys.....	1,380	114	74
Net change.....	-20,412	-2,233	-2,471

NA Not available.

Minus sign indicates fewer farms for 1954.

A complete list of counties included in the area of enumeration and in the multiple-unit area in 1954 is given in the Appendix.

Landlord-tenant operations containing multiple units.—A landlord-tenant operation consists of all the land held by a landlord who rents land to one or more tenants, including croppers, and retains some land not assigned to tenants, or who rents land to two or more tenants, including croppers, and retains no land for himself. The landlord may hold the land through ownership or through lease, rental, or cropping arrangement, or as a hired manager for others.

The home farm, if one, plus all component tenant farms, including cropper farms, make up the landlord-tenant operation. The home farm and one or more cropper farms make up the multiple unit. If there was no home farm, then two or more cropper farms were required to constitute a multiple unit. Thus, all multiple units represent a landlord-tenant operation or a portion thereof. If croppers were the only kind of tenants represented in the landlord-tenant operation, the multiple unit was identical with the landlord-tenant operation. If there were tenants in addition to croppers, the operations of the additional tenants comprised part of the landlord-tenant operation but not a part of the multiple unit.

For multiple-unit purposes, a cropper subunit is one for which the landlord furnished the work power. Some persons may have all their work power furnished for their entire farming operation, even when they work separate tracts of land for different landlords. A cropper with two landlords could be counted more than once as a cropper subunit of a multiple unit. Other persons having two or more landlords may be furnished work power by one landlord but not by the other. In such a case, the cropper land could be a subunit of a multiple unit for one landlord but not for the other. Still other persons, who own and operate land on their own account, may rent land and be furnished work power for the rented portion. In such cases, the cropper land could be a part of a multiple unit.

Census enumerators were not given the definition of a multiple unit. The existence of a multiple unit was determined during the office processing of questionnaires.

Subunits.—A subunit denotes a component part of a landlord-tenant or multiple-unit operation. The land assigned each cropper or tenant is a subunit. The land retained by the landlord, i. e., the land not assigned to tenants including croppers is likewise a subunit. Each subunit is a "farm," as defined by the Census, except for tenants, including croppers, who own and operate or rent and operate, additional land. (See discussion under "Tenants.") One of the subunits of a landlord-tenant operation is usually the "home farm." The other subunits are classed as cropper farms, share-tenant farms, and other-tenant farms (not cropper or share-tenant farms).

A home farm includes all the land in a landlord-tenant operation not assigned to tenants, including croppers. In a multiple unit, the home farm is the portion not assigned to croppers. In a landlord-tenant operation containing a multiple unit, the home farm of the multiple unit is the same as that of the landlord-tenant operation. The home farm was determined by subtracting, from the over-all landlord-tenant operation, the operations of all tenant subunits. (See "Office procedures.") The home farm usually contains the work of the multiple-unit operator or the headquarters where work stock and equipment are kept for the entire multiple-unit operation. It usually includes land worked by the multiple-unit operator with the help of his family and/or hired labor. Occasionally, a home farm may consist only of pastureland not assigned for the exclusive use of croppers or tenants, and woodland or wasteland. Home farms of landlord-tenant and multiple-unit operations were considered farms for Census purposes if they contained three or more acres even though the agricultural operations on the home-farm tract may have been insufficient to qualify as a Census farm.

In some multiple-unit operations all the land is assigned to croppers. Such multiple units do not have home farms. In most of these cases, the multiple-unit operator does not live on the place.

Tenants rent from others or work on shares for others all the land they operate. When used in reference to subunits of a landlord-tenant or multiple-unit operation, the tenure relates only to land operated in that landlord-tenant or multiple-unit operation. For example, a tenant or cropper of a particular landlord may also rent land from, or crop land for, other landlords; or he may own land on his own account. In such instances, in presenting statistics for landlord-tenant and multiple-unit operations, the subunit operated by the cropper, or tenant other than cropper, was treated as though it were a complete farm in itself. This procedure was one of convenience and varies from that used in tabulating data for Census farms. In the data for Census farms the entire acreage operated, including land owned and/or land rented from others, was counted as one farm. The term "tenant" may also be used in reference to the classification of a multiple-unit operation when all the land in the operation is rented from others.

Croppers sometimes have been defined as crop-share tenants whose landlords furnish all the work power. For convenience, the classification was based entirely on whether the landlord furnished all the animal or tractor power. The laws of some States define a sharecropper as a tenant. In other States, a cropper may be legally classified as either a laborer or a tenant, depending upon the nature of the agreement under which he produces a crop. In most States, court decisions as to his tenure status have been based on whether he had title to the crop and upon harvest, paid his landlord a share, or whether the landlord retained title to the crop and, upon harvest, paid the cropper his share after deducting any advances in cash, credit, supplies, etc.

Most cropper farms represent subunits of multiple-unit operations. However, cropper farms may be operated as independent units, the landlord neither having other croppers nor farming any land with his own labor or with the help of members of his family and/or wage workers. Thus, the count of the farms not in multiple units includes some farms operated by croppers. As mentioned before, cropper farms and cropper subunits are not necessarily synonymous.

Share tenants are tenants other than croppers who pay their landlords a share of either the crops or livestock products, or a share of both.

Other tenants in this report refers to all tenants who were not classified as croppers or as share tenants. In the other reports of the 1954 Census of Agriculture, "other tenants" represents a more restricted group than in this report.

A farm.—For the 1954 Census of Agriculture, places of three or more acres were counted as farms if the value of agricultural products in 1954, exclusive of home gardens, amounted to \$150 or more. The agricultural products could have been either for home use or for sale. Places of less than three acres were counted as farms only if the value of sales of agricultural products in 1954 amounted to \$150 or more. Places operated in 1954 for which the value of agricultural products in 1954 was less than these minima because of crop failure or other unusual situations, and places operated in 1954 for the first time, were counted as farms if, normally, they could be expected to produce these minimum quantities of farm products. As explained above, an exception to the criterion in regard to the value of agricultural products produced was made for home farms of landlord-tenant and multiple-unit operations. The 1950 definition of a farm was identical with that of 1954.

All the land under the immediate control of one person or partnership was included as one farm. Control may have been through ownership, or through lease, rental, or cropping arrangement. Land worked on shares for others was considered as under the immediate control of the person working the land. Thus, the land assigned to a cropper or tenant other than cropper was considered a separate farm even though the landlord may have closely supervised the cropper or tenant other than cropper and handled his (the landlord's) entire holding essentially as one operating unit.

Farms in multiple units are the cropper and home-farm subunits comprising the multiple unit.

Farms not in multiple units are those which are not parts of multiple-unit operations. Some of the farms not in multiple units represent farms in landlord-tenant operations. The information shown for farms not in multiple-unit operations was obtained by subtracting the totals for multiple-unit operations from those for all farms. (For an appraisal of this procedure, see "Reliability of Data.")

Multiple-unit operator.—A multiple-unit operator is the person who directs or supervises the multiple-unit operation. In this report, the multiple-unit operator is frequently referred to as the landlord. He is the person who controls the land either through ownership, lease, rental, or cropping arrangement. The cropper in the multiple unit works land on shares for him. The multiple-unit operator may be a hired manager employed by the person who controls the land. The number of multiple-unit operators is considered the same as the number of multiple units.

Farm operator.—A "farm operator" is a person who operates a Census-defined farm, either performing the labor himself or directly supervising it. He may be an owner, a hired manager, or a tenant, renter, or sharecropper. If he rents land to others or has land cropped for him by others, he is listed as the operator of only that land which he retains. In the case of a partnership, one member only was included as the operator. The number of farm operators, therefore, is considered the same as the number of farms.

Units, farms, or operators reporting.—Figures for units reporting, farms reporting, or operators reporting represent the number of multiple units or other designated units, the number of farms, or the number of operators, for which the specified item was reported. For example, if there were 240 multiple units in a county and 187 of these harvested tobacco in 1954, then the number of multiple units reporting tobacco would be 187. The differences in the total number of multiple units and number reporting an item represents the number not having that item, provided the inquiry was answered for all multiple units.

Land owned and land rented from others.—The land to be included in each landlord-tenant operation was determined by asking the number of acres owned and the acres rented from, or worked on shares, for others.

Land owned includes all land which the operator or his wife, or both, hold under title, purchase contract, homestead law, or as one of the heirs, or as a trustee of an undivided estate. In the case of a managed operation, the inquiry on the Landlord-Tenant Questionnaire related to the land owned by the employer.

Land rented from others includes land worked on shares for others, and land used rent free, as well as all land rented or leased under other arrangements. In the case of a managed operation, the inquiry on the Landlord-Tenant Questionnaire related to the land rented from others by the employer.

Land in the landlord-tenant operation represents the sum of the land owned plus that rented from others by the landlord. The total of the land in all subunits comprising a landlord-tenant operation is identical with the total land in the landlord-tenant operation.

Land in the multiple unit represents the sum of the land in the home-farm subunit plus that in the cropper subunits. Land rented by the multiple-unit operator to tenants other than croppers is excluded from the multiple-unit operation, by definition.

Land in farms.—The acreage in each farm was obtained by adding the acres owned by the farm operator and the acres rented by him from others or cropped on shares by him for others, and subtracting the acres rented to or worked on shares by others.

The acreage designated "land in farms" includes considerable areas of land not actually under cultivation and some land not used for pasture or grazing. All woodland and wasteland owned by farm operators, or included in tracts rented from others, is included as land in farms unless such land was held for other than agricultural purposes, or unless the acreage of such land held by a farm operator was unusually large. If a place had 1,000 or more acres of land not being used for agricultural purposes and less than 10 percent of the total acreage in the place was used for agricultural purposes, the nonagricultural land in excess of the number of acres used for agricultural purposes was excluded from the farm area. For application of this rule, land rented out was considered to be used for agricultural purposes.

Cropland harvested.—This represents that portion of the land in the multiple unit, or in the farm (subunit or otherwise), from which crops were harvested in 1954 including land from which hay was cut and land in small fruits, orchards, vineyards, nurseries, and greenhouses. Land from which two or more crops were harvested in 1949 was to be counted only once.

Crops harvested.—The Landlord-Tenant Questionnaire asked specifically concerning five crops harvested in 1954, viz, corn, cotton, tobacco, rice, and peanuts. The inquiry for corn was restricted to corn harvested for grain and that for peanuts, to peanuts harvested for picking or threshing. Data for crops shown for all farms and for farms not in multiple units are limited to those specified on the Landlord-Tenant Questionnaire. The crops were to be those harvested in 1954 from land under the control of the operator in 1954 regardless of whether the crops were grown by the operator or by someone else. Crops grown by the operator on land not under his control in 1954 were not to be included.

Horses and mules.—The inquiry called for horses and mules of all ages. The horses and mules were to be reported for the farm or unit where kept, regardless of ownership. If horses and mules owned by a multiple-unit operator and furnished to the croppers were kept on the cropper farms, they were to be included on the Agriculture Questionnaires for the croppers; if kept on the home farm, they were to be reported on the Agriculture Questionnaire for the home farm. Thus, in the multiple-unit area, many of the farms not reporting horses and mules represent cropper farms for which the horses and mules were reported on the home farm.

CLASSIFICATION OF MULTIPLE UNITS

Multiple units by size.—Multiple units are classified by size according to the total land area in each multiple-unit operation. The size groups used are the same as those for the classification of farms by size, with the exception that all multiple units of less than 30 acres are in a single group. For farms, separate data are available for three groups under 30 acres—viz, (a) farms under 3 acres, (b) farms of 3 to 9 acres, and (c) farms of 10 to 29 acres.

Multiple units by color and tenure of operator.—Multiple-unit operators are classified by color as white and nonwhite. Nonwhite includes Negroes and all other nonwhite races such as Indians, Chinese, Japanese, etc. In the multiple-unit area nearly all of the nonwhite operators of multiple units and of farms are Negroes.

Multiple-unit operators are classified according to the tenure under which they hold their land on the basis of the total land owned and the total land rented from others, and on the basis of the reply to the inquiry, "Do you operate this land as a hired manager?"

Full owners own land but do not rent land from others. Also included in this group are those office-constructed multiple units for which no home farm Agriculture Questionnaire could be located.

Part owners own land and rent land from others.

Managers operate land for others, directing and supervising the entire multiple-unit operation, and are paid a wage or salary for their services. Multiple-unit operators were classified as managers when the answer was "yes" to the question, "Do you operate this land as a hired manager?"

Tenant-multiple-unit operators rent from others all the land in the multiple-unit operation. They own no land.

Multiple units by type of farm.—Multiple units are classified as to type on the basis of the kinds of crops harvested and the relationship of the acreage of each crop harvested to cropland harvested and to other crops harvested. Only the principal cash crops—cotton, tobacco, peanuts, and rice—were used as a basis for the classification by type.

If only one of these cash crops was of primary importance, the multiple unit was designated as that crop type. A crop was considered as being of primary importance when its acreage represented 10 percent or more of the acres of cropland harvested in the case of cotton, peanuts, or rice, or 2 percent or more in the case of tobacco.

To be considered of secondary importance, the acreage of a given crop—cotton, peanuts, or rice—had to equal or exceed 10 percent of the acreage of the primary crop, provided the primary crop was not tobacco. If the primary crop was tobacco, it was necessary for the acreage of cotton, peanuts, or rice to equal or to exceed the tobacco acreage in order to be considered a secondary crop. Tobacco was considered a secondary crop when it comprised at least 1 percent but less than 2 percent of the total cropland harvested.

If one of these cash crops was of primary importance with one or more of secondary importance, or if two or more were of primary importance, the multiple unit was classified as a combination-crop type. For the combination types, all of these crops of either primary or secondary importance are indicated by the type name. For the combination types, the type name does not distinguish the relative importance of the crops comprising the combination. Thus, in a "cotton and tobacco" type, either the cotton may be of primary importance with tobacco secondary, or the tobacco primary with cotton secondary, or both crops may be of primary importance.

If a multiple unit did not qualify as either a primary-crop type or a combination-crop type, it was classed as "miscellaneous." Thus, the "miscellaneous" type includes multiple-unit operations

with none of the four designated crops reported; also, those for which none of the designated crops were considered of primary importance.

Multiple units by acres of cropland harvested.—This classification was based on the acreage from which crops were harvested in 1954 for each multiple unit. The groups are the same as those used for Census farms except that the smallest acre group for the multiple-unit classification includes those with less than 20 acres of cropland harvested, whereas, for Census farms with less than 20 acres of cropland harvested, two groups are shown, viz, those with less than 10 acres of cropland harvested and those with 10 to 19 acres for this land use.

Multiple units by number of subunits.—This classification was based on the total number of subunits in each multiple-unit operation. Since by definition a multiple unit must have at least two subunits, the classification begins with those having two subunits. In the classification, the home farm is counted as one of the subunits. A distribution of multiple units by number of croppers may be obtained from this tabulation. For example, if there are 326 multiple units with 2 subunits and 291 of these have home farms, 291 of these have only 1 cropper each, and 35 have 2 croppers each. These 35 added to the number having 3 subunits that have home farms gives the total number of multiple units having 2 croppers each.

Multiple units by kind of tenants in the landlord-tenant operation.—Multiple units were classified into the following groups on the basis of the kind of tenants in the landlord-tenant operation:

Croppers only.—In this group, each landlord-tenant operation containing a multiple unit reported only cropper tenants. In such cases, the multiple-unit operation is identical with the landlord-tenant operation.

Croppers and share tenants, with or without other tenants.—In this group, each landlord-tenant operation containing a multiple unit reported both croppers and share tenants. It may or may not have included tenants other than croppers or share tenants. For this group, the landlord-tenant operation is larger than the multiple-unit operation.

Croppers and tenants other than share tenants only.—In this group, all the landlord-tenant operations containing a multiple unit included, in addition to croppers, "other tenants" (not croppers and not share tenants) but no share tenants. Probably most of these other tenants represented cash tenants, standing renters, etc., who operated their places entirely independently of the multiple-unit operation. However, a few of these other tenants may have been closely supervised and their operations handled along with those of the croppers and the home farm.

PRESENTATION OF THE STATISTICS

This report presents data for multiple-unit operations from the 1954 and the 1950 Censuses of Agriculture, supplemented by data for all Census-defined farms and Census farms not in multiple units.

These data are presented for the entire multiple-unit area, by States, by counties, and by State economic areas.

Summary data for the selected multiple-unit area.—The Summary Tables 1 to 26 present data for the entire multiple-unit area. Most of the data presented were taken or derived from tables giving data by county or State economic area. Some of the tables present averages or percentages to aid in the use and analysis of the statistics.

State data.—State totals for all farms, for multiple-unit operations, and for farms not in multiple units are shown in Summary Tables 1 and 3. State totals for multiple-unit operations classified by size, tenure, etc., are shown only in the State economic area tables. State totals for the number of landlord-tenant operations and for multiple-unit reports classified according to whether enumerated or office-constructed are given in Summary Table 2.

County data.—The county table presents, for the selected counties, data for multiple-unit operations with comparative data for all farms. This table also shows the number and total acreage for farms not in multiple units. No data by size, tenure, or other classification of the multiple unit are shown by counties. Data for such classifications are presented in the State economic area tables.

State economic area data.—The number of landlord-tenant operations and multiple-unit operations classified according to whether enumerated or office-constructed are shown by economic areas in Summary Table 2. Data for multiple-unit operations classified by size of unit based on total acres in the unit, by color and tenure of the multiple-unit operator, by type of farm, by acres of cropland harvested, by number of subunits, and by kind of tenants in the landlord-tenant operation are shown in State Economic Area Tables 1, 2, 3, 4, 5, and 6, respectively.

Data for all farms and for farms not in multiple units are not shown by economic areas. The data for all farms and for farms not in multiple units could be obtained for any items by adding the figures for the individual counties comprising the State economic area and making the necessary computations.

State economic areas represent groupings of counties within a State. The counties comprising a State economic area have similar agricultural, demographic, climatic, physiographic, and cultural characteristics. (For a description of State economic areas, see the special 1950 report of the Bureau of the Census entitled, "State Economic Areas: A Description of the Procedure Used in Making a Functional Grouping of the Counties of the United States.") Except for the metropolitan areas, the State economic areas, in general, are the same as State type-of-farming areas. Since the counties comprising each State economic area have similar characteristics, data for a State economic area may be used for describing, with reasonable accuracy, the characteristics of the agriculture in each county making up the area.

For the most part, the counties selected for inclusion in the multiple-unit area include entire economic areas. However, in some instances it was not feasible to follow this general rule. For economic areas for which all counties were not included, the economic area designation is followed by the word "part" to indicate that the area for which data are shown, represents only a portion of the economic area. In Virginia, no data are included for the independent cities. Statistics for Sevier County, Tenn., are included with Economic Area 8b (comprising a part of Economic Area 8a).

A map of each State showing the counties and economic areas with a designation of the counties not included in the multiple-unit area precedes the county and economic area tables for the State.

1950 comparative data for the 1954 multiple-unit area.—For the purpose of facilitating the analysis of changes since the prior Census, comparative data are presented for 1950. The 1950 data for counties not included in the 1954 area have been eliminated from the tables containing county data and the State totals have been adjusted. However, similar adjustments could not be made in the 1950 data tabulated by State economic areas. For counties included in 1954 but not in 1950, it was possible to make adjustments in the 1950 data only for those items tabulated from inquiries on the Agriculture Questionnaire. In the tables containing data by State economic areas for 1954 and 1950, the totals for some economic areas and, hence, for some States, are not fully comparable because of changes in the counties in the multiple-unit area within the State economic area. However, in most cases where adjustment could not be made because of differences in the counties included in the multiple-unit area, the comparability of data for 1954 and 1950 is not affected significantly. The data in the following table provide a general summary of the extent of comparability for the data for 1954 and 1950.

NUMBER OF COUNTIES INCLUDED AND NUMBER OF LANDLORD-TENANT OPERATIONS IN THE MULTIPLE-UNIT AREAS, BY STATES: CENSUSES OF 1954 AND 1950

State	Number of counties		Number of landlord-tenant operations		
	1954	1950	1954	1950	
				as revised ¹	as published ²
Total.....	891	902	341,229	406,672	408,853
Alabama.....	67	67	33,144	46,246	46,246
Arkansas.....	42	45	15,566	21,751	21,943
Florida.....	25	25	2,183	3,672	3,672
Georgia.....	159	159	32,400	41,049	41,049
Kentucky.....	106	105	37,075	39,941	39,941
Louisiana.....	64	64	14,183	19,923	19,923
Maryland.....		5			1,176
Mississippi.....	82	82	40,196	46,363	46,363
Missouri.....	7	7	2,672	4,479	4,479
North Carolina.....	90	90	61,057	58,010	58,010
South Carolina.....	46	46	23,327	28,965	28,965
Tennessee.....	64	70	38,837	43,975	44,635
Texas.....	90	85	25,087	37,744	37,744
Virginia.....	49	52	15,522	14,554	14,707

¹ To obtain comparability with 1954 and as published in this report.

² In 1950.

Reliability of data.—The use of the inquiry regarding the furnishing of work power as a basis for classifying croppers results in the inclusion of some farm operators who do not have the characteristics generally associated with cropper-operated farms. These farm operators comprise, largely, relatives of the landlord to whom the landlord furnishes all work power, equipment, etc. Some of these cropper operations may be relatively large and of a type of farm not similar to the type of farm generally operated by croppers.

The arrangement of the inquiries on the Landlord-Tenant Questionnaire made it possible to present data giving a count of those share tenants who were not croppers. It is this group of share tenants, wholly excluded from the multiple units, which was most likely to have contained dependent tenants whose operations would have been eligible for consideration as an integral part of a multiple unit if satisfactory criteria could have been applied to designate them. To complete the picture of the over-all landlord-tenant operations, a count of the other subunits comprising them has been made. This number is shown in several of the tables under the heading, "Other tenants, not croppers nor share tenants."

In using the data presented in this report, it is necessary to consider not only the effect of the procedures upon the data but, also, the accuracy of the Landlord-Tenant Questionnaires.

In evaluating the data given in this report, consideration should be given to several factors:

First, the definition of a multiple unit was established arbitrarily on the basis of the presence of croppers. Some of the cropper subunits comprising multiple units may not be under the close supervision of the landlord and may be operated as independent units. Moreover, some tenant-operated farms not included in multiple-unit operations may have been under the close supervision of the landlord and may have been operated as a part of a larger operational unit.

Second, during the office processing, Landlord-Tenant Questionnaires were prepared in 1954 for 14,186 multiple units. These office-constructed questionnaires represented 10.8 percent of the multiple units. For 3,867 of the office-constructed questionnaires, there was no Agriculture Questionnaire for the landlord and, in such cases, it was not possible to determine with certainty the total acreage held by him, or his tenure. However, for statistical purposes, it was assumed that the sum of the acreage of land shown on the Agriculture Questionnaires for tenants of such landlords represented the total acres of land in the landlord-tenant operation and that the landlord owned the land.

Third, in some cases, the number of multiple units, as well as

the number of subunits, may have been overstated. Because of differences in names reported for the landlord an additional Landlord-Tenant Questionnaire may have been constructed. Likewise, tenants may have been included as part of a landlord-tenant operation when those tenant operations were already listed on a report with a slightly different name, or under another name if either the Landlord-Tenant or Agriculture Questionnaire erroneously listed the 1955 tenant instead of the 1954 operator. Also, most of the matching of Landlord-Tenant and Agriculture Questionnaires was performed on a county basis. In some cases, where the tenants belonging to a landlord-tenant operation were enumerated in two or more counties, a Landlord-Tenant Questionnaire may have been constructed because the original Landlord-Tenant Questionnaire was enumerated in another county.

Fourth, since a cropper subunit in a multiple unit did not always comprise an entire Census farm, the procedure of subtracting the number of subunits from the number of farms, or from the number of farms reporting, resulted in an understatement of the number of farms and number of farms reporting for such items as corn, cotton, tobacco, rice, etc., for farms not in multiple units. This understatement arises because of croppers having two or more landlords. If the cropper rented land from more than one landlord who furnished work stock or tractor power, then such a cropper would have been counted as a subunit on more than one multiple unit. A tabulation was made for a sample of 45 counties, containing 14,401 multiple units, of the cropper subunits having two or more landlords in 1954. On the basis of this sample, it is estimated that there were 17,846 cropper subunits in the multiple-unit area having two or more landlords. (The chances are about 2 out of 3 that this estimate would differ by not more than 9 percent from the results obtained by making the same tabulation for all multiple units.) Thus, the number of farms not in multiple units is understated by at least 17,000. Farms reporting cotton, corn, tobacco, rice, etc., for farms not in multiple units are also affected by a procedure of subtracting cropper subunits reporting from all Census farms reporting.

The failure to detect the duplication of the cropper subunits on a Landlord-Tenant Questionnaire because of differences in the reported name for the same cropper, and the inclusion of cropper subunits which did not qualify as Census farms on the Landlord-Tenant Questionnaire also resulted in some overcounting of cropper subunits and consequently in an understatement of the number of farms and farms reporting, for farms not in multiple units.

Data from the Censuses of Agriculture indicate that there were Landlord-Tenant Questionnaires for practically all the landlord-tenant operations in the multiple-unit area. According to the Census of Agriculture, there were 333,784 farm operators in the multiple-unit area with land rented to others. For each of these farm operators there should have been a Landlord-Tenant Questionnaire. The tabulations for this report included 341,229 Landlord-Tenant Questionnaires. However, 5,136 of these questionnaires did not have home farms and, hence, the landlord would not have been counted among the 333,784 farm operators renting land to others in the Census of Agriculture. On the basis of these data, there should have been 339,000 Landlord-Tenant Questionnaires in the multiple-unit area as compared with the 341,229 actually included in the tabulations.

For 1954, for most States there are more cropper subunits in multiple units than there are farms operated by croppers as shown by the Census of Agriculture. This inconsistency resulted from (1) the counting more than once of the same cropper as a cropper subunit in case the cropper rented from two or more landlords; (2) the counting in the Census of Agriculture of croppers listed on the Landlord-Tenant Questionnaire as part owners because the person also operated land he owned; and (3) the counting of croppers listed in the Landlord-Tenant Questionnaire as tenants other than croppers in the Census of Agriculture because such croppers also rented land, but not as a cropper, from another landlord.

As stated above, it is estimated that at least 17,000 cropper subunits were counted on more than one Landlord-Tenant Questionnaire. Estimates based on the same sample used to estimate the number of subunits having two or more landlords

ERRATA

U. S. Bureau of the Census. *U. S. Census of Agriculture: 1954.* Vol. III, Special Reports,
Part 1, Multiple-Unit Operations.
U. S. Government Printing Office, Washington, D. C., 1956.

Page XXI

These tabular presentations, referred to in the last paragraph of the text on page XXI, were inadvertently omitted from the publication.

NUMBER OF STATES AND COUNTIES INCLUDED IN THE MULTIPLE-UNIT OR PLANTATION AREAS, BY STATES: CENSUSES OF 1950, 1945, 1940, AND 1910

State	1950	1945	1940	1910
States, total.....	14	9	10	11
Selected counties, total.....	902	567	372	325
Selected counties in—				
Alabama.....	¹ 67	¹ 67	40	47
Arkansas.....	² 45	² 46	27	23
Florida.....	25			1
Georgia.....	¹ 159	¹ 159	102	70
Kentucky.....	105			
Louisiana.....	¹ 64	¹ 64	29	29
Maryland.....	5			
Mississippi.....	¹ 82	¹ 82	66	45
Missouri.....	7	7	5	
North Carolina.....	90	80	44	21
South Carolina.....	¹ 46	¹ 46	30	35
Tennessee.....	70		20	11
Texas.....	85			41
Virginia.....	52	16	9	2

¹ All counties in State.

² The 1950 multiple-unit area included two counties not included in the 1945 area; and the 1945 multiple-unit area included three counties not in the 1950 area.

COMPARISON OF CRITERIA USED FOR DEFINING MULTIPLE UNITS AND PLANTATIONS: CENSUSES OF 1950, 1945, 1940, AND 1910

Census year	Minimum number of subunits	Kind of subunits included			Requirement as to operating unit	All subunits part of a continuous tract
		Home farm	Croppers	Tenants other than croppers		
1950.....	2	Not necessary.	All subunits other than the home farm had to be cropper operations.	Excluded.	Not specified for enumeration; determination made in the Washington office.	Not necessary.
1945.....	2	Not necessary.	Subunits other than home farm could be either cropper or other tenant operations. For office-constructed reports at least one of the tenant operations was a cropper operation.	Other classes of tenants could be included.	Handled as a single-farm enterprise with close supervision of cropper and/or tenant operations.	Not specified to the enumerator.
1940.....	Not specified; however, there had to be 5 or more farm families regularly employed. 5 or more subunits were required for office-constructed reports.	Not necessary.	At least one of the regularly employed farm families was a cropper or other tenant. For the office-constructed reports, at least one of the subunits was a cropper operation.	Other classes of tenants could be included.	Operated as single-working unit.	Continuous or closely adjacent tracts.
1910.....	5 tracts leased to tenants.	Necessary.	Kind of tenants not specified.			Continuous tract of land of considerable area.

indicated that there were approximately 17,000 cropper subunits with croppers reporting that they also operated land they owned. Thus, it is estimated that there were, in the multiple-unit area, approximately 29,000 cropper subunits which would not have been counted as cropper-operated farms in the Census of Agriculture.

The procedure for showing the data for a multiple unit in the county in which its headquarters is located and the data for individual farms comprising the multiple unit, in the county in which the farms are located, affects the totals for farms not in multiple units in counties where some of the farms comprising the multiple unit are located in different counties.

Comparability of multiple-unit statistics for 1954 with prior Censuses.—Because of the lack of comparability of the data for 1954 and 1950 with those for prior Censuses, all data presented in this report are for the two most recent Censuses. The definition of a multiple unit for 1954 was not fully comparable with that for 1950.

A multiple unit for the 1954 report was a landlord-tenant operation containing two or more cropper subunits if there was no home farm, or it included one or more cropper subunits if there was a home farm. The cropper subunits included persons sharing in the crop to whom the landlord furnishes all the work power. Assuming two landlord-tenant operations had the same tenants, the cropper subunits may be (1) persons who have work power furnished by their landlords for all the land they operate; (2) they may own land on their own account and be a cropper subunit on the rented portion; or (3) they may be a cropper subunit on one landlord-tenant operation and not on the other.

A multiple unit for the 1950 report was a landlord-tenant operation containing two or more cropper subunits if there was no home farm, or if it included one or more cropper subunits when there was a home farm. A cropper subunit was restricted to those persons whose landlords furnished the work power for all the land they operated. Thus, in 1950, a cropper whose land was a subunit of a landlord-tenant holding was not considered a part of

a multiple-unit operation if he owned and operated additional land or if he rented additional land in other than cropper status.

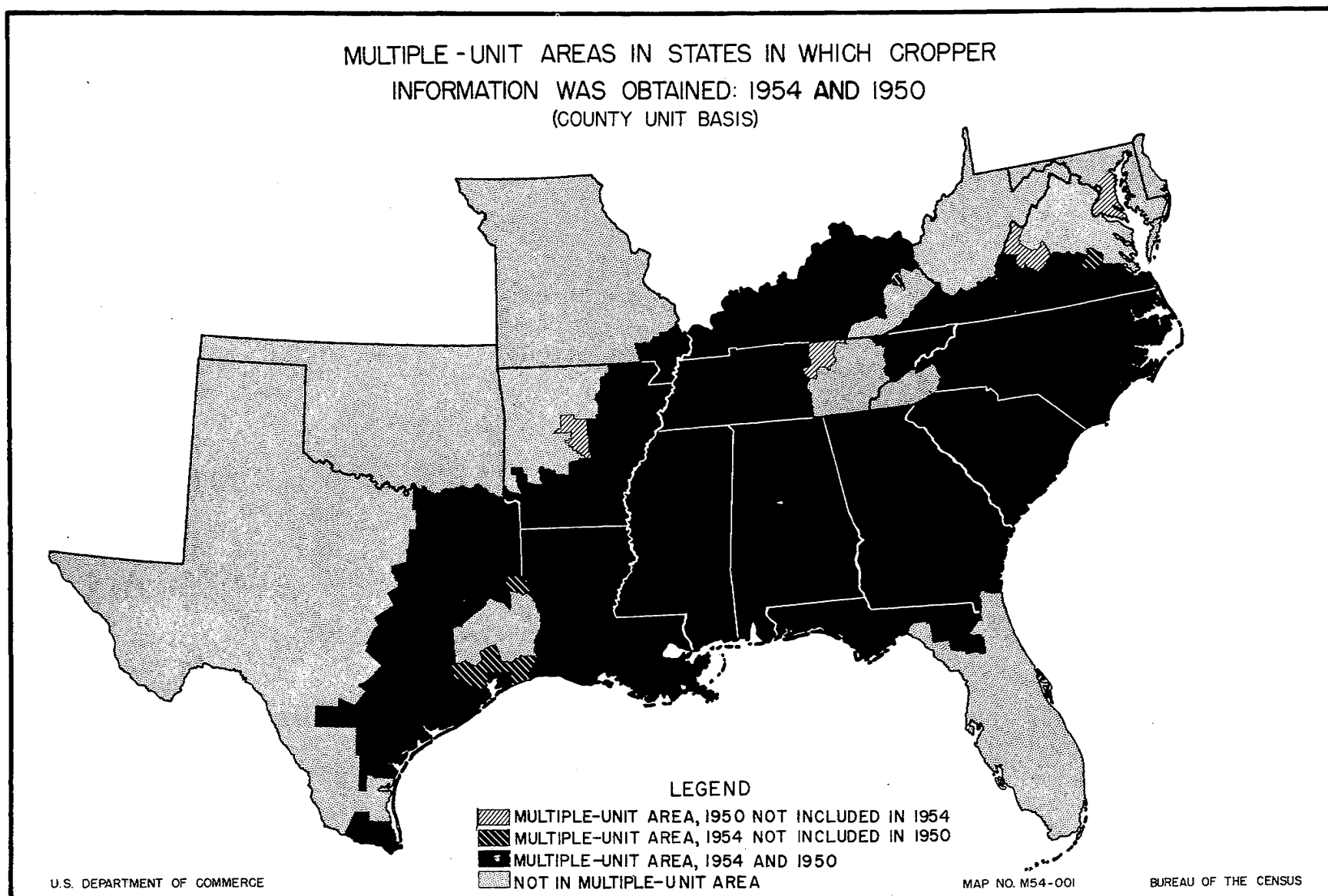
It is estimated that there were approximately 17,000 cropper subunits in multiple units in 1954 that were counted as part-owner operators in the Census of Agriculture because the cropper on the multiple unit also farmed some land he owned. Such cropper subunits would not have been included in multiple units for the 1950 Census. Except for the inclusion of cropper subunits for croppers owning land in multiple units in 1954, the definition for a multiple unit in 1954 and 1950 was the same and it is believed that data for 1954 and for 1950 for multiple units are reasonably comparable.

For 1945, statistics for multiple-unit operations are presented in a special report entitled, "Multiple-Unit Operations." Data are shown for 567 selected counties in 9 States.

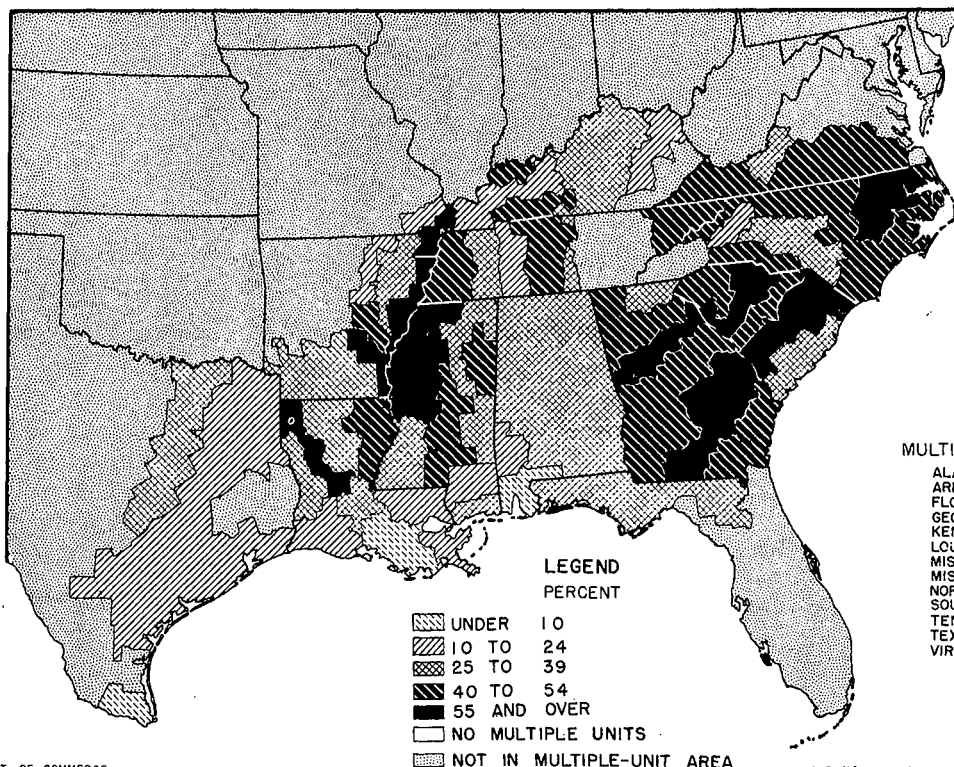
For 1940, statistics for plantations are presented in a special report entitled, "Special Study—Plantations." Only a very limited number of copies was printed and distributed, primarily to the Land-Grant Colleges in the South. If any of the 1940 data are desired, and the 1940 special report is not available in a reference library, copies of the tabular material may be obtained from the Bureau of the Census by paying the cost of making a photostatic copy. In the 1940 report, statistics are presented for the plantation as a whole, also for the farms comprising the plantation. Data are shown for 372 selected counties in 10 States.

For 1910, statistics for plantations were published as Chapter III in Volume V of the 1910 Census reports and in a monograph based on this and other statistical material issued by the Bureau of the Census in 1916 entitled, "Plantation Farming in the United States." Data are shown for areas representing 325 selected counties in 11 States.

The accompanying tabular presentation of the areas covered in multiple-unit or plantation studies and the definitions provide a convenient reference of the differences in the statistical treatment of multiple-unit operations for the several Censuses.



PERCENT OF LANDLORD-TENANT OPERATIONS CONTAINING MULTIPLE UNITS, 1954
(ECONOMIC AREA UNIT BASIS)



PERCENT
MULTIPLE-UNIT AREA...38.6

ALABAMA	29.3
ARKANSAS	41.9
FLORIDA	28.7
GEORGIA	46.0
KENTUCKY	30.7
LOUISIANA	31.6
MISSISSIPPI	44.9
MISSOURI	53.7
NORTH CAROLINA	43.2
SOUTH CAROLINA	49.6
TENNESSEE	38.6
TEXAS	20.3
VIRGINIA	43.2

LEGEND
PERCENT

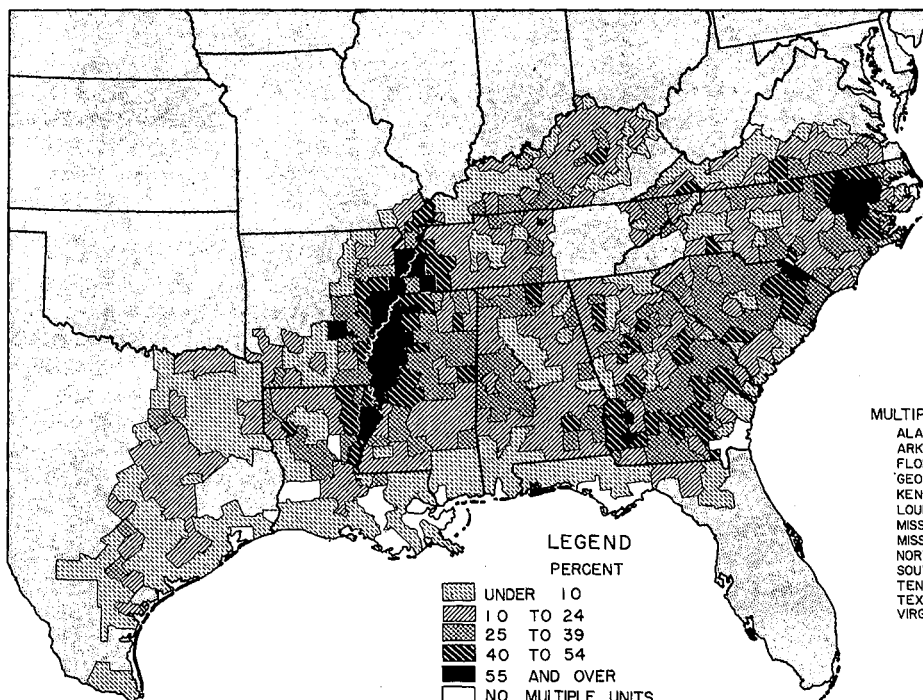
UNDER 10
10 TO 24
25 TO 39
40 TO 54
55 AND OVER
NO MULTIPLE UNITS
NOT IN MULTIPLE-UNIT AREA

U.S. DEPARTMENT OF COMMERCE

MAP NO. M54-006

BUREAU OF THE CENSUS

LAND IN MULTIPLE UNITS AS A PERCENT OF ALL LAND IN FARMS, 1954
(COUNTY UNIT BASIS)



PERCENT
MULTIPLE-UNIT AREA...22.3

ALABAMA	20.7
ARKANSAS	29.1
FLORIDA	8.0
GEORGIA	30.0
KENTUCKY	15.4
LOUISIANA	18.2
MISSISSIPPI	35.0
MISSOURI	23.7
NORTH CAROLINA	30.1
SOUTH CAROLINA	30.3
TENNESSEE	25.2
TEXAS	8.7
VIRGINIA	18.4

LEGEND
PERCENT

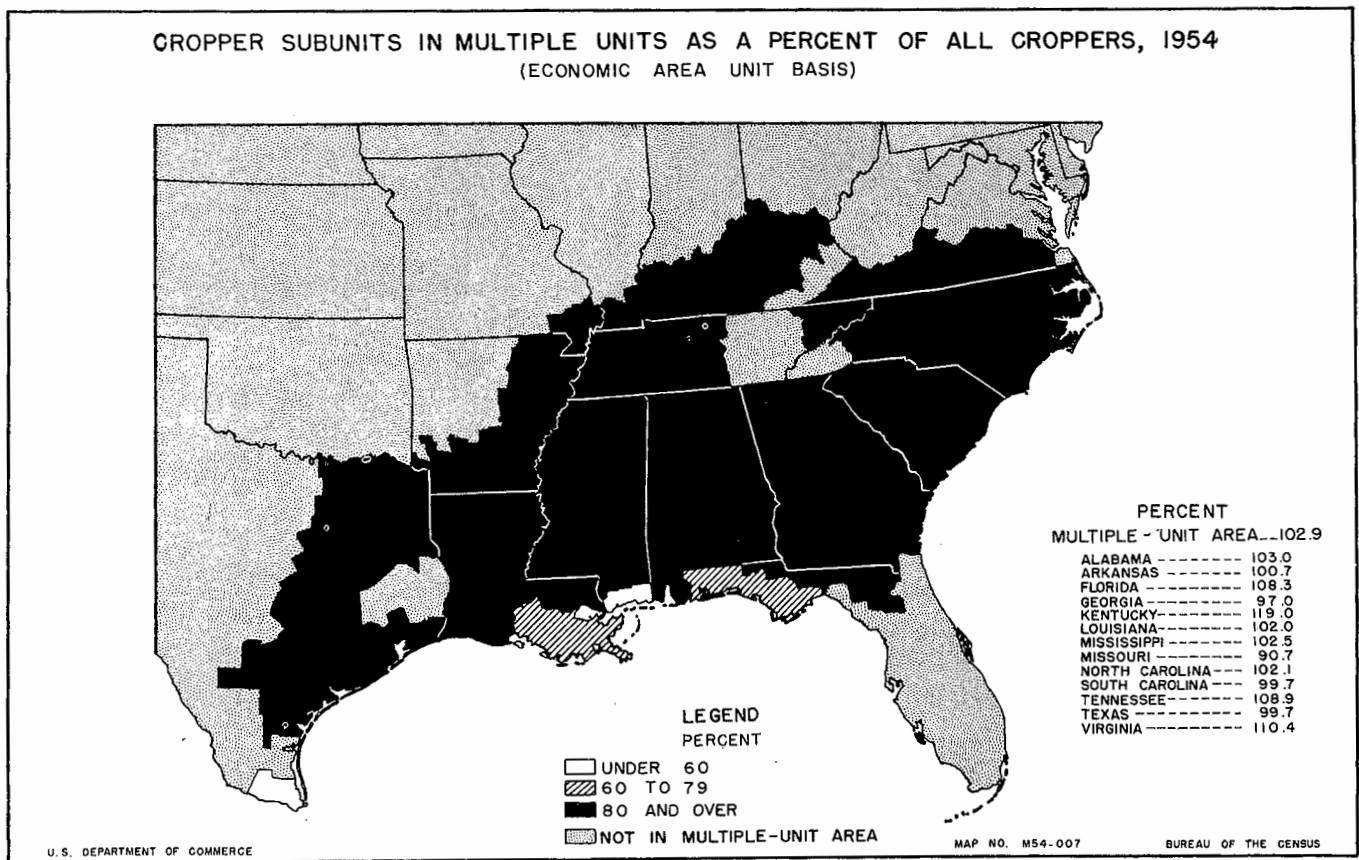
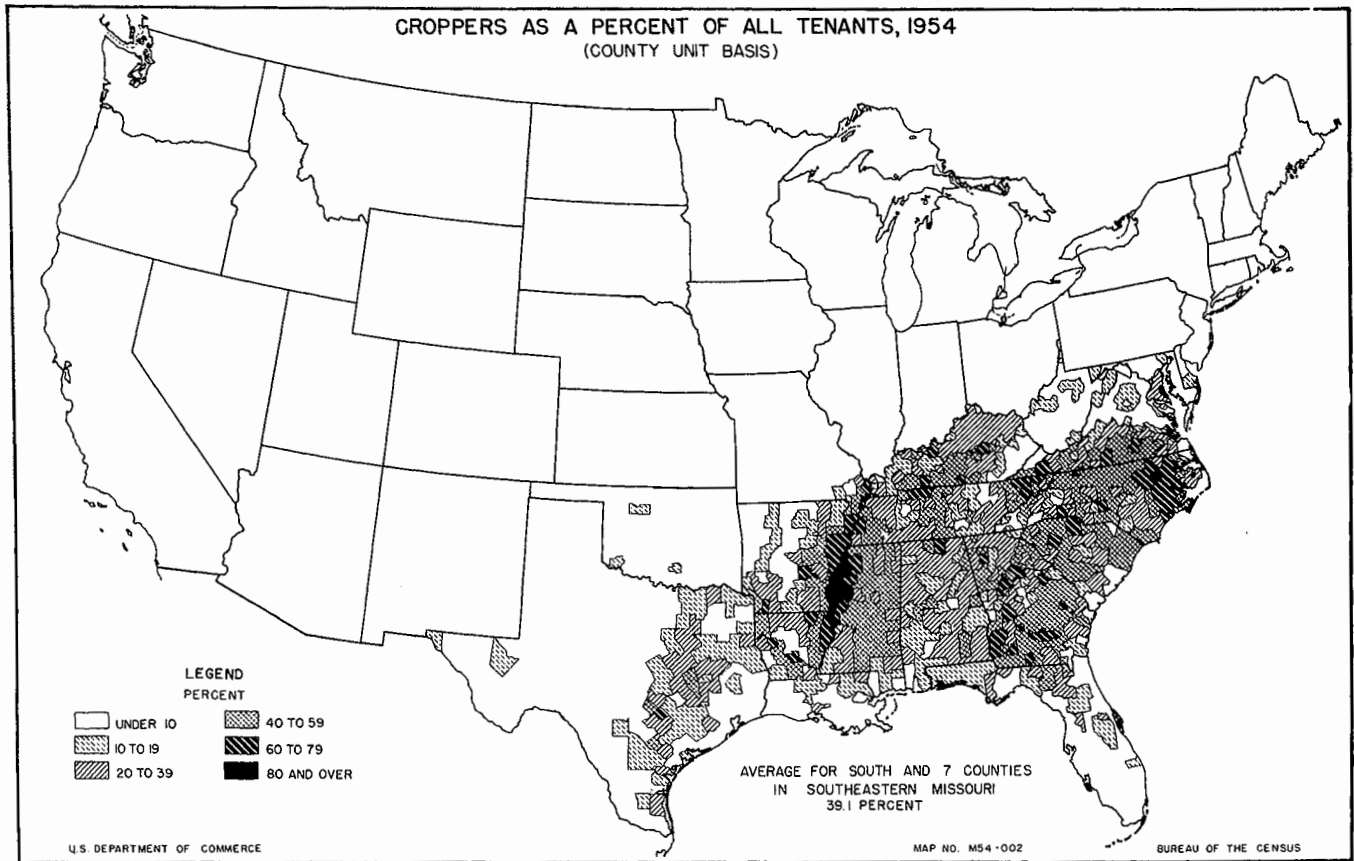
UNDER 10
10 TO 24
25 TO 39
40 TO 54
55 AND OVER
NO MULTIPLE UNITS
NOT IN MULTIPLE-UNIT AREA

U.S. DEPARTMENT OF COMMERCE

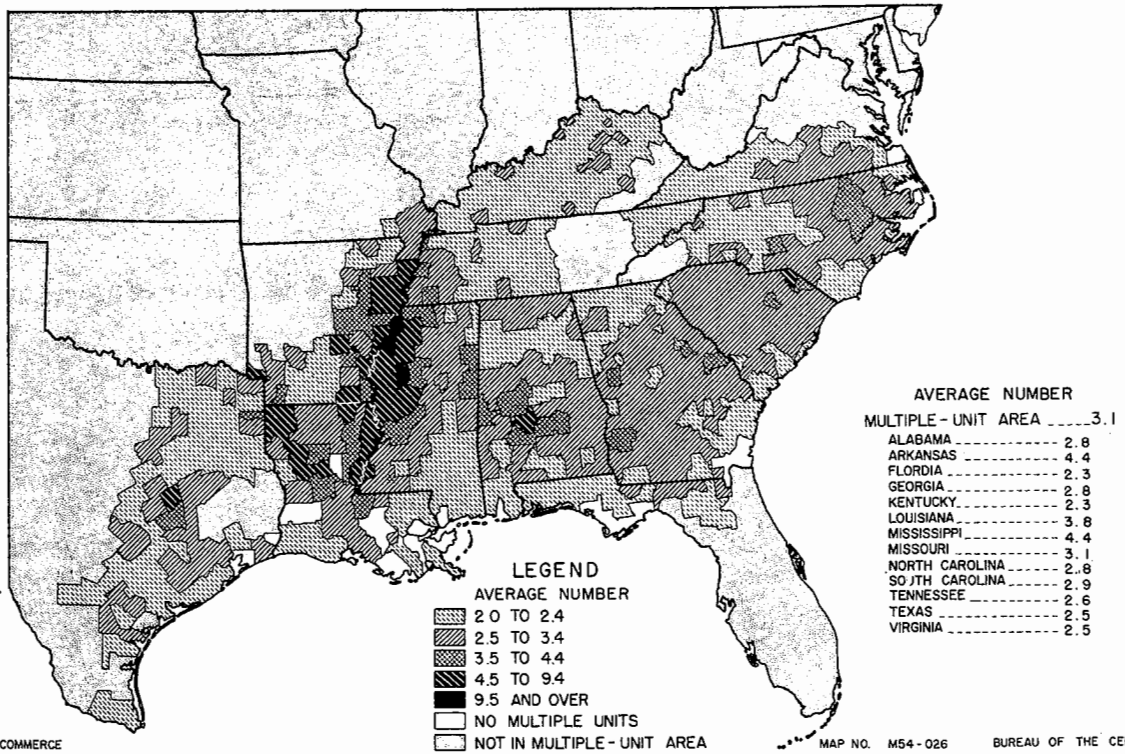
MAP NO. M54-010

BUREAU OF THE CENSUS

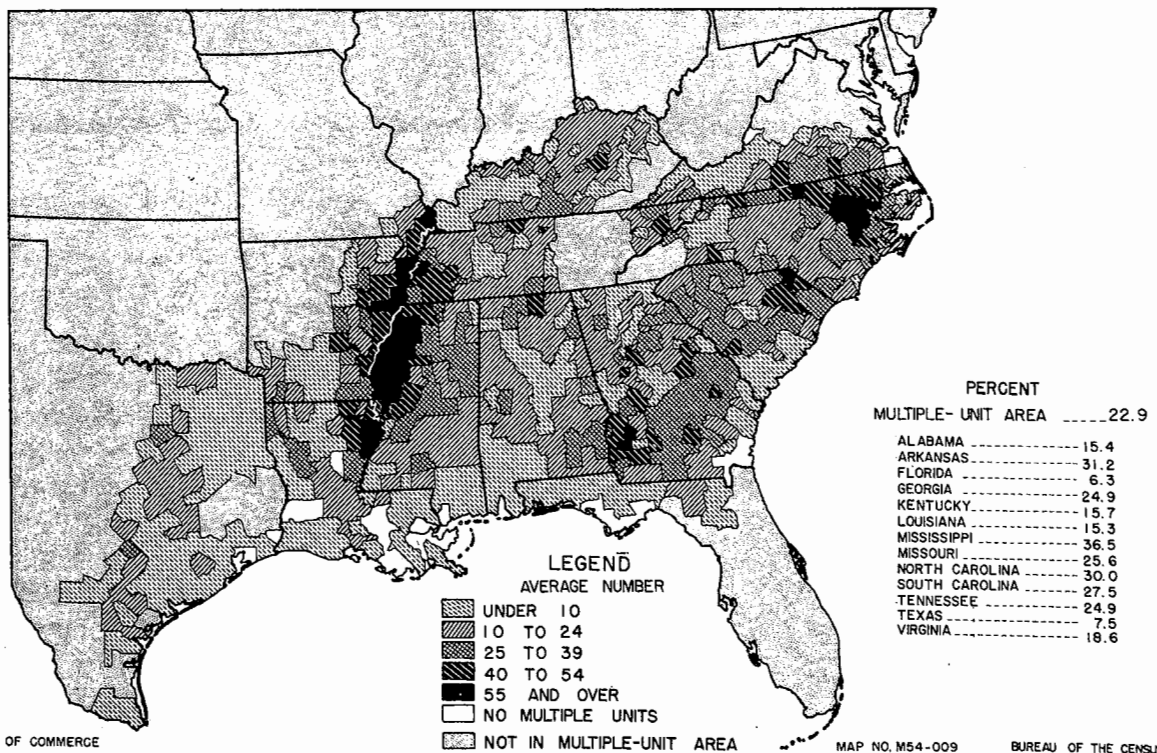
MULTIPLE-UNIT OPERATIONS



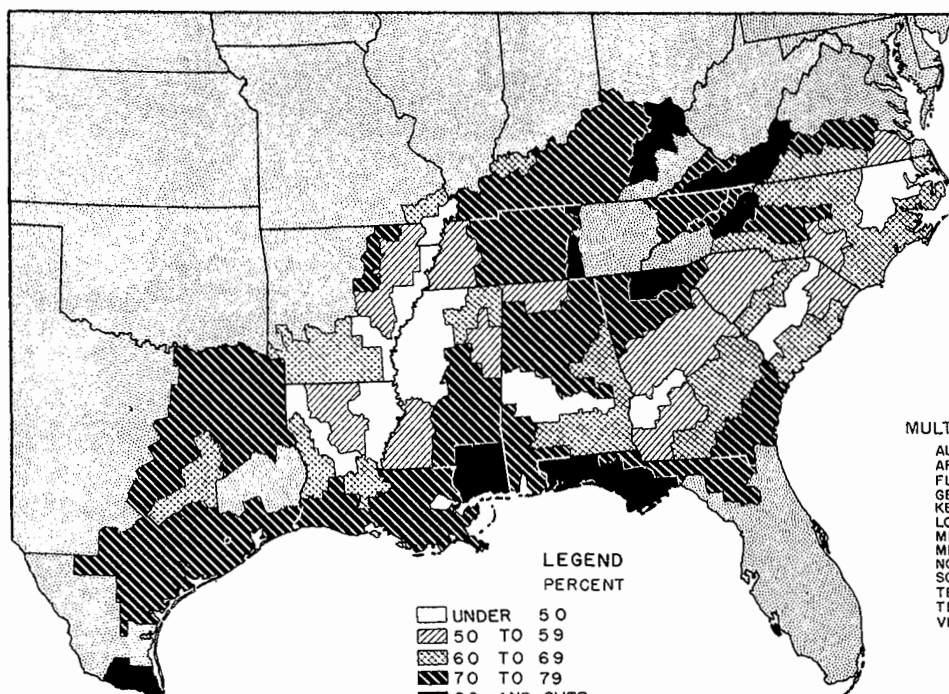
AVERAGE NUMBER OF SUBUNITS PER MULTIPLE UNIT, 1954
(COUNTY UNIT BASIS)



SUBUNITS IN MULTIPLE UNITS AS A PERCENT OF ALL FARMS, 1954
(COUNTY UNIT BASIS)



MULTIPLE UNITS CONTAINING HOME FARM AND ONE CROPPER ONLY AS A PERCENT
OF ALL MULTIPLE UNITS, 1954
(ECONOMIC AREA UNIT BASIS)



PERCENT
MULTIPLE-UNIT AREA 61.3

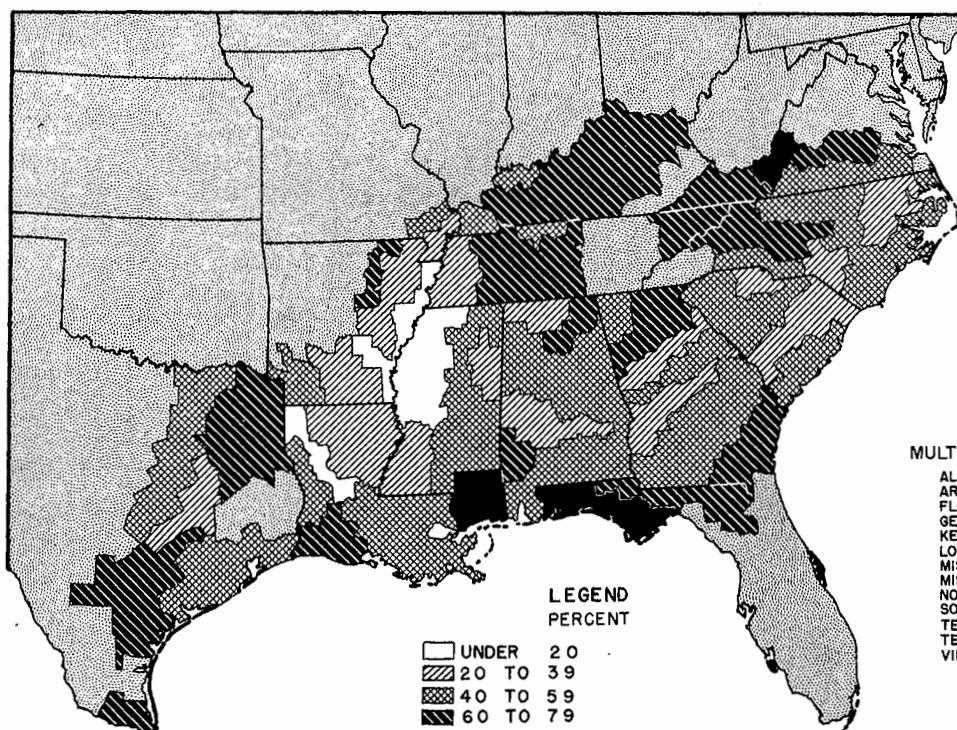
ALABAMA	65.4
ARKANSAS	46.2
FLORIDA	79.2
GEORGIA	62.5
KENTUCKY	77.0
LOUISIANA	51.7
MISSISSIPPI	52.2
MISSOURI	50.9
NORTH CAROLINA	58.4
SOUTH CAROLINA	55.3
TENNESSEE	68.2
TEXAS	73.1
VIRGINIA	69.5

U.S. DEPARTMENT OF COMMERCE

MAP NO. M54-008

BUREAU OF THE CENSUS

SUBUNITS IN MULTIPLE UNITS CONTAINING HOME FARM AND ONE CROPPER ONLY
AS A PERCENT OF TOTAL SUBUNITS IN ALL MULTIPLE UNITS, 1954
(ECONOMIC AREA UNIT BASIS)



PERCENT
MULTIPLE-UNIT AREA 40.1

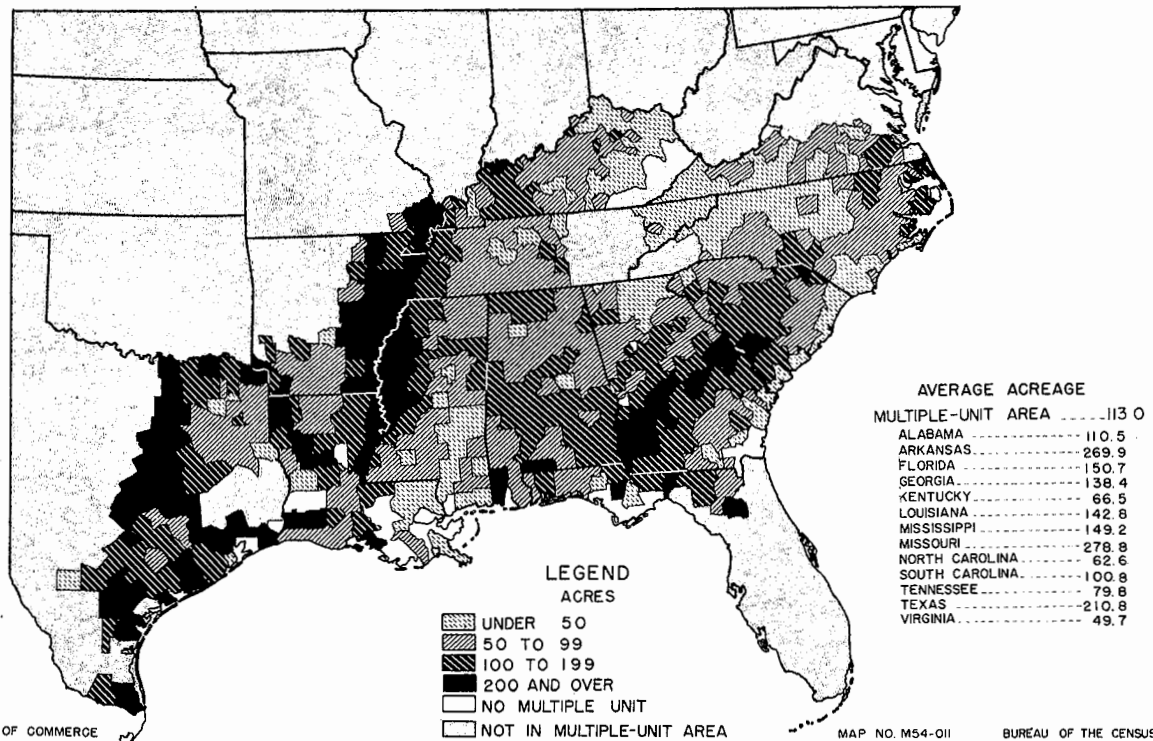
ALABAMA	46.7
ARKANSAS	21.0
FLORIDA	70.3
GEORGIA	45.1
KENTUCKY	65.9
LOUISIANA	27.2
MISSISSIPPI	23.9
MISSOURI	33.2
NORTH CAROLINA	41.1
SOUTH CAROLINA	37.5
TENNESSEE	52.4
TEXAS	57.9
VIRGINIA	55.5

U.S. DEPARTMENT OF COMMERCE

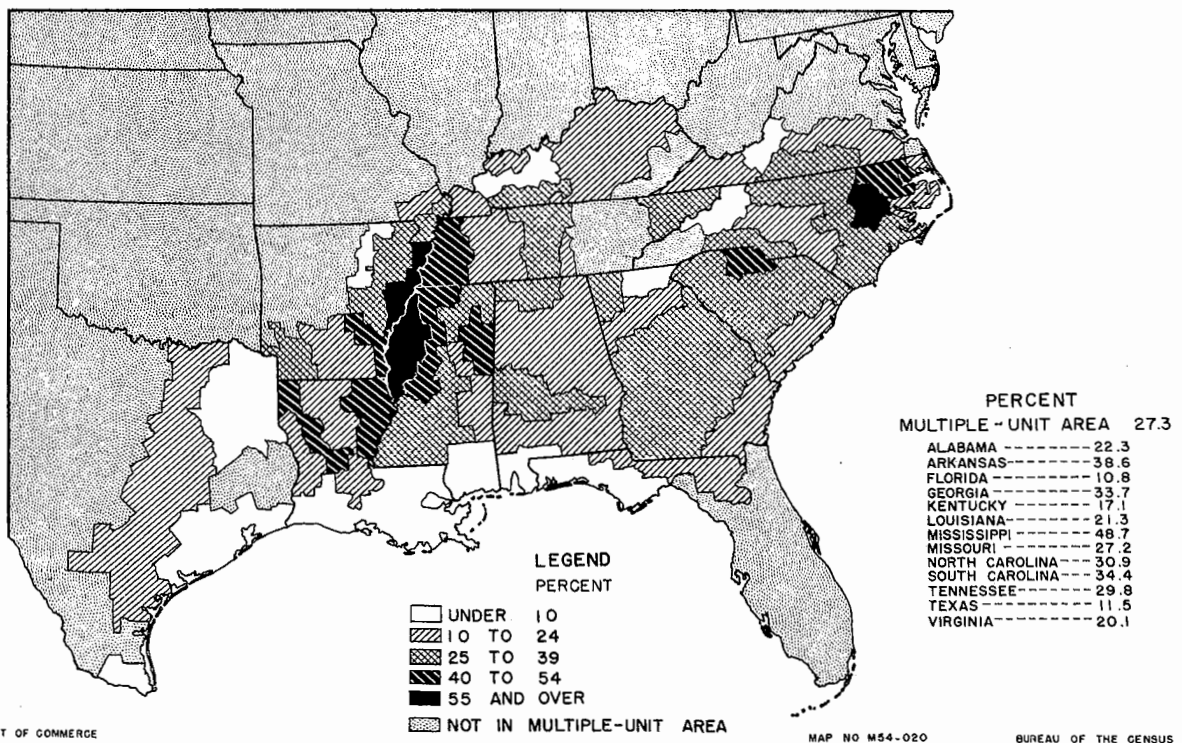
MAP NO. M54-021

BUREAU OF THE CENSUS

AVERAGE ACREAGE OF CROPLAND HARVESTED PER MULTIPLE UNIT, 1954
(COUNTY UNIT BASIS)

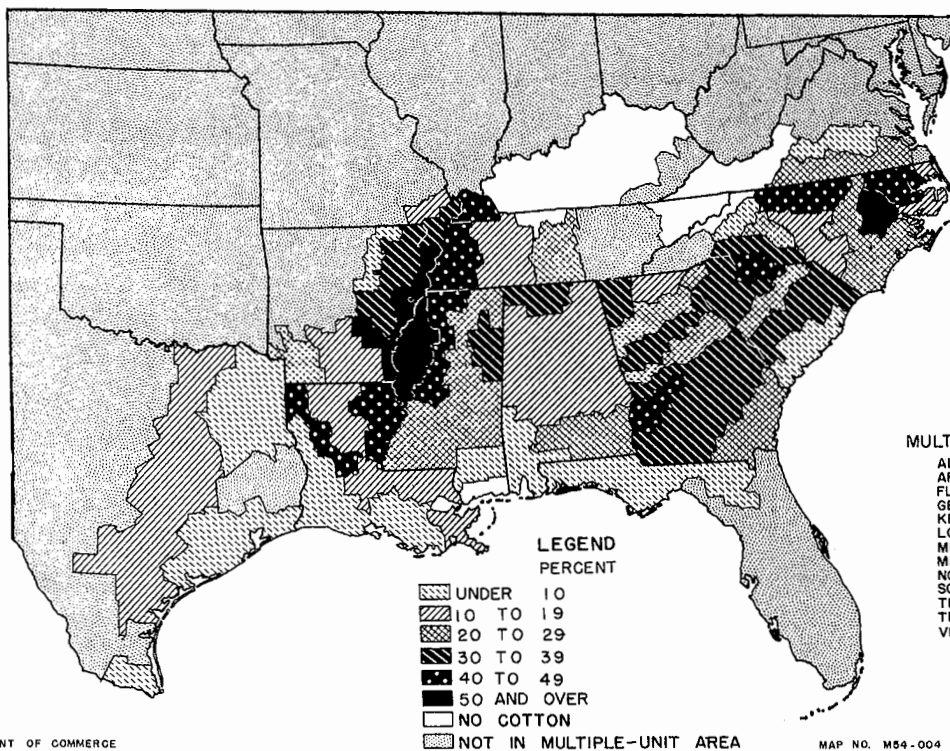


ACREAGE OF CROPLAND HARVESTED IN MULTIPLE UNITS AS A PERCENT
OF TOTAL CROPLAND HARVESTED, 1954
(ECONOMIC AREA UNIT BASIS)

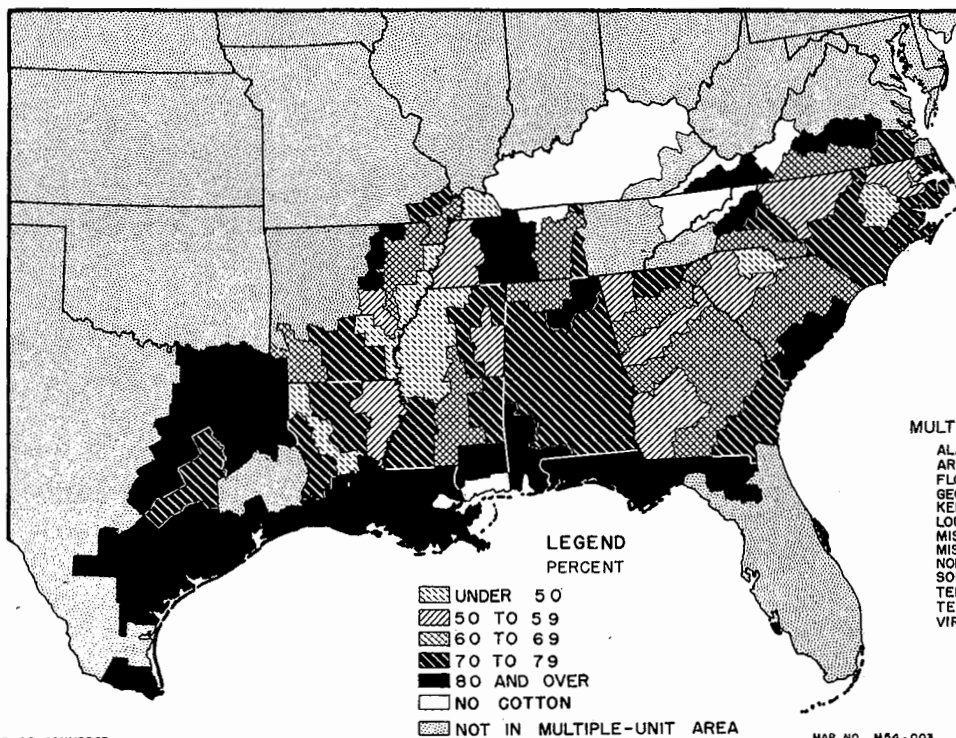


MULTIPLE-UNIT OPERATIONS

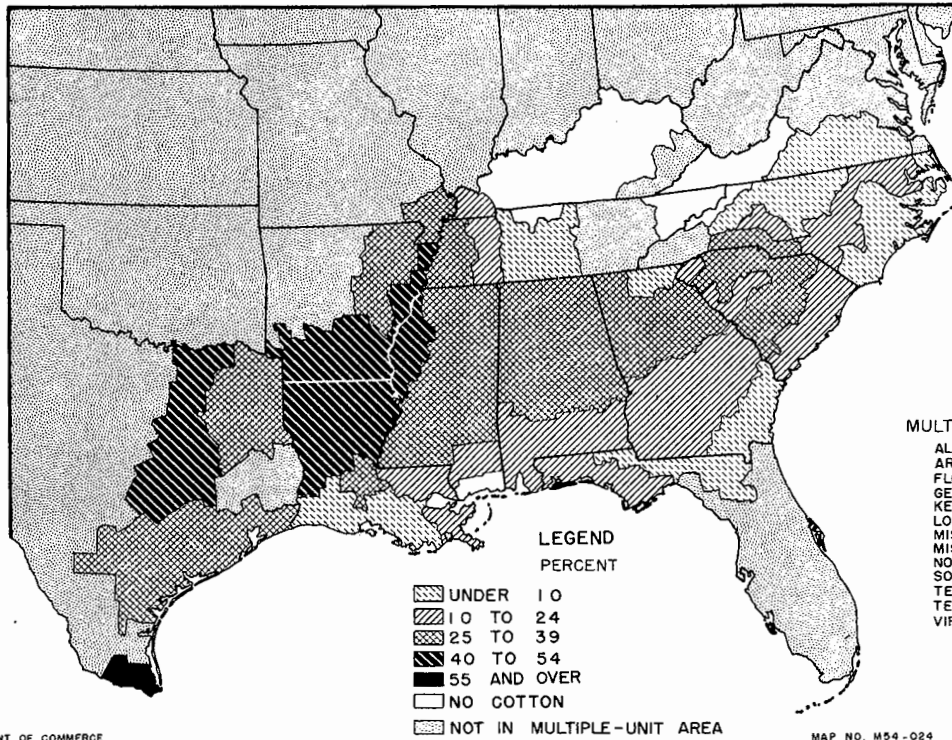
SUBUNITS IN MULTIPLE UNITS REPORTING COTTON AS A PERCENT
OF ALL FARMS REPORTING COTTON, 1954
(ECONOMIC AREA UNIT BASIS)



FARMS NOT IN MULTIPLE UNITS REPORTING COTTON AS A PERCENT
OF ALL FARMS REPORTING COTTON, 1954
(ECONOMIC AREA UNIT BASIS)



COTTON ACREAGE HARVESTED AS A PERCENT OF TOTAL CROPLAND HARVESTED
FOR MULTIPLE-UNIT OPERATIONS, 1954
(ECONOMIC AREA UNIT BASIS)



PERCENT
MULTIPLE-UNIT AREA--27.7

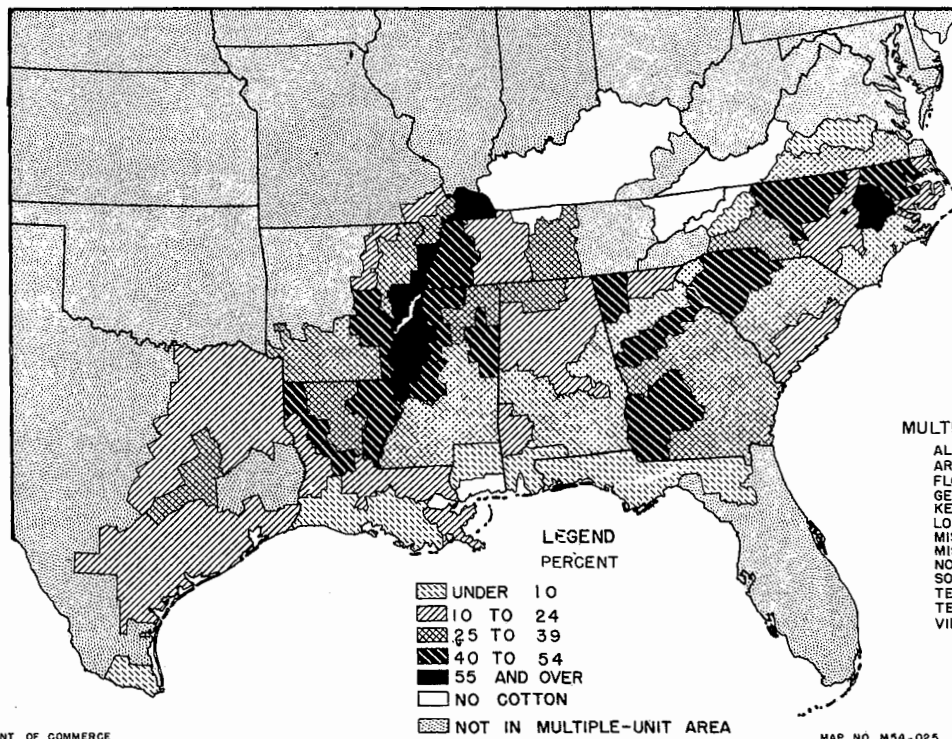
ALABAMA	28.2
ARKANSAS	42.9
FLORIDA	2.8
GEORGIA	19.7
KENTUCKY	0.7
LOUISIANA	38.5
MISSISSIPPI	40.4
MISSOURI	33.2
NORTH CAROLINA	11.0
SOUTH CAROLINA	27.1
TENNESSEE	19.9
TEXAS	41.7
VIRGINIA	1.3

U. S. DEPARTMENT OF COMMERCE

MAP NO. M54-024

BUREAU OF THE CENSUS

COTTON ACREAGE HARVESTED IN MULTIPLE UNITS AS A PERCENT
OF TOTAL COTTON ACREAGE HARVESTED, 1954
(ECONOMIC AREA UNIT BASIS)



PERCENT
MULTIPLE-UNIT AREA--34.4

ALABAMA	26.2
ARKANSAS	46.8
FLORIDA	7.9
GEORGIA	40.7
KENTUCKY	58.7
LOUISIANA	36.7
MISSISSIPPI	55.8
MISSOURI	31.4
NORTH CAROLINA	34.9
SOUTH CAROLINA	39.0
TENNESSEE	37.9
TEXAS	14.2
VIRGINIA	27.3

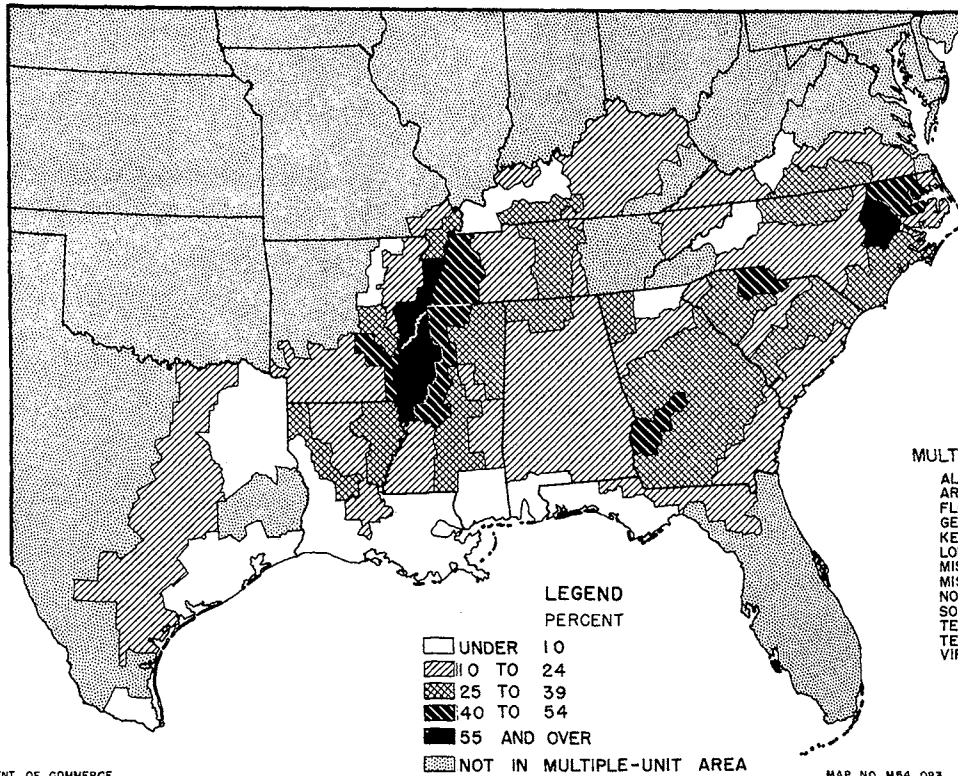
U. S. DEPARTMENT OF COMMERCE

MAP NO. M54-025

BUREAU OF THE CENSUS

MULTIPLE-UNIT OPERATIONS

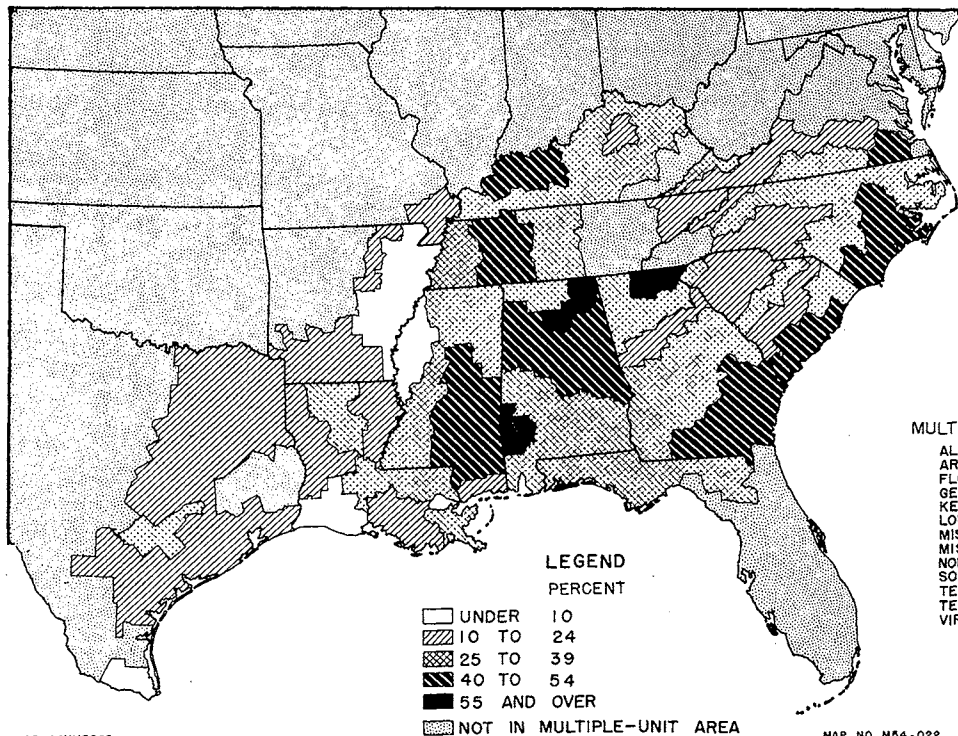
CORN ACREAGE HARVESTED FOR GRAIN IN MULTIPLE UNITS AS A PERCENT
OF TOTAL CORN ACREAGE HARVESTED FOR GRAIN, 1954
(ECONOMIC AREA UNIT BASIS)



PERCENT
MULTIPLE-UNIT AREA...24.7

ALABAMA	20.2
ARKANSAS	30.5
FLORIDA	9.3
GEORGIA	33.3
KENTUCKY	14.6
LOUISIANA	20.3
MISSISSIPPI	33.5
MISSOURI	22.5
NORTH CAROLINA	32.9
SOUTH CAROLINA	30.3
TENNESSEE	26.1
TEXAS	11.2
VIRGINIA	20.7

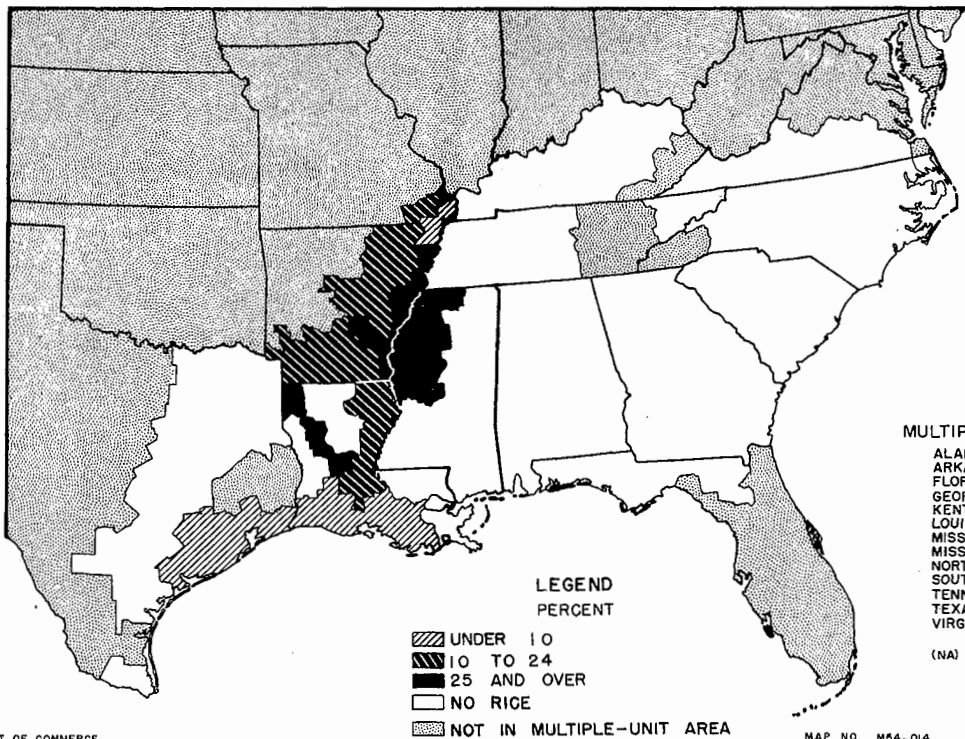
CORN ACREAGE HARVESTED FOR GRAIN AS A PERCENT OF TOTAL CROPLAND HARVESTED,
FOR MULTIPLE-UNIT OPERATIONS, 1954
(ECONOMIC AREA UNIT BASIS)



PERCENT
MULTIPLE-UNIT AREA... 25.1

ALABAMA	39.1
ARKANSAS	8.1
FLORIDA	28.8
GEORGIA	34.1
KENTUCKY	34.7
LOUISIANA	17.7
MISSISSIPPI	19.1
MISSOURI	15.4
NORTH CAROLINA	36.1
SOUTH CAROLINA	24.0
TENNESSEE	30.3
TEXAS	15.3
VIRGINIA	28.0

RICE ACREAGE HARVESTED IN MULTIPLE UNITS AS A PERCENT
OF TOTAL RICE ACREAGE HARVESTED, 1954
(ECONOMIC AREA UNIT BASIS)

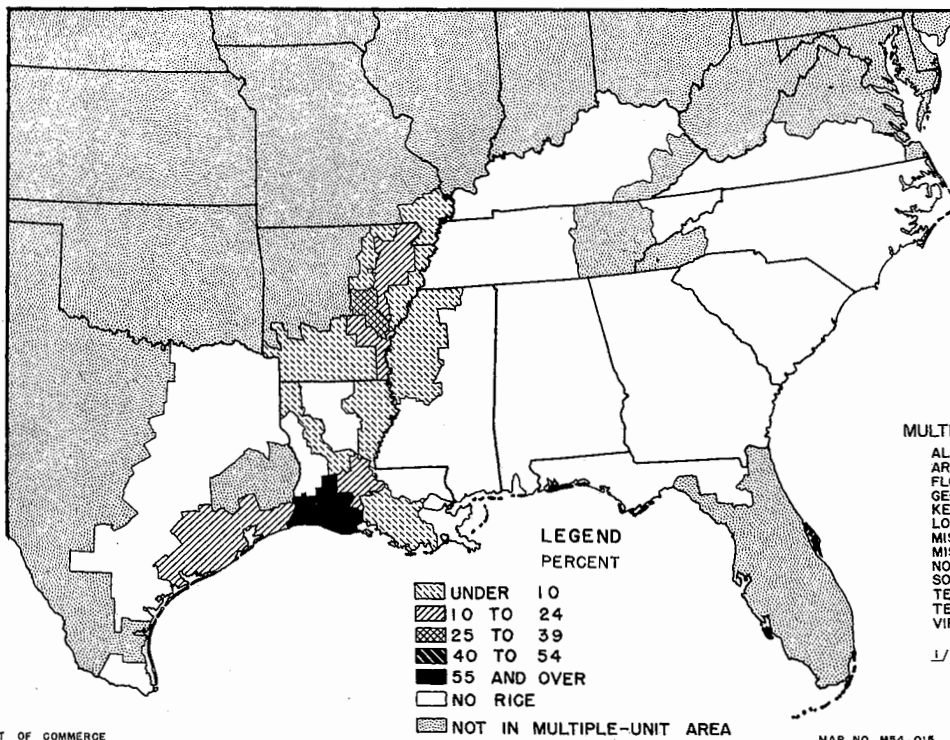


U.S. DEPARTMENT OF COMMERCE

MAP NO. M54-014

BUREAU OF THE CENSUS

RICE ACREAGE HARVESTED AS A PERCENT OF TOTAL CROPLAND HARVESTED,
FOR MULTIPLE-UNIT OPERATIONS, 1954
(ECONOMIC AREA UNIT BASIS)

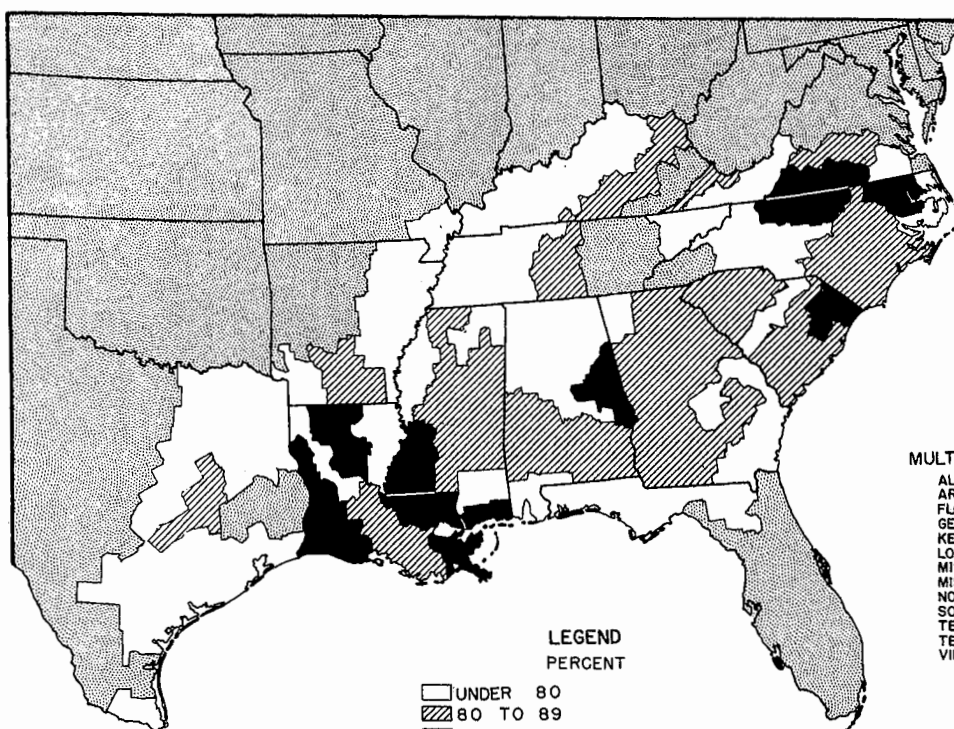


U.S. DEPARTMENT OF COMMERCE

MAP NO. M54-015

BUREAU OF THE CENSUS

PERCENT OF MULTIPLE-UNIT OPERATIONS REPORTING HORSES AND/OR MULES, 1954
(ECONOMIC AREA UNIT BASIS)



PERCENT
MULTIPLE-UNIT AREA 77.7

ALABAMA	75.4
ARKANSAS	51.8
FLORIDA	68.0
GEORGIA	81.3
KENTUCKY	77.8
LOUISIANA	80.6
MISSISSIPPI	78.6
MISSOURI	19.4
NORTH CAROLINA	85.8
SOUTH CAROLINA	86.4
TENNESSEE	75.4
TEXAS	51.4
VIRGINIA	85.7

LEGEND
PERCENT

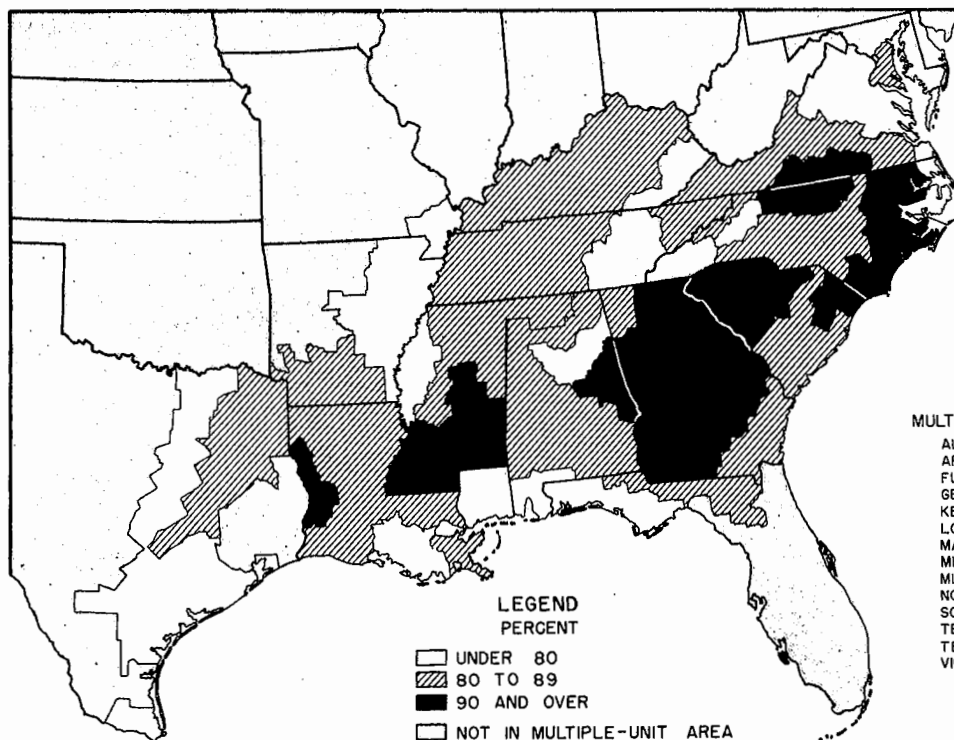
- UNDER 80
- ▨ 80 TO 89
- 90 AND OVER
- ▤ NOT IN MULTIPLE-UNIT AREA

U.S. DEPARTMENT OF COMMERCE

MAP NO. M54-018

BUREAU OF THE CENSUS

PERCENT OF MULTIPLE-UNIT OPERATIONS REPORTING HORSES AND / OR MULES
CENSUS OF 1950
(ECONOMIC AREA UNIT BASIS)



PERCENT
MULTIPLE-UNIT AREA 85.2

ALABAMA	84.4
ARKANSAS	74.0
FLORIDA	80.6
GEORGIA	91.6
KENTUCKY	84.8
LOUISIANA	85.3
MARYLAND	82.2
MISSISSIPPI	86.0
MISSOURI	52.7
NORTH CAROLINA	88.9
SOUTH CAROLINA	89.9
TENNESSEE	85.0
TEXAS	61.8
VIRGINIA	88.8

LEGEND
PERCENT

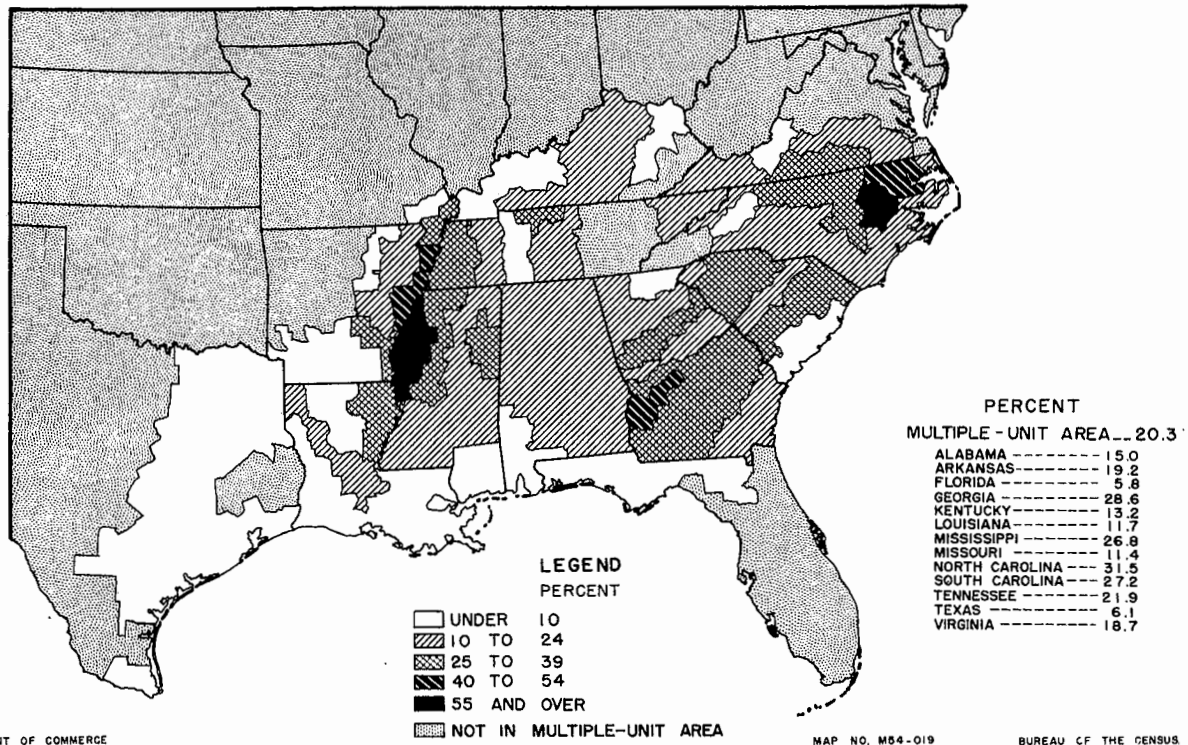
- UNDER 80
- ▨ 80 TO 89
- 90 AND OVER
- ▤ NOT IN MULTIPLE-UNIT AREA

U.S. DEPARTMENT OF COMMERCE

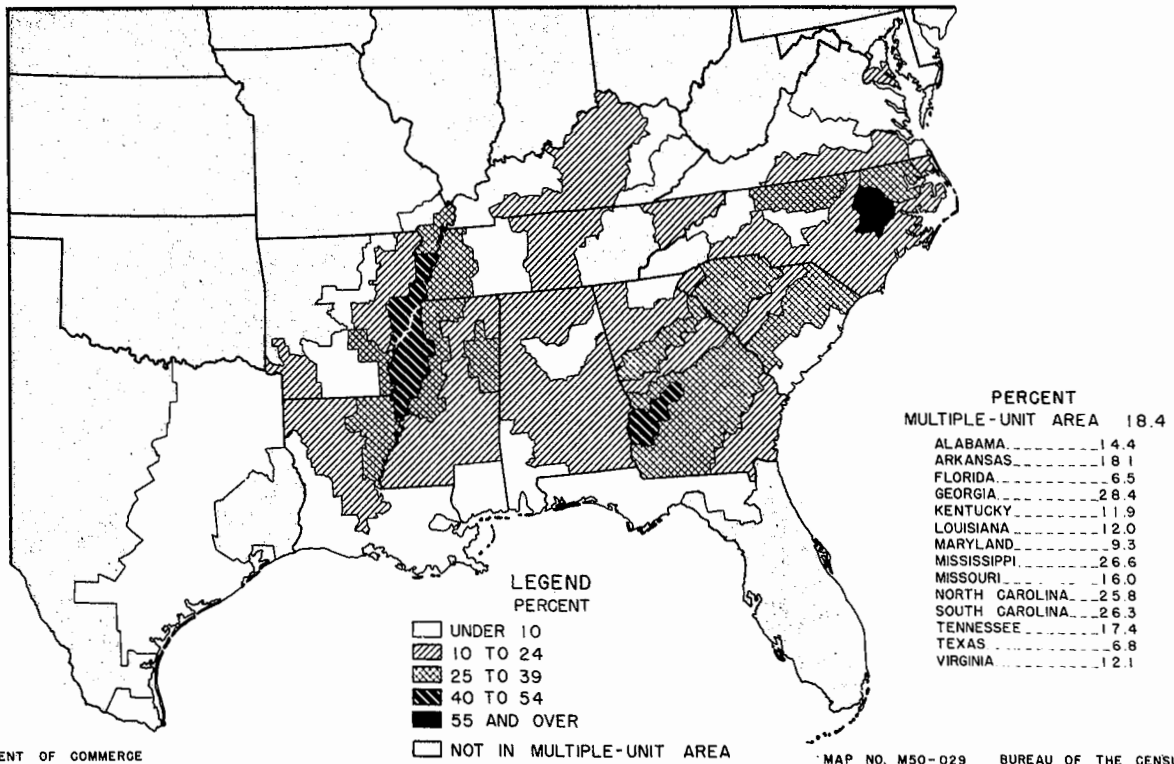
MAP NO. M50-030

BUREAU OF THE CENSUS

NUMBER OF HORSES AND MULES ON MULTIPLE UNITS AS A PERCENT
OF ALL HORSES AND MULES, 1954
(ECONOMIC AREA UNIT BASIS)

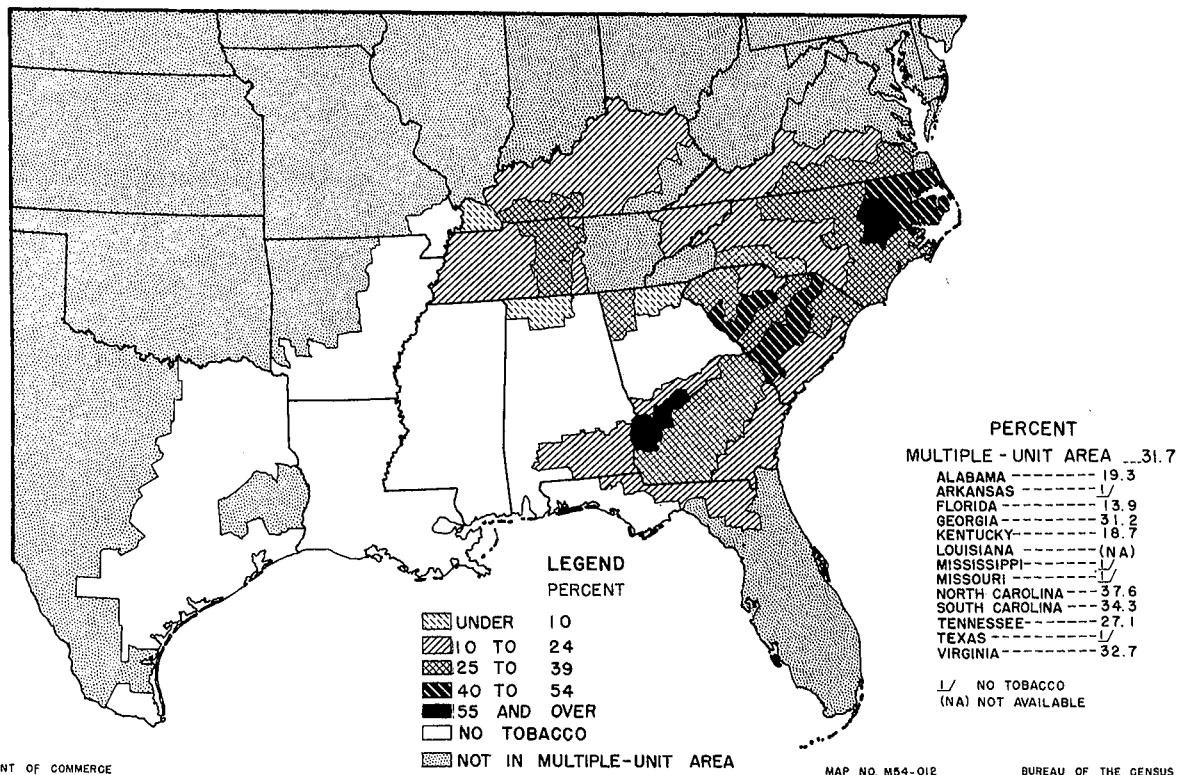


NUMBER OF HORSES AND MULES ON MULTIPLE UNITS AS A PERCENT
OF ALL HORSES AND MULES: CENSUS OF 1950
(ECONOMIC AREA UNIT BASIS)

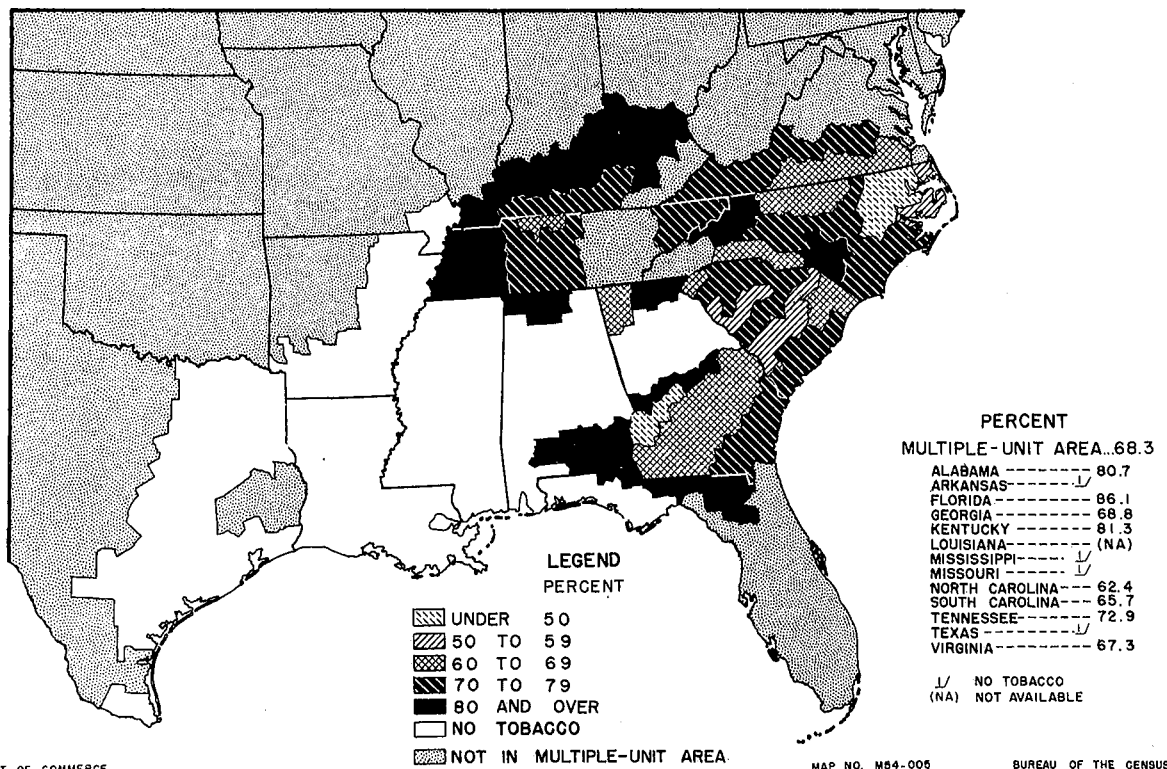


MULTIPLE-UNIT OPERATIONS

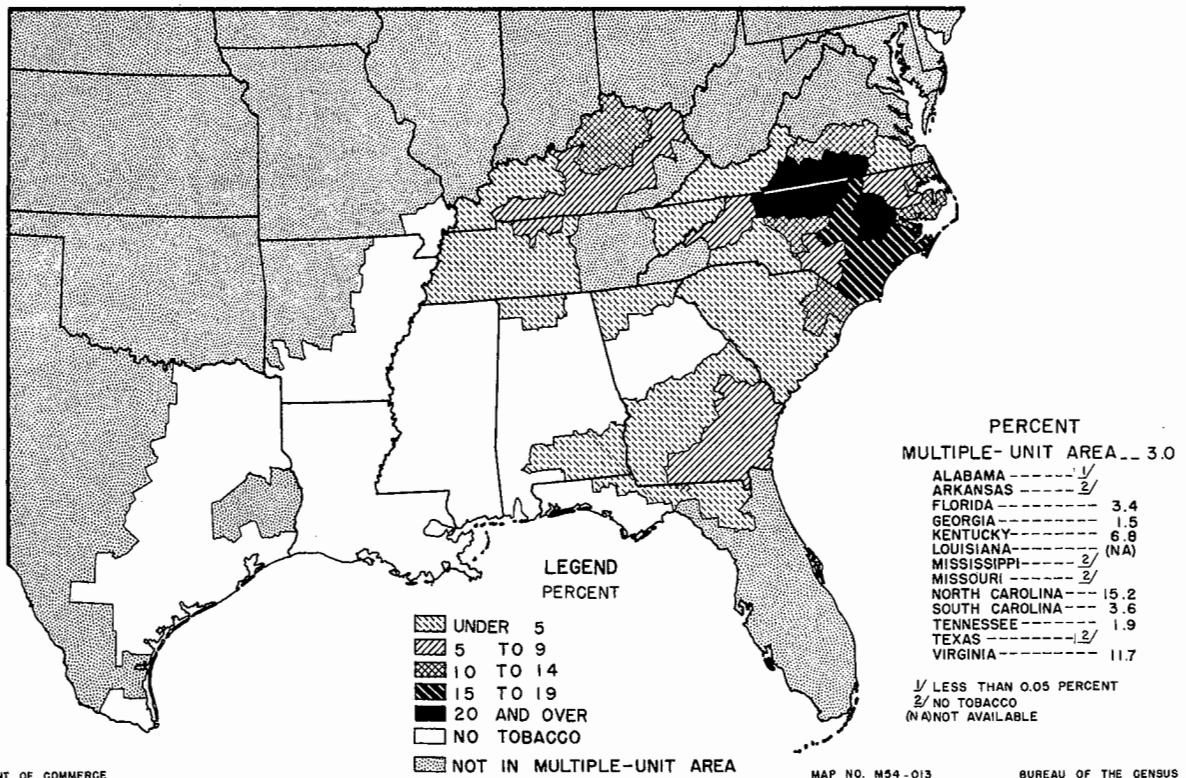
TOBACCO ACREAGE HARVESTED IN MULTIPLE UNITS AS A PERCENT
OF TOTAL TOBACCO ACREAGE HARVESTED, 1954
(ECONOMIC AREA UNIT BASIS)



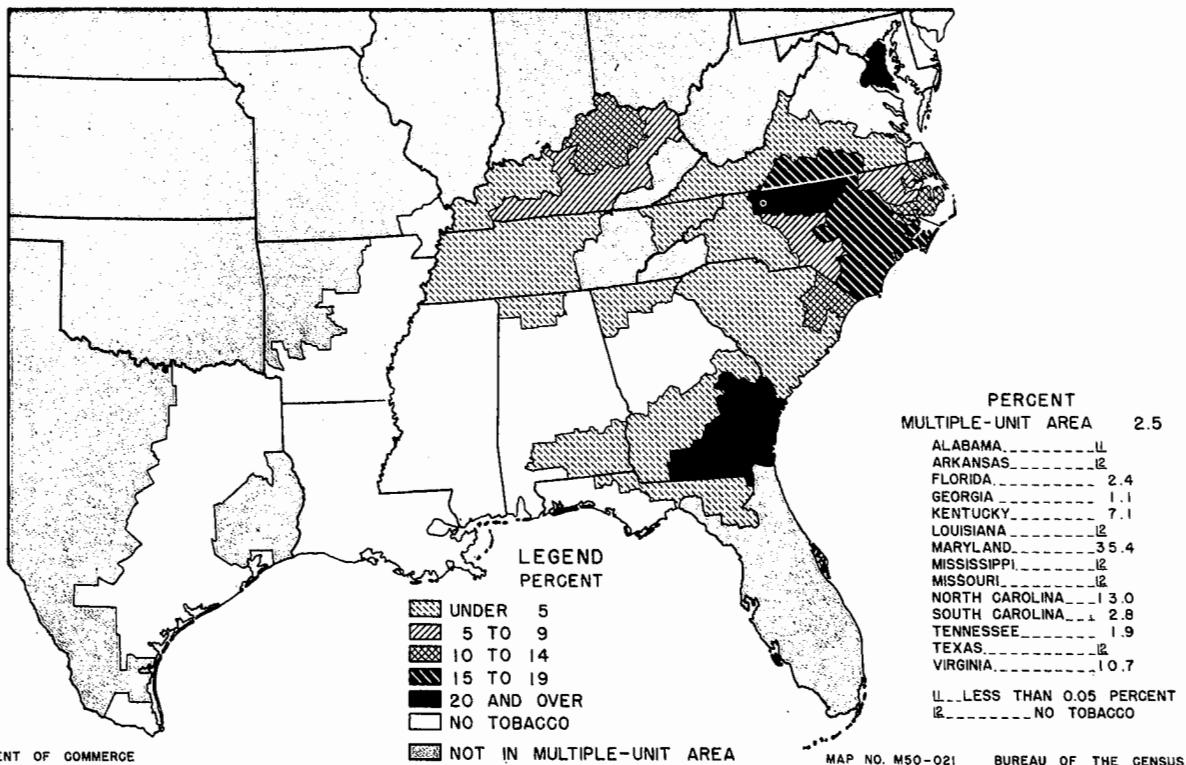
TOBACCO ACREAGE NOT IN MULTIPLE UNITS AS A PERCENT
OF TOTAL TOBACCO ACREAGE, 1954
(ECONOMIC AREA UNIT BASIS)



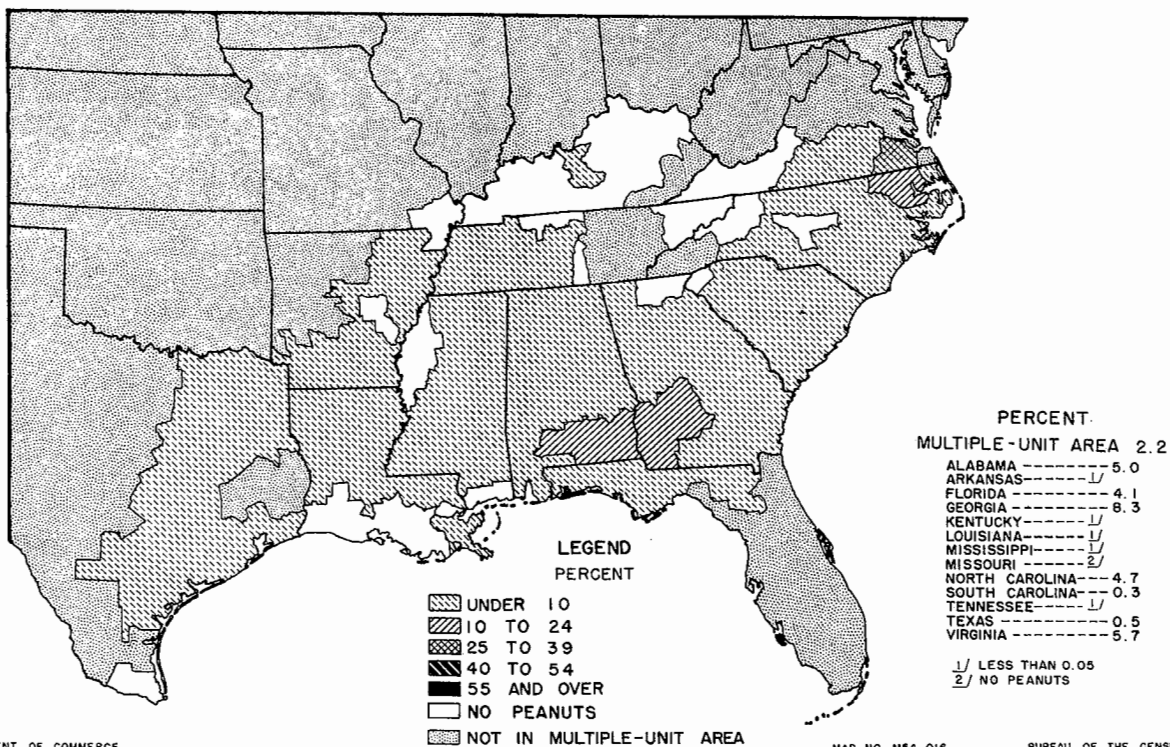
TOBACCO ACREAGE HARVESTED AS A PERCENT OF TOTAL CROPLAND HARVESTED,
FOR MULTIPLE-UNIT OPERATIONS, 1954
(ECONOMIC AREA UNIT BASIS)



TOBACCO ACREAGE HARVESTED AS A PERCENT OF TOTAL CROPLAND HARVESTED,
FOR MULTIPLE-UNIT OPERATIONS: CENSUS OF 1950
(ECONOMIC AREA UNIT BASIS)



PEANUT ACREAGE HARVESTED FOR PICKING OR THRESHING AS A PERCENT
OF TOTAL CROPLAND HARVESTED, FOR MULTIPLE-UNIT OPERATIONS, 1954
(ECONOMIC AREA UNIT BASIS)



PEANUT ACREAGE HARVESTED FOR PICKING OR THRESHING IN MULTIPLE UNITS AS A PERCENT
OF TOTAL PEANUT ACREAGE HARVESTED FOR PICKING OR THRESHING, 1954
(ECONOMIC AREA UNIT BASIS)

