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# **COSTS OF CROP PRODUCTION**

## **by Size of Farm**

**CENTRAL  
COTTON-TOBACCO AREA  
OF NORTH CAROLINA**

UNITED STATES DEPARTMENT OF AGRICULTURE  
Economic Research Service  
Farm Economics Division

# CONTENTS

	Page
SUMMARY . . . . .	ii
INTRODUCTION. . . . .	1
The Nature of Farm Costs . . . . .	1
The Purpose of This Study . . . . .	3
Use of the Cost Data . . . . .	3
Description of Area . . . . .	3
The Procedure . . . . .	4
DESCRIPTION OF FARMS . . . . .	5
Crops Grown . . . . .	6
Crop Yields . . . . .	7
Livestock Enterprises . . . . .	7
Tenure of Farmers . . . . .	7
Farms With Tractors . . . . .	10
Family Labor . . . . .	12
COSTS OF PRODUCING MAJOR CROPS . . . . .	12
Labor Costs per Acre . . . . .	12
Power and Machinery Costs per Acre . . . . .	13
Materials and Services Costs per Acre . . . . .	15
Total Costs per Acre . . . . .	17
Relation of Size of Farm to Unit Costs . . . . .	19
APPENDIX . . . . .	21



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## SUMMARY

Costs per pound of producing tobacco in 1956 were 16 percent lower on large farms in the central cotton-tobacco area of North Carolina than on small farms in the same area, and for cotton they were 20 percent lower on the large farms. Costs of producing corn were more than 40 percent lower and costs of producing soybeans, oats, and wheat were more than 50 percent lower on the large farms. Costs of producing cotton, tobacco, and corn were lowest on the large single-unit farms; costs of producing soybeans, oats, and wheat were lowest on large multiple-unit farms (farms with croppers).

These conclusions are based on a study of 267 farms selected at random and surveyed in 1957. The cost estimates exclude charges for land and management, but they include charges for all labor at wage rates paid to hired labor.

Farms ranged in size from 4.2 to 305 acres of cropland. Separate analyses were made of single- and multiple-unit farms--that is, farms without croppers and those with croppers. Each of these classes of farms was divided into 4 size groups. The small- and medium-sized farms in each class include farms in the lowest and middle third of all farms in the sample arrayed by acreage of cropland. The medium-large and large farms together comprise the one-third of the largest farms in each of their respective classes. The two groups of large farms include the fewest number of farms and span the widest range in acreage of cropland.

Much of the difference in costs reflected the degree of mechanization associated with size, which on the larger farms had reduced labor requirements per acre and per unit of production. Total power and machinery costs were higher on the larger farms, but costs per acre and per unit of production were lower because fixed costs were spread over a larger volume of production.

Assuming that production practices were the same in 1959 as in 1956, it is estimated that production costs in 1959 were 2 to 7 percent higher because of higher prices paid for goods and services used in production. Costs rose most on farms that bought most of the seed oats and seed wheat, but there was no particular relationship between size of farm and proportion of crop seeds purchased. The general relationship between size of farms and costs of production was the same in both years.

# **COSTS OF CROP PRODUCTION, BY SIZE OF FARM, CENTRAL COTTON-TOBACCO AREA OF NORTH CAROLINA**

by

W. T. Chumney and James Vermeer  
Farm Economics Division, Economic Research Service

## **INTRODUCTION**

In an agricultural industry as diverse as that in the United States, costs of production of any specified commodity vary widely between areas, and between farms of different types and sizes within areas.

Changes in technology are among the chief reasons for differences in costs because they do not occur on all farms simultaneously. Many technological improvements are profitable only if volume of production per farm is sufficiently large. Others are applicable only on selected types of farms. Still others are adaptable only in selected areas. Even a simple technological improvement such as the use of hybrid seed corn required nearly 30 years for adoption on 98 percent of the farms producing corn in the United States. In areas where adapted hybrids were available, farmers accepted the change in relatively few years, but plant breeders needed most of the 30 years to develop varieties adaptable in other areas.

Thus, differences in costs of production due to differences in time of adoption of only one simple technological improvement persisted for many years. In the meantime, other technological improvements were being introduced and adopted at uneven rates. Consequently, differences in costs of production among areas and farms remain large, although rapid changes may occur on some sizes or types of farms.

Like farmers in other parts of the country, farmers in the central cotton-tobacco area of North Carolina have adopted in recent years a number of changes in methods of producing their major crops. Tractors have largely replaced mules as a source of power. Mechanical harvesting of corn, soybeans, and small grains is common, and technical breakthroughs in the mechanical harvesting of cotton and tobacco are imminent. Petroleum fuels

have replaced farm-raised wood as a source of heat in curing tobacco.

With advances in technology, costs tend to decline, but gains obtained through technology may be partly or wholly canceled by rising prices of the goods and services used in production. Most of the technological changes have reduced labor requirements, but have added to the cash costs of machinery and other resources that must be bought off the farm. Consequently, their adoption has been more economically feasible on some sizes of farms than on others.

This report presents the findings of a recent study of costs of producing cotton, tobacco, corn, soybeans, oats, and wheat on several sizes of farms in the central cotton-tobacco area of North Carolina. An earlier report, based on the same study, included estimates of costs of owning and operating machines on the same group of farms.<sup>1</sup>

## **The Nature of Farm Costs**

Most estimates of total costs of production of farm commodities are mixtures of estimates of actual costs of purchased inputs used by producers of the commodity in question and values assigned to the non-purchased inputs. Costs of purchased inputs do not cause any particular difficulty in estimating costs of producing farm commodities. But, unlike most other production, production of farm commodities involves the use of goods and services owned or supplied by farmers that frequently have no alternative use and for which there is

<sup>1</sup>Chumney, W. T., and Vermeer, James. The Use and Cost of Tractor Power and Equipment, by Size of Farm, in the Central Cotton-Tobacco Area of North Carolina, 1956. N.C. State Coll., Dept. Agr. Econ., A.E. Inform. Ser. 82, 1961.

no established market. These nonpurchased inputs frequently comprise a large part of all inputs used; they do not flow through the market channels, consequently, the only way to charge for their use is to impute to them some cost or value.

The most important of these nonpurchased inputs is unpaid family labor. It usually is valued at what it could earn in its next most remunerative use. In principle, this is an acceptable method. In practice, it is difficult to decide what this use is. Much of the family labor used on farms has no alternative use. Therefore, in principle, such labor has no value. Usually, we are reluctant to accept this conclusion because the lack of alternatives is difficult to substantiate, and it violates our sense of justice. A more generally acceptable standard of value is to value this labor at what it would be worth if hired by another farmer, but in many situations this leads to excessive charges for family labor. Most farmers would not hire labor at prevailing wage rates to spend 30 minutes a day to care for a flock of 50 hens, for example, or hire labor to spend an hour per acre to pull a few weeds that probably would have little effect on yields.

But offsetting, in part at least, the disadvantage of valuing family labor at wage rates of hired farmworkers is the fact that operator's labor is usually valued at the same rate with no recognition given to his value as a manager. On small farms, however, much of the operators' labor also has no alternative use and may, therefore, be overvalued.

Finding an acceptable basis for charging for the use of land is even more difficult. In a few areas where land is rented for cash the problem is easily solved. However, in areas where crop farming predominates most rented land is paid for by a share of the crop. Charges for share rent are difficult to estimate because of the variety of arrangements for sharing expenses as well. But more fundamentally, is a share of the crop an addition to the tenant's costs or does it merely reduce the amount of the product the tenant has to sell? If it is a cost of the tenant's share of the product, then it is income to the landlord and, therefore, reduces his cost. In the combined cost of landlord's and tenant's share of the crop, the land charge (excluding taxes and maintenance costs) would be zero. This hardly is an acceptable solution. But perhaps if an acceptable method can be found for

charging for land on an owner-operated farm the principle can be applied to a share-rented farm under the assumption that landlord and tenant are joint owner-operators.

Some equally difficult problems confront us in estimating charges for owner-operated land. It may be argued that the cost of land to the present owner is the only basis of value for cost purposes. It is a cost in the sense that the land was purchased just as other inputs are purchased. However, it might have been bought at a time when land prices were much lower (or higher) than in the period for which we are estimating costs of production. Also, using this basis for costs is not consistent with charging for land in its next most remunerative use.

Charging for the use of land on the basis of its current market value is perhaps the most common method. But little information is available on value of the farmland in an operating unit, since most of the data on real estate values are based on the sales of a small fraction of all farmland. Frequently, these values reflect the value of specific pieces of land for additions to existing farms, for highway use, or for subdividing for industrial or residential use. Seldom are values for these purposes comparable with the value of farmland as a whole-farm economic unit. Even in the very few cases where titles to whole farms are transferred from one farmer to another, the value usually includes buildings of various sizes and kinds of construction, and in various conditions of repair.

Even if the question of the proper value base for land could be answered satisfactorily, the question of how much of this cost or value to charge to each year or production period still remains. If we assume that a charge for the use of equity capital is justified, then it seems logical to charge the same rate that this capital could earn if invested in similar income-producing assets with similar risks. Charging for this capital at the rate it could earn if invested in farm mortgages, with due allowance for the difference in risk, appears to be justified.

At this point it seems appropriate to raise the question of whether any charge for the use of equity capital is justified in view of the most common use of farm cost data. Perhaps the most frequent use of such data is to compare costs of production with the price of the product. In

so doing, most people have in mind that an industry, if it is to be profitable, must receive a price for its product in excess of the total cost of the product. In most industries other than farming, however, total costs include charges for all resources used in production except equity capital. This capital is the residual claimant to profits. All charges for labor, management, rent and borrowed capital are included in total costs. In contrast, almost all management used in agriculture receives no wages or salary, and three-fourths of the labor is unpaid. Thus, estimates of total costs of production in agriculture differ substantially from, and are not comparable to, total costs in other industries, and anyone attempting to use them in price-cost comparisons does so at his peril.

In the study reported here, no charge is made for management or the use of land. Labor is valued at wage rates paid to farmworkers for similar work.

### The Purpose of This Study

In developing farm programs, it often is necessary to be able to answer such questions as: What effect will the program have on changes in size of farms? What size of farm is likely to predominate? How do costs in one area compare with those in competing areas? And, if farmers in one area adjust to the most efficient size of unit for their area, can they compete successfully with farmers in other areas? Will the program, as designed, obtain the desired objectives? Information on costs by size of farms casts some light on all these questions.

Although it is generally agreed that costs of production per unit of product are lower on large farms than on small farms, little information is available on the amount of this difference in costs. The study reported here was designed to provide measures of the differences in costs of producing major crops on four sizes of cotton-tobacco farms in North Carolina without croppers, and four sizes of similar farms with croppers. Farms without croppers were treated separately from farms with croppers in order to minimize the effect of factors other than farm size. For convenience these are referred to as single-unit and multiple-unit farms, respectively.

The physical requirements for production are representative of conditions in 1956. Methods of production in the area have not changed appreciably since then. However, estimates were made to reflect changes in prices paid by farmers for production goods and services from 1956 to 1959.

### Use of the Cost Data

Costs of production by size of farm and enterprise provide farmers with management data and provide farm program developers with a basis for estimating changes in farming that may emerge from changing technology. With information on differences in costs by size of farm or enterprise, farmers can know what changes in cost may be expected from buying or renting more land. The data in this study generally do not indicate the most efficient size of farms but do show the relative costs among the different sizes of farms included in the study. The selection of farms by a random sampling method did not include enough large farms to provide reliable information on the size of farm necessary to obtain the lowest costs per unit of product.

Because charges for such inputs as operator and family labor and depreciation of machinery and buildings are subject to personal judgment and because they make up a large part of total costs, total costs per unit of production for the area are less significant than the differences in costs by size of farms.

### Description of Area<sup>2</sup>

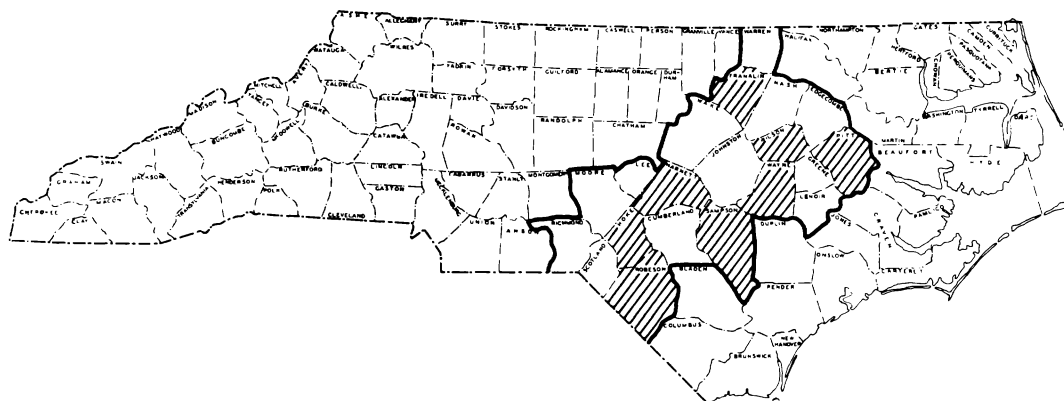
The central cotton-tobacco area of North Carolina extends across the east-central part of the State in an almost north-south direction from Virginia to South Carolina. (See fig. 1.) It comprises 20 counties and a total land area of 7,175,680 acres, or about 23 percent of the total land in the State.

The area includes the Upper Coastal Plain and Eastern Piedmont, the Central Coastal Plain, and the Sandhills. Almost half the land is in the Upper Coastal Plain and Eastern Piedmont, 29 percent is in the Central Coastal Plain, and 22 percent is in the Sandhills.

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<sup>2</sup> Adapted from unpublished material prepared by William D. Lee, Associate Professor of Agronomy, North Carolina State College.

# CENTRAL COTTON-TOBACCO AREA, NORTH CAROLINA



- Central cotton-tobacco area
- ▨ Counties in which sample was drawn

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Figure 1

The topography of the central cotton-tobacco area ranges from strongly rolling or almost hilly in portions of the Piedmont and Sandhills to almost flat in the southeast. Elevations range from sea level where the Tar River leaves Pitt County to 650 feet above sea level at Pinehurst in Moore County.

The Coastal Plain soils are chiefly sandy loams. In general, they are well drained and are especially suited to the production of flue-cured tobacco and cotton.

The Piedmont portion of the area is undulating to rolling with slope gradients mostly between 4 and 12 percent. The heavy-textured soils are used mostly for small grain, hay, other forage crops, and pasture, and the lighter or sandy soils are especially prized for tobacco.

The area is characterized by a long growing season, relatively abundant rain-

fall, and other climatic conditions usually favorable to agriculture. Most winters are short and mild, and the summers usually are long, warm, and sometimes quite humid. The average length of growing season is about 210 days, or from about April 3 to October 30. Rainfall is distributed rather evenly during the year, with the greatest amount occurring in spring and summer, and the least amount in the fall.

The economy of the area is based on agriculture, predominantly tobacco production, with relatively little industrial development.

## The Procedure

Most of the information used in the study was obtained in 1957 from a survey of a random sample of 267 farms in the central

cotton-tobacco area. The data pertain largely to operations and practices in 1956. All farms in the sample produced cotton or had cotton allotments in 1956, although some farmers put a part or all of their allotted acreage in the Soil Bank in 1957. The survey provided information on size of farm; size of enterprises; amount of labor, power, and machinery used by enterprises; amount and cost of fertilizer, seed, pesticides, and other materials used; size of tractors and machines; actual and normal yields; and other information concerning physical resources for production.

Data for 1956 and 1959 on machinery operating costs, prices paid, costs of tobacco plant beds, costs of harvesting tobacco, and costs of mule power were obtained from secondary sources.

The costs of owning and operating tractors and machinery reported in "The Use and Cost of Tractor Power and Equipment, by Size of Farm, in the Central Cotton-Tobacco Area of North Carolina, 1956," provide the basis of charges for these items. Other data were obtained from unpublished research of the North Carolina Agricultural Experiment Station. These costs, plus quantities and costs of labor, materials, custom work, and other items, are shown in the detailed budgets in appendix tables 18 to 23.

The first step in classifying the farms in the sample was to divide them into single-unit and multiple-unit farms. Single-unit farms are those managed by one operator, either as tenant or as owner-operator, who may also rent additional land. Multiple-unit farms have two or more subunits, some of which are operated by croppers who share in the management to some degree and share in the income from the farm. Farms were separated into these two types because of the possibility that their use of different combinations of labor, power and machinery might affect production costs, and because of the possibility of differences in yields on the two types of farms.

Farms of each type (single-unit and multiple-unit) were arrayed by total acreage of cropland and sorted into three

size groups with an equal number of farms in each group. Upon examination of the three size groups, it was observed that, in each of the large-farm groups, many of the farms were clustered near the lower end. By placing these farms in separate groups of "medium-large" farms it was possible to obtain information about costs on farms slightly larger than the average without materially affecting the reliability of the data on "large" farms. Therefore, the one-third of the largest farms was subdivided at the point where the array by size of farm began to rise steeply.

The method of analysis used in the study was to estimate the kind and amount of resources used in crop production on the four sizes of single- and multiple-unit farms; to estimate the gross returns, expenses, and net returns associated with the production of major crops on these farms; and to determine which type-size of farm had the relative advantage in cost of producing each of the major crops.

In this report, cost of production is defined as the cost of labor, materials, power and machinery services and depreciation, interest, repairs, and taxes and insurance on specialized buildings and equipment used in production. It excludes charges for use of working capital, capital invested in land, rent, real estate taxes other than those on buildings used especially for tobacco production, other overhead costs, and management.

All labor used in production, including cropper labor, is valued at wages paid to hired labor. Although charging for cropper labor at hired wage rates does not reflect actual costs to operators of multiple-unit farms, it does provide estimates of costs of production on these farms comparable to those on single-unit farms. To show actual costs of cropper labor would have required a detailed study of tenure arrangements, exchange of work, methods of payment for use of tractors and machinery, and other working arrangements between operators and croppers. Obtaining such information was beyond the scope of the study.

## DESCRIPTION OF FARMS

Of the 267 farms surveyed in 1957, 194 were single-unit farms and 73 were multiple-unit farms. Single-unit farms ranged

in size from 4.2 to 186.1 acres of cropland. Multiple-unit farms had from 8.7 to 305.2 acres of cropland (table 1). Approximately



TABLE 1.--Land utilization on single- and multiple-unit farms, by type and size of farm, central cotton-tobacco area of North Carolina, 1956

Type and size of farm	Farms in sample	Cropland per farm		
		Range	Average	Percentage of total land
Single-unit:	<u>Number</u>	<u>Acres</u>	<u>Acres</u>	<u>Percent</u>
Small .....	65	4.2-20.7	14.6	53
Medium .....	65	20.8-35.4	27.5	51
Medium-large .....	49	35.7-76.5	49.2	57
Large .....	15	82.4-186.1	113.8	70
Multiple-unit:				
Small .....	24	8.7-35.4	23.9	55
Medium .....	24	36.2-57.2	43.4	49
Medium-large .....	17	57.9-96.0	77.5	46
Large .....	8	107.4-305.2	156.4	43
Average acreage per farm				
	Permanent pasture	Woods not pastured	Other land	Total land operated
Single-unit:	<u>Acres</u>	<u>Acres</u>	<u>Acres</u>	<u>Acres</u>
Small .....	0.8	10.5	1.8	27.7
Medium .....	1.7	23.5	1.6	54.3
Medium-large .....	3.2	31.4	2.4	86.2
Large .....	6.7	37.0	5.9	163.4
Multiple-unit:				
Small .....	2.2	16.3	1.4	43.8
Medium .....	4.4	39.7	1.8	89.3
Medium-large .....	3.5	81.1	5.8	167.9
Large .....	4.2	199.0	2.9	362.5

two-thirds of the single-unit farms had less than 36 acres of cropland, whereas about two-thirds of the multiple-unit farms had more than 36 acres of cropland.

Only about 8 percent of the single-unit farms were classified as large farms--farms with more than 80 acres of cropland. Multiple-unit farms were somewhat larger, and 11 percent of these were classified as large farms with more than 107 acres of cropland.<sup>3</sup> On single-unit farms, about 57 percent of total land was cropland, compared with 47 percent on multiple-unit farms. On the smaller farms of both types, about half the land was

cropland. But in the larger size groups of single-unit farms, cropland comprised considerably more than half of all land. In contrast, it was less than half of all land in the large multiple-unit farms.

### Crops Grown

The principal crops grown in 1956, in order of acres per farm, were corn, cotton, tobacco, soybeans, oats, and wheat. All of the farmers grew cotton or had cotton allotments, more than 95 percent grew corn, and 91 percent grew tobacco. Soybeans and small grains were grown mostly on the larger farms (table 2).

<sup>3</sup> See discussion of classification of farms, p. 5.

TABLE 2.--Percentage of farms reporting specified crops, and average acreage per farm reporting, by type and size of farm, central cotton-tobacco area of North Carolina, 1956

Type and size of farm	Cotton	Flue-cured tobacco	Corn	Soybeans	Oats	Wheat	Other small grain	Hay	Vegetables	Other
Percent of farms reporting										
Single-unit:										
Small.....	98.5	92.3	95.4	6.2	3.1	18.5	0	24.6	10.8	9.2
Medium.....	100.0	96.9	96.9	23.1	9.2	10.8	1.5	26.2	12.3	10.8
Medium-large.....	95.9	98.0	100.0	34.7	24.5	36.7	2.0	18.4	12.2	18.4
Large.....	100.0	100.0	100.0	53.3	20.0	33.3	6.7	33.3	20.0	33.3
Multiple-unit:										
Small.....	95.8	91.7	100.0	20.8	20.8	20.8	0	37.5	4.2	20.8
Medium.....	100.0	100.0	100.0	45.8	29.2	41.7	4.2	25.0	12.5	16.7
Medium-large.....	100.0	94.1	100.0	41.2	29.4	17.6	5.9	17.6	41.2	17.6
Large.....	100.0	100.0	100.0	37.5	50.0	50.0	0	25.0	25.0	25.0
Acres grown per farm reporting										
Single-unit:										
Small.....	2.9	3.0	7.3	2.6	3.0	2.8	0	2.1	1.9	1.6
Medium.....	5.5	5.1	12.1	4.9	4.5	3.6	4.0	4.0	1.3	2.5
Medium-large.....	8.5	6.6	20.9	8.3	8.3	5.6	19.0	3.2	3.2	3.7
Large.....	17.9	11.9	47.6	22.0	8.8	11.8	4.0	6.5	18.0	10.5
Multiple-unit:										
Small.....	4.8	4.0	10.4	6.9	3.0	3.4	0	3.0	1.0	2.0
Medium.....	7.3	6.8	17.0	9.0	7.2	4.1	5.0	4.5	5.5	4.4
Medium-large.....	14.7	10.2	30.0	16.1	6.8	19.0	3.0	5.7	4.9	3.9
Large.....	20.3	16.2	44.6	58.3	36.5	25.2	0	5.5	3.5	7.0

### Crop Yields

According to estimates of the farm operators interviewed, crop yields on the farms studied were higher in 1956 than were normally expected. Table 3 shows 1956 yields and estimated normal yields of the major crops produced on these farms.

Yields of all crops were generally higher on single-unit farms than on multiple-unit farms. Furthermore, there was a definite relationship between size of single-unit farm and yields. Yields were lowest on the small farms and gradually increased as farm size increased. This was not true of multiple-unit farms. The medium-sized multiple-unit farms had the lowest yields and the medium-large farms had the highest. Yields on large farms were slightly lower than on medium-large farms, probably because of more extensive use of cropper labor.

### Livestock Enterprises

Some livestock was reported on more than three-fourths of the farms; however, the number of animals per farm was usually small (table 4). Hog production was more important than other livestock enterprises, with more than 50 percent of the farms having some hogs. About one-third of the single-unit farms and one-half of the multiple-unit farms had milk cows. Most of the chickens were in farm flocks of 100 or less kept for home use.

### Tenure of Farmers

Almost half the operators of farms in the sample owned all of the land they operated in 1956 (table 5). About 15 percent owned some land and rented some

TABLE 3.--Yields in 1956 and normal yields of major crops, by type and size of farm, central cotton-tobacco area of North Carolina<sup>1</sup>

Type and size of farm	Cotton		Tobacco		Corn	
	1956	Normal	1956	Normal	1956	Normal
Single unit:	<u>Lb.</u>	<u>Lb.</u>	<u>Lb.</u>	<u>Lb.</u>	<u>Bu.</u>	<u>Bu.</u>
Small.....	376	437	1,594	1,488	38	36
Medium.....	439	461	1,656	1,612	44	40
Medium-large.....	436	438	1,816	1,666	47	41
Large.....	496	484	1,804	1,692	55	46
Multiple unit:						
Small.....	502	468	1,729	1,571	52	44
Medium.....	455	462	1,562	1,472	40	46
Medium-large.....	504	476	1,746	1,665	46	39
Large.....	445	430	1,990	1,646	48	42
	Oats		Soybeans		Wheat	
	1956	Normal	1956	Normal	1956	Normal
Single unit:	<u>Bu.</u>	<u>Bu.</u>	<u>Bu.</u>	<u>Bu.</u>	<u>Bu.</u>	<u>Bu.</u>
Small.....	55	40	24	26	30	25
Medium.....	55	43	24	21	29	25
Medium-large.....	56	53	18	22	30	28
Large.....	48	46	22	19	30	31
Multiple unit:						
Small.....	48	47	18	20	27	25
Medium.....	46	42	21	20	25	28
Medium-large.....	47	48	19	19	24	24
Large.....	59	54	24	23	30	33

<sup>1</sup> Normal yields are averages of estimates made by farmers included in the survey.

land, and 40 percent rented all land operated.

Tenure of farm operators varied significantly between single- and multiple-unit farms. Only slightly more than a third of the operators of single-unit farms were full owners and almost half rented all land operated, whereas almost three-fourths of the operators of multiple-unit farms owned their farms and only 18 percent rented all land operated. The proportion of farms operated by full owners was highest for large multiple-unit farms and lowest for medium-sized single-unit farms.

The usual tenure arrangement between landlord and cropper on multiple-unit

farms was for the landlord to furnish all the seed, fertilizer, and insecticides and half the fuel for curing tobacco; to pay half the costs of ginning cotton; and to receive half the crop. This arrangement applied to over 50 percent of the multiple-unit farms studied (table 6).

The percentages of specified crops grown on multiple-unit farms by operators and croppers in 1956 are shown in table 7. Croppers grew over two-thirds of the cotton and tobacco on farms of all sizes, and over two-thirds of the corn on all except the medium-large farms.

TABLE 4.--Livestock enterprises, by type and size of farm, central cotton-tobacco area of North Carolina, 1956

Type and size of farm	Cattle				Hogs				Poultry	
	Milk cows	Other cows	Heifers, 1-2 yrs.	Other cattle	Sows and gilts	Other hogs	Pigs weaned	Feeder pigs bought	Hens and pullets	Chicks bought or hatched
Percent of farms reporting										
Single-unit:										
Small.....	27.7	1.5	4.6	7.7	40.0	46.2	43.1	27.7	87.7	50.8
Medium.....	35.4	6.2	10.8	15.4	60.0	50.8	47.7	46.2	81.5	52.3
Medium-large.....	53.1	8.2	14.3	16.3	69.4	61.2	63.3	22.4	85.7	69.4
Large.....	40.0	6.7	6.7	33.3	66.7	73.3	60.0	20.0	100.0	73.3
Multiple-unit:										
Small.....	29.2	0	0	16.7	41.7	45.8	29.2	37.5	83.3	75.0
Medium.....	66.7	4.2	12.5	37.5	58.3	75.0	62.5	37.5	91.7	62.5
Medium-large.....	64.7	23.5	11.8	29.4	82.4	70.6	82.4	17.6	94.1	82.3
Large.....	87.5	12.5	12.5	50.0	37.5	50.0	25.0	75.0	87.5	50.0
Average number per farm reporting										
Single-unit:										
Small.....	1.4	5.0	1.3	2.4	1.8	5.1	12.2	4.8	30.2	78.5
Medium.....	1.2	3.0	1.7	3.7	2.0	11.2	19.2	10.0	30.9	87.9
Medium-large.....	1.3	5.5	3.4	3.2	3.2	19.0	26.2	3.9	72.3	118.9
Large.....	1.5	15.0	1.0	3.4	7.2	19.7	37.7	9.3	94.1	88.2
Multiple-unit:										
Small.....	1.6	0	0	3.5	1.7	7.7	11.9	7.0	37.2	100.9
Medium.....	1.5	1.0	3.0	3.2	2.4	10.6	24.6	6.2	64.5	85.3
Medium-large.....	2.9	3.2	1.5	2.2	2.3	14.8	26.8	9.0	195.1	336.8
Large.....	2.3	20.0	1.0	3.5	7.3	34.7	87.0	13.3	53.0	87.5

TABLE 5.--Distribution of farms by tenure of operator and by type and size of farm, central cotton-tobacco area of North Carolina, 1956

Type and size of farm	Total	Full-owner <sup>1</sup>	Part-owner <sup>2</sup>	Tenants <sup>3</sup>
	<u>Number</u>	<u>Percent</u>	<u>Percent</u>	<u>Percent</u>
Single-unit:				
Small.....	65	42	18	40
Medium.....	65	32	14	54
Medium-large.....	49	33	14	53
Large.....	15	40	20	40
All single-unit farms.....	194	36	16	48
Multiple-unit:				
Small.....	24	71	4	25
Medium.....	24	67	8	25
Medium-large.....	17	71	23	6
Large.....	8	75	25	0
All multiple-unit farms.....	73	70	12	18
All farms.....	267	45	15	40

<sup>1</sup> Owned all land operated.

<sup>2</sup> Owned part and rented part of land operated.

<sup>3</sup> Rented all land operated.

TABLE 6.--Percentage of multiple-unit farms with specified share-rental arrangements for major crops, central cotton-tobacco area of North Carolina, 1956<sup>1</sup>

Landlord's part in share-cropping arrangement	Cotton	Tobacco	Corn
	Percent	Percent	Percent
Received half the crop.....	95.3	95.5	81.8
Furnished all seed.....	78.1	77.3	62.1
Furnished all fertilizer.....	62.5	53.0	48.5
Furnished all dusts and sprays.....	52.5	48.5	--
Paid half the cost of ginning.....	87.5	--	--
Furnished half the fuel for curing.....	--	92.4	--

<sup>1</sup> Percentages of all farms on which specified crop was grown.

TABLE 7.--Percentage of acreage of specified crops grown by operators and croppers on multiple-unit farms, by size of farm, central cotton-tobacco area of North Carolina, 1956

Item	Cotton	Flue-cured tobacco	Corn	Soybeans	Oats	Wheat	Other small grain	Hay	Vegetables	Other crops
	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.
Small farms:										
Operators.....	12	5	17	15	87	0	0	34	0	75
Croppers.....	88	95	83	85	13	100	0	66	100	25
Medium farms:										
Operators.....	9	31	28	40	28	56	100	79	9	0
Croppers.....	91	69	72	60	72	44	0	21	91	100
Medium-large farms:										
Operators.....	29	40	57	80	56	74	100	94	68	30
Croppers.....	71	60	43	20	44	26	0	6	32	70
Large farms:										
Operators.....	25	14	20	83	66	82	0	45	0	100
Croppers.....	75	86	80	17	34	18	0	55	100	0

### Farms with Tractors

About two-thirds of the sample farms had tractors. Of these, 85 percent had one tractor and 14 percent had two. Two of the medium-sized single-unit farms had three tractors. Most of the tractors were of the small row-crop type with a drawbar horsepower rating of from 6 to 15.<sup>4</sup>

The percentage of farms with tractors and the use of tractor power varied with size of farm (table 8). About half the small farms and all the large farms used tractors in their farming operations. Tractors were the only source of power on about half of the larger single-unit farms. Most of the farmers on multiple-unit farms used a combination of tractor and mule power. Croppers used mules extensively in planting and cultivating, and mules were used by both landlords and croppers in harvesting tobacco.

<sup>4</sup>A complete description of the number and size of tractors reported is presented in "The Use and Cost of Tractor Power and Equipment, by Size of Farm, in the Central Cotton-Tobacco Area of North Carolina, 1956."

TABLE 8.--Percentage of farms with tractors, and farms using tractors and mules, by type and size of farm, central cotton-tobacco area of North Carolina, 1956

Type and size of farm	Farms reporting tractors	Power used		
		Tractors only	Mules only	Tractors and mules
	Percent	Percent	Percent	Percent
Single-unit:				
Small.....	44	28	25	47
Medium.....	66	41	8	51
Medium-large.....	94	45	0	55
Large.....	100	73	0	27
Multiple-unit:				
Small.....	58	33	8	59
Medium.....	63	17	0	83
Medium-large.....	94	41	0	59
Large.....	88	0	0	100

TABLE 9.--Age and education of farm operators and operators' wives, by type and size of farm, central cotton-tobacco area of North Carolina, 1956

Type and size of farm	Average age		Average years of school completed	
	Operator	Operators' wives	Operator	Operators' wives
	Years	Years	Years	Years
Single-unit.....	47	43	6.9	8.5
Small.....	50	44	6.7	8.3
Medium.....	45	42	6.9	8.4
Medium-large.....	47	43	7.1	8.4
Large.....	45	40	7.0	10.0
Multiple-unit.....	51	48	8.2	9.2
Small.....	51	49	6.8	8.0
Medium.....	54	49	7.8	8.7
Medium-large.....	48	42	9.5	10.3
Large.....	51	48	10.4	11.3

TABLE 10.--Average man-equivalents of available family labor, by type and size of farm, central cotton-tobacco area of North Carolina, 1956<sup>1</sup>

Size of farm	Single-unit farms	Multiple-unit farms
Small.....	2.1	1.8
Medium.....	2.2	1.8
Medium-large.....	2.7	2.2
Large.....	2.8	1.7
All farms.....	2.3	1.9

<sup>1</sup> Man-equivalents were determined by weighting the number of workers on the farm by the wage rate paid for hired workers in the same age groups. See Bishop and Sutherland, Resource Use and Incomes of Families on Small Farms, Southern Piedmont Area, North Carolina, N. C. State Coll., Dept. Agr. Econ., A.E. Inform. Ser. 30, 1953, p. 66.

## Family Labor

Operators of single-unit farms generally were younger than operators of multiple-unit farms (table 9). Approximately three-fourths of the operators of single-unit farms and over half of the operators of multiple-unit farms had less than 8 years of education, averaging 6.9 and 8.2 years of schooling, respectively.

About 2.3 man-equivalents of family labor were available per farm on single-unit farms (table 10). The range was from 2.1 man-equivalents on the small farms to 2.8 on the large farms. Average man-equivalents of family labor on multiple-unit farms ranged from 1.7 on large farms to 2.2 on medium-large farms. For all multiple-unit farms, family labor averaged 1.9 man-equivalents, compared with 2.3 on single-unit farms.

About 24 percent of the farm operators in this study were employed in off-farm work in 1956. They worked in construc-

tion, carpentry, truck driving, and sales work, and as employees in tobacco warehouses, service stations, and offices. Over three-fourths of the farmers doing off-farm work operated either small or medium-sized farms.

Only 17 percent of the operators of single-unit farms worked off the farm. On the average, these farmers earned about \$1,850 annually for about 29 weeks of off-farm work. In addition, 11 percent of the operators' wives worked off the farm an average of 35 weeks annually with average earnings of \$1,472.

On multiple-unit farms, about 43 percent of the operators were employed in off-farm work, averaging approximately 32 weeks during the year. The average annual income from off-farm employment was \$1,616 per worker. Eleven percent of the farmers' wives worked an average of 47 weeks off the farm and earned about \$3,013 annually.

## COSTS OF PRODUCING MAJOR CROPS

One of the assumptions at the outset of the study was that costs of producing major farm products were lower on large farms than on small farms. The extent of the difference in costs, however, was not known, nor was it known which elements of costs varied most by size of farm.

### Labor Costs per Acre

The study revealed that, in 1956, labor requirements per acre of cotton and tobacco were 10 to 15 percent lower on large farms than on small farms. Labor used per acre of corn was 40 percent less on large single-unit farms and 25 percent less on large multiple-unit farms than on small farms of the same type (table 11).

Differences in amount of farm labor used per acre of soybeans, oats, and wheat were relatively small. These crops were grown by less than half the farmers in each size group, but those who grew them used fully-mechanized methods. Consequently, labor requirements per acre were not related to size of farm and the small farms were not always the high labor users. However, on many of the small farms these crops were harvested by

custom operators. The cost of labor supplied by the custom operators, and included in their total charges, is charged to "other machinery" in table 12.

Preharvest operations on cotton, tobacco, and corn required from one-half to three-fourths as much labor per acre on the large farms as on the small farms. Because nearly all cotton and tobacco was harvested by hand, labor requirements for harvesting these crops were closely related to yields.

Less labor per acre was used on the large farms than on the small ones for harvesting tobacco, preparing it for market, and marketing it. Most of this difference resulted from more efficient use of labor in grading tobacco on the large farms. Total labor costs per acre of tobacco were about 10 percent lower on large farms than on small ones, but the relationship of size to cost was not consistent among the intermediate size groups.

On the large farms, about half the corn was picked by machines compared with 15 and 12 percent on the small single- and multiple-unit farms. Consequently, labor used for harvesting corn was only one-half to two-thirds as great as on the small farms.

TABLE 11.--Preharvest and harvest labor used per acre of major crops, by type and size of farm, central cotton-tobacco area of North Carolina, 1956

Item	Single-unit farms				Multiple-unit farms			
	Small	Medium	Medium-large	Large	Small	Medium	Medium-large	Large
Cotton:	<u>Hours</u>	<u>Hours</u>	<u>Hours</u>	<u>Hours</u>	<u>Hours</u>	<u>Hours</u>	<u>Hours</u>	<u>Hours</u>
Preharvest.....	39.58	30.89	31.91	24.04	35.57	33.48	33.40	27.10
Harvest.....	65.14	68.38	64.38	70.49	66.48	69.09	70.50	60.51
Total.....	104.72	99.27	96.29	94.53	102.05	102.57	103.90	87.61
Tobacco:								
Preharvest.....	106.19	83.03	95.25	83.47	109.43	96.99	87.92	90.11
Harvest.....	417.09	412.57	418.52	384.37	454.07	415.71	447.67	411.70
Total.....	523.28	495.60	513.77	467.84	563.50	512.70	535.59	501.81
Corn:								
Preharvest.....	18.53	15.90	12.15	9.29	15.04	12.19	12.56	10.71
Harvest.....	11.53	12.96	8.44	8.39	14.29	11.23	9.62	11.45
Total.....	30.06	28.86	20.59	17.68	29.33	23.42	22.18	22.16
Soybeans:								
Preharvest.....	4.88	7.89	5.48	3.69	3.44	6.50	5.76	4.28
Harvest.....	1.76	1.61	2.59	2.45	.82	1.57	1.37	1.45
Total.....	6.64	9.50	8.07	6.14	4.26	8.07	7.13	5.73
Oats:								
Preharvest.....	3.67	2.99	3.64	2.18	2.68	3.04	3.41	1.64
Harvest.....	1.50	1.25	1.75	2.06	1.20	1.74	1.36	1.98
Total.....	5.17	4.24	5.39	4.24	3.88	4.78	4.77	3.62
Wheat:								
Preharvest.....	5.24	3.76	3.39	3.37	4.72	3.13	3.54	2.69
Harvest.....	1.87	1.60	1.61	1.43	1.08	1.24	1.49	1.17
Total.....	7.11	5.36	5.00	4.80	5.80	4.37	5.03	3.86

### Power and Machinery Costs per Acre

On the large farms, fuller utilization of tractors and other machinery and less dependence on mule power resulted in power and machinery costs per acre that were just a little more than half as high as on small farms for all major crops except tobacco (table 12). Total hours of tractor work per acre generally were higher on the larger farms, but because of more work per tractor, costs per hour

and per acre were lower. However, tractor costs per acre did not decline as fast with increasing size of farm as did other machinery costs, or costs of mule power.

"Other machinery costs" given in table 12 consist mainly of costs of owning and operating tillage and harvesting machinery and equipment used with tractors and mules. Costs of operating motortrucks and cost of custom work are also included. No attempt was made to separate the labor and machinery components of custom work.



TABLE 12.--Power and machinery costs per acre of major crops, by type and size of farm,  
central cotton-tobacco area of North Carolina, 1956

Item	Unit	Single-unit farms				Multiple-unit farms			
		Small	Medium	Medium-large	Large	Small	Medium	Medium-large	Large
Cotton:									
Tractor use:									
Preharvest.....	Hour	5.73	8.82	8.09	8.46	4.04	6.45	6.50	4.66
Harvest.....	do.	1.16	.78	.76	.39	.98	.36	.44	0
Total.....	do.	6.89	9.60	8.85	8.85	5.02	6.42	6.94	4.66
Cost per hour.....	Dollar	1.02	.89	.86	.71	1.00	.78	.69	.73
Total tractor costs.....	do.	7.03	8.54	7.61	6.28	5.02	5.01	4.79	3.40
Other machinery costs <sup>1</sup> ....	do.	10.80	7.45	7.01	6.42	7.56	6.27	4.56	4.49
Mule cost.....	do.	7.87	4.89	3.81	.38	8.02	6.51	4.30	2.71
Total.....	do.	25.70	20.88	18.43	13.08	20.60	17.79	13.65	10.60
Tobacco:									
Tractor use:									
Preharvest.....	Hour	5.83	8.21	9.45	11.79	6.53	7.71	7.36	8.29
Harvest.....	do.	10.30	13.80	18.59	18.35	10.65	8.59	11.44	5.86
Total.....	do.	16.13	22.01	28.04	30.14	17.18	16.30	18.80	14.15
Cost per hour.....	Dollar	1.02	.89	.86	.71	1.00	.78	.69	.73
Total tractor costs.....	do.	16.45	19.59	24.11	21.40	17.18	12.71	12.97	10.33
Other machinery costs <sup>1</sup> ....	do.	19.93	16.24	15.65	12.66	17.97	12.86	10.68	9.21
Mule cost.....	do.	19.24	15.87	10.39	11.86	19.06	17.11	15.14	21.40
Total.....	do.	55.62	51.70	50.15	45.92	54.21	42.68	38.79	40.94
Corn:									
Tractor use:									
Preharvest.....	Hour	4.16	5.80	7.09	5.51	3.57	4.40	5.71	6.08
Harvest.....	do.	1.23	1.95	1.40	2.90	1.77	1.00	1.60	2.58
Total.....	do.	5.39	7.75	8.49	8.41	5.34	5.40	7.31	8.66
Cost per hour.....	Dollar	1.02	.89	.86	.71	1.00	.78	.69	.73
Total tractor costs.....	do.	5.50	6.90	7.30	5.97	5.34	4.21	5.04	6.32
Other machinery costs <sup>1</sup> ....	do.	7.38	4.82	7.70	5.72	6.26	3.67	6.00	2.62
Mule cost.....	do.	8.78	6.60	3.20	.31	8.23	7.18	3.52	1.59
Total.....	do.	21.66	18.32	18.20	12.00	19.83	15.06	14.56	10.53
Soybeans:									
Tractor use:									
Preharvest.....	Hour	4.31	6.48	4.50	2.79	2.07	3.84	5.09	3.49
Harvest.....	do.	1.76	.45	.71	.34	.29	.45	.63	.52
Total.....	do.	6.07	6.93	5.21	3.13	2.36	4.29	5.72	4.01
Cost per hour.....	Dollar	1.02	.89	.86	.71	1.00	.78	.69	.73
Total tractor costs.....	do.	6.19	6.17	4.48	2.22	2.36	3.35	3.95	2.93
Other machinery costs <sup>1</sup> ....	do.	21.56	16.37	13.29	11.62	14.43	12.81	10.83	6.30
Mule cost.....	do.	.27	0	.20	0	0	1.59	.13	0
Total.....	do.	28.02	22.54	17.97	13.84	16.79	17.75	14.91	9.23

<sup>1</sup> Includes custom work hired.

Continued

TABLE 12.--Power and machinery costs per acre of major crops, by type and size of farm, central cotton-tobacco area of North Carolina, 1956--Continued

Item	Unit	Single-unit farms				Multiple-unit farms			
		Small	Medium	Medium-large	Large	Small	Medium	Medium-large	Large
Oats:									
Tractor use:									
Preharvest.....	Hour	3.67	2.35	2.91	2.18	2.68	2.70	3.22	1.59
Harvest.....	do.	.50	0	.49	.45	.60	.51	.29	.58
Total.....	do.	4.17	2.35	3.40	2.63	3.28	3.21	3.51	2.17
Cost per hour.....	Dollar	1.02	.89	.86	.71	1.00	.78	.69	.73
Total tractor costs.....	do.	4.25	2.09	2.92	1.87	3.28	2.50	2.42	1.58
Other machinery costs <sup>1</sup> ....	do.	17.39	11.59	11.41	9.47	12.53	10.27	9.38	7.12
Mule cost.....	do.	0	0	.41	0	0	.12	0	0
Total.....	do.	21.64	13.68	14.74	11.34	15.81	12.89	11.80	8.70
Wheat:									
Tractor use:									
Preharvest.....	Hour	3.25	2.74	2.77	3.34	4.08	2.47	2.84	2.55
Harvest.....	do.	.76	.10	.51	.30	.54	.44	.75	.24
Total.....	do.	4.01	2.84	3.28	3.64	4.62	2.91	3.59	2.79
Cost per hour.....	Dollar	1.02	.89	.86	.71	1.00	.78	.69	.73
Total tractor costs.....	do.	4.09	2.53	2.82	2.58	4.62	2.27	2.48	2.04
Other machinery costs <sup>1</sup> ....	do.	12.77	13.01	9.54	8.79	13.98	9.26	9.34	8.14
Mule cost.....	do.	0	0	0	0	0	0	.49	0
Total.....	do.	16.86	15.54	12.36	11.37	18.60	11.53	12.31	10.18

<sup>1</sup> Includes custom work hired.

Details on the kinds and sizes of machines used are shown in the appendix tables 24 to 29.

The costs of using mules were estimated by dividing the total costs of keeping a mule for 1 year by the hours of work done. With increasing mechanization, mules do less work. As costs of keeping them do not decline in proportion to the decrease in amount of work done, costs per hour of work have increased. In 1956, mules were used extensively in the production of tobacco on all sizes of farms. They were also used for much of the work on cotton and corn, particularly on the smaller farms and on the multiple-unit farms, which depended on croppers for much of the manpower used in production. They were used very little in the production of soybeans, oats, and wheat.

### Materials and Services Costs per Acre

Unlike costs of labor and machinery, total costs of materials and services per acre of cotton, tobacco, and corn tended to be higher on the larger farms (table 13). A more detailed analysis, however, reveals few logically consistent relationships between these costs and size of farm.

On single-unit farms, most of the differences in materials and services costs per acre of cotton were due to differences in ginning costs; on multiple-unit farms, the differences appeared to be due largely to higher costs of fertilizer and pesticides.

The costs per acre of the different materials and services used in tobacco production varied somewhat by size of farm but there was no clear pattern with different kinds of materials.

TABLE 13.--Materials and services costs per acre of major crops, by type and size of farm, central cotton-tobacco area of North Carolina, 1956

Item	Single-unit farms				Multiple-unit farms			
	Small	Medium	Medium-large	Large	Small	Medium	Medium-large	Large
	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars
Cotton:								
Seed.....	2.12	2.60	2.57	2.20	2.21	1.96	2.77	2.42
Fertilizer.....	12.63	15.23	14.85	13.88	14.03	15.09	13.69	15.06
Pesticides.....	1.34	3.03	2.47	2.53	3.73	2.39	4.23	4.67
Ginning.....	10.45	11.02	10.45	11.59	11.25	11.02	11.37	10.33
Other <sup>1</sup> .....	.25	.03	.05	.12	--	.04	.46	1.10
Total.....	26.79	31.91	30.39	30.32	31.22	30.50	32.52	33.58
Tobacco:								
Plantbed.....	19.94	20.66	19.75	20.64	22.40	21.00	19.17	18.67
Fertilizer.....	40.33	42.30	40.55	42.79	44.86	42.44	40.19	47.50
Pesticides.....	14.07	18.28	18.04	18.51	18.53	17.15	25.76	20.24
Fuel oil.....	40.80	43.20	36.75	49.35	37.05	30.60	51.75	34.20
Barns and equipment <sup>2</sup>	64.62	64.62	64.62	64.62	64.62	64.62	64.62	64.62
Other <sup>3</sup> .....	40.18	41.69	35.63	34.51	36.54	27.30	39.94	57.84
Total.....	219.94	230.75	215.34	230.42	224.00	203.11	241.43	243.07
Corn:								
Seed.....	1.02	1.12	0.99	1.22	1.00	0.82	1.10	1.78
Fertilizer.....	14.57	14.66	15.03	17.30	18.21	13.56	16.38	19.75
Total.....	15.59	15.78	16.02	18.52	19.21	14.38	17.48	21.53
Soybeans:								
Seed.....	3.77	3.41	3.62	3.79	3.36	4.48	3.79	2.26
Fertilizer.....	3.06	4.93	3.11	1.21	.15	2.39	4.23	2.03
Total.....	6.83	8.34	6.73	5.00	3.51	6.87	8.02	4.29
Oats:								
Seed.....	4.39	3.52	2.65	3.11	2.67	4.16	3.13	2.51
Fertilizer.....	5.70	6.15	8.72	7.39	8.19	10.17	7.15	7.46
Total.....	10.09	9.67	11.37	10.50	10.86	14.33	10.28	9.97
Wheat:								
Seed.....	4.69	4.14	4.55	3.76	5.04	4.13	3.13	3.83
Fertilizer.....	12.57	8.79	9.79	7.18	10.21	8.32	7.90	8.55
Total.....	17.26	12.93	14.34	10.94	15.25	12.45	11.03	12.38

<sup>1</sup> Includes costs of seed treatment, defoliant, and insurance when incurred.

<sup>2</sup> Based on unpublished data on costs of maintaining tobacco farms.

<sup>3</sup> Includes sucker control materials, twine, crop insurance, and warehouse charges.

Fertilizer costs per acre of corn and oats usually were higher on the larger farms. Use of more fertilizer was consistent with generally higher yields on these farms. However, the cost of fertilizer on soybeans and wheat appeared to be inversely related to size of farm.

## Total Costs per Acre

In 1956, the range in total production costs per acre was greater for tobacco than for the other crops (table 14). Costs averaged about \$36 an acre less on the large single-unit farms than on the small

TABLE 14.--Summary of costs per acre of major crops, by type and size of farm, central cotton-tobacco area of North Carolina, 1956

Item	Single-unit farms				Multiple-unit farms			
	Small	Medium	Medium-large	Large	Small	Medium	Medium-large	Large
	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars
Cotton:								
Labor.....	71.57	68.40	66.91	66.18	71.92	70.38	71.52	62.40
Power and machinery..	25.70	20.89	18.43	13.08	20.60	17.79	13.65	10.60
Materials and services	26.79	31.91	30.39	30.32	31.22	30.50	32.52	33.58
Total.....	124.06	121.20	115.58	109.58	123.74	118.67	117.69	106.58
Tobacco:								
Labor.....	345.38	327.10	343.42	308.77	371.91	338.38	353.49	331.19
Power and machinery..	55.62	51.70	50.15	45.92	54.21	42.68	38.79	40.94
Materials and services	219.94	230.75	215.34	230.42	224.00	203.11	241.43	243.07
Total.....	620.94	609.55	608.91	585.11	650.12	584.17	633.71	615.20
Corn:								
Labor.....	19.84	19.05	13.59	11.67	19.36	15.46	14.64	14.63
Power and machinery..	21.66	18.32	18.20	12.00	19.83	15.06	14.56	10.53
Materials and services	15.59	15.78	16.02	18.52	19.21	14.38	17.48	21.53
Total.....	57.09	53.15	47.81	42.19	58.40	44.90	46.68	46.69
Soybeans:								
Labor.....	4.38	6.27	5.32	4.05	2.81	5.33	4.71	3.78
Power and machinery..	28.02	22.54	17.97	13.84	16.79	17.75	14.91	9.23
Materials and services	6.83	8.34	6.73	5.00	3.51	6.87	8.02	4.29
Total.....	39.23	37.15	30.02	22.89	23.11	29.95	27.64	17.30
Oats:								
Labor.....	3.41	2.80	3.56	2.80	2.56	3.15	3.15	2.39
Power and machinery..	21.64	13.68	14.74	11.34	15.81	12.89	11.80	8.70
Materials and services	10.09	9.67	11.37	10.50	10.86	14.33	10.28	9.97
Total.....	35.14	26.15	29.67	24.64	29.23	30.37	25.23	21.06
Wheat:								
Labor.....	4.69	3.54	3.30	3.17	3.83	2.88	3.32	2.55
Power and machinery..	16.86	15.54	12.36	11.37	18.60	11.53	12.31	10.18
Materials and services	17.26	12.93	14.34	10.94	15.25	12.45	11.03	12.38
Total.....	38.81	32.01	30.00	25.48	37.68	26.86	26.66	25.11

single-unit farms. Of the multiple-unit farms, the medium-sized farms had the lowest costs and the small farms had the highest, with a difference of \$66.

For the other major crops, total costs per acre of production on both single- and multiple-unit farms consistently averaged lowest on the large farms and highest on the small farms. Differences by size of farm were relatively more important for these crops than for tobacco. For example, the cost of producing tobacco on single-unit farms ranged from \$621 an acre on small farms to \$585 an acre on large farms, a decrease of only 6 percent, whereas costs of producing soybeans ranged from \$39 an acre on the small farms to \$23 an acre on the large farms, a decrease of 40 percent. The percentage differences were less for cotton than for any other crop except tobacco.

Most of the difference between costs of production per acre on small and large

farms was associated with lower per acre costs of power and machinery and the lower costs of labor resulting from higher mechanization. Costs of materials and services tended to be higher on the larger farms, although this tendency was not consistent among all crops. Use of more fertilizer and pesticides was reflected in higher yields on the larger farms. (See table 3.) This relationship was more apparent among single-unit farms than among multiple-unit farms.

Because of higher prices, production costs on the sample farms were 2 to 7 percent higher in 1959 than in 1956. Costs rose most on farms where most of the seed oats and seed wheat were bought, but there was no particular relationship between size of farm and proportion of crop seeds purchased. The general relationship between costs and size of farm was not appreciably different from that found in 1956 (table 15)

TABLE 15.--Total costs per acre, excluding charges for land and management, for major crops, by type and size of farm, central cotton-tobacco area of North Carolina, 1956 and 1959

Item	Cotton	Tobacco	Corn	Soybeans	Oats	Wheat
<u>1956</u>						
Single-unit:	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars
Small.....	124.06	620.94	57.09	39.23	35.14	38.81
Medium.....	121.20	609.55	53.15	37.15	26.15	32.01
Medium-large.....	115.73	608.91	47.81	30.02	29.67	30.00
Large.....	109.58	585.11	42.19	22.89	24.64	25.48
Multiple-unit:						
Small.....	123.74	650.12	58.40	23.11	29.23	37.68
Medium.....	118.67	584.17	44.90	29.95	30.37	26.86
Medium-large.....	117.69	633.71	46.68	27.64	25.23	26.66
Large.....	106.58	615.20	46.69	17.30	21.06	25.11
<u>1959</u>						
Single-unit:						
Small.....	128.37	638.08	59.14	40.85	37.96	40.29
Medium.....	124.73	634.02	54.74	39.08	27.14	33.19
Medium-large.....	119.04	634.49	49.20	31.87	30.76	30.75
Large.....	112.49	608.19	42.83	23.61	25.74	26.64
Multiple-unit:						
Small.....	127.21	676.74	60.15	23.80	30.30	39.25
Medium.....	121.87	608.02	45.98	30.94	32.20	27.54
Medium-large.....	120.43	658.72	47.70	28.81	26.17	27.51
Large.....	108.87	638.37	47.53	18.27	21.63	26.04

Measures of changes between 1956 and 1959 in size of farms or methods of production were unavailable, but observations of production in the area do not reveal any changes that would significantly affect the conclusions drawn from the 1956 data.

### Relation of Size of Farm to Unit Costs

In table 16, average 1956 costs per unit of production are shown for farms in each type-size group as a percentage of average costs on small single-unit farms. Generally, cotton and tobacco were produced most efficiently on the large single-unit farms. Relative differences in costs of production--20 and 25 percent, respectively--were less for these crops than for the other major crops.

Per-unit costs of producing corn were closely associated with method of picking.

Costs were highest on small single-unit farms and on multiple-unit farms; they were lowest on large single-unit farms where nearly half the corn was picked by machines. On these farms, costs per bushel of corn averaged only 58 percent of costs on small single-unit farms.

With the fully-mechanized methods used in production of soybeans, oats, and wheat, costs were lowest on the largest farms, which were able to spread machine costs over the largest volume of production. Costs per bushel of these crops were less than half as high on the large multiple-unit farms as on the small single-unit farms. Generally, large farms had a relatively greater advantage in production of these crops than they did in production of cotton, tobacco, and corn.

As mentioned earlier, the farmers interviewed considered 1956 yields to be above normal. Production costs based on their estimates of normal yields and on prices paid in 1956 and 1959 are given in table 17.

TABLE 16.--Costs per unit of production in 1956 if yields had been normal, as percentage of costs on small single-unit farms, by type and size of farm, major crops, central cotton-tobacco area of North Carolina<sup>1</sup>

Type and size of farm	Cotton	Tobacco	Corn	Soybeans	Oats	Wheat
	<u>Percent</u>	<u>Percent</u>	<u>Percent</u>	<u>Percent</u>	<u>Percent</u>	<u>Percent</u>
Single-unit:						
Small.....	100	100	100	100	100	100
Medium.....	93	92	84	117	69	83
Medium-large.....	93	88	74	90	64	69
Large.....	80	84	58	79	61	53
Multiple-unit:						
Small.....	93	100	84	77	70	97
Medium.....	90	96	62	99	82	62
Medium-large.....	87	92	75	96	60	72
Large.....	87	91	70	50	44	49

<sup>1</sup> Excluding charges for land and management.

TABLE 17.--Total costs, excluding charges for land and management, per unit of production with normal yields and 1956 and 1959 prices, major crops by size of farm, central cotton-tobacco area of North Carolina<sup>1</sup>

Size of farm	Cotton, per pound <sup>2</sup>		Tobacco, per pound		Corn, per bushel		Soybeans, per bushel		Oats, per bushel		Wheat, per bushel	
	1956	1959	1956	1959	1956	1959	1956	1959	1956	1959	1956	1959
Single-unit:	<u>Cents</u>	<u>Cents</u>	<u>Cents</u>	<u>Cents</u>	<u>Dol.</u>	<u>Dol.</u>	<u>Dol.</u>	<u>Dol.</u>	<u>Dol.</u>	<u>Dol.</u>	<u>Dol.</u>	<u>Dol.</u>
Small.....	28.4	29.4	41.2	42.9	1.59	1.64	1.51	1.57	0.88	0.95	1.55	1.61
Medium.....	26.3	27.1	37.8	39.3	1.33	1.37	1.77	1.86	.61	.63	1.28	1.33
Medium-large..	26.4	27.2	36.3	37.8	1.17	1.20	1.36	1.45	.56	.58	1.07	1.10
Large.....	22.6	23.2	34.6	35.9	.92	.93	1.20	1.24	.54	.56	.82	.86
Multiple-unit:												
Small.....	26.4	27.2	41.4	43.1	1.33	1.37	1.16	1.19	.62	.64	1.51	1.57
Medium.....	25.7	26.4	39.7	41.3	.98	1.00	1.50	1.55	.72	.77	.96	.98
Medium-large..	24.7	25.3	38.1	39.6	1.20	1.22	1.45	1.52	.53	.55	1.11	1.15
Large.....	24.8	25.3	37.4	38.8	1.11	1.13	.75	.79	.39	.40	.76	.79

<sup>1</sup> See table 3, page 8, for normal yields.

<sup>2</sup> Per pound of lint. Includes cost of producing approximately 1.7 pounds of seed.

## APPENDIX

TABLE 18.--Cotton: Estimated costs and gross and net returns per acre with normal yields and 1956 and 1959 prices, by type and size of farm, central cotton-tobacco area of North Carolina

## SMALL SINGLE-UNIT FARMS

Item	Quantity per acre	Price or cost per unit		Cost per acre		Part of acreage on which cost was incurred	Cost or return per acre, all cotton acreage	
		1956	1959	1956	1959		1956	1959
		Dol.	Dol.	Dol.	Dol.	Percent	Dol.	Dol.
Gross returns:								
Lint.....	437 lb.	0.309	0.304	--	--	--	135.03	132.85
Seed.....	741 lb.	.0214	.0165	--	--	--	15.86	12.23
Total.....	--	--	--	--	--	--	150.89	145.08
Costs:								
Home-grown seed.....	45 lb.	.0214	.0165	.96	.74	16	.15	.12
Purchased seed, treated and delinted.....	30 lb.	.078	.077	2.34	2.31	84	1.97	1.94
Seed treatment (Ceresan).....	3 oz.	.09	.09	.27	.27	2	.01	.01
Fertilizer:								
5-10-10.....	440 lb.	.0238	.0230	10.47	10.12	94	9.84	9.51
Nitrate of soda.....	119 lb.	.03	.0285	3.57	3.39	67	2.39	2.27
Muriate of potash.....	130 lb.	.0258	.0259	3.35	3.37	12	.40	.40
Poison:								
Toxaphene (10%).....	52 lb.	.07	.07	3.64	3.64	22	.80	.80
Endrin (19.5%).....	1 gal.	10.15	9.65	10.15	9.65	5	.51	.48
Aldrin (2.5%) and DDT (5%).....	12 lb.	.078	.074	.94	.89	3	.03	.02
Defoliant (cyanamid).....	30 lb.	.07	.07	2.10	2.10	3	.06	.06
Ginning.....	.91 bale	11.48	12.51	10.45	11.38	100	10.45	11.38
Insurance, FCIC.....	\$300	2.00	2.00	6.00	6.00	3	.18	.18
Tractor.....	6.89 hr.	1.02	1.14	7.03	7.85	100	7.03	7.85
Mule.....	16.39 hr.	.48	.48	7.87	7.87	100	7.87	7.87
Hauling to gin:								
Custom.....	.91 bale	1.72	1.72	1.57	1.57	23	.36	.36
Farm equipment.....	9.2 mi.	.065	.065	.60	.60	34	.20	.20
Other machines.....	--	--	--	10.24	11.68	100	10.24	11.68
Labor:								
Preharvest.....	39.58 hr.	.66	.70	26.12	27.71	100	26.12	27.71
Harvest:								
Picking, own labor.....	11.78 cwt.	3.74	3.74	44.06	44.06	59	26.00	26.00
Picking, custom.....	11.78 cwt.	3.74	3.74	44.06	44.06	41	18.06	18.06
Other.....	2.1 hr.	.66	.70	1.39	1.47	100	1.39	1.47
Total.....	--	--	--	--	--	--	124.06	128.37
Net returns to land and management.....	--	--	--	--	--	--	26.83	16.71

## MEDIUM SINGLE-UNIT FARMS

Gross returns:								
Lint.....	461 lb.	.309	.304	--	--	--	142.45	140.14
Seed.....	782 lb.	.0214	.0165	--	--	--	16.73	12.90
Total.....	--	--	--	--	--	--	159.18	153.04
Costs:								
Home-grown seed.....	33 lb.	.0214	.0165	.71	.54	10	.07	.05
Purchased seed, treated and delinted.....	36 lb.	.078	.077	2.81	2.77	90	2.53	2.49
Fertilizer:								
5-10-10.....	512 lb.	.0238	.0230	12.19	11.78	99	12.07	11.66
Nitrate of soda.....	144 lb.	.03	.0285	4.32	4.10	58	2.51	2.38
Muriate of potash.....	114 lb.	.0258	.0259	2.94	2.95	22	.65	.65
Poison:								
Toxaphene (10%).....	69.2 lb.	.07	.07	4.84	4.84	55	2.66	2.66
Endrin (19.5%).....	.7 gal.	10.15	9.65	7.10	6.76	3	.21	.20
Aldrin (2.5%) and DDT (5%).....	40 lb.	.078	.074	3.12	2.96	5	.16	.15
Defoliant (cyanamid).....	10 lb.	.07	.07	.70	.70	2	.01	.01
Ginning.....	.96 bale	11.48	12.51	11.02	12.01	100	11.02	12.01
Insurance, commercial hail and wind.....	\$100	2.50	2.50	2.50	2.50	1	.02	.02
Tractor.....	9.61 hr.	.89	.98	8.55	9.42	100	8.55	9.42
Mule.....	9.06 hr.	.54	.54	4.89	4.89	100	4.89	4.89
Hauling to gin:								
Custom.....	.96 bale	1.67	1.67	1.60	1.60	13	.21	.21
Farm equipment.....	10.7 mi.	.065	.065	.70	.70	54	.38	.38
Other machines.....	--	--	--	6.86	7.83	100	6.86	7.83



TABLE 18.--Cotton: Estimated costs and gross and net returns per acre with normal yields and 1956 and 1959 prices, by type and size of farm, central cotton-tobacco area of North Carolina--Continued

MEDIUM SINGLE-UNIT FARMS--Continued

Item	Quantity per acre	Price or cost per unit		Cost per acre		Part of acreage on which cost was incurred	Cost or return per acre, all cotton acreage	
		1956	1959	1956	1959		1956	1959
Costs--Continued		Dol.	Dol.	Dol.	Dol.	Percent	Dol.	Dol.
Labor:								
Preharvest.....	30.89 hr.	0.66	0.70	20.39	21.62	100	20.39	21.62
Harvest:								
Picking, own labor.....	12.43 cwt.	3.74	3.74	46.49	46.49	23	10.69	10.69
Picking, custom.....	12.43 cwt.	3.74	3.74	46.49	46.49	77	35.80	35.80
Other.....	2.3 hr.	.66	.70	1.52	1.61	100	1.52	1.61
Total.....	--	--	--	--	--	--	121.20	124.73
Net returns to land and management.....	--	--	--	--	--	--	37.98	28.31

MEDIUM-LARGE SINGLE-UNIT FARMS

Gross returns:								
Lint.....	438 lb.	.309	.304	--	--	--	135.34	133.15
Seed.....	743 lb.	.0214	.0165	--	--	--	15.90	12.26
Total.....	--	--	--	--	--	--	151.24	145.41
Costs:								
Home-grown seed.....	39 lb.	.0214	.0165	.83	.64	12	.10	.08
Purchased seed, treated and delinted.....	36 lb.	.078	.077	2.81	2.77	88	2.47	2.44
Seed treatment (Ceresan).....	1.8 oz.	.09	.09	.16	.16	1	( <sup>1</sup> )	( <sup>1</sup> )
Fertilizer:								
5-10-10.....	504 lb.	.0238	.0230	12.00	11.59	99	11.88	11.47
Nitrate of soda.....	125 lb.	.03	.0285	3.75	3.56	68	2.55	2.42
Muriate of potash.....	102 lb.	.0258	.0259	2.63	2.64	16	.42	.42
Poison:								
Toxaphene (10%).....	55.3 lb.	.07	.07	3.87	3.87	45	1.74	1.74
Endrin (19.5%).....	1 gal.	10.15	9.65	10.15	9.65	1	.10	.10
Aldrin (10%).....	40 lb.	.19	.18	7.60	7.20	5	.38	.36
Aldrin (2.5%) and DDT (5%).....	80 lb.	.078	.074	6.24	5.92	4	.25	.24
Ginning.....	.91 bale	11.48	12.51	10.45	11.38	100	10.45	11.38
Insurance, FCIC.....	\$120	2.00	2.00	2.40	2.40	2	.05	.05
Tractor.....	8.85 hr.	.86	.94	7.61	8.32	100	7.61	8.32
Mule.....	6.24 hr.	.61	.61	3.81	3.81	100	3.81	3.81
Hauling to gin:								
Custom.....	.91 bale	1.41	1.41	1.28	1.28	8	.10	.10
Farm equipment.....	11.3 mi.	.065	.065	.73	.73	60	.44	.44
Other machines.....	--	--	--	6.47	7.38	100	6.47	7.38
Labor:								
Preharvest.....	31.91 hr.	.66	.70	21.06	22.34	100	21.06	22.34
Harvest:								
Picking, own labor.....	11.81 cwt.	3.74	3.74	44.17	44.17	28	12.37	12.37
Picking, custom.....	11.81 cwt.	3.74	3.74	44.17	44.17	72	31.80	31.80
Other.....	2.54 hr.	.66	.70	1.68	1.78	100	1.68	1.78
Total.....	--	--	--	--	--	--	115.73	119.04
Net returns to land and management.....	--	--	--	--	--	--	35.51	26.37

LARGE SINGLE-UNIT FARMS

Gross returns:								
Lint.....	484 lb.	.309	.304	--	--	--	149.56	147.14
Seed.....	821 lb.	.0214	.0165	--	--	--	17.57	13.55
Total.....	--	--	--	--	--	--	167.13	160.69
Costs:								
Home-grown seed.....	42 lb.	.0214	.0165	.90	.69	10	.09	.07
Purchased seed, treated and delinted.....	30 lb.	.078	.077	2.34	2.31	90	2.11	2.08

<sup>1</sup> Less than 0.5 cent.

TABLE 18.--Cotton: Estimated costs and gross and net returns per acre with normal yields and 1956 and 1959 prices, by type and size of farm, central cotton-tobacco area of North Carolina--Continued

LARGE SINGLE-UNIT FARMS--Continued

Item	Quantity per acre	Price or cost per unit		Cost per acre		Part of acreage on which cost was incurred	Cost or return per acre, all cotton acreage	
		1956	1959	1956	1959		1956	1959
Costs--Continued		<u>Dol.</u>	<u>Dol.</u>	<u>Dol.</u>	<u>Dol.</u>	<u>Percent</u>	<u>Dol.</u>	<u>Dol.</u>
Fertilizer:								
5-10-10.....	504 lb.	0.0238	0.0230	12.00	11.59	89	10.68	10.32
Nitrate of soda.....	138 lb.	.03	.0285	4.14	3.93	59	2.44	2.32
Muriate of potash.....	92 lb.	.0258	.0259	2.37	2.38	32	.76	.76
Poison:								
Toxaphene (10%).....	35 lb.	.07	.07	2.45	2.45	68	1.67	1.67
Aldrin (10%).....	50 lb.	.19	.18	9.50	9.00	9	.86	.81
Ginning.....	1.01 bale	11.48	12.51	11.59	12.64	100	11.59	12.64
Insurance, FCIC.....	\$300	2.00	2.00	6.00	6.00	2	.12	.12
Tractor.....	8.85 hr.	.71	.77	6.28	6.81	100	6.28	6.81
Mule.....	.28 hr.	1.34	1.34	.38	.38	100	.38	.38
Hauling to gin:								
Custom.....	1.01 bale	2.00	2.00	2.02	2.02	4	.08	.08
Farm equipment.....	5.6 mi.	.065	.065	.36	.36	83	.30	.30
Other machines.....	--	--	--	6.04	6.89	100	6.04	6.89
Labor:								
Preharvest.....	24.04 hr.	.66	.70	15.87	16.83	100	15.87	16.83
Harvest:								
Picking, own labor.....	13.05 cwt.	3.74	3.74	48.81	48.81	26	12.69	12.69
Picking, custom.....	13.05 cwt.	3.74	3.74	48.81	48.81	74	36.12	36.12
Other.....	2.28 hr.	.66	.70	1.50	1.60	100	1.50	1.60
Total.....	--	--	--	--	--	--	109.58	112.49
Net returns to land and management.....	--	--	--	--	--	--	57.55	48.20

SMALL MULTIPLE-UNIT FARMS

Gross returns:								
Lint.....	468 lb.	.309	.304	--	--	--	144.61	142.27
Seed.....	793 lb.	.0214	.0165	--	--	--	16.97	13.08
Total.....	--	--	--	--	--	--	161.58	155.35
Costs:								
Home-grown seed.....	36 lb.	.0214	.0165	.77	.59	20	.15	.12
Purchased seed, treated and delinted.....	33 lb.	.078	.077	2.57	2.54	80	2.06	2.03
Fertilizer:								
5-10-10.....	448 lb.	.0238	.0230	10.66	10.30	100	10.66	10.30
Nitrate of soda.....	138 lb.	.03	.0285	4.14	3.93	66	2.73	2.59
Muriate of potash.....	100 lb.	.0258	.0259	2.58	2.59	25	.64	.65
Poison:								
Toxaphene (10%).....	50.3 lb.	.07	.07	3.52	3.52	41	1.44	1.44
B.H.C. (35%).....	52 lb.	.088	.084	4.58	4.37	4	1.83	1.75
Aldrin (2.5%) and DDT (5%).....	119 lb.	.078	.074	9.28	8.81	5	.46	.44
Ginning.....	.98 bale	11.48	12.51	11.25	12.26	100	11.25	12.26
Tractor.....	5.02 hr.	1.00	1.12	5.02	5.62	100	5.02	5.62
Mule.....	15.73 hr.	.51	.51	8.02	8.02	100	8.02	8.02
Hauling to gin:								
Custom.....	.98 bale	2.17	2.17	2.13	2.13	11	.23	.23
Farm equipment.....	5.8 mi.	.065	.065	.38	.38	48	.18	.18
Other machines.....	--	--	--	7.15	8.16	100	7.15	8.16
Labor:								
Preharvest.....	35.57 hr.	.66	.70	23.48	24.90	100	23.48	24.90
Harvest:								
Picking, own labor.....	12.61 cwt.	3.74	3.74	47.16	47.16	46	21.69	21.69
Picking, custom.....	12.61 cwt.	3.74	3.74	47.16	47.16	54	25.47	25.47
Other.....	1.94 hr.	.66	.70	1.28	1.36	100	1.28	1.36
Total.....	--	--	--	--	--	--	123.74	127.21
Net returns to land and management.....	--	--	--	--	--	--	37.84	28.14

TABLE 18.--Cotton: Estimated costs and gross and net returns per acre with normal yields and 1956 and 1959 prices, by type and size of farm, central cotton-tobacco area of North Carolina--Continued

MEDIUM MULTIPLE-UNIT FARMS

Item	Quantity per acre	Price or cost per unit		Cost per acre		Part of acreage on which cost was incurred	Cost or return per acre, all cotton acreage	
		1956	1959	1956	1959		1956	1959
		<u>Dol.</u>	<u>Dol.</u>	<u>Dol.</u>	<u>Dol.</u>	<u>Percent</u>	<u>Dol.</u>	<u>Dol.</u>
Gross returns:								
Lint.....	462 lb.	0.309	0.304	--	--	--	142.76	140.45
Seed.....	783 lb.	.0214	.0165	--	--	--	16.76	12.92
Total.....	--	--	--	--	--	--	159.52	153.37
Costs:								
Home-grown seed.....	33 lb.	.0214	.0165	.71	.54	23	.16	.12
Purchased seed, treated and delinted.....	30 lb.	.078	.077	2.34	2.31	77	1.80	1.79
Fertilizer:								
5-10-10.....	456 lb.	.0238	.0230	10.85	10.49	98	10.63	10.28
Nitrate of soda.....	156 lb.	.03	.0285	4.68	4.45	89	4.17	3.96
Muriate of potash.....	112 lb.	.0258	.0259	2.89	2.90	10	.29	.29
Poison:								
Toxaphene (10%).....	54.6 lb.	.07	.07	3.82	3.82	55	2.10	2.10
B.H.C. (35%).....	36 lb.	.088	.084	3.17	3.02	9	.29	.27
Defoliant (cyanamid).....	30 lb.	.07	.07	2.10	2.10	2	.04	.04
Ginning.....	.96 bale	11.48	12.51	11.02	12.01	100	11.02	12.01
Tractor.....	6.42 hr.	.78	.87	5.01	5.59	100	5.01	5.59
Mule.....	11.62 hr.	.56	.56	6.51	6.51	100	6.51	6.51
Hauling to gin:								
Custom.....	.96 bale	1.00	1.00	.96	.96	1	.01	.01
Farm equipment.....	7.8 mi.	.065	.065	.51	.51	85	.43	.43
Other machines.....	--	--	--	5.83	6.65	100	5.83	6.65
Labor:								
Preharvest.....	33.48 hr.	.66	.70	22.10	23.44	100	22.10	23.44
Harvest:								
Picking, own labor.....	12.45 cwt.	3.74	3.74	46.56	46.56	70	32.59	32.59
Picking, custom.....	12.45 cwt.	3.74	3.74	46.56	46.56	30	13.97	13.97
Other.....	2.6 hr.	.66	.70	1.72	1.82	100	1.72	1.82
Total.....	--	--	--	--	--	--	118.67	121.87
Net returns to land and management.....	--	--	--	--	--	--	40.85	31.50

MEDIUM-LARGE MULTIPLE-UNIT FARMS

Gross returns:								
Lint.....	476 lb.	.309	.304	--	--	--	147.08	144.70
Seed.....	817 lb.	.0214	.0165	--	--	--	17.27	13.48
Total.....	--	--	--	--	--	--	164.35	158.18
Costs:								
Home-grown seed.....	26 lb.	.0214	.0165	.56	.43	11	.06	.05
Purchased seed, treated and delinted.....	39 lb.	.078	.077	3.04	3.00	89	2.71	2.67
Seed treatment, (Ceresan).....	2.4 oz.	.09	.09	.22	.22	2	( <sup>1</sup> )	( <sup>1</sup> )
Fertilizer:								
5-10-10.....	468 lb.	.0238	.0230	11.13	10.76	100	11.13	10.76
Nitrate of soda.....	131 lb.	.03	.0285	3.93	3.73	59	2.32	2.20
Muriate of potash.....	83 lb.	.0258	.0259	2.14	2.15	11	.24	.24
Poison:								
Toxaphene (10%).....	48.3 lb.	.07	.07	3.38	3.38	49	1.66	1.66
Endrin (19.5%).....	1.25 gal.	10.15	9.65	12.69	12.06	16	2.03	1.93
DDT (10%).....	12 lb.	.096	.091	1.15	1.09	9	.10	.10
B.H.C. (35%).....	100 lb.	.088	.084	8.80	8.40	5	.44	.42
Ginning.....	.99 bale	11.48	12.51	11.37	12.38	100	11.37	12.38
Insurance:								
FCIC.....	\$100	2.00	2.00	2.00	2.00	14	.28	.28
Commercial hail and wind.....	\$100	2.00	2.00	2.00	2.00	9	.18	.18
Tractor.....	6.94 hr.	.69	.75	4.79	5.20	100	4.79	5.20
Mule.....	8.61 hr.	.50	.50	4.30	4.30	100	4.30	4.30
Hauling to gin:								
Custom.....	.99 bale	1.36	1.36	1.35	1.35	15	.20	.20
Farm equipment.....	11.1 mi.	.065	.065	.72	.72	63	.45	.45
Other machines.....	--	--	--	3.91	4.46	100	3.91	4.46

<sup>1</sup> Less than 0.5 cent.

TABLE 18.--Cotton: Estimated costs and gross and net returns per acre with normal yields and 1956 and 1959 prices, by type and size of farm, central cotton-tobacco area of North Carolina--Continued

MEDIUM-LARGE MULTIPLE-UNIT FARMS--Continued

Item	Quantity per acre	Price or cost per unit		Cost per acre		Part of acreage on which cost was incurred	Cost or return per acre, all cotton acreage	
		1956	1959	1956	1959		1956	1959
Costs--Continued		<u>Dol.</u>	<u>Dol.</u>	<u>Dol.</u>	<u>Dol.</u>	<u>Percent</u>	<u>Dol.</u>	<u>Dol.</u>
Labor:								
Preharvest.....	33.40 hr.	0.66	0.70	22.04	23.38	100	22.04	23.38
Harvest:								
Picking, own labor.....	12.83 cwt.	3.74	3.74	47.98	47.98	65	31.19	31.19
Picking, custom.....	12.83 cwt.	3.74	3.74	47.98	47.98	35	16.79	16.79
Other.....	2.27 hr.	.66	.70	1.50	1.59	100	1.50	1.59
Total.....	--	--	--	--	--	--	117.69	120.43
Net returns to land and management.....	--	--	--	--	--	--	46.66	37.75

LARGE MULTIPLE-UNIT FARMS

Gross returns:								
Lint.....	430 lb.	.309	.304	--	--	--	132.87	130.72
Seed.....	729 lb.	.0214	.0165	--	--	--	15.60	12.03
Total.....	--	--	--	--	--	--	148.47	142.75
Costs:								
Purchased seed, treated and delinted.....	31 lb.	.078	.077	2.42	2.39	100	2.42	2.39
Fertilizer:								
5-10-10.....	520 lb.	.0238	.0230	12.38	11.96	100	12.38	11.96
Nitrate of soda.....	119 lb.	.03	.0285	3.57	3.39	75	2.68	2.54
Poison:								
Toxaphene (10%).....	69 lb.	.07	.07	4.83	4.83	80	3.86	3.86
Endrin (19.5%).....	.4 gal.	10.15	9.65	4.06	3.86	20	.81	.77
Defoliant (cyanamid).....	30 lb.	.07	.07	2.10	2.10	22	.46	.46
Ginning.....	.90 bale	11.48	12.51	10.33	11.26	100	10.33	11.26
Insurance, FCIC.....	\$100	2.00	2.00	2.00	2.00	32	.64	.64
Tractor.....	4.66 hr.	.73	.79	3.40	3.68	100	3.40	3.68
Mule.....	3.61 hr.	.75	.75	2.71	2.71	100	2.71	2.71
Hauling to gin:								
Custom.....	.90 bale	2.00	2.00	1.80	1.80	7	.13	.13
Farm equipment.....	6.9 mi.	.065	.065	.45	.45	93	.42	.42
Other machines.....	--	--	--	3.94	4.50	100	3.94	4.50
Labor:								
Preharvest.....	27.10 hr.	.66	.70	17.89	18.97	100	17.89	18.97
Harvest:								
Picking, own labor.....	11.59 cwt.	3.74	3.74	43.35	43.35	27	11.70	11.70
Picking, custom.....	11.59 cwt.	3.74	3.74	43.35	43.35	73	31.65	31.65
Other.....	1.76 hr.	.66	.70	--	--	--	1.16	1.23
Total.....	--	--	--	--	--	--	106.58	108.87
Net returns to land and management.....	--	--	--	--	--	--	41.89	33.88

TABLE 19.--Flue-cured Tobacco: Estimated costs and gross and net returns per acre with normal yields and 1956 and 1959 prices, by type and size of farm, central cotton-tobacco area of North Carolina

SMALL SINGLE-UNIT FARMS

Item	Quantity per acre	Price or cost per unit		Cost per acre		Part of acreage on which cost was incurred	Cost or return per acre, all tobacco acreage	
		1956	1959	1956	1959		1956	1959
		<u>Dol.</u>	<u>Dol.</u>	<u>Dol.</u>	<u>Dol.</u>	<u>Percent</u>	<u>Dol.</u>	<u>Dol.</u>
Gross returns.....	1,488 lb.	0.518	0.587	--	--	--	770.78	873.46
Costs:								
Plant bed (96.7 sq. yd. per acre of tobacco):								
Fumigant, methyl bromide.....	6.9 lb.	.70	.70	--	--	--	4.83	4.83
Fertilizer, 4-9-3.....	225 lb.	.0225	.0225	--	--	--	5.06	5.06
Tobacco seed.....	.3 oz.	5.00	5.00	--	--	--	1.50	1.50
Blue mold treatment, 15% Fermate.....	9 lb.	.13	.13	--	--	--	1.17	1.17
Insecticide, 10% DDT.....	3 lb.	.10	.10	--	--	--	.30	.30
Plant bed cover <sup>1</sup> .....	50 yd.	.10	.10	--	--	--	5.00	5.00
Gas cover for fumigation <sup>2</sup> .....	--	--	--	--	--	--	2.08	2.08
Field expenses:								
Soil fumigation, Dowfume (W-85) on 19% of acreage, Shell DD on 17%.....	4.4 gal.	2.83	2.83	12.45	12.45	36	4.48	4.48
Field insect control:								
Dust materials, mostly 10% TDE and 10% DDT.....	26 lb.	.14	.14	3.64	3.64	66	2.40	2.40
Spray materials, mostly 10% TDE and 10% DDT.....	.9 gal.	3.39	3.39	3.05	3.05	29	.89	.89
Sucker control, MH-30.....	1.1 gal.	16.00	18.00	17.60	19.80	19	3.34	3.76
Fertilizer:								
3-9-6.....	1,549 lb.	.022	.021	34.08	32.53	100	34.08	32.53
Nitrate of soda.....	125 lb.	.03	.0285	3.75	3.56	25	.94	.89
Muriate of potash.....	96 lb.	.0258	.0259	2.48	2.49	10	.25	.25
Twine.....	3.1 lb.	.75	.70	2.32	2.17	100	2.32	2.17
Fuel oil.....	272 gal.	.15	.15	40.80	40.80	100	40.80	40.80
Insurance (\$350 per acre hail insurance on 51% of acreage, remainder fire and wind).....	\$473/\$100	6.93	6.93	32.78	32.78	69	22.62	22.62
Tractor.....	16.13 hr.	1.02	1.14	16.45	18.39	100	16.45	18.39
Mule.....	40.09 hr.	.48	.48	19.24	19.24	100	19.24	19.24
Hauling to market, custom.....	14.88 cwt.	.77	.77	11.46	11.46	51	5.84	5.84
Hauling to market, farm equipment.....	109 mi.	.065	.065	7.08	7.08	49	3.47	3.47
Other machines.....	--	--	--	10.62	12.12	100	10.62	12.12
Warehouse charges.....	--	--	--	--	--	--	23.26	25.83
Labor.....	523.3 hr.	.66	.70	345.38	366.31	100	345.38	366.31
Depreciation <sup>3</sup> .....	--	--	--	--	--	--	26.90	26.90
Buildings and equipment:								
Interest <sup>4</sup> .....	--	--	--	--	--	--	16.16	16.16
Repairs <sup>5</sup> .....	--	--	--	--	--	--	10.78	10.78
Insurance and taxes <sup>5</sup> .....	1 acre	--	--	--	--	--	10.78	10.78
Total.....	--	--	--	--	--	--	620.94	646.55
Net returns to land and management.....	--	--	--	--	--	--	149.84	226.91

MEDIUM SINGLE-UNIT FARMS

Gross returns.....	1,612 lb.	.518	.587	--	--	--	835.02	946.24
Costs:								
Plant bed (102.7 sq. yds. per acre of tobacco):								
Fumigant, methyl bromide.....	7.3 lb.	.70	.70	--	--	--	5.11	5.11
Fertilizer, 4-9-3.....	239 lb.	.0225	.0225	--	--	--	5.38	5.38
Tobacco seed.....	.3 oz.	5.00	5.00	--	--	--	1.50	1.50
Blue mold treatment, 15% Fermate.....	9.5 lb.	.13	.13	--	--	--	1.24	1.24
Insecticides, 10% DDT.....	3.5 lb.	.10	.10	--	--	--	.35	.35
Plant bed cover <sup>1</sup> .....	50 yd.	.10	.10	--	--	--	5.00	5.00
Gas cover for fumigation <sup>2</sup> .....	--	--	--	--	--	--	2.08	2.08

See footnotes at end of table.

TABLE 19.--Flue-cured Tobacco: Estimated costs and gross and net returns per acre with normal yields and 1956 and 1959 prices, by type and size of farm, central cotton-tobacco area of North Carolina--Continued

MEDIUM SINGLE-UNIT FARMS--Continued

Item	Quantity per acre	Price or cost per unit		Cost per acre		Part of acreage on which cost was incurred	Cost or return per acre, all tobacco acreage	
		1956	1959	1956	1959		1956	1959
Costs--Continued								
Field expenses:								
Soil fumigation--mostly Dowfume (W-85) and Shell DD.....	5.2 gal.	<u>Dol.</u> 2.97	<u>Dol.</u> 2.97	<u>Dol.</u> 15.44	<u>Dol.</u> 15.44	<u>Percent</u> 47	<u>Dol.</u> 7.26	<u>Dol.</u> 7.26
Field insect control:								
Dust materials--10 percent TDE and Rothane.....	25.7 lb.	.15	.15	3.86	3.86	73	2.82	2.82
Spray materials--19.5 percent Endrin and 10 percent TDE.....	.7 gal.	5.63	5.63	3.94	3.94	38	1.50	1.50
Sucker control, MH-30.....	.9 gal.	16.00	18.00	14.40	16.20	27	3.89	4.37
Fertilizer:								
3-9-6.....	1,645 lb.	.022	.021	36.19	34.54	100	36.19	34.54
Nitrate of soda.....	75 lb.	.03	.0285	2.25	2.14	17	.38	.36
Muriate of potash.....	96 lb.	.0258	.0259	2.48	2.49	14	.35	.35
Twine.....	3.4 lb.	.75	.70	2.55	2.38	100	2.55	2.38
Fuel oil.....	288 gal.	.15	.15	43.20	43.20	100	43.20	43.20
Insurance, \$415 per acre hail insurance on 58% of acreage, remainder fire and wind insurance.....	\$516	5.35	5.35	27.61	27.61	80	22.09	22.09
Tractor.....	22.01 hr.	.89	.98	19.59	21.57	100	19.59	21.57
Mule.....	29.39 hr.	.54	.54	15.87	15.87	100	15.87	15.87
Hauling to market:								
Custom.....	16.22 cwt.	.77	.77	12.49	12.49	30	3.75	3.75
Farm equipment.....	80 mi.	.065	.065	5.20	5.20	70	3.64	3.64
Other machines.....	1 acre	--	--	8.85	10.10	100	8.85	10.10
Warehouse charges.....	1 acre	--	--	--	--	--	25.24	28.02
Labor.....	495.6	.66	.70	327.10	346.92	100	327.10	346.92
Depreciation <sup>3</sup> .....	1 acre	--	--	--	--	--	26.90	26.90
Buildings and equipment:								
Interest <sup>4</sup> .....	1 acre	--	--	--	--	--	16.16	16.16
Repairs <sup>5</sup> .....	1 acre	--	--	--	--	--	10.78	10.78
Insurance and taxes <sup>5</sup> .....	1 acre	--	--	--	--	--	10.78	10.78
Total.....	--	--	--	--	--	--	609.55	634.02
Net return to land and management.....	--	--	--	--	--	--	225.47	312.22

MEDIUM-LARGE SINGLE-UNIT FARMS

Gross returns.....	1,666 lb.	.518	.587	--	--	--	862.99	977.94
Costs:								
Plant bed (94.6 sq. yds. per acre of tobacco):								
Fumigant, methyl bromide.....	6.8 lb.	.70	.70	--	--	--	4.76	4.76
Fertilizer, 4-9-3.....	220 lb.	.0225	.0225	--	--	--	4.95	4.95
Tobacco seed.....	.3 oz.	5.00	5.00	--	--	--	1.50	1.50
Blue mold treatment, 15% Fermate.....	8.8 lb.	.13	.13	--	--	--	1.14	1.14
Insecticides, 10% DDT.....	3.2 lb.	.10	.10	--	--	--	.32	.32
Plant bed cover <sup>1</sup> .....	50 yd.	.10	.10	--	--	--	5.00	5.00
Gas cover for fumigation <sup>2</sup> .....	--	--	--	--	--	--	2.08	2.08
Field expenses:								
Soil fumigation--23% Dowfume and 25% Shell DD.....	3.3 gal.	3.64	3.64	12.01	12.01	48	5.76	5.76
Field insect control:								
Dust materials (Rothane, 10% TDE and Toxaphene).....	39 lb.	.16	.16	6.24	6.24	66	4.12	4.12
Spray materials (Rothane and Endrin).....	1.4 gal.	3.85	3.85	5.39	5.39	36	1.94	1.94
Sucker control (15% MH-30 and 13% mineral oil).....	1.1 gal.	5.52	6.20	6.07	6.82	28	1.70	1.91

See footnotes at end of table.

TABLE 19.--Flue-cured Tobacco: Estimated costs and gross and net returns per acre with normal yields and 1956 and 1959 prices, by type and size of farm, central cotton-tobacco area of North Carolina--Continued

MEDIUM-LARGE SINGLE-UNIT FARMS--Continued

Item	Quantity per acre	Price or cost per unit		Cost per acre		Part of acreage on which cost was incurred	Cost or return per acre, all tobacco acreage	
		1956	1959	1956	1959		1956	1959
Costs--Continued								
Field expenses--Continued								
Fertilizer:		<u>Dol.</u>	<u>Dol.</u>	<u>Dol.</u>	<u>Dol.</u>	<u>Percent</u>	<u>Dol.</u>	<u>Dol.</u>
3-9-6.....	1,553 lb.	0.022	0.021	34.17	32.61	100	34.17	32.61
Nitrate of soda.....	75 lb.	.03	.0285	2.25	2.14	29	.65	.62
Muriate of potash.....	108 lb.	.0258	.0259	2.79	2.80	28	.78	.78
Twine.....	3.4 lb.	.75	.70	2.55	2.38	100	2.55	2.38
Fuel oil.....	245 gal.	.15	.15	36.75	36.75	100	36.75	36.75
Insurance (\$350 per acre hail ins. on 60% of acreage, remainder--wind, fire, and theft ins.).....	\$472	5.16	5.16	24.36	24.36	68	16.56	16.56
Tractor.....	28.04 hr.	.86	.94	24.11	26.36	100	24.11	26.36
Mule.....	17.04 hr	.61	.61	10.39	10.39	100	10.39	10.39
Hauling to market:								
Custom.....	16.66 cwt.	.77	.77	12.83	12.83	26	3.34	3.34
Farm equipment.....	80 mi.	.065	.065	5.20	5.20	74	3.85	3.85
Other machines.....	1 acre	--	--	8.46	9.65	100	8.46	9.65
Warehouse charges.....	1 acre	--	--	--	--	--	25.99	28.87
Labor.....	520.33 hr.	.66	.70	343.42	364.23	100	343.42	364.23
Depreciation <sup>3</sup> .....	1 acre	--	--	--	--	--	26.90	26.90
Buildings and equipment:								
Interest <sup>4</sup> .....	1 acre	--	--	--	--	--	16.16	16.16
Repairs <sup>5</sup> .....	1 acre	--	--	--	--	--	10.78	10.78
Insurance and taxes <sup>5</sup> .....	1 acre	--	--	--	--	--	10.78	10.78
Total.....	--	--	--	--	--	--	608.91	634.49
Net return to land and management.....	--	--	--	--	--	--	254.08	343.45

LARGE SINGLE-UNIT FARMS

Gross returns.....	1,692 lb.	.518	.587	--	--	--	876.46	993.20
Costs:								
Plant bed (102.4 sq. yds. per acre of tobacco):								
Fumigant, methyl bromide.....	7.3 lb.	.70	.70	--	--	--	5.11	5.11
Fertilizer, 4-9-3.....	238 lb.	.225	.225	--	--	--	5.36	5.36
Tobacco seed.....	.3 oz.	5.00	5.00	--	--	--	1.50	1.50
Blue mold treatment, 15% Fermate.....	9.5 lb.	.13	.13	--	--	--	1.24	1.24
Insecticides, 10% DDT.....	3.5 lb.	.10	.10	--	--	--	.35	.35
Plant bed cover <sup>1</sup> .....	50 yd.	.10	.10	--	--	--	5.00	5.00
Gas cover for fumigation <sup>2</sup> .....	--	--	--	--	--	--	2.08	2.08
Field expenses:								
Soil fumigation (28% Dowfume and 24% Shell DD).....	6.6 gal.	2.92	2.92	19.27	19.27	52	10.02	10.02
Field insect control:								
Dust materials (Rothane and 10% DDT)	18.5 lb.	.18	.18	3.33	3.33	39	1.30	1.30
Spray materials (Rothane and Endrin)	.3 gal.	3.57	3.57	1.07	1.07	46	.49	.49
Sucker control, MH-30.....	.8 gal.	16.00	18.00	12.80	14.40	27	3.46	3.89
Fertilizer:								
3-9-6.....	1,663 lb.	.022	.021	36.59	34.92	100	36.59	34.92
Nitrate of soda.....	69 lb.	.03	.0285	2.07	1.97	24	.50	.47
Muriate of potash.....	110 lb.	.0258	.0259	2.84	2.85	12	.34	.34
Twine.....	3.2 lb.	.75	.70	2.40	2.24	100	2.40	2.24
Fuel oil.....	329 gal.	.15	.15	49.35	49.35	100	49.35	49.35
Insurance (\$350 per acre hail ins. on 56% of acreage, remainder--wind and fire).....	\$491	4.50	4.50	22.10	22.10	65	14.36	14.36
Tractor.....	30.14 hr.	.71	.77	21.40	23.21	100	21.40	23.21
Mule.....	8.85 hr.	1.34	1.34	11.86	11.86	100	11.86	11.86

See footnotes at end of table.

TABLE 19.--Flue-cured Tobacco: Estimated costs and gross and net returns per acre with normal yields and 1956 and 1959 prices, by type and size of farm, central cotton-tobacco area of North Carolina--Continued

LARGE SINGLE-UNIT FARMS--Continued

Item	Quantity per acre	Price or cost per unit		Cost per acre		Part of acreage on which cost was incurred	Cost or return per acre, all tobacco acreage	
		1956	1959	1956	1959		1956	1959
Costs--Continued								
Field expenses--Continued								
Hauling to market:		<u>Dol.</u>	<u>Dol.</u>	<u>Dol.</u>	<u>Dol.</u>	<u>Percent</u>	<u>Dol.</u>	<u>Dol.</u>
Custom.....	16.92 cwt.	0.77	0.77	13.03	13.03	14	1.82	1.82
Farm equipment.....	60 mi.	.065	.065	3.90	3.90	86	3.35	3.35
Other machines.....	1 acre	--	--	7.49	8.55	100	7.49	8.55
Warehouse charges.....	1 acre	--	--	--	--	--	26.35	29.27
Labor.....	467.84 hr.	.66	.70	308.77	327.49	100	308.77	327.49
Depreciation <sup>3</sup> .....	1 acre	--	--	--	--	--	26.90	26.90
Buildings and equipment:								
Interest <sup>4</sup> .....	1 acre	--	--	--	--	--	16.16	16.16
Repairs <sup>5</sup> .....	1 acre	--	--	--	--	--	10.78	10.78
Insurance and taxes <sup>5</sup> .....	1 acre	--	--	--	--	--	10.78	10.78
Total.....	--	--	--	--	--	--	585.11	608.19
Net return to land and management.....	--	--	--	--	--	--	291.35	385.01

SMALL MULTIPLE-UNIT FARMS

Gross returns.....	1,571 lb.	.518	.587	--	--	--	813.78	922.18
Costs:								
Plant bed (117.4 sq. yds. per acre of tobacco):								
Fumigant, methyl bromide.....	8.4 lb.	.70	.70	--	--	--	5.88	5.88
Fertilizer, 4-9-3.....	273 lb.	.0225	.0225	--	--	--	6.14	6.14
Tobacco seed.....	.3 oz.	5.00	5.00	--	--	--	1.50	1.50
Blue mold treatment, 15% Fermate.....	10.8 lb.	.13	.13	--	--	--	1.40	1.40
Insecticides, 10% DDT.....	4.0 lb.	.10	.10	--	--	--	.40	.40
Plant bed cover <sup>1</sup> .....	50 yd.	.10	.10	--	--	--	5.00	5.00
Gas cover for fumigation <sup>2</sup> .....	--	--	--	--	--	--	2.08	2.08
Field expenses:								
Soil fumigation (35% Shell DD and 11% Dowfume).....	6.3 gal.	2.12	2.12	13.36	13.36	46	6.15	6.15
Field insect control:								
Dust materials (DDT, TDE, and Rothane).....	29 lb.	.13	.13	3.77	3.77	61	2.30	2.30
Spray materials (Rothane, TDE and Endrin).....	1.8 gal.	3.10	3.10	5.58	5.58	43	2.40	2.40
Sucker control, MH-30.....	.75 gal.	16.00	18.00	12.00	13.50	27	3.24	3.64
Fertilizer:								
3-9-6.....	1,722 lb.	.022	.021	37.88	36.16	100	37.88	36.16
Nitrate of soda.....	100 lb.	.03	.0285	3.00	2.85	25	.75	.71
Muriate of potash.....	115 lb.	.0258	.0259	2.97	2.98	3	.09	.09
Twine.....	4.0 lb.	.75	.70	3.00	2.80	100	3.00	2.80
Fuel oil.....	247 gal.	.15	.15	37.05	37.05	100	37.05	37.05
Insurance (\$310 per acre hail ins. on 53% of acreage, remainder wind and fire).....	\$443	4.88	4.88	21.62	21.62	90	19.46	19.46
Tractor.....	17.18 hr.	1.00	1.12	17.18	19.24	100	17.18	19.24
Mule.....	37.37 hr.	.51	.51	19.06	19.06	100	19.06	19.06
Hauling to market:								
Custom.....	15.71 cwt.	.77	.77	12.10	12.10	34	4.11	4.11
Farm equipment.....	139 mi.	.065	.065	9.04	9.04	66	5.97	5.97
Other machines.....	1 acre	--	--	7.89	9.00	100	7.89	9.00
Warehouse charges.....	1 acre	--	--	--	--	--	24.66	27.13
Labor.....	563.5 hr.	.66	.70	371.91	394.45	100	371.91	394.45
Depreciation <sup>3</sup> .....	1 acre	--	--	--	--	--	26.90	26.90
Buildings and equipment:								
Interest <sup>4</sup> .....	1 acre	--	--	--	--	--	16.16	16.16
Repairs <sup>5</sup> .....	1 acre	--	--	--	--	--	10.78	10.78
Insurance and taxes <sup>5</sup> .....	1 acre	--	--	--	--	--	10.78	10.78
Total.....	--	--	--	--	--	--	650.12	676.74
Net return to land and management.....	--	--	--	--	--	--	163.66	245.44

See footnotes at end of table.



TABLE 19.--Flue-cured Tobacco: Estimated costs and gross and net returns per acre with normal yields and 1956 and 1959 prices, by type and size of farm, central cotton-tobacco area of North Carolina--Continued

MEDIUM MULTIPLE-UNIT FARMS

Item	Quantity per acre	Price or cost per unit		Cost per acre		Part of acreage on which cost was incurred	Cost or return per acre, all tobacco acreage	
		1956	1959	1956	1959		1956	1959
Gross returns.....	1,472 lb.	<u>Dol.</u> 0.518	<u>Dol.</u> 0.587	<u>Dol.</u> --	<u>Dol.</u> --	<u>Percent</u> --	<u>Dol.</u> 762.50	<u>Dol.</u> 864.06
Costs:								
Plant bed (105.5 sq. yds. per acre of tobacco):								
Fumigant, methyl bromide.....	7.5 lb.	.70	.70	--	--	--	5.25	5.25
Fertilizer, 4-9-3.....	246 lb.	.0225	.0225	--	--	--	5.54	5.54
Tobacco seed.....	.3 oz.	5.00	5.00	--	--	--	1.50	1.50
Blue mold treatment, 15% Fermate.....	9.8 lb.	.13	.13	--	--	--	1.27	1.27
Insecticide, 10% DDT.....	3.6 lb.	.10	.10	--	--	--	.36	.36
Plant bed cover <sup>1</sup> .....	50 yd.	.10	.10	--	--	--	5.00	5.00
Gas cover for fumigation <sup>2</sup> .....	--	--	--	--	--	--	2.08	2.08
Field expenses:								
Soil fumigation (25% Shell DD and 10% Dowfume).....	6.2 gal.	2.49	2.49	15.44	15.44	35	5.40	5.40
Field insect control:								
Dust materials (TDE, DDT, and Toxaphene).....	31 lb.	.10	.10	3.10	3.10	59	1.83	1.83
Spray materials (Endrin, DDT and Rothane).....	2.3 gal.	3.00	3.00	6.90	6.90	44	3.04	3.04
Sucker control (10% MH-30, and 4% mineral oil).....	1.2 gal.	6.78	7.56	8.14	9.07	14	1.14	1.27
Fertilizer:								
3-9-6.....	1,638 lb.	.022	.021	36.04	34.40	100	36.04	34.40
Nitrate of soda.....	75 lb.	.03	.0285	2.25	2.14	12	.27	.26
Muriate of potash.....	115 lb.	.0258	.0259	2.97	2.98	20	.59	.60
Twine.....	3.7 lb.	.75	.70	2.78	2.59	100	2.78	2.59
Fuel oil.....	204 gal.	.15	.15	30.60	30.60	100	30.60	30.60
Insurance (\$310 per acre hail ins. on 56% acreage. Also some fire & wind insurance.).....	\$400	5.70	5.70	22.80	22.80	56	12.77	12.77
Tractor.....	16.30 hr.	.78	.87	12.71	14.18	100	12.71	14.18
Mule.....	30.55 hr.	.56	.56	17.11	17.11	100	17.11	17.11
Hauling to market:								
Custom.....	14.72 cwt.	.77	.77	11.33	11.33	22	2.49	2.49
Farm equipment.....	60 mi.	.065	.065	3.90	3.90	78	3.04	3.04
Other machines.....	1 acre	--	--	7.33	8.36	100	7.33	8.36
Warehouse charges.....	1 acre	--	--	--	--	--	23.03	25.57
Labor.....	512.7	.66	.70	338.38	358.89	100	338.38	358.89
Depreciation <sup>3</sup> .....	1 acre	--	--	--	--	--	26.90	26.90
Buildings and equipment:								
Interest <sup>4</sup> .....	1 acre	--	--	--	--	--	16.16	16.16
Repairs <sup>5</sup> .....	1 acre	--	--	--	--	--	10.78	10.78
Insurance and taxes <sup>5</sup> .....	1 acre	--	--	--	--	--	10.78	10.78
Total.....	--	--	--	--	--	--	584.17	608.02
Net return to land and management.....	--	--	--	--	--	--	178.33	256.04

MEDIUM-LARGE MULTIPLE-UNIT FARMS

Gross returns.....	1,665 lb.	.518	.587	--	--	--	862.47	977.36
Costs:								
Plant bed (90.2 sq. yds. per acre of tobacco):								
Fumigant, methyl bromide.....	6.4 lb.	.70	.70	--	--	--	4.48	4.48
Fertilizer, 4-9-3.....	210 lb.	.0225	.0225	--	--	--	4.72	4.72
Tobacco seed.....	.3 oz.	5.00	5.00	--	--	--	1.50	1.50
Blue mold treatment, 15% Fermate.....	8.3 lb.	.13	.13	--	--	--	1.08	1.08
Insecticide, 10% DDT.....	3.1 lb.	.10	.10	--	--	--	.31	.31
Plant bed cover <sup>1</sup> .....	50 yd.	.10	.10	--	--	--	5.00	5.00
Gas cover for fumigation <sup>2</sup> .....	--	--	--	--	--	--	2.08	2.08

See footnotes at end of table.

TABLE 19.--Flue-cured Tobacco: Estimated costs and gross and net returns per acre with normal yields and 1956 and 1959 prices, by type and size of farm, central cotton-tobacco area of North Carolina--Continued

MEDIUM-LARGE MULTIPLE-UNIT FARMS--Continued

Item	Quantity per acre	Price or cost per unit		Cost per acre		Part of acreage on which cost was incurred	Cost or return per acre, all tobacco acreage	
		1956	1959	1956	1959		1956	1959
Cost--Continued								
Field Expenses:		<u>Dol.</u>	<u>Dol.</u>	<u>Dol.</u>	<u>Dol.</u>	<u>Percent</u>	<u>Dol.</u>	<u>Dol.</u>
Soil fumigation (37% Shell DD and 30% Dowfume).....	8.2 gal.	2.57	2.57	21.07	21.07	67	14.12	14.12
Field insect control:								
Dust materials (DDT, Toxaphene, and Rothane).....	34 lb.	.13	.13	4.42	4.42	65	2.87	2.87
Spray materials (TDE and Endrin).....	1.1 gal.	4.05	4.05	4.46	4.46	65	2.90	2.90
Sucker control, MH-30.....	0.9 gal.	16.00	18.00	14.40	16.20	35	5.04	5.67
Fertilizer:								
3-9-6.....	1,575 lb.	.022	.021	34.65	33.08	100	34.65	33.08
Cal-nitro.....	98 lb.	.032	.028	3.14	2.74	6	.19	.14
Muriate of potash.....	90 lb.	.0258	.0259	2.32	2.33	27	.63	.63
Twine.....	3.5 lb.	.75	.70	2.62	2.45	100	2.62	2.45
Fuel oil.....	345 gal.	.15	.15	51.75	51.75	100	51.75	51.75
Insurance (\$396 hail insurance per acre on 68% of acreage. Remainder--fire and wind insurance.).....	\$425	4.79	4.79	20.36	20.36	83	16.90	16.90
Tractor.....	18.80 hr.	.69	.75	12.97	14.10	100	12.97	14.10
Mule.....	30.29 hr.	.50	.50	15.14	15.14	100	15.14	15.14
Hauling to market, farm equipment.....	82 mi.	.065	.065	5.33	5.33	100	5.33	5.33
Other machines.....	1 acre	--	--	5.35	6.10	100	5.35	6.10
Warehouse charges.....	1 acre	--	--	--	--	--	25.97	28.84
Labor.....	535.59 hr.	.66	.70	353.50	374.92	100	353.49	374.91
Depreciation <sup>3</sup> .....	1 acre	--	--	--	--	--	26.90	26.90
Buildings and equipment:								
Interest <sup>4</sup> .....	1 acre	--	--	--	--	--	16.16	16.16
Repairs <sup>5</sup> .....	1 acre	--	--	--	--	--	10.78	10.78
Insurance and taxes <sup>5</sup> .....	1 acre	--	--	--	--	--	10.78	10.78
Total.....	--	--	--	--	--	--	633.71	658.72
Net return to land and management.....	--	--	--	--	--	--	228.76	318.64

LARGE MULTIPLE-UNIT FARMS

Gross returns.....	1,646 lb.	.518	.587	--	--	--	852.63	966.20
Costs:								
Plant bed (85.8 sq. yds. per acre of tobacco):								
Fumigant, methyl bromide.....	6.1 lb.	.70	.70	--	--	--	4.27	4.27
Fertilizer, 4-9-3.....	200 lb.	.0225	.0225	--	--	--	4.50	4.50
Tobacco seed.....	0.3 oz.	5.00	5.00	--	--	--	1.50	1.50
Blue mold treatment, 15% Fermate.....	7.9 lb.	.13	.13	--	--	--	1.03	1.03
Insecticide, 10% DDT.....	2.9 lb.	.10	.10	--	--	--	.29	.29
Plant bed cover <sup>1</sup> .....	50 yd.	.10	.10	--	--	--	5.00	5.00
Gas cover for fumigation <sup>2</sup> .....	--	--	--	--	--	--	2.08	2.08
Field expenses:								
Soil fumigation (Shell DD).....	12.6 gal.	1.85	1.85	23.23	23.23	39	9.06	9.06
Field insect control:								
Dust materials (TDE and Endrin).....	32 lb.	.10	.10	3.20	3.20	70	2.24	2.24
Spray materials (Endrin).....	1.1 gal.	4.55	4.55	5.00	5.00	67	3.35	3.35
Sucker control, MH-30.....	1.0 gal.	16.00	18.00	16.00	18.00	37	5.92	6.66
Fertilizer:								
3-9-6.....	1,912 lb.	.022	.021	42.06	40.15	100	42.06	40.15
Nitrate of soda.....	50 lb.	.032	.028	1.60	1.40	19	.30	.27
Muriate of potash.....	100 lb.	.0258	.0259	2.58	2.59	25	.64	.65
Twine.....	3.5 lb.	.75	.70	2.62	2.45	100	2.62	2.45
Fuel oil.....	228 gal.	.15	.15	34.20	34.20	100	34.20	34.20
Insurance (\$472 per acre hail insurance on 77% of acreage. Also, some fire and wind insurance).....	\$774	5.65	5.65	43.73	43.73	77	33.67	33.67
Tractor.....	14.15 hr.	.73	.79	10.33	11.18	100	10.33	11.18
Mule.....	28.54 hr.	.75	.75	21.40	21.40	100	21.40	21.40
Hauling to market, farm equipment.....	58 mi.	.065	.065	3.77	3.77	100	3.77	3.77
Other machines.....	1 acre	--	--	5.44	6.21	100	5.44	6.21

See footnotes at end of table.

TABLE 19.--Flue-cured Tobacco: Estimated costs and gross and net returns per acre with normal yields and 1956 and 1959 prices, by type and size of farm, central cotton-tobacco area of North Carolina--Continued

LARGE MULTIPLE-UNIT FARMS--Continued

Item	Quantity per acre	Price or cost per unit		Cost per acre		Part of acreage on which cost was incurred	Cost or return per acre, all tobacco acreage	
		1956	1959	1956	1959		1956	1959
Costs--Continued								
Field expenses--Continued		<u>Dol.</u>	<u>Dol.</u>	<u>Dol.</u>	<u>Dol.</u>	<u>Percent</u>	<u>Dol.</u>	<u>Dol.</u>
Warehouse charges.....	1 acre	--	--	--	--	--	25.72	28.56
Labor.....	501.8 hr.	.66	.70	331.19	351.26	100	331.19	351.26
Depreciation <sup>3</sup> .....	1 acre	--	--	--	--	--	26.90	26.90
Buildings and equipment:								
Interest <sup>4</sup> .....	1 acre	--	--	--	--	--	16.16	16.16
Repairs <sup>5</sup> .....	1 acre	--	--	--	--	--	10.78	10.78
Insurance and taxes <sup>5</sup> .....	1 acre	--	--	--	--	--	10.78	10.78
Total.....	--	--	--	--	--	--	615.20	638.37
Net return to land and management.....	--	--	--	--	--	--	237.43	327.83

<sup>1</sup> 100 square yards--2-year life.

<sup>2</sup> 100 square yards used on 300 square yards of plant bed--2-year life.

<sup>3</sup> Barn, oil curers, fuel tank and stringing shed--20-year life; miscellaneous equipment 10 years; tobacco trucks 15 years.

<sup>4</sup> @ 3 percent of \$538.83 per acre based on investment of \$1,616.50 for 3 acres.

<sup>5</sup> @ 2 percent of \$538.83 per acre based on investment of \$1,616.50 for 3 acres.

TABLE 20.--Corn: Estimated costs and gross and net returns per acre with normal yields and 1956 and 1959 prices, by type and size of farm, central cotton-tobacco area of North Carolina

SMALL SINGLE-UNIT FARMS

Item	Quantity per acre	Price or cost per unit		Cost per acre		Part of acreage on which cost was incurred	Cost or return per acre, all corn acreage	
		1956	1959	1956	1959		1956	1959
		<u>Dol.</u>	<u>Dol.</u>	<u>Dol.</u>	<u>Dol.</u>	<u>Percent</u>	<u>Dol.</u>	<u>Dol.</u>
Gross returns.....	36 bu.	1.29	1.16	--	--	--	46.44	41.76
Costs:								
Home-grown seed.....	10.4 lb.	.023	.0207	0.24	0.22	42	.10	.09
Purchased seed, hybrid.....	8.3 lb.	.19	.18	1.58	1.49	58	.92	.86
Fertilizer:								
4-10-6.....	395 lb.	.0208	.0201	8.22	7.94	90	7.40	7.15
Nitrate of soda.....	250 lb.	.03	.0285	7.50	7.12	93	6.98	6.62
Muriate of potash.....	146 lb.	.0258	.0259	3.77	3.78	5	.19	.19
Tractor.....	5.39 hr.	1.02	1.14	5.50	6.14	100	5.50	6.14
Mule.....	18.29 hr.	.48	.48	8.78	8.78	100	8.78	8.78
Picker, custom, 1-row.....	--	--	--	6.20	6.20	13	.81	.81
Picker-sheller, custom, 2-row..	--	--	--	13.50	13.50	2	.27	.27
Other machines.....	--	--	--	6.30	7.19	100	6.30	7.19
Labor.....	30.06 hr.	.66	.70	19.84	21.04	100	19.84	21.04
Total.....	--	--	--	--	--	--	57.09	59.14
Net return to land and management	--	--	--	--	--	--	-10.65	-17.38

MEDIUM SINGLE-UNIT FARMS

Gross returns.....	40 bu.	1.29	1.16	--	--	--	51.60	46.40
Costs:								
Home-grown seed.....	8.5 lb.	.023	.0207	.20	.18	31	.06	.06
Purchased seed, hybrid.....	8.1 lb.	.19	.18	1.54	1.46	69	1.06	1.01
Fertilizer:								
4-10-6.....	400 lb.	.0208	.0201	8.32	8.04	94	7.82	7.56
Cal-nitro.....	244 lb.	.0305	.028	7.44	6.83	92	6.84	6.28
Tractor.....	7.75 hr.	.89	.98	6.90	7.60	100	6.90	7.60
Mule.....	12.23 hr.	.54	.54	6.60	6.60	100	6.60	6.60
Picker, custom, 1-row.....	--	--	--	6.20	6.20	8	.50	.50
Other machines.....	--	--	--	4.32	4.93	100	4.32	4.93
Labor.....	28.86 hr.	.66	.70	19.05	20.20	100	19.05	20.20
Total.....	--	--	--	--	--	--	53.15	54.74
Net returns to land and management	--	--	--	--	--	--	-1.55	-8.34

MEDIUM-LARGE SINGLE-UNIT FARMS

Gross returns.....	41 bu.	1.29	1.16	--	--	--	52.89	47.56
Costs:								
Home-grown seed.....	7.5 lb.	.023	.0207	.17	.16	36	.06	.06
Purchased seed, hybrid.....	7.7 lb.	.19	.18	1.46	1.39	64	.93	.89
Fertilizer:								
4-10-6.....	395 lb.	.0208	.0201	8.22	7.94	96	7.89	7.62
Cal-nitro.....	244 lb.	.0305	.028	7.44	6.83	96	7.14	6.56
Tractor.....	8.49 hr.	.86	.94	7.30	7.98	100	7.30	7.98
Mule.....	5.24 hr.	.61	.61	3.20	3.20	100	3.20	3.20
Picker, custom, 1-row.....	--	--	--	6.20	6.20	4	.25	.25
Picker-sheller, custom, 2-row..	--	--	--	13.50	13.50	14	1.89	1.89
Other machines.....	--	--	--	--	--	--	5.56	6.34
Labor.....	20.59 hr.	.66	.70	13.59	14.41	100	13.59	14.41
Total.....	--	--	--	--	--	--	47.81	49.20
Net returns to land and management	--	--	--	--	--	--	5.08	-1.64

TABLE 20.--Corn: Estimated costs and gross and net returns per acre with normal yields and 1956 and 1959 prices, by type and size of farm, central cotton-tobacco area of North Carolina--Continued

LARGE SINGLE-UNIT FARMS

Item	Quantity per acre	Price or cost per unit		Cost per acre		Part of acreage on which cost was incurred	Cost or return per acre, all corn acreage	
		1956	1959	1956	1959		1956	1959
		<u>Dol.</u>	<u>Dol.</u>	<u>Dol.</u>	<u>Dol.</u>	<u>Percent</u>	<u>Dol.</u>	<u>Dol.</u>
Gross returns.....	46 bu.	1.29	1.16	--	--	--	59.34	53.36
Costs:								
Home-grown seed.....	9.2 lb.	.023	.0207	.21	.19	20	.04	.04
Purchased seed, hybrid.....	7.8 lb.	.19	.18	1.48	1.40	80	1.18	1.12
Fertilizer:								
4-10-6.....	405 lb.	.0208	.0201	8.42	8.14	87	7.33	7.08
Cal-nitro.....	322 lb.	.0305	.028	9.82	9.02	100	9.82	9.02
Muriate of potash.....	200 lb.	.0258	.0259	5.16	5.18	3	.15	.16
Tractor.....	8.41 hr.	.71	.77	5.97	6.48	100	5.97	6.48
Mule.....	.23 hr.	1.34	1.34	.31	.31	100	.31	.31
Picker, custom, 1-row.....	--	--	--	6.20	6.20	7	.43	.43
Picker-sheller, custom, 2-row..	--	--	--	13.50	13.50	12	1.62	1.62
Other machines.....	--	--	--	3.67	4.19	100	3.67	4.19
Labor.....	17.68 hr.	.66	.70	11.67	12.38	100	11.67	12.38
Total.....	--	--	--	--	--	--	42.19	42.83
Net returns to land and management	--	--	--	--	--	--	17.15	10.53

SMALL MULTIPLE-UNIT FARMS

Gross returns.....	44 bu.	1.29	1.16	--	--	--	56.76	51.04
Expenses:								
Home-grown seed.....	9.5 lb.	.023	.0207	.22	.20	35	.08	.07
Purchased seed, hybrid.....	7.4 lb.	.19	.18	1.41	1.33	65	.92	.86
Fertilizer:								
4-10-6.....	390 lb.	.0208	.0201	8.11	7.84	100	8.11	7.84
Nitrate of soda.....	362 lb.	.03	.0285	10.86	10.32	93	10.10	9.60
Tractor.....	5.34 hr.	1.00	1.12	5.34	5.98	100	5.34	5.98
Mule.....	16.13 hr.	.51	.51	8.23	8.23	100	8.23	8.23
Picker, custom, 1-row.....	--	--	--	6.20	6.20	12	.74	.74
Other machines.....	--	--	--	5.52	6.30	100	5.52	6.30
Labor.....	29.33 hr.	.66	.70	19.36	20.53	100	19.36	20.53
Total.....	--	--	--	--	--	--	58.40	60.15
Net returns to land and management	--	--	--	--	--	--	-1.64	-9.11

MEDIUM MULTIPLE-UNIT FARMS

Gross returns.....	46 bu.	1.29	1.16	--	--	--	59.34	53.36
Costs:								
Home-grown seed.....	8.8 lb.	.023	.0207	.20	.18	40	.08	.07
Purchased seed, hybrid.....	6.5 lb.	.19	.18	1.24	1.17	60	.74	.70
Fertilizer:								
4-10-6.....	370 lb.	.0208	.0201	7.70	7.44	93	7.16	6.92
Cal-nitro.....	210 lb.	.0305	.028	6.40	5.88	100	6.40	5.88
Tractor.....	5.40 hr.	.78	.87	4.21	4.70	100	4.21	4.70
Mule.....	12.82 hr.	.56	.56	7.18	7.18	100	7.18	7.18
Picker, custom, 1-row.....	--	--	--	6.20	6.20	5	.31	.31
Other machines.....	--	--	--	--	--	--	3.36	3.83
Labor.....	23.42 hr.	.66	.70	15.46	16.39	100	15.46	16.39
Total.....	--	--	--	--	--	--	44.90	45.98
Net returns to land and management	--	--	--	--	--	--	14.44	7.38

TABLE 20.--Corn: Estimated costs and gross and net returns per acre with normal yields and 1956 and 1959 prices, by type and size of farm, central cotton-tobacco area of North Carolina--Continued

MEDIUM-LARGE MULTIPLE-UNIT FARMS

Item	Quantity per acre	Price or cost per unit		Cost per acre		Part of acreage on which cost was incurred	Cost or return per acre, all corn acreage	
		1956	1959	1956	1959		1956	1959
		<u>Dol.</u>	<u>Dol.</u>	<u>Dol.</u>	<u>Dol.</u>	<u>Percent</u>	<u>Dol.</u>	<u>Dol.</u>
Gross returns.....	39 bu.	1.29	1.16	--	--	--	50.31	45.24
Costs:								
Home-grown seed.....	8.1 lb.	.023	.0207	.19	.17	13	.02	.02
Purchased seed, hybrid.....	6.5 lb.	.19	.18	1.24	1.17	87	1.08	1.02
Fertilizer:								
4-10-6.....	385 lb.	.0208	.0201	8.01	7.74	100	8.01	7.74
Nitrate of soda.....	300 lb.	.03	.0285	9.00	8.55	93	8.37	7.95
Tractor.....	7.31 hr.	.69	.75	5.04	5.48	100	5.04	5.48
Mule.....	7.03 hr.	.50	.50	3.52	3.52	100	3.52	3.52
Picker, custom, 1-row.....	--	--	--	6.20	6.20	7	.43	.43
Picker-sheller, custom, 2-row..	--	--	--	13.50	13.50	18	2.43	2.43
Other machines.....	--	--	--	3.14	3.58	100	3.14	3.58
Labor.....	22.18 hr.	.66	.70	14.64	15.53	100	14.64	15.53
Total.....	--	--	--	--	--	--	46.68	47.70
Net returns to land and management	--	--	--	--	--	--	3.63	-2.46

LARGE MULTIPLE-UNIT FARMS

Gross returns.....	42 bu.	1.29	1.16	--	--	--	54.18	48.72
Costs:								
Home-grown seed.....	7.3 lb.	.023	.0207	.17	.15	11	.02	.02
Purchased seed, hybrid.....	10.4 lb.	.19	.18	1.98	1.87	89	1.76	1.66
Fertilizer:								
4-10-6.....	455 lb.	.0208	.0201	9.46	9.15	100	9.46	9.15
Nitrate of soda.....	381 lb.	.03	.0285	11.43	10.86	90	10.29	9.77
Tractor.....	8.66 hr.	.73	.79	6.32	6.84	100	6.32	6.84
Mule.....	2.12 hr.	.75	.75	1.59	1.59	100	1.59	1.59
Other machines.....	--	--	--	2.62	2.99	100	2.62	2.99
Labor.....	22.16 hr.	.66	.70	14.63	15.51	100	14.63	15.51
Total.....	--	--	--	--	--	--	46.69	47.53
Net returns to land and management	--	--	--	--	--	--	7.49	1.19

TABLE 21.--Soybeans: Estimated costs and gross and net returns per acre with normal yields and 1956 and 1959 prices, by type and size of farm, central cotton-tobacco area of North Carolina

SMALL SINGLE-UNIT FARMS

Item	Quantity per acre	Price or cost per unit		Cost per acre		Part of acreage on which cost was incurred	Cost or return per acre, all soybean acreage	
		1956	1959	1956	1959		1956	1959
		<u>Dol.</u>	<u>Dol.</u>	<u>Dol.</u>	<u>Dol.</u>	<u>Percent</u>	<u>Dol.</u>	<u>Dol.</u>
Gross returns.....	26 bu.	2.09	2.10	--	--	--	54.34	54.60
Costs:								
Home-grown seed.....	60 lb.	.035	.035	2.10	2.10	21	.44	.44
Purchased seed.....	64 lb.	.066	.058	4.22	3.71	79	3.33	2.93
Fertilizer, 5-10-10.....	378 lb.	.0238	.0230	9.00	8.69	34	3.06	2.95
Tractor.....	6.07 hr.	1.02	1.14	6.19	6.92	100	6.19	6.92
Mule.....	0.57 hr.	.48	.48	.27	.27	100	.27	.27
Combine, custom <sup>1</sup> .....	--	--	--	13.58	13.58	100	13.58	13.58
Other machines.....	--	--	--	7.98	9.11	100	7.98	9.11
Labor.....	6.64 hr.	.66	.70	4.38	4.65	100	4.38	4.65
Total.....	--	--	--	--	--	--	39.23	40.85
Net returns to land and management.....	--	--	--	--	--	--	15.11	13.75

MEDIUM SINGLE-UNIT FARMS

Gross returns.....	21 bu.	2.09	2.10	--	--	--	43.89	44.10
Costs:								
Home-grown seed.....	75 lb.	.035	.035	2.62	2.62	22	.58	.58
Purchased seed.....	55 lb.	.066	.058	3.63	3.19	78	2.83	2.49
Fertilizer, 2-12-12.....	319 lb.	.0212	.022	6.76	7.02	73	4.93	5.12
Tractor.....	6.93 hr.	.89	.98	6.17	6.79	100	6.17	6.79
Combine, custom <sup>1</sup> .....	--	--	--	10.97	10.97	79	8.67	8.67
Haul, pickup truck.....	.73 hr.	.89	.98	.65	.72	51	.33	.37
Other machines.....	--	--	--	7.37	8.41	100	7.37	8.41
Labor.....	9.50 hr.	.66	.70	6.27	6.65	100	6.27	6.65
Total.....	--	--	--	--	--	--	37.15	39.08
Net returns to land and management.....	--	--	--	--	--	--	6.74	5.02

MEDIUM-LARGE SINGLE-UNIT FARMS

Gross returns.....	22 bu.	2.09	2.10	--	--	--	45.98	46.20
Costs:								
Home-grown seed.....	89 lb.	.035	.035	3.12	3.12	54	1.68	1.68
Purchased seed.....	64 lb.	.066	.058	4.22	3.71	46	1.94	1.71
Fertilizer:								
2-12-12.....	373 lb.	.0212	.022	7.91	8.21	38	3.01	3.12
Muriate of potash.....	200 lb.	.0258	.0259	5.16	5.18	2	.10	.10
Tractor.....	5.21 hr.	.86	.94	4.48	4.90	100	4.48	4.90
Mule.....	.32 hr.	.61	.61	.20	.20	100	.20	.20
Combine, custom <sup>1</sup> .....	--	--	--	11.50	11.50	39	4.48	4.48
Haul, car and trailer.....	1.18 hr.	.86	.94	1.01	1.11	48	.48	.53
Other machines.....	--	--	--	8.33	9.50	100	8.33	9.50
Labor.....	8.07 hr.	.66	.70	5.32	5.65	100	5.32	5.65
Total.....	--	--	--	--	--	--	30.02	31.87
Net returns to land and management.....	--	--	--	--	--	--	15.96	14.33

<sup>1</sup> Usual custom rate one-fourth of crop.

TABLE 21.--Soybeans: Estimated costs and gross and net returns per acre with normal yields and 1956 and 1959 prices, by type and size of farm, central cotton-tobacco area of North Carolina--Continued

LARGE SINGLE-UNIT FARMS

Item	Quantity per acre	Price or cost per unit		Cost per acre		Part of acreage on which cost was incurred	Cost or return per acre, all soybean acreage	
		1956	1959	1956	1959		1956	1959
		<u>Dol.</u>	<u>Dol.</u>	<u>Dol.</u>	<u>Dol.</u>	<u>Percent</u>	<u>Dol.</u>	<u>Dol.</u>
Gross returns.....	19 bu.	2.09	2.10	--	--	--	39.71	39.90
Costs:								
Home-grown seed.....	92 lb.	.035	.035	3.22	3.22	52	1.67	1.67
Purchased seed.....	67 lb.	.066	.058	4.42	3.89	48	2.12	1.87
Fertilizer, 4-10-6.....	207 lb.	.0208	.0201	4.31	4.16	28	1.21	1.16
Tractor.....	3.13 hr.	.71	.77	2.22	2.41	100	2.22	2.41
Combine, custom <sup>1</sup> .....	--	--	--	9.93	9.93	74	7.35	7.35
Haul, truck.....	0.83 hr.	.71	.77	.59	.64	67	.40	.43
Other machines.....	--	--	--	3.87	4.42	100	3.87	4.42
Labor.....	6.14 hr.	.66	.70	4.05	4.30	100	4.05	4.30
Total.....	--	--	--	--	--	--	22.89	23.61
Net returns to land and management.....	--	--	--	--	--	--	16.82	16.29

SMALL MULTIPLE-UNIT FARMS

Gross returns.....	20 bu.	2.09	2.10	--	--	--	41.80	42.00
Costs:								
Home-grown seed.....	53 lb.	.035	.035	1.86	1.86	47	.87	.87
Purchased seed.....	71 lb.	.066	.058	4.69	4.12	53	2.49	2.18
Fertilizer, nitrate of soda....	100 lb.	.03	.0285	3.00	2.85	5	.15	.14
Tractor.....	2.36 hr.	1.00	1.12	2.36	2.64	100	2.36	2.64
Combine, custom <sup>1</sup> .....	--	--	--	10.45	10.45	100	10.45	10.45
Other machines.....	--	--	--	3.98	4.54	100	3.98	4.54
Labor.....	4.26 hr.	.66	.70	2.81	2.98	100	2.81	2.98
Total.....	--	--	--	--	--	--	23.11	23.80
Net returns to land and management.....	--	--	--	--	--	--	18.69	18.20

MEDIUM MULTIPLE-UNIT FARMS

Gross returns.....	20 bu.	2.09	2.10	--	--	--	41.80	42.00
Costs:								
Home-grown seed.....	120 lb.	.035	.035	4.20	4.20	2	.08	.08
Purchased seed.....	68 lb.	.066	.058	4.49	3.94	98	4.40	3.86
Fertilizer, 2-12-12.....	305 lb.	.0212	.022	6.47	6.71	37	2.39	2.48
Tractor.....	4.29 hr.	.78	.87	3.35	3.73	100	3.35	3.73
Mule.....	2.84 hr.	.56	.56	1.59	1.59	100	1.59	1.59
Combine, custom <sup>1</sup> .....	--	--	--	10.45	10.45	72	7.52	7.52
Haul, truck.....	0.54 hr.	.78	.87	.42	.47	57	.24	.27
Other machines.....	--	--	--	5.05	5.76	100	5.05	5.76
Labor.....	8.07 hr.	.66	.70	5.33	5.65	100	5.33	5.65
Total.....	--	--	--	--	--	--	29.95	30.94
Net returns to land and management.....	--	--	--	--	--	--	11.85	11.06

<sup>1</sup> Usual custom rate one-fourth of crop.



TABLE 21.--Soybeans: Estimated costs and gross and net returns per acre with normal yields and 1956 and 1959 prices, by type and size of farm, central cotton-tobacco area of North Carolina--Continued

MEDIUM-LARGE MULTIPLE-UNIT FARMS

Item	Quantity per acre	Price or cost per unit		Cost per acre		Part of acreage on which cost was incurred	Cost or return per acre, all soybean acreage	
		1956	1959	1956	1959		1956	1959
		<u>Dol.</u>	<u>Dol.</u>	<u>Dol.</u>	<u>Dol.</u>	<u>Percent</u>	<u>Dol.</u>	<u>Dol.</u>
Gross returns.....	19 bu.	2.09	2.10	--	--	--	39.71	39.90
Costs:								
Home-grown seed.....	77 lb.	.035	.035	2.70	2.70	18	.49	.49
Purchased seed.....	61 lb.	.066	.058	4.03	3.54	82	3.30	2.90
Fertilizer:								
2-12-12.....	220 lb.	.0212	.022	4.66	4.84	87	4.05	4.21
Muriate of potash.....	100 lb.	.0258	.0259	2.58	2.59	7	.18	.18
Tractor.....	5.72 hr.	.69	.75	3.95	4.29	100	3.95	4.29
Mule.....	0.26 hr.	.50	.50	.13	.13	100	.13	.13
Combine, custom <sup>1</sup> .....	--	--	--	9.93	9.93	53	5.26	5.26
Haul, pickup truck.....	1.25 hr.	.69	.75	.86	.94	4	.03	.04
Other machines.....	--	--	--	5.54	6.32	100	5.54	6.32
Labor.....	7.13 hr.	.66	.70	4.71	4.99	100	4.71	4.99
Total.....	--	--	--	--	--	--	27.64	28.81
Net returns to land and management.....	--	--	--	--	--	--	12.07	11.09

LARGE MULTIPLE-UNIT FARMS

Gross returns.....	23 bu.	2.09	2.10	--	--	--	48.07	48.30
Costs:								
Home-grown seed.....	60 lb.	.035	.035	2.10	2.10	67	1.41	1.41
Purchased seed.....	39 lb.	.066	.058	2.57	2.26	33	.85	.75
Fertilizer:								
3-9-6.....	223 lb.	.022	.021	4.91	4.68	31	1.52	1.45
Nitrate of soda.....	100 lb.	.03	.0285	3.00	2.85	17	.51	.48
Tractor.....	4.01 hr.	.73	.79	2.93	3.17	100	2.93	3.17
Combine, custom <sup>2</sup> .....	--	--	--	8.00	8.00	17	1.36	1.36
Haul, truck.....	0.29 hr.	.73	.79	.21	.23	69	.14	.16
Other machines.....	--	--	--	4.80	5.48	100	4.80	5.48
Labor.....	5.73 hr.	.66	.70	3.78	4.01	100	3.78	4.01
Total.....	--	--	--	--	--	--	17.30	18.27
Net returns to land and management.....	--	--	--	--	--	--	30.77	30.03

<sup>1</sup> Usual custom rate one-fourth of crop.

<sup>2</sup> Usual custom rate \$8.00 per acre.

TABLE 22.--Wheat: Estimated costs and gross and net returns per acre with normal yields and 1956 and 1959 prices, by type and size of farm, central cotton-tobacco area of North Carolina

SMALL SINGLE-UNIT FARMS

Item	Quantity per acre	Price or cost per unit		Cost per acre		Part of acreage on which cost was incurred	Cost or return per acre, all wheat acreage	
		1956	1959	1956	1959		1956	1959
Gross returns.....	25 bu.	<u>Dol.</u> 1.95	<u>Dol.</u> 1.80	<u>Dol.</u> ---	<u>Dol.</u> ---	<u>Percent</u> ---	<u>Dol.</u> 48.75	<u>Dol.</u> 45.00
Costs:								
Home-grown seed.....	120 lb.	.0325	.03	3.90	3.60	36	1.40	1.30
Purchased seed.....	98 lb.	.0525	.0584	5.14	5.72	64	3.29	3.66
Fertilizer:								
3-9-9.....	400 lb.	.0212	.0210	8.48	8.40	24	2.04	2.02
Nitrate of soda.....	369 lb.	.03	.0285	11.07	10.52	91	10.07	9.57
Muriate of potash.....	120 lb.	.0258	.0259	3.10	3.11	15	.46	.47
Tractor.....	4.01 hr.	1.02	1.14	4.09	4.57	100	4.09	4.57
Combine, custom <sup>1</sup> .....	--	--	--	6.00	6.00	100	6.00	6.00
Haul, pickup truck.....	0.92 hr.	1.02	1.14	.94	1.05	19	.18	.20
Other machines.....	--	--	--	6.59	7.52	100	6.59	7.52
Labor.....	7.11 hr.	.66	.70	4.69	4.98	100	4.69	4.98
Total.....	--	--	--	--	--	--	38.81	40.29
Net returns to land and management.....	--	--	--	--	--	--	9.94	4.71

MEDIUM SINGLE-UNIT FARMS

Gross returns.....	25 bu.	1.95	1.80	--	--	---	48.75	45.00
Costs:								
Home-grown seed.....	89 lb.	.0325	.03	2.89	2.67	47	1.36	1.25
Purchased seed.....	100 lb.	.0525	.0584	5.25	5.84	53	2.78	3.10
Fertilizer:								
5-10-10.....	500 lb.	.0238	.0230	11.90	11.50	25	2.98	2.88
Cal-nitro.....	254 lb.	.0305	.028	7.75	7.11	75	5.81	5.33
Tractor.....	2.84 hr.	.89	.98	2.53	2.78	100	2.53	2.78
Combine, custom <sup>1</sup> .....	--	--	--	6.00	6.00	86	5.16	5.16
Haul, truck.....	0.56 hr.	.89	.98	.50	.55	100	.50	.55
Other machines.....	1 acre	--	--	7.35	8.39	100	7.35	8.39
Labor.....	5.36 hr.	.66	.70	3.54	3.75	100	3.54	3.75
Total.....	--	--	--	--	--	--	32.01	33.19
Net returns to land and management.....	--	--	--	--	--	--	16.74	11.81

MEDIUM-LARGE SINGLE-UNIT FARMS

Gross returns.....	28 bu.	1.95	1.80	--	--	--	54.60	50.40
Costs:								
Home-grown seed.....	104 lb.	.0325	.03	3.38	3.12	41	1.39	1.28
Purchased seed.....	102 lb.	.0525	.0584	5.36	5.96	59	3.16	3.52
Fertilizer:								
5-10-10.....	325 lb.	.0238	.0230	7.74	7.48	33	2.55	2.47
Cal-nitro.....	293 lb.	.0305	.028	8.94	8.20	81	7.24	6.64
Tractor.....	3.28 hr.	.86	.94	2.82	3.08	100	2.82	3.08
Combine, custom <sup>1</sup> .....	--	--	--	6.00	6.00	72	4.32	4.32
Haul, truck.....	0.61 hr.	.86	.94	.52	.57	53	.28	.30
Other machines.....	--	--	--	4.94	5.64	100	4.94	5.64
Labor.....	5.00 hr.	.66	.70	3.30	3.50	100	3.30	3.50
Total.....	--	--	--	--	--	--	30.00	30.75
Net returns to land and management.....	--	--	--	--	--	--	24.60	19.65

<sup>1</sup> Usual custom rate \$6.00 per acre.

TABLE 22.--Wheat: Estimated costs and gross and net returns per acre with normal yields and 1956 and 1959 prices, by type and size of farm, central cotton-tobacco area of North Carolina--Continued

LARGE SINGLE-UNIT FARMS

Item	Quantity per acre	Price or cost per unit		Cost per acre		Part of acreage on which cost was incurred	Cost or return per acre, all wheat acreage	
		1956	1959	1956	1959		1956	1959
Gross returns.....	31 bu.	<u>Dol.</u> 1.95	<u>Dol.</u> 1.80	<u>Dol.</u> --	<u>Dol.</u> --	<u>Percent</u> --	<u>Dol.</u> 60.45	<u>Dol.</u> 55.80
Costs:								
Home-grown seed.....	75 lb.	.0325	.03	2.44	2.25	42	1.02	.94
Purchased seed.....	90 lb.	.0525	.0584	4.72	5.26	58	2.74	3.05
Fertilizer:								
Cal-nitro.....	200 lb.	.0305	.028	6.10	5.60	100	6.10	5.60
Muriate of potash.....	100 lb.	.0258	.0259	2.58	2.59	42	1.08	1.09
Tractor.....	3.64 hr.	.71	.77	2.58	2.80	100	2.58	2.80
Combine, custom <sup>1</sup> .....	--	--	--	6.00	6.00	26	1.55	1.55
Haul, pickup truck.....	0.41 hr.	.71	.77	.29	.32	100	.29	.32
Other machines.....	--	--	--	6.95	7.93	100	6.95	7.93
Labor.....	4.80 hr.	.66	.70	3.17	3.36	100	3.17	3.36
Total.....	--	--	--	--	--	--	25.48	26.64
Net returns to land and management.....	--	--	--	--	--	--	34.97	29.16

SMALL MULTIPLE-UNIT FARMS

Gross returns.....	25 bu.	1.95	1.80	--	--	--	48.75	*45.00
Costs:								
Home-grown seed.....	90 lb.	.0325	.03	2.92	2.70	26	.76	.70
Purchased seed.....	110 lb.	.0525	.0584	5.78	6.42	74	4.28	4.75
Fertilizer:								
Cal-nitro.....	300 lb.	.0305	.028	9.15	8.40	100	9.15	8.40
Muriate of potash.....	100 lb.	.0258	.0259	2.58	2.59	41	1.06	1.06
Tractor.....	4.62 hr.	1.00	1.12	4.62	5.17	100	4.62	5.17
Combine, custom <sup>1</sup> .....	--	--	--	6.00	6.00	100	6.00	6.00
Other machines.....	--	--	--	7.98	9.11	100	7.98	9.11
Labor.....	5.80 hr.	.66	.70	3.83	4.06	100	3.83	4.06
Total.....	--	--	--	--	--	--	37.68	39.25
Net returns to land and management.....	--	--	--	--	--	--	11.07	5.75

MEDIUM MULTIPLE-UNIT FARMS

Gross returns.....	28 bu.	1.95	1.80	--	--	--	54.60	50.40
Costs:								
Home-grown seed.....	96 lb.	.0325	.03	3.12	2.88	35	1.09	1.01
Purchased seed.....	89 lb.	.0525	.0584	4.67	5.20	65	3.04	3.38
Fertilizer:								
4-10-6.....	300 lb.	.0208	.0201	6.24	6.03	9	.56	.54
Cal-nitro.....	217 lb.	.0305	.028	6.62	6.08	100	6.62	6.08
Muriate of potash.....	200 lb.	.0258	.0259	5.16	5.18	22	1.14	1.14
Tractor.....	2.91 hr.	.78	.87	2.27	2.53	100	2.27	2.53
Combine, custom <sup>1</sup> .....	--	--	--	6.00	6.00	90	5.40	5.40
Haul, truck.....	0.29 hr.	.78	.87	.23	.25	46	.11	.12
Other machines.....	--	--	--	3.75	4.28	100	3.75	4.28
Labor.....	4.37 hr.	.66	.70	2.88	3.06	100	2.88	3.06
Total.....	--	--	--	--	--	--	26.86	27.54
Net returns to land and management.....	--	--	--	--	--	--	27.74	22.86

<sup>1</sup> Usual custom rate \$6.00 per acre.

TABLE 22.--Wheat: Estimated costs and gross and net returns per acre with normal yields and 1956 and 1959 prices, by type and size of farm, central cotton-tobacco area of North Carolina--Continued

MEDIUM-LARGE MULTIPLE-UNIT FARMS

Item	Quantity per acre	Price or cost per unit		Cost per acre		Part of acreage on which cost was incurred	Cost or return per acre, all wheat acreage	
		1956	1959	1956	1959		1956	1959
		<u>Dol.</u>	<u>Dol.</u>	<u>Dol.</u>	<u>Dol.</u>	<u>Percent</u>	<u>Dol.</u>	<u>Dol.</u>
Gross returns.....	24 bu.	1.95	1.80	---	---	---	46.80	43.20
Costs:								
Home-grown seed.....	75 lb.	.0325	.03	2.44	2.25	70	1.71	1.58
Purchased seed.....	90 lb.	.0525	.0584	4.72	5.26	30	1.42	1.58
Fertilizer, cal-nitro.....	259 lb.	.0305	.028	7.90	7.25	100	7.90	7.25
Tractor.....	3.59 hr.	.69	.75	2.48	2.69	100	2.48	2.69
Mule.....	0.98 hr.	.50	.50	.49	.49	100	.49	.49
Combine, custom <sup>1</sup> .....	--	--	--	6.00	6.00	30	1.80	1.80
Other machines.....	--	--	--	7.54	8.60	100	7.54	8.60
Labor.....	5.03 hr.	.66	.70	3.32	3.52	100	3.32	3.52
Total.....	--	--	--	--	--	--	26.66	27.51
Net returns to land and management.....	--	--	--	--	--	--	20.14	15.69

LARGE MULTIPLE-UNIT FARMS

Gross returns.....	33 bu.	1.95	1.80	--	--	--	64.35	59.40
Costs:								
Home-grown seed.....	90 lb.	.0325	.03	2.92	2.70	23	.67	.62
Purchased seed.....	78 lb.	.0525	.0584	4.10	4.56	77	3.16	3.51
Fertilizer:								
4-10-6.....	325 lb.	.0208	.0201	6.76	6.53	71	4.80	4.64
Cal-nitro.....	300 lb.	.0305	.028	9.15	8.40	41	3.75	3.44
Tractor.....	2.79 hr.	.73	.79	2.04	2.20	100	2.04	2.20
Combine, custom <sup>1</sup> .....	--	--	--	6.00	6.00	41	2.46	2.46
Haul, truck.....	0.30 hr.	.73	.79	.22	.24	100	.22	.24
Other machines.....	--	--	--	5.46	6.23	100	5.46	6.23
Labor.....	3.86 hr.	.66	.70	2.55	2.70	100	2.55	2.70
Total.....	--	--	--	--	--	--	25.11	26.04
Net returns to land and management.....	--	--	--	--	--	--	39.24	33.36

<sup>1</sup> Usual custom rate \$6.00 per acre.

TABLE 23 ---Oats: Estimated costs and gross and net returns per acre with normal yields and 1956 and 1959 prices, by type and size of farm, central cotton-tobacco area of North Carolina

SMALL SINGLE-UNIT FARMS

Item	Quantity per acre	Price or cost per unit		Cost per acre		Part of acreage on which cost was incurred	Cost or return per acre, all oats acreage	
		1956	1959	1956	1959		1956	1959
		<u>Dol.</u>	<u>Dol.</u>	<u>Dol.</u>	<u>Dol.</u>	<u>Percent</u>	<u>Dol.</u>	<u>Dol.</u>
Gross returns .....	40 bu.	0.70	0.67	--	--	---	28.00	26.80
Costs:								
Home-grown seed .....	96 lb.	.0238	.0212	2.28	2.04	18	.41	.37
Purchased seed .....	107 lb.	.0453	.0547	4.85	5.85	82	3.98	4.80
Fertilizer, nitrate of soda .....	190 lb.	.03	.0285	5.70	5.42	100	5.70	5.42
Tractor .....	4.17 hr.	1.02	1.14	4.25	4.75	100	4.25	4.75
Combine, custom <sup>1</sup> .....	--	--	--	6.00	6.00	100	6.00	6.00
Other machines .....	--	--	--	11.39	13.00	100	11.39	13.00
Labor .....	5.17 hr.	.66	.70	3.41	3.62	100	3.41	3.62
Total.....	--	--	--	--	--	--	35.14	37.96
Net returns to land and management.....	--	--	--	--	--	--	-7.14	-11.16

MEDIUM SINGLE-UNIT FARMS

Gross returns.....	43 bu.	.70	.67	--	--	--	30.10	28.81
Costs:								
Home-grown seed .....	98 lb.	.0238	.0212	2.33	2.08	50	1.16	1.04
Purchased seed .....	104 lb.	.0453	.0547	4.71	5.69	50	2.36	2.84
Fertilizer, cal-nitro .....	224 lb.	.0305	.028	6.83	6.27	90	6.15	5.64
Tractor .....	2.35 hr.	.89	.98	2.09	2.30	100	2.09	2.30
Combine, custom <sup>1</sup> .....	--	--	--	6.00	6.00	100	6.00	6.00
Haul, pickup truck .....	.58 hr.	.89	.98	.52	.57	100	.52	.57
Other machines .....	--	--	--	5.07	5.78	100	5.07	5.78
Labor .....	4.24 hr.	.66	.70	2.80	2.97	100	2.80	2.97
Total.....	--	--	--	--	--	--	26.15	27.14
Net returns to land and management.....	--	--	--	--	--	--	3.95	1.67

MEDIUM-LARGE SINGLE-UNIT FARMS

Gross returns	53 bu.	.70	.67	--	--	--	37.10	35.51
Costs:								
Home-grown seed .....	105 lb.	.0238	.0212	2.50	2.23	92	2.30	2.05
Purchased seed .....	96 lb.	.0453	.0547	4.35	5.25	8	.35	.42
Fertilizer:								
2-12-12 .....	294 lb.	.0212	.022	6.23	6.47	41	2.55	2.65
Cal-nitro .....	244 lb.	.0305	.028	7.44	6.83	83	6.17	5.67
Tractor .....	3.40 hr.	.86	.94	2.92	3.20	100	2.92	3.20
Mule .....	0.68 hr.	.61	.61	.41	.41	100	.41	.41
Combine, custom <sup>1</sup> .....	--	--	--	6.00	6.00	46	2.76	2.76
Haul, pickup truck .....	1.09 hr.	.86	.94	.94	1.02	56	.53	.57
Other machines .....	--	--	--	8.12	9.26	100	8.12	9.26
Labor .....	5.39 hr.	.66	.70	3.56	3.77	100	3.56	3.77
Total .....	--	--	--	--	--	--	29.67	30.76
Net returns to land and management.....	--	--	--	--	--	--	7.43	4.75

<sup>1</sup> Usual custom rate \$6.00 per acre.

TABLE 23 ---Oats: Estimated costs and gross and net returns per acre with normal yields and 1956 and 1959 prices, by type and size of farm, central cotton-tobacco area of North Carolina--Continued

LARGE SINGLE-UNIT FARMS

Item	Quantity per acre	Price or cost per unit		Cost per acre		Part of acreage on which cost was incurred	Cost or return per acre, all oats acreage	
		1956	1959	1956	1959		1956	1959
		<u>Dol.</u>	<u>Dol.</u>	<u>Dol.</u>	<u>Dol.</u>	<u>Percent</u>	<u>Dol.</u>	<u>Dol.</u>
Gross returns .....	46 bu.	0.70	0.67	--	--	--	32.20	30.82
Costs:								
Home-grown seed .....	99 lb.	.0238	.0212	2.35	2.10	72	1.69	1.52
Purchased seed .....	112 lb.	.0453	.0547	5.07	6.13	28	1.42	1.72
Fertilizer:								
5-10-10 .....	500 lb.	.0238	.0230	11.90	11.50	28	3.33	3.22
Cal-nitro .....	185 lb.	.0305	.028	5.64	5.18	72	4.06	3.73
Tractor .....	2.63 hr.	.71	.77	1.87	2.03	100	1.87	2.03
Combine, custom <sup>1</sup> .....	--	--	--	6.00	6.00	28	1.68	1.68
Haul, truck .....	.57 hr.	.71	.77	.40	.44	100	.40	.44
Other machines .....	--	--	--	7.39	8.43	100	7.39	8.43
Labor .....	4.24 hr.	.66	.70	2.80	2.97	100	2.80	2.97
Total .....	--	--	--	--	--	--	24.64	25.74
Net returns to land and management .....	--	--	--	--	--	--	7.56	5.08

SMALL MULTIPLE-UNIT FARMS

Gross returns .....	47 bu.	.70	.67	--	--	--	32.90	31.49
Costs:								
Home-grown seed .....	93 lb.	.0238	.0212	2.21	1.97	87	1.92	1.71
Purchased seed .....	128 lb.	.0453	.0547	5.80	7.00	13	.75	.91
Fertilizer:								
5-10-10 .....	400 lb.	.0238	.0230	9.52	9.20	20	1.90	1.84
Nitrate of soda .....	262 lb.	.03	.0285	7.86	7.47	80	6.29	5.98
Tractor .....	3.28 hr.	1.00	1.12	3.28	3.67	100	3.28	3.67
Combine, custom <sup>1</sup> .....	--	--	--	6.00	6.00	100	6.00	6.00
Other machines .....	--	--	--	6.53	7.47	100	6.53	7.47
Labor .....	3.88 hr.	.66	.70	2.56	2.72	100	2.56	2.72
Total .....	--	--	--	--	--	--	29.23	30.30
Net returns to land and management .....	--	--	--	--	--	--	3.67	1.19

MEDIUM MULTIPLE-UNIT FARMS

Gross returns .....	42 bu.	.70	.67	--	--	--	29.40	28.14
Costs:								
Home-grown seed .....	94 lb.	.0238	.0212	2.24	1.99	22	.49	.44
Purchased seed .....	104 lb.	.0453	.0547	4.71	5.69	78	3.67	4.44
Fertilizer:								
5-10-10 .....	575 lb.	.0238	.0230	13.68	13.22	56	7.66	7.40
Cal-nitro .....	187 lb.	.0305	.028	5.70	5.24	44	2.51	2.31
Tractor .....	3.21 hr.	.78	.87	2.50	2.79	100	2.50	2.79
Mile .....	.22 hr.	.56	.56	.12	.12	100	.12	.12
Combine, custom <sup>1</sup> .....	--	--	--	6.00	6.00	44	2.64	2.64
Haul, pickup truck .....	.33 hr.	.78	.87	.26	.29	78	.20	.23
Other machines .....	--	--	--	7.43	8.48	100	7.43	8.48
Labor .....	4.78 hr.	.66	.70	3.15	3.35	100	3.15	3.35
Total .....	--	--	--	--	--	--	30.37	32.20
Net returns to land and management .....	--	--	--	--	--	--	-.97	-4.06

<sup>1</sup> Usual custom rate \$6.00 per acre.

TABLE 23 .--Oats: Estimated costs and gross and net returns per acre with normal yields and 1956 and 1959 prices, by type and size of farm, central cotton-tobacco area of North Carolina--Continued

MEDIUM-LARGE MULTIPLE-UNIT FARMS

Item	Quantity per acre	Price or cost per unit		Cost per acre		Part of acreage on which cost was incurred	Cost or return per acre, all oats acreage	
		1956	1959	1956	1959		1956	1959
Gross returns .....	48 bu.	<u>Dol.</u> 0.70	<u>Dol.</u> 0.67	<u>Dol.</u> --	<u>Dol.</u> --	<u>Percent</u> --	<u>Dol.</u> 33.60	<u>Dol.</u> 32.16
Costs:								
Home-grown seed .....	92 lb.	.0238	.0212	2.19	1.95	64	1.40	1.25
Purchased seed .....	106 lb.	.0453	.0547	4.80	5.80	36	1.73	2.09
Fertilizer:								
5-10-10 .....	300 lb.	.0238	.0230	7.14	6.90	23	1.64	1.59
Cal-nitro .....	215 lb.	.0305	.028	6.56	6.02	77	5.05	4.64
Muriate of potash .....	100 lb.	.0258	.0259	2.58	2.59	18	.46	.47
Tractor .....	3.51 hr.	.69	.75	2.42	2.63	100	2.42	2.63
Combine, custom <sup>1</sup> .....	--	--	--	6.00	6.00	62	3.72	3.72
Haul, pickup truck .....	0.57 hr.	.69	.75	.39	.43	100	.39	.43
Other machines .....	--	--	--	5.27	6.01	100	5.27	6.01
Labor .....	4.77 hr.	.66	.70	3.15	3.34	100	3.15	3.34
Total.....	--	--	--	--	--	--	25.23	26.17
Net returns to land and management .....	--	--	--	--	--	--	8.37	5.99

LARGE MULTIPLE-UNIT FARMS

Gross returns .....	54 bu.	.70	.67	--	--	--	37.80	36.18
Costs:								
Home-grown seed .....	96 lb.	.0238	.0212	2.28	2.04	62	1.41	1.26
Purchased seed .....	64 lb.	.0453	.0547	2.90	3.50	38	1.10	1.33
Fertilizer:								
5-10-10 .....	300 lb.	.0238	.0230	7.14	6.90	29	2.07	2.00
Cal-nitro .....	249 lb.	.0305	.028	7.59	6.97	71	5.39	4.95
Tractor .....	2.17 hr.	.73	.79	1.58	1.71	100	1.58	1.71
Combine, custom <sup>1</sup> .....	--	--	--	6.00	6.00	31	1.86	1.86
Haul, truck.....	.31 hr.	.73	.79	.23	.24	34	.08	.08
Other machines .....	--	--	--	5.18	5.91	100	5.18	5.91
Labor .....	3.62 hr.	.66	.70	2.39	2.53	100	2.39	2.53
Total .....	--	--	--	--	--	--	21.06	21.63
Net returns to land and management .....	--	--	--	--	--	--	16.74	14.55

<sup>1</sup> Usual custom rate \$6.00 per acre.

TABLE 24.--Cotton: Labor, equipment, and power used in producing and harvesting, by type and size of farm, central cotton-tobacco area of North Carolina, 1956

SMALL SINGLE-UNIT FARMS

Operation	Size and kind of equipment	Times over	Time per acre, over once		Percentage of cotton acreage covered	Time per acre, average for all cotton acreage		
			Man	Power		Man	Tractor	Mule
		No.	Hr.	Hr.	Pct.	Hr.	Hr.	Hr.
Preharvest:								
Cut stalks.....	1-row stalk cutter	1.0	0.81	0.81	18	0.15	0.15	--
Do.....	2-row stalk cutter	1.0	.53	.53	26	.14	.14	--
Do.....	1-row 2-mule stalk cutter	1.0	1.41	2.83	39	.55	--	1.10
Cut stalks by hand.....	--	1.0	4.67	--	2	.09	--	--
Plow.....	1 14-in. moldboard plow	1.0	2.26	2.26	18	.41	.41	--
Do.....	2 14-in. moldboard plow	1.0	.99	.99	37	.37	.37	--
Do.....	1 12-in. moldboard 1-mule plow	1.1	7.51	7.51	22	1.82	--	1.82
Do.....	1 14-in. moldboard 2-mule plow	1.0	3.46	6.91	11	.38	--	.76
Disk.....	4-ft. tandem disk	1.5	1.14	1.14	23	.39	.39	--
Do.....	6-ft. tandem disk	1.4	.71	.71	30	.30	.30	--
Do.....	8-ft. tandem disk	1.9	.52	.52	17	.17	.17	--
Do.....	4-ft. single disk	1.5	1.14	1.14	20	.34	.34	--
Do.....	4-ft. 2-mule single disk	1.0	1.72	3.44	22	.38	--	.76
Harrow.....	8-ft. spiketooth harrow	1.0	.51	.51	22	.11	.11	--
Do.....	12-ft. spiketooth harrow	1.0	.25	.25	5	.01	.01	--
Do.....	8-ft. 2-mule spiketooth harrow	1.0	.83	1.66	13	.11	--	.22
Do.....	4-ft. 1-mule spiketooth harrow	1.2	.95	.95	6	.07	--	.07
Lay off rows.....	1-row 1-mule shovel	1.0	1.61	1.56	31	.50	--	.48
Fertilize.....	1-row 1-mule spreader	1.1	2.64	1.75	40	1.16	--	.77
Do.....	1-row spreader	1.0	2.00	1.00	2	.04	.02	--
Bed.....	1/2-row 1-mule plow	1.0	3.70	3.55	18	.67	--	.64
Do.....	1-row 2-mule bedder	1.0	1.32	2.65	10	.13	--	.26
Do.....	2-row bedder	1.0	.67	.67	1	.01	.01	--
Plant and fertilize.....	1-row planter	1.2	2.34	1.47	18	.51	.32	--
Plant and fertilize.....	2-row planter	1.1	1.49	.81	35	.57	.31	--
Plant.....	1-row 1-mule planter	1.1	2.04	1.59	47	1.05	--	.82
Weed.....	2-row weeder	2.1	.48	.48	14	.14	.14	--
Do.....	1-row 1-mule weeder	2.3	1.16	1.16	4	.11	--	.11
Do.....	2-row 2-mule weeder	1.7	.57	1.13	4	.04	--	.08
Cultivate.....	1-row cultivator	5.5	1.04	1.04	24	1.37	1.37	--
Do.....	2-row cultivator	4.6	.67	.67	21	.65	.65	--
Do.....	1/2-row 1-mule cultivator	4.4	3.02	2.69	30	3.99	--	3.55
Do.....	1-row 2-mule cultivator	4.8	2.06	3.50	26	2.57	--	4.37
Split middles.....	1-row 1-mule middlebuster	3.9	1.64	1.64	7	.45	--	.45
Sidedress.....	1-row cultivator	1.0	1.92	1.33	10	.19	.13	--
Do.....	2-row cultivator	1.0	.79	.79	5	.04	.04	--
Sidedress by hand.....	--	1.0	3.31	--	17	.56	--	--
Apply poison.....	4- to 6-row sprayer	4.8	.28	.28	26	.35	.35	--
Do.....	2-row 1-mule sprayer	4.5	.50	.50	5	.11	--	.11
Dust or spray by hand.....	--	2.5	2.28	--	3	.17	--	--
Hoe.....	--	2.3	8.10	--	99	18.41	--	--
Total.....	--	--	--	--	--	39.58	5.73	16.37
Harvest:								
Pick by hand.....	--	1.4	45.04	--	100	63.05	--	--
Haul to gin.....	Trailer	1.0	2.91	2.75	42	1.22	1.16	--
Do.....	Truck	1.0	2.55	2.27	57	1.45	--	--
Do.....	2-mule wagon	1.0	1.06	2.12	1	.01	--	.02
Total.....	--	--	--	--	--	65.73	1.16	.02
Grand total.....	--	--	--	--	--	105.31	6.89	16.39



TABLE 24.--Cotton: Labor, equipment, and power used in producing and harvesting, by type and size of farm, central cotton-tobacco area of North Carolina, 1956--Continued

MEDIUM SINGLE-UNIT FARMS

Operation	Size and kind of equipment	Times over	Time per acre, over once		Percent- age of cotton acreage covered	Time per acre, average for all cotton acreage		
			Man	Power		Man	Tractor	Mule
Preharvest:		No.	Hr.	Hr.	Pct.	Hr.	Hr.	Hr.
Cut stalks.....	1-row stalk cutter	1.0	0.90	0.90	30	0.27	0.27	--
Do.....	2-row stalk cutter	1.0	.56	.56	28	.16	.16	--
Do.....	1-row 2-mule stalk cutter	1.0	1.28	2.57	23	.29	--	0.59
Apply manure.....	2-mule spreader	2.0	2.50	2.50	2	.10	--	.10
Plow.....	1 14-in. moldboard plow	1.0	2.03	2.03	14	.28	.28	--
Do.....	2 14-in. moldboard plow	1.0	1.18	1.18	55	.65	.65	--
Do.....	1 12-in. moldboard 1-mule plow	1.0	5.38	5.38	13	.70	--	.70
Do.....	1 14-in. moldboard 2-mule plow	1.0	4.03	8.05	8	.32	--	.64
Disk.....	5-ft. tandem disk	1.6	.92	.92	36	.53	.53	--
Do.....	6-ft. tandem disk	1.3	.76	.76	45	.44	.44	--
Do.....	8-ft. tandem disk	1.4	.73	.73	17	.17	.17	--
Do.....	4-ft. single disk	1.6	1.46	1.46	17	.40	.40	--
Do.....	4-ft. 2-mule single disk	1.0	1.67	3.34	11	.18	--	.37
Harrow.....	8-ft. spiketooth harrow	1.0	.45	.45	36	.16	.16	--
Do.....	12-ft. spiketooth harrow	1.1	.31	.31	13	.04	.04	--
Do.....	8-ft. 2-mule spiketooth harrow	1.1	.88	1.76	12	.12	--	.23
Lay off rows.....	1-row 1-mule shovel	1.0	1.70	1.70	25	.42	--	.42
Fertilize.....	1-row 1-mule spreader	1.0	2.96	1.68	10	.30	--	.17
Bed.....	1-row 1-mule bedder	1.0	3.60	2.06	5	.18	--	.19
Do.....	2-row 2-mule bedder	1.0	1.33	2.66	7	.09	--	.19
Do.....	2-row bedder	1.0	.51	.51	3	.02	.02	--
Plant and fertilize.....	1-row planter	1.1	2.04	1.30	29	.65	.41	--
Do.....	2-row planter	1.0	1.53	.83	22	.34	.18	--
Do.....	1-row 1-mule planter	1.1	2.88	1.82	9	.29	--	.18
Plant.....	1-row 1-mule planter	1.0	2.59	1.63	22	.57	--	.36
Do.....	1-row planter	1.0	2.04	1.47	11	.22	.16	--
Do.....	2-row planter	1.0	1.36	.80	7	.10	.06	--
Weed.....	2-row weeder	2.6	.49	.49	5	.06	.06	--
Do.....	2-row 2-mule weeder	2.1	.62	1.24	5	.07	--	.13
Cultivate.....	1-row cultivator	6.4	1.16	1.14	46	3.41	3.36	--
Do.....	2-row cultivator	4.9	.64	.64	25	.78	.78	--
Do.....	1/2-row 1-mule cultivator	5.4	3.09	2.67	15	2.50	--	2.16
Do.....	1-row 2-mule cultivator	5.4	1.19	2.38	18	1.16	--	2.31
Split middles.....	1-row 1-mule middlebuster	2.5	1.31	1.11	9	.29	--	.25
Sidedress.....	1-row cultivator	1.0	1.73	1.16	15	.26	.17	--
Sidedress by hand.....	--	1.0	1.85	--	7	.13	--	--
Apply poison.....	4-row sprayer	4.0	.29	.28	46	.53	.52	--
Apply poison.....	2-row 1-mule sprayer	3.2	.50	.50	10	.16	--	.16
Hoe.....	--	2.3	5.89	--	100	13.55	--	--
Total.....	--	--	--	--	--	30.89	8.82	9.06
Harvest:								
Pick by hand.....	--	1.3	50.82	--	100	66.07	--	--
Haul to gin.....	Trailer	1.0	2.40	2.38	33	.79	.79	--
Do.....	Truck	1.0	2.82	2.50	67	1.89	--	--
Total.....	--	--	--	--	--	68.75	.79	--
Grand total.....	--	--	--	--	--	99.64	9.61	9.06

TABLE 24.--Cotton: Labor, equipment, and power used in producing and harvesting, by type and size of farm, central cotton-tobacco area of North Carolina, 1956--Continued

MEDIUM-LARGE SINGLE-UNIT FARMS

Operation	Size and kind of equipment	Times over	Time per acre, over once		Percentage of cotton acreage covered	Time per acre, average for all cotton acreage		
			Man	Power		Man	Tractor	Mule
		No.	Hr.	Hr.	Pct.	Hr.	Hr.	Hr.
Preharvest:								
Cut stalks.....	1-row stalk cutter	1.0	0.70	0.70	30	0.21	0.21	--
Do.....	2-row stalk cutter	1.0	.50	.50	37	.18	.18	--
Do.....	1-row 2-mule stalk cutter	1.0	1.05	2.09	15	.16	--	0.31
Plow.....	2 14-in. moldboard plow	1.0	1.13	1.13	87	.98	.98	--
Do.....	3 14-in. moldboard plow	1.0	.82	.82	13	.11	.11	--
Disk.....	5-ft. tandem disk	1.2	.86	.86	31	.32	.32	--
Do.....	6-ft. tandem disk	1.9	.60	.60	30	.34	.34	--
Do.....	8-ft. tandem disk	1.8	.57	.57	30	.31	.31	--
Do.....	5-ft. single disk	1.1	.97	.97	26	.28	.28	--
Do.....	4-ft. 2-mule single disk	1.0	1.22	2.44	12	.15	--	.29
Harrow.....	8-ft. spiketooth harrow	1.0	.37	.37	62	.23	.23	--
Do.....	12-ft. spiketooth harrow	1.0	.24	.24	4	.01	.01	--
Do.....	8-ft. 2-mule spiketooth harrow	1.0	.88	1.75	5	.04	--	.09
Lay off rows.....	1-row 1-mule shovel	1.0	1.67	1.04	9	.15	--	.09
Do.....	2-row cultivator	1.0	.80	.80	7	.06	.06	--
Fertilize.....	1-row 1-mule spreader	1.0	1.33	.84	5	.07	--	.04
Do.....	2-row spreader	1.0	.86	.86	6	.05	.05	--
Bed.....	1/2-row 1-mule plow	1.0	2.79	2.79	4	.11	--	.11
Plant and fertilize.....	1-row 1-mule planter	1.0	2.15	1.97	13	.28	--	.26
Do.....	1-row planter	1.0	2.02	1.13	21	.42	.24	--
Do.....	2-row planter	1.0	1.89	.85	39	.74	.33	--
Plant.....	1-row 1-mule planter	1.0	1.75	1.18	8	.14	--	.09
Do.....	1-row planter	1.0	1.64	1.16	5	.08	.06	--
Do.....	2-row planter	1.1	1.24	.74	14	.19	.11	--
Weed.....	2-row weeder	1.9	.53	.53	17	.17	.17	--
Cultivate.....	1-row cultivator	6.4	.96	.96	29	1.78	1.78	--
Do.....	2-row cultivator	5.6	.63	.63	50	1.76	1.76	--
Do.....	1/2-row 1-mule cultivator	5.5	2.96	2.96	16	2.60	--	2.60
Do.....	1-row 2-mule cultivator	5.5	1.30	2.60	4	.29	--	.57
Split middles.....	1-row 1-mule middlebuster	4.2	1.71	1.71	23	1.65	--	1.65
Sidedress.....	1-row cultivator	1.2	2.23	1.27	3	.08	.05	--
Do.....	2-row cultivator	1.0	1.44	.87	2	.03	.02	--
Sidedress by hand.....	--	1.0	1.86	--	19	.35	--	--
Apply poison.....	4-row sprayer	2.6	.51	.51	10	.13	.13	--
Do.....	6-row sprayer	4.8	.18	.18	42	.36	.36	--
Do.....	2-row 1-mule sprayer	2.3	.87	.87	7	.14	--	.14
Hoe.....	--	2.4	7.21	--	98	16.96	--	--
Total.....	--	--	--	--	--	31.91	8.09	6.24
Harvest:								
Pick by hand.....	--	1.3	48.06	--	99	61.85	--	--
Pick.....	1-row picker	1.0	1.00	1.00	1	--	--	--
Haul to gin.....	Trailer	1.0	2.61	2.36	32	.84	.76	--
Haul to gin.....	Truck	1.0	2.83	2.41	68	1.92	--	--
Total.....	--	--	--	--	--	64.61	.76	--
Grand total.....	--	--	--	--	--	96.52	8.85	6.24

LARGE SINGLE-UNIT FARMS

Preharvest:								
Cut stalks.....	2-row stalk cutter	1.0	.40	.40	78	.31	.31	--
Plow.....	2 14-in. moldboard plow	1.0	1.18	1.18	51	.60	.60	--
Do.....	3 14-in. moldboard plow	1.0	.77	.77	49	.38	.38	--
Disk.....	6-ft. tandem disk	1.7	.55	.55	49	.46	.46	--
Do.....	8-ft. tandem disk	2.0	.49	.49	56	.55	.55	--
Do.....	4-ft. single disk	1.2	1.02	1.02	13	.16	.16	--
Harrow.....	8-ft. spiketooth harrow	1.0	.35	.35	20	.07	.07	--
Do.....	12-ft. spiketooth harrow	1.0	.23	.23	31	.07	.07	--
Plant and fertilize.....	2-row planter	1.0	1.43	.72	100	1.43	.72	--
Weed.....	2-row weeder	1.1	.73	.73	36	.29	.29	--
Do.....	2-row 2-mule weeder	1.0	1.00	2.00	14	.14	--	.28

TABLE 24.--Cotton: Labor, equipment, and power used in producing and harvesting, by type and size of farm, central cotton-tobacco area of North Carolina, 1956--Continued

LARGE SINGLE-UNIT FARMS--Continued

Operation	Size and kind of equipment	Times over	Time per acre, over once		Percentage of cotton acreage covered	Time per acre, average for all cotton acreage		
			Man	Power		Man	Tractor	Mule
Preharvest--Continued		No.	Hr.	Hr.	Pct.	Hr.	Hr.	Hr.
Cultivate.....	1-row cultivator	5.8	1.02	1.02	30	1.77	1.77	--
Do.....	2-row cultivator	5.3	.52	.52	75	2.07	2.07	--
Sidedress.....	1-row cultivator	1.0	1.87	1.00	12	.22	.12	--
Do.....	2-row cultivator	1.0	1.29	.61	35	.45	.21	--
Apply poison.....	4-row sprayer	2.4	.25	.25	33	.20	.20	--
Do.....	6-row sprayer	5.3	.22	.22	41	.48	.48	--
Hoe.....	--	2.0	7.27	--	99	14.39	--	--
Total.....	--	--	--	--	--	24.04	8.46	.28
Harvest:								
Pick by hand.....	--	1.2	56.84	--	100	68.21	--	--
Haul to gin.....	Trailer	1.0	3.47	2.98	13	.45	.39	--
Do.....	Truck	1.0	2.21	1.89	87	1.92	--	--
Total.....	--	--	--	--	--	70.58	.39	--
Grand total.....	--	--	--	--	--	94.62	8.85	.28

SMALL MULTIPLE-UNIT FARMS

Preharvest:								
Cut stalks.....	1-row stalk cutter	1.0	.74	.74	10	.07	.07	--
Do.....	2-row stalk cutter	1.0	.52	.52	27	.14	.14	--
Do.....	1-row 2-mule stalk cutter	1.0	1.23	2.46	44	.54	--	1.08
Plow.....	1 14-in. moldboard plow	1.0	2.01	2.01	20	.40	.40	--
Do.....	2 14-in. moldboard plow	1.0	1.17	1.17	22	.26	.26	--
Do.....	3 14-in. moldboard plow	1.0	.78	.78	15	.12	.12	--
Do.....	1 12-in. moldboard 1-mule plow	1.0	5.34	5.34	14	.75	--	.75
Do.....	1 14-in. moldboard 2-mule plow	1.0	4.41	7.56	24	1.06	--	1.81
Disk.....	6-ft. tandem disk	1.4	.73	.73	45	.46	.46	--
Do.....	8-ft. tandem disk	1.1	.54	.54	32	.19	.19	--
Do.....	4-ft. 2-mule single disk	1.0	1.66	3.32	15	.25	--	.50
Harrow.....	8-ft. spiketooth harrow	1.0	.36	.36	40	.14	.14	--
Do.....	8-ft. 2-mule spiketooth harrow	1.0	.85	1.70	15	.13	--	.26
Lay off rows.....	1-row 1-mule shovel	1.0	1.39	1.39	49	.68	--	.68
Fertilize.....	1-row 1-mule spreader	1.0	2.85	1.48	49	1.40	--	.73
Fertilize and bed.....	1-row 1-mule bedder	1.0	2.23	1.88	17	.38	--	.32
Plant and fertilize.....	1-row planter	1.0	2.10	1.21	16	.34	.19	--
Do.....	2-row planter	1.0	1.64	.82	35	.57	.29	--
Plant.....	1-row 1-mule planter	1.0	1.91	1.70	49	.94	--	.83
Weed.....	2-row 2-mule weeder	3.0	.59	1.18	7	.12	--	.25
Cultivate.....	1-row cultivator	4.5	.98	.98	13	.57	.57	--
Do.....	2-row cultivator	5.5	.56	.56	24	.74	.74	--
Do.....	1/2-row 1-mule cultivator	5.5	2.83	2.83	22	3.42	--	3.42
Do.....	1-row 2-mule cultivator	4.8	1.34	2.68	38	2.44	--	4.89
Sidedress.....	2-row cultivator	1.0	.93	.74	14	.13	.10	--
Sidedress by hand.....	--	1.0	1.40	--	24	.34	--	--
Apply poison.....	6-row sprayer	4.1	.25	.25	36	.37	.37	--
Do.....	2-row sprayer	2.1	.55	.55	18	.21	--	.21
Hoe.....	--	2.3	8.25	--	97	18.41	--	--
Total.....	--	--	--	--	--	35.57	4.04	15.73
Harvest:								
Pick by hand.....	--	1.4	47.70	--	96	64.11	--	--
Pick.....	1-row picker	1.0	1.78	1.78	4	.07	.07	--
Haul to gin.....	Trailer	1.0	2.72	2.22	41	1.12	.91	--
Do.....	Truck	1.0	2.46	1.70	59	1.45	--	--
Total.....	--	--	--	--	--	66.75	.98	--
Grand total.....	--	--	--	--	--	102.32	5.02	15.73

TABLE 24.--Cotton: Labor, equipment, and power used in producing and harvesting, by type and size of farm, central cotton-tobacco area of North Carolina, 1956--Continued

MEDIUM MULTIPLE-UNIT FARMS

Operation	Size and kind of equipment	Times over	Time per acre, over once		Percent- age of cotton acreage covered	Time per acre, average for all cotton acreage		
			Man	Power		Man	Tractor	Mule
Preharvest:		No.	Hr.	Hr.	Pct.	Hr.	Hr.	Hr.
Cut stalks.....	1-row stalk cutter	1.0	0.82	0.82	20	0.16	0.16	--
Do.....	2-row stalk cutter	1.0	.44	.44	38	.17	.17	--
Do.....	1-row 2-mule stalk cutter	1.0	.96	1.92	39	.37	--	.75
Plow.....	2 14-in. moldboard plow	1.0	1.24	1.24	58	.72	.72	--
Do.....	3 14-in. moldboard plow	1.0	.60	.60	15	.09	.09	--
Do.....	1 14-in. moldboard 2-mule plow	1.0	4.32	6.66	16	.69	--	1.07
Disk.....	5-ft. tandem disk	1.2	.65	.65	12	.09	.09	--
Do.....	6-ft. tandem disk	2.0	.53	.53	14	.15	.15	--
Do.....	8-ft. tandem disk	1.4	.66	.66	34	.31	.31	--
Do.....	4-ft. single disk	1.3	1.02	1.02	46	.61	.61	--
Do.....	4-ft. 2-mule single disk	1.0	1.35	2.70	11	.15	--	.30
Harrow.....	8-ft. spiketooth harrow	1.0	.50	.50	47	.23	.23	--
Do.....	12-ft. spiketooth harrow	1.0	.30	.30	12	.04	.04	--
Do.....	8-ft. 2-mule spiketooth harrow	1.0	.81	1.63	13	.11	--	.21
Lay off rows.....	1-row 1-mule shovel	1.0	1.40	1.50	29	.41	--	.43
Fertilize.....	1-row 1-mule spreader	1.0	1.38	1.03	26	.36	--	.27
Fertilize and bed.....	1-row 1-mule bedder	1.0	3.07	1.54	10	.31	--	.15
Plant and fertilize.....	1-row 1-mule planter	1.0	2.93	1.46	8	.23	--	.12
Do.....	1-row planter	1.0	2.18	1.20	58	1.26	.70	--
Plant.....	1-row 1-mule planter	1.0	2.13	1.25	34	.72	--	.42
Weed.....	2-row weeder	1.4	.49	.49	18	.12	.12	--
Do.....	1-row 2-mule weeder	2.9	.59	1.18	18	.31	--	.62
Cultivate.....	1-row cultivator	4.0	1.06	1.02	33	1.40	1.35	--
Do.....	2-row cultivator	3.4	.63	.63	27	.58	.58	--
Do.....	1-row 2-mule cultivator	5.6	1.63	3.25	40	3.65	--	7.28
Sidedress.....	2-row cultivator	1.1	1.25	1.25	18	.25	.25	--
Sidedress by hand.....	--	1.0	1.67	--	19	.32	--	--
Apply poison.....	6-row sprayer	3.9	.23	.23	55	.49	.49	--
Hoe.....	--	2.2	8.72	--	100	19.18	--	--
Total.....	--	--	--	--	--	33.48	6.06	11.62
Harvest:								
Pick by hand.....	--	1.6	41.56	--	100	66.50	--	--
Haul to gin.....	Trailer	1.0	3.04	2.56	14	.43	.36	--
Do.....	Truck	1.0	2.55	2.55	86	2.19	--	--
Total.....	--	--	--	--	--	69.12	.36	--
Grand total.....	--	--	--	--	--	102.60	6.42	11.62

MEDIUM-LARGE MULTIPLE-UNIT FARMS

Preharvest:								
Cut stalks.....	1-row stalk cutter	1.0	.80	.80	18	.14	.14	--
Do.....	2-row stalk cutters	1.0	.55	.55	29	.16	.16	--
Do.....	1-row 2-mule stalk cutters	1.0	1.22	2.45	32	.39	--	.78
Rake and burn stalks.....	2-row 2-mule rake	1.0	1.67	3.34	3	.05	--	.10
Plow.....	2 14-in. moldboard plow	1.0	1.08	1.08	95	1.03	1.03	--
Disk.....	5-ft. tandem disk	1.4	.79	.79	41	.45	.45	--
Do.....	6-ft. tandem disk	1.7	.62	.62	22	.23	.23	--
Do.....	8-ft. tandem disk	1.0	.53	.53	14	.07	.07	--
Do.....	5-ft. single disk	1.4	1.14	1.14	27	.43	.43	--
Harrow.....	8-ft. spiketooth harrow	1.1	.40	.40	68	.30	.30	--
Do.....	8-ft. 2-mule spiketooth harrow	1.0	.87	1.68	11	.09	--	.18
Lay off rows.....	1-row 1-mule shovel	1.0	1.33	1.33	29	.39	--	.39
Fertilize.....	1-row 1-mule spreader	1.0	1.24	1.24	16	.20	--	.20
Fertilize and bed.....	1-row 1-mule bedder	1.0	3.12	1.56	7	.22	--	.11
Bed.....	1/2-row 1-mule plow	1.0	3.80	3.80	18	.68	--	.68

TABLE 24.--Cotton: Labor, equipment, and power used in producing and harvesting, by type and size of farm, central cotton-tobacco area of North Carolina, 1956--Continued

MEDIUM-LARGE MULTIPLE-UNIT FARMS--Continued

Operation	Size and kind of equipment	Times over	Time per acre, over once		Percent- age of cotton acreage covered	Time per acre, average for all cotton acreage		
			Man	Power		Man	Tractor	Mule
		No.	Hr.	Hr.	Pct.	Hr.	Hr.	Hr.
Preharvest--Continued								
Plant and fertilize.....	1-row planter	1.0	1.83	0.98	45	0.82	0.44	--
Do.....	2-row planter	1.0	1.49	.82	32	.48	.26	--
Plant.....	1-row 1-mule planter	1.0	2.25	1.65	23	.52	--	.38
Weed.....	2-row weeder	1.1	.63	.49	18	.12	.10	--
Cultivate.....	1-row cultivator	4.2	.88	.88	32	1.18	1.18	--
Do.....	2-row cultivator	6.9	.53	.53	31	1.13	1.13	--
Do.....	1/2-row 1-mule cultivator	5.4	2.82	2.82	15	2.28	--	2.28
Do.....	1-row 2-mule cultivator	3.2	1.21	2.38	28	2.13	--	2.13
Split middles.....	1-row 1-mule middlebuster	5.5	1.93	1.93	13	1.38	--	1.38
Sidedress.....	1-row cultivator	1.0	.85	.61	30	.26	.18	--
Sidedress by hand.....	--	1.0	1.32	--	10	.13	--	--
Apply poison.....	4-row sprayer	3.1	.23	.20	64	.46	.40	--
Hoe.....	--	2.6	6.80	--	100	17.68	--	--
Total.....	--	--	--	--	--	33.40	6.50	8.61
Harvest:								
Pick by hand.....	--	1.1	62.01	--	100	68.21	--	--
Haul to gin.....	Trailer	1.0	1.99	1.99	22	.44	.44	--
Do.....	Truck	1.0	2.93	2.60	78	2.29	--	--
Total.....	--	--	--	--	--	70.94	.44	--
Grand total.....	--	--	--	--	--	104.34	6.94	8.61

LARGE MULTIPLE-UNIT FARMS

Preharvest:								
Cut stalks.....	2-row stalk cutter	1.0	.40	.40	90	.36	.36	--
Plow.....	2 14-in. moldboard plow	1.0	.92	.92	34	.31	.31	--
Do.....	3 14-in. moldboard plow	1.0	.67	.67	59	.40	.40	--
Disk.....	6-ft. tandem disk	1.6	.63	.63	57	.57	.57	--
Do.....	8-ft. tandem disk	1.6	.50	.50	43	.34	.34	--
Harrow.....	8-ft. spiketooth harrow	1.0	.26	.26	65	.17	.17	--
Lay off rows.....	1-row 1-mule shovel	1.0	1.16	1.16	6	.07	--	.07
Fertilize.....	1-row 1-mule planter	1.0	2.36	1.60	6	.14	--	.10
Bed.....	1-row 1-mule bedder	1.0	1.89	1.26	6	.11	--	.08
Plant and fertilize.....	2-row planter	1.0	1.06	.66	94	1.00	.62	--
Plant.....	1-row 1-mule planter	1.0	3.15	1.26	6	.19	--	.08
Weed.....	2-row weeder	2.0	.33	.33	22	.15	.15	--
Cultivate.....	2-row cultivator	5.0	.47	.47	43	1.01	1.01	--
Do.....	1/2-row 1-mule cultivator	5.3	2.17	1.04	57	6.56	--	3.14
Sidedress.....	2-row cultivator	1.0	.94	.53	46	.43	.24	--
Apply poison.....	6-row sprayer	3.2	.32	.20	71	.73	.45	--
Do.....	4-row 1-mule sprayer	5.0	.17	.17	16	.14	--	.14
Hoe.....	--	2.0	7.19	--	100	14.38	--	--
Defoliate.....	6-row sprayer	1.0	.20	.20	22	.04	.04	--
Total.....	--	--	--	--	--	27.10	4.66	3.61
Harvest:								
Pick by hand.....	--	1.6	36.72	--	100	58.75	--	--
Haul to gin.....	Truck	1.0	1.89	1.86	100	1.89	--	--
Total.....	--	--	--	--	--	60.64	--	--
Grand total.....	--	--	--	--	--	87.74	4.66	3.61

TABLE 25.--Tobacco: Labor, equipment, and power used in producing, harvesting, and marketing, by type and size of farm, central cotton-tobacco area of North Carolina, 1956

SMALL SINGLE-UNIT FARMS

Operation	Size and kind of equipment	Times over	Time per acre, once over		Percentage of tobacco acreage covered	Time per acre, average for all tobacco acreage		
			Man	Power		Man	Tractor	Mule
		No.	Hr.	Hr.	Pct.	Hr.	Hr.	Hr.
Preharvest:		--	--	--	--	15.08	0.39	0.97
Prepare and care for plant bed <sup>1</sup>	--	--	--	--	--	15.08	0.39	0.97
Cut stalks.....	1-row stalk cutter	1.0	0.92	0.92	29	.27	.27	--
Do.....	2-row stalk cutter	1.0	.62	.62	20	.12	.12	--
Do.....	1-row 2-mule stalk cutter	1.0	1.31	2.62	39	.51	--	1.02
Plow.....	1 14-in. moldboard plow	1.0	2.25	2.25	22	.50	.50	--
Do.....	2 14-in. moldboard plow	1.0	1.22	1.22	32	.39	.39	--
Do.....	1 12-in. moldboard 1-mule plow	1.1	6.68	6.68	24	1.76	--	1.76
Do.....	1 14-in. moldboard 2-mule plow	1.0	3.97	7.94	12	.48	--	.95
Disk.....	6-ft. tandem disk	1.1	1.02	1.02	16	.16	.16	--
Do.....	8-ft. tandem disk	1.2	.43	.43	11	.06	.06	--
Do.....	4-ft. single disk	1.1	1.31	1.31	14	.20	.20	--
Harrow.....	8-ft. spiketooth harrow	1.0	.56	.56	23	.13	.13	--
Do.....	8-ft. 2-mule spiketooth harrow	1.0	.88	1.76	24	.21	--	.42
Fertilize and bed.....	1-row bedder	1.0	2.60	1.40	41	1.07	.57	--
Do.....	2-row bedder	1.0	1.99	.99	6	.12	.06	--
Lay off rows.....	1-row 1-mule single shovel	1.0	1.50	1.50	53	.80	--	.80
Fertilize.....	1-row 1-mule spreader	1.0	2.92	1.66	53	1.55	--	.88
Bed.....	1-row 2-mule bedder	1.0	3.60	5.46	53	1.91	--	2.89
Fumigate.....	2-row applicator	1.0	.97	.67	9	.09	.06	--
Transplant.....	1-row transplanter	1.0	15.72	3.01	25	3.93	.75	--
Transplant by hand.....	--	1.0	24.86	--	54	13.42	--	--
Transplant.....	1-row 2-mule transplanter	1.1	14.42	4.70	21	3.33	--	1.09
Replant by hand.....	--	1.7	3.81	--	14	.91	--	--
Cultivate.....	1-row cultivator	4.2	1.44	1.44	30	1.81	1.81	--
Do.....	1-row 2-mule cultivator	3.3	1.77	3.48	48	2.80	--	5.51
Do.....	2-row 1-mule cultivator	3.8	3.52	3.52	27	3.61	--	3.61
Sidedress by hand.....	--	1.0	3.68	--	11	.40	--	--
Dust or spray by hand.....	--	2.1	4.50	--	16	1.51	--	--
Apply poison.....	4-row sprayer	2.2	.28	.28	12	.07	.07	--
Do.....	6-row sprayer	2.5	.31	.31	17	.13	.13	--
Do.....	2-row 1-mule sprayer	2.6	.66	.66	33	.57	--	.57
Do.....	4-row 1-mule sprayer	1.7	.48	.48	14	.11	--	.11
Sucker by hand.....	--	2.8	11.41	--	73	23.32	--	--
Top by hand.....	--	1.4	6.19	--	75	6.50	--	--
Apply sucker control.....	4-row sprayer	1.0	.95	0.83	19	.18	.16	--
Top and sucker by hand.....	--	3.2	11.39	--	17	6.20	--	--
Hoe by hand.....	--	1.6	7.85	--	68	8.54	--	--
Clean barns and set up.....	--	1.0	3.87	--	89	3.44	--	--
equipment								
Total.....	--	--	--	--	--	106.19	5.83	20.58
Harvest and market:								
Harvest.....	Tobacco truck	5.0	31.18	5.1	32	49.89	8.16	--
Do.....	1-mule tobacco truck	5.0	31.18	5.1	68	106.01	--	17.34
Barn.....	--	5.0	3.90	--	100	19.50	--	--
Cure.....	--	1.0	11.20	--	100	11.20	--	--
Take out.....	Trailer	1.0	14.95	3.84	50	7.48	1.92	--
Do.....	2-mule wagon	1.0	14.95	5.72	36	5.38	--	2.06
Do.....	Truck	1.0	14.95	3.78	9	1.35	--	--
Do.....	Automobile and trailer	1.0	14.95	4.20	5	.75	--	--
Repile by hand.....	--	1.0	6.31	--	56	3.53	--	--
Move to strip room.....	Automobile and trailer	1.0	14.01	4.00	1	.14	--	--
Do.....	Trailer	1.0	14.01	7.26	3	.42	.22	--
Do.....	2-mule wagon	1.0	14.01	10.91	1	.14	--	.11
Move to strip room by hand.....	--	1.0	14.01	--	10	1.40	--	--
Grade.....	--	1.0	197.13	--	100	197.13	--	--
Load.....	--	1.0	3.93	--	100	3.93	--	--
Haul to market.....	Automobile and trailer (owned)	1.0	17.86	17.86	27	4.82	--	--

<sup>1</sup> About 96.7 square yards of plant bed required for 1 acre of tobacco.

TABLE 25.--Tobacco: Labor, equipment, and power used in producing, harvesting, and marketing, by type and size of farm, central cotton-tobacco area of North Carolina, 1956--Continued

SMALL SINGLE-UNIT FARMS--Continued

Operation	Size and kind of equipment	Times over	Time per acre, once over		Percentage of tobacco acreage covered	Time per acre, average for all tobacco acreage		
			Man	Power		Man	Tractor	Mile
		No.	Hr.	Hr.	Pct.	Hr.	Hr.	Hr.
Harvest and market--Continued								
Haul to market.....	Automobile and trailer (custom)	1.0	26.39	26.39	6	1.58	--	--
Do.....	Pickup truck (owned)	1.0	17.46	17.36	19	3.32	--	--
Do.....	Pickup truck (custom)	1.0	19.38	19.38	29	5.62	--	--
Do.....	1-ton or larger truck (owned)	1.0	23.39	23.39	3	0.70	--	--
Do.....	1-ton or larger truck (custom)	1.0	21.57	21.57	16	3.45	--	--
Total.....		--	--	--	--	427.74	10.30	19.51
Grand total.....		--	--	--	--	533.93	16.13	40.09

MEDIUM SINGLE-UNIT FARMS

Preharvest:								
Prepare and care for plant bed <sup>2</sup>	--	--	--	--	--	16.02	.72	.72
Cut stalks.....	1-row stalk cutter	1.0	1.07	1.07	10	.11	.11	--
Do.....	2-row stalk cutter	1.0	.66	.66	27	.18	.18	--
Do.....	1-row 2-mule stalk cutter	1.0	1.33	2.65	24	.32	--	.64
Plow.....	1 14-in. moldboard plow	1.0	2.64	2.64	10	.26	.26	--
Do.....	2 14-in. moldboard plow	1.0	1.19	1.19	45	.54	.54	--
Do.....	1 12-in. moldboard 1-mule plow	1.0	4.75	4.75	5	.24	--	.24
Do.....	1 14-in. moldboard 2-mule plow	1.0	4.49	8.99	12	.54	--	1.08
Disk.....	5-ft. tandem disk	1.1	1.03	1.03	24	.25	.25	--
Do.....	6-ft. tandem disk	1.3	.85	.85	35	.39	.39	--
Do.....	8-ft. tandem disk	1.0	.86	.86	22	.19	.19	--
Do.....	4-ft. single disk	1.2	1.36	1.36	7	.11	.11	--
Do.....	4-ft. 2-mule single disk	1.0	1.71	3.41	12	.21	--	.41
Harrow.....	8-ft. spiketooth harrow	1.0	.43	.43	23	.10	.10	--
Do.....	8-ft. 2-mule spiketooth harrow	1.0	.83	1.66	20	.17	--	.33
Fertilize and bed.....	1-row bedder	1.0	2.76	1.53	31	.86	.47	--
Do.....	2-row bedder	1.0	1.32	.89	14	.18	.12	--
Lay off rows.....	1-row 1-mule single shovel	1.0	1.77	1.77	42	.74	--	.74
Do.....	2-row 2-mule cultivator	1.0	.79	1.58	13	.10	--	.21
Fertilize.....	1-row 1-mule spreader	1.0	3.24	1.57	55	1.78	--	.86
Bed.....	1-row 2-mule bedder	1.0	2.63	5.26	55	1.45	--	2.89
Fumigate.....	2-row applicator	1.0	.89	.50	9	.08	.04	--
Fumigate.....	4-row applicator	1.0	.89	.50	12	.11	.06	--
Fumigate.....	2-row 2-mule applicator	1.0	2.41	1.21	3	.07	--	.04
Transplant.....	1-row transplanter	1.0	12.83	2.55	61	7.83	1.56	--
Do.....	1-row 2-mule transplanter	1.0	13.42	5.09	19	2.55	--	.97
Transplant by hand.....	--	1.0	21.65	--	20	4.33	--	--
Replant by hand.....	--	1.9	5.71	--	21	2.28	--	--
Cultivate.....	1-row cultivator	3.1	1.37	1.28	58	2.46	2.30	--
Do.....	1-row 2-mule cultivator	3.0	2.21	3.38	29	1.92	--	2.94
Do.....	1/2-row 1-mule cultivator	4.5	4.66	3.30	13	2.73	--	1.93
Sidedress.....	1-row cultivator	1.0	2.27	1.14	9	.20	.10	--
Apply poison.....	4-row sprayer	2.4	.31	.31	30	.22	.22	--
Do.....	2-row 2-mule sprayer	3.5	.72	.72	13	.33	--	.33
Dust or spray by hand.....	--	1.6	.81	--	8	.10	--	--
Apply poison.....	4-row 1-mule sprayer	4.0	.54	.54	19	.41	--	.41
Irrigate.....	--	4.0	30.00	5.00	2	2.40	.40	--
Sucker by hand.....	--	2.3	10.54	--	60	14.54	--	--
Top by hand.....	--	1.3	5.73	--	46	3.43	--	--
Sucker and top by hand.....	--	3.3	8.92	--	19	5.59	--	--
Apply sucker control.....	6-row sprayer	1.0	.34	.34	27	.09	.09	--

<sup>2</sup> About 102.7 square yards of plant bed required for 1 acre of tobacco.

TABLE 25.--Tobacco: Labor, equipment, and power used in producing, harvesting, and marketing, by type and size of farm, central cotton-tobacco area of North Carolina, 1956--Continued

MEDIUM SINGLE-UNIT FARMS--Continued

Operation	Size and kind of equipment	Times over	Time per acre, once over		Percent- age of tobacco acreage covered	Time per acre, average for all tobacco acreage		
			Man	Power		Man	Tractor	Mule
Preharvest--Continued		No.	Hr.	Hr.	Pct.	Hr.	Hr.	Hr.
Hoe by hand.....	--	1.4	6.74	--	40	3.77	--	--
Clean barns and set up equipment	--	1.0	3.06	--	93	2.85	--	--
Total.....		--	--	--	--	83.03	8.21	14.74
Harvest and market:								
Harvest.....	Tobacco truck	5.0	31.18	5.1	47	73.27	11.98	--
Do.....	2-mule tobacco truck	5.0	31.18	5.1	53	82.63	--	13.51
Barn.....	--	5.0	3.90	--	100	19.50	--	--
Cure.....	--	--	--	--	--	9.00	--	--
Take out.....	Trailer	1.0	14.65	3.39	51	7.47	1.73	--
Do.....	2-mule wagon	1.0	14.65	4.68	23	3.37	--	1.08
Do.....	Truck	1.0	14.65	3.75	20	2.93	--	--
Do.....	Automobile and trailer	1.0	14.65	4.92	6	.88	--	--
Repile by hand.....	--	1.0	5.53	--	69	3.82	--	--
Move to strip room.....	Tractor	1.0	10.50	4.44	2	.21	.09	--
Do.....	2-mule wagon	1.0	10.50	1.60	4	.42	--	.06
Move to strip room by hand	--	1.0	10.50	--	31	3.26	--	--
Move to strip room.....	Truck	1.0	10.50	10.83	3	.32	--	--
Grade.....	--	1.0	191.93	--	100	191.93	--	--
Load.....	--	1.0	3.29	--	100	3.29	--	--
Haul to market.....	Automobile and trailer (custom)	1.0	25.38	25.38	2	.51	--	--
Do.....	Automobile and trailer (owned)	1.0	16.83	16.83	22	3.70	--	--
Do.....	Pickup truck (custom)	1.0	18.72	18.72	12	2.25	--	--
Do.....	Pickup truck (owned)	1.0	12.30	12.30	41	5.04	--	--
Do.....	1-ton or larger truck (custom)	1.0	12.60	12.60	16	2.02	--	--
Do.....	1-ton or larger truck (owned)	1.0	21.71	21.71	7	1.52	--	--
Total.....	--	--	--	--	--	417.34	13.80	14.65
Grand total.....	--	--	--	--	--	500.37	22.01	29.39

MEDIUM-LARGE SINGLE-UNIT FARMS

Preharvest:								
Prepare and care for plant bed <sup>3</sup>	--	--	--	--	--	14.76	.95	.38
Cut stalks.....	1-row stalk cutter	1.0	.74	.74	33	.24	.24	--
Do.....	2-row stalk cutter	1.0	.55	.55	35	.19	.19	--
Do.....	1-row 2-mule stalk cutter	1.0	1.67	2.15	19	.32	--	.41
Plow.....	2 14-in. moldboard plow	1.0	1.17	1.17	95	1.11	1.11	--
Disk.....	5-ft. tandem disk	1.5	.73	.73	68	.74	.74	--
Do.....	8-ft. tandem disk	1.5	.77	.77	52	.60	.60	--
Do.....	5-ft. single disk	1.1	.95	.95	21	.22	.22	--
Do.....	4-ft. 2-mule single disk	1.0	1.65	3.31	9	.15	--	.30
Harrow.....	8-ft. spiketooth harrow	1.0	.38	.38	35	.13	.13	--
Do.....	12-ft. spiketooth harrow	1.0	.34	.34	16	.05	.05	--
Do.....	8-ft. 2-mule spiketooth harrow	1.0	.97	1.94	5	.05	--	.10
Fertilize and bed.....	1-row bedder	1.0	2.53	1.26	45	1.14	.57	--
Do.....	2-row bedder	1.0	1.85	.90	28	.52	.25	--
Lay off rows.....	1-row 1-mule single shovel	1.0	1.62	1.62	16	.26	--	.26
Do.....	2-row 2-mule cultivator	1.0	.90	1.80	11	.10	--	.20
Fertilize.....	1-row 1-mule spreader	1.0	3.24	1.57	27	.87	--	.42
Bed.....	1-row 1-mule bedder	1.0	2.38	2.38	12	.29	--	.29
Do.....	1-row 2-mule bedder	1.0	1.19	2.38	15	.18	--	.36
Fumigate.....	2-row applicator	1.0	1.12	.68	15	.17	.10	--
Do.....	2-row 1-mule applicator	1.0	1.08	.73	8	.09	--	.06

<sup>3</sup> About 94.6 square yards of plant bed required for 1 acre of tobacco.



TABLE 25.--Tobacco: Labor, equipment, and power used in producing, harvesting, and marketing, by type and size of farm, central cotton-tobacco area of North Carolina, 1956--Continued

MEDIUM-LARGE SINGLE-UNIT FARMS--Continued

Operation	Size and kind of equipment	Times over	Time per acre, once over		Percentage of tobacco acreage covered	Time per acre, average for all tobacco acreage		
			Man	Power		Man	Tractor	Mule
Preharvest--Continued		No.	Hr.	Hr.	Pct.	Hr.	Hr.	Hr.
Transplant.....	1-row transplanter	1.0	14.98	2.53	60	8.99	1.52	--
Do.....	1-row 2-mule transplanter	1.0	14.40	3.74	12	1.73	--	0.45
Transplant by hand.....	--	1.0	19.84	--	28	5.56	--	--
Replant by hand.....	--	2.8	4.99	--	20	2.79	--	--
Cultivate.....	1-row cultivator	2.9	1.17	1.11	51	1.73	1.64	--
Do.....	2-row cultivator	3.9	.82	.82	9	.29	.29	--
Do.....	1-row 2-mule cultivator	3.2	1.57	3.15	15	.75	--	1.51
Do.....	1-row 1-mule cultivator	2.8	2.85	2.74	19	1.52	--	1.46
Split middles.....	1-row 1-mule middle-buster	2.5	1.36	1.21	11	.37	--	.33
Sidedress.....	1-row cultivator	1.0	1.46	.96	29	.42	.28	--
Apply poison.....	4-row sprayer	2.7	.55	.53	11	.16	.16	--
Do.....	5-row sprayer	3.9	.35	.35	14	.19	.19	--
Do.....	8-row sprayer	3.6	.38	.30	14	.19	.15	--
Dust or spray by hand.....	--	2.3	1.11	--	21	.54	--	--
Apply poison.....	2-row 1-mule sprayer	3.2	.67	.57	15	.32	--	.27
Do.....	4-row 1-mule sprayer	3.1	.49	.48	15	.23	--	.22
Sucker by hand.....	--	2.6	12.42	--	55	17.76	--	--
Top by hand.....	--	1.5	5.98	--	59	5.29	--	--
Top and sucker by hand.....	--	3.1	11.89	--	41	15.11	--	--
Apply sucker control.....	8-row sprayer	1.0	.44	.26	28	0.12	.07	--
Hoe by hand.....	--	1.4	7.42	--	61	6.34	--	--
Clean barns and set up equipment.....	--	1.0	2.84	--	94	2.67	--	--
Total.....		--	--	--	--	95.25	9.45	7.02
Harvest and market:								
Harvest.....	Tobacco truck	5.0	31.18	5.10	63	98.22	16.06	--
Do.....	2-mule tobacco truck	5.0	31.18	5.10	37	57.68	--	9.44
Barn.....	--	5.0	3.90	--	100	19.50	--	--
Cure.....	--	1.0	7.90	--	100	7.90	--	--
Take out.....	Trailer	1.0	16.70	3.51	72	12.02	2.53	--
Do.....	2-mule wagon	1.0	16.70	4.48	13	2.17	--	.58
Do.....	Truck	1.0	16.70	3.29	15	2.50	--	--
Repile by hand.....	--	1.0	5.75	--	67	3.85	--	--
Move to strip room by hand.....	--	1.0	8.17	--	26	2.12	--	--
Grade.....	--	1.0	205.97	--	100	205.97	--	--
Load.....	--	1.0	2.97	--	100	2.97	--	--
Haul to market.....	Automobile and trailer (custom)	1.0	13.79	13.79	2	.28	--	--
Do.....	Automobile and trailer (owned)	1.0	10.10	10.10	18	1.82	--	--
Do.....	Pickup truck (custom)	1.0	21.04	21.04	14	2.95	--	--
Do.....	Pickup truck (owned)	1.0	13.56	13.56	51	6.92	--	--
Do.....	1-ton or larger truck (custom)	1.0	17.38	17.38	10	1.74	--	--
Do.....	1-ton or larger truck (owned)	1.0	28.76	28.76	5	1.44	--	--
Total.....		--	--	--	--	422.94	18.59	10.02
Grand total.....		--	--	--	--	518.19	28.04	17.04

LARGE SINGLE-UNIT FARMS

Preharvest:								
Prepare and care for..... plant bed <sup>4</sup>	--	--	--	--	--	15.97	1.02	.41
Cut stalks.....	1-row stalk cutter	1.0	.81	.81	24	.19	.19	--
Do.....	2-row stalk cutter	1.0	.48	.48	52	.25	.25	--
Flow.....	2 14-in. moldboard plow	1.0	1.38	1.38	92	1.27	1.27	--
Disk.....	4-ft. tandem disk	1.0	1.32	1.32	35	.46	.46	--
Do.....	6-ft. tandem disk	1.5	.58	.58	55	.48	.48	--

<sup>4</sup> About 102.4 square yards of plant bed required for 1 acre of tobacco.

TABLE 25.--Tobacco: Labor, equipment, and power used in producing, harvesting, and marketing, by type and size of farm, central cotton-tobacco area of North Carolina, 1956--Continued

LARGE SINGLE-UNIT FARMS--Continued

Operation	Size and kind of equipment	Times over	Time per acre, once over		Percentage of tobacco acreage covered	Time per acre, average for all tobacco acreage		
			Man	Power		Man	Tractor	Mule
Preharvest--Continued		No.	Hr.	Hr.	Pct.	Hr.	Hr.	Hr.
Disk.....	8-ft. tandem disk	1.1	0.64	0.64	58	0.41	0.41	--
Harrow.....	8-ft. spiketooth harrow	1.0	.47	.47	30	.14	.14	--
Do.....	12-ft. spiketooth harrow	1.0	.34	.34	20	.07	.07	--
Fumigate.....	2-row applicator	1.0	1.23	1.10	26	.32	.29	--
Fertilize and bed.....	2-row bedder	1.0	1.40	.70	100	1.40	.70	--
Transplant.....	1-row transplanter	1.0	13.59	2.20	100	13.59	2.20	--
Replant by hand.....	--	2.0	4.61	--	27	2.49	--	--
Cultivate.....	1-row cultivator	3.2	1.21	1.21	80	3.10	3.10	--
Do.....	2-row cultivator	1.8	.45	.39	39	.32	.27	--
Sidedress.....	2-row cultivator	1.0	.94	.47	24	.23	.11	--
Apply poison.....	4-row sprayer	3.0	.32	.30	80	.77	.72	--
Do.....	4-row 1-mule sprayer	2.0	1.42	.71	20	.57	--	.28
Irrigate.....	--	3.0	3.76	--	6	.68	--	--
Sucker by hand.....	--	2.3	14.60	--	63	21.16	--	--
Top by hand.....	--	1.1	4.39	--	77	3.72	--	--
Top and sucker by hand.....	--	4.5	10.25	--	17	7.84	--	--
Apply sucker control.....	6-row sprayer	1.0	0.40	.40	27	.11	.11	--
Hoe by hand.....	--	1.4	6.14	--	74	6.36	--	--
Clean barns and set up equipment	--	1.0	1.67	--	94	1.57	--	--
Total.....	--	--	--	--	--	83.47	11.79	.69
Harvest and market:								
Harvest.....	Tobacco truck	5.0	31.18	5.10	68	106.01	17.34	--
Do.....	2-mule tobacco truck	5.0	31.18	5.10	32	49.89	--	8.16
Barn.....	--	5.0	3.90	--	100	19.50	--	--
Cure.....	--	1.0	8.00	--	100	8.00	--	--
Take out.....	Trailer	1.0	15.95	3.60	28	4.47	1.01	--
Do.....	Truck	1.0	15.95	3.60	72	11.48	--	--
Repile by hand.....	--	1.0	5.40	--	82	4.43	--	--
Move to strip room.....	Automobile and trailer	1.0	8.38	2.25	4	.34	--	--
Do.....	Trailer	1.0	8.38	2.55	3	.25	--	--
Move to strip room by hand	--	1.0	8.38	--	42	3.52	--	--
Grade.....	--	1.0	163.30	--	100	163.30	--	--
Load.....	--	1.0	2.65	--	100	2.65	--	--
Haul to market.....	Automobile and trailer (owned)	1.0	20.15	20.15	8	1.61	--	--
Do.....	Pickup truck (custom)	1.0	19.35	19.35	7	1.35	--	--
Do.....	Pickup truck (owned)	1.0	9.21	9.21	38	3.50	--	--
Do.....	1-ton or larger truck (custom)	1.0	9.77	9.77	7	.68	--	--
Do.....	1-ton or larger truck (owned)	1.0	13.55	13.55	40	5.42	--	--
Total.....	--	--	--	--	--	386.40	18.35	8.16
Grand total.....	--	--	--	--	--	469.87	30.14	8.85

SMALL MULTIPLE-UNIT FARMS

Preharvest:								
Prepare and care for..... plant bed <sup>5</sup>	--	--	--	--	--	18.31	.47	1.17
Cut stalks.....	1-row stalk cutter	1.0	.88	.88	13	.11	.11	--
Do.....	2-row stalk cutter	1.0	.68	.68	14	.10	.10	--
Do.....	1-row 2-mule cutter	1.0	1.16	2.33	62	.72	--	1.44
Plow.....	1 14-in. moldboard plow	1.0	3.24	3.24	22	.71	.71	--
Do.....	2 14-in. moldboard plow	1.0	1.24	1.24	33	.41	.41	--
Do.....	1 12-in. moldboard 1-mule plow	1.0	7.68	7.68	14	1.08	--	1.08
Do.....	1 14-in. moldboard 2-mule plow	1.0	6.31	12.63	25	1.58	--	3.16
Disk.....	5-ft. tandem disk	1.0	.99	.99	47	.47	.47	--

<sup>5</sup> About 117.4 square yards of plant bed required for 1 acre of tobacco.

TABLE 25.--Tobacco: Labor, equipment, and power used in producing, harvesting, and marketing, by type and size of farm, central cotton-tobacco area of North Carolina, 1956--Continued

SMALL MULTIPLE-UNIT FARMS--Continued

Operation	Size and kind of equipment	Times over	Time per acre, once over		Percentage of tobacco acreage covered	Time per acre, average for all tobacco acreage		
			Man	Power		Man	Tractor	Mule
Preharvest--Continued		No.	Hr.	Hr.	Pct.	Hr.	Hr.	Hr.
Disk.....	6-ft. tandem disk	1.0	0.47	0.47	15	0.07	0.07	--
Do.....	8-ft. tandem disk	1.0	.98	.98	36	.35	.35	--
Do.....	4-ft. 2-mule single disk	1.0	1.53	3.06	15	.23	--	.46
Harrow.....	8-ft. spiketooth harrow	1.0	.50	.50	35	.18	.18	--
Do.....	8-ft. 2-mule spiketooth harrow	1.0	.89	1.78	34	.30	--	.61
Lay off rows.....	1-row 1-mule single shovel	1.0	1.31	1.31	62	.81	--	.81
Fertilize.....	1-row 1-mule spreader	1.0	2.48	1.40	62	1.54	--	.87
Bed.....	1-row 2-mule bedder	1.0	3.60	5.46	62	2.23	--	3.39
Fertilize and bed.....	1-row bedder	1.0	1.77	1.00	30	.53	.30	--
Fertilize and bed.....	2-row bedder	1.0	1.46	1.11	8	.12	.09	--
Transplant.....	1-row transplanter	1.0	17.36	3.46	52	9.03	1.80	--
Transplant by hand.....	--	1.0	24.49	--	48	11.76	--	--
Replant by hand.....	--	1.0	5.08	--	7	.36	--	--
Cultivate.....	1-row cultivator	2.4	.95	.95	31	.71	.71	--
Cultivate.....	2-row 1-mule cultivator	2.9	2.90	1.62	69	5.80	--	3.24
Sidedress.....	1-row cultivator	1.1	1.57	1.45	16	.28	.26	--
Dust or spray by hand.....	--	1.2	5.50	--	32	2.11	--	--
Apply poison.....	6-row sprayer	1.8	.45	.29	42	.34	.22	--
Do.....	2-row 1-mule sprayer	2.4	1.01	.89	24	.58	--	.51
Sucker by hand.....	--	2.3	14.21	--	81	26.47	--	--
Top by hand.....	--	1.8	5.48	--	79	7.79	--	--
Apply sucker control.....	4-row sprayer	1.1	.95	.95	27	.28	.28	--
Hoe by hand.....	--	1.5	9.36	--	78	10.95	--	--
Clean barns and set up.....	equipment	1.0	3.39	--	92	3.12	--	--
Total.....	--	--	--	--	--	109.43	6.53	16.74
Harvest and market:								
Harvest.....	Tobacco truck	5.0	31.18	5.10	32	49.89	8.16	--
Do.....	2-mule tobacco truck	5.0	31.18	5.10	68	106.01	--	17.34
Barn.....	--	5.0	3.90	--	100	19.50	--	--
Cure.....	--	--	--	--	--	11.60	--	--
Take out.....	Trailer	1.0	18.92	4.06	56	10.60	2.27	--
Do.....	2-mule wagon	1.0	18.92	10.27	32	6.05	--	3.29
Do.....	Truck	1.0	18.92	1.94	8	1.51	--	--
Do.....	Automobile and trailer	1.0	18.92	13.89	1	.19	.14	--
Repile by hand.....	--	1.0	8.65	--	72	6.23	--	--
Move to strip room.....	Trailer	1.0	5.00	1.67	5	.25	.08	--
Grade.....	--	1.0	231.46	--	96	222.20	--	--
Load.....	--	1.0	3.70	--	96	3.55	--	--
Haul to market.....	Automobile and trailer	1.0	36.22	36.22	12	4.35	--	--
Do.....	Pickup truck (custom)	1.0	13.85	13.85	10	1.38	--	--
Do.....	Pickup truck (owned)	1.0	23.43	23.43	43	10.08	--	--
Do.....	1-ton or larger truck	1.0	14.58	14.58	24	3.50	--	--
Do.....	(custom)							
Do.....	1-ton or larger truck	1.0	18.60	18.60	11	2.05	--	--
Total.....	--	--	--	--	--	458.94	10.65	20.63
Grand total.....	--	--	--	--	--	568.37	17.18	37.37

MEDIUM MULTIPLE-UNIT FARMS

Preharvest:								
Prepare and care for plant bed <sup>6</sup>	--	--	--	--	--	16.46	.42	1.06
Cut stalks.....	1-row stalk cutter	1.0	.85	.85	27	.23	.23	--
Do.....	2-row stalk cutter	1.0	.50	.50	12	.06	.06	--
Do.....	1-row 2-mule stalk cutter	1.0	1.05	2.10	45	.47	--	.95
Plow.....	2 14-in. moldboard plow	1.0	1.22	1.22	80	.98	.98	--

<sup>6</sup> About 105.5 square yards of plant bed required for 1 acre of tobacco.

TABLE 25.--Tobacco: Labor, equipment, and power used in producing, harvesting, and marketing, by type and size of farm, central cotton-tobacco area of North Carolina, 1956--Continued

MEDIUM MULTIPLE-UNIT FARMS--Continued

Operation	Size and kind of equipment	Times over	Time per acre, once over		Percent- age of tobacco acreage covered	Time per acre, average for all tobacco acreage		
			Man	Power		Man	Tractor	Mule
Preharvest--Continued		No.	Hr.	Hr.	Pct.	Hr.	Hr.	Hr.
Plow.....	1 14-in. moldboard 2-mule plow	1.0	6.42	12.83	11	0.71	--	1.41
Disk.....	6-ft. tandem disk	1.1	.66	.66	62	.45	0.45	--
Do.....	8-ft. tandem disk	1.0	.68	.68	20	.14	.14	--
Do.....	4-ft. single disk	1.0	1.05	1.05	62	.65	.65	--
Harrow.....	8-ft. spiketooth harrow	1.1	.45	.45	61	.30	.30	--
Do.....	8-ft. 2-mule spiketooth harrow	1.0	.98	1.96	17	.17	--	.33
Lay off rows.....	1-row 1-mule single shovel	1.0	1.28	1.28	30	.38	--	.38
Fertilize.....	1-row 1-mule spreader	1.0	1.97	1.25	30	.59	--	.38
Bed.....	1-row 2-mule bedder	1.0	2.63	5.26	30	.79	--	1.58
Fertilize and bed.....	1-row bedder	1.0	2.50	1.25	70	1.75	.87	--
Transplant.....	1-row transplanter	1.0	14.34	2.38	65	9.32	1.55	--
Transplant by hand.....	--	1.0	25.89	--	35	9.06	--	--
Replant by hand.....	--	2.0	6.25	--	6	.75	--	--
Cultivate.....	1-row cultivator	2.8	1.19	1.14	54	1.80	1.72	--
Do.....	1-row 2-mule cultivator	3.7	.98	1.95	41	1.49	--	2.96
Do.....	2-row 1-mule cultivator	2.7	2.55	2.55	19	1.31	--	1.31
Siddress by hand.....	--	1.0	2.48	--	12	.30	--	--
Dust or spray by hand.....	--	2.5	2.88	--	23	1.66	--	--
Apply poison.....	4-row sprayer	2.6	.26	.26	39	.26	.26	--
Do.....	2-row 1-mule sprayer	1.9	1.11	.75	48	1.01	--	.68
Sucker by hand.....	--	3.1	11.86	--	63	23.16	--	--
Top by hand.....	--	1.6	4.80	--	67	5.15	--	--
Top and sucker by hand.....	--	2.2	7.30	--	23	3.69	--	--
Apply sucker control.....	4-row sprayer	1.0	.81	.60	14	.11	.08	--
Hoe by hand.....	--	1.7	9.01	--	73	11.18	--	--
Clean barns and set up equipment	--	1.0	2.78	--	94	2.61	--	--
Total.....	--	--	--	--	--	96.99	7.71	11.04
Harvest and market:								
Harvest.....	Tobacco truck	5.0	31.18	5.10	27	42.09	6.88	--
Do.....	2-mule tobacco truck	5.0	31.18	5.10	73	113.81	--	18.62
Barn.....	--	5.0	3.90	--	100	19.50	--	--
Cure.....	--	1.0	7.50	--	100	7.50	--	--
Take out.....	Trailer	1.0	12.57	3.28	52	6.54	1.71	--
Do.....	2-mule wagon	1.0	12.57	2.62	34	4.27	--	.89
Do.....	Truck	1.0	12.57	3.55	14	1.76	--	--
Repile by hand.....	--	1.0	6.14	--	75	4.61	--	--
Move to strip room.....	--	1.0	12.10	--	22	2.66	--	--
Grade.....	--	1.0	202.90	--	100	202.90	--	--
Load.....	--	1.0	2.70	--	100	2.70	--	--
Haul to market.....	Automobile and trailer	1.0	6.79	6.79	28	1.90	--	--
Do.....	Pickup truck (custom)	1.0	17.15	17.15	8	1.37	--	--
Do.....	Pickup truck (owned)	1.0	10.33	10.33	46	4.75	--	--
Do.....	1-ton or larger truck (custom)	1.0	15.31	15.31	14	2.14	--	--
Do.....	1-ton or larger truck (owned)	1.0	17.27	17.27	4	.69	--	--
Total.....	--	--	--	--	--	419.19	8.59	19.51
Grand total.....	--	--	--	--	--	516.18	16.30	30.55

MEDIUM-LARGE MULTIPLE-UNIT FARMS

Preharvest:								
Prepare and care for plant bed <sup>7</sup>	--	--	--	--	--	14.07	0.36	0.90
Cut stalks.....	1-row stalk cutter	1.0	0.89	0.89	13	.12	.12	--
Do.....	2-row stalk cutter	1.0	.48	.48	31	.15	.15	--

<sup>7</sup> About 90.2 square yards required for 1 acre of tobacco.

TABLE 25.--Tobacco: Labor, equipment, and power used in producing, harvesting, and marketing, by type and size of farm, central cotton-tobacco area of North Carolina, 1956--Continued

MEDIUM-LARGE MULTIPLE-UNIT FARMS--Continued

Operation	Size and kind of equipment	Times over	Time per acre, once over		Percentage of tobacco acreage covered	Time per acre, average for all tobacco acreage		
			Man	Power		Man	Tractor	Mule
Preharvest--Continued		No.	Hr.	Hr.	Pct.	Hr.	Hr.	Hr.
Cut stalks.....	1-row 2-mule stalk cutter	1.0	1.92	2.46	42	0.81	--	1.03
Plow.....	2 14-in. moldboard plow	1.0	1.00	1.00	93	.93	0.93	--
Do.....	1 14-in. moldboard 2-mule plow	1.0	5.00	10.00	7	.35	--	.70
Disk.....	5-ft. tandem disk	1.0	.79	.79	53	.42	.42	--
Do.....	6-ft. tandem disk	1.1	.56	.56	65	.40	.40	--
Do.....	5-ft. single disk	1.0	.93	.93	28	.26	.26	--
Harrow.....	8-ft. spiketooth harrow	1.0	.49	.49	45	.22	.22	--
Do.....	12-ft. spiketooth harrow	1.0	.23	.23	16	.04	.04	--
Do.....	8-ft. 2-mule spiketooth harrow	1.0	.83	1.65	24	.20	--	.40
Lay off rows.....	2-row 2-mule cultivator	1.0	.63	1.26	21	.13	--	.26
Fumigate.....	2-row applicator	1.0	1.01	.50	18	.18	.09	--
Fertilize.....	1-row 1-mule spreader	1.0	1.00	1.00	21	.21	--	.21
Fertilize and bed.....	1-row bedder	1.0	2.43	1.21	29	.70	.35	--
Do.....	2-row bedder	1.0	1.50	0.81	50	.75	.40	--
Bed.....	1-row 2-mule bedder	1.0	2.17	2.54	21	.46	--	.53
Transplant.....	1-row transplanter	1.0	16.30	2.24	74	12.06	1.66	--
Transplant by hand.....	--	1.0	21.90	--	26	5.69	--	--
Replant by hand.....	--	2.3	3.61	--	26	2.16	--	--
Cultivate.....	1-row cultivator	3.4	1.42	1.30	31	1.50	1.37	--
Do.....	1-row 2-mule cultivator	3.3	1.80	3.61	53	3.15	--	6.31
Do.....	1/2-row 1-mule cultivator	3.0	2.98	2.84	18	1.61	--	1.53
Hoe by hand.....	--	1.6	7.65	--	43	5.26	--	--
Sidedress by hand.....	--	1.4	.94	--	16	.21	--	--
Dust or spray by hand.....	--	2.1	1.00	--	23	.48	--	--
Apply poison.....	4-row sprayer	3.1	.39	.30	27	.33	.25	--
Do.....	2-row 1-mule sprayer	2.8	1.56	.96	40	1.75	--	1.08
Apply sucker control.....	4-row sprayer	1.3	.63	.32	12	.10	.05	--
Irrigate.....	--	2.0	3.99	1.33	11	.88	.29	--
Sucker by hand.....	--	2.7	11.65	--	50	15.73	--	--
Top by hand.....	--	1.4	6.66	--	50	4.66	--	--
Top and sucker.....	--	3.3	7.32	--	37	8.94	--	--
Clean barns and set up, equipment	--	1.0	3.17	--	95	3.01	--	--
Total.....	--	--	--	--	--	87.92	7.36	12.95
Harvest and market:								
Harvest.....	Tobacco truck	5.0	31.18	5.10	32	49.89	8.16	--
Do.....	1-mule tobacco truck	5.0	31.18	5.10	68	106.01	--	17.34
Barn.....	--	5.0	3.90	--	100	19.50	--	--
Cure.....	--	1.0	10.70	--	100	10.70	--	--
Take out.....	Trailer	1.0	24.16	3.97	70	16.91	2.78	--
Do.....	Truck	1.0	24.16	2.96	30	7.25	--	--
Repile by hand.....	--	1.0	4.01	--	65	2.61	--	--
Move to strip room.....	Trailer	1.0	13.55	5.57	9	1.22	0.50	--
Move to strip room by hand	--	1.0	13.55	--	21	2.85	--	--
Grade.....	--	1.0	212.69	--	100	212.69	--	--
Load.....	--	1.0	3.48	--	100	3.48	--	--
Haul to market.....	Automobile and trailer	1.0	10.00	10.00	15	1.50	--	--
Do.....	Pickup truck	1.0	15.31	15.31	65	9.95	--	--
Do.....	1-ton or larger truck	1.0	15.54	15.54	20	3.11	--	--
Total.....	--	--	--	--	--	447.67	11.44	17.34
Grand total.....	--	--	--	--	--	535.59	18.80	30.29

TABLE 25.--Tobacco: Labor, equipment, and power used in producing, harvesting, and marketing, by type and size of farm, central cotton-tobacco area of North Carolina, 1956--Continued

LARGE MULTIPLE-UNIT FARMS

Operation	Size and kind of equipment	Times over	Time per acre, once over		Percentage of tobacco acreage covered	Time per acre, average for all tobacco acreage		
			Man	Power		Man	Tractor	Mule
		No.	Hr.	Hr.	Pct.	Hr.	Hr.	Hr.
Preharvest:								
Prepare and care for plant bed <sup>8</sup>	--	--	--	--	--	13.33	0.17	1.03
Cut stalks.....	2-row stalk cutter	1.0	0.38	0.38	86	.33	.33	--
Plow.....	2 14-in. moldboard plow	1.0	.89	.89	100	.89	.89	--
Disk.....	6-ft. tandem disk	1.0	.57	.57	94	.54	.54	--
Do.....	8-ft. tandem disk	1.0	.33	.33	45	.15	.15	--
Harrow.....	8-ft. spiketooth harrow	1.0	.29	.29	61	.18	.18	--
Do.....	12-ft. spiketooth harrow	1.0	.29	.29	33	.10	.10	--
Fumigate.....	2-row applicator	1.0	.44	.44	14	.06	.06	--
Fertilize and bed.....	2-row bedder	1.0	1.40	.58	56	.78	.32	--
Do.....	1-row bedder	1.0	2.86	1.43	44	1.26	.63	--
Transplant.....	1-row transplanter	1.0	23.94	2.52	81	19.39	2.04	--
Transplant by hand.....	--	1.0	18.05	--	19	3.43	--	--
Cultivate.....	1-row cultivator	2.7	1.57	1.09	44	1.87	1.29	--
Do.....	2-row cultivator	1.9	.62	.62	33	.39	.39	--
Do.....	1-row 2-mule cultivator	2.3	.97	1.93	22	.49	--	.98
Do.....	2-row 1-mule cultivator	4.7	2.89	2.89	27	3.67	--	3.67
Sidedress by hand.....	--	1.0	1.42	--	19	.27	--	--
Apply poison.....	6-row sprayer	4.0	.65	.36	83	2.16	1.20	--
Do.....	2-row 1-mule sprayer	2.9	.50	.50	34	.49	--	.49
Sucker by hand.....	--	2.3	9.30	--	87	18.61	--	--
Top by hand.....	--	1.4	4.13	--	87	5.03	--	--
Top and sucker.....	--	4.0	10.00	--	14	5.60	--	--
Hoe by hand.....	--	1.7	5.82	--	96	9.50	--	--
Clean barns and set up equipment	--	1.0	1.59	--	100	1.59	--	--
Total.....	--	--	--	--	--	90.11	8.29	6.17
Harvest and market:								
Harvest.....	Tobacco truck	5.0	31.18	5.10	13	20.27	3.32	--
Do.....	1-mule tobacco truck	5.0	31.18	5.10	87	135.63	--	22.18
Barn.....	--	5.0	3.90	--	100	19.50	--	--
Cure.....	--	--	--	--	--	11.16	--	--
Take out.....	Trailer	1.0	16.28	3.38	75	12.21	2.54	--
Do.....	2-mule wagon	1.0	16.28	2.73	7	1.14	--	.19
Do.....	Truck	1.0	16.28	3.04	19	3.09	--	--
Repile by hand.....	--	1.0	7.11	--	66	4.69	--	--
Move to strip room by hand	--	1.0	5.97	--	26	1.55	--	--
Grade.....	--	1.0	207.90	--	93	193.35	--	--
Load.....	--	1.0	2.29	--	93	2.13	--	--
Haul to market.....	Pickup truck	1.0	9.89	9.89	54	5.34	--	--
Do.....	1-ton or larger truck	1.0	4.21	4.21	39	1.64	--	--
Total.....	--	--	--	--	--	411.70	5.86	22.37
Grand total.....	--	--	--	--	--	501.81	14.15	28.54

<sup>8</sup> About 85.8 square yards of plant bed required for 1 acre of tobacco.

TABLE 26.--Corn: Labor, equipment, and power used in producing and harvesting for grain, by type and size of farm, central cotton-tobacco area of North Carolina, 1956

SMALL SINGLE-UNIT FARMS

Operation	Size and kind of equipment	Times over	Time per acre, over once		Percentage of corn acreage covered	Time per acre, average for all corn acreage		
			Man	Power		Man	Tractor	Mule
		No.	Hr.	Hr.	Pct.	Hr.	Hr.	Hr.
Preharvest:								
Cut stalks.....	1-row stalk cutter	1.0	0.84	0.84	20	0.17	0.17	--
Do.....	2-row stalk cutter	1.0	.56	.56	14	.08	.08	--
Do.....	1-row 2-mule stalk cutter	1.0	1.27	2.55	42	.53	--	1.07
Plow.....	1 14-in. moldboard plow	1.0	2.26	2.26	17	.38	.38	--
Do.....	2 14-in. moldboard plow	1.0	1.36	1.36	30	.41	.41	--
Do.....	1 12-in. moldboard 1-mule plow	1.0	7.39	7.39	19	1.40	--	1.40
Do.....	1 14-in. moldboard 2-mule plow	1.0	4.83	9.67	13	.63	--	1.26
Disk.....	4-ft. tandem disk	1.2	1.10	1.10	23	.30	.30	--
Do.....	6-ft. tandem disk	1.5	.88	.88	24	.32	.32	--
Do.....	8-ft. tandem disk	1.8	.56	.56	15	.15	.15	--
Do.....	4-ft. single disk	1.8	1.33	1.33	22	.53	.53	--
Do.....	4-ft. 2-mule single disk	1.0	1.73	3.46	24	.42	--	.83
Harrow.....	8-ft. spiketooth harrow	1.0	.53	.53	25	.13	.13	--
Do.....	8-ft. 2-mule spiketooth harrow	1.0	.86	1.72	22	.19	--	.38
Lay off rows.....	1-row 1-mule shovel	1.0	1.43	1.41	37	.53	--	.52
Fertilize.....	1-row 1-mule spreader	1.0	2.32	1.46	16	.37	--	.23
Bed.....	1/2-row 1-mule plow	1.1	3.35	3.35	18	.66	--	.66
Plant and fertilize.....	2-row planter	1.2	1.91	1.27	11	.25	.17	--
Do.....	1-row 1-mule planter	1.0	2.82	2.00	17	.48	--	.34
Do.....	1-row planter	1.0	2.20	1.10	22	.48	.24	--
Plant.....	2-row planter	1.0	1.98	1.05	14	.28	.15	--
Do.....	1-row 1-mule planter	1.1	2.09	1.42	36	.83	--	.56
Weed.....	2-row 2-mule weeder	1.8	.67	1.35	26	.31	--	.63
Cultivate.....	1-row cultivator	2.6	1.07	1.07	26	.72	.72	--
Do.....	2-row cultivator	2.7	.72	.72	14	.27	.27	--
Do.....	1/2-row 1-mule cultivator	2.7	3.06	2.75	36	2.97	--	2.67
Do.....	1-row 2-mule cultivator	2.9	1.93	3.68	29	1.62	--	3.09
Split middles.....	1-row 1-mule middlebuster	2.0	1.61	1.61	14	.45	--	.45
Sidedress.....	1-row cultivator	1.0	1.89	1.10	11	.21	.12	--
Do.....	2-row cultivator	1.0	.57	.29	6	.03	.02	--
Sidedress by hand.....	--	1.0	2.36	--	21	.50	--	--
Hoe.....	--	1.0	5.37	--	36	1.93	--	--
Total.....	--	--	--	--	--	18.53	4.16	14.09
Harvest:								
Pick.....	1-row picker (custom)	1.0	1.67	1.38	13	.22	.18	--
Pick and shell.....	2-row picker-sheller (custom)	1.0	1.33	.78	2	.03	.02	--
Pick by hand and pile.....	--	1.0	8.88	--	61	5.42	--	--
Pick by hand and haul.....	Trailer	1.0	12.04	4.79	11	1.32	.53	--
Pick by hand and haul.....	2-mule wagon	1.0	12.82	10.25	13	1.67	--	1.33
Haul from picker.....	Trailer	1.0	1.41	1.13	15	.21	.17	--
Haul from piles.....	do.	1.0	4.19	2.30	23	.96	.53	--
Haul from piles.....	2-mule wagon	1.0	5.13	7.55	38	1.95	--	2.87
Total.....	--	--	--	--	--	11.78	1.43	4.20
Grand total.....	--	--	--	--	--	30.31	5.59	18.29

MEDIUM SINGLE-UNIT FARMS

Preharvest:								
Cut stalks.....	1-row stalk cutter	1.0	1.01	1.01	24	.24	.24	--
Do.....	2-row stalk cutter	1.0	.54	.54	26	.14	.14	--
Do.....	1-row 2-mule stalk cutter	1.0	1.26	2.52	35	.44	--	.88
Plow.....	1 14-in. moldboard plow	1.0	2.36	2.36	16	.38	.38	--
Do.....	2 14-in. moldboard plow	1.0	1.21	1.21	52	.63	.63	--
Do.....	1 14-in. moldboard 2-mule plow	1.0	4.88	9.14	29	1.41	--	2.65

TABLE 26.--Corn: Labor, equipment, and power used in producing and harvesting for grain, by type and size of farm, central cotton-tobacco area of North Carolina, 1956--Continued

MEDIUM SINGLE-UNIT FARMS

Operation	Size and kind of equipment	Times over	Time per acre, over once		Percentage of corn acreage covered	Time per acre, average for all corn acreage		
			Man	Power		Man	Tractor	Mule
Preharvest--Continued		No.	Hr.	Hr.	Pct.	Hr.	Hr.	Hr.
Disk.....	5-ft. tandem disk	1.4	0.91	0.91	31	0.39	0.39	--
Do.....	6-ft. tandem disk	1.3	.76	.76	20	.20	.20	--
Do.....	8-ft. tandem disk	1.1	.74	.74	29	.24	.24	--
Do.....	4-ft. single disk	1.1	1.09	1.09	19	.23	.23	--
Do.....	4-ft. 2-mule single disk	1.0	1.47	2.95	24	.35	--	.71
Harrow.....	8-ft. spiketooth harrow	1.1	.49	.49	38	.20	.20	--
Do.....	8-ft. 2-mule spiketooth harrow	1.2	.87	1.74	25	.26	--	.52
Lay off rows.....	1-row 1-mule shovel	1.0	1.49	1.49	21	.31	--	.31
Do.....	2-row 2-mule shovel	1.0	.86	1.71	13	.11	--	.22
Fertilize.....	1-row 1-mule spreader	1.0	3.30	1.65	13	.43	--	.21
Bed.....	2-row bedder	1.0	.61	.61	8	.05	.05	--
Plant and fertilize.....	1-row planter	1.0	2.56	1.41	39	1.00	.55	--
Do.....	1-row 1-mule planter	1.0	3.44	2.44	18	.62	--	.44
Do.....	2-row planter	1.0	2.06	1.03	7	.14	.07	--
Plant.....	1-row planter	1.0	2.75	1.63	13	.36	.21	--
Do.....	1-row 1-mule planter	1.2	2.20	1.43	23	.61	--	.39
Weed.....	2-row weeder	2.1	.49	.49	6	.06	.06	--
Do.....	2-row 2-mule weeder	1.7	.81	1.62	14	.19	--	.39
Cultivate.....	1-row cultivator	2.4	1.46	1.36	53	1.86	1.73	--
Do.....	2-row cultivator	2.5	.69	.60	21	.36	.32	--
Do.....	1/2-row 1-mule cultivator	2.5	2.65	2.61	15	.99	--	.98
Do.....	1-row 2-mule cultivator	2.8	1.40	2.69	27	1.06	--	2.03
Split middles.....	1-row 1-mule middlebuster	1.6	1.09	1.09	7	.12	--	.12
Sidedress.....	1-row cultivator	1.0	1.16	.81	16	.19	.13	--
Do.....	2-row cultivator	1.0	.52	.33	8	.04	.03	--
Sidedress by hand.....	--	1.0	1.31	--	9	.12	--	--
Hoe.....	--	1.1	5.32	--	37	2.17	--	--
Total.....	--	--	--	--	--	15.90	5.80	9.85
Harvest:								
Pick.....	1-row picker (custom)	1.0	1.38	1.26	7	.10	.09	--
Pick and shell.....	2-row picker-sheller (custom)	1.0	1.67	1.00	1	.02	.01	--
Pick by hand and pile.....	--	1.0	9.56	--	73	6.98	--	--
Pick by hand and haul.....	Trailer	1.0	10.88	5.74	13	1.41	.75	--
Pick by hand and haul.....	2-mule wagon	1.0	9.33	5.35	6	.56	--	.32
Haul from picker.....	Trailer	1.0	1.44	1.17	8	.12	.09	--
Haul from piles.....	do.	1.0	5.77	3.27	34	1.96	1.11	--
Haul from piles.....	2-mule wagon	1.0	4.94	5.29	39	1.93	--	2.06
Total.....	--	--	--	--	--	13.08	2.05	2.38
Grand total.....	--	--	--	--	--	28.98	7.85	12.23

MEDIUM-LARGE SINGLE-UNIT FARMS

Preharvest:								
Cut stalks.....	1-row stalk cutter	1.0	.76	.76	26	.20	.20	--
Do.....	2-row stalk cutter	1.0	.52	.52	37	.19	.19	--
Do.....	1-row 2-mule stalk cutter	1.0	.92	1.84	18	.17	--	.33
Plow.....	2 14-in. moldboard plow	1.0	1.15	1.15	80	.92	.92	--
Do.....	3 14-in. moldboard plow	1.0	.86	.86	14	.12	.12	--
Do.....	1 12-in. moldboard 1-mule plow	1.0	4.00	4.00	4	.16	--	.16
Disk.....	5-ft. tandem disk	1.1	.79	.79	39	.34	.34	--
Do.....	6-ft. tandem disk	1.8	.59	.59	78	.83	.83	--
Do.....	8-ft. tandem disk	1.2	.66	.66	38	.30	.30	--
Do.....	5-ft. single disk	1.0	.89	.89	30	.27	.27	--
Do.....	4-ft. 2-mule single disk	1.0	1.55	3.09	7	.11	--	.22
Harrow.....	8-ft. spiketooth harrow	1.1	.36	.36	32	.13	.13	--
Do.....	12-ft. spiketooth harrow	1.4	.39	.39	12	.66	.66	--
Do.....	8-ft. 2-mule spiketooth harrow	1.0	1.15	2.29	9	.10	--	.21



TABLE 26.--Corn: Labor, equipment, and power used in producing and harvesting for grain, by type and size of farm, central cotton-tobacco area of North Carolina, 1956--Continued

MEDIUM-LARGE SINGLE-UNIT FARMS--Continued

Operation	Size and kind of equipment	Times over	Time per acre, over once		Percent- age of corn acreage covered	Time per acre, average for all corn acreage		
			Man	Power		Man	Tractor	Mule
		No.	Hr.	Hr.	Pct.	Hr.	Hr.	Hr.
Preharvest--Continued								
Lay off rows.....	1-row 1-mule shovel	1.1	1.09	1.09	12	0.14	--	0.14
Do.....	1-row 2-mule cultivator	1.0	.66	1.32	8	.05	--	.11
Plant and fertilize....	1-row planter	1.4	2.23	1.43	31	.97	.62	--
Do.....	2-row planter	1.0	1.65	.84	31	.51	.26	--
Plant.....	2-row planter	1.0	1.30	.81	25	.32	.20	--
Do.....	1-row 1-mule planter	1.0	2.12	1.15	13	.28	--	.15
Weed.....	2-row weeder	2.1	.61	.61	12	.15	.15	--
Do.....	4-row weeder	1.6	.34	.34	10	.05	.05	--
Do.....	2-row 2-mule weeder	2.9	.66	1.32	8	.15	--	.31
Cultivate.....	1-row cultivator	2.9	.93	.93	30	.81	.81	--
Do.....	2-row cultivator	2.5	.71	.65	51	.91	.83	--
Do.....	1/2-row 1-mule cultivator	2.2	2.25	2.25	18	.89	--	.89
Do.....	1-row 2-mule cultivator	2.1	1.52	2.44	13	.41	--	.67
Sidedress.....	1-row cultivator	1.0	1.88	1.04	13	.24	.14	--
Do.....	2-row cultivator	1.0	.45	.40	17	.08	.07	--
Sidedress by hand.....	--	1.0	1.40	--	11	.15	--	--
Apply poison.....	4-row sprayer	1.0	.41	.41	1	0	--	--
Hoe.....	--	1.0	4.15	--	37	1.54	--	--
Total.....	--	--	--	--	--	12.15	7.09	3.19
Harvest:								
Pick.....	1-row picker	1.0	1.62	1.59	17	0.28	0.27	--
Do.....	2-row picker	1.0	.98	.98	6	.06	.06	--
Pick and shell.....	2-row picker-sheller (custom)	1.0	.89	.89	14	.12	.12	--
Pick by hand and pile....	--	1.0	9.27	--	38	3.52	--	--
Pick by hand and haul....	Trailer	1.0	9.39	3.61	11	1.03	.40	--
Pick by hand and haul....	2-mule wagon	1.0	7.94	6.25	14	1.11	--	.88
Haul from picker.....	Trailer	1.0	1.74	1.07	37	.64	.40	--
Haul from piles.....	do.	1.0	4.51	2.20	15	.68	.33	--
Haul from piles.....	2-mule wagon	1.0	5.15	5.08	23	1.18	--	1.17
Total.....	--	--	--	--	--	8.62	1.58	2.05
Grand total.....	--	--	--	--	--	20.77	8.67	5.24

LARGE SINGLE-UNIT FARMS

Operation	Size and kind of equipment	Times over	Time per acre, over once		Percent- age of corn acreage covered	Time per acre, average for all corn acreage		
			Man	Power		Man	Tractor	Mule
		No.	Hr.	Hr.	Pct.	Hr.	Hr.	Hr.
Preharvest:								
Cut stalks.....	2-row stalk cutter	1.0	.44	.44	81	.36	.36	--
Plow.....	2 14-in. moldboard plow	1.0	.96	.96	74	.71	.71	--
Do.....	3 14-in. moldboard plow	1.0	.93	.93	18	.17	.17	--
Disk.....	6-ft. tandem disk	1.0	.56	.56	94	.53	.53	--
Do.....	8-ft. tandem disk	1.0	.54	.54	77	.42	.42	--
Harrow.....	8-ft. spiketooth harrow	1.0	.27	.27	25	.07	.07	--
Do.....	12-ft. spiketooth harrow	1.0	.34	.34	18	.06	.06	--
Plant and fertilize.....	2-row planter	1.0	1.58	.77	64	1.01	.49	--
Do.....	1-row planter	1.0	2.48	1.24	14	.35	.17	--
Plant.....	2-row planter	1.0	1.34	.67	22	.29	.15	--
Weed.....	4-row weeder	1.5	.27	.27	32	.13	.13	--
Cultivate.....	1-row cultivator	2.2	1.05	1.05	37	.85	.85	--
Do.....	2-row cultivator	1.7	.66	.62	99	1.11	1.04	--
Sidedress.....	1-row cultivator	1.0	1.30	1.00	20	.26	.20	--
Do.....	2-row cultivator	1.0	.88	.58	25	.22	.14	--
Apply poison.....	4-row sprayer	1.0	.15	.15	10	.02	.02	--
Hoe.....	--	1.0	6.38	--	32	2.04	--	--
Total.....	--	--	--	--	--	8.60	5.51	--
Harvest:								
Pick.....	1-row picker	1.0	1.70	1.70	33	.56	.56	--
Do.....	2-row picker	1.0	1.60	1.26	4	.06	.05	--

TABLE 26.--Corn: Labor, equipment, and power used in producing and harvesting for grain, by type and size of farm, central cotton-tobacco area of North Carolina, 1956--Continued

LARGE SINGLE-UNIT FARMS--Continued

Operation	Size and kind of equipment	Times over	Time per acre, over once		Percent- age of corn acreage covered	Time per acre, average for all corn acreage		
			Man	Power		Man	Tractor	Mule
Harvest--Continued		No.	Hr.	Hr.	Pct.	Hr.	Hr.	Hr.
Pick and shell.....	2-row picker-sheller (custom)	1.0	0.76	0.76	12	0.09	0.09	--
Pick by hand and pile.....	--	1.0	10.09	--	39	3.94	--	--
Pick by hand and haul.....	Trailer	1.0	13.91	9.81	12	1.67	1.18	--
Haul from picker.....	do.	1.0	2.38	1.43	49	1.17	.70	--
Haul from piles.....	do.	1.0	4.90	1.65	32	1.57	.53	--
Do.....	2-mule wagon	1.0	3.34	3.34	7	.23	--	.23
Total.....	--	--	--	--	--	9.29	3.11	.23
Grand total.....	--	--	--	--	--	17.89	8.62	.23

SMALL MULTIPLE-UNIT FARMS

Preharvest:								
Cut stalks.....	2-row stalk cutter	1.0	.52	.52	30	.16	.16	--
Do.....	1-row 2-mule stalk cutter	1.0	1.22	2.44	47	.57	--	1.15
Plow.....	2 14-in. moldboard plow	1.0	1.20	1.20	62	.74	.74	--
Do.....	1 14-in. moldboard 2-mule plow	1.0	5.09	9.15	36	1.83	--	3.29
Disk.....	6-ft. tandem disk	1.3	.81	.81	52	.55	.55	--
Do.....	8-ft. tandem disk	1.3	.70	.70	30	.27	.27	--
Do.....	4-ft. 2-mule single disk	1.0	1.18	2.36	18	.21	--	.42
Harrow.....	8-ft. spiketooth harrow	1.1	.40	.40	50	.22	.22	--
Do.....	8-ft. 2-mule spiketooth harrow	1.0	.80	1.59	29	.23	--	.46
Lay off rows.....	1-row 1-mule shovel	1.0	2.54	1.43	14	.36	--	.20
Do.....	1-row 2-mule cultivator	1.0	1.37	2.32	31	.42	--	.72
Fertilize.....	1-row 1-mule spreader	1.0	2.25	1.16	40	.90	--	.46
Bed.....	1/2-row 1-mule plow	1.0	3.27	1.82	9	.29	--	.16
Plant and fertilize.....	1-row planter	1.0	1.79	1.06	29	.52	.31	--
Plant.....	2-row planter	1.0	1.46	.82	21	.31	.17	--
Do.....	1-row 1-mule planter	1.0	1.75	1.37	50	.88	--	.68
Cultivate.....	1-row cultivator	2.1	1.05	1.05	16	.35	.35	--
Do.....	2-row cultivator	2.8	.47	.47	28	.37	.37	--
Do.....	1/2-row 1-mule cultivator	1.9	2.93	1.91	18	1.00	--	.65
Do.....	1-row 2-mule cultivator	2.6	1.56	2.51	36	1.46	--	2.35
Sidedress.....	1-row cultivator	1.3	2.08	1.04	16	.43	.22	--
Do.....	2-row cultivator	1.0	1.49	.58	36	.54	.21	--
Sidedress by hand.....	--	1.0	2.31	--	22	.51	--	--
Hoe.....	--	1.0	6.85	--	28	1.92	--	--
Total.....	--	--	--	--	--	15.04	3.57	10.54
Harvest:								
Pick.....	1-row picker (custom)	1.0	3.41	1.59	12	.41	.19	--
Pick by hand and pile.....	--	1.0	7.67	--	35	2.68	--	--
Pick by hand and haul.....	Trailer	1.0	9.30	3.72	13	1.21	.48	--
Pick by hand and haul.....	2-mule wagon	1.0	17.65	13.19	40	7.06	--	5.28
Haul from picker.....	Trailer	1.0	2.33	1.26	12	.28	.15	--
Haul from piles.....	do.	1.0	10.57	5.41	21	2.22	1.14	--
Do.....	2-mule wagon	1.0	6.02	6.02	14	.84	--	.84
Total.....	--	--	--	--	--	14.70	1.96	6.12
Grand total.....	--	--	--	--	--	29.74	5.53	16.66

TABLE 26.--Corn: Labor, equipment, and power used in producing and harvesting for grain, by type and size of farm, central cotton-tobacco area of North Carolina, 1956--Continued

MEDIUM MULTIPLE-UNIT FARMS

Operation	Size and kind of equipment	Times over	Time per acre, over once		Percent- age of corn acreage covered	Time per acre, average for all corn acreage		
			Man	Power		Man	Tractor	Mule
		No.	Hr.	Hr.	Pct.	Hr.	Hr.	Hr.
Preharvest:								
Cut stalks.....	1-row stalk cutter	1.0	0.89	0.89	39	0.35	0.35	--
Do.....	1-row 2-mule stalk cutter	1.0	1.03	2.05	49	.50	--	1.00
Plow.....	2 14-in. moldboard plow	1.0	1.05	1.05	76	.80	.80	--
Do.....	1 14-in. moldboard 2-mule plow	1.0	6.47	8.94	14	.91	--	1.25
Disk.....	8-ft. tandem disk	1.4	.67	.67	36	.34	.34	--
Do.....	5-ft. tandem disk	1.0	.74	.74	27	.20	.20	--
Do.....	5-ft. single disk	1.3	.84	.84	19	.21	.21	--
Do.....	5-ft. bush and bog disk	1.2	1.09	1.09	26	.34	.34	--
Disk.....	4-ft. 2-mule single disk	1.0	.61	1.22	18	.11	--	.22
Harrow.....	8-ft. spiketooth harrow	1.0	.41	.41	49	.20	.20	--
Do.....	8-ft. 2-mule spiketooth harrow	1.0	.87	1.75	27	.23	--	.47
Lay off rows.....	1-row 1-mule shovel	1.0	2.33	4.66	15	.35	--	.70
Do.....	2-row 2-mule cultivator	1.0	1.53	1.21	17	.26	--	.21
Fertilize.....	1-row 1-mule spreader	1.0	2.23	1.35	22	.49	--	.30
Plant and fertilize.....	1-row planter	1.0	2.02	1.04	57	1.15	.59	--
Plant.....	1-row planter	1.3	2.21	1.49	9	.26	.17	--
Do.....	1-row 1-mule planter	1.0	1.61	1.16	35	.56	--	.41
Weeder.....	2-row 2-mule weeder	1.4	.54	1.09	24	.18	--	.37
Cultivate.....	1-row cultivator	2.4	1.00	1.00	50	1.20	1.20	--
Do.....	1/2-row 1-mule cultivator	1.9	2.98	2.98	19	1.08	--	1.08
Do.....	1-row 2-mule cultivator	3.2	.87	1.75	31	.86	--	1.74
Sidedress by hand.....	--	1.0	1.33	--	39	.52	--	--
Hoe.....	--	1.0	7.79	--	14	1.09	--	--
Total.....	--	--	--	--	--	12.19	4.40	7.75
Harvest:								
Pick.....	Picker (custom)	1.0	1.40	1.20	5	.07	.06	--
Pick by hand and pile.....	--	1.0	8.30	--	17	1.41	--	--
Pick by hand and haul.....	Trailer	1.0	12.77	3.91	19	2.43	.74	--
Pick by hand and haul.....	2-mule wagon	1.0	10.71	8.08	59	6.32	--	4.77
Haul from picker.....	Trailer	1.0	.90	.70	5	.04	.04	--
Haul from piles.....	do.	1.0	6.80	2.20	10	.68	.22	--
Do.....	2-mule wagon	1.0	5.04	4.35	7	.35	--	.30
Total.....	--	--	--	--	--	11.30	1.06	5.07
Grand total.....	--	--	--	--	--	23.49	5.46	12.82

MEDIUM-LARGE MULTIPLE-UNIT FARMS

Preharvest:								
Cut stalks.....	1-row stalk cutter	1.0	.92	.92	22	.20	.20	--
Do.....	2-row stalk cutter	1.0	.46	.46	41	.19	.19	--
Do.....	1-row 2-mule stalk cutter	1.0	1.25	2.50	22	.28	--	.55
Plow.....	2 14-in. moldboard plow	1.0	1.09	1.09	95	1.04	1.04	--
Disk.....	5-ft. tandem disk	1.2	.87	.87	69	.72	.72	--
Do.....	6-ft. tandem disk	1.2	.60	.60	56	.40	.40	--
Harrow.....	8-ft. spiketooth harrow	1.1	.47	.47	61	.32	.32	--
Do.....	8-ft. 2-mule spiketooth harrow	1.0	.83	1.67	16	.13	--	.27
Lay off rows.....	1-row 2-mule cultivator	1.0	.84	1.68	18	.15	--	.30
Bed.....	1/2-row 1-mule plow	1.3	3.20	3.20	9	.37	--	.37
Plant and fertilize.....	1-row planter	1.4	2.30	1.61	22	.71	.50	--
Plant and fertilize.....	2-row planter	1.1	1.92	.96	51	1.08	.54	--
Plant.....	2-row planter	1.0	1.51	.75	15	.23	.11	--
Do.....	1-row 1-mule planter	1.0	2.80	1.40	12	.34	--	.17
Weed.....	2-row weeder	1.6	.42	.42	47	.32	.32	--

TABLE 26.--Corn: Labor, equipment, and power used in producing and harvesting for grain, by type and size of farm, central cotton-tobacco area of North Carolina, 1956--Continued

MEDIUM-LARGE MULTIPLE-UNIT FARMS--Continued

Operation	Size and kind of equipment	Times over	Time per acre, over once		Percent- age of corn acreage covered	Time per acre, average for all corn acreage		
			Man	Power		Man	Tractor	Mule
Preharvest--Continued								
		No.	Hr.	Hr.	Pct.	Hr.	Hr.	Hr.
Cultivate.....	1-row cultivator	2.9	1.06	1.06	17	0.52	0.52	--
Do.....	2-row cultivator	2.3	.60	.60	53	.73	.73	--
Do.....	1/2-row 1-mule cultivator	3.0	3.60	3.60	12	1.30	--	1.30
Do.....	1-row 2-mule cultivator	2.2	1.96	3.93	17	.73	--	1.47
Sidedress.....	2-row cultivator	1.2	.62	.38	27	.20	.12	--
Sidedress by hand.....	--	1.0	1.42	--	12	.17	--	--
Hoe.....	--	1.0	5.52	--	44	2.43	--	--
Total.....	--	--	--	--	--	12.56	5.71	4.43
Harvest:								
Pick.....	1-row picker	1.0	1.75	1.40	21	.37	.29	--
Pick and shell.....	2-row picker-sheller (custom)	1.0	.85	.56	18	.15	.10	--
Pick by hand and pile.....	--	1.0	9.91	--	33	3.27	--	--
Pick by hand and haul.....	Trailer	1.0	13.45	3.29	19	2.56	.63	--
Pick by hand and haul.....	2-mule wagon	1.0	9.94	9.00	9	.89	--	.81
Haul from picker.....	Trailer	1.0	1.17	.83	36	.42	.30	--
Do.....	2-mule wagon	1.0	4.00	4.00	3	.12	--	.12
Haul from piles.....	Trailer	1.0	6.97	2.83	17	1.18	.48	--
Do.....	2-mule wagon	1.0	5.83	10.41	16	.93	--	1.67
Total.....	--	--	--	--	--	9.89	1.80	2.60
Grand total.....	--	--	--	--	--	22.45	7.51	7.03

LARGE MULTIPLE-UNIT FARMS

<b>Preharvest:</b>								
Cut stalks.....	2-row stalk cutter	1.0	.38	.38	99	.38	.38	--
Apply manure.....	Spreader	1.0	2.00	1.00	34	.68	.34	--
Plow.....	3 14-in. moldboard plow	1.0	.86	.86	100	.86	.86	--
Disk.....	5-ft. tandem disk	1.1	.57	.57	27	.17	.17	--
Do.....	8-ft. tandem disk	1.3	.44	.44	73	.42	.42	--
Harrow.....	8-ft. spiketooth harrow	1.0	.25	.25	88	.22	.22	--
Lay off rows.....	1-row 1-mule shovel	1.0	1.42	1.42	6	.09	--	.09
Plant and fertilize.....	2-row planter	1.0	1.06	.53	28	.30	.15	--
Do.....	1-row planter	1.0	2.00	1.00	47	.94	.47	--
Bed.....	1/2-row 1-mule plow	1.0	3.00	3.00	3	.09	--	.09
Plant.....	2-row planter	1.0	.94	.94	25	.24	.24	--
Weed.....	2-row weeder	2.0	.33	.33	14	.92	.92	--
Cultivate.....	1-row cultivator	3.0	1.77	1.00	43	2.28	1.29	--
Do.....	2-row cultivator	2.7	.46	.46	39	.48	.48	--
Do.....	1/2-row 1-mule cultivator	3.8	2.72	1.12	17	1.76	--	.72
Sidedress.....	2-row cultivator	1.0	.53	.53	25	.13	.13	--
Sidedress by hand.....	--	1.0	1.62	--	14	.23	--	--
Apply poison.....	6-row sprayer	1.0	.10	.10	14	.01	.01	--
Hoe.....	--	1.0	3.00	--	17	.51	--	--
Total.....	--	--	--	--	--	10.71	6.08	.90
<b>Harvest:</b>								
Pick.....	1-row picker	1.0	3.13	1.13	29	.91	.33	--
Pick by hand and pile.....	--	1.0	10.42	--	45	4.69	--	--
Pick by hand and haul.....	Trailer	1.0	13.39	6.04	19	2.54	1.15	--
Pick by hand and haul.....	2-mule wagon	1.0	9.50	5.00	7	.67	--	.35
Haul from picker.....	Trailer	1.0	2.00	2.00	29	.58	.58	--
Haul from piles.....	do.	1.0	5.60	1.87	28	1.57	.52	--
Do.....	2-mule wagon	1.0	2.89	5.12	17	.49	--	.87
Total.....	--	--	--	--	--	11.45	2.58	1.22
Grand total.....	--	--	--	--	--	22.16	8.66	2.12

TABLE 27.--Soybeans: Labor, equipment, and power used in producing and harvesting for grain, by type and size of farm, central cotton-tobacco area of North Carolina, 1956

SMALL SINGLE-UNIT FARMS

Operation	Size and kind of equipment	Times over	Time per acre, over once		Percent- age of soybean acreage covered	Time per acre, average for all soybean acreage		
			Man	Power		Man	Tractor	Mile
Preharvest:		No.	Hr.	Hr.	Pct.	Hr.	Hr.	Hr.
Plow .....	2 14-in. moldboard plow	1.0	1.28	1.28	90	1.15	1.15	--
Disk .....	6-ft. tandem disk	2.2	.61	.61	100	1.34	1.34	--
Harrow .....	8-ft. spiketooth harrow	1.0	.25	.25	19	.05	.05	--
Plant .....	2-row planter	1.0	1.10	.81	100	1.10	.81	--
Weed .....	5-ft. 2-mule weeder	1.0	1.50	3.00	19	.28	--	.57
Cultivate .....	2-row cultivator	1.0	.96	.96	100	.96	.96	--
Total .....	--	--	--	--	--	4.88	4.31	.57
Harvest:								
Combine .....	7-ft. combine (custom)	1.0	1.65	.82	100	1.65	.82	--
Haul .....	Trailer	1.0	1.76	1.76	100	1.76	1.76	--
Total .....	--	--	--	--	--	3.41	2.58	--
Grand total .....	--	--	--	--	--	8.29	6.89	.57

MEDIUM SINGLE-UNIT FARMS

Preharvest:								
Cut stalks .....	1-row stalk cutter	1.0	1.02	1.02	19	.19	.19	--
Do .....	2-row stalk cutter	1.0	.57	.57	41	.23	.23	--
Plow .....	1 14-in. moldboard plow	1.0	1.06	1.06	64	.68	.68	--
Do .....	2 14-in. moldboard plow	1.0	1.00	1.00	30	.30	.30	--
Disk .....	5-ft. tandem disk	1.2	.91	.91	57	.62	.62	--
Do .....	8-ft. tandem disk	1.1	.65	.65	70	.50	.50	--
Do .....	4-ft. single disk	1.0	1.00	1.00	7	.07	.07	--
Harrow .....	8-ft. spiketooth harrow	1.2	.30	.30	43	.15	.15	--
Bed, plant and fertilize..	2-row bedder-planter	1.0	1.65	.96	26	.43	.25	--
Plant and fertilize.....	1-row planter	1.0	2.00	1.00	19	.38	.19	--
Do .....	2-row planter	1.0	.80	.80	24	.19	.19	--
Plant .....	2-row planter	1.0	1.33	.87	31	.41	.27	--
Cultivate .....	1-row cultivator	2.9	1.18	1.18	64	2.19	2.19	--
Do .....	2-row cultivator	3.2	.63	.63	32	.65	.65	--
Hoe .....	--	1.0	3.33	--	27	.90	--	--
Total .....	--	--	--	--	--	7.89	6.48	--
Harvest:								
Combine .....	6-ft. combine	1.0	1.44	.74	100	1.44	.74	--
Haul .....	Trailer	1.0	1.10	.59	49	.54	.29	--
Do .....	Pickup	1.0	1.51	.73	51	.77	--	--
Total .....	--	--	--	--	--	2.75	1.03	--
Grand total .....	--	--	--	--	--	10.64	7.51	--

MEDIUM-LARGE SINGLE-UNIT FARMS

Preharvest:								
Cut stalks .....	2-row stalk cutter	1.0	.51	.51	45	.23	.23	--
Plow .....	2 14-in. moldboard plow	1.5	1.10	1.10	54	.89	.89	--
Do .....	3 14-in. moldboard plow	1.0	.83	.83	41	.34	.34	--
Disk .....	6-ft. tandem disk	1.3	.60	.60	83	.65	.65	--
Do .....	8-ft. tandem disk	1.4	.57	.57	47	.38	.38	--
Do .....	5-ft. single disk	1.0	.67	.67	6	.04	.04	--
Harrow .....	8-ft. spiketooth harrow	1.0	.26	.26	38	.10	.10	--
Do .....	12-ft. spiketooth harrow	1.0	.30	.30	16	.05	.05	--
Do .....	8-ft. 2-mule spiketooth harrow	1.0	1.00	2.00	7	.07	--	.14
Lay off rows .....	1-row 1-mule shovel	1.0	1.50	1.50	12	.18	--	.18
Plant and fertilize.....	2-row planter	1.0	1.76	.88	13	.23	.11	--

TABLE 27.--Soybeans: Labor, equipment, and power used in producing and harvesting for grain, by type and size of farm, central cotton-tobacco area of North Carolina, 1956--Continued

MEDIUM-LARGE SINGLE-UNIT FARMS--Continued

Operation	Size and kind of equipment	Times over	Time per acre, over once		Percent- age of soybean acreage covered	Time per acre, average for all soybean acreage		
			Man	Power		Man	Tractor	Mule
Preharvest--Continued		No.	Hr.	Hr.	Pct.	Hr.	Hr.	Hr.
Plant .....	2-row planter	1.0	1.56	0.86	87	1.36	0.75	--
Cultivate .....	1-row cultivator	2.7	.95	.95	8	.21	.21	--
Do .....	2-row cultivator	2.9	.67	.67	35	.68	.68	--
Apply poison .....	6-row sprayer	1.0	.27	.27	26	.07	.07	--
Total .....	--	--	--	--	--	5.48	4.50	.32
Harvest:								
Combine .....	7-ft. combine	1.0	1.75	.88	100	1.75	.88	--
Haul .....	Trailer	1.0	.75	.32	52	.39	.17	--
Haul .....	Automobile and trailer	1.0	2.36	1.18	48	1.13	--	--
Total .....	--	--	--	--	--	3.27	1.05	--
Grand total .....	--	--	--	--	--	8.75	5.55	.32

LARGE SINGLE-UNIT FARMS

Preharvest:								
Cut stalks .....	2-row stalk cutter	1.0	.64	.64	6	.04	.04	--
Plow .....	2 14-in. moldboard plow	1.0	1.74	1.74	14	.24	.24	--
Do .....	3 14-in. moldboard plow	1.0	.59	.59	73	.43	.43	--
Disk .....	8-ft. tandem disk	1.0	.46	.46	41	.19	.19	--
Harrow .....	8-ft. spiketooth harrow	1.0	.33	.33	37	.12	.12	--
Fertilize .....	2-row spreader	1.0	2.00	1.00	28	.56	.28	--
Plant .....	2-row planter	1.0	1.69	.92	66	1.12	.61	--
Plant .....	10-ft. drill	1.0	.64	.32	34	.22	.11	--
Weed .....	12-ft. weeder	2.0	.32	.32	34	.22	.22	--
Cultivate .....	1-row cultivator	2.5	.92	.92	24	.55	.55	--
Total .....	--	--	--	--	--	3.69	2.79	--
Harvest:								
Combine .....	10-ft. combine	1.0	1.34	.45	100	1.34	.45	--
Haul .....	Trailer	1.0	1.33	.67	33	.44	.22	--
Do .....	Truck	1.0	2.48	.83	67	1.66	--	--
Total .....	--	--	--	--	--	3.44	.67	--
Grand total .....	--	--	--	--	--	7.13	3.46	--

SMALL MULTIPLE-UNIT FARMS

Preharvest:								
Cut stalks .....	2-row stalk cutter	1.0	.56	.56	47	.26	.26	--
Plow .....	2 14-in. moldboard plow	1.1	.50	.50	51	.28	.28	--
Disk .....	6-ft. tandem disk	2.0	.62	.62	65	.81	.81	--
Plant .....	2-row planter	1.0	1.30	.80	65	.84	.52	--
Plant by hand .....	--	1.0	3.00	--	35	1.05	--	--
Cultivate .....	2-row cultivator	2.7	.33	.33	22	.20	.20	--
Total .....	--	--	--	--	--	3.44	2.07	--
Harvest:								
Combine .....	8-ft. combine	1.0	1.36	.68	100	1.36	.68	--
Haul .....	Trailer	1.0	.82	.29	100	.82	.29	--
Total .....	--	--	--	--	--	2.18	.97	--
Grand total .....	--	--	--	--	--	5.62	3.04	--

TABLE 27.--Soybeans: Labor, equipment, and power used in producing and harvesting for grain, by type and size of farm, central cotton-tobacco area of North Carolina, 1956--Continued

MEDIUM MULTIPLE-UNIT FARMS

Operation	Size and kind of equipemnt	Times over	Time per acre, over once		Percent- age of soybean acreage covered	Time per acre, average for all soybean acreage		
			Man	Power		Man	Tractor	Mule
Preharvest:		No.	Hr.	Hr.	Pct.	Hr.	Hr.	Hr.
Cut stalks .....	1-row stalk cutter	1.0	0.80	0.80	22	0.18	0.18	--
Do .....	2-row stalk cutter	1.0	.38	.38	32	.12	.12	--
Plow .....	2 14-in. moldboard plow	1.0	1.01	1.01	36	.36	.36	--
Do .....	3 14-in. moldboard plow	1.0	.55	.55	64	.35	.35	--
Disk .....	5-ft. tandem disk	1.4	.69	.69	27	.26	.26	--
Do .....	8-ft. tandem disk	1.0	.39	.39	69	.27	.27	--
Do .....	4-ft. single disk	1.7	1.05	1.05	23	.41	.41	--
Harrow .....	8-ft. spiketooth harrow	1.0	.53	.53	46	.24	.24	--
Lay off rows .....	1-row 2-mule cultivator	1.0	1.13	2.27	13	.15	--	.30
Plant .....	1-row planter	1.0	1.13	1.03	30	.34	.31	--
Do .....	2-row planter	1.0	1.58	.85	43	.68	.37	--
Do .....	1-row 1-mule planter	1.0	1.20	.90	27	.32	--	.24
Cultivate .....	1-row cultivator	2.5	.95	.95	41	.97	.97	--
Do .....	1/2-row 1-mule cultivator	2.3	2.00	2.00	24	1.10	--	1.10
Do .....	1-row 2-mule cultivator	2.0	1.25	2.00	30	.75	--	1.20
Total .....	--	--	--	--	--	6.50	3.84	2.84
Harvest:								
Combine .....	6-ft. combine	1.0	1.65	.87	54	.89	.47	--
Do .....	10-ft. combine	1.0	.62	.33	46	.29	.15	--
Haul .....	Trailer	1.0	1.52	.65	43	.65	.28	--
Do .....	Pickup truck	1.0	1.66	.83	28	.46	--	--
Do .....	Truck	1.0	.44	.25	29	.13	--	--
Total .....	--	--	--	--	--	2.42	.90	--
Grand total .....	--	--	--	--	--	8.92	4.74	2.84

MEDIUM-LARGE MULTIPLE-UNIT FARMS

Preharvest:								
Cut stalks .....	1-row stalk cutter	1.0	.67	.67	12	.08	.08	--
Do .....	1-row 2-mule stalk cutter	1.0	1.00	2.00	13	.13	--	.26
Plow .....	2 14-in. moldboard plow	1.0	1.05	1.05	98	1.03	1.03	--
Disk .....	5-ft. tandem disk	1.1	.84	.84	87	.80	.80	--
Do .....	5-ft. single disk	1.0	.90	.90	13	.12	.12	--
Harrow .....	8-ft. spiketooth harrow	1.0	.27	.27	89	.24	.24	--
Plant and fertilize .....	1-row planter	1.0	1.70	.97	29	.49	.28	--
Do .....	2-row planter	1.0	1.00	.50	58	.58	.29	--
Plant .....	8-ft. drill	1.0	.33	.33	13	.04	.04	--
Cultivate .....	1-row cultivator	2.8	.96	.96	73	1.96	1.96	--
Do .....	2-row cultivator	2.2	.73	.64	18	.29	.25	--
Total .....	--	--	--	--	--	5.76	5.09	.26
Harvest:								
Combine .....	6-ft. combine	1.0	1.03	.52	100	1.03	.52	--
Haul .....	Trailer	1.0	.82	.41	96	.79	.39	--
Do .....	Pickup truck	1.0	2.50	1.25	4	.10	--	--
Total .....	--	--	--	--	--	1.92	.91	--
Grand total .....	--	--	--	--	--	7.68	6.00	.26

LARGE MULTIPLE-UNIT FARMS

Preharvest:								
Cut stalks .....	2-row stalk cutter	1.0	.40	.40	69	.28	.28	--
Plow .....	3 14-in. moldboard plow	1.0	.67	.67	100	.67	.67	--
Disk .....	8-ft. tandem disk	2.1	.31	.31	100	.65	.65	--
Harrow .....	12-ft. spiketooth harrow	1.0	.24	.24	100	.24	.24	--
Plant and fertilize .....	2-row planter	1.0	2.00	1.00	17	.34	.17	--

TABLE 27.--Soybeans: Labor, equipment, and power used in producing and harvesting for grain, by type and size of farm, central cotton-tobacco area of North Carolina, 1956--Continued

LARGE MULTIPLE-UNIT FARMS--Continued

Operation	Size and kind of equipment	Times over	Time per acre, over once		Percentage of soybean acreage covered	Time per acre, average for all soybean acreage		
			Man	Power		Man	Tractor	Mile
Preharvest--Continued		<u>No.</u>	<u>Hr.</u>	<u>Hr.</u>	<u>Pct.</u>	<u>Hr.</u>	<u>Hr.</u>	<u>Hr.</u>
Plant .....	2-row planter	1.0	1.50	0.75	83	1.24	0.62	--
Cultivate .....	2-row cultivator	2.0	.50	.50	69	.69	.69	--
Topdress .....	1-row spreader	1.0	1.00	1.00	17	.17	.17	--
Total .....	--	--	--	--	--	4.28	3.49	--
Harvest:								
Combine .....	9-ft. combine	1.0	.93	.46	100	.93	.46	--
Haul .....	Trailer	1.0	.91	.45	31	.28	.14	--
Do .....	Truck	1.0	.58	.29	69	.40	--	--
Total	--	--	--	--	--	1.61	.60	--
Grand total .....	--	--	--	--	--	5.89	4.09	--



TABLE 28.--Oats: Labor, equipment, and power used in producing and harvesting for grain, by type and size of farm, central cotton-tobacco area of North Carolina, 1956

SMALL SINGLE-UNIT FARMS

Operation	Size and kind of equipment	Times over	Time per acre, once over		Percentage of oat acreage covered	Time per acre, average for all oat acreage covered		
			Man	Power		Man	Tractor	Mule
Preharvest:		No.	Hr.	Hr.	Pct.	Hr.	Hr.	Hr.
Cut stalks.....	2-row stalk cutter	1.0	0.50	0.50	83	0.42	0.42	--
Plow.....	2 14-in. moldboard plow	1.0	.60	.60	83	.50	.50	--
Disk.....	8-ft. tandem disk	1.8	.50	.50	100	.90	.90	--
Harrow.....	8-ft. spiketooth harrow	1.0	.40	.40	100	.40	.40	--
Seed.....	6-ft. drill	1.0	.70	.70	100	.70	.70	--
Topdress.....	6-ft. spreader	1.0	.75	.75	100	.75	.75	--
Total.....	--	--	--	--	--	3.67	3.67	--
Harvest:								
Combine.....	6-ft. combine (custom)	1.0	1.80	.60	100	1.80	.60	--
Haul.....	Trailer	1.0	1.50	.50	100	1.50	.50	--
Total.....	--	--	--	--	--	3.30	1.10	--
Grand total.....	--	--	--	--	--	6.97	4.77	--

MEDIUM SINGLE-UNIT FARMS

Preharvest:								
Cut stalks.....	2-row stalk cutter	1.0	.62	.62	48	.30	.30	--
Plow.....	2 14-in. moldboard plow	1.0	2.00	2.00	7	.14	.14	--
Disk.....	6-ft. tandem disk	1.3	.62	.62	81	.65	.65	--
Do.....	4-ft. single disk	2.0	1.00	1.00	19	.38	.38	--
Seed.....	8-ft. drill	1.0	.65	.65	63	.41	.41	--
Seed by hand.....	--	1.0	1.35	--	37	.50	--	--
Topdress by hand.....	--	1.0	.74	--	19	.14	--	--
Topdress.....	8-ft. drill	1.0	.75	.75	63	.47	.47	--
Total.....	--	--	--	--	--	2.99	2.35	--
Harvest:								
Combine.....	8-ft. combine (custom)	1.0	1.37	.83	100	1.37	.83	--
Haul.....	Pickup truck	1.0	1.25	.58	100	1.25	--	--
Total.....	--	--	--	--	--	2.62	.83	--
Grand total.....	--	--	--	--	--	5.61	3.18	--

MEDIUM-LARGE SINGLE-UNIT FARMS

Preharvest:								
Cut stalks.....	1-row stalk cutter	1.0	.60	.60	20	.12	.12	--
Do.....	2-row stalk cutter	1.0	.47	.47	38	.18	.18	--
Plow.....	2 14-in. moldboard plow	1.0	1.00	1.00	20	.20	.20	--
Do.....	3 14-in. moldboard plow	1.0	.57	.57	47	.27	.27	--
Disk.....	5-ft. tandem disk	1.1	1.12	1.12	56	.69	.69	--
Do.....	8-ft. tandem disk	1.4	.47	.47	46	.30	.30	--
Do.....	4-ft. 2-mule single disk	1.0	1.00	2.00	34	.34	--	.68
Harrow.....	8-ft. spiketooth harrow	1.8	.34	.34	49	.30	.30	--
Seed.....	8-ft. drill	1.0	.80	.54	100	.80	.54	--
Topdress.....	8-ft. drill	1.0	.58	.41	75	.44	.31	--
Total.....	--	--	--	--	--	3.64	2.91	.68
Harvest:								
Combine.....	6-ft. combine	1.0	1.30	.65	56	.73	.36	--
Do.....	8-ft. combine	1.0	1.09	.45	44	.48	.20	--
Haul.....	Trailer	1.0	1.15	.53	44	.51	.23	--
Do.....	Pickup truck	1.3	1.00	.83	56	.73	--	--
Total.....	--	--	--	--	--	2.45	.79	--
Grand total.....	--	--	--	--	--	6.09	3.70	.68

TABLE 28.--Oats: Labor, equipment, and power used in producing and harvesting for grain, by type and size of farm, central cotton-tobacco area of North Carolina, 1956--Continued

LARGE SINGLE-UNIT FARMS

Operation	Size and kind of equipment	Times over	Time per acre, once over		Percentage of oat acreage covered	Time per acre, average for all oat acreage covered		
			Man	Power		Man	Tractor	Mule
Preharvest:		No.	Hr.	Hr.	Pct.	Hr.	Hr.	Hr.
Cut stalks.....	1-row stalk cutter	1.0	0.80	0.80	19	0.15	0.15	--
Plow.....	3 14-in. moldboard plow	1.0	.69	.69	100	.69	.69	--
Disk.....	8-ft. tandem disk	1.0	.83	.83	45	.37	.37	--
Harrow.....	16-ft. spiketooth harrow	1.0	.42	.42	45	.19	.19	--
Seed.....	10-ft. drill	1.0	.42	.42	100	.42	.42	--
Topdress.....	do.	1.0	.50	.50	72	.36	.36	--
Total.....	--	--	--	--	--	2.18	2.18	--
Harvest:								
Combine.....	6-ft. combine	1.0	1.27	.63	100	1.27	.63	--
Haul.....	Truck	1.0	1.15	.57	100	1.15	--	--
Total.....	--	--	--	--	--	2.42	.63	--
Grand total.....	--	--	--	--	--	4.60	2.81	--

SMALL MULTIPLE-UNIT FARMS

Preharvest:								
Cut stalks.....	2-row stalk cutter	1.0	.50	.50	27	.14	.14	--
Plow.....	2 14-in. moldboard plow	1.0	1.10	1.10	93	1.02	1.02	--
Disk.....	8-ft. tandem disk	1.3	.58	.58	40	.30	.30	--
Harrow.....	8-ft. spiketooth harrow	1.0	.34	.34	67	.23	.23	--
Seed.....	6-ft. drill	1.0	.54	.54	100	.54	.54	--
Topdress.....	do.	1.0	.67	.67	67	.45	.45	--
Total.....	--	--	--	--	--	2.68	2.68	--
Harvest:								
Combine.....	8-ft. combine (custom)	1.0	1.13	.53	100	1.13	.53	--
Haul.....	Trailer	1.0	1.20	.60	100	1.20	.60	--
Total.....	--	--	--	--	--	2.33	1.13	--
Grand total.....	--	--	--	--	--	5.01	3.81	--

MEDIUM MULTIPLE-UNIT FARMS

Preharvest:								
Cut stalks.....	2-row stalk cutter	1.0	.40	.40	70	.28	.28	--
Plow.....	3 14-in. moldboard plow	1.0	.63	.63	88	.55	.55	--
Disk.....	8-ft. tandem disk	1.3	.50	.50	78	.51	.51	--
Harrow.....	8-ft. 2-mule spiketooth harrow	1.0	.79	1.57	14	.11	--	.22
Do.....	8-ft. spiketooth harrow	1.0	.36	.36	72	.26	.26	--
Seed.....	6-ft. drill	1.0	.78	.74	100	.78	.74	--
Topdress.....	do.	1.8	.30	.30	66	.36	.36	--
Topdress by hand.....	--	1.0	1.48	--	13	.19	--	--
Total.....	--	--	--	--	--	3.04	2.70	.22
Harvest:								
Combine.....	6-ft. combine	1.0	1.40	.70	100	1.40	.70	--
Haul.....	Truck	1.0	.89	.33	78	.69	--	--
Do.....	Trailer	1.0	1.24	.53	22	.27	.12	--
Total.....	--	--	--	--	--	2.36	.82	--
Grand total.....	--	--	--	--	--	5.40	3.52	.22

TABLE 28.--Oats: Labor, equipment, and power used in producing and harvesting for grain, by type and size of farm, central cotton-tobacco area of North Carolina, 1956--Continued

MEDIUM-LARGE MULTIPLE UNIT FARMS

Operation	Size and kind of equipment	Times over	Time per acre, once over		Percent- age of oat acreage covered	Time per acre, average for all oat acreage covered		
			Man	Power		Man	Tractor	Mule
Preharvest:		No.	Hr.	Hr.	Pct.	Hr.	Hr.	Hr.
Cut stalks.....	2-row stalk-cutter	1.0	0.55	0.55	82	0.45	0.45	--
Plow.....	2 14-in. moldboard plow	1.0	1.22	1.22	47	.57	.57	--
Disk.....	6-ft. tandem disk	1.5	.62	.62	100	.93	.93	--
Harrow.....	8-ft. spiketooth harrow	1.0	.42	.42	44	.18	.18	--
Seed.....	8-ft. drill	1.0	.68	.62	100	.68	.62	--
Topdress.....	do.	1.0	.60	.47	100	.60	.47	--
Total.....	--	--	--	--	--	3.41	3.22	--
Harvest:								
Combine.....	6-ft. combine	1.0	1.53	.76	100	1.53	.76	--
Haul.....	Pickup truck	1.0	.78	.57	100	.78	--	--
Total.....	--	--	--	--	--	2.31	.76	--
Grand total.....	--	--	--	--	--	5.72	3.98	--

LARGE MULTIPLE-UNIT FARMS

Preharvest:								
Cut stalks.....	2-row stalk cutter	1.0	.42	.42	38	.16	.16	--
Plow.....	3 14-in. moldboard plow	1.0	.50	.50	38	.19	.19	--
Disk.....	6-ft. tandem disk	1.4	.54	.54	69	.52	.52	--
Do.....	8-ft. tandem disk	2.0	.26	.26	34	.18	.18	--
Harrow.....	12-ft. spiketooth harrow	1.0	.22	.22	38	.08	.08	--
Seed.....	8-ft. drill	1.0	.32	.32	100	.32	.32	--
Topdress.....	8-ft. drill	1.0	.26	.19	72	.19	.14	--
Total.....	--	--	--	--	--	1.64	1.59	--
Harvest:								
Combine.....	6-ft. combine	1.0	1.10	.43	100	1.10	.43	--
Haul.....	Trailer	1.0	1.53	.42	66	1.01	.28	--
Do.....	Truck	1.0	.62	.31	34	.21	--	--
Total.....	--	--	--	--	--	2.32	.71	--
Grand total.....	--	--	--	--	--	3.96	2.30	--

TABLE 29.--Wheat: Labor, equipment, and power used in producing and harvesting, by type and size of farm, central cotton-tobacco area of North Carolina, 1956

SMALL SINGLE-UNIT FARMS

Operation	Size and kind of equipment	Times over	Time per acre, over once		Percent- age of wheat acreage covered	Time per acre, average for all wheat		
			Man	Power		Man	Tractor	Mule
Preharvest:		No.	Hr.	Hr.	Pct.	Hr.	Hr.	Hr.
Cut stalks.....	2-row stalk cutter	1.0	0.55	0.55	73	0.40	0.40	--
Plow.....	2 14-in. moldboard plow	1.0	.96	.96	78	.75	.75	--
Disk.....	8-ft. tandem disk	1.1	.75	.75	91	.75	.75	--
Do.....	6-ft. single disk	1.5	.71	.71	49	.52	.52	--
Harrow.....	8-ft. spiketooth harrow	1.1	.42	.42	39	.18	.18	--
Seed.....	6-ft. drill	1.0	.75	.75	36	.27	.27	--
Seed by hand.....	--	1.0	1.37	--	64	.88	--	--
Topdress.....	8-ft. lime spreader	1.0	1.30	.83	46	.60	.38	--
Topdress by hand.....	--	1.0	2.07	--	43	.89	--	--
Total.....	--	--	--	--	--	5.24	3.25	--
Harvest:								
Combine.....	6-ft. combine (custom)	1.0	1.60	.80	100	1.60	.80	--
Haul.....	Trailer	1.0	1.88	.94	81	1.52	.76	--
Do.....	Pickup truck	1.0	1.84	.92	19	.35	--	--
Total.....	--	--	--	--	--	3.47	1.56	--
Grand total.....	--	--	--	--	--	8.71	4.81	--

MEDIUM SINGLE-UNIT FARMS

Preharvest:								
Plow.....	2 14-in. moldboard plow	1.0	1.16	1.16	60	.70	.70	--
Disk.....	6-ft. tandem disk	1.4	.80	.80	100	1.12	1.12	--
Harrow.....	8-ft. spiketooth harrow	1.0	.50	.50	100	.50	.50	--
Seed.....	8-ft. drill	1.0	.67	.67	62	.42	.42	--
Seed by hand.....	--	1.0	1.05	--	38	.40	--	--
Topdress by hand.....	--	1.0	.74	--	84	.62	--	--
Total.....	--	--	--	--	--	3.76	2.74	--
Harvest:								
Combine.....	6-ft. combine	1.0	1.55	.70	100	1.55	.70	--
Haul.....	1/2-ton truck	1.0	1.38	.56	100	1.38	--	--
Total.....	--	--	--	--	--	2.93	.70	--
Grand total.....	--	--	--	--	--	6.69	3.44	--

MEDIUM-LARGE SINGLE-UNIT FARMS

Preharvest:								
Cut stalks.....	1-row stalk cutter	1.0	.52	.52	27	.14	.14	--
Plow.....	2 14-in. moldboard plow	1.0	1.05	1.05	64	.67	.67	--
Disk.....	8-ft. tandem disk	1.0	.73	.73	42	.31	.31	--
Do.....	5-ft. tandem disk	1.3	1.05	1.05	21	.29	.29	--
Do.....	5-ft. single disk	1.0	1.00	1.00	43	.43	.43	--
Harrow.....	8-ft. spiketooth harrow	1.0	.28	.28	44	.12	.12	--
Seed.....	6-ft. drill	1.0	.50	.43	14	.07	.06	--
Do.....	8-ft. drill	1.0	.87	.67	63	.55	.42	--
Seed by hand.....	--	1.0	.94	--	23	.22	--	--
Topdress.....	8-ft. drill	1.0	.58	.52	63	.37	.33	--
Topdress by hand.....	--	1.0	1.20	--	18	.22	--	--
Total.....	--	--	--	--	--	3.39	2.77	--
Harvest:								
Combine.....	6-ft. combine	1.0	1.50	.77	100	1.50	.77	--
Haul.....	Trailer	1.0	1.22	.61	47	.57	.29	--
Do.....	1/2-ton truck	1.0	.99	.60	16	.16	--	--
Do.....	Pickup truck	1.0	1.28	.62	37	.47	--	--
Total.....	--	--	--	--	--	2.70	1.06	--
Grand total.....	--	--	--	--	--	6.09	3.83	--

TABLE 29.--Wheat: Labor, equipment, and power used in producing and harvesting, by type and size of farm, central cotton-tobacco area of North Carolina, 1956--Continued

LARGE SINGLE-UNIT FARMS

Operation	Size and kind of equipment	Times over	Time per acre, over once		Percent- age of wheat acreage covered	Time per acre, average for all wheat		
			Man	Power		Man	Tractor	Mule
Preharvest:		No.	Hr.	Hr.	Pct.	Hr.	Hr.	Hr.
Cut stalks.....	2-row stalk cutter	1.0	0.60	0.60	49	0.29	0.29	--
Plow.....	2 14-in. moldboard plow	1.0	.95	.95	100	.95	.95	--
Disk.....	6-ft. tandem disk	1.0	.94	.94	41	.39	.39	--
Do.....	8-ft. tandem disk	1.0	.77	.77	51	.39	.39	--
Harrow.....	8-ft. spiketooth harrow	1.4	.33	.33	95	.44	.44	--
Seed.....	8-ft. drill	1.0	.48	.45	100	.48	.45	--
Topdress.....	10-ft. lime spreader	1.0	.43	.43	100	.43	.43	--
Total.....	--	--	--	--	--	3.37	3.34	--
Harvest:								
Combine.....	6-ft. combine	1.0	.94	.47	100	.94	.47	--
Haul.....	Pickup truck	1.0	.82	.41	100	.82	--	--
Total.....	--	--	--	--	--	1.76	.47	--
Grand total.....	--	--	--	--	--	5.13	3.81	--

SMALL MULTIPLE-UNIT FARMS

Preharvest:								
Cut stalks.....	2-row stalk cutter	1.0	.57	.57	41	.23	.23	--
Plow.....	2 14-in. moldboard plow	1.0	1.00	1.00	100	1.00	1.00	--
Disk.....	6-ft. tandem disk	2.1	.78	.78	76	1.24	1.24	--
Harrow.....	8-ft. spiketooth harrow	1.0	.43	.43	47	.20	.20	--
Seed.....	6-ft. drill	1.0	.79	.79	100	.79	.79	--
Topdress.....	6-ft. drill	1.0	1.43	.71	88	1.26	.62	--
Total.....	--	--	--	--	--	4.72	4.08	--
Harvest:								
Combine.....	6-ft. combine (custom)	1.0	1.20	.60	100	1.20	.60	--
Haul.....	Trailer	1.0	1.08	.54	100	1.08	.54	--
Total.....	--	--	--	--	--	2.28	1.14	--
Grand total.....	--	--	--	--	--	7.00	5.22	--

MEDIUM MULTIPLE-UNIT FARMS

Preharvest:								
Cut stalks.....	2-row stalk cutter	1.0	.56	.56	41	.23	.23	--
Plow.....	2 14-in. moldboard plow	1.0	1.10	1.10	78	.86	.86	--
Disk.....	5-ft. tandem disk	1.0	.64	.64	71	.45	.45	--
Harrow.....	8-ft. spiketooth harrow	1.1	.54	.54	53	.31	.31	--
Seed.....	6-ft. drill	1.0	.57	.57	79	.45	.45	--
Seed by hand.....	--	1.0	.82	--	21	.17	.17	--
Topdress by hand.....	--	1.0	1.61	--	41	.66	--	--
Total.....	--	--	--	--	--	3.13	2.47	--
Harvest:								
Combine.....	6-ft. combine	1.0	1.33	.66	31	.41	.20	--
Do.....	10-ft. combine	1.0	.79	.42	69	.55	.29	--
Haul.....	Trailer	1.0	1.46	.73	54	.79	.39	--
Do.....	1/2-ton truck	1.0	.76	.29	46	.35	--	--
Total.....	--	--	--	--	--	2.10	.88	--
Grand total.....	--	--	--	--	--	5.23	3.35	--

TABLE 29.--Wheat: Labor, equipment, and power used in producing and harvesting, by type and size of farm, central cotton-tobacco area of North Carolina, 1956--Continued

MEDIUM-LARGE MULTIPLE-UNIT FARMS

Operation	Size and kind of equipment	Times over	Time per acre, over once		Percent- age of wheat acreage covered	Time per acre, acreage for all wheat		
			Man	Power		Man	Tractor	Mule
Preharvest:		No.	Hr.	Hr.	Pct.	Hr.	Hr.	Hr.
Cut stalks.....	1-row 2-mule stalk cutter	1.0	1.04	2.08	47	0.49	--	0.98
Plow.....	2 14-in. moldboard plow	1.0	.97	.97	96	.93	.93	--
Disk.....	5-ft. tandem disk	1.0	1.00	1.00	100	1.00	1.00	--
Harrow.....	8-ft. spiketooth harrow	1.0	.40	.40	100	.40	.40	--
Seed.....	8-ft. drill	1.0	.33	.33	100	.33	.33	--
Topdress.....	8-ft. drill	1.0	.25	.25	70	.18	.18	--
Topdress by hand.....	--	1.0	.71	--	30	.21	--	--
Total.....	--	--	--	--	--	3.54	2.84	.98
Harvest:								
Combine.....	6-ft. combine	1.0	.96	.48	100	.96	.48	--
Haul.....	Trailer	1.0	.82	.41	100	.82	.41	--
Total.....	--	--	--	--	--	1.78	.89	--
Grand total.....	--	--	--	--	--	5.32	3.73	.98

LARGE MULTIPLE-UNIT FARMS

Preharvest:								
Cut stalks.....	2-row stalk cutter	1.0	.43	.43	81	.35	.35	--
Plow.....	2 14-in. moldboard plow	1.0	1.13	1.13	94	1.06	1.06	--
Disk.....	6-ft. tandem disk	1.3	.56	.56	47	.34	.34	--
Harrow.....	8-ft. spiketooth harrow	1.0	.30	.30	94	.28	.28	--
Seed.....	8-ft. drill	1.0	.37	.37	100	.37	.37	--
Topdress.....	10-ft. lime spreader	1.0	.33	.17	88	.29	.15	--
Total.....	--	--	--	--	--	2.69	2.55	--
Harvest:								
Combine.....	6-ft. combine	1.0	.89	.41	100	.89	.41	--
Haul.....	1/2-ton truck	1.0	.64	.30	100	.64	--	--
Total.....	--	--	--	--	--	1.53	.41	--
Grand total.....	--	--	--	--	--	4.22	2.96	--