

AN ECONOMIC STUDY OF FARMS HAVING WHITE OPERATORS  
IN HANSEMOND COUNTY, VIRGINIA, 1932

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Lewis Banks Wilkins, B.S.

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Approved by:

Head of the Department of Agricultural Economics

Dean of Agriculture

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## CONTENTS

	<u>Page</u>
<b>Purpose and Method of Study</b> .....	1
<b>Description of the Area</b> .....	2
<b>Topography</b> .....	2
<b>Rainfall and Temperature</b> .....	3
<b>Transportation</b> .....	4
<b>Soils</b> .....	4
<b>Economic Conditions</b> .....	4
<b>Description of Farms Studied</b> .....	6
<b>Farm Capital</b> .....	6
<b>Variation in Farm Capital</b> .....	7
<b>Size of Farms</b> .....	7
<b>Crops</b> .....	8
<b>Livestock</b> .....	11
<b>Receipts</b> .....	12
<b>Variation in Farm Receipts</b> .....	13
<b>Expenses</b> .....	13
<b>Average Profits</b> .....	14
<b>Variation in Labor Incomes</b> .....	16
<b>Factors Affecting Income</b> .....	16
<b>Size of Business</b> .....	16
<b>Relation of Total Productive-Man-Work Units to Income</b> .....	18
<b>Relation of Real-Estate Capital to Various Factors</b> .....	20
<b>Labor Efficiency</b> .....	22
<b>Relation of Size of Business to Labor Efficiency</b> .....	23
<b>Combined Effect of Size and Labor Efficiency on Income</b> .....	24

## CONTENTS (Continued)

	<u>Page</u>
Rates of Production -----	27
Combined Effect of Size of Business and Rates of Production on Income -----	28
Combined Effect of Size of Business, Labor Efficiency, and Rates of Production on Income -----	30
Other Factors Affecting Income -----	32
Tenure -----	32
Education -----	34
Age of the Operator -----	35
Summary and Conclusions -----	39
Appendix -----	42

PURPOSE AND METHOD OF STUDY

This study was conducted for the purpose of determining the most profitable methods of farming under conditions existing in Nansemond County and for determining and measuring the importance of the many factors affecting incomes of farmers in this region.

There are several methods of studying the business of farming in any region. Accounts or records of their businesses may be kept by a group of farmers in the region, but generally only the better or more educated farmers will keep such records, so that the results do not present an accurate picture of the region as a whole. Experimentation may be carried on in the region but this method is not only relatively expensive but the results are likely to be somewhat limited in their application. Since every farmer has done considerable experimenting on his own farm the most feasible method of obtaining results of general application is to collect the experiences of a large number of farmers in the region and study these results statistically. This is known as the survey method. ✓

During the summer of 1935, records of the entire farm business of 725 farms in Nansemond County, Virginia were obtained by the survey method for the farm business year 1932. These farms were located west of the Dismal Swamp and south of the Norfolk-Danville branch of the Southern Railroad. Of the 725 records obtained 262 farms having colored operators have been accounted for in another study; 463 were operated by

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✓ A discussion of the validity of the survey method is given in "An Economic Study of Agriculture in Northern Livingston County, New York", S. W. Warren, Cornell Univ. Agr. Exp. Sta. Bul. 539. 1932.

white farmers of which 370 are included in this study. Of the remaining 95 records, 27 were considered inaccurate or not typical of the region, 24 obtained more than 50 per cent of their receipts from sources other than farming, 27 had less than a full year's farm business for one man, 11 were operated by women, and 4 provided less than 90 total productive-man-work units, that is, less than 90 days of directly productive work for the year.

### Description of the Area

#### Topography

Nansemond County is in the southeastern part of Virginia. It is bordered by Norfolk County on the east, North Carolina on the south, Isle of Wight and Southampton counties on the west, and on the north by Isle of Wight County and Hampton Roads. The land is level and swampy sections are numerous throughout the area. The average elevation of the farms included in this study was 60 feet above sea level (Table 1).

Table 1.- Elevation of 370 Farms with White Operators,  
Nansemond County, Virginia, 1932

Magisterial District	Number of farms	Elevation in feet above sea level		
		High	Low	Median
Cypress	116	70	30	50
Whaleyville	117	70	30	60
Holy Neck	137	80	40	70
All farms	370	60	30	60

## Rainfall and Temperature

No climatological station is located in the region for which data are available to represent the rainfall and temperature of the area studied. The annual rainfall at Norfolk, about 20 miles outside the area, has averaged about 45 inches over a period of 62 years and the average temperature has been 59.5 degrees F. (Table 2). The yearly rainfall in 1932 was 25 per cent below normal and the temperature was 4 per cent above the normal.

Table 2.- Average Precipitation in Inches and Temperature in Degrees F. at Norfolk, Virginia, 1932

Month	Normal*		1932		1932 in per cent of normal	
	Rain-fall	Temperature	Rain-fall	Temperature	Rain-fall	Temperature
January	3.11	40.6	4.53	52.8	145	130
February	3.35	42.7	2.15	49.4	64	116
March	3.84	48.2	3.13	46.4	82	96
April	3.80	56.8	1.63	56.3	49	99
May	3.84	66.2	2.49	65.2	65	98
June	4.29	74.4	3.26	75.4	76	101
July	5.60	79.7	3.21	79.2	57	101
August	5.07	77.4	1.60	78.8	32	102
September	3.54	71.6	1.51	72.8	43	102
October	3.16	62.5	3.96	63.4	125	101
November	2.36	51.4	2.34	51.6	99	100
December	3.35	43.1	3.70	47.4	110	110
Annual	44.82	59.5	33.50	61.6	75	104

\* Average for 62 years.

The rainfall during the growing season in 1932 was much below normal, but in October, when most of the peanuts were harvested, rainfall was 25 per cent more than normal. These weather conditions are very unfavorable to crops.

### Transportation

There are five railroads running through Nansemond county, but practically all farm products are moved by truck. Nansemond county has very good roads.

Rail shipments of livestock in 1932 amounted to only 250 hogs for the whole county. <sup>1/</sup> Practically the whole peanut crop was moved by truck or team as 31 farmers hauled their own peanuts and 193 paid someone else to have them hauled. Only 8 of these farmers had any expense for freight or express, including all rail shipments both to and from the farms.

### Soils

At the time this study was made a classification of the soils was not available. The soils are generally sandy and are of marine origin.

### Economic Conditions

Farm prices were exceptionally low during the year covered by the study. Virginia farm prices for the year 1932 averaged 72 per cent of pre-war; for the year 1933 this index was 87; and for the 12 months in which most of the products in this area were marketed, the index was 74 (Table 3).

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<sup>1/</sup> Virginia Farm Statistics, 1933.



Table 3.- Prices Paid to Virginia Producers for Farm Products, 1932 and 1935\*

	Prices						Index Numbers (Corresponding months, 1910-1914 = 100)						
	Pea- nuts per lb.	Cotton per lb.	Corn per bu.	Hogs per cwt.	Sweet pota- toes per bu.	Irish pota- toes per bu.	Pea- nuts	Cot- ton	Corn	Hogs	Sweet pota- toes	Irish pota- toes	All farm products
1932	1.4¢	65¢	42¢	\$4.29	37¢	62¢	39	50	57	59	44	78	72
September	2.0	7.4	43	4.45	40	60	54	60	54	61	51	79	75
October	1.6	6.5	43	4.15	25	60	47	55	57	58	35	81	76
November	1.6	6.1	41	3.80	25	60	50	50	57	52	55	82	74
December	1.0	5.6	40	3.65	35	55	51	46	53	50	46	45	74
1935													
January	1.1	5.7	42	5.45	45	60	52	46	61	47	56	76	75
February	1.1	5.6	43	3.60	49	60	50	44	61	50	57	74	70
March	1.1	6.5	44	3.70	55	65	30	51	62	49	62	78	63
April	1.1	6.5	50	3.75	60	65	29	51	63	49	62	78	63
May	1.6	6.5	61	3.95	65	75	41	67	61	54	64	91	63
June	2.0	8.6	66	4.20	65	85	50	67	66	59	68	104	91
July	2.3	10.6	76	4.35	75	120	59	62	99	61	84	144	121
August	2.5	9.0	78	4.35	110	115	63	71	100	61	124	146	98
Crop year	1.2	6.6	50	4.15	42	106	74	54	63	57	55	104	74
1910-14 average	5.6	12.6	74	7.50	85	79	100	100	100	100	100	100	100

\* Virginia Farm Economics No. 24 pp. 326, 329-30. October, 1935.

With low prices for farm products farmers suffer from the disparity between prices received and the prices they pay, and from insufficient funds with which to operate their businesses efficiently, as well as from other causes.

Since low prices prevailed in 1932, and the weather conditions in this region were unfavorable for the production of crops, the year studied is not entirely typical of what may be expected under normal conditions.

#### DESCRIPTION OF FARMS STUDIED

##### Farm Capital

The average total capital per farm was \$4,651, of which 88 per cent was invested in real estate and 12 per cent in working capital (Table 4).

Table 4.-- Average Capital of 370 Farms with White Operators, Hansemond County, Virginia, 1932

	Value per farm	Per cent of total
Operator's dwelling	\$1,177	26.
Other dwellings	154	3.
Other buildings	<u>422</u>	<u>9.</u>
All buildings	\$1,753	38.
Crop land	\$1,528	33.
Other land*	<u>788</u>	<u>17.</u>
All land	\$2,316	50.
All real estate	\$4,069	88.
Machinery	\$ 183	4.
Livestock	254	5.
Feed and supplies	<u>145</u>	<u>3.</u>
All working capital	\$ 582	12.
Total Capital	\$4,651	100.

\* Includes woodland and swampland.

Operator's dwellings represented about one-fourth of the total farm capital. About one-half of the total capital was invested in land, and the remaining one-fourth included working capital and other buildings. Real estate constituted about seven-eighths of the total capital.

#### Variation in Farm Capital

More than one-half the farms had less than the average amount of capital; about 35 per cent of them had less than \$3,000, and 22 per cent had more than \$6,000 capital (Table 5). The greater part of the farms had a capital investment of from \$3,000 to \$6,000.

Table 5.- Variation in Total Farm Capital on 370 Farms with White Operators, Nansemond County, Virginia, 1932

Capital	Number of farms	Per cent of farms
Less than \$1,500	25	6
\$1,500 - \$2,999	106	29
\$3,000 - \$4,499	103	28
\$4,500 - \$5,999	55	15
\$6,000 - \$7,499	51	8
\$7,500 - \$8,999	19	5
\$9,000 or more	35	9
	370	100

#### Size of Farms

The average size of the farms studied was 116 acres of which about one-third was crop land (Table 6).

Woods not pastured, including swamp land, constituted nearly one-half the total farm acreage.

The largest farm had an area of 1,057 acres with 254 acres of crops, and the smallest farm had 12 acres with 7 acres of crops.

Table 6.- Average Size of 370 Farms with White Operators,  
Nansmond County, Virginia, 1932

	Acres per farm	Per cent of total acres
Crops	57.8	35
Woods not pastured	56.8	49
Woods pastured	15.5*	15
Other permanent pasture	.9	1
Farmstead, etc.	2.4	2
Other land	2.6	2
Total farm acreage	116.0	100

\* Equivalent to 2 acres of open pasture.

### Crops

The farms studied averaged 59.75 acres of crops with 1.91 acres double-cropped (Table 7). The total acres of crops varied from 7 to 555 acres per farm.

Peanuts were the most important crop grown on these farms, accounting for 56 per cent of the total crop area. Part or all of the peanut vines were saved for hay on 290 of these farms. The average acreage of peanut hay saved was 6.78 per farm and the average amount of hay saved was 681 pounds per acre. All but 3 farms produced peanuts for harvest. The average acreage of peanuts per farm was 14.42 acres, and the average yield of unshelled peas was 1,416 pounds per acre. In addition, many peanuts were left in the field. These were utilized with hogs. Only 5 of these farms harvested peanuts entirely with hogs.

Table 7.- Crops Grown on 370 Farms with White Operators, Nansemond County, Virginia, 1932

	Number of farms growing	Acres per farm	Per cent of crop area	Average yield per acre
Peanuts (unshelled) -----	367	14.42	36	1,416 pounds
Cotton (in seed) -----	325	4.70	12	805 pounds
Corn for grain (shelled basis) -----	205	4.57	12	25 bushels
fodder -----	210	( 3.95)*		270 pounds
tops -----	27	( 0.40)*		339 pounds
Corn and soybeans or cowpeas:				
Corn for grain -----	257	9.14	25	(27 bushels
Soybeans or cowpeas hogged)-----				(22 A.U.D. <sup>1/</sup>
Soybeans or cowpeas for grain -----	39	0.14	<sup>2/</sup>	11 bushels
Tobacco -----	4	0.05	<sup>2/</sup>	903 pounds
Sorghum -----	22	0.03	<sup>2/</sup>	94 gallons
Small grains -----	1	<sup>2/</sup>	<sup>2/</sup>	31 bushels
Main crops -----		55.05	85	
Sweet potatoes -----	255	0.79	2	120 bushels
Irish potatoes -----	155	0.36	1	154 bushels
Other truck crops <sup>3/</sup> -----	77	0.27	<sup>1</sup>	
Truck crops -----		1.42	4	
Soybeans or cowpeas for hay -----	91	0.65	2	2,737 pounds
Oats for hay -----	207	0.39	2	2,227 pounds
Peanut hay -----	290	( 6.78)*		691 pounds
Other hay -----	25	0.16	<sup>2/</sup>	1,549 pounds
Hay crops -----		1.68	4	
Small grains pastured -----	132	1.75	4	65 A.U.D. <sup>1/</sup>
Soybeans or cowpeas pastured -----	175	1.44	4	45 A.U.D. <sup>1/</sup>
Other crops pastured -----	34	0.32	<sup>1</sup>	110 A.U.D. <sup>1/</sup>
Crops pastured -----		3.51	9	
Miscellaneous <sup>4/</sup> -----		0.06	<sup>2/</sup>	
Fruits -----	318	0.01	<sup>2/</sup>	
All crops -----		39.75	100	
Acres double-cropped -----		1.91		
Acres used for crops -----		37.64		

\* Acres included in main crops. These crops were considered residues.  
<sup>1/</sup> A.U.D.: Animal-unit days of full forage, that is, for one mature horse, one cow, five sows, or ten shoats.  
<sup>2/</sup> Too small to average.  
<sup>3/</sup> Includes green peas, snap beans, lima beans, roasting ears, tomatoes, cabbage, watermelons, canteloupes, cucumbers, kale, collards, spinach, turnips, rutabaga, strawberries, peppers, miscellaneous garden products sold, and sweet potato slips.  
<sup>4/</sup> Includes newly seeded clover, rye plowed under, and cowpeas plowed under.

Cotton was produced on 325 farms and accounted for 12 per cent of the total crop area. The average acreage of cotton per farm was 4.7 acres and the average yield of seed cotton was 803 pounds per acre. Only 17 of these 325 farms had their cotton ginned, the remainder selling their entire crop as seed cotton.

Corn was planted alone for grain on 205 of these farms and planted with soybeans or cowpeas on 257 farms. The average acreage of corn alone for grain was 4.57 acres per farm and that of corn planted with soybeans or cowpeas was 9.14 acres per farm. The average yield of corn alone was 23 bushels of shelled corn per acre as compared with 27 bushels per acre for corn planted with soybeans or cowpeas.

These farms produced a wide variety of truck crops, most important of which were sweet potatoes grown on 253 farms and Irish potatoes grown on 153 farms. Altogether, 20 different truck crops were produced on these farms. However, the average area of all truck crops was only 1.42 acres per farm and this accounted for only 4 per cent of the total crop area.

Hay and pasture crops accounted for 13 per cent of the total crop area, of which the most important were rye and soybeans or cowpeas hogged. The most important hay crop was oats grown for hay on 207 farms. The highest yielding hay crop was soybeans or cowpeas for hay, of which the average yield was 2,737 pounds per acre as compared with 2,227 pounds per acre for oats hay and 1,549 pounds per acre for other kinds of hay. The average amount of full forage per acre furnished by small grains pastured was 65 animal-unit days; that is, 65 days of full forage for one mature horse or cow or its equivalent in other livestock. Soybeans or cowpeas hogged averaged furnishing 45 animal-unit days of full forage per acre.

### Livestock

Hogs were the only kind of productive livestock grown to any extent in this area (Table 8). Fattening hogs were reported on 94 per cent of the farms. The weighted average number of sows per farm was 5.4 and the average number of hogs raised per farm was 27.4. The total amount of pork produced per farm was 4,305 pounds. Other productive livestock was kept to supply family needs. The average number of cows per farm was 1, worth about \$29. Although 99 per cent of the farms had poultry, only 2 flocks were found consisting of as many as 400 birds.

Table 8.- Average Numbers and Values of Livestock on 370 Farms with White Operators, Hansemond County, Virginia, 1932

Kind	Number of farms having	Average inventories per farm (all farms)			
		January 1, 1932		December 31, 1932	
		Number	Value	Number	Value
Cows	225	1.0	\$ 29	1.0	\$ 28
Heifers 1 yr. or over	33	0.1	1	0.1	2
Heifers under 1 year	46	0.1	1	0.2	2
Calves	152	*	**	*	**
Bulls	11	*	1	*	1
Beef cattle	2	*	1	*	**
All cattle		1.2	\$ 33	1.3	\$ 33
Work horses	172	0.6	\$ 22	0.6	\$ 21
Work mules	316	1.7	109	1.7	104
All work stock		2.3	\$ 131	2.3	\$ 125
Goats	6	0.1	\$ **	0.1	\$ **
Ewes and bucks	7	0.2	1	0.2	1
All sheep and goats		0.3	\$ 1	0.3	\$ 1
Bears	182	0.4	\$ 4	0.5	\$ 4
Sows	357	5.2	27	5.5	27
Fattening hogs	346	5.9	21	6.8	36
Pigs	341	1.4	2	2.6	4
All hogs		8.9	\$ 54	15.2	\$ 71
Poultry	365	48.2	\$ 28	51.5	\$ 29
Bees	6	0.3	\$ 1	0.5	\$ 1
All livestock			\$ 248		\$ 260

\* Not more than 0.05 animal.  
 \*\* Not more than \$0.50 value.

The average investment in all livestock at the beginning was \$248 and at the end of the year \$260. Workstock constituted about one-half the total investment, hogs about one-fifth, and cows, poultry, sheep, and goats made up the remaining three-tenths.

### Receipts

The average total receipts per farm amounted to \$721 (Table 9). Crop sales constituted 65 per cent of the total receipts. Peanuts alone constituted 41 per cent of the total. About one-fifth of the total receipts came from hogs, and only 27 per cent from all livestock.

Table 9.- Average Total Receipts per Farm for 370 Farms with  
White Operators, Nansemond County, Virginia, 1952

Source	Average value	Per cent of total
Peanuts sold _____	\$ 296	41
Cotton sold _____	85	11
Other crop sales _____	92	15
Total crop sales _____	\$ 471	65
Receipts from hogs* _____	\$ 159	19
Livestock increase (except hogs) _____	11	2
Livestock products sold (except pork) _____	46	6
Total livestock _____	\$ 196	27
Other receipts _____	\$ 54	8
Total receipts _____	\$ 721	100

\* Receipts from hogs = Hogs sold alive and dressed plus ending inventory plus pork sold fresh and cured minus beginning inventory and purchases of hogs.



### Variation in Farm Receipts

Nearly three-fourths of the farms had less than \$300 and more than one-fifth of them had less than \$500 total farm receipts (Table 10). Only 4 per cent of the farms had more than \$2,300 receipts for the year.

Table 10.- Variation in Total Farm Receipts on 370 Farms with White Operators, Hansemond County, Virginia, 1932

Receipts	Number of farms	Per cent of farms
Less than \$500	82	22
\$500 - \$799	182	49
\$800 - \$1,299	54	14
\$1,300 - \$1,799	25	7
\$1,800 - \$2,299	14	4
\$2,300 or more	15	4
	370	100

### Expenses

The average expenses per farm amounted to \$720 (Table 11). Labor was the largest item, constituting 35 per cent of the total expenses, not including the value of the operator's time. Expenses on crops constituted 23 per cent and livestock 3 per cent of the total. The average taxes per farm amounted to \$41, or about 0.9 per cent of the total capital. Total expenses per farm varied from \$85 to \$4,051.

Table 11.- Distribution of Farm Expenses on 370 Farms with  
White Operators, Nansmond County, Virginia,  
1932

Item	Average amount per farm	Per cent of total
Hired labor and board _____	\$ 102	14
Unpaid labor and board (except operator) _____	151	21
Labor (except operator) _____	\$ 253	35
Fertilizer and lime _____	\$ 114	16
Seeds and plants _____	16	2
Threshing and hauling peanuts _____	35	5
Peanut bags _____	14	2
Other crop expenses* _____	10	1
Crop expenses _____	\$ 189	26
Feed purchases _____	\$ 17	2
Miscellaneous livestock expenses** _____	4	1
Livestock expenses _____	\$ 21	3
Machinery expenses*** _____	\$ 70	9
Decrease in value of machinery _____	20	3
Machines hired (except peanut picker) _____	1	-
Machinery expenses _____	\$ 91	12
Building expense _____	\$ 71	10
Land expense _____	8	1
Real estate expense _____	\$ 79	11
Taxes _____	\$ 41	6
Miscellaneous _____	12	2
Decrease in feed and supplies _____	34	5
Total farm expenses _____	\$ 720	100

\* Includes twine, ginning cotton, barrels, baskets, wind and hail insurance, molasses making, etc.

\*\* Includes horseshoeing, stock pasturage, veterinary, medicines, tonics, breeding and registration fees, pepper, saltpetre, etc. Livestock purchases and decreases were not included with expenses but were deducted from increases in calculating receipts.

\*\*\* Includes truck, tractor, other machinery, and farm share of auto expenses.

#### Average Profits

The difference between the receipts and expenses is what the operator receives for his year's work and for the use of the capital invested. This

is called the farm income. The average farm income for the farms studied was \$1 (Table 12).

Table 12.- Average Profits of 570 Farms with White Operators, Nansmond County, Virginia, 1932

	Average per farm
Receipts _____	\$ 721
Expenses _____	720
Farm income _____	\$ 1
Interest on average capital* _____	\$ 256
Labor income _____	\$ -257
Value of farm products used by the household _____	\$ 361
Labor earnings _____	\$ 124
Value of operator's time** _____	\$ 285
Return on capital _____	\$ -284
Per cent return on capital _____	-6.1%

\* Interest on working capital figured at 6 per cent and real estate capital figured at 5 per cent.

\*\* Estimated by the operator at what his labor and management would have cost if hired.

The average labor income for these farms was \$-257. This was what the operator received for his year's work after interest on the total capital invested was deducted. In addition to this, the farmer received the use of the house and products furnished by the farm. When the value of these items was added to the labor income, labor earnings amounted to \$124 per farm.

If the farmer owned his property and had no interest to pay on mortgages, the interest charge of \$256 would represent an additional receipt.

### Variation in Labor Incomes

Only 19 per cent of all the farms made as much as \$6 labor income, and only 2 per cent made more than \$405 (Table 15). Only 75 farms made labor incomes greater than zero.

Table 15.-- Variation in Labor Income on 370 Farms with White Operators, Hansemond County, Virginia, 1932

Labor income	Number of farms	Per cent of farms
Less than \$-1,195	8	2
\$-1,194 to \$-995	7	2
\$-994 to \$-795	9	2
\$-794 to \$-595	21	6
\$-594 to \$-395	55	14
\$-394 to \$-195	92	25
\$-194 to \$5	109	30
\$6 to \$205	42	11
\$206 to \$405	20	6
\$406 or more	9	2
	370	100

### FACTORS AFFECTING INCOME

#### Size of Business

Other studies have generally shown that under normal conditions an increase in the size of business results in an increase in labor income. Owing to unfavorable weather conditions and low prices for farm products all measures of size except total productive animal units show that the larger businesses lost more money (Table 14). Real-estate capital and acres of peanuts showed a consistent inverse relation to labor income.

This table points out distinctly that a non-paying business results in a larger loss as its size is increased.

Table 14.- Relation of Six Measures of Size of Business to Labor Income of 370 Farms with White Operators, Hansemond County, Virginia, 1932

Group	Number of farms	Labor Income					
		Productive men work units	Acres of crops	Man equivalent	Acres of peanuts	Real estate capital	Animal units except work animals
Smallest 20 per cent of farms according to each size measure	74	\$-175	\$-199	\$- 79	\$-220	\$-129	\$-195
Next 20 per cent	74	-224	-187	-128	-158	-150	-508
Next 20 per cent	74	-196	-185	-272	-195	-212	-228
Next 20 per cent	74	-246	-248	-267	-280	-507	-261
Largest 20 per cent of farms according to each size measure	74	-546	-568	-442	-545	-589	-195

As the size of business increased, as indicated by productive-man-work units, other measures of size showed a similar increase (Table 15). Total productive-man-work units is closely associated with the number of men employed, but the effect on income of adding more men to the labor force depends upon the amount of productive work accomplished by each man. Acres of crops measures the size of crop business while animal units, except work animals, measures the size of the livestock enterprise. Real-estate capital was not considered a very desirable measure of size because it includes the investment in non-productive land and unnecessary buildings. The best measure of size is total productive-man-work units, or total days of directly productive work provided by all enterprises combined.

Table 15.- Relation of Productive-Man-Work Units to Other Measures of Size of Business on 570 Farms with White Operators, Kanawood County, Virginia, 1932

Productive-man-work units	Number of farms	Average productive man work units	Size of business in per cent of average as measured by-				
			Pro-ductive man work units	Acres of crops	Animal units except work animals	Man equi-valent	Real-estate capital
Less than 195	76	155	42	45	55	65	52
195 - 294	110	246	69	69	71	90	75
295 - 394	77	546	96	98	100	95	87
395 - 494	59	453	120	122	155	110	121
495 or more	68	752	208	202	204	170	200

#### Relation of Total Productive-Man-Work Units to Income

In general, the relatively small farms in this area in 1932 lost less than the relatively large farms, since the average labor income was minus. The farms with less than 195 total productive-man-work units made labor incomes averaging \$-175 as compared with \$-354 for the farms having 495 or more total productive-man-work units (Table 16). This inverse relationship of size of business to labor income generally held true, regardless of the fact that the relatively large farms obtained higher rates of production and accomplished more directly productive work per man than did the relatively small farms.

However, the combined amount returned by these farms to pay interest on the capital invested in the farm business and to pay the operator for his time increased considerably as the size of business increased. Farms having less than 195 total productive-man-work units lacked \$54 of having

Table 16.- Relation of Total Productive-Man-Work Units to Various Income Factors on 370 Farms with White Operators, Nansmond County, Virginia, 1932

Productive-man-work units	Number of farms	Average productive man work units	Production index	Work units per man	Labor income	Return to capital and operator's labor	Returns per worker	Per cent return on capital
Less than 195	76	153	92	122	\$-175	\$ -54	\$ 76	-7.61
195 - 294	110	248	100	155	-217	-44	148	-8.77
295 - 394	77	346	102	181	-210	- 3	207	-6.92
395 - 494	39	433	105	196	-269	22	198	-5.01
495 or more	68	752	109	218	-354	125	257	-2.87

anything left to pay for the use of capital and operator's time, whereas farms with 495 or more total productive-man-work units averaged \$125 return to capital and operator's labor. This represents a difference of \$179 per farm between the 68 largest and the 76 smallest businesses. All of the return to capital and operator's labor was available to the farm operator who owned his own farm free of debt. Operators of the larger businesses generally had more money available to pay interest on indebtedness than did the operators of the smaller businesses.

The failure of labor income to increase with size of business and return to capital and operator's labor indicates that in general these farms were too highly capitalized for the poor conditions prevailing in 1932. As a safe basis for normal value the returns over a period of years would have to be considered rather than the results of only one year.

Many of these farm operators are probably more interested in returns per worker than in labor income, since 69 per cent of the work done on

these farms was performed by the operator and other members of his family who did not receive wages. The workers on the relatively large farms were better paid than those on the relatively small farms in spite of the poor economic conditions prevailing in 1932. The average return per worker on farms with 495 or more total productive-man-work units was more than three times that on the farms having less than 195 total productive-man-work units.

The per cent return on capital invested in the farm business, after allowing pay for the operator's time at his estimate of the cost to hire what he did on the farm, was much less for the relatively small than for the relatively large businesses. The significance of this measure of return, however, depends upon the relative amounts of capital invested, and these were less for the smaller than for the larger businesses.

#### Relation of Real-Estate Capital to Various Factors

As the total value of all farm real-estate increased a consistent increase occurred in acres of crops and value of bare land per acre (Table 17). Increases in real estate capital, like other measures of size, were accompanied by increases in labor efficiency and rates of production and by a decrease in labor income. Increases in real-estate capital resulted both from larger businesses and larger real-estate values per acre. Higher crop yields were obtained on farms having land of relatively higher value per acre. The relationship of total real-estate value to farm income depends upon the comparability of land values and their correlation with productivity, as well as upon the relative proportions of productive and unproductive real estate.



Table 17.- Relation of Real-Estate Capital to Various Factors on 570 Farms with White Operators, Hansemond County, Virginia, 1952

Real-estate capital	Number of farms	Average real estate capital	Average per farm						
			Value of bare land per acre	Acres of crops	Crop index	Production index	Working capital	Work units per man	Labor income
Less than \$2,020	58	\$1,278	\$ 23	24	91	90	268	146	\$-115
\$2,020 - \$2,949	93	2,269	51	27	99	96	378	164	-153
\$2,950 - \$3,949	74	3,227	33	34	103	102	471	161	-216
\$3,950 - \$4,949	42	4,160	38	42	106	103	624	170	-504
\$4,950 - \$5,949	37	5,176	44	49	108	106	888	205	-283
\$5,950 or more	66	9,247	52	72	110	108	1,072	216	-414

### Labor Efficiency

Labor income was directly affected by labor efficiency on these farms. As labor efficiency increased from less than 130 work units per man to 220 or more work units per man, the average labor income increased from \$-421 to \$-165 (Table 18).

However, the increase in labor income associated with an increase in labor efficiency was not entirely the result of better use of labor, but partly the result of a larger size of business and higher rates of production which were associated with the accomplishment of more directly productive work per man.

Table 18.- Relation of Productive-Man-Work Units Per Man to Various Factors on 570 Farms with White Operators, Nansemond County, Virginia, 1952

Man-work units per man	Number of farms	Average work units per man	Average per farm					Man equivalent	Labor income
			Acres of crops	Productive man work units	Production index	Acres of crops per man	Man equivalent		
Less than 130	75	102	24.3	212	95	11.6	2.1	\$-421	
130 - 159	76	147	31.2	277	101	16.6	1.9	-225	
160 - 189	76	174	38.8	347	102	19.5	2.0	-212	
190 - 219	59	202	44.0	395	105	22.4	2.0	-165	
220 or more	84	271	59.0	555	105	28.8	2.0	-165	

The average total productive-man-work units on farms having less than 130 work units per man was only 212 as compared with 555 for the farms having 220 or more total productive-man-work units, although the average number of men on these groups of farms was practically the same. This suggests that one method of obtaining efficiency in the use of labor is to provide more directly productive work for the existing labor force to perform throughout the year.

Relation of Size of Business to Labor Efficiency

As the size of business was increased, labor efficiency also showed a consistent increase, regardless of the measure of labor efficiency used. Farms having less than 195 total productive-man-work units averaged only 14 acres of crops per man while farms having more than 495 total productive-man-work units averaged 25 acres of crops per man (Table 19).

Table 19.- Relation of Total Productive-Man-Work Units to Labor Efficiency and Other Factors on 370 Farms with White Operators, Nansemond County, Virginia, 1932

Total productive-man-work units	Number of farms	Average total man work units	Acres of crops per man	Animal units except work animals per man	Average crop index	Pounds of pork produced per hog animal unit	Average work units per man	Index of total output per man*
Less than 195	76	155	14	1.5	93	1,065	122	61
195 - 294	110	246	17	2.4	102	1,129	155	85
295 - 394	77	346	20	2.9	104	1,191	181	101
395 - 494	59	433	22	3.5	106	1,272	196	115
495 or more	68	752	25	5.2	111	1,294	218	130

\* Work units per man adjusted by production index and expressed as a percentage of average.

Animal units except work animals per man, although productive livestock was of minor importance on these farms, showed a like increase in size. Although the amount of work accomplished per man increased with increased size, the quality of the work was not reduced. Crop index increased from 93 on the farms having less than 195 total productive-man-work units to 111 on farms with more than 495 total work units. Pounds of pork produced per hog animal unit increased from 1,065

pounds on the relatively small farms to 1,294 pounds per hog animal unit on the relatively large farms.

The number of work units per man multiplied by the production index provides a measure of the physical value of output per man. With a combination of increased work units per man and increased rates of production, total output per man increased from 39 per cent below average on the farms having less than 195 total productive-man-work units to 30 per cent above the average on the farms having 495 or more total productive-man-work units.

Combined Effect of Size and Labor  
Efficiency on Income

That size of business was an important factor affecting labor efficiency is further evidenced by the fact that only 11 per cent of the farms with less than 246 total productive-man-work units accomplished 192 or more work units per man as compared with 64 per cent of those with 395 or more total productive-man-work units (Table 20).

Farms having less than 246 total productive-man-work units showed a considerable increase in labor income when labor efficiency was increased from less than 161 to 161-191 work units per man, but further increase in labor efficiency with no change in size showed very little increase in labor income. This was not true for either group of farms having 246 or more total work units. As labor efficiency increased within a given size range labor income showed a consistent increase.

Table 20.- Relation of Work Units Per Man and Total Productive-Man-Work Units to Various Factors on 370 Farms with White Operators, Hennessy County, Virginia, 1932

Total productive-man-work units	Number of farms	Average work units per man	Average per farm					Return to capital and operator's labor
			Total productive-man-work units	Man equivalent	Acres of crops	Production index	Labor income	
Farms with less than 161 work units per man:								
Less than 246	91	114	109	1.5	19	95	\$-233	\$-103
246 - 394	48	134	501	2.2	34	101	-356	-167
395 or more	15	130	543	4.2	61	100	-633	-263
Farms with 161-191 work units per man:								
Less than 246	25	173	202	1.1	23	96	\$- 71	\$ 83
246 - 394	30	174	522	1.9	36	103	-205	- 9
395 or more	23	177	551	3.1	61	103	-352	- 31
Farms with 192 or more work units per man:								
Less than 246	15	203	221	1.1	24	95	\$- 69	\$ 44
246 - 394	54	233	523	1.4	36	100	-112	104
395 or more	69	254	634	2.7	73	103	-234	205

For farms with about the same labor efficiency, more men were required to operate the larger businesses, but the man equivalent declined consistently as work units per man increased in each size group. In each size group, increased labor efficiency resulted from operating larger businesses with a smaller labor force, and not from lower rates of production, for while average total productive-man-work units increased along with work units per man in each size group shown in table 20, the production index did not decline. In fact, for the largest size group, rates of production increased with an increase in labor efficiency.

Although in each group of farms according to work units per man the average labor income decreased as the size of business increased, this was not true of the combined amount of money left to pay interest on the capital invested in the business and to pay the operator for his time. With relatively low labor efficiency, the return to capital and operator's labor decreased rapidly as size of business increased, but with relatively high labor efficiency the return to capital and operator's labor increased with size of business.

It was much more important to use labor efficiently on the large than on the small businesses. For businesses of less than 246 total productive-man-work units the difference in return to capital and operator's labor between the farms having less than 161 work units per man and those with 192 or more work units per man was only \$147 as compared with a corresponding difference of \$473 per farm for businesses of 595 or more total productive-man-work units. Increase in return to capital and operator's labor associated with a given increase in work units per man was more than three times as

great for the relatively large as for the relatively small farms. If having a large business failed to result in the one important effect normally expected with large businesses, namely, efficient use of labor, the farm lost heavily, but when high labor efficiency was magnified by a large business the result was a considerable increase in income on these Nansemond county farms in 1932.

### Rates of Production

Production index is the combined rates of production of crops and productive livestock weighted by productive-man-work units with the average rates for the region as the base. Of the 370 farms, 24 had a production index of less than 70 (Table 21). The average production index for these farms was 62, the average crop index was 62, the average yield of peanuts per acre was 925 pounds, and the average pounds of pork produced per hog animal unit was 799 pounds. The 32 farms having a production index 130 or more averaged 138. Their average crop index was 145, the average yield of peanuts was 1,869 pounds per acre, and the average pounds of pork produced ~~was~~ per hog animal unit, <sup>was</sup> 1,457 pounds.

Table 21.- Relation of Production Index to Various Rates of Production on 370 Farms with White Operators, Nansemond County, Virginia, 1932

Production index	Number of farms	Average production index	Average per farm		
			Crop index	Yield of peanuts	Pounds of pork produced per hog animal unit
Less than 70	24	62	62	925	799
70 - 89	90	81	79	1,134	1,062
90 - 109	136	101	105	1,455	1,167
110 - 129	38	118	121	1,613	1,326
130 or more	32	138	145	1,869	1,457

Farms having a production index of less than 70 made \$-545 labor income as compared with \$-22 for farms with production index of 150 or more (Table 22). Returns to capital and operator's labor showed an even greater increase when production index was increased.

Total productive-man-work units, work units per man, and acres of crops showed some tendency to increase with production index, although not consistently. Although the value of bare land per acre increased somewhat with increased crop yields and livestock, this increase was not consistent. Evidently, not all of the increased rates of production were reflected in land values. Hence, the higher producing land represented the better investment in real estate.

Table 22.- Relation of Production Index to Various Factors on 370 Farms with White Operators, Nansemond County, Virginia, 1932

Production index	Number of farms	Average per farm						
		Production index	Total productive man work units	Man work units per man	Acres of crops	Value of bare land per acre	Labor income	Return to capital and operator's labor
Less than 70	24	62	250	160	50	\$57	\$-545	\$-181
70 - 89	90	81	287	168	55	55	-272	-105
90 - 109	156	101	387	178	42	57	-285	- 18
110 - 129	88	118	419	198	46	56	-180	94
150 or more	52	158	577	191	41	41	- 22	250

Combined Effect of Size of Business and Rates of Production on Income

When the farms were grouped according to size of business, <sup>increased</sup> rates of production were accompanied by increased incomes in all three size



groups (Table 23). The return to capital and operator's labor for farms with more than 395 total productive-man-work units and with a production index of 110 or more was \$266 as compared with \$26 for farms having less than 246 total productive-man-work units and similar rates of production.

Table 23.- Combined Effect of Total Productive-Man-Work Units and Production Index on Various Measures of Returns on 570 Farms with White Operators, Nansemond County, Virginia, 1952

Production index	Number of farms	Return to capital and operator's labor	Labor income	Labor earnings
<b>Farms with less than 246 total productive-man-work units:</b>				
Less than 95	64	\$- 78	\$-202	\$ 7
95 - 109	34	- 70	-194	47
110 or more	55	26	-135	156
<b>Farms with 246-394 productive-man-work units:</b>				
Less than 95	48	\$-116	\$-293	\$ 12
95 - 109	42	- 14	-229	114
110 or more	42	82	-134	268
<b>Farms with 395 or more productive-man-work units:</b>				
Less than 95	25	\$-224	\$-550	\$-104
95 - 109	39	65	-396	126
110 or more	45	266	-144	433

Size of business had an important bearing on the effect of rates of production on farm income. For farms with less than 246 total productive-man-work units, the difference between the average return to

capital and operator's labor for those with a production index of less than 95 and those with a production index of 110 or more was \$104, as compared with a corresponding difference of \$490 for farms with 595 or more total productive-man-work units.

The relatively large farms with low rates of production lost more heavily than any other group and the relatively large farms with high rates of production made more than any other group. Although the small farms with high rates of production paid better than those with low rates of production, it is not possible to either lose or make a very large amount with a very small business, regardless of the rates of production.

Farmers having relatively large businesses and high rates of production earned more for their year's work than those having low rates of production. Labor earnings includes a house to live in and farm products furnished the home by the farm. The relatively large farms with low rates of production made the lowest labor earnings.

#### Combined Effect of Size of Business, Labor Efficiency, and Rates of Production on Income

The 92 farms that were below average in three factors, namely, total productive-man-work units, work units per man, and production index, averaged \$-269 labor income as compared with \$-133 labor income for the 65 farms average or above in all three factors (Table 24).

With small size of business and low labor efficiency, to increase rates of production, increased the labor income. With small businesses and less than average rates of production, increased labor efficiency increased the labor income. Increased labor efficiency was more important than increased rates of production for small businesses.

Table 24.- Combined Effect of Three Factors\* on Income of 370 Farms with White Operators, Hansemond County, Virginia, 1932

Total man-work units per farm	Work units per man	Pro-duction index	Number of farms	Average per farm			Return to capital and operator's labor	
				Total work units	Work units per man	Pro-duction index		
		Below average	92	206	<sup>131</sup> 151	<sup>269</sup> -269	\$-151	
	Below average							
Below average		Average or above	71	235	136	115	-212	- 57
		Below average	35	274	220	85	-159	18
	Average or above							
		Average or above	36	257	211	118	- 68	121
		Below average	14	495	149	85	-655	-551
	Below average							
Average or above		Average or above	24	517	155	116	-439	- 76
		Below average	<sup>33</sup> 53	563	248	86	<sup>385</sup> -365	29
	Average or above							
		Average or above	65	629	249	118	-153	270

\* The averages of the three factors used were: Total productive-man-work units, 361; work units per man, 181; and production index, by definition, 100.

Small farms with labor efficiency and rates of production average or above lost less money than any group. The increased size with unfavorable conditions caused the large businesses to lose more money.

Under normal conditions, the larger businesses would have made more money, but in 1932 with poor conditions, the larger businesses lost more money.

With large businesses, as well as with small businesses, labor efficiency was a more important factor affecting income than rates of production. The large businesses having poor labor efficiency and low rates of production lost more money than any other group. This was also true when success was measured by the total return to capital and operator's labor. The average return to capital and operator's labor for the relatively large businesses with good labor efficiency and high rates of production was greater than for any other group; with an efficient business the farmer is better off for having more of it. This was true even under the unfavorable weather and economic conditions in this area in 1932.

#### Other Factors Affecting Income

##### Tenure

According to acres of crops, hog animal units, and total productive-man-work units the part-owners ranked largest in size of business of any tenure group (Table 25). Because of the inverse effect of size of business in this area in 1932, the part-owners

Table 25.- Relation of Tenure to Various Factors on 370 Farms with White Operators, Hansemond County, Virginia, 1952

Tenure	Number of farms	Acres of crops	Hog animal units	Total productive-man-work units	Production index	Crop index	Work units per man	Age of operator	Labor income
Owners	214	39	5.6	553	102	104	175	51	\$-220
Part owners*	57	51	4.0	462	102	105	201	47	-555
Share tenants	61	56	2.5	512	96	97	179	45	-211
Cash tenants	35	35	2.9	294	98	99	180	45	-198
Mixed tenants**	5	38	5.0	352	95	92	202	35	-232

\* Operators owning part and renting part of the land which they operated. Most of these men owned their farms and rented some additional crop land.

\*\* Tenants renting some land for cash and giving a share of the crop as rent for the remainder.

Table 26.- Relation of Type of Labor to Various Factors on 370 Farms with White Operators, Hansemond County, Virginia, 1952

Labor	Number of farms	Acres of crops	Production index	Total productive-man-work units	Man equivalent	Age of operator	Man-work units per man	Labor income
Cropper	50	67	106	621	3.3	54	190	\$-295
Except cropper	320	35	100	520	1.6	47	178	-229

made lower labor incomes than other tenure groups, in spite of the fact that their rates of production were as high as those of the owners and higher than those of the tenant farmers, and in spite of better than average efficiency in the use of labor. The higher labor efficiency was a direct result of having a relatively large business. With relatively high rates of production and efficiency in the use of labor, increasing the size of business generally adds to the income. One method of obtaining control over a larger amount of capital is to rent additional land.

The operator's personal interest in the business was probably increased by ownership, since those who owned a part or all of their farms obtained higher than average rates of production.

Most of the owners were older men, whereas the tenants included men who were just starting to farm and had not as yet amassed sufficient capital to own their businesses.

Of the 370 farms studied 50 employed cropper labor, that is, they paid for their hired labor with crops rather than cash. Farmers employing cropper labor had much larger businesses than did those not employing cropper labor (Table 26). Their rates of production and labor efficiency were greater, and their labor income was \$-295 as compared with \$-229 for farms not employing cropper labor.

#### Education

Only 6 of the 370 farms studied had operators who entered college. Of the 49 operators with no schooling, 42 were illiterate, that is, they could neither read nor write. Of the remaining 315 operators 49 entered high school and 266 concluded their schooling in the grades.

The farmers who went to high school or college made labor incomes averaging \$-157 while those having no schooling averaged \$-558 (Table 27). Labor income increased directly as the operator's education increased.

The age of the operator was inversely proportional to the amount of schooling, which indicates that the level of education has been rising. As education increased, acres of crops, total man-work units, work units per man, and rates of production increased. The more educated farmers were more successful than their neighbors, not because of the diplomas or certificates which they had received, but because in the operation of their businesses they were doing the things that resulted in farm financial success.

#### Age of the Operator

The average age of the operators on these farms was 48 years, the youngest was 16 years old and the 3 oldest were 83. Twenty-one farm operators were 70 or more years of age.

Farms with less than 246 total productive-man-work units and with operators less than 48 years old made \$-146 average labor income as compared with \$-224 for farms with operators 48 years old or older (Table 28). The younger operators had higher labor efficiency, larger businesses, and higher rates of production than did the older operators.

In all three size groups the older operators lost more heavily than did the younger operators because rates of production and labor efficiency, as well as size of business, were higher on farms operated

Table 27.- Relation of Education to Various Factors on 370 Farms  
with White Operators, Hanover County, Virginia,  
1932

Education	Number of farms	Age of operator	Acres of crops	Total man-work units	Man-work units per man	Crop index	Production index	Labor income
No schooling	49	60	55	504	160	95	92	\$-558
1 - 3 grades	68	56	53	503	152	98	97	-261
4 - 6 grades	119	47	56	527	173	102	101	-240
7 - 8 grades	81	42	46	416	204	107	105	-196
High school and college	55	39	51	475	210	110	103	-157



Table 28.- Relation of Size of Business and Operator's Age to Various Factors on 570 Farms with White Operators, Hansemond County, Virginia, 1952

Operator's age	Number of farms	Total productive-man-work units	Age of operator	Acres of crops	Acres of crops per man	Work units Per man	Value of operator's time	Production index	Labor income
<b>Farms with less than 245 productive-man-work units:</b>									
Less than 48	69	186	56	21	17	148	\$ 237	97	\$-146
48 or more	62	177	62	20	13	118	218	94	-224
<b>Farms with 245-395 productive-man-work units:</b>									
Less than 48	69	317	56	55	20	187	\$ 235	104	\$-202
48 or more	63	315	59	56	19	163	272	98	-244
<b>Farms with 395 or more productive-man-work units:</b>									
Less than 48	45	670	58	72	25	227	\$ 418	111	\$-294
48 or more	62	612	57	66	22	202	329	105	-345

by younger men. Although in each size group the younger men operated slightly larger businesses, they obtained considerably higher labor efficiency than did the older men. On farms with about the same size of business, labor efficiency was somewhat directly proportional to the youth of the operator.

## SUMMARY AND CONCLUSIONS

The farmers in Nansenond county were severely handicapped by weather as well as economic conditions in 1932.

The average capital of these farms was \$4,651 of which 88 per cent was invested in real estate. Of the total, 38 per cent was invested in buildings, 50 per cent in land, and 12 per cent in working capital.

The average size of these farms was 116 acres, of which about one-third was in crops, one-half in woods not pastured, and the remaining one-sixth was in farmstead, pasture, etc. The largest farm contained 1,057 acres with 254 acres of crops, and the smallest contained 12 acres of land with 7 acres of crops.

The farms averaged 39.75 acres of crops of which 36 per cent was in peanuts, 35 per cent in corn, 12 per cent in cotton, 4 per cent in truck crops, 4 per cent in hay, and 9 per cent in pasture crops.

The average receipts per farm amounted to \$721. Of this total peanuts made up 41 per cent, cotton 11 per cent, other crop sales 13 per cent, hogs 19 per cent, and other livestock 8 per cent, while all other receipts made up the remaining 8 per cent.

The average total expenses per farm amounted to \$720. Labor, the largest item of expense, was 35 per cent of the total.

The average labor income was \$-257 per farm, the average labor earnings \$124 per farm, and the average return on capital was -6.1 per cent.

The most important factors affecting variation in incomes of individual farms were labor efficiency, rates of production, and size of business.

Farms accomplishing less than 150 days of directly productive work per man made labor incomes averaging \$-421 as compared with \$-165 for those accomplishing 220 or more days of directly productive work per man. In general the larger farms had greater labor efficiency than did the smaller businesses. On farms of about the same size of business the younger operators used labor more efficiently than did the older operators. On farms with about the same size of business and about the same number of days of directly productive work, those with relatively high rates of production obtained greater output per worker than did those with lower rates of production.

Of farms having about the same size of business and labor efficiency, those obtaining relatively high rates of production made greater incomes than those whose rates of production were lower.

Size of business had an important bearing on the effect of both labor efficiency and rates of production on farm incomes. Large businesses with low rates of production and low labor efficiency lost heavily, whereas the large businesses with high rates of production and efficient use of labor made greater farm incomes than their neighbors, even in a poor year. It was not possible to either lose or make a very large amount with a small business. One method which some farmers in this area were using to increase the size of their business was to rent crop land to operate in addition to their own. Another method was to increase their livestock production, particularly hogs.

The more educated farmers in the area were generally more successful than those with less schooling because they had larger businesses and operated them more efficiently. That the level of education has been rising is indicated by the fact that the more educated operators were generally younger than were those with less schooling.

Even in a year of relatively low and declining prices for farm products, and in a year of unfavorable weather conditions, 73 of the 570 farms studied in Nansemond county were able to obtain some income to pay the operator for his year's work after all business expenses and interest on all capital invested in the farm business had been deducted from the farm receipts. The most successful operators were those who had relatively large businesses operated with relatively high labor efficiency, and who obtained relatively high rates of production of both crops and productive livestock.

**APPENDIX**

Table 29.- Crops Grown and Sold on 370 Farms with White Operators,  
Nansemond County, Virginia, 1932

Crop	Number of farms	Acres	Total Crop	Unit	Sold or to be sold	
					Amount	Value
Corn for grain _____	199	1,671.5	56,524	Bu.	5,845	\$ 2,425
Corn silage _____	1	15.	135	T.		
Corn hogged _____	1	5.	30	Bu.		
				(27 A.U.D.)		
Corn fed green _____	1	1.	55	Bu.		
Corn fodder _____	210	(1,455.05)	591,678	Lbs.	20,549	172
Corn tops _____	27	(148.5)	50,295	Lbs.	8,640	84
Corn fodder (green) _____	1	( 8. )	12,000	Lbs.		
Irish potatoes _____	153	153.55	20,541	Bu.	17,522	11,153
Sweet potatoes _____	251	286.35	34,672	Bu.	16,667	7,641
Sweet potatoes hogged _____	6	4.5	569	Bu.		
				(273 A.U.D.)		
Tobacco _____	4	19.	17,159	Lbs.	17,158	1,876
Peanuts _____	367	5,308.1	7,521,474	Lbs.	7,174,011	109,494
Peanuts hogged _____	5	23.	32,728	Lbs.		
				(2,299 A.U.D.)		
Cotton (in seed) _____	512	1,627.3	1,286,158	Lbs.	1,286,026	26,999
Cotton ginned _____	17	109.7(11nt)	43,073	Lbs.	43,073	3,310
		(seed)	64,845	Lbs.	61,615	450
Corn and soybeans:						
Corn - grain _____			84,749	Bu.	8,161	3,626
Beans - hogged _____	242	3,110.7	65,813	A.U.D.	38	81
Corn and soybeans:						
Corn - grain _____			1,275	Bu.	170	68
Beans - under, let fall, etc.-	6	69.				
Corn and soybeans:						
Corn - hogged _____	21	124.8	5,398	A.U.D.		
Beans - hogged _____						

Table 22-(continued) Crops Grown and Sold.

Crop	Number of farms	Acres	Total crop	Unit	Sold or to be sold	
					Amount	Value
Corn and cowpeas:						
Corn - hogged _____)	1	2.	145	A. U. D.		
Cowpeas - hogged _____)						
Corn and soybeans:						
Corn - grain _____	10	40.5	1,300	Bu.	104	\$ 69
Beans - grain _____			273	Bu.	24	14
Corn and cowpeas:						
Corn - grain _____	1	10.	200	Bu.		
Cowpeas - hogged _____			20	A. U. D.		
Corn and cowpeas:						
Corn - grain _____	5	17.	290	Bu.	53	30
Cowpeas - grain _____			84	Bu.	8	6
Corn and cowpeas:						
Corn - grain _____	1	6.	180	Bu.		
Cowpeas - let fall _____						
Soybeans - grain _____	16	27.8	365	Bu.	126	83
Cowpeas - grain _____	26	25.05	240	Bu.	83	75
Oats (grain) _____	1	2.	62	Bu.		
Green peas _____	22	18.55	6,259	Qts.	4,065	392
Snap beans _____	18	19.9	2,116	Bu.	2,022	743
Lima beans _____	6	1.05	5,391	Qts.	5,142	178
Roasting ears _____	16	13.55	32,808	Ears	27,192	282
Tomatoes _____	4	.5	51	Bu.	42	22
Cabbage _____	11	8.75	50,025	Lbs.	41,275	326
Watermelons _____	26	21.4	14,276	Melons	7,955	679
Cantaloupes _____	11	4.4	9,800	Melons	7,160	265
Cucumbers _____	1	1.	150	Bu.	150	45
Kale _____	6	5.8	678	Bu.	659	226
Collards _____	2	2.5	709	Bu.	659	162

-continued.



Table 29.-- (Continued 2). Crops Grown and Sold.

Crops	Number of farms	Acres	Total crop	Unit	Sold or to be sold	
					Amount	Value
Spinach _____	1	1.	100	Bu.	50	\$ 25
Turnips _____	3	.8	4,650	Lbs.	4,150	75
Rutabaga _____	2	.6	8,150	Lbs.	3,400	28
Strawberries _____	1	.5	18	Crates	17	27
Peppers _____	1	.1	30	Bu.	30	15
Cabbage and _____	1	.5	5,000	Lbs.	512	5
green peas _____			52	Qts.	52	5
Garden _____	42	-	-	-	-	75
Sweet potato slips _____	2	-	-	(slip)	65,000	1,484*
Sorghum _____	22	10.95	1,028	Gal.	409	75
Oats hay _____	207	350.5	755,900	Lbs.	12,133	188
Pea vine hay _____	290	(2,510.0)	1,709,775	Lbs.	55,099	49
Oats and crimson clover fed green _____	1	2.	12,000	Lbs.		228
Soybean hay _____	88	214.9	602,350	Lbs.	14,000	95
Cowpea hay _____	2	2.5	6,000	Lbs.		
Soybean and cowpea hay _____	2	14.	25,000	Lbs.		
Red clover, crimson clover, red top hay _____	7	25.3	50,600	Lbs.		
Grab grass hay _____	12	29.	41,800	Lbs.		
Lespedeza hay _____	1	2.	2,000	Lbs.		
Oats and clover _____						
Oats and red top hay _____	2	3.	7,000	Lbs.		
Grass mixture hay _____	1	1.	2,000	Lbs.		

\* Garden products received by hired help.

-continued.

Table 29.-- (Continued 3). Crops Grown and Sold.

Crops	Number of farms	Acres	Total crop	Unit	Sold or to be sold	
					Amount	Value
\$						
Soybeans hogged:						
Yield in bu. and A.U.D. -----	175	75.5	962	Est. Bu.		
Yield in # hay and A.U.D. ----		9.	15,500	(4,234 A.U.D.) Lbs.		
Yield in A.U.D. only -----		352.2	15,357	(235 A.U.D.) A.U.D.		
Yield in Est. Bu. only -----		78.7	793	Est. Bu.		
Cowpeas hogged:						
Yield in bu. and A.U.D. -----	9	5.5	44	Est. Bu.		
Yield in A.U.D. only -----		16.	421	(87 A.U.D.) A.U.D.		
Kale, rape, salad						
Crops, spring sprouts hogged ----	7	10.75	974	A.U.D.		
Barley pasture -----	1	10.	1,920	A.U.D.		
Eye pasture (hogged, grazed, etc.)	126					
Yield in A.U.D. and Bu. -----		22.5	258	Bu.		
Yield in A.U.D. and hay -----		13.	20,000	(1,005 A.U.D.) Est. Lbs. Hay		
Yield in A.U.D. only -----		523.75	29,256	(465 A.U.D.) A.U.D.		
Yield in Est. bu. only -----		10.	185	Est. bu.		
Yield in Est. Lbs. Hay only --		9.	33,000	Lbs.		
Eye pasture -----		1.				
Oats pasture -----	11					
Yield in A.U.D. and Bu. -----		9.	45	Bu.		
Yield in A.U.D. only -----		17.	1,303	(155 A.U.D.) A.U.D.		
Wheat and Barley pasture -----	5					
Yield in A.U.D. only -----		9.5	455	A.U.D.		
Yield in bu. only -----		4.	30	Bu.		
Wheat pasture -----	4					
Yield in A.U.D. & Est. Bu. ----		5.	55	Est. Bu.		
Yield in est. bu. only -----		1.	15	(23 <sup>1</sup> / <sub>2</sub> A.U.D.) Est. bu.		
Yield in A.U.D. only -----		4.	206	A.U.D.		

-continued.

Table 29.- (Continued 4). Crops Grown and Sold.

Crop	Number of farms	Acres	Total crop	Unit	Sold or to be sold	
					Amount	Value
Oats and wheat pasture:-----	4					
Yield in A.U.D. only -----		6.	495	A.U.D.		\$
Yield in est. bu. only -----		1.	15	Bu.		
Rye and clover pasture -----	1	25.	728	A.U.D.		
Wheat, oats, and lespedeza pasture -----	1	2.	176	A.U.D.		
Oats and lespedeza pasture -----	5	9.	2,451	A.U.D.		
Rye and lespedeza pasture -----	2	2.	678	A.U.D.		
Wheat, crimson clover, and oats pasture -----	1	4.	88	A.U.D.		
Crimson clover and oats pasture-----	1	5.	211	A.U.D.		
Alsike, buckwheat, and oats pasture -----	1	4.	88	A.U.D.		
Crimson clover and rye pasture --	1	1.	115	A.U.D.		
Barley, wheat and vetch pasture -	1	4.	500	A.U.D.		
Clover, Red Top, or Crimson Clover pasture: -----	10					
Yield in A.U.D. -----		56.5	4,946	A.U.D.		
Yield in Est. Lbs. hay -----		1.	2,000	Lbs.		
Lespedeza pasture -----	6	16.5	1,881	A.U.D.		
Sudan grass pasture -----	1	.5	112	A.U.D.		
Clover, new seeding -----	1	2.				
Rye, plowed under -----	5	21.5				
Cowpeas, plowed under -----	3	7.				
Apples -----	2,254	255	1,170	Bu.	90	54
Pears -----	254	108	525	Bu.	50	55
Peaches -----	1,614	214	807	Bu.	115	91
Grapes ----- Vines-----	529	189	1,271	Bu.	355	405
Plums -----	50	12	16.5	Bu.		
Cherries -----	50	15	6	Bu.	1	1
Figs -----	28	17	15	Bu.	2	4

-continued.

Table 29.- (Continued 5). Crops Grown and Sold.

Crop	Number of farms	Acres	Total crop	Unit	Sold or to be sold	
					Amount	Value
Walnuts -----	5 trees-	2	7	Bu.		
Pecans -----	52 trees-	18	12.2	Bu.	4	\$ 19
Non-bearing trees:						
Apples -----	270 trees-	36				
Peaches -----	132 trees-	22				
Pears -----	25 trees-	12				
Figs -----	5 trees-	2				
Grapes -----	5 vines-	4				
Cherries -----	5 trees-	1				
Pecans -----	11 trees-	4				
<b>Total -----</b>	<b>570</b>	<b>14,706.9</b>				<b>\$ 174,149</b>

Table 30.- Livestock on 370 Farms with White Operators, Nanssmond County, Virginia, 1932

Kind	Number of farms having:	Beginning										End										Sold					
		Born		Raised		Purchases		End		Alive		Dressed		Others butchered		Died		Widged									
		Number	Value	Number	Value	Number	Value	Number	Value	Number	Value	Number	Value	Number	Value	Number	Value	Number	Value	Number	Value						
Cows	225	-	-	571	10699	23	728	571	-	10477	24	-	570	2.25	-	-	57	6	-	-	1.75	-	-	78			
Heifers 1 yr. or more	35	-	-	28	533	-	-	36	-	555	4	-	110	-	-	-	-	-	-	-	-	-	-	-			
Heifers under 1 yr.	46	-	-	21	191	7	49	57	-	599	4	-	42	-	-	-	-	-	-	-	-	-	-	-			
Calves	152	273	-	3	17	29	70	9	-	73	208	-	1855	8.5	-	-	98	19	-	-	.7	-	-	10			
Bull calves	1	-	-	-	-	-	-	1	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
Bulls	10	-	-	9	555	1	5	9	-	422	1	-	25	1	-	-	44	-	-	-	-	-	-	-			
Beef cattle	1	-	-	6	205	-	-	4	-	170	2	-	57	-	-	-	-	-	-	-	-	-	-	-			
Stags	1	-	-	-	-	-	-	1	-	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
<b>Total cattle</b>				<b>439</b>	<b>12180</b>	<b>59</b>	<b>851</b>	<b>489</b>		<b>12344</b>	<b>243</b>		<b>2659</b>	<b>11.55</b>			<b>199</b>	<b>25</b>			<b>2.45</b>			<b>88</b>			
Work horses	172	-	-	208	8368	13	725	208	-	7033	3	-	370	-	-	-	12	-	-	-	-	-	-	-			
Work mules	518	-	-	633	40345	25	2084	621	-	39401	23	-	945	-	-	-	14	11	-	-	-	-	-	-			
Other horses	1	-	-	-	-	1	20	1	-	20	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
<b>Total horses</b>				<b>841</b>	<b>48711</b>	<b>39</b>	<b>2829</b>	<b>825</b>		<b>46559</b>	<b>29</b>		<b>1315</b>				<b>26</b>	<b>11</b>									
Goats	6	-	-	42	46	2	5	49	-	51	-	-	-	-	-	-	2	-	-	-	-	-	-	-			
Kids	4	16	-	-	-	-	-	-	-	-	2	-	2	-	-	-	-	-	-	-	7	-	-	19			
Ewes	7	-	-	53	151	-	-	51	-	128	4	-	10	-	-	-	-	-	-	-	-	-	-	-			
Bucks	4	-	-	4	15	-	-	3	-	10	-	-	-	-	-	-	-	-	-	1	-	-	-	5			
Lambs	6	55	-	-	-	-	-	-	-	-	28	-	72	14	-	-	70	6	-	-	7	-	-	25			
<b>Total sheep &amp; goats</b>				<b>99</b>	<b>192</b>	<b>2</b>	<b>5</b>	<b>103</b>		<b>189</b>	<b>32</b>		<b>84</b>	<b>14</b>			<b>70</b>	<b>8</b>			<b>15</b>			<b>49</b>			
Boars	182	-	-	157	30723	1302	35	3204	178	169	33931	1412	12	1725	94	5	2292	1864	83	12	-	29	9506	7523	398		
Sows	557	-	1262.5	1174	206705	9950	62	7540	399	1235	223273	9990	13	2745	117	14	3540	2756	125	33	-	99	26525	20751	1140		
Other hogs	546	-	10145.5	1426	179827	7770	341	23940	1072	2517	327437	13331	810	91899	4444	2475.7	390632	302644	15635	21	-	5659.3	915343	702384	45428		
Pigs	541	10823	-	516	12234	888	490	15665	933	952	25643	1534	474	15319	1059	-	-	-	-	495	-	-	-	-	-		
<b>Total hogs</b>				<b>3273</b>	<b>429489</b>	<b>19910</b>	<b>929</b>	<b>49349</b>	<b>2582</b>	<b>4973</b>	<b>610284</b>	<b>26237</b>	<b>1309</b>	<b>111689</b>	<b>5714</b>	<b>2494.7</b>	<b>396464</b>	<b>307264</b>	<b>16991</b>	<b>561</b>			<b>5786.3</b>	<b>951379</b>	<b>731159</b>	<b>46963</b>	
Chickens	365	-	-	17769	10239	512	-	269	18955	-	10396	10782	-	5130	2064	-	-	986	2200	-	18163	-	-	7565			
Baby chicks	363	-	29763	-	-	4145	-	373	-	-	-	25	-	2	-	-	-	-	-	-	-	-	-	-			
Other poultry	11	-	81	93	68	19	-	25	105	-	106	36	-	51	30	-	-	120	10	-	2	-	-	6			
<b>Total poultry</b>				<b>17852</b>	<b>10326</b>	<b>4676</b>		<b>687</b>	<b>19060</b>		<b>10502</b>	<b>10843</b>		<b>5183</b>	<b>2094</b>			<b>1106</b>	<b>2210</b>		<b>18165</b>			<b>7571</b>			
Bees	8	-	-	120	533	-	-	119	-	532	-	-	4	-	-	-	-	-	-	5	-	-	-	-			
<b>TOTAL LIVESTOCK</b>	<b>370</b>				<b>91857</b>		<b>6934</b>			<b>96213</b>			<b>14955</b>				<b>17266</b>		<b>11</b>					<b>5467</b>			

Table 51.- Livestock Products Sold on 570 Farms with White Operators, Hansemond County, Virginia, 1932

Product	Number of farms	Amount	Total
Pork green	86	159,852 lbs.	\$9,575
Pork cured	98	155,192 lbs.	16,627
Milk retailed	19	55,705 qts.	5,224
Cream retailed	6	1,120 qts.	514
Butter	67	6,221 lbs.	1,772
Other dairy products	12	-	762
Lard	1	50 lbs.	4
Wool	4	153 lbs.	21
Poultry croppers	14	715 lbs.	123
Eggs	517	46,525 doz.	8,015
Hatching eggs	4	673 doz.	184
Breeding fees	3	54 no.	55
Honey	3	2,150 lbs.	305
Spoiled meat	1	525 lbs.	-
Miscellaneous food to campers	1	-	15
<b>Total</b>			<b>\$ 42,992</b>

Table 32.- Miscellaneous Receipts on 570 Farms with White Operators, Hansemond County, Virginia, 1932

Source	Number of farms	Amount	Total
Man labor off farm	41	1,172 days	\$ 2,108
Team work off farm	7	120 days	159
Machine work	25	126.7 days	957
Trucking	7	364 days	1,765
Jury, assessor, etc.	31	144 days	409
Peanut picking	26	-	6,128
Boarding stock	7	-	262
Rent of buildings	72	-	3,674
Wood	61	847.5 eds.	3,287
Standing timber	21	( 10 acres	100
		( 250,600 bd.ft.	1,014
Land rented to campers	1	-	25
Lumber	1	1,000 bd.ft.	10
Posts	1	7 posts	4
Saw-logs	1	9,000 bd.ft.	72
Total			\$19,954

## DIRECTIONS FOR WORKING FACTORS

## Productive-Man-Work Units

## Crops:

The acres of each crop were multiplied by the units assigned below, and the products were added.

<u>Man units per acre</u>	<u>Crops</u>
5.0	Corn for grain.
5.0	Corn hogged.
0.5	Corn fodder.
4.0	Corn fed green.
0.5	Corn tops.
4.0	Corn fodder, whole plant.
8.0	Irish potatoes.
10.0	Sweet potatoes hogged only.
18.0	Sweet potatoes harvested.
45.0	Tabacco.
7.0	Peanuts picked, whether or not hogged.
5.0	Peanuts hogged only.
18.0	Cotton.
3.0	Corn and soybeans - corn for grain.
1.0	Add for: Soybeans hogged.
3.0	Soybeans grain.
2.0	Soybean hay.
1.0	Soybeans plowed under or left in field.
7.0	Add for: Green peas.
5.0	Corn and soybeans - roasting ears.
	Add for soybeans same as above.
2.0	Corn and soybeans - corn hogged.
	Add for soybeans same as above.
	Corn and cowpeas - same as corn and soybeans.
18.0	Green peas.
15.0	Snap beans.
15.0	Lima beans.
8.0	Roasting ears or sweet corn.
12.0	Tomatoes.
12.0	Cabbage.
15.0	Watermelons.
15.0	Cantaloupes.
15.0	Collards, kale, salad crops.
25.0	Strawberries.
15.0	Cabbage and peas.
10.0	Turnips.
10.0	Beets.
10.0	Rutabaga.
15.0	Cucumbers.
12.0	Peppers.
15.0	Sorghum molasses.
3.0	Soybeans for grain.
3.0	Cowpeas for grain.



## Productive-Man-Work Units (Continued).

<u>Man units</u> <u>per acre</u>	<u>Crops</u>
2.0	Small grains threshed.
2.0	Soybean hay.
2.0	Cowpea hay.
2.0	Small grains cut for hay.
0.2	Peanut hay.
1.5	Crimson clover hay.
1.0	Timothy hay.
1.0	Lespedeza hay.
1.0	Crab grass hay.
1.5	Mixed small grains and annual legumes cut for hay.
1.0	Other hay.
1.0	Soybeans or cowpeas hogged.
1.0	Small grains hogged or pastured.
1.0	Kale, rape, or salad crops hogged.
0.5	Clover pastured.
1.0	Pasture mixtures.
3.0	Tree fruits per acre.
0.1	Fruit and nut trees, bearing age, per tree.
10.0	Grapes per acre.
0.5	Grapes, bearing age, Scuppernon, per vine.
0.05	Non-bearing fruit, per tree.
0.5	Sweet potato slips sold, per 1000.
25.0	Garden, per acre.
1.0	Garden sales, per \$20.00 sales.
0.5	New seeding legumes.
0.5	Green manure crops, all kinds.

## Livestock:

The average number of each kind of livestock was multiplied by the units assigned below.

<u>Man units</u> <u>per head</u>	<u>Kind of Livestock</u>
18.0	Cows.
2.5	Heifers.
2.5	Bulls.
1.0	Beef cattle.
2.0	Colts.
0.5	Ewes or goats.
0.5	Bucks.
0.5	Boars.
3.0	Sows.
1.5	Other hogs raised.
0.55	Hens and other mature poultry.
0.02	Chickens or fowls raised.
0.5	Bees, per hive.

**Miscellaneous Receipts:**

The number of days worked were multiplied by the following units assigned below.

<u>Man units per day worked</u>	<u>Kind of work</u>
1.0	Labor off farm: Man, man and team, machine, per day.
1.0	Trucking, per day.
1.0	Jury, etc., per day.
1.0	Stock pasturing or boarding, per day of man labor.
2.0	Sawed lumber, per 1000 board feet.
1.0	Posts, for 25 posts.
3.0	Wood, per cord.

### Animal Units

The average number of each of the following animals was multiplied by the corresponding units.

<u>Animal units</u> <u>per head</u>	<u>Kind of livestock</u>
1.	Cows.
.5	Heifers.
.5	Bull calves to be raised.
1.	Bulls.
.5	Beef cattle fattened or wintered.
1.	Horses, mules, stallions, driving or riding horses.
.5	Colts and ponies.
.14	Ewes, bucks, mature goats.
.05	Sheep fattened or wintered, kids.
.2	Brood sows and boars.
.1	Hogs raised.
.01	Mature poultry.
.005	Chickens raised.

### Crop Index

For each crop grown the average yield for the area was divided by the work units per acre for that crop to obtain the average yield per work unit. This figure was divided into that for the total crop produced on the farm. The result was called adjusted work units, which, when divided by the actual work units, gives a crop index weighted by work units.

### Production Index

Work units were adjusted according to the rates of production on the hog enterprise and combined with crop index on a percentage basis to get production index.