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AN ECONOMIC STUDY OF SMALL FARMS

IN

PITTSYLVANIA COUNTY, VIRGINIA

1940

By

James Ray Thorpe

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## INTRODUCTION

There are great variations in returns to different farms for a given year, due to differences in (1) size of business, (2) labor efficiency, (3) rates of production, and (4) balance of the farm business. The dominant factor is size of business, since it exerts influence on each of the other factors.

The problem of the small farm has been much discussed, but little studied. The problem becomes more and more pronounced as each generation passes on and leaves smaller estates to be divided among descendants.

Small farms have usually been studied in comparisons with large farms, seldom being given attention as separate problems. Previous studies have shown that small farms are less efficient users of labor and capital than large farms. The small farm has difficulty in furnishing productive work for the labor force throughout the year. The small farm cannot afford as much equipment as a large farm, and has difficulty in using efficiently that equipment which it can afford. With its equipment inferior to that of the large farm the small farm is handicapped in the struggle to keep rates of production up and costs of production down.

The small farm cannot diversify its sources of income to the extent that a large farm can, because it must specialize in a small number of enterprises in order to be at all efficient in any. There is a limit to the receipts that a small farm can make, just as there is a limit to the receipts that can be had from a single cow, from a flock of 10 hens, or an acre of tobacco.

The need for a study of small farms was given consideration in 1940, when graduate students in agricultural economics at V.P.I. took records of

the 1940 farm businesses on 300 farms scattered throughout Pittsylvania County. The records used for this study gave itemized lists of all receipts and expenses, crop and livestock production and sales, inventories of property on hand at the end of the year, other sources of income, and other information necessary to make an analysis of each farm business.

In the tobacco section, the tobacco acreage is a good indicator of the size of the farm business. A study of the farms in the Banister River Drainage Basin of Pittsylvania County showed an average of 7.3 acres of tobacco per farm, and a range of 1.0 to 45.0 acres of tobacco. <sup>1/</sup> For the purposes of this study a small farm is defined as one that has 5.0 acres of tobacco or less. An average of 2.9 acres of tobacco was grown by the farms included in this study, with a range of 0.1 to 5.0 acres of tobacco.

This study covers only the year 1940. Relationships that held true for that year may or may not be valid for subsequent years due to changes in economic conditions. The purpose of this study is to describe the 300 small farms and to show the effect of factors that affect the returns to a farm business.

The writer wishes to express his appreciation to Dr. H. M. Love, for making the farm records available for this study; and for his helpful guidance in, and patient supervision of, this study. Thanks are due W. L. Gibson, Jr. for valuable suggestions, information, and examples, to Miss Georgia Croy for typing the thesis, and to other members of the Department of Agricultural Economics who were of assistance.

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<sup>1/</sup> Gibson, W. L., Jr., Economics of Flue Cured Tobacco Farming, Virginia Agricultural Experiment Station Bulletin, 66, April 1940.

### DEFINITION OF TERMS

Productive man work unit- The work unit measures men's accomplishment, not how hard they work. The work unit is used to reduce man labor to a common denominator. A work unit is generally considered to be 10 hours of productive work by one man using modern equipment and methods, or the time required to raise and cut an acre of hay once. It is possible to do a unit of work in 5 hours working rapidly and with extensive operations, whereas with intensive operations, 20 hours or more may be required. However, under average conditions with methods of average intensity and average efficiency, a unit of work can usually be done in 10 hours.

Man equivalent- Each man equivalent represents farm labor by an adult male for 12 months of 26 days each. The work of women and children is converted to the equivalent of a man if the rate of work is different. A 14 year old boy might be able to do  $\frac{1}{2}$  the work of a man at some tasks, and an amount equal to the work of a man at other jobs. A man equivalent of 2 for a farm might consist of one man equivalent for the operator,  $\frac{1}{2}$  a man equivalent of hired man labor, and  $\frac{1}{2}$  a man equivalent of woman and child labor.

Farm income- The difference between total farm receipts and total farm expenses. Sources of receipts include sales of crops, livestock, livestock products, increases in inventories, and receipts from off-the-farm sources. Farm expenses include expenditures for fertilizer and lime, livestock purchases, power equipment operating costs, equipment purchases and repairs, feed and seed purchases, real estate repairs, and general expenses. Unpaid family labor and losses from decreases in inventories must also be counted as expenses. The operator's labor is not counted as a farm expense. Farm income is the return to the operator for his year's labor and management and the use

of all his capital.

Labor income- That part of farm income that is left after a 5 percent interest charge has been made on the average of the beginning and ending capital investment. If a farmer does not own his capital he has to borrow in order to acquire the use of the necessary capital and pay interest rates approximating 5 percent per year. Labor income is the return to the operator for his labor on and management of the farm, exclusive of farm products used from the farm by the farm family.

Return on capital- Farm income minus the farmer's estimate of what his work on and management of the farm should be worth. This is not a return in addition to labor income. Instead of charging a fixed rate of interest on capital, as in determining labor income, the operator estimates the value of his labor and management, subtracts it from the farm income and finds what his capital has earned. The rate of return on capital is found by dividing the return on capital by the average total capital investment, and expressing the result in percents.

Farm products furnished the family- The value of the house rent, milk, butter, pork, beef, poultry, eggs, vegetables, fruit, corn, wheat, and firewood used from the farm by the farm family. These products are an addition to the real income of the farmer.

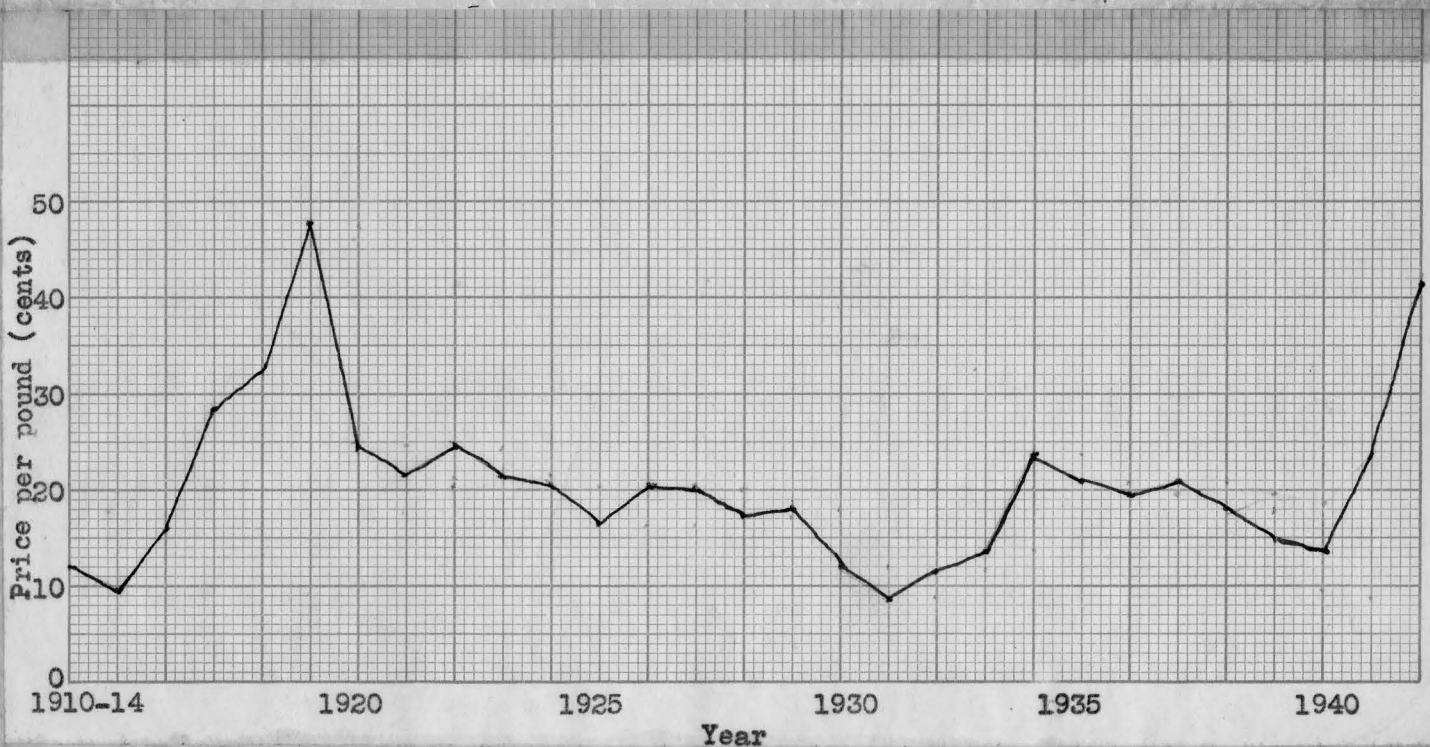
Labor earnings- The value of the house rent and farm products furnished the family added to the labor income. Labor earnings correspond generally to the wages of a man employed in industry, or to the salary of a professional man. A farmer with a labor income of \$500 and \$500 of farm products furnished the family can be said to have earned the equal of a \$1,000 wage or salary.

### ECONOMIC CONDITIONS DURING 1940

The year covered by this study was after the Country had partially recovered from the depression, and before the boom of World War II. The index number of Virginia farm prices for 1940 was 105, and that of wholesale prices of all commodities in the United States was 115, when 1910-14 equals 100. The purchasing power of farm prices was, therefore, 91 percent of pre-World War I ( $105 \div 115 = 91$ ).

Virginia farmers received an average of 13.8 cents a pound for their bright tobacco in 1940, the lowest average price since 1933. (Figure 1).

Figure 1 -  
Average prices paid Virginia farmers for bright tobacco 1910-1942. 1/



1/ Virginia Farm Economics, Department of Agricultural Economics and Rural Sociology, Virginia Agricultural Extension Division, July 1931-April 1944.

The total 1940 tobacco crop in the United States was 1,241,700,000 pounds, a decrease of 32.8 percent from the record 1939 crop of 1,848,700,000 pounds. 1/ The largest part of the decrease in the tobacco crop was in flue-cured tobacco, which totaled 1,159,300,000 pounds in 1939 but was only 643,000,000 pounds in 1940, a decrease of 44.5 percent. Nevertheless a semblance of a surplus existed due to abnormally small exports and leftovers from the record 1939 crop. The 1940 supply of flue-cured tobacco was 2,053,000,000 pounds, a reduction of more than 50,000,000 pounds from the record 1939 supply of 2,106,000,000 pounds.

#### DESCRIPTION OF THE AREA

##### Location and Topography

Pittsylvania County is situated in the south central part of Virginia. It is bounded on the north by Bedford and Campbell Counties, on the west by Franklin and Henry Counties, on the south by North Carolina, and on the east by Halifax County, from which it was formed in 1767. The county extends 40 miles north to south and 28 miles east to west, measuring 1,012 square miles, or 647,860 acres.

The county lies wholly within the Piedmont Plateau, the general topography being that of a high plateau which has been so dissected by numerous streams as to be decidedly rolling. 2/ The general range of elevation is from 400 to 800 feet above sea level. Distinctive physiographic features include Smith Mountain, which attains an altitude of about 2,000 feet, and other peaks known locally as Brushy, Jasper, Wheeler Knob, Turkey Cock, Farmers, and White Oak Mountains.

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1/ The Tobacco Situation, Bureau of Agricultural Economics, United States Department of Agriculture, September 1940.

2/ Soil Survey of Pittsylvania County, Virginia

The area is thoroughly dissected with rivers and creeks of rapid current, so that surface drainage as a whole is good. The drainage is predominantly towards the south and east. The Dan River drains the southern part of the County, the Banister River drains the Central part, and the Staunton River drains the northern part.

#### Climate and Soils

The summers in Pittsylvania are long and hot and the winters are not usually severe. The growing season averages about 6½ months. There is an average of approximately 42 inches of rainfall annually; which is generally well distributed throughout the year (Table 1). 1/

Table 1.- Average temperature in degrees Fahrenheit and precipitation in inches at Chatham, Virginia, 1940 \*/

Month	Temperature			Precipitation		
	1940	Normal	1940 in percent of normal	1940	Normal	1940 in percent of normal
January	27.0	40.0	67.5	2.92	3.48	83.9
February	39.0	43.1	91.4	3.20	3.18	100.6
March	44.6	47.0	94.8	2.06	3.75	54.9
April	54.8	56.3	97.3	2.88	3.35	85.9
May	65.4	65.7	99.5	4.07	3.80	107.1
June	74.8	74.1	100.9	3.57	3.77	94.6
July	75.0	78.0	96.1	3.42	4.23	80.8
August	74.0	75.6	97.8	12.22	4.15	294.4
September	67.0	71.2	94.1	1.94	3.42	56.7
October	57.0	57.8	98.6	0.84	2.92	28.8
November	47.3	47.8	98.9	5.41	2.53	213.8
December	41.9	41.9	100.0	2.47	3.47	71.1
Annual	55.7	58.2	95.7	45.00	42.05	107.0

\*/ Climatological Data. United States Weather Bureau, Virginia Section, Vol. 60-61, 1940-41.

1/ Climatological Data. United States Weather Bureau, Virginia Section, Vol. 60-61, 1940-41.

Normally, Pittsylvania is wettest in July, with a precipitation of 4.23 inches; and driest in November, with a precipitation of 2.53 inches. However, in 1940, August was the wettest month with 12.22 inches of rainfall, 294.4 percent of normal, and October the driest, with 0.84 inches of rainfall, 28.8 percent of normal.

Pittsylvania is normally hottest in July with an average temperature of 78.0 degrees, and coldest in January, averaging 40.0 degrees. In 1940, July was cooler than normal, averaging 75.0 degrees and the January temperature averaged 27.0 which was 67.5 percent of normal. On the whole, Pittsylvania was cooler and wetter than normal in 1940.

The upland soils of Pittsylvania County are residual in origin, derived from granite, gneiss, schist, diorite, sandstone, and shale. 1/ They are predominantly gray to yellowish gray in color and quite sandy. The subsoils, for the most part, vary from red to yellow.

Soils of the Cecil series account for 57.6 percent of the total acreage of the county (table 2). Appling accounts for 8.6 percent, Granville for 6.1 percent, and Durham for 3 percent of the total acreage. These soils are rated high for bright flue-cured tobacco. In 1940, Pittsylvania County rated 7th in the United States in tobacco harvested on farms. 2/

#### Population and Public Facilities

The population of Pittsylvania County numbered 56,493 in 1920, 61,424 in 1930, and 61,697 in 1940. 3/ The people are largely the descendants of the original settlers who were of English origin. The total rural farm popu-

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1/ Soils Survey of Pittsylvania County, Virginia.

2/ Ranking Agricultural Counties. U.S. Department of Commerce, Bureau of the Census, 16th census of the United States, 1940.

3/ Population, First Series, Virginia, U.S. Department of Commerce, Bureau of Census, 16th census of the United States, 1940.

Table 2.- Areas of different soils in Pittsylvania County 1/

Soil	Acres	Percent
Cecil sandy loam	131,456	23.1
steep phase	17,984	23.1
Cecil gravelly fine sandy loam	104,576	16.1
Cecil fine sandy loam	89,728	13.9
Appling fine sandy loam	44,800	6.9
Louisa gravelly fine sandy loam	25,984	4.7
steep phase	4,864	4.7
Cecil clay loam	29,184	4.5
Granville fine sandy loam	20,032	3.1
Granville sandy loam	19,264	3.0
Durham fine sandy loam	15,936	2.5
Meadow (congarree material)	15,808	2.4
Wadesboro fine sandy loam	13,504	2.1
Appling sandy loam	11,136	1.7
Iredell sandy loam	10,688	1.6
Wilkes sandy loam	10,432	1.6
Congaree fine sandy loam	9,856	1.5
Wadesboro stony fine sandy loam	8,320	1.3
Louisa fine sandy loam	7,936	1.2
Davidson clay loam	7,104	1.1
Congaree silt loam	6,976	1.1
Penn fine sandy loam	6,336	1.0
Lehigh stony silt loam	5,888	0.9
Penn loam	5,568	0.9
White stone fine sandy loam	4,928	0.8
Wilkes fine sandy loam	4,864	0.7
Rough stony land	3,968	0.6
Lehigh silt loam	3,008	0.5
Durham sandy loam	2,944	0.5
Altavista fine sandy loam	1,920	0.3
Iredell loam	1,408	0.2
Wichem loam	1,280	0.2
<b>Total</b>	<b>647,680</b>	<b>100.0</b>

1/ Soils Survey of Pittsylvania County, Virginia.

lation in 1940 was 40,393 of whom 26,151 were native whites, 17 foreign born whites, and 14,225 negro. 1/ The city of Danville had a population of 32,749 in 1940, and Chatham, the county seat, 1,230. 2/

The county is adequately served by railroad and highway facilities. The services of the Southern and the Virginian railroads are available. United States highways 29, 56, and 360 cross the county, the first in an east to west direction, the second in a north to south direction, and the third in a north-east to southwest direction. State highways 40, 41, and 57 together with numerous secondary roads serve the county. The city of Danville affords an excellent market for the tobacco produced in the county.

#### DESCRIPTION OF THE FARMS STUDIED

##### Farm Acreage

The landlord of one farm rented all his land to tenants. The average size of the other 299 farms was 81.7 acres (table 3). Land used for crops accounted for 28.06 acres per farm, over one-third of the total farm area. An average of 1.64 acres of woods was pastured per farm and 43.67 acres was not pastured. Other land, most of which was idle during 1940, was reported on 240 farms averaging 8.33 acres per farm.

Tobacco was grown on 294 of the farms, averaging 2.92 acres per farm. An average of 7.73 acres of corn and 3.34 acres of wheat was grown per farm. Lespedeza was the most important hay crop, averaging 2.23 acres per farm.

Two hundred and forty-one farms had open pasture, averaging 7.01 acres per farm. An average of 4 acres per farm was double or intercropped.

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1/ Population, Second Series, Virginia, U.S. Department of Commerce, Bureau of the Census, 16th Census of the United States, 1940.

2/ Population, First Series, Virginia, U.S. Department of Commerce, Bureau of Census, 16th census of the United States, 1940.

Table 3.- Use of land on 299 small farms in Pittsylvania county, 1940 <sup>1/</sup>

Use of land	Number of farms	Acres per farm	Percent of land
Tobacco	294	2.92	3.6
Corn	295	7.73	9.5
Wheat	166	3.34	4.1
Oats	3	0.04	0.0
Lespedeza	120	2.14	2.6
Truck Crops	85	0.44	0.5
Mixed hay	41	0.42	0.5
Lespedeza hay	117	2.23	2.7
Alfalfa hay	4	0.02	0.0
Other hay	110	1.12	1.4
Other crops	76	0.65	0.8
Open pasture	241	7.01	8.6
<b>Total all crops</b>		<b>28.06</b>	<b>34.3</b>
Woods pastured	47	1.64	2.0
Woods not pastured	294	43.67	53.5
Other land	240	8.33	10.2
<b>Total land operated</b>		<b>81.70</b>	<b>100.0</b>
<b>Land double or intercropped</b>	<b>167</b>	<b>4.00</b>	<b>4.9</b>

<sup>1/</sup> One farm rented to tenants.

Slightly over one-third of the farms had less than 50 acres of land, while approximately another third were between 50 and 99 acres in area (table 4).

Table 4.- Distribution by size of 300 small Farms in Pittsylvania County, 1940

Area in Acres	Number of farms	Percent of farms
Less than 50	108	36.0
50-99	99	33.0
100-149	57	19.0
150-199	19	6.3
200-249	9	3.0
250-299	2	0.7
300-349	2	0.7
350-399	1	0.3
400 or more	3	1.0
<b>Total</b>	<b>300</b>	<b>100.0</b>

Nearly one-fifth of the farms were between 100 and 149 acres in area. Eighty-eight percent of the farms contained less than 150 acres. Only 3 farms contained 400 acres or more.

Slightly over one-third of the farms were owned by their operators. (table 5).

Table 5.- Land Tenure on 300 small farms in Pittsylvania County, 1940

Tenure	Number of farms	Acres	Percent of total acres
Owned <sup>1/</sup>	103	8,070.5	32.5
Share rented	165	14,819.0	59.8
Cash rented	6	250.0	1.0
Partly owned and partly rented	26	1,662.6	6.7
Total	300	24,802.1	100.0

<sup>1/</sup> Seven owners rented a total of 303 acres to others.

Farms owned accounted for 8,070.5 acres, or 32.5 percent of the total acreage. There were 165 share rented farms, accounting for 14,819.0 acres or nearly three-fifths of the total acreage. The most common rental agreement was one whereby the landlord paid  $\frac{1}{2}$  of the expenses and received  $\frac{1}{2}$  of the crops produced. Six farms were cash rented. Twenty-six farms were partly owned and partly rented. In 7 instances, owned land was rented out, accounting for 303 acres, or slightly more than 1 percent of the total acreage.

#### Farm Capital

Capital investment was classified as (1) fixed capital, which included investments in land and buildings, and (2) working capital, which included investments in livestock, equipment, and feed and supplies. The total capital investment was \$2,653 per farm (table 6). Of the total farm capital 81 percent was in fixed capital and 19 percent in working capital.

Table 6.- Distribution of Capital investment on 300 small farms in Pittsylvania County, 1940

Items	Number of farms	Investment per farm	Percent of total capital investment
<b>Fixed capital:</b>			
Buildings	298	\$ 785	29.6
Land	300	<u>1,365</u>	<u>51.4</u>
Total fixed capital		\$2,150	81.0
<b>Working capital:</b>			
Livestock	298	\$ 268	10.1
Power equipment	110	41	1.6
Other equipment	295	96	3.6
Feed and supplies	293	<u>98</u>	<u>3.7</u>
Total working capital		\$ 503	19.0
All capital		\$2,653	100.0

The total livestock investment constituted 53.3 percent of the working capital and slightly over one-tenth of the total capital. An average of \$785 per farm was invested in buildings and \$1,365 in land.

Less than \$2,000 was invested in total farm capital on 45 percent of the farms (table 7). Less than \$4,000 was invested in total farm capital on 81.7 percent of the farms. Fourteen farms had \$6,000 or more invested in total farm capital. Only one farm had more than \$10,000 invested in total farm capital.

Table 7.- Variation in total farm capital on 300 small farms in Pittsylvania County, 1940

Total Capital investment	Number of farms	Percent of farms
Less than \$2,000	135	45.0
2,000-3,999	110	36.7
4,000-5,999	41	13.7
6,000-7,999	7	2.3
8,000-9,999	6	2.0
10,000 or more	<u>1</u>	<u>0.3</u>
Total	300	100.0

Crops

Bright flue-cured tobacco was by far the most important cash crop grown on the farms of this study. Tobacco sales averaged \$451.37 per farm, accounting for 96.4 percent of the total crop sales (table 8). Truck crops accounted for \$10.40 of crop sales per farm. Corn sales averaged \$2.77 per farm and wheat sales \$1.67.

Table 8.- Cash sales of crops on 296 small farms in Pittsylvania County, 1940 <sup>\*/</sup>

Crop	Number of farms	Cash sales per farm	Percent of total crop receipts
Tobacco	294	\$ 451.37	96.4
Corn	28	2.77	0.6
Wheat	11	1.67	0.4
Lespedeza	4	0.64	0.1
Truck crops	24	10.40	2.2
Mixed hay	11	0.03	0.0
Lespedeza hay	5	0.80	0.2
Other hay	2	0.45	0.1
Other crops	2	0.09	0.0
<b>Total</b>		<b>\$ 468.22</b>	<b>100.0</b>

<sup>\*/</sup> Four farms had no crop sales.

The average tobacco yield was 889 pounds per acre (table 9). The average corn yield was 16.5 bushels per acre, and wheat 10.2 bushels per acre. Alfalfa was the highest yielding hay, averaging 1.48 tons per acre. Lespedeza hay was grown on 117 farms, whereas alfalfa hay was grown on only 4 farms. Only 3 farms grew oats.

Table 9.- Crop yields per acre on 299 small farms in Pittsylvania County, 1940 <sup>\*</sup>/<sub>1</sub>

Crop	Number of farms	Yields per acre
Tobacco	294	889 lbs.
Corn	295	16.5 bu.
Wheat	166	10.2 bu.
Oats	3	27.3 bu.
Lespedeza	120	115 lbs. <sup>1</sup> / <sub>1</sub>
Mixed hay	41	0.68 tons
Lespedeza hay	117	0.97 tons
Alfalfa hay	4	1.48 tons
Other hay	110	0.92 tons

<sup>\*</sup>/<sub>1</sub> One farm rented to tenants.

<sup>1</sup>/<sub>1</sub> Only 4 farms harvested lespedeza seed. Other lespedeza was (1) grazed, (2) idle, or (3) fallowed.

#### Livestock

The average investment in livestock was \$268 per farm (table 10). Of the total livestock investment, \$181 per farm, or 67.5 percent was in workstock. Workstock was kept by 282 farms, averaging 1.5 head per farm.

Cattle, which included cows, heifers, veals, bulls, and other cattle, were second in importance among livestock. An average of 1.5 head valued at \$60.84 was kept per farm. The number of farms keeping cattle decreased from 260 at the beginning of the year to 253 at the end of the year. <sup>1</sup>/<sub>1</sub> The number of farms keeping hogs increased from 140 at the beginning of the year to 184 at the end of the year.

Poultry ranked third among livestock, accounting for an average of \$17.67 of the livestock inventory per farm. Work stock purchases accounted

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<sup>1</sup>/<sub>1</sub> A single farm far outstripped the rest with an inventory of 51 head of cattle at the beginning of the year, 50 of which were sold during the year. They accounted for \$4,000 in the beginning livestock inventory, \$4,000 of livestock sales, and \$4,950 of sales of livestock products.

Table 10.- Summary of livestock per farm on 298 small farms in Pittsylvania County, 1940 \*/

Kind of livestock	Inventory at beginning of year			Purchases			Inventory at end of year			Sales		
	Number of farms	No. of head	Value	Number of farms	No. of head	Value	Number of farms	No. of head	Value	Number of farms	No. of head	Value
	re- port- ing			re- port- ing			re- port- ing			re- port- ing		
Workstock	282	1.5	\$177.63	32	0.1	\$ 18.42	282	1.5	\$185.20	18	0.1	\$ 6.42
Cattle	260	1.5	66.42	29	0.2	4.42	253	1.5	55.25	119	0.8	24.98
Hogs	140	1.1	6.38	237	1.8	9.30	184	1.6	10.40	20	0.3	2.26
Poultry	286	24.0	<u>17.73</u>	13	3.2	<u>0.31</u>	283	24.0	<u>17.61</u>	159	8.4	<u>7.41</u>
Total			\$268.16			\$ 32.45			\$268.46			\$41.07

\*/ Two farms had no livestock.

for \$18.42 of the \$32.45 expenditure for livestock purchases per farm, and cattle sales accounted for \$24.98 of the \$41.07 of livestock sales.

### Livestock Products Sold

Livestock product sales averaged \$33.54 per farm (table 11). Milk was the most important livestock product sold, accounting for \$16.85 per farm, slightly over one-half of the total sales of livestock products. Eggs ranked second among livestock products sold, accounting for \$7.61 of sales per farm. Only 7 farms sold milk, while 220 farms sold eggs. Butter was sold from 90 farms, averaging \$2.59 per farm.

Sales amounting to \$1.85 per farm were unclassified, it being understood that the majority of these sales were of dairy products. Of the 300 farms, 238 sold livestock products of some kind.

Table 11.- Livestock products sold on 238 small farms in Pittsylvania County, 1940 <sup>2/</sup>

Product	Number of farms reporting	Sales per farm (all farms)	Percent of livestock product sales
Milk	7	\$ 16.85	50.3
Cheese	4	0.44	1.3
Butter	90	4.19	12.5
Eggs	220	7.61	22.7
Meat	40	2.59	7.7
Unclassified	5	1.85	5.5
Total		\$ 33.54	100.0

<sup>2/</sup> Sixty-two farms sold no livestock products.

### Farm Receipts

The average total receipts were \$676.55 per farm (table 12). The sale of crops accounted for \$468.22 per farm, or 69.2 percent of the total receipts.

Table 12.- Distribution of receipts on 300 small farms in Pittsylvania County, 1940

Source	Number of farms	Receipts per farm	Percent of total receipts
Crop sales	296	\$ 468.22	69.2
Livestock sold	213	41.07	6.1
Livestock products sold	238	33.54	4.9
Increase in inventory	118	47.22	7.0
Miscellaneous	188	86.50	12.8
<b>Total</b>		<b>\$ 676.55</b>	<b>100.0</b>

The second most important source of receipts was miscellaneous receipts, which averaged \$86.50 per farm, or slightly over one-eighth of the total receipts. One hundred and eighty-eight farms had miscellaneous receipts. The most important source of miscellaneous receipts was day labor off the farm, accounting for \$36.11 per farm, or 41.7 percent of the total miscellaneous receipts (table 13).

Table 13.- Sources of miscellaneous receipts on 188 small farms in Pittsylvania County, 1940 \*/

Source	Number of farms reporting	Average receipts per farm (all farms)	Percent of misc. receipts
Day labor off farm	96	\$ 36.11	41.7
Jury duty	9	0.40	0.5
Team	8	2.65	3.1
Hauling	6	1.84	2.1
Machine work	2	0.15	0.2
Lumber	14	9.18	10.6
Rent	20	8.72	10.1
A.A.A.	74	6.39	7.4
Relief	5	2.12	2.5
Pensions	2	1.07	1.2
Insurance	7	2.86	3.3
Other	35	14.99	17.3
<b>Total</b>		<b>\$ 86.50</b>	<b>100.0</b>

\*/ One hundred and twelve farms had no miscellaneous receipts.

Increases in inventories ranked third as a source of receipts. Increases occurred on 118 farms, and averaged \$47.22 per farm, or 7 percent of the total receipts.

Livestock and livestock products together accounted for receipts of \$74.61 per farm, or 11 percent of the total receipts.

One third of the farms had total receipts of less than \$400 (table 14). Another third had between \$400 and \$799 of receipts, while one fifth had between \$800 and \$1,199 of receipts. Five farms had total receipts of \$2,000 or more.

Table 14.- Variation in total farm receipts on 300 small farms in Pittsylvania County, 1940

Receipts	Number of farms	Percent of farms
Less than \$400	100	33.3
\$400 - 799	110	36.7
\$800 - 1199	63	21.0
\$1,200 - 1,599	20	6.7
\$1,600 - 1,999	2	0.7
\$2,000 or more	5	1.6
Total	300	100.0

#### Farm Expenses

Total farm expenses averaged \$459.24 per farm (table 15). Unpaid labor was the largest expense item, amounting to \$108.58 per farm, or nearly one-fourth of the total farm expense. General expenses ranked second, averaging \$104.26 per farm. General expenses consisted of expenditures for hired help, insurance on crops, buildings and livestock, hired machinery and hauling, spray, poison, twine, canvas, fence, threshing toll, feed grinding, horse shoeing, breeding fees, taxes, farm share of telephone and electricity costs, fuel, and other expenses.

Table 15.- Items of expense on 300 small farms  
in Pittsylvania County, 1940

Items	Number of farms	Expense per farm	Percent of farm expense
<b>Fertilizer:</b>			
For tobacco	294	\$ 46.97	10.2
For crops other than tobacco	204	<u>14.62</u>	<u>3.2</u>
Total fertilizer		\$ 61.59	13.4
Livestock bought	254	\$ 32.45	7.1
Unpaid labor	242	108.58	23.6
General expenses	300	104.26	22.7
Power equipment operating costs	110	18.97	4.1
Other equipment repairs	288	7.86	1.7
Equipment bought	58	10.56	2.3
Decrease in inventory	182	50.03	10.9
Seed bought	213	10.50	2.3
Feed bought	222	23.77	5.2
Real estate repairs	297	<u>30.67</u>	<u>6.7</u>
Total		\$459.24	100.0

An average of \$46.97 was expended per farm for tobacco fertilizer, and \$14.62 for crops other than tobacco, making the total fertilizer expense \$61.59. Seed purchases amounted to \$10.50 per farm, and feed purchases \$23.77. Power equipment operating costs were \$18.97 per farm. The smallest item of expense was equipment repairs, which amounted to \$7.86 per farm.

Inventories decreased on 182 farms, an average of \$50.03 per farm. About one-tenth of the total farm expenses resulted from decreasing inventories.

#### Home Expenses

The farms were divided into 5 groups to study home expenses on the basis of the operator's race and tenure status: (1) white owners, (2) colored owners, (3) white share renters, (4) colored share renters, and (5) miscellaneous. Twenty six farms that did not fit into any of the first four groups were classed as miscellaneous (table 16). The miscellaneous group contained

Table 16.- Home Expenses on 300 small farms in Pittsylvania County, 1940

Operator Race Status	Number of farms	Average amounts and percents	Clothing	Groceries	Doctor's bills	Life Insurance	Tele- phone	Elec- tricity	Auto- mobile	Fuel	Other	Total
White owners	80	Average expend.	\$61.38	\$68.16	\$25.25	\$15.70	\$0.15	\$7.76	\$13.44	\$7.40	\$8.45	\$207.69
		Percent of total	29.5%	32.7%	12.1%	7.5%	0.1%	3.9%	6.5%	3.6%	4.1%	100.0%
Colored owners	30	Average expend.	\$40.17	\$63.93	\$ 4.47	\$17.40	\$0.00	\$0.90	\$ 5.67	\$7.03	\$25.27	\$166.84
		Percent of total	24.8%	38.4%	2.7%	10.5%	0.0%	0.6%	3.5%	4.3%	15.2%	100.0%
White share renters	106	Average expend.	\$57.92	\$69.96	\$37.70	\$ 7.39	\$0.00	\$2.76	\$12.57	\$6.06	\$ 2.79	\$197.15
		Percent of total	29.4%	35.5%	19.1%	3.7%	0.0%	1.4%	6.4%	3.1%	1.4%	100.0%
Colored share renters	58	Average expend.	\$47.34	\$57.38	\$13.95	\$ 6.28	\$0.00	\$0.00	\$ 6.48	\$6.00	\$ 1.48	\$138.91
		Percent of total	34.1%	41.3%	10.1%	4.5%	0.0%	0.0%	4.6%	4.3%	1.1%	100.0%
Miscellaneous	26	Average expend.	\$61.05	\$61.35	\$15.50	\$ 7.81	\$0.23	\$0.85	\$23.19	\$6.19	\$ 2.12	\$178.77
		Percent of total	34.4%	34.3%	8.7%	4.4%	0.1%	0.5%	12.8%	3.4%	1.2%	100.0%
All farms	300	Average expend.	\$55.43	\$65.40	\$24.54	\$10.43	\$0.06	\$3.21	\$11.85	\$6.51	\$ 6.24	\$184.07
		Percent of total	30.1%	35.7%	13.3%	5.7%	0.03%	1.7%	6.5%	3.57%	3.4%	100.0%

farms (1) for which the operators race was not known, (2) that were cash rented, and (3) that were partly owned and partly rented.

The average total home expense was \$184.07 per farm. Of this, \$65.40 or 35.7 percent was spent for groceries, and \$55.43 or 30.1 percent, for clothing. The total home expenses ranged from \$138.91 per farm for colored share renters to \$207.69 for white owners.

Colored owners, white share renters, and colored share renters had no telephone expense. Colored share renters had no electricity expense. Colored owners paid most for life insurance, and white share renters paid most for doctor's bills.

#### Incomes

Farm products valued at an average of \$307.41 per farm were furnished the families on these farms (table 17). An average of \$60.51 worth of farm products was furnished each of the 5.08 persons per household. House rent was the largest valued product furnished, averaging \$66.67 per farm. Vegetables and fruit, ranking second, were valued at \$60.88 per farm. Milk and butter, ranking third, were valued at \$57.30 per farm. These large amounts of farm products furnished families are in keeping with the fact that in 1940 Pittsylvania County ranked second in the United States in farm products furnished households. 1/

The \$676.55 average total receipts exceeded the \$459.24 average total farm expenses by \$217.31 per farm (table 18). The operators had this to pay them for their labor and the use of all capital. When \$132.65 was charged as interest on the average capital investment, \$84.66 was left per farm to pay the operators for their labor and management. Had it not been for

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1/ Ranking Agricultural Counties, U.S. Department of Commerce, Bureau of the Census, 16th Census of the United States, 1940.

miscellaneous receipts averaging \$86.50 per farm, labor income would have averaged minus \$1.84 per farm.

Table 17.- Farm products furnished families on 298 small farms in Pittsylvania County, 1940 <sup>a/</sup>

Items	Number of farms reporting	Value per farm (all farms)	Value per person
Milk-butter	255	\$ 57.30	\$11.28
Pork-beef	278	37.01	7.29
Poultry-eggs	281	31.85	6.27
Vegetables-fruit	295	60.88	11.98
Corn-wheat	263	23.21	4.57
Firewood	288	30.49	6.00
House rent	294	66.67	13.12
<b>Total</b>		<b>\$307.41</b>	<b>\$60.51</b>

<sup>a/</sup> Two farm families were furnished no farm products.

Table 18.- Financial summary for 300 small farms in Pittsylvania County, 1940

Item	Average per farm
Capital investment	\$2,653.00
Total receipts	676.55
Total expenses	459.24
Farm income	217.31
Interest on average capital	132.65
Labor income	84.66
Farm products furnished the family	307.41
Labor earnings	392.07
Value of operator's labor	312.90
Return to capital	- 95.59
Percent return on capital	- 3.69

When \$307.41 of farm products furnished the family was added to the labor income, labor earnings amounted to \$392.07 per farm. The average farm income failed to pay the \$312.90 average value of operator's labor by \$95.59

per farm. This amounted to a rate of minus 3.69 percent return on all capital.

Two farms had labor incomes of less than minus \$800 (table 19). Over one-third of all farms, or 37.3 percent, had minus labor incomes. Nearly four-fifths or 88.6 percent of the farms had labor incomes of less than \$400.00. Only two farms had labor incomes greater than \$1,000.

Table 19.- Variation in labor income on 300 small farms in Pittsylvania County, 1940

<u>Labor income</u>	<u>Number of farms</u>	<u>Percent of farms</u>
<u>Dollars</u>		
Less than -800	2	0.7
-800 - -601	1	0.3
-600 - -401	5	1.7
-400 - -201	21	7.0
-200 - -1	84	28.0
0 - 199	107	35.6
200 - 399	46	15.3
400 - 599	23	7.7
600 - 799	8	2.7
800 - 999	1	0.3
1,000 or more	2	0.7

## FACTORS AFFECTING RETURNS

Previous sections have shown that there were great variations in the success of individual farms. It is the purpose of the remaining sections to determine the factors affecting the returns to these farms and show their significance. Since these factors do not act independently, it is impossible to discover exactly how much of a given effect is due to an individual factor.

## Size of Business

As the size of business increases, there are greater opportunities to use capital and labor efficiently. Increased capital and labor efficiency cause increased outputs per acre and per man, resulting in increased returns.

Relation of productive man work units per farm other measures of size of business- As the size of business increased when measured by productive man work units per farm, the size of business measured by four other factors also increased (table 20).

Table 20.- Relation of productive man work units per farm to other measures of size of business on 300 small farms in Pittsylvania County, 1940

Productive man work units per farm	Number of farms	Average per farm				
		Productive man work units	Man equivalent	Acres of crops	Acres of tobacco	Capital investment
Less than 100	15	77	0.8	11	0.6	\$1,368
100 - 199	115	161	1.2	18	2.0	1,834
200 - 299	104	246	1.6	31	3.4	2,748
300 - 399	50	336	1.9	42	3.8	4,016
400 and over	16	465	2.3	53	4.0	4,890
All farms	300	232	1.5	28	2.9	\$2,653

As the number of productive man work units per farm increased from less than 100 to 400 and over, man equivalent increased from 0.8 to 2.3 per

farm, acres of crops increased from 11 to 53 per farm, acres of tobacco increased from 0.6 to 4.0 per farm, and capital investment increased from \$1,368 to \$4,880 per farm. The consistent increases in other measures of size of business with increases in productive man work units per farm indicates the reliability of the productive man work unit as a measure of size of business.

Relation of productive man work units per farm to returns and various other factors-- Increases in productive man work units per farm brought consistent increases in returns (table 21).

Table 21.-- Relation of productive man work units per farm to returns and various other factors on 300 small farms in Pittsylvania County, 1940

Productive man work units per farm	Number of farms	Productive Man work units		Pounds of tobacco produced per acre	Average per farm			
		Per farm	Per man		Total receipts	Farm income	Inter-est	Labor income
Less than 100	15	77	96	789	\$ 189	\$ 29	\$ 69	\$ -40
100 - 199	115	161	134	818	414	132	91	41
200 - 299	104	246	154	880	710	241	137	104
300 - 399	50	336	177	923	988	339	202	137
400 and over	16	465	222	952	1,835	479	245	234
All farms	300	232	154	889	\$ 677	\$217	\$132	\$ 85

As the number of productive man work units per farm increased from less than 100 to 400 and over, total receipts increased from \$189 to \$1,835 per farm, farm income increased from \$29 to \$479 per farm, and labor income increased from minus \$40 to plus \$234 per farm despite interest charges that increased from \$69 to \$245 per farm.

Labor efficiency, as indicated by productive man work units per man, increased consistently with increases in productive man work units per farm. Quantitative rates of production, as indicated by pounds of tobacco produced per acre, also increased consistently with increases in productive man work

units per farm. The combined effect of increased labor and capital efficiency with increased size of business was sufficient to raise labor income by \$274 per farm.

Relation of acres of tobacco per farm to returns and various other factors- As acres of tobacco per farm increased from an average of 0.8 to 4.6, farm income increased from \$52 to \$320 per farm, and labor income increased from minus \$19 to plus \$121 per farm (table 22).

Table 22.- Relation of acres of tobacco per farm to returns and various other factors on 294 small farms in Pittsylvania County, 1940 \*/

Acres of tobacco per farm	Number of farms	Average per farm			Pro- ductive man work units per man	Price received per pound for tobacco	Average per farm			
		Acres of tobacco	Acres of crops	Pro- ductive man work units			Farm income	Inter- est	Labor income	
0.1 - 1.0	21	0.8	15	123	1.2	107	15	\$ 52	\$ 71	\$-19
1.1 - 2.0	57	1.8	19	167	1.2	144	16	164	83	81
2.1 - 3.0	80	2.6	23	205	1.4	152	17	200	107	93
3.1 - 4.0	77	3.6	36	268	1.7	160	18	258	164	94
4.1 - 5.0	59	4.6	38	334	2.1	161	18	320	199	121
All farms	294	2.9	28	232	1.5	154	17	\$222	\$134	\$ 88

\*/ The six farms that grew no tobacco had an average of only \$25 per farm after paying all farm expenses, and lacked \$83 per farm to pay interest charges.

Size of business, as indicated by acres of crops per farm, productive man work units per farm, and man equivalent per farm, increased with increases in acres of tobacco per farm.

Labor efficiency, as indicated by productive man work units per man, increased consistently with increases in acres of tobacco per farm. Qualitative rates of production, as indicated by price received per pound for tobacco, increased with increases in acres of tobacco per farm. The combined effect of increased efficiency in the use of labor and capital was sufficient to raise labor income by \$140 per farm.

Relation of capital investment per farm to returns and various other factors- As capital investment per farm increased from less than \$2,000 to \$3,500 and over, total receipts increased from \$440 to \$1,188 per farm, and farm income increased from \$154 to \$342 per farm (table 23).

There was a slight negative relation between capital investment and labor income. As the value of real estate capital per farm increased from less than \$2,000 to \$3,500 and over, labor income decreased from \$90 to \$81 per farm. Livestock receipts per farm increased with increases in capital investment per farm. Increased livestock brought increased farm expenses and also increased interest charges. Livestock did not prove profitable on these farms as will be shown on table 32. The increased advantages afforded by the increased size of business were not sufficient to offset the increased interest charges on the larger capital investments. Another cause of lower labor income with larger capital investments was increased age of operator, lowering labor efficiency as will be shown on table 27.

Size of business, as indicated by acres of crops per farm, acres of tobacco per farm, and man equivalent per farm, increased consistently with increases in capital investment per farm.

#### Labor Efficiency

It is very important that labor be used efficiently if the farmer is to keep costs of production down and increase returns to the farm business. Labor efficiency is more easily obtained with larger sized businesses, because there is more and better equipment for labor to work with.

Relation of productive man work units per man to returns and various other factors- Increases in productive man work units per man brought consistent increases in returns (table 24).

Table 23.- Relation of capital investment per farm to returns and various other factors on 300 small farms in Pittsylvania County, 1940

Capital investment per farm	Number of farms	Average per farm								
		Capital investment	Acres of crops	Acres of tobacco	Man equivalent	Receipts from livestock	Total receipts	Farm income	Interest	Labor income
Less than \$2,000	135	\$1,307	18	2.4	1.3	\$ 26	\$ 440	\$154	\$ 64	\$90
\$2,000 - \$3,499	97	2,733	28	3.0	1.6	52	645	218	135	83
\$3,500 and over	68	5,214	46	3.8	1.9	206	1,188	342	261	81
All farms	300	\$2,653	28	2.9	1.6	\$ 75	\$ 677	\$217	\$132	\$85

Table 24.- Relation of productive man work units per man to returns and various other factors on 300 small farms in Pittsylvania County, 1940

Productive man work units per man	Number of farms	Productive man work units per man	Pounds of tobacco produced per acre	Average per farm					
				Productive man work units	Acres of crops	Total receipts	Farm income	Interest	Labor income
Less than 120	78	99	819	161	22	\$494	\$ 58	\$105	\$-47
120 - 179	139	148	883	228	27	653	302	202	100
180 and over	83	248	897	285	35	686	347	161	186
All farms	300	154	889	232	28	\$677	\$217	\$132	\$ 85

As productive man work units per man increased from less than 120 to 180 and over, total receipts increased from \$494 to \$886 per farm, farm income increased from \$58 to \$347 per farm, and labor income increased from minus \$47 to plus \$186 per farm (table 24).

Size of business, as indicated by productive man work units per farm and acres of crops per farm, increased consistently with increases in productive man work units per man. Quantitative rates of production, as indicated by pounds of tobacco produced per acre, also increased consistently with increases in productive man work units per man. The combined effect of increased size and labor efficiency was sufficient to raise labor income by \$233 per farm.

Relation of acres of tobacco per man to returns and various other factors- As acres of tobacco per man increased from less than 1.5 to 2.5 and over, farm income increased from \$70 to \$301 per farm, and labor income increased from minus \$51 to plus \$156 per farm (table 25).

Table 25.- Relation of acres of tobacco per man to returns and various other factors on 294 small farms in Pittsylvania County, 1940 <sup>\*/</sup>

Acres of tobacco per man	Number of farms	Acres of tobacco per man	Average per farm				
			Acres of tobacco	Sales of tobacco	Farm income	Inter-est	Labor income
Less than 1.5	66	1.0	1.9	\$278	\$ 70	\$121	\$-51
1.5 - 1.9	78	1.7	2.9	467	227	124	103
2.0 - 2.4	71	2.2	3.2	516	268	140	128
2.5 and over	<u>79</u>	<u>3.1</u>	<u>3.6</u>	<u>553</u>	<u>301</u>	<u>145</u>	<u>156</u>
All farms	294	2.1	3.0	\$460	\$222	\$134	\$ 88

<sup>\*/</sup> Six farms grew no tobacco

Size of business, as indicated by acres of tobacco per farm, increased consistently with increases in acres of tobacco per man. Sales of tobacco per farm also increased consistently with increases in acres of tobacco per

man. The combined effect of increased size of business and labor efficiency was sufficient to raise labor income by \$201 per farm.

Relation of acres of crops per man to returns and various other factors- As acres of crops per man increased from less than 10 to 20 and over, total receipts increased from \$518 to \$733 per farm, farm income increased from \$175 to \$263 per farm, and labor income increased from \$72 to \$99 per farm (table 26).

Table 26.- Relation of acres of crops per man to returns and various other factors on 299 small farms in Pittsylvania County, 1940 <sup>a/</sup>

Acres of crops per man	Number of farms	Acres of crops per man	Average per farm					
			Acres of crops	Pro-ductive man work units	Total re-ceipts	Farm in- come	Inter- est	Labor in- come
Less than 10	65	7	12	191	\$518	\$175	\$103	\$72
10 - 19	125	14	30	225	710	207	127	80
20 and over	<u>109</u>	<u>33</u>	<u>44</u>	<u>263</u>	<u>733</u>	<u>263</u>	<u>164</u>	<u>99</u>
All farms	299	19	28	232	\$677	\$219	\$133	\$86

<sup>a/</sup> One farm rented to tenants

Size of business, as indicated by acres of crops per farm and productive man work units per farm, increased consistently with increases in acres of crops per man. The combined effect of increases in size of business and labor efficiency was sufficient to raise labor income by \$27 per farm.

Relation of age of operator to returns and various other factors- As the age of operator increased from less than 40 to 55 or more, capital investment increased from \$2,390 to \$2,872 per farm, and interest charges increased from \$120 to \$140 per farm (table 27).

As the age of operator increased from less than 40 to 55 or more, farm income decreased from \$265 to \$166 per farm, and labor income decreased from

Table 27.- Relation of age of operator to returns and various other factors on 298 small farms in Pittsylvania County, 1940 \*/

Age of operator years	Number of farms	Average age of operator years	Productive man work units per man	Price received per pound for tobacco cents	Average per farm				
					Acres of tobacco	Capital investment	Farm income	Inter-est	Labor in- come
Less than 40	83	30	165	18	2.8	\$2,390	\$265	\$120	\$145
40 - 54	103	48	156	17	3.2	2,623	237	130	107
55 and over	<u>112</u>	<u>63</u>	<u>141</u>	<u>16</u>	<u>2.9</u>	<u>2,872</u>	<u>166</u>	<u>140</u>	<u>25</u>
All farms	298	49	154	17	2.9	\$2,652	\$218	\$132	\$ 86

\*/ Age of operator not known for two farms

\$145 to \$25 per farm.

Operators between the ages of 40 and 54 grew the largest tobacco acreages. Labor efficiency as indicated by productive man work units per man, decreased consistently as age of operator increased. Qualitative rates of production, as indicated by price received per pound for tobacco, decreased consistently with increased age of operator. The combined effect of decreased size of business and labor efficiency was sufficient to lower labor income by \$120 per farm.

#### Rates of Production

Size of business and labor efficiency are more effective when rates of production are high. Small size of business can be supplemented to a considerable extent by increasing intensity of operations.

#### Relation of tobacco yield per acre to returns and various other factors-

As tobacco yield per acre increased from less than 800 pounds to 1,000 pounds and over, total receipts increased from \$430 to \$936 per farm, farm income increased from \$94 to \$324 per farm, and labor income increased from \$0 to \$159 per farm (table 28).

Size of business, as indicated by acres of tobacco per farm and productive man work units per farm, increased consistently with increased tobacco yields per acre. Qualitative rates of production, as indicated by price received per pound for tobacco, also increased with increased tobacco yields per acre. Intensity of operations, as indicated by value of purchased fertilizer per acre of tobacco, increased consistently with increased tobacco yields per acre.

Relation of value of purchased fertilizer per acre of tobacco to returns and various other factors- As the value of purchased fertilizer per acre of

Table 28.- Relation of tobacco yield per acre to returns and various other factors on 294 small farms in Pittsylvania County, 1940 \*/

Tobacco yield per acre pounds	Number of farms	To- bacco yield per acre pounds	Price re- ceived per pound for to- bacco cents	Value of purchased fertilizer per acre of tobacco	Average per farm					
					Acres of to- bacco	Pro- ductive man work units	Total re- ceipts	Farm in- come	Inter- est	Labor in- come
Less than 800	90	652	15	\$15.37	2.7	212	\$430	\$ 94	\$ 94	\$ 0
800 - 999	110	884	17	16.15	3.0	239	676	238	138	100
1,000 and over	94	1122	18	17.68	3.1	248	936	324	165	159
All farms	294	889	17	\$16.40	3.0	232	\$684	\$222	\$134	\$ 88

\*/ Six farms grew no tobacco

tobacco increased from less than \$14.00 to \$16.50 and over, sales of tobacco increased from \$136 to \$174 per acre, or 28 percent, total receipts increased from \$598 to \$777 per farm, farm income increased from \$171 to \$263 per farm, and labor income increased from \$30 to \$133 per farm (table 29).

Farms with smallest tobacco acreages used more fertilizer per acre of tobacco than did farms with larger tobacco acreages. Thus, size of business was supplemented by intensity of operations.

Relation of price received per pound for tobacco to returns and various other factors- As the price received per pound for tobacco increased from less than 14 cents to 22 cents and over, sales of tobacco increased from \$216 to \$702 per farm, total receipts increased from \$517 to \$909 per farm, farm income increased from \$65 to \$470 per farm and labor income increased from minus \$43 to plus \$317 per farm (table 30).

Size of business, as indicated by acres of tobacco per farm, increased consistently with increases in the price received per pound for tobacco. Quantitative rates of production, as indicated by pounds of tobacco produced per acre, also increased consistently with increases in the price received per pound for tobacco.

The 165 farms that received less than 18 cents per pound for their tobacco had labor incomes that averaged a minus \$25 per farm. There was a difference of \$186 in labor income per farm in favor of the farms that received an average of 19 cents per pound for their tobacco over the farms that received an average of 16 cents. There was a difference of \$139 in labor income per farm in favor of the farms that received an average of 25 cents per pound for their tobacco over the farms that received an average of 19 cents.

Table 29.- Relation of value of purchased fertilizer per acre of tobacco to returns and various other factors on 294 small farms in Pittsylvania County, 1940 \*/

Value of purchased fertilizer per acre of tobacco	Number of farms	Value of purchased fertilizer per acre of tobacco	Sales of tobacco per acre	Average per farm				
				Acres of tobacco	Total receipts	Farm income	Interest	Labor income
Less than \$14.00	69	\$11.97	\$136	3.2	\$598	\$171	\$141	\$ 30
\$14.00 - \$16.49	93	15.16	147	3.0	615	199	131	68
\$16.50 and over	<u>132</u>	<u>19.58</u>	<u>174</u>	<u>2.8</u>	<u>777</u>	<u>263</u>	<u>130</u>	<u>133</u>
All farms	294	\$16.40	\$154	3.0	\$684	\$222	\$134	\$ 88

\*/ Six farms grew no tobacco.

Table 30.- Relation of price received per pound for tobacco to returns and various other factors on 294 small farms in Pittsylvania County, 1940 \*/

Price received per pound for tobacco	Number of farms	Price received per pound for tobacco	Pounds of tobacco produced per acre	Average per farm					
				Acres of tobacco	Sales of tobacco	Total receipts	Farm income	Interest	Labor income
Less than 14	80	10	837	2.5	\$216	\$517	\$ 65	\$108	\$-43
14 - 17	85	16	885	3.0	423	603	130	138	- 8
18 - 21	79	19	924	3.1	595	798	321	143	178
22 and over	<u>50</u>	<u>25</u>	<u>925</u>	<u>3.2</u>	<u>702</u>	<u>909</u>	<u>470</u>	<u>153</u>	<u>317</u>
All farms	294	17	889	3.0	\$461	\$684	\$222	\$134	\$ 88

\*/ Six farms grew no tobacco.

### Balance

A farm is most profitable when its enterprises are so combined that returns are at the maximum.

Relation of percentage of receipts from crops to returns and various other factors- As the percentage of receipts from crops increased from less than 50 percent to 80 percent and over, sales of tobacco increased from \$227 to \$526 per farm, and crop receipts increased from \$244 to \$535 per farm (table 31).

As the percentage of receipts from crops increased from less than 50 percent to 80 percent and over, livestock receipts decreased from \$243 to \$27 per farm, farm income decreased from \$262 to \$206 per farm, and labor income decreased from \$134 to \$74 per farm.

Size of business, as indicated by acres of tobacco per farm, increased consistently with increases in the percentage of receipts from crops. This does not mean that crops were not profitable, but rather that they were less profitable than another source of income, miscellaneous receipts (see table 33). In other words, crops were not profitable enough to justify dependence on them for all or a large part of receipts.

Labor efficiency, as indicated by productive man work units per man, decreased consistently with increases in the percentage of receipts from crops.

Relation of percentage of receipts from livestock to returns and various other factors- As the percentage of receipts from livestock increased from less than 5 percent to 10 percent or more, farm income decreased from \$247 to \$190 per farm, and labor income decreased from \$117 to \$47 per farm (table 32).

As the percentage of receipts from livestock increased from less than 5 percent to 10 percent and over, receipts from livestock increased from \$20

Table 31.- Relation of percentage of receipts from crops to returns and various other factors on 296 small farms in Pittsylvania County, 1940 \*/

Percent of receipts from crops	Number of farms	Percent of receipts from crops	Productive man work units per man	Average per farm						
				Acres of tobacco	Sales of tobacco	Receipts from crops	Receipts from live-stock	Farm income	Interest	Labor income
Percent		Percent								
Less than 50	47	33	173	1.9	\$227	\$244	\$243	\$262	\$128	\$134
50 - 79	87	68	161	3.0	455	475	73	229	139	90
80 and over	<u>162</u>	<u>92</u>	<u>143</u>	<u>3.3</u>	<u>526</u>	<u>535</u>	<u>27</u>	<u>206</u>	<u>132</u>	<u>74</u>
All farms	296	76	154	3.0	\$457	\$477	\$ 76	\$221	\$134	\$ 88

\*/ Four farms had no crop receipts.

Table 32.- Relation of percentage of receipts from livestock to returns and various other factors on 255 small farms in Pittsylvania County, 1940 \*/

Percent of receipts from livestock	Number of farms	Percent of receipts from livestock	Pro- ductive man work units per man	Man equiv- alent	Average per farm						
					Acres of tobacco	Sales of tobacco	Receipts from crops	Receipts from live-stock	Farm income	Interest	Labor income
Percent		Percent									
Less than 5	97	3	151	1.6	3.3	\$527	\$542	\$ 20	\$247	\$130	\$117
5 - 9	80	7	156	1.5	2.9	447	453	39	193	130	63
10 and over	<u>78</u>	<u>21</u>	<u>164</u>	<u>1.4</u>	<u>2.6</u>	<u>378</u>	<u>415</u>	<u>222</u>	<u>190</u>	<u>143</u>	<u>47</u>
All farms	255	10	155	1.5	3.0	\$456	\$475	\$ 86	\$213	\$134	\$ 79

\*/ Forty-five farms had less than 0.5 percent of receipts from livestock.

to \$222 per farm, while sales of tobacco decreased from \$527 to \$378 per farm, and receipts from crops decreased from \$642 to \$415 per farm.

Size of business, as indicated by man equivalent per farm and acres of tobacco per farm, decreased consistently with increases in the percentage of receipts from livestock.

Labor efficiency, as indicated by productive man work units per man, increased consistently with increases in the percentage of receipts from livestock. Livestock affords an even distribution of labor throughout the year, and thus enable farms to carry a large number of productive man work units per man. Most of the work with crops is seasonal, so that fewer productive man work units per man can be carried. It was shown in table 31 that productive man work units per man decreased with increases in the percentage of receipts from crops.

Relation of percentage of receipts from miscellaneous sources to returns and various other factors- As the percentage of receipts from miscellaneous sources increased from less than 10 to 30 or more, crop receipts decreased from \$490 to \$254 per farm, while farm income increased from \$195 to \$297 per farm, and labor income increased from \$51 to \$187 per farm (table 33).

Size of business, as indicated by acres of tobacco per farm and capital investment per farm, decreased consistently with increases in the percentage of receipts from miscellaneous sources. Labor efficiency, as indicated by productive man work units per man, decreased consistently with increases in the percentage of receipts from miscellaneous sources.

Relation of percentage of crop acreage in tobacco to returns and various other factors- As the percentage of crop acreage in tobacco increased

Table 33.- Relation of percentage of receipts from miscellaneous sources to returns and various other factors on 185 small farms in Pittsylvania County, 1940 <sup>\*/</sup>

Percent of receipts from miscellaneous sources	Number of farms	Percent of receipts from miscellaneous sources	Pro-ductive man work units per man	Average per farm					
				Acres of tobacco	Capital investment	Receipts from crops	Farm income	Interest	Labor income
Percent		Percent							
Less than 10	86	4	222	2.9	\$2,873	\$490	\$195	\$144	\$ 51
10 - 29	53	18	158	2.9	2,700	437	204	135	69
30 and over	46	51	132	2.0	2,189	254	297	110	187
All farms	185	20	184	2.7	\$2,654	\$417	\$224	\$134	\$ 90

<sup>\*/</sup> One hundred and fifteen farms had less than 0.5 percent of receipts from miscellaneous sources.

from less than 10 to 20 and over, farm income increased from \$187 per farm to \$285 per farm and labor income increased from \$28 to \$165 per farm (table 34).

Acres of tobacco per farm increased, while acres of crops per farm decreased, with increases in the percentage of crop acreage in tobacco.

Labor efficiency as indicated by acres of tobacco per man, increased consistently with increases in the percentage of crop acreage in tobacco. Qualitative rates of production, as indicated by price received per pound for tobacco, increased with increases in the percentage of crop acreage in tobacco.

#### Combined Effect of Three Factors Above and Below Average

Farms which were above average in size of business, labor efficiency, and rates of production made the highest labor incomes, averaging \$259 per farm (table 35).

Farms which were below average in size of business, labor efficiency, and rates of production made the lowest labor incomes, averaging minus \$44 per farm. Of the farms with size of business below the average 39 percent were below the average in both labor efficiency and production rates, while only 13 percent of the farms with size of business above the average were below the average in the two factors. Labor efficiency was below the average on 68 percent of the farms with size of business below the average, as compared to only 32 percent of the farms with size of business above the average.

Table 34.- Relation of percentage of crop acreage in tobacco to returns and various other factors on 294 small farms in Pittsylvania County, 1940 \*/

Percent of crop acreage in tobacco	Number of farms	Percent of crop acreage in tobacco	Acres of tobacco per man	Price received per pound for tobacco	Average per farm				
					Acres of tobacco	Acres of crops	Farm income	Interest	Labor income
Percent		Percent		Cents					
Less than 10	97	6	1.8	16	2.7	45	\$157	\$159	\$ 28
10 - 14	88	12	2.0	17	3.0	26	214	130	84
15 - 19	55	17	2.3	18	3.2	18	233	127	106
20 and over	<u>54</u>	<u>29</u>	<u>2.6</u>	<u>18</u>	<u>3.2</u>	<u>12</u>	<u>285</u>	<u>100</u>	<u>185</u>
All farms	294	14	2.1	17	3.0	28	\$222	\$134	\$ 88

\*/ Six farms grow no tobacco.

Table 35.- Effect on labor income of having different factors above and below average

Factors above or Below average	Number of farms	Productive man work units		Pounds of tobacco produced per acre	Labor income per farm
		Per farm	Per man		
Work units below, work units per man below, tobacco yield below	65	153	111	649	\$-44
Work units above, work units per man below, tobacco yield below	17	322	128	756	1
Work units below, work units per man above, tobacco yield below	30	185	183	691	60
Work units below, work units per man below, tobacco yield above	48	159	112	1,098	68
Work units above, work units per man below, tobacco yield above	25	314	121	1,021	74
Work units above, work units per man above, tobacco yield below	44	299	210	762	113
Work units below, work units per man above, tobacco yield above	25	190	183	1,078	189
Work units above, work units per man above, tobacco yield above	46	327	211	1,021	259
All farms	300	232	154	889	\$ 85

## SUMMARY

The purchasing power of farm prices in 1940 was 91 percent of pre-World War I. Virginia farmers were receiving an average of 13.8 cents a pound for their bright tobacco, the lowest average price received since 1933. Heavy August rains reduced both the quality and quantity of the 1940 tobacco crop.

Pittsylvania county is situated in the south central part of Virginia, and lies wholly within the Piedmont Plateau. The climate is mild, and there is approximately 42 inches of well distributed rainfall each year. The growing season averages about 6½ months. Cecil, Appling, Granville, and Durham are the predominating soil series. These soils are rated high for bright flue-cured tobacco. In 1940, Pittsylvania County ranked 7th in the United States in tobacco harvested on farms.

The average size of the 299 farms tended by their operators in 1940 was 81.7 acres, slightly over one-third of which was in crops. An average of 2.9 acres of tobacco was grown per farm. All farms except 6 grew tobacco.

The average capital investment was \$2,653 per farm, 81 percent of which was invested in fixed, or real estate capital.

The average receipts from crops were \$456.22 per farm. Sales of tobacco amounted to an average of \$451.37 per farm, 96.4 percent of the total crop sales. The average total receipts were \$676.55 per farm. The sale of crops accounted for 69.2 percent of the total receipts. Miscellaneous receipts were the second most important source of receipts, averaging \$86.50 per farm.

Total farm expenses averaged \$459.24 per farm. Unpaid family labor accounted for 23.6 percent of the total farm expense. The operator's labor was not counted as a farm expense. The average home expenses for clothing,

groceries, doctor's bills, life insurance, telephone, electricity, automobile, fuel, and other home expenses were \$184.07 per farm.

The average farm income was \$217.31 per farm. After \$132.65 was deducted as interest on capital, \$84.66 was left per farm as labor income. Adding \$307.41 of farm products furnished the family to the average labor income gave \$392.07 per farm as labor earnings. When \$312.90, the average value of the operator's labor, was subtracted from the average farm income, a minus \$95.59 per farm was left as return on capital, a rate of minus 3.69 percent.

As productive man work units per farm and acres of tobacco per farm increased, there were consistent increases in labor income per farm. As capital investment per farm increased, there was a slight tendency for labor income to decrease.

As productive man work units per man, acres of tobacco per man, and acres of crops per man increased, there were consistent increases in labor income per farm. Labor income per farm decreased as age of operator increased.

As tobacco yield per acre, value of purchased fertilizer per acre of tobacco, and price received per pound for tobacco increased, there were consistent increases in labor income per farm.

Labor income per farm decreased consistently with increases in the percentage of receipts from crops and increased consistently with increases in the percentage of receipts from miscellaneous sources. Labor income per farm decreased consistently with increases in the percentage of receipts from livestock. The combination of enterprises that gave the best results for these farms in 1940 was one that provided less than 50 percent of receipts from

crops, and greater than 30 percent of receipts from off-the-farm sources.

There was a difference of \$303 in labor income per farm in favor of farms that were above the average in size of business, labor efficiency, and rates of production over the farms that were below the average in the three factors.