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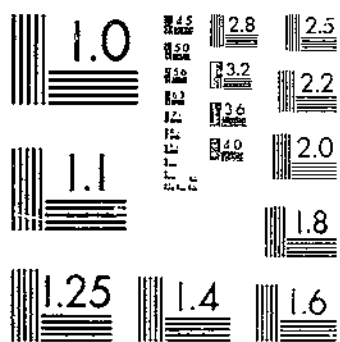
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FARMS, 1964 AND 1965, 48 STATES

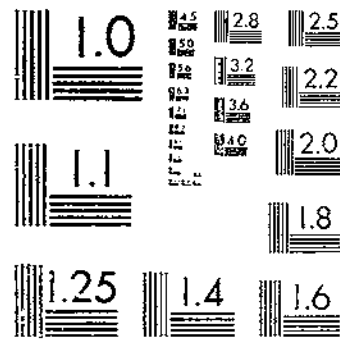
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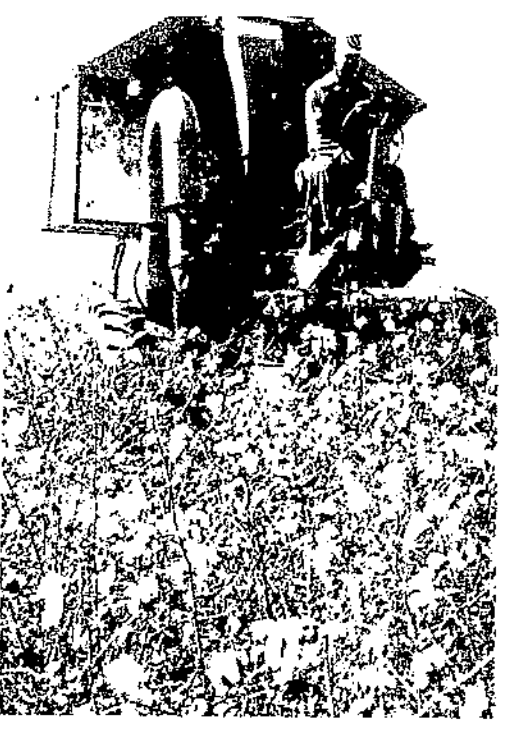
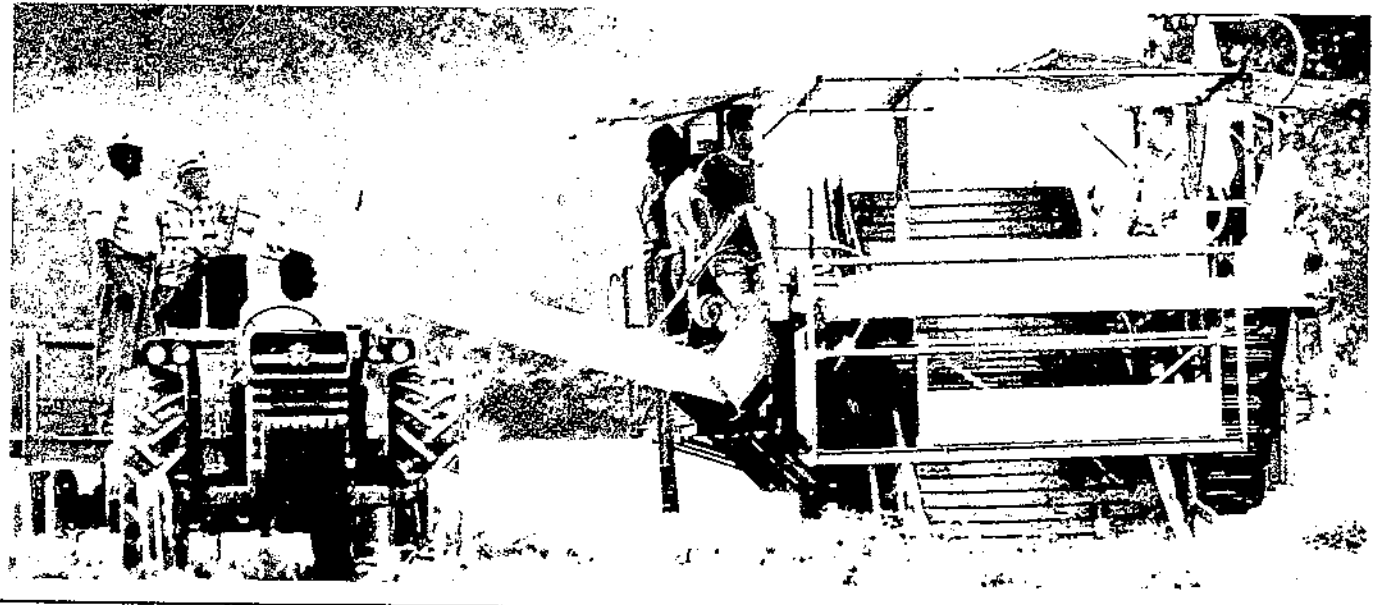
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LABOR USED ON U.S. FARMS 1964 and 1966

U.S. DEPARTMENT OF AGRICULTURE • ECONOMIC RESEARCH SERVICE • STATISTICAL BULLETIN NO. 456



ABSTRACT

Factors such as type of farm, farm production region, and farm size affect the percentage of farms hiring workers, the number of hours worked by hired workers, the length of the farm workweek, and the hours of labor used per \$100 gross sales. Labor costs and shortages most directly affected farms that sold over \$20,000 of farm products in 1964 and 1966. In 1966, these farms produced 68 percent of all farm products sold and used 68 percent of all manhours of hired labor. Yet the farm family was the major source of manpower in both years. Regular hired labor was important on farms grossing over \$40,000 in sales and a major source of hired manpower for dairy and livestock operations. Work weeks were shortest for tobacco farmers, longest for dairy farmers and livestock ranchers. To produce \$100 gross sales, more labor was used on small farms, particularly tobacco farms, in both 1964 and 1966. Data in this report were derived from information obtained in two Pesticide and General Farm Surveys based on 1964 and 1966 farm operations.

Key Words: Farm labor, Hired labor, Family labor, Regular hired labor, Farm workweek, and Gross sales.

CONTENTS

| | <u>Page</u> |
|---|-------------|
| HIGHLIGHTS..... | iii |
| INTRODUCTION..... | 1 |
| CONCENTRATION OF FARMS, FARM PRODUCTS SOLD, AND FARM LABOR..... | 2 |
| DEMAND FOR HUMAN RESOURCES--COMPARISON OF 1965 WITH 1964..... | 4 |
| Effects of Farm Size..... | 4 |
| Human Resource Allocation by Type of Farm..... | 5 |
| Regional Effects on Demand for Farm Labor..... | 6 |
| Weekly Work Patterns..... | 7 |
| Returns to Labor, 1964 and 1966..... | 12 |
| APPENDIX A..... | 14 |
| APPENDIX B, SCOPE AND METHOD OF 1966 SURVEY..... | 17 |
| DEFINITIONS..... | 21 |

TEXT TABLES

| <u>Table</u> | <u>Page</u> |
|---|-------------|
| 1. Number of survey farms and value of farm products sold, by sales of agricultural products, 48 States, 1966..... | 2 |
| 2. Number of farms and distribution of hours of labor, by value of farm products sold, 48 States, 1966..... | 3 |
| 3. Proportion of survey farms that hired labor and the proportion of labor performed by family and hired workers, by value of farm products sold, 48 States, 1964 and 1966..... | 5 |
| 4. Proportion of survey farms that hired labor and the proportion of labor performed by family and hired workers, by type of farm, 48 States, 1964 and 1966..... | 6 |
| 5. Proportion of survey farms that hired labor and the proportion of labor performed by family and hired workers, by farm production region, 48 States, 1964 and 1966..... | 8 |
| 6. Average weekly hours of farmwork per worker, by family and hired workers, on survey farms that hired labor, by value of farm products sold, 48 States, 1964 and 1966..... | 9 |
| 7. Average weekly hours of farmwork per worker by family and hired workers, on survey farms that hired labor, by type of farm, 48 States, 1964 and 1966..... | 11 |
| 8. Hours of labor used per \$100 gross sales on survey farms that hired labor, by value of farm products sold and by type of farm, 48 States, 1964 and 1966..... | 13 |

APPENDIX TABLES

| | |
|--|----|
| 1. Proportion of farms that hired labor and the proportion of labor performed by family and hired workers, by region and type of farm, 48 States, 1964 and 1966..... | 14 |
| 2. Distribution of farms by economic class in selected surveys or estimates based on surveys..... | 18 |
| 3. Distribution of value of sales by economic class for three major surveys or estimates..... | 19 |
| 4. Distribution of farms by type of farm, comparison of two surveys..... | 20 |

HIGHLIGHTS

The farms most directly affected by increases in labor costs and manpower shortages in 1964 and 1966 were those that sold over \$20,000 of farm products. These farms comprised 18 percent of all farms surveyed; produced 68 percent of all farm products sold; and used 68 percent of all man-hours of hired farm labor in 1966.

The farm family was the major source of manpower in both years. With the exception of families of livestock operators, the family increased its share of total farm labor inputs over the 2-year period on all types of farms. The family commitment to farm labor varied by farm size, type, and geographic location. About 36 percent of all farms functioned using only family labor in 1964 and 27 percent in 1966.

Type of farm, region, and size of farming operation influenced hiring practices and total labor demand. The regular hired worker became important on farms grossing over \$40,000 in sales, and was the major source of hired manpower for most of the dairy and livestock operations.

In the farming sector, there is a great disparity in the length of the work week for both operators and their hired help. In 1966, the operators' work week averaged 54 hours--varying from 46 hours on tobacco farms to 66 hours on dairy farms. Regular hired workers in 1966 put in considerable hours wherever they worked--from 36 hours a week on tobacco farms to 55 hours on dairy farms, and 56 hours on livestock ranches. The same range was prevalent during 1964.

Small-scale farmers had to put in more than 3 1/2 hours of labor for every 1 hour that the large-scale operator worked to derive \$100 in sales in 1964. By 1966, this disparity had risen to 5 to 1.

Tobacco farmers in both crop years had to put in nearly three times as much labor to earn \$100 as cash grain farmers, and over two times as much as livestock ranchers.

LABOR USED ON U.S. FARMS, 1964 AND 1966

by

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INTRODUCTION

Many production economists measure a firm's economic soundness by the quality and cost of inputs in relation to the receipts for its product. Basic to any farm firm are the inputs of land, labor, and capital.

For many decades, the farmer worried about the quality of his land and the cost of capital, but rarely did he concern himself with the quality and cost of labor. He always had available a residual pool of unemployed persons desirous of work. Therefore, he had a natural resource of human energy that he could rely upon.

In the 1960's, with low unemployment in the total labor force and labor cost continuously increasing, the farmer found his labor resources drying up. He had to actively compete for labor. He had to either pay more to retain hired labor, use more family labor and more machines to replace hired labor, or restrict his farm size to the level that his family labor could maintain without added investment.

Many small farm operators are helping pay their hired labor with income they earn from off-farm employment. Large farm operators who must rely on hired labor are mechanizing, hiring only the more efficient workers, and working toward optimal use of all their inputs.

This study uses 1964 and 1966 data to show that certain relationships do hold over a period of time--that type of farm, farm size, and geographic location determine to some extent how much and what kind of labor will be used. Of course, certain exogenous, nonfarm factors--such as high wages, surplus labor, lack of job opportunities, and economic growth of an area--may be just as important. However, this is the interplay of the regional factor.

In the 1964 study, farms were examined by region, farm size, and farm type to see if there was a relationship with the use of labor.^{1/} Only a few farms with less than \$5,000 in gross sales were included. In the 1966 Pesticide and General Farm Survey, on which 1966 data in this report are based, farms of all sizes were studied. Therefore, in this

^{1/} Sellers, W.E., and Eichers, T.E. Farm Labor Inputs, 1964. U.S. Dept. Agr., Econ. Res. Serv., Stat. Bul. No. 438, June 1969.

report, which compares data for the 2 years, only farms above \$5,000 in gross sales are discussed. For methodology and reliability of the 1966 Pesticide and General Farm Survey, see page 17 in appendix B. Tables 2, 3, and 4 in appendix B compare the distribution of farms and value of sales in this study with other national surveys.

CONCENTRATION OF FARMS, FARM PRODUCTS SOLD, AND FARM LABOR

Who is producing the bulk of our farm products? Who is most likely to be affected by our farm programs, increased farm labor costs, and the supply of rural manpower? This section is mainly to establish a perspective before a discussion of the quantity and kinds of farm labor used in 1966 and 1964 on various types and sizes of farms in selected farm production regions.

Farms with gross sales less than \$5,000 are important to the extent that they comprise almost half of all our farms. Yet farms of this size produce only 7 percent of all farm products sold (table 1). The effect on the farm labor force of these small farms is quite minimal, both as to family and hired labor.

Table 1.--Number of survey farms and value of farm products sold, by sales of agricultural products, 48 States, 1966

| Sales of agricultural products | Farms | Value of farm products sold | | | |
|--------------------------------|--------|-----------------------------|-------|-----------|---------------------|
| | | Total | Crops | Livestock | Other ^{1/} |
| | Number | Million dollars | | | |
| All farms..... | 16,164 | 224.8 | 79.0 | 144.6 | 1.2 |
| | | Percent | | | |
| \$50-\$4,999..... | 49 | 7 | 8. | 6 | 16 |
| \$5,000-\$9,999..... | 19 | 10 | 13 | 8 | 7 |
| \$10,000-\$19,999..... | 14 | 15 | 17 | 14 | 9 |
| \$20,000-\$39,999..... | 12 | 23 | 26 | 22 | 19 |
| \$40,000-\$99,999..... | 5 | 19 | 22 | 18 | 11 |
| \$100,000 and over..... | 1 | 26 | 14 | 32 | 38 |

^{1/} Nursery, greenhouse, and forest products.

At the other end of the spectrum, farms with gross sales of \$100,000 and over comprised only 1 percent of the farms, but sold 26 percent of all farm products sold and hired 28 percent of all regular labor. Extending this to farms with gross sales of \$20,000 and over, 18 percent of the farms produced 68 percent of all farm products sold and 72 percent of the livestock. These farms used 68 percent of the total man-hours of hired labor and 77 percent of the man-hours of regular hired labor (table 2). This is a somewhat greater concentration of sales and labor on large farms than reported in 1964. These are the farms most directly affected

Table 2.--Number of farms and distribution of hours of labor, by value of farm products sold, 48 States, 1966

| Value of farm products sold | Farms <u>1/</u> | Total hours of labor on all farms <u>2/</u> | Hours of hired labor <u>2/</u> | | | Distribution of hours | | | |
|-----------------------------|-----------------|---|--------------------------------|---------|----------|-----------------------|-------------|---------|----------|
| | | | Total | Regular | Seasonal | Total hours | Hired labor | | |
| | | | | | | | Total | Regular | Seasonal |
| | Thousands | Million hours | | | | Percent | | | |
| \$50-\$2,499..... | 1,110 | 1,702 | 88 | 24 | 65 | 14 | 4 | 2 | 6 |
| \$2,500-\$4,999..... | 449 | 1,364 | 96 | 33 | 63 | 11 | 4 | 2 | 6 |
| \$5,000-\$9,999..... | 600 | 2,366 | 260 | 102 | 159 | 19 | 10 | 7 | 16 |
| \$10,000-\$19,999..... | 458 | 2,293 | 337 | 183 | 154 | 19 | 14 | 12 | 16 |
| \$20,000-\$39,999..... | 376 | 2,304 | 518 | 336 | 182 | 19 | 21 | 23 | 18 |
| \$40,000-\$99,999..... | 149 | 1,323 | 582 | 394 | 188 | 11 | 23 | 26 | 19 |
| \$100,000 and over..... | 41 | 814 | 602 | 416 | 186 | 7 | 24 | 28 | 19 |
| All farms <u>3/</u> | 3,183 | 12,167 | 2,482 | 1,484 | 998 | 100 | 100 | 100 | 100 |

1/ Number of Farms and Land in Farms. U.S. Dept. Agr., Stat. Rpt. Serv., SPSY (1-69), Jan. 10, 1969. (Excludes Rhode Island, Hawaii, and Alaska.)

2/ Average hours of labor per farm by farm size (as reported in the 1966 Pesticide and General Farm Survey, U.S. Dept. Agr., Econ. Res. Serv., unpublished) multiplied by the number of farms in col. 1.

3/ Detail may not add to total because of rounding.

by increases in labor costs and manpower shortages. It is these farms that must compete with nonfarm industry for skilled and competent full-time, year-round workers.

DEMAND FOR HUMAN RESOURCES--COMPARISON OF 1966 WITH 1964

In evaluating human resource allocation on farms, we should determine the major demand areas. Does farm size ^{2/} have a cause and effect relationship to demand for manpower? Or would farms of the same size in different production regions require different amounts of labor, and in particular, different amounts of hired labor? What is the differentiation in demand for labor on a tobacco farm in the Appalachian Region in contrast with such demand on a Lake State dairy farm?

The purpose of this study is to determine labor demand differences and their magnitudes. This particular study shows that these differences persist over time and that there is some increase in the trend for more farms to hire labor although requiring less labor per farm.

Effects of Farm Size

The majority of farms in every sales group hire some labor during the year. Between 1964 and 1966, the proportion of farms hiring labor increased at every level below \$40,000 gross sales (table 3). For the largest farms, the percentage hiring remained about the same. Even so, the operator and his family furnished the major share of labor on all farms below \$100,000 in gross sales. For farms with less than \$20,000 of gross sales, the family did over four-fifths of the work during 1966. On large class I farms (those with sales of \$40,000 to \$99,999), just over half the labor was provided by the family. In both 1964 and 1966, small- and medium-size farmers relied mostly on family labor except at peak demand periods. Their labor supply, then, is probably adequate until one or more members go off to school or the military, or otherwise are not available. Then they must hire labor or restrict their farming operations. However, as brought out in other studies, an increasing number of farmers and their families are doing off-farm work.^{3/} This allows farmers to substitute low paid hired farm labor for family labor as well as provide the family with greater income. This may be one of the reasons behind an increasing number of smaller farms using hired labor.

Acquiring enough labor to run an efficient, large-scale farm is much of the farm manpower problem. Although small farmers have some concern over hiring labor at a peak season, large commercial farms (whether family or corporate) have considerable difficulty all year long. About 95 percent of all large farms hired labor and relied upon hired help to do 75 to 80 percent of the work.

Large-scale operations bring the operator into the competitive labor market--not only with other farmers but also with nonfarm businesses.

^{2/} Farm size in this study is measured by value of farm products sold during the year. For more detailed explanation, see p. 22 in app. B.

^{3/} U.S. Census Bureau, 1965 sample survey of agriculture, and Farm Income Situation. U.S. Dept. Agr., Econ. Res. Serv., FIS-214, July 1969.

Table 3.--Proportion of survey farms that hired labor and the proportion of labor performed by family and hired workers, by value of farm products sold, 48 States, 1964 and 1966 ^{1/}

| Value of farm products sold | Percentage of farms hiring labor | | Percentage of total man-hours worked by-- ^{2/} | | | |
|-----------------------------|----------------------------------|------|---|------|---------------|------|
| | 1964 | 1966 | Operator and family | | Hired workers | |
| | | | 1964 | 1966 | 1964 | 1966 |
| | -----Percent----- | | | | | |
| \$5,000-\$9,999..... | 57 | 68 | 77 | 86 | 23 | 14 |
| \$10,000-\$19,999.... | 60 | 71 | 73 | 82 | 27 | 18 |
| \$20,000-\$39,999... | 74 | 76 | 59 | 73 | 41 | 27 |
| \$40,000-\$99,999.... | 88 | 84 | 41 | 52 | 59 | 48 |
| \$100,000 and over..... | 95 | 94 | 19 | 25 | 81 | 75 |
| All sales groups..... | 64 | 73 | 60 | 70 | 40 | 30 |

^{1/} Data in this table refer only to those farms with gross sales of \$5,000 or more.

^{2/} These data are for farms that hired labor. Farms not hiring labor are excluded from last four columns.

Efficient large-scale operations mean mechanization. Mechanization means skilled workers (machine operators and mechanics), and skilled workers relate to higher cash wages, more supplemental benefits, and good labor-management relations. The "big farmer," then, must compete with nonfarm industry for competent, reliable workers.

Human Resource Allocation by Type of Farm

The majority of farms of all types in both 1964 and 1966 hired some labor during the year (table 4). During the 2-year interval, the proportion of farms hiring labor actually increased for all farm types, except tobacco and "other field crop" farms.

About 36 percent of all farms used only family labor in 1964 and 27 percent in 1966. Family labor was heavily relied upon on cash grain, tobacco, dairy, and "other livestock" farms. In 1966, family labor contributed about three-fourths of these farms' manpower requirements. Also, all four types of farms showed increased use of family labor from 1964 to 1966. In the case of cash grain and tobacco farms, this is probably due to more mechanization and technological changes that resulted in less need for hired help. However, in dairy and "other livestock" farming, the increase in family labor may be due more to the inability of farmers in these areas to compete for competent, year-round workers. Too, a 55-hour week--somewhat common with livestock enterprises--is not an attractive inducement to many Americans who value leisure time, especially if they can average 40 hours or less in nonfarmwork.

Table 4.--Proportion of survey farms that hired labor and the proportion of labor performed by family and hired workers, by type of farm, 48 States, 1964 and 1966 ^{1/}

| Type of farm | Percentage of farms hiring labor | | Percentage of total hours worked by-- ^{2/} | | | |
|---------------------|----------------------------------|------|---|------|---------------|------|
| | 1964 | 1966 | Operator and family | | Hired workers | |
| | | | 1964 | 1966 | 1964 | 1966 |
| | -----Percent----- | | | | | |
| Cash grain..... | 58 | 69 | 63 | 73 | 37 | 27 |
| Tobacco..... | 96 | 93 | 58 | 75 | 42 | 25 |
| Cotton..... | 92 | 95 | 35 | 50 | 65 | 50 |
| Other field crops.. | 93 | 86 | 53 | 55 | 47 | 45 |
| Dairy..... | 56 | 70 | 69 | 79 | 31 | 21 |
| Livestock ranches.. | 61 | 72 | 58 | 53 | 42 | 47 |
| Other livestock... | 60 | 70 | 74 | 76 | 26 | 24 |
| General..... | 63 | 76 | 54 | 61 | 46 | 39 |
| All farms..... | 64 | 73 | 60 | 70 | 40 | 30 |

^{1/} Data in this table refer only to farms with gross sales of \$5,000 or more.

^{2/} These data are on farms that hired labor. Farms not hiring labor are excluded in the last four columns.

Because of the heavy seasonal need for manpower on "other field crop" farms and livestock ranches, the family was able to supply little more than half the labor in both 1964 and 1966. Families also supplied 54 and 61 percent of the labor on general farms in the 2 respective years. With the exception of families of livestock operators, the family increased its share of total labor input used over the 2-year period on all types of farms.

Regional Effects on Demand for Farm Labor

Topography, climate, and other environmental factors restrict certain types of farming to certain regions--and it is said that farm type and the kind and quantity of farm labor used within a region are directly related. However--if this were a truism--why does a greater proportion of every farm type in the southern regions hire labor and hire more labor than its corresponding farm type in other regions?

I submit a basic factor in regional differences in labor use is the availability of human resources. Labor, like any other commodity, has a price, and the price of labor without Government controls depends

upon supply and demand. The abundant over-supply of unskilled, low-priced manpower in the South allowed farmers to engage in labor use practices that were economically prohibitive in other regions.

More than 85 percent of the southern 4/ farms with gross sales over \$5,000 hired labor in 1964 and 1966 (table 5). The only other region with such a propensity to use hired labor was the Southern Plains, where there has been an abundance of unskilled Americans of Mexican ancestry.

On farms hiring labor in the Southeast and Delta States, family labor accounted for less than half the manpower in 1964 and not much over half in 1966 (app. table 1). Yet, in the Corn Belt, Lake States, and Northern Plains, the family was the major source of labor--furnishing about 85 percent in each region. Of course, the labor utilization practices differ among regions because of the kinds of crops grown or the type of farm operations peculiar to a region. In the Northeast and Lake States Regions, where dairy farming is the major farm activity, there is need for year-round work. The operator and his hired help work more weeks during the year and longer hours every day than do farmers in other regions. There is less demand for seasonal short-term employment.

In the Appalachian and Southeast Regions, cotton, tobacco, and fruit and nut farms require a heavy influx of labor for a short period of time. Because of the type of work and the lower wage structure on these farms, the operators in the past could hire lower skilled workers than are required to operate expensive combines in the Corn Belt. However, with the dramatic increase in cost of labor in recent years, cotton, fruit and nut, and tobacco farmers are turning to more productive operations and using less labor. If the trend toward greater mechanization and technological improvement continues, and a change in Government policy in acreage allotments comes about, these types of farms in the South will change their hiring practices considerably. We can then look for a more stabilized work force in the South, with less short-term work and greater emphasis on regular full-time employment.

Seasonality of the work force will be discussed at length in a forthcoming publication, and will be referred to only in general terms in this report.

The conclusion of this section, then, is that there is a regional factor influencing the employment practices of farmers--due to both environmental and population characteristics of the regions.

Weekly Work Patterns

Farm Size

The average farmer in 1964 and 1966, no matter what his gross farm sales, had less leisure time than the average nonfarm worker. He also worked more hours a week than his hired help. During both years, the operator averaged around 54 or 55 hours per week (table 6). On the small farms, he averaged about 51 hours a week during 1964 and 47 hours during 1966.

4/ Southern farms here refers to those in the Appalachian, Southeast, and Delta States Regions.

Table 5.--Proportion of survey farms that hired labor and the proportion of labor performed by family and hired workers, by farm production region, 48 States, 1964 and 1966 1/

| Farm production region | Percentage of farms hiring labor | | Percentage of total hours worked by-- <u>2/</u> | | | |
|------------------------|----------------------------------|------|---|------|---------------|------|
| | 1964 | 1966 | Operator and family | | Hired workers | |
| | | | 1964 | 1966 | 1964 | 1966 |
| | -----Percent----- | | | | | |
| Northeast..... | 67 | 75 | 61 | 66 | 39 | 34 |
| Lake States..... | 43 | 71 | 81 | 86 | 19 | 14 |
| Corn Belt..... | 58 | 61 | 78 | 83 | 22 | 17 |
| Northern Plains... | 47 | 71 | 76 | 85 | 24 | 15 |
| Appalachian..... | 89 | 91 | 58 | 67 | 42 | 33 |
| Southeast..... | 89 | 70 | 44 | 53 | 56 | 47 |
| Delta States..... | 84 | 85 | 38 | 51 | 62 | 49 |
| Southern Plains... | 83 | 90 | 52 | 63 | 48 | 37 |
| Mountain..... | 71 | 80 | 47 | 54 | 53 | 46 |
| Pacific..... | 76 | 77 | 45 | 39 | 55 | 61 |
| All regions..... | 64 | 73 | 61 | 70 | 39 | 30 |

1/ Data in this table refer only to farms with gross sales of \$5,000 or more.

2/ These data are on farms that hired labor. Farms not hiring labor are excluded in the last four columns.

Table 6.--Average weekly hours of farmwork per worker, by family and hired workers, on survey farms that hired labor, by value of farm products sold, 48 States, 1964 and 1966 1/

| Value of farm products sold | Average weekly hours worked per worker <u>2/</u> | | | | | | | |
|---------------------------------|--|------|--------------|-----------------------|----------|------|--------------|-----------------------|
| | 1964 | | | | 1966 | | | |
| | Family | | | Regular hired workers | Family | | | Regular hired workers |
| | Operator | Wife | Other family | | Operator | Wife | Other family | |
| -----Hours----- | | | | | | | | |
| \$5,000-\$9,999..... | 51 | 27 | 41 | 42 | 47 | 23 | 26 | 46 |
| \$10,000-\$19,999..... | 58 | 24 | 40 | 50 | 56 | 24 | 26 | 47 |
| \$20,000-\$39,999..... | 61 | 22 | 44 | 52 | 61 | 24 | 27 | 49 |
| \$40,000-\$99,999..... | 61 | 20 | 49 | 58 | 58 | 20 | 26 | 49 |
| \$100,000 and over..... | 62 | 25 | 56 | 57 | 55 | 18 | 26 | 46 |
| All sales groups <u>1/</u> | 55 | 25 | 43 | 53 | 54 | 23 | 27 | 47 |

1/ Data in this table refer only to farms with gross sales of \$5,000 or more.

2/ Hours per week for the weeks that the workers performed farmwork.

Operators of farms with gross sales between \$20,000 and \$39,999 averaged 61 hours of farm work for those weeks they worked during 1964 and 1966. Operators of this size farm put in more hours per week than operators on any other size of farm in 1966. In 1964, farm operators with over \$100,000 gross sales averaged 62 hours a week, the highest for any group that year. However, this was only an hour more than farm operators with gross sales between \$20,000 and \$39,999.

During 1964 and 1966, regular hired farmworkers had fewer hours of leisure than nonfarm workers. In 1964, their work week ran from 42 hours on the smaller farms (\$5,000 to \$9,999 gross sales) to 58 hours per week on the large class I farms (table 6). In 1966, regular hired farmworkers had a shorter work week than they did 2 years earlier on all farms above \$10,000 gross sales. Even so, the number of hours they worked a week was more than that averaged by nonfarm employees.^{5/} In 1966, regular hired farmworkers averaged about as many hours per week on the smaller farms as they did on the largest farms.

Farm Type

The workweek varied considerably among farm types in both 1964 and 1966. In 1964, the operator's workweek ranged from 44 hours on tobacco farms to 69 hours on dairy farms. In 1966, the same wide spread in the workweek was evident with tobacco farmers averaging considerably fewer hours a week than dairymen (table 7). Over the 2-year period, the workweek for most types of farm operators remained nearly the same. However, there was a significant decline in the workweek of livestock ranch operators. Their workweek declined from 62 to 48 hours. The same shortening of the workweek took place for regular hired help on these ranches.

The disparity in the length of the workweek for regular hired help follows about the same pattern as for the operator. Hired workers on most livestock operations had a considerably longer workweek than those working on field crop farms. Regular hired help on livestock ranches worked almost half again as many hours as hired help on tobacco farms. Also, in 1964, hired workers on dairy farms had a workweek a third longer than hired workers on tobacco farms. Unlike farm operators, regular hired workers showed shorter work weeks in 1966 than in 1964 on every type of farm operation. This may be due in part to the sizable increase in the use of seasonal labor. In 1966, seasonal workers accounted for a greater proportion of total hours of farmwork than they did in 1964.

Within agriculture there is a great disparity in the length of the workweek among farm operators as well as among their hired help. Dairy and livestock farms have a workweek almost 50 percent longer than nonfarm industry and even many other farming operations. Thus, there is little wonder that dairy and livestock farms have difficulty finding and keeping good hired help.

^{5/} The U.S. Dept. of Labor reported average weekly hours worked by production workers in total private industry in 1966 as 38.6. Employment and Earnings Statistics for the United States 1909-68. Bul. No. 1312-6, Aug. 1968.

Table 7.--Average weekly hours of farmwork per worker by family and hired workers, on survey farms that hired labor, by type of farm, 48 States, 1964 and 1966 1/

| Type of farm | Average weekly hours worked per worker <u>2/</u> | | | | | | | |
|------------------------|--|------|-----------------|-----------------------------|----------|------|-----------------|-----------------------------|
| | 1964 | | | | 1966 | | | |
| | Family | | | Regular hired workers | Family | | | Regular hired workers |
| | Operator | Wife | Other family | | Operator | Wife | Other family | |
| -----Hours----- | | | | | | | | |
| Cash grain..... | 52 | 22 | 43 | 53 | 51 | 20 | 26 | 48 |
| Tobacco..... | 44 | 32 | 45 | 41 | 46 | 24 | 25 | 36 |
| Cotton..... | 48 | 27 | 47 | 51 | 50 | 20 | 22 | 47 |
| Other field crops..... | 53 | 26 | 62 | 47 | 52 | 27 | 25 | 44 |
| Dairy..... | 69 | 25 | 42 | 56 | 66 | 24 | 26 | 55 |
| Other livestock..... | 54 | 20 | 35 | 50 | 54 | 18 | 23 | 47 |
| Livestock ranches..... | 62 | 23 | 60 | 61 | 48 | 15 | 17 | 56 |
| General..... | 55 | 23 | 43 | 55 | 55 | 23 | 22 | 45 |
| All farm types..... | 55 | 25 | 43 | 53 | 54 | 23 | 27 | 47 |

1/ Data in this table refer only to farms with gross sales of \$5,000 or more.

2/ Hours per week for the weeks that the workers performed farmwork.

11

Returns to Labor, 1964 and 1966

Roughly stated, the neoclassical concept of returns to scale says that as a firm or farm increases in size, the inputs required per unit of output should decline. Data on farm labor input for 1964 and 1966 bear out this concept quite vividly. Every type of farm operation showed marked declines in labor use per \$100 gross sales as the size of the farming operation increased.

In both 1964 and 1966, operations on tobacco farms used more hours per \$100 sales than on any other type of farm (table 8).^{6/} Cash grain farms provide a stark contrast to tobacco farms. They used 65 percent fewer hours per \$100 sales than did tobacco farms in 1964 and in 1966.

During both years, livestock ranches were a close second to cash grain farms in low labor use per \$100 sales.

Conversely, dairy and cotton farms during both years were next to tobacco in high labor inputs.

For the "all sales" categories, there was some increase in labor per \$100 sales over the 2-year period on every type of farm except livestock ranches. Most of this increase was due to the increase in operator labor, much of which occurred on the smaller farms. Most types of farms above \$20,000 in gross sales showed improvement in their labor to sales ratio over the 2-year period. All but general and other livestock farms used less labor per \$100 sales in 1966 than they did 2 years earlier.

Hours of labor used per \$100 gross sales indicates that the small farmer is not only noncompetitive with the large-scale operator, but actually receives little or nothing for his own farm labor. A small-scale farmer had to put in 3 1/2 hours of labor for every 1 hour that the large-scale operator worked to derive \$100 in sales in 1964. By 1966, this disparity had risen to 5 to 1. Returns to labor also are more rewarding on certain types of farms. A tobacco farmer in both crop years had to use nearly three times as much labor to earn \$100 as a cash grain farmer, and over two times as much as a livestock rancher.

^{6/} This study reports labor for all operations, not just for tobacco or grain per se, but for all crops or livestock grown and sold on a particular type of farm.

Table 8.--Hours of labor used per \$100 gross sales on survey farms that hired labor, by value of farm products sold and by type of farm, 48 States, 1964 and 1966 ^{1/}

| Type of farm | Hours of labor used per \$100 gross sales | | | | | | | | | |
|------------------------|---|---------------|-----------------|-----------------|-------------------|----------------------------|---------------|-----------------|-----------------|-------------------|
| | 1964 | | | | | 1966 | | | | |
| | Average, all sales classes | \$5,000-9,999 | \$10,000-19,999 | \$20,000-39,999 | \$40,000 and over | Average, all sales classes | \$5,000-9,999 | \$10,000-19,999 | \$20,000-39,999 | \$40,000 and over |
| | -----Hours----- | | | | | | | | | |
| Cash grain..... | 19 | 30 | 22 | 17 | 13 | 21 | 40 | 26 | 17 | 11 |
| Tobacco..... | 53 | 60 | 46 | 34 | -- | 60 | 69 | 46 | 32 | 25 |
| Cotton..... | 33 | 56 | 33 | 28 | 24 | 40 | 60 | 36 | 26 | 30 |
| Other field crop..... | 29 | 50 | 33 | 22 | 18 | 29 | 43 | 34 | 21 | 13 |
| Dairy..... | 34 | 59 | 40 | 29 | 14 | 42 | 69 | 42 | 24 | 16 |
| Other livestock..... | 20 | 39 | 26 | 17 | 9 | 32 | 55 | 29 | 18 | 8 |
| Livestock ranches..... | 24 | 53 | 37 | 25 | 11 | 22 | 36 | 30 | 20 | 9 |
| General..... | 19 | 41 | 26 | 19 | 10 | 37 | 59 | 34 | 23 | 15 |
| All farm types..... | 27 | 48 | 33 | 24 | 14 | 34 | 55 | 33 | 19 | 11 |

^{1/} Data in this table refer only to farms with gross sales of \$5,000 or more.

13

APPENDIX A

Appendix table 1.--Proportion of farms that hired labor and the proportion of labor performed by family and hired workers, by region and type of farm, 48 States, 1964 and 1966 ^{1/}

| Type of farm within region | Percentage of farms hiring labor | | Total hours worked per farm | | Percentage of total hours worked by: ^{2/} | | | |
|-----------------------------|----------------------------------|------|-----------------------------|--------|--|------|---------------|------|
| | 1964 | 1966 | 1964 | 1966 | Operator and family | | Hired workers | |
| | | | | | 1964 | 1966 | 1964 | 1966 |
| | ---Percent--- | | -----Hours----- | | -----Percent----- | | | |
| Northeast Region: | | | | | | | | |
| Cash grain..... | 54 | 32 | 10,424 | 6,689 | 72 | 55 | 28 | 45 |
| Tobacco..... | 94 | 94 | 9,754 | 4,902 | 60 | 82 | 40 | 18 |
| Cotton..... | --- | --- | --- | --- | --- | --- | --- | --- |
| Other field crops..... | 100 | 100 | 15,951 | 8,581 | 68 | 56 | 32 | 44 |
| Dairy..... | 66 | 74 | 7,403 | 7,591 | 63 | 73 | 37 | 27 |
| Other livestock..... | 63 | 67 | 3,469 | 3,527 | 67 | 82 | 33 | 18 |
| Livestock ranches..... | --- | --- | --- | --- | --- | --- | --- | --- |
| General..... | 74 | 68 | 18,885 | 7,096 | 32 | 63 | 68 | 37 |
| All farm types..... | 67 | 73 | 7,709 | 7,178 | 61 | 72 | 39 | 28 |
| Appalachian Region: | | | | | | | | |
| Cash grain..... | 65 | 91 | 7,995 | 7,024 | 32 | 39 | 68 | 61 |
| Tobacco..... | 96 | 92 | 6,279 | 5,624 | 60 | 76 | 40 | 24 |
| Cotton..... | 88 | 100 | 7,619 | 5,532 | 40 | 68 | 60 | 32 |
| Other field crops..... | 100 | 96 | 6,642 | 5,136 | 44 | 53 | 56 | 47 |
| Dairy..... | 80 | 87 | 7,201 | 7,021 | 58 | 62 | 42 | 38 |
| Other livestock..... | 94 | 92 | 4,713 | 4,091 | 59 | 69 | 41 | 31 |
| Livestock ranches..... | --- | --- | --- | --- | --- | --- | --- | --- |
| General..... | 92 | 90 | 8,616 | 6,441 | 39 | 54 | 61 | 46 |
| All farm types..... | 91 | 91 | 6,627 | 5,733 | 54 | 67 | 46 | 33 |
| Southeast Region: | | | | | | | | |
| Cash grain..... | 50 | 59 | 7,706 | 5,530 | 34 | 71 | 66 | 29 |
| Tobacco..... | 98 | 99 | 7,381 | 6,727 | 46 | 72 | 54 | 28 |
| Cotton..... | 91 | 88 | 8,084 | 7,400 | 35 | 40 | 65 | 60 |
| Other field crops..... | 93 | 77 | 6,577 | 4,965 | 47 | 75 | 53 | 25 |
| Dairy..... | 88 | 100 | 13,571 | 12,265 | 27 | 35 | 73 | 65 |
| Other livestock..... | 71 | 57 | 7,908 | 5,790 | 31 | 57 | 69 | 43 |
| Livestock ranches..... | --- | 100 | --- | 2,767 | --- | 68 | --- | 32 |
| General..... | 91 | 78 | 8,065 | 7,153 | 38 | 52 | 62 | 48 |
| All farm types..... | 91 | 79 | 8,006 | 6,504 | 39 | 60 | 61 | 40 |
| Delta States Region: | | | | | | | | |
| Cash grain..... | 98 | 94 | 9,733 | 7,198 | 31 | 44 | 69 | 56 |
| Tobacco..... | --- | --- | --- | --- | --- | --- | --- | --- |
| Cotton..... | 92 | 86 | 11,460 | 11,501 | 26 | 29 | 74 | 71 |
| Other field crops..... | --- | --- | --- | --- | --- | --- | --- | --- |
| Dairy..... | 70 | 73 | 5,791 | 6,367 | 72 | 68 | 28 | 32 |
| Other livestock..... | 77 | 63 | 5,272 | 2,910 | 43 | 66 | 57 | 34 |
| Livestock ranches..... | --- | --- | --- | --- | --- | --- | --- | --- |
| General..... | 96 | 100 | 6,277 | 5,589 | 51 | 56 | 49 | 44 |
| All farm types..... | 87 | 85 | 9,412 | 8,036 | 33 | 51 | 67 | 49 |
| Corn Belt Region: | | | | | | | | |
| Cash grain..... | 56 | 59 | 4,154 | 4,049 | 77 | 82 | 23 | 18 |
| Tobacco..... | --- | --- | --- | --- | --- | --- | --- | --- |
| Cotton..... | 89 | 100 | 7,774 | 3,893 | 28 | 27 | 72 | 73 |
| Other field crops..... | --- | 43 | --- | 10,986 | --- | 69 | --- | 31 |
| Dairy..... | 58 | 64 | 6,764 | 6,243 | 82 | 87 | 18 | 13 |
| Other livestock..... | 60 | 62 | 4,696 | 4,551 | 79 | 87 | 21 | 13 |
| Livestock ranches..... | --- | --- | --- | --- | --- | --- | --- | --- |
| General..... | 52 | 44 | 5,412 | 5,418 | 77 | 83 | 23 | 17 |
| All farm types..... | 58 | 60 | 4,871 | 4,665 | 78 | 85 | 22 | 15 |

See footnotes at end of table.

--Continued

Appendix table 1.--Proportion of farms that hired labor and the proportion of labor performed by family and hired workers, by region and type of farm, 48 States, 1964 and 1966 1/--Continued

| Type of farm within region | Percentage of farms hiring labor | | Total hours worked per farm | | Percentage of total hours worked by: 2/ | | | |
|----------------------------|----------------------------------|------|-----------------------------|--------|---|------|---------------|------|
| | 1964 | 1966 | 1964 | 1966 | Operator and family | | Hired workers | |
| | | | | | 1964 | 1966 | 1964 | 1966 |
| | -----Percent----- | | -----Hours----- | | -----Percent----- | | | |
| Lake States Region: | | | | | | | | |
| Cash grain..... | 50 | 69 | 4,763 | 3,850 | 78 | 87 | 22 | 13 |
| Tobacco..... | --- | --- | --- | --- | --- | --- | --- | --- |
| Cotton..... | --- | --- | --- | --- | --- | --- | --- | --- |
| Other field crops..... | 100 | 100 | 5,801 | 11,210 | 58 | 32 | 42 | 68 |
| Dairy..... | 41 | 67 | 6,774 | 6,492 | 82 | 89 | 18 | 11 |
| Other livestock..... | 44 | 78 | 5,063 | 5,346 | 81 | 86 | 19 | 14 |
| Livestock ranches..... | --- | --- | --- | --- | --- | --- | --- | --- |
| General..... | 56 | 85 | 6,855 | 6,193 | 71 | 88 | 29 | 12 |
| All farm types..... | 43 | 70 | 6,178 | 5,861 | 81 | 88 | 19 | 12 |
| Northern Plains Region: | | | | | | | | |
| Cash grain..... | 52 | 72 | 4,458 | 4,350 | 78 | 86 | 22 | 14 |
| Tobacco..... | --- | --- | --- | --- | --- | --- | --- | --- |
| Cotton..... | --- | --- | --- | --- | --- | --- | --- | --- |
| Other field crops..... | 86 | 100 | 4,501 | 8,313 | 63 | 37 | 37 | 63 |
| Dairy..... | 39 | 63 | 5,840 | 5,390 | 75 | 85 | 25 | 15 |
| Other livestock..... | --- | 73 | --- | 5,022 | --- | 85 | --- | 15 |
| Livestock ranches..... | 51 | 75 | 5,907 | 4,866 | 78 | 70 | 22 | 30 |
| General..... | 44 | 63 | 5,135 | 5,120 | 75 | 85 | 25 | 15 |
| All farm types..... | 53 | 71 | 4,997 | 4,774 | 76 | 85 | 24 | 15 |
| Southern Plains Region: | | | | | | | | |
| Cash grain..... | 82 | 88 | 5,302 | 5,424 | 54 | 62 | 46 | 38 |
| Tobacco..... | --- | --- | --- | --- | --- | --- | --- | --- |
| Cotton..... | 95 | 100 | 7,027 | 7,423 | 47 | 50 | 53 | 50 |
| Other field crops..... | --- | 100 | --- | 2,483 | --- | 46 | --- | 54 |
| Dairy..... | 64 | 84 | 7,755 | 6,937 | 64 | 73 | 36 | 27 |
| Other livestock..... | --- | 92 | --- | 4,489 | --- | 72 | --- | 28 |
| Livestock ranches..... | 84 | 75 | 9,487 | 5,682 | 31 | 57 | 69 | 43 |
| General..... | 80 | 98 | 5,504 | 4,139 | 55 | 71 | 45 | 29 |
| All farm types..... | 83 | 90 | 6,274 | 5,383 | 51 | 63 | 49 | 37 |
| Mountain Region: | | | | | | | | |
| Cash grain..... | 58 | 78 | 10,424 | 5,252 | 34 | 74 | 66 | 26 |
| Tobacco..... | --- | --- | --- | --- | --- | --- | --- | --- |
| Cotton..... | 85 | 100 | 9,841 | 5,594 | 34 | 54 | 66 | 46 |
| Other field crops..... | 88 | 92 | 8,205 | 7,297 | 58 | 59 | 42 | 41 |
| Dairy..... | 73 | 75 | 10,692 | 8,800 | 51 | 74 | 49 | 26 |
| Other livestock..... | --- | 80 | --- | 9,281 | --- | 51 | --- | 49 |
| Livestock ranches..... | 79 | 60 | 11,914 | 7,844 | 42 | 48 | 58 | 52 |
| General..... | 70 | 93 | 8,386 | 12,027 | 49 | 39 | 51 | 61 |
| All farm types..... | 71 | 79 | 9,231 | 8,571 | 47 | 54 | 53 | 46 |

See footnotes at end of table.

--Continued

Appendix table 1.--Proportion of farms that hired labor and the proportion of labor performed by family and hired workers, by region and type of farm, 48 States, 1964 and 1966 ^{1/}--Continued

| Type of farm within region | Percentage of farms hiring labor | | Total hours worked per farm | | Percentage of total hours worked by: ^{2/} | | | |
|----------------------------|----------------------------------|------|-----------------------------|--------|--|------|---------------|------|
| | 1964 | 1966 | 1964 | 1966 | Operator and family | | Hired workers | |
| | | | | | 1964 | 1966 | 1964 | 1966 |
| | ---Percent--- | | -----Hours----- | | -----Percent----- | | | |
| Pacific Region: | | | | | | | | |
| Cash grain..... | 75 | 71 | 4,611 | 5,507 | 63 | 65 | 37 | 35 |
| Tobacco..... | --- | --- | --- | --- | --- | --- | --- | --- |
| Cotton..... | 95 | 100 | 14,169 | 6,059 | 25 | 58 | 75 | 42 |
| Other field crops..... | --- | 100 | --- | 13,189 | --- | 28 | --- | 72 |
| Dairy..... | 69 | 56 | 9,928 | 9,324 | 49 | 60 | 51 | 40 |
| Other livestock..... | --- | 61 | --- | 8,175 | --- | 39 | --- | 61 |
| Livestock ranches..... | 78 | 100 | 4,527 | 8,358 | 65 | 36 | 35 | 64 |
| General..... | 77 | 87 | 7,786 | 8,313 | 43 | 37 | 57 | 63 |
| All farm types..... | 76 | 67 | 8,152 | 8,131 | 45 | 52 | 55 | 48 |

^{1/} Data are derived from information obtained in two Pesticide and General Farm Surveys based on 1964 and 1966 farm operations. Data in this table refer only to farms with sales of \$5,000 or more.

^{2/} These data are on farms which hired labor. Farms not hiring labor are excluded in the last six columns.

APPENDIX B

Scope and Method of 1966 Survey

Findings in this study for 1966 are based on information obtained in the 1966 Pesticide and General Farm Survey, a nationwide survey taken in 1967 and based on 1966 farm operations. About 9,600 farmers in 417 counties throughout the 48 contiguous States were enumerated.

The Standards and Research Division of the U.S. Department of Agriculture's Statistical Reporting Service (SRS) designed the nationwide samples from which farmers were selected for interview. The Data Collection Branch of SRS assisted in developing the final format of the questionnaires and supervised the collection of data through their State statistical offices.

Farmers were selected for interview on the basis of a stratified random sample designed to represent all farms. A proportionately greater number of larger farms was included in the sample. Farms with gross sales of \$10,000 to \$39,999 were sampled at four times the rate of those with gross sales of less than \$10,000. Farms with gross sales of \$40,000 or more were sampled at twice the rate of those with gross sales of \$10,000 to \$39,999. However, proper weighting factors were applied in the programing to put each economic class on a 1 to 1 ratio.

To make analysis of data by economic class, the following technique was used which gave each class a 1 to 1 comparability. Data on farms with sales of :

Less than \$10,000 were multiplied by 4
\$10,000 to \$39,999 were multiplied by 1
\$40,000 and over were multiplied by 1/2

This technique expanded the number of farms and made each class of farms representative.

For persons interested in evaluating the findings of the 1966 Pesticide and General Farm Survey and comparing them with findings of other farm surveys see tables 2,3, and 4 in this appendix. The distribution of farms and value of sales for the surveys are compared.

Only farms meeting the U.S. Census Bureau's definition of a farm are included in the labor tabulations. Usable labor information was obtained from 16,249 farms when the adjusted expansion factors were applied.

For definitions used and States included in each of the farm production regions discussed in this report, see pages 21-24.

Appendix table 2.--Distribution of farms by economic class in selected surveys or estimates based on surveys

| Economic class | 1964 Census of Agriculture <u>1/</u> | 1965 Census of Agriculture, special labor study <u>2/</u> | 1966 ESAD estimate of farms based on census and SRS data <u>3/</u> | 1966 Pesticide and General Farm Survey <u>4/</u> | |
|------------------------------------|--|--|--|---|-----------------------------------|
| | | | | All farms in survey | Farms with valid labor data |
| -----Percent----- | | | | | |
| Class VI, \$50-2,499..... | 42.4 | 43.0 | 43.0 | 40.7 | 33.7 |
| Class V, \$2,500-4,999..... | 14.1 | 13.9 | 11.6 | 13.4 | 15.3 |
| Class IV, \$5,000-9,999..... | 16.0 | 15.8 | 14.3 | 17.3 | 18.8 |
| Class III, \$10,000-19,999..... | 14.8 | 14.3 | 15.5 | 13.8 | 14.5 |
| Class II, \$20,000-39,999..... | 8.2 | | 9.9 | 10.0 | 11.7 |
| Class I, \$40,000 and over..... | 4.5 | 13.0 | 5.7 | 4.8 | 6.0 |
| -----Number----- | | | | | |
| All economic classes <u>5/</u> ..: | 3,157,857 | 3,197,000 | 3,239,000 | 18,961 | 16,249 |

18

1/ 1964 Census of Agriculture, Vol. II, General Report. Bureau of the Census.
 2/ 1965 Census of Agriculture Special Labor Study, Vol. III, Part 2. Bureau of the Census.
 3/ 1966 estimates by U.S. Dept. Agr., Econ. Res. Serv., Econ. and Stat. Anal. Div.
 4/ 1966 Pesticide and General Farm Survey. U.S. Dept. Agr., Econ. Res. Serv., unpublished.
 5/ All farms included; i.e., commercial, part-time, part-retirement, and abnormal farms.

Appendix table 3.--Distribution of value of sales by economic class for three major surveys or estimates

| Economic class | 1964 | 1966 | 1966 |
|--------------------------------------|---------------------------------|---|--|
| | Census of Agriculture <u>1/</u> | Pesticide and General Farm Survey <u>2/</u> | ESAD estimates based on census and SRS <u>3/</u> |
| | -----Percent----- | | |
| Class VI, \$50-2,499..... | 3.2 | 3.0 | 3.1 |
| Class V, \$2,500-4,999..... | 4.6 | 4.2 | 3.2 |
| Class IV, \$5,000-9,999..... | 10.4 | 9.3 | 7.9 |
| Class III, \$10,000-19,999..... | 18.7 | 14.4 | 16.7 |
| Class II, \$20,000-39,999..... | 20.2 | 22.7 | 20.6 |
| Class I, \$40,000 and over..... | 42.5 | 46.4 | 48.5 |
| All economic classes <u>4/</u> | 100.0 | 100.0 | 100.0 |

1/ 1964 Census of Agriculture, Vol. II, General Report, table 15, col. 2. Bureau of the Census.

2/ 1966 Pesticide and General Farm Survey. U.S. Dept. Agr., Econ. Res. Serv., unpublished.

3/ 1966 estimates by U.S. Dept. Agr., Econ. Res. Serv., Econ. and Stat. Anal. Div.

4/ Total value of all farm sales in 1964 Census of Agriculture was \$35,294,000,000; for farms in the 1966 Pesticide and General Farm Survey, \$244,984,156; and for ESAD 1966 estimates, \$43,180,000,000.

Appendix table 4.--Distribution of farms by type of farm, comparison of two surveys

| Type of farm | Farms | | |
|--------------------------------|---|---|-----------------------------------|
| | 1964 Census of Agriculture <u>1/</u> | 1966 Pesticide and General Farm Survey <u>2/</u> | |
| | | All farms in survey | Farms with valid labor data |
| | -----Percent----- | | |
| Cash grain..... | 16.7 | 19.8 | 16.1 |
| Tobacco..... | 7.4 | 5.9 | 9.4 |
| Cotton..... | 6.4 | 2.8 | 3.6 |
| Other field crops..... | 1.3 | 1.3 | 1.1 |
| Vegetable..... | 1.1 | 1.2 | 1.3 |
| Fruit and nut..... | 2.7 | 2.3 | 2.1 |
| Poultry..... | 3.3 | 3.1 | 2.0 |
| Dairy..... | 12.7 | 17.6 | 13.2 |
| Other livestock..... | 27.9 | 32.2 | 32.9 |
| Livestock ranches..... | 3.4 | 1.8 | 1.6 |
| General..... | 9.0 | 5.6 | 5.3 |
| Miscellaneous..... | 8.0 | 6.4 | 11.4 |
| All farm types <u>3/</u> | 100.0 | 100.0 | 100.0 |

1/ 1964 Census of Agriculture, Vol. II, General Report, table 15. Bureau of the Census.

2/ 1966 Pesticide and General Farm Survey. U.S. Dept. Agr., Econ. Res. Serv., unpublished.

3/ All farms included, i.e., commercial, part-time, part retirement, and abnormal farms.

Definitions

Farmwork--includes time spent tending crops and livestock and overhead jobs such as constructing and repairing fences and farm buildings, maintaining and repairing machinery, and similar farm maintenance jobs. Note: Time spent for planning and managing the farm operations is excluded. Examples: farm record keeping, attending educational or farm business meetings, making farm financial arrangements, and performing housework are not considered to be farmwork.

Regions--States included in each of the 10 farm production regions are:

Northeast

Maine
New Hampshire
Vermont
Massachusetts
Rhode Island
Connecticut
New York
New Jersey
Pennsylvania
Delaware
Maryland

Appalachian

Virginia
West Virginia
North Carolina
Kentucky
Tennessee

Southeast

South Carolina
Georgia
Florida
Alabama

Mountain

Montana
Idaho
Wyoming
Colorado
New Mexico
Arizona
Utah
Nevada

Lake States

Michigan
Wisconsin
Minnesota

Corn Belt

Ohio
Indiana
Illinois
Iowa
Missouri

Delta States

Mississippi
Arkansas
Louisiana

Northern Plains

North Dakota
South Dakota
Nebraska
Kansas

Southern Plains

Oklahoma
Texas

Pacific

Washington
Oregon
California

Economic Class--For this study, there are seven basic classes of sales groups with the same dollar ranges as used by the Census Bureau in its quinquennial Census of Agriculture surveys:

| <u>Economic class</u> | <u>Gross sales</u> |
|-----------------------|--|
| Class VI | \$ 50-\$2,499 |
| Class V | \$ 2,500-\$4,999 |
| Class IV | \$ 5,000-\$9,999 |
| Class III | \$10,000-\$19,999 |
| Class II | \$20,000-\$39,999 |
| Class I | \$40,000 and over. Divided into two sectors: a. \$40,000-\$99,999 b. \$100,000 and over |

Type of Farm as Defined in 1966 Survey

| Type of farm | Source of cash income |
|------------------------|---|
| | (Products with sales value representing 50 percent or more of total value of all farm products sold.) |
| Cash grain..... | Corn, sorghums, small grains, soybeans for beans, cowpeas for peas, dry field and seed beans, and peas. |
| Tobacco..... | Tobacco. |
| Cotton..... | Cotton. |
| Other field crop..... | Peanuts, potatoes (Irish and sweet), sugarcane for sugar or sirup, sweet sorghums for sirup, broomcorn, popcorn, sugar beets, mint, hops, and sugar beet seed. |
| Vegetable..... | Vegetables. |
| Fruit and nut..... | Berries, other small fruits, tree fruits, grapes, and nuts. |
| Poultry..... | Chickens, chicken eggs, turkeys, and other poultry products. |
| Dairy..... | <p>Milk and cream. The criterion of 50 percent of total sales was modified in the case of dairy farms. A farm having value of sales of dairy products amounting to less than 50 percent of the total value of farm products sold was classified as a dairy farm, if:</p> <ul style="list-style-type: none"> (a) Milk and cream sold accounted for more than 30 percent of the total value of products sold and (b) Milk cows represented 50 percent or more of total cows and (c) The value of milk and cream sold plus the value of cattle and calves sold amounted to 50 percent or more of the total value of all farm products sold. |
| Livestock ranches..... | Farms in the 17 conterminous Western States, Louisiana, and Florida were classified as livestock ranches if the sales of livestock, wool, and mohair represented 50 percent or more of the total value of farm products sold and if pastureland or grazing land amounted to 100 or more acres and was 10 or more times the acreage of cropland harvested. |

Type of Farm as Defined in 1966 Survey

| Type of farm | : | Source of cash income |
|---|---|--|
| Livestock other than dairy and poultry..... | : | Cattle, calves, hogs, sheep, goats, and wool and mohair, except for farms in the 17 conterminous Western States, Louisiana, and Florida that qualified as livestock ranches. |
| General..... | : | Field seed crops, hay, and silage. Also, a farm was classified as general if it had cash income from three or more sources and did not meet the criteria for any other type. |
| Miscellaneous..... | : | Nursery and greenhouse products, forest products, mules, horses, colts, and ponies. Also, all institutional farms and Indian reservations. |

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