Types-of-Farming in Oklahoma

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TYPES OF FARMING IN OKLAHOMA

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PART I

INTRODUCTION

Agencies employed in agricultural research with experiment stations and agricultural extension find increasingly difficult the task of advising farmers regarding the practices related to the enterprises of their particular farm. To be effective, recommendations must comply with local conditions. New complications resulting from changing and improved practices make the application less certain. Experience has shown that the wide variation in organizations and conditions found on farms, both within the same area and in different areas, make broad generalizations exceedingly questionable. Blanket recommendations for the so-called "average" farmer are not only hazardous, but are likely to be misleading. What is needed is a segregation of farmers into specific groups based upon size and upon homogenity of the general farming type. When such procedure is followed it is possible to make an appraisal of the needs of typical groups and to interpret the effect which changing economic conditions are likely to produce. Such an analysis of the agriculture of Oklahoma is attempted in the present study.

The typical farming systems and basic information presented will be of direct assistance to agricultural workers in the state particularly those engaged as specialists and county agents by adding greater definiteness and precision to their work. The discussion, particularly in the concluding section, on methods in which the typical farming systems may be used, should be of assistance in suggesting how to determine what organization will be most profitable to follow under probable yield and price relationship.

The data used as a basis for the study were obtained from a number of sources including the United States Census, United States Weather Bureau, United States Bureau of Agricultural Economics, Oklahoma State Board of Agriculture, Departments of Field Crops and Soils, and the Department of Animal Husbandry of the Oklahoma Agricultural and Mechanical College.

Meaning of "Type-of-Farming" and Type-of Farming Area"

The term "type-of-farming" will be used in the present study to indicate a definite system of agricultural operation. More specifically it means the kind, amount and proportion of crops and livestock found on an individual farm. A "type-of-farming area," on the other hand, will be used to refer to a region in which exists a fairly high degree of uniformity in the types-of-farming prevailing as well as in the soil and climatic condition.

In most areas there will be found one farm enterprise or one farm organization which is more common than any other. It is this dominant enterprise, or combination of enterprises, together with the prevailing physical conditions, which define the type area. Within each area may be found rather wide variations from the most common practices. In fact, organizations are frequently found which include little if any of the dominant enterprise distinguishing the type area, but instead a considerable proportion of other crop or livestock enterprises. A case in point is a strictly dairy organization found in a cash grain area like northwestern Oklahoma. Because of this condition it is necessary to indicate the variations in both the major and minor enterprises in order to show a true picture of the prevailing types.

PART II

TYPES-OF-FARMING AREAS IN OKLAHOMA

Present Utilization of the Land Area

Land suitable to farming is scattered generally throughout the state with the exception of the mountainous area of the southeast. Sixty-nine per cent of the total area of the state was in farms in 1925. Fifty-one per cent of the farm land was in crops and forty-two per cent in pasture. Thirty-five per cent of the total area was in crops in 1925. Sixty-three per cent of the farm land was used by crops and plowable pasture. Forty-four per cent of the total area of the state was used in 1925 for crops and plowable pasture.

Oklahoma is divided into two general types of farming sections commonly called the cotton belt and the wheat belt. The cotton section comprises the southern half of the state and the wheat section the northwestern quarter. The northeastern section is devoted more to mixed farming, producing mostly feed crops. Between the general areas are counties in which various combinations of the two general types are found. In such transitional regions farmers frequently shift their practice from year to year. At times wheat is relatively important displacing cotton, corn, or grain sorghums, as the price and crop conditions seem at the time to justify. Payne County is a typical example of such an area. In this county no one crop occupies more than twenty-five per cent of the crop area. Each general area contains several definite combinations of enterprises which will be discussed later.

Location of Principal Farm Crop Enterprises

The principal crops, cotton, wheat, corn and grain sorghum group themselves with reference to area according to certain physical factors which will be discussed in more detail later. The accompanying dot maps indicate the relative concentration of each of the four crops and also show the overlapping of two or more crops where such actually exists.

Cotton: Figure 1 gives the approximate location of cotton in acres planted.

(See Appendix 1 for Table.) Seventy per cent of the crop area of Jackson county was devoted to cotton in 1924. The greatest cotton producing counties in the order of their importance were Jackson, 70 percent; Jefferson, 60; Mc-Curtain, 60; Love, 59; Greer, 58; Harmon, 57; and Tillman, 57. Seven additional counties, Marshall, Bryan, Choctaw, LeFlore, Sequoyah, Carter, and Stephens, each had over 50 per cent of their crop area devoted to cotton. The importance of cotton gradually declines toward the north. The 1925 census indicates that in 1924 cotton was produced in every county in Oklahoma

Cotton is an illustration of a rapidly expanding enterprise. In the southeastern part of the state, farm practices with cotton are similar to those east of the Mississippi river, i. e. one man with one mule units in the hill country and one man with two mules in the better area. Practices, common in the southwest portion, are quite different and threaten to revolutionize the cotton production industry by using improved methods, thus lowering the cost of production. One farmer may grow fifty to two hundred acres of the crop and teams of six and eight mules to one man are not uncommon. Two-row planters attached to two-row "ridge-busters," or listers, are used with eight mules. Tractor power is increasing in the cotton fields. Mechanical pickers have been used and probably will be more common in future years. Sleds are now used in years of low priced cotton as in 1926. Competition with such practices will continue to be more difficult in the southeast where large scale methods are less practical because of topography and the size of the fields. The apparent

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1. Acres are used instead of production, as area planted best indicates the relative ance of a crop in the farm business. Production is more influenced by factors such as climate and insects and, as in 1927, would fail to indicate the relative importance of either cotton or wheat.

shifting of the cotton belt west adds a new complication which may be an important factor in future years. With an increasing proportion of the cotton crop of the world being grown in semi-arid regions, the annual production is likely to fluctuate more than in past years. In harmony with changes in quantity produced, prices may move over a wider range in the future. This trend seems probable providing other factors continue relatively constant.

Wheat: The wheat crop is largely concentrated in the northwestern portion of the state as illustrated in Figure 2. Alfalfa County had 72 per cent of its crop area in wheat in 1924. Harper had 69 per cent, Woods 66, Major 66, Garfield 66, Kingfisher 62. Blaine, Ellis, Woodword, Beaver, and Texas counties all exceeded 50 per cent of their crop area in wheat. Wheat, like cotton, was grown in 1924 in every county of the state.

The increasing uses of improved mechanical devices, such as the tractor and the combine, are increasing the concentration of the production area to regions adapted to the use of large machinery. Shifts in size of farm, and of acres devoted to wheat will be discussed later.

Corn: Corn is grown most extensively in the eastern half of the state with Pushmataha county leading in the proportion of the crop area used by corn. This county had 48 per cent of the crop area in corn in 1924. Corn occupies over two per cent of the crop area in every county of the state and in all but thirteen counties, over 10 per cent. Corn is produced almost entirely for grain for local feeding purposes. Figure 3 gives the degree of concentration of the corn in quantity of acres devoted to the crop.

Grain Sorghum: Figure 4 indicates that grain sorghums are important in the more arid regions of the western portion of the state. In the northwest, including the Panhandle counties, milo and kafir are used as a catch crop on abandoned wheat land or as the main crops on lands too sandy for wheat. Where the soil permits, all possible area is annually planted to wheat. The available moisture at planting time is usually the determining factor. Winter killing of wheat may also mean an increased acreage of grain sorghum. In the western and southwestern counties, grain sorghums are regularly grown as the main feed crop.

Minor Crops: Oats are more important in Craig County than in any other county with 30 per cent of the crop area devoted to oats. Oats are also grown in other parts of the northeast. Barley occupies nine per cent of the crop area in Beaver County, this being the highest. Hay utilizes over 30 per cent of the crop area in only three counties, Washington, Nowata, and Osage. Broomcorn uses over 10 per cent of the crop area in Garvin, McClain, and Roger Mills counties. No one vegetable or fruit occupies over one per cent of the crop area in any county.

Livestock: The livestock population, based upon the number of each kind to 100 acres in crops and pasture, is given in Appendix II and is illustrated graphically for six typical areas in Figure 5.

Beef Cattle are most numerous in the grass lands of Washington and Osage counties and in the hill areas of Pushmataha county.

Dairying is most abundant about the important markets, being in largest proportion in Oklahoma and Tulsa counties.

Hogs are most important in the eastern quarter of the state with the largest number per acres in crops and pasture being in Adair and Cherokee counties.

Poultry, like dairying, are most numerous near the large cities and are found in greatest numbers in Okfuskee, Tulsa, and Oklahoma counties.
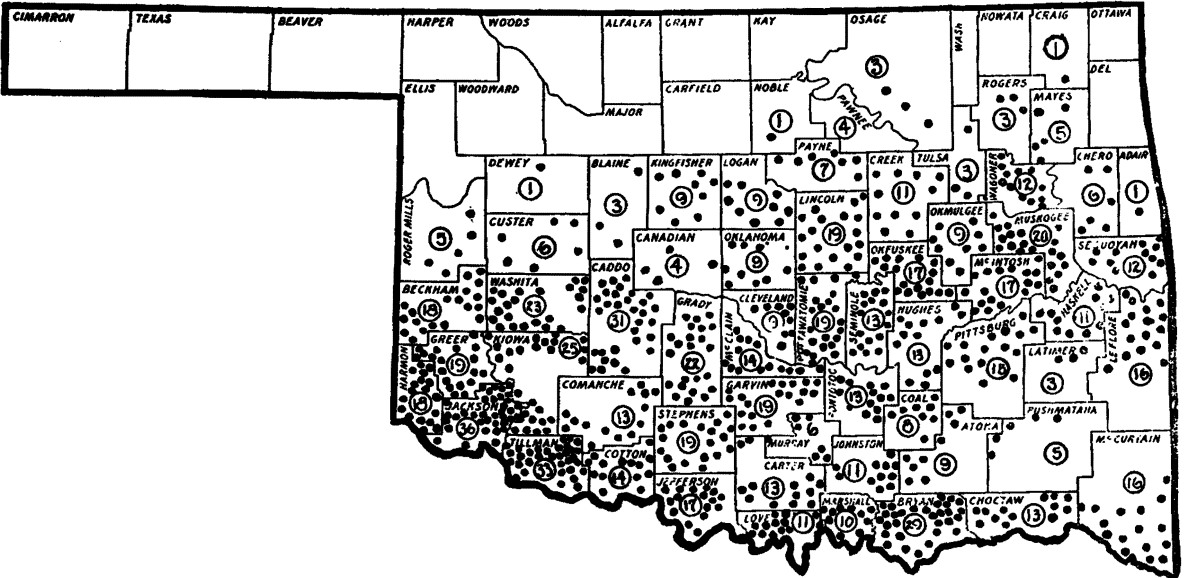
Figure 1—Distribution of Cotton, Acreage 1924. Taken from U. S. Cennsus. One dot represents 5,000 acres. See Appendix I.
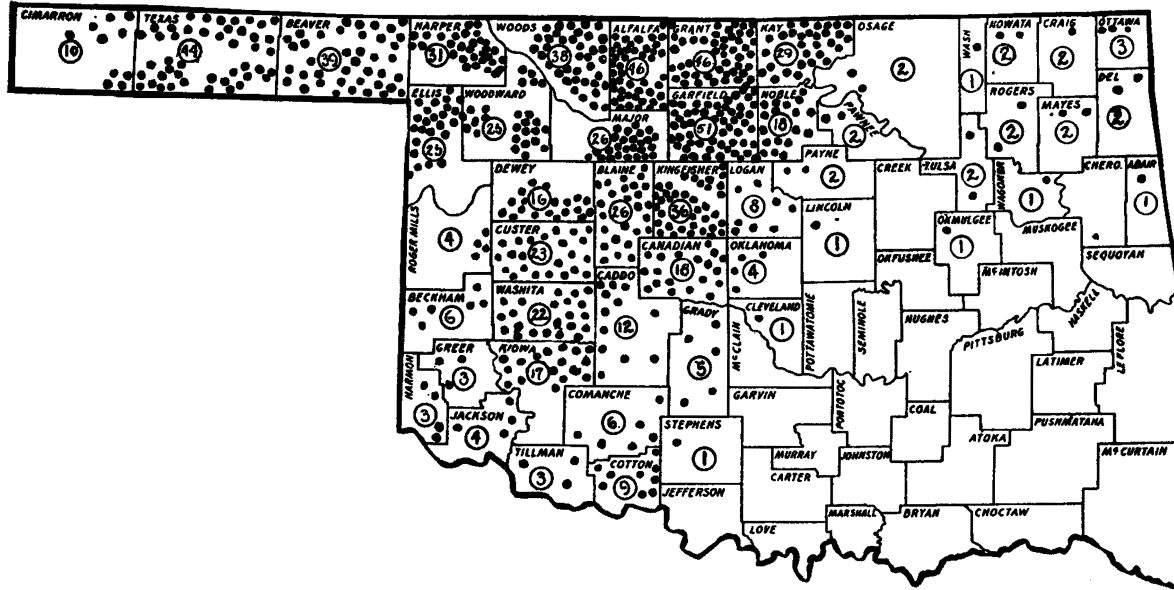
Figure 2—Distribution of Wheat Acreage, 1924. Taken from U. S. Census. One dot represents 5,000 acres. See also Appendix I.
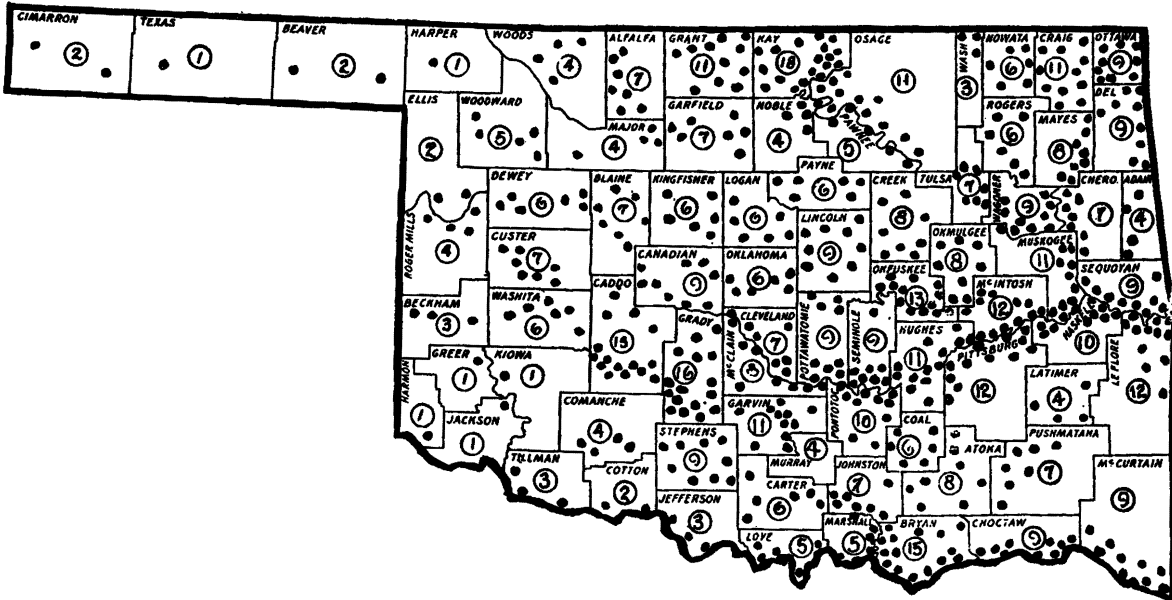
Figure 3—Distribution of Corn Acreage, 1924. Taken from U. S. Census. One dot represents 5,000 acres. See Appendix I.
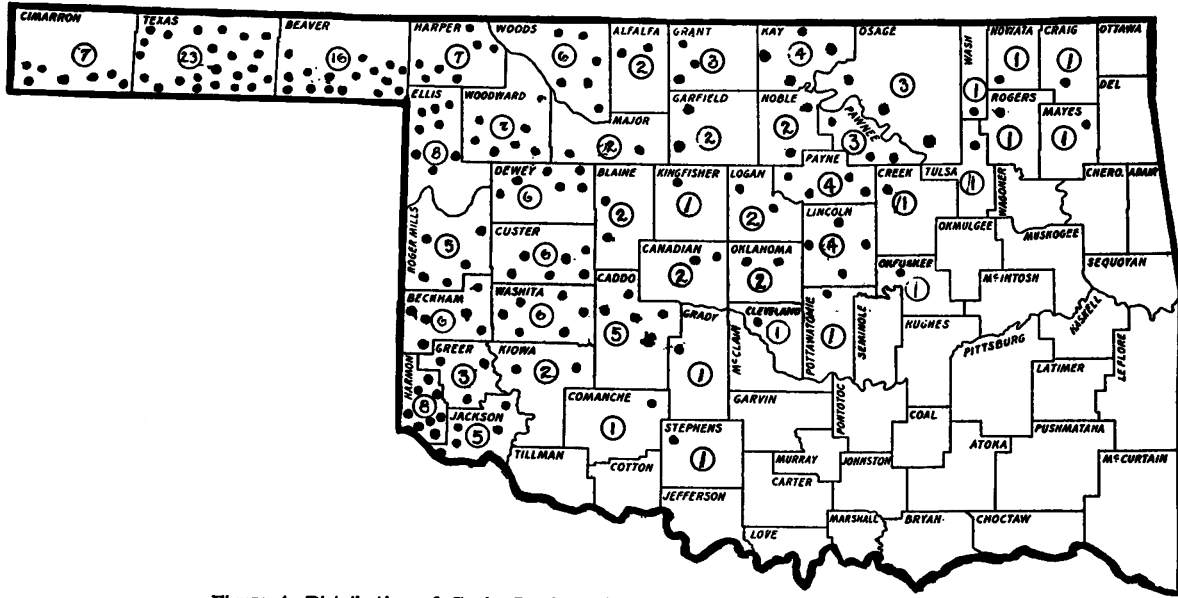
Figure 4—Distribution of Grain Sorghum Acreage, 1924. Taken from U. S. Census. One dot represents 5,000 acres. See Appendix I.
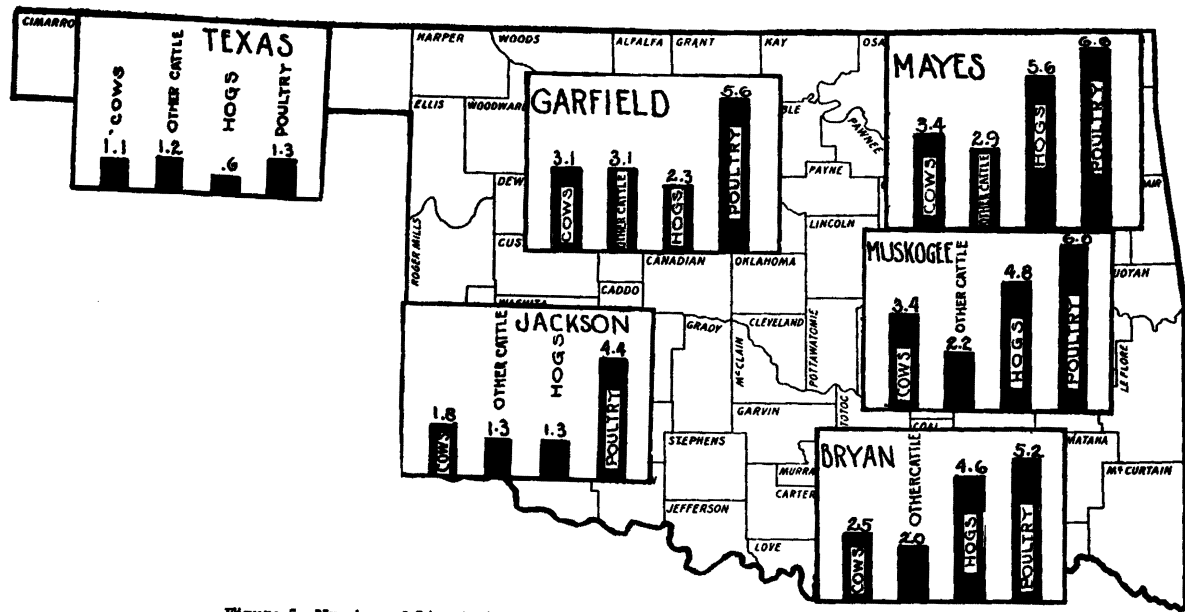
Figure 5—Number of Livestock and Poultry per 100 Acres in Crop land and Pasture per farm for five selected Counties.   See Appendix II.

Figure 6—Type-of-Farming Areas Indicating the General Characteristics of Each Area. See Figure 10.

General Type Areas

The type-of-farming of any section is largely determined and limited by certain physical factors most of which are beyond the control of the farmer. The natural agencies include the five general divisions of location, topography, soil, water supply, and weather. Each of these factors as applied to Oklahoma will be discussed in the following pages.

The important type-of-farming areas in the State are given in Figure 6. The similarity of physical and biological factors account in considerable measure fo rthe grouping of the state into the 10 areas. Area 1 includes the wheat and grain sorghum region of the Panhandle. Wherever soil is suitable and whenever moisture is adequate wheat is planted. Sorghum is used on sandy land, and on wheat land when wheat is killed by freezing.

Area 4 is an over lapping of areas 1 and 2. Due to more sandy soils, rougher topography, and less rainfall in area 4 than area 2, wheat is less certain as a cash crop and is partly and often supplanted by row crops like corn and sorghum.

Area 5 is the most diversified region of the state, having mixed farming of cotton, corn, and wheat. Farmers in this section, which is a marginal area between the cotton and wheat belts, often shift from cotton to wheat or vice versa depending upon the immediate outlook for price and production.

Areas 6, 7, 8, 9 and 10 constitute the cotton belt and differ mainly in the proportion of cotton to other crops. Cotton is by far the most important crop. In area 6, high proportions of both cotton and corn are common. Area 7 includes sorghum instead of corn. Area 8 includes land where wheat is grown as far south as the Red River. In this area cotton and wheat compete for crop land. Area 9 includes much oil land with cotton and corn as the most important crops. Area 10 has a high proportion of land devoted to cotton. In this area truck crops, poultry, and dairying are increasing.

Area 2 is the most concentrated wheat region of the state. In Alfalfa County over 70 per cent of the crop area is devoted to wheat. Some feed crops are grown for local use only.

A diversified farming system is most common in Area 3 with feed crops predominating. Here no one crop occupies more than 25 per cent of the crop area.

Topography and Soil Types

Oklahoma is located mostly within the Great Plains area of the United States, long since famous as the granary of America with wheat as the predominating crop. The topography is mostly rolling with some areas hilly. The general slope of the state is toward the southeast. The altitude ranges from slightly over 4,500 feet in the extreme northwest corner of the Panhandle, to about 400 feet at the extreme southeast.

Although the state is largely a level plain, the surface is broken in places by its many rivers into rough and irregular topography, called "breaks," suitable only for pasture. In such areas beef cattle production is common and ranching constitutes the local type. Usually such breaks are from one to five miles in width and follow the river channels. The higher lands between the rivers are usually only slightly rolling and constitute the bulk of the farming area. In such areas extensive wheat farming is found in the northwestern part of the state and cotton in the southwestern. River bottom lands frequently afford the most fertile portion of the tillable area and are used for corn, alfalfa, and such crops as respond to such a soil type.

The general topography is broken by the Ozark Mountains in the northeast and the southeast, the Arbuckle Mountains in the south central, and the Wichita Mountains in the southwest. These mountains assume their highest proportions in the southeast where some peaks are 1,500 feet high. Here again the beef cattle business assumes considerable proportion.

The farming area is well distributed throughout the state. Wherever cultivation is possible farms are to be found. During the high price period of the

World War much land, otherwise sub-marginal, was cleared of forest or the virgin sod was plowed and placed into crops. In recent years much of this land has been abandoned and left to erode, washing away with the heavy rains of the spring months. During the period referred to, temporary changes occurred in the type-of-farming because of unnatural price relationships.

Parts of the state have been given over to oil production. Generally where oil comes in, agriculture is abandoned. In such cases land owners move to town and live from the income from oil leases and royalty.

The soils of Oklahoma are largely residual, having been formed by the disintegration or weathering of the rock beds beneath. The sandy soils originated from sandstone, the "tight" or clay soils from shale, the more fertile and darker soils usually originated from sedimentary rocks containing much limestone. These factors have had considerable influence upon the type-of-farming followed.

Figure 7 gives the general soil divisions of the state. Most of the western half of the state consists of open prairies with red soil commonly spoken of as "Red Beds" or "Permian red lands." Much of the eastern half of the state, excepting the mountainous regions, is also classed as prairie. Woods gradually increase toward the east; however, open plains extend in places near to the east boundary of the state. Timber is found mostly along the streams and on the higher mountains. The Gulf Coastal Plain occupies the area along the Red River east and south of Ardmore. Alluvial soils are found along the Arkansas and in small areas along the other large rivers.

The west portion of the state was originally a smooth plain. At present erosion has in places cut the stream beds through the deep soil and into the sandstone, forming narrow V shaped valleys.

Water Supply, Precipitation, and Weather

Tributaries of the Mississippi River, including the Arkansas and the Red Rivers, drain all of Oklahoma. About three- fourths of the area is drained by the branches of the Arkansas. The important streams include Verdigris, Grand, Illinois, Salt Fork, Cimarron, North Canadian, South Canadian, and Poteau. Red River, which forms the southern boundary of the state, drains the southern portion. Most streams are intermittant in their flow, due to the irregularity of the rainfall. At times the larger rivers are dry for weeks and at other times floods do much damage to crops planted on the "first bottoms." Occasional heavy rains result in much loss due to erosion necessitating terracing, a practice being adopted by an increasingly large number of farmers. Surface erosion has a marked influence on the type-of-farming. Much land once cultivated has been given over to pasture as a result of gullies cut by the heavy rains.

Rainfall in Oklahoma generally varies inversely as the elevation. In the extreme high section of the northwest the annual precipitation is less than 15 inches while in the extreme southeast it is 45 inches. About half of the state receives over 30 inches of rain. The seasonal distribution of the rainfall (see Figure 8) is to the advantage of the growing crops. (See Appendix III). Fifty to eighty per cent of the annual rainfall comes in the six months, April to September. May is the high month and January the low month. In parts of the eastern portion of the state excessive rains frequently interfere with the planting of cotton and row crops, while in the western portion the planting of wheat in October is at times made impossible through the absence of moisture.

Temperature and humidity in their different aspects and relationships are the principal constitutents of what is commonly termed the weather. Frequently weather is the determining factor in the type-of-farming of a locality. The length of the growing season largely locates the northern boundary of the cotton belt. The length of the growing period has little influence, however, upon the wheat area, as winter varieties are grown in Oklahoma. Gen-
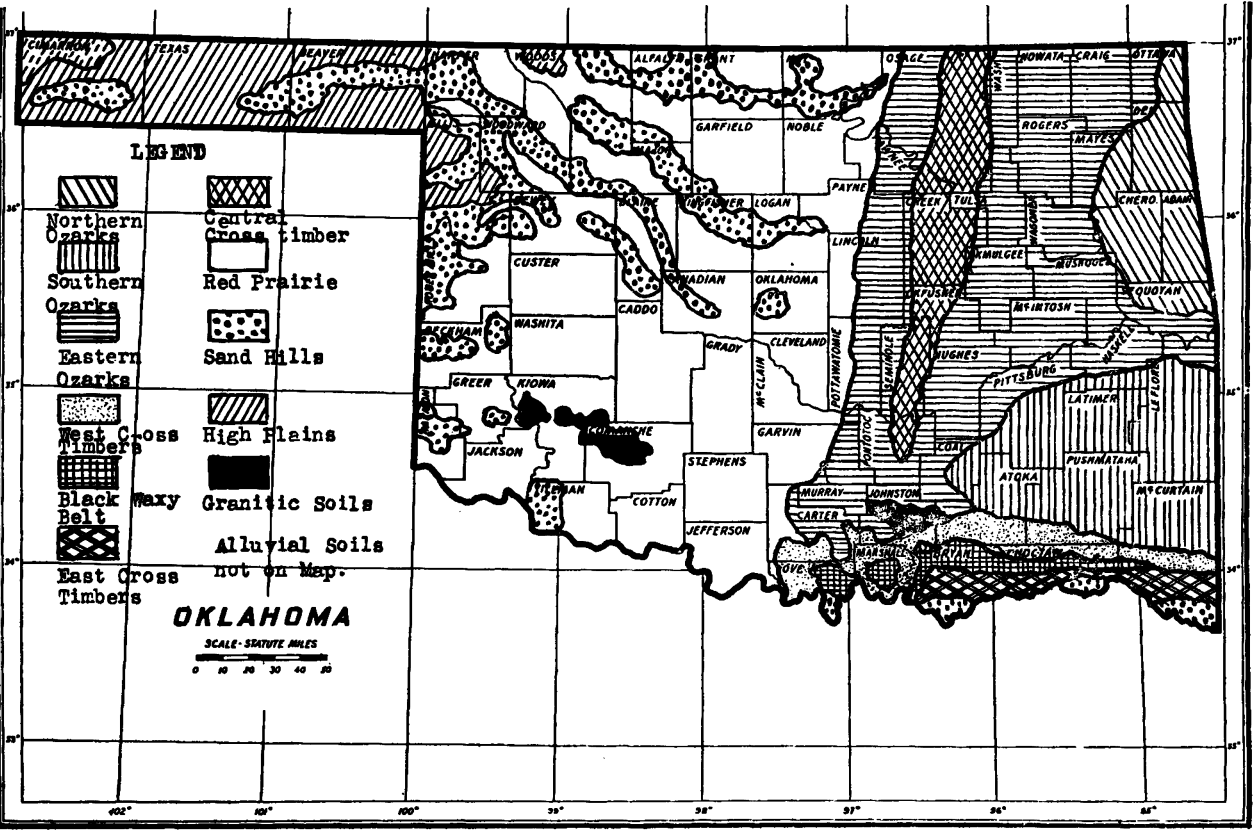
Figure 7—General Soil Areas of Oklahoma. Based upon maps constructed by the Department of Field, Crops and Soils, Oklahoma Agricultural and Mechanical College.
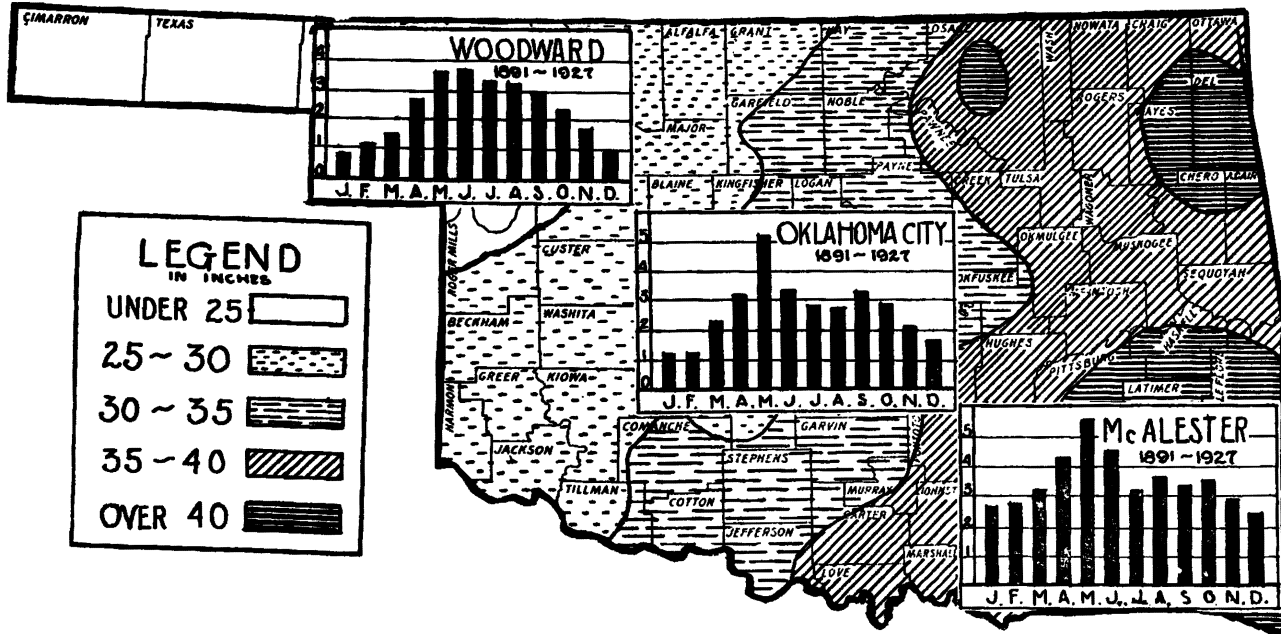
Figure 8—Rainfall in Total Inches and Seasonal Distribution for Three Selected Stations.

erally, that type-of-farming persists which utilizes most economically the nat-
ural forces of nature.   Competition of farming enterprises for the various ad-
vantages of weather are illustrated by the type areas of Oklahoma, such as
winter wheat in the northwest, which utilizes the long-growing period of the
autumn and winter.   Cotton in the south utilizes, as does no other crop, the
long hot period of the summer months.

Generally the climate of the state is temperate, although there are many
extremes, both wet and dry, cold and hot.   The seasonal temperature ranges
below 0° in the winter to above 100° in the summer. Diagonally across the state
from the northwest to the southeast the temperature gradually increases,
the rainfall increases, and the elevation decreases.

The cool and pleasant temperature of the months of autumn and spring
is most ideal for farming practice, especially for livestock production.   The
hottest months are July and August and the coldest months are December
and January. The hot summers are tempered by low humidity and the pre-
vailing winds.   The nights are usually cool.   Occasionally hot dry winds
from the south cause damage to crops. The winters are usually open and dry.

Figure 9 gives the growing period in five selected regions of the state.
Beaver in the northwest part of the state, with an elevation of 3,000 feet and
an annual rainfall of 20 inches, has in the year 141 frost-free days.   (These
data are based upon weather records for the past 30 years).

Vinita located in the northeast section has a frost-free period of 143 days.
Oklahoma City in about the center of the state has 159 frost-free days. Man-
gum located in southwest has 184 frost-free days and Durant in the southeast
170 frost-free days. Durant 80 per cent of the time has twelve more frost-free
days than Mangum. Figure 9 also indicates that four years in five or 80 per
cent of the time the growing period is from one week to a month longer than
the frost-free period for the same locality.

The amount of sunshine during the growing season is important for cer-
tain crops.   The hours of sunshine in percentage of the possible is about 65
per cent for Oklahoma. In the months of July, August, and September the
sunshine is about 80 per cent of the possible. The state has few long periods
of cloudy weather.

The prevailing winds are from the south, although the winds of most
concern to the farmers are the "northers" or blizzards in the winter months
and are the cause of sudden drops in temperature of as much as 50° in 12
hours necessitating special attention to livestock and the provision of shelter
for cattle running on wheat pasture.

The foregoing physical factors are largely responsible for the farm prac-
tices of various regions. They, too, rather definitely determine the limits of
variation in type which are possible within each area.   The type-of-farming
on any particular farm is the result of a composite of all factors including the
personal wishes of the farm operator.   The process of grouping counties into
type-of-farming areas as given in Figure 6, page ____, included in addition
to the physical factors discussed, such factors as productivity or yields of crops,
similarity of crop and livestock, size of farm, etc. Each of these minor factors
is in part the resultant of the physical factors previously mentioned.

The variation in yield of crops is largely due to such natural agencies as
the quantity and seasonal distribution of rainfall in the wheat belt.   Wheat
in Texas County, typical of Area 1 (See Figure 6, page ____) varied from 22
bushels in 1926 to three bushels in 1927, with an average of 10.8 bushels for the
seven-year period, 1921-1927. Garfield county, typical of Area 2 with the same

average yield as Area 1, varied only from seven bushels in 1917 to 17 bushels in 1926.

That yield of a specific crop as a type-determining factor is not so important as returns from competing crops as illustrated in Jackson County, which has a ten-year average yield of wheat of 12.7 yet produces very little of this crop. This condition is the result of the successful competition of cotton as a more profitable crop in that area. An analysis of cotton yields show similar relationships to those of wheat.
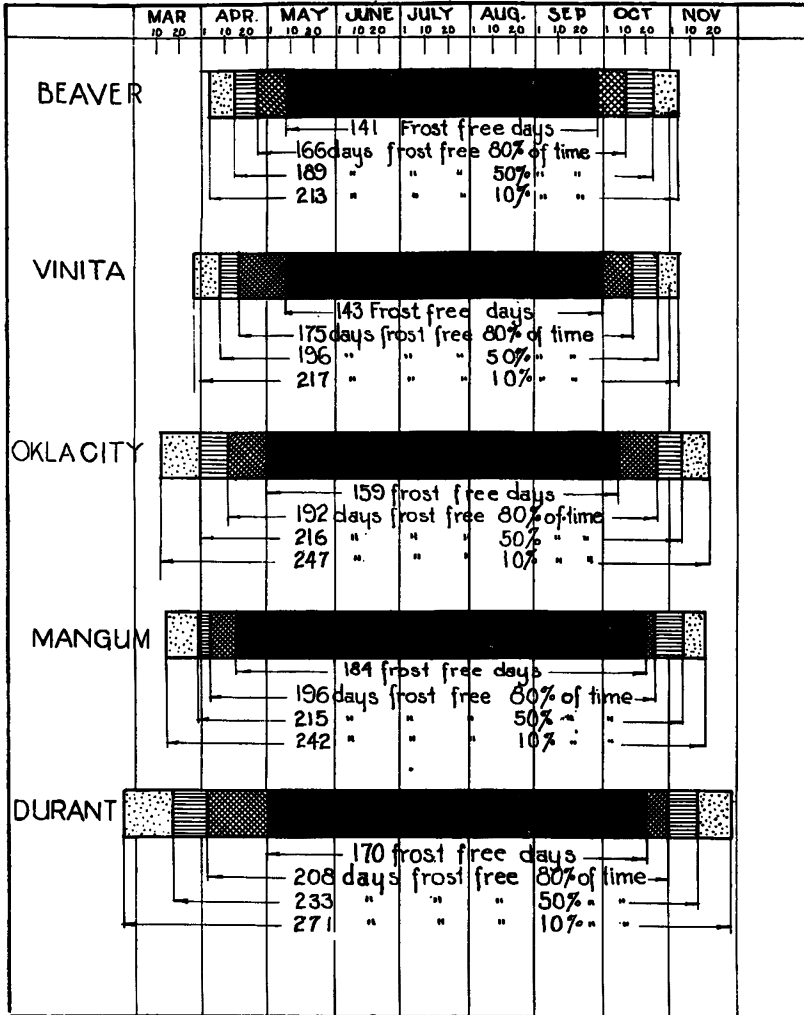
Figure 9—Growing Season at Five selected Stations. (Based upon 30 years' record of the Weather Bureau).

Reference to Figure 10 indicates that in general the acreage devoted to each crop is similar for counties within each area. Also the number and kind of livestock is similar. It is also observed that within some areas there are more variations between counties than between areas. This arrangement was unavoidable because of such factors as differences of soil type, topography, elevation, etc. in neighboring counties while their geographical location necessitated placing them in the same area.

Figure 10—Grouping of Counties into Type-of-Farming Areas according to the percentage each crop is of the total area of all crops and pasture, also the number of Livestock per 100 acres of crops and pasture.

FIGURE 10.(Cont.) LAND UTILIZATION· RELATIVE ACRLAGE OF VARIOUS
CROPS AND NUMBERS OF LIVESTOCK
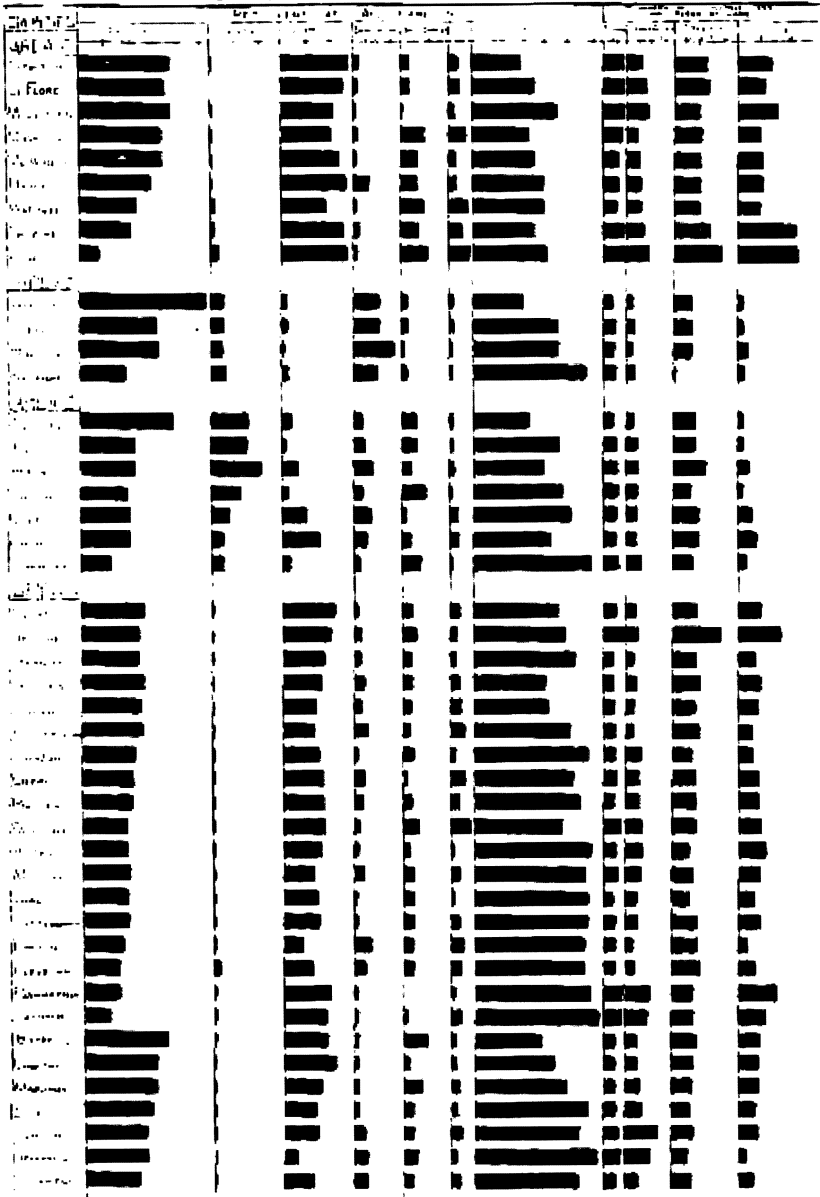
Figure 10—(continued): Grouping of Counties into Type-of-Farming Area: according to the percentage each crop is of the total area of all crops and pasture, also the number of Livestock per 100 acres of crops and pasture.

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PART III

CHANGES AND TRENDS IN TYPES-OF-FARMING

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The present trend in Oklahoma agriculture, according to the date analysed in this study, is to increase the size of farms, especially in the wheat belt; to reduce the number of farms due to combination and abandonment of sub-marginal land; to increase tenancy; to increase the acreage of the following enterprises, wheat, cotton, grain sorghum, soy beans, cowpeas, peanuts, pecans, truck crops including: potatoes, strawberries, and melons; increase dairying, beef, and poultry; decrease corn, hay, hogs, and horses; to hold about constant broomcorn, and sheep.

Adequate information is not available for the determination of the type-of-farming in Oklahoma previous to statehood in 1908. The earliest data usable were taken in the 1910 census. These data with those of succeeding census periods will serve as the basis for determining the changes which have taken place in the farming systems of the state.

Most of the present area of Oklahoma, previous to 1908, was known as Oklahoma and Indian Territories. The southeast half of the state was at one time largely included in land grants or allotments to individual Indians. Such divisions are still evident as accounting for the many small farms in acreage of multiples of 20. This also accounts for the many irregular shapes and sizes of farms in that portion of the state formerly known as Indian Territory. The west portion of the state formerly included in Oklahoma Territory was not so divided and hence came into cultivation under the hands of the "pioneers" in quarter section or 160-acre units.

Figure 11 gives by counties the changes in the percentage of the total land area occupied by farms in 1910, 1920, and 1925. The most noticeable change is the decrease in the percentage of land in farms in 1925 as compared to 1910, especially in the wheat belt and the southwestern cotton belt. Some land in farms in 1910 has since been abandoned. The high prices of the war period expanded the farm land in 1920 as compared to 1910, especially in the Panhandle and other wheat producing counties. The acreage dropped, however, during the period from 1919 to 1924.

Figure 12 shows for the four main crops, cotton, wheat, corn, and grain sorghum ,the trend in total acreage for the state. Previous to 1914 corn occupied more acres than all other crops combined, but since 1917 this crop has been partly replaced by grain sorghum. Wheat has held an increase from less than one million in 1907 to over three million acres, since 1925, the peak being in 1919 with nearly five million acres. Cotton has made the most rapid increase since 1923, reaching the peak of about five million acres in 1925.

Changes in the percentage of crop land used by the four principal crops, wheat, cotton, corn, and grain sorghum were calculated from census data for the crop years of 1909, 1919, and 1924, for one typical county in each type-of-farming area.

Figure 13 shows such changes. The illustration portrays the marked in crease of wheat in wheat areas, the increase of cotton in cotton areas, and a general decrease in corn in all parts of the state.

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Trend in Size of Farms

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Larger farms in the wheat belt and smaller farms in the cotton belt are the changes most noticeable as having taken place since 1910 in the size of farms. Figure 14 gives graphically the size of the farms in 1924 and Figure 15 gives the shift in size for the five main districts of the state.
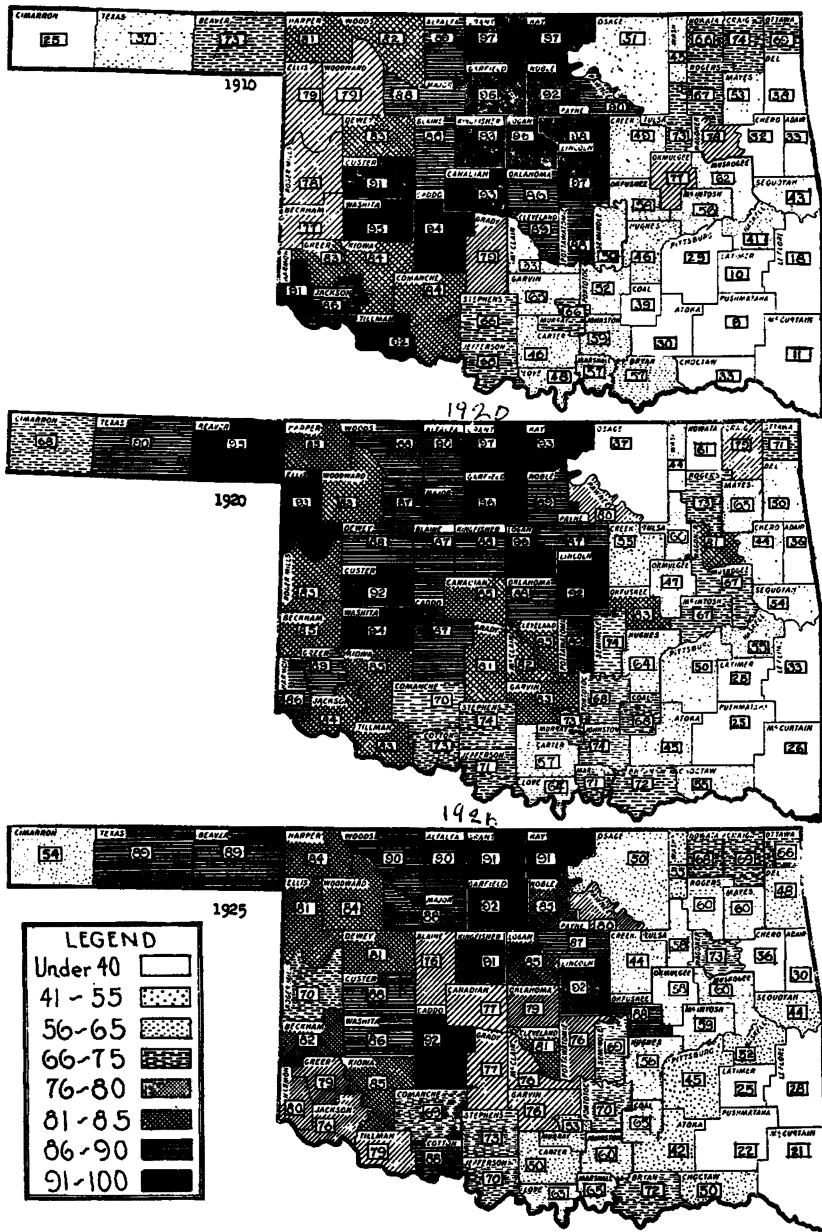
Figure 11—Percentage of Total Area in Farms, 1910, 1920, 1925.
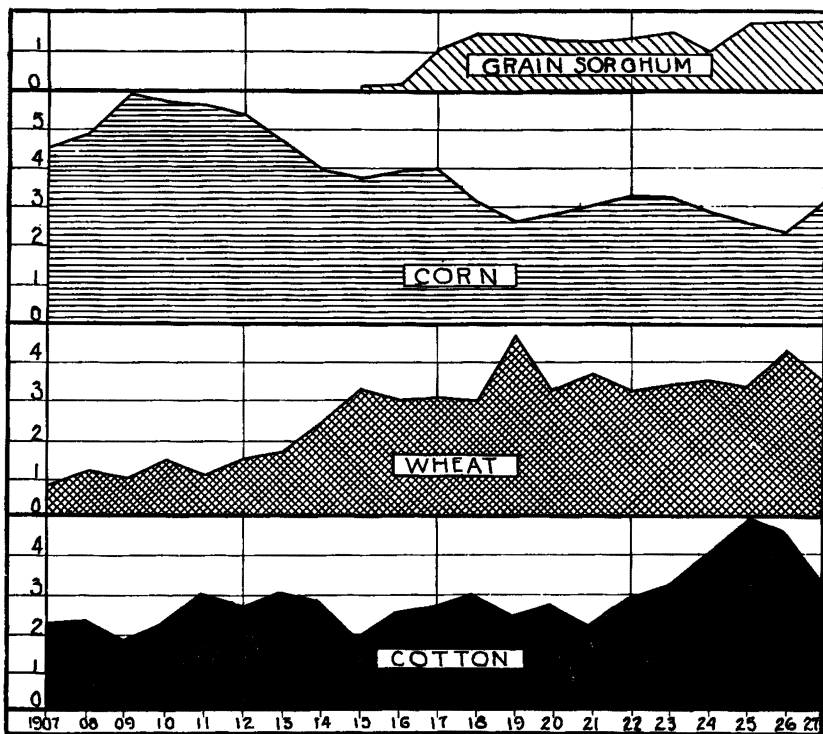
Figure 12—Trend in Acreage Devoted to Crops Designated for Oklahoma for twenty-one years. Given in Millions of Acres.
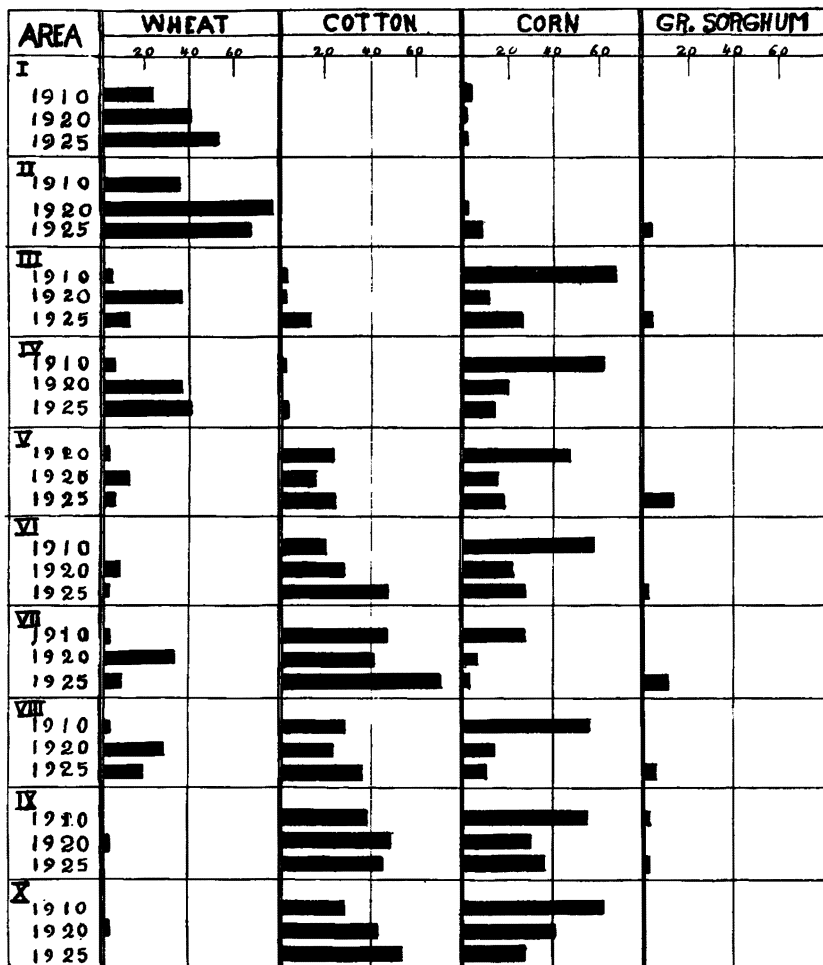
Figure 13—Changes in the Percentage of Crop Land used by the Important Crops.
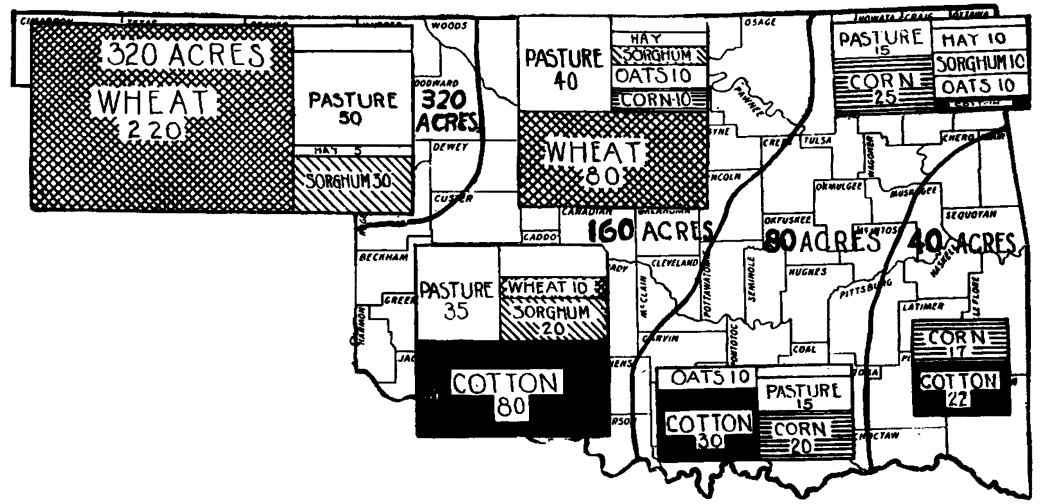
Figure 14—Relative size of Farms and Use of Farm Land. Based upon most common Organization in the following Typical Counties: Texas, Garfield, Craig, Jackson, Bryan. Choctaw.
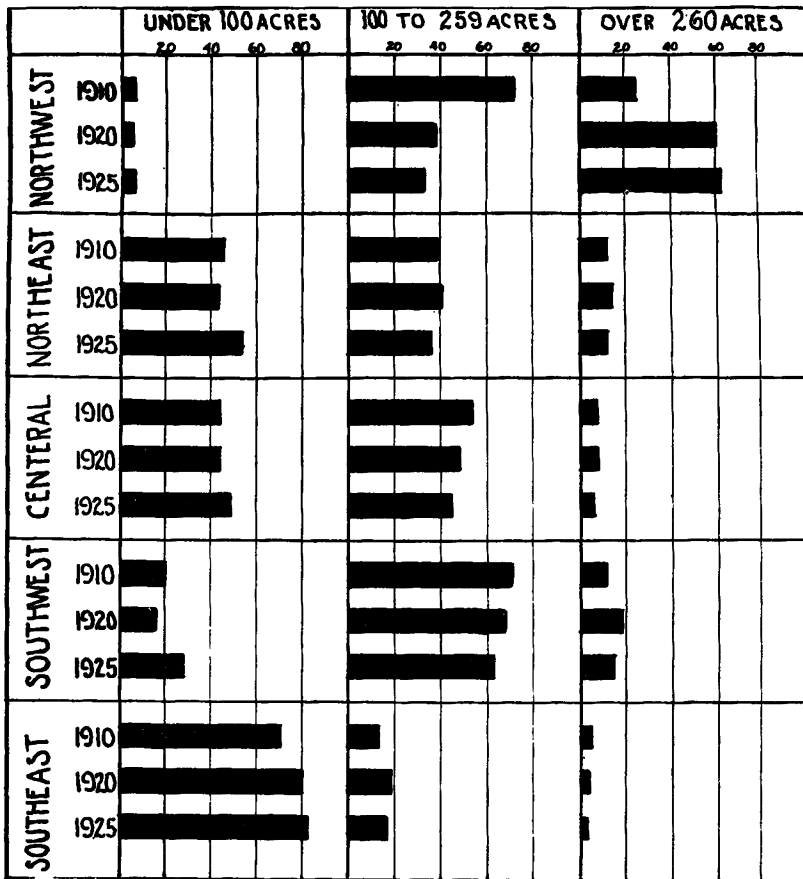
Figure 15—Trend in Changes in size of Farms from 1910 to 1925 in Five Districts of Oklahoma given in Percentage of all Farms Found within Certain Size Groups.

Table I gives the changes in more detail both in regard to size, groups, and areas of the state.

Figure 15 in addition to showing the changes in size, readily shows the important size-groups in the different parts of the state. In the northwest the large portion of the farms are in the 160 and 320 groups while in the south, most farms are in the small sizes.

Northwest District: Seventy per cent of all farms in the northwest district were 160 and 240 acres in size in 1910. In 1925 the proportion of the size decreased to 34 per cent. Table 1 shows that many quarter section farms were combined during the interval of 15 years to make the larger farms of over 320 acres. This pronounced shift to larger sizes is the result of several factors including the type-of-farming followed in the section. With wheat as the main enterprise 320 acres or more seems to be the economic size. Larger machinery including the tractor and combine are also important factors stimulating the shift to larger farms. The important increase has been in the 320 and 640-acre farms. For all farms over 260 acres in size the increase has been from 24 per cent in 1910 to 61 per cent in 1925.

Table 1—Trend in The Size of Farms by Districts for 1910, 1920, 1925

Given in Percentage that the number of
Farms in each Size Group is of the Total
Number of Farms in the District.
(Based upon United State Census)

Size Group in Acres

Common Size	10	40	80	160	240	320	640	*
Size Range	Under 19	20 to 49	50 to 99	100 to 174	175 to 259	260 to 499	500 to 999	Over 1000
NORTHWEST								
1910	1.0	1.1	3.5	58.3	12.4	20.3	3.2	.8
1920	.6	1.1	2.4	25.7	11.1	39.4	14.6	5.1
1925	1.1	1.5	2.9	24.8	8.9	39.8	16.1	4.9
NORTH CENTRAL								
1910	4.2	3.5	9.5	52.9	13.0	17.7	1.9	.4
1920	1.8	2.6	7.6	44.6	14.1	24.4	3.9	1.0
1925	3.1	3.6	8.4	43.8	12.5	23.4	4.0	1.1
NORTHEAST								
1910	1.3	18.0	26.6	30.5	9.3	8.6	2.1	.8
1920	4.7	15.9	24.2	28.9	11.7	10.8	2.7	1.1
1925	7.7	19.7	26.5	26.2	9.0	8.0	2.1	.8
WEST CENTRAL								
1910	11.6	3.2	9.6	54.8	12.8	16.1	2.0	.4
1920	1.6	2.6	8.2	46.1	13.0	22.6	4.5	1.2
1925	3.7	5.9	11.4	42.7	12.5	19.1	3.6	1.0
CENTRAL								
1910	3.6	15.0	25.7	40.8	7.4	6.4	.8	.2
1920	2.8	13.7	27.7	40.0	7.9	7.0	.9	.2
1925	5.1	14.7	29.6	37.6	6.6	5.7	.6	.1
EAST CENTRAL								
1910	.9	37.6	29.0	17.2	3.5	2.9	.8	.4
1920	4.8	32.3	33.4	21.1	4.6	3.0	.7	.3
1925	7.6	33.1	34.1	19.1	3.6	2.0	.4	.2
SOUTHWEST								
1910	3.5	4.0	13.1	60.8	9.0	10.5	1.0	.2
1920	1.3	3.1	12.2	58.4	8.5	14.2	1.9	.4
1925	3.5	7.5	16.6	52.0	8.1	10.7	1.2	.2
SOUTH CENTRAL								
1910	1.1	27.0	34.0	23.7	6.1	3.2	1.2	.5
1920	2.9	22.4	32.3	29.0	7.6	4.0	1.1	.6
1925	3.8	19.6	32.9	30.9	7.6	3.8	.8	.5
SOUTHEAST								
1910	.3	50.2	19.5	10.2	2.4	2.2	.7	.4
1920	6.2	45.4	28.7	14.9	2.7	1.9	.5	.2
1925	9.4	45.2	27.6	13.3	2.2	1.6	.3	.2

Northeast District: With 80 acres and 160 acres being the most common sizes in the mixed farming area of the northeast, the shift in size has been mostly a slight increase in the group of the less than 80-acre or from 41 to 54 per cent of the total, and a slight decrease in the 160 and 240-acre groups or from 40 to 35 per cent of the total. Larger sizes are uncommon and have changed but little.

Central District: The change in size of farms in the central portion of

the state has been similar to that of the northeast. The 80-acre size, which is most common, has increased from 44 to 49 per cent from 1910 to 1925. The 160 and 240-acre sizes have declined from 48 to 44 per cent. There has also been a slight reduction of those over 160 acres or from seven to six per cent.

Southwest District: Farms of 160 acres in size are more numerous than all other sizes. In 1910, 70 per cent of the farms were in the class of 160 and 240. In 1925 the number had declined slightly to 60 per cent. The most noticeable increase during the 15-year period was in the 80-acre size from 13 to 28 per cent.

Southeast District: Among the small cotton farms of the southeast, 40 acres is the most common size. In 1910, 70 per cent of all farms were less than 100 acres in size. This proportion increased to 82 per cent by 1925. A slight increase occurred in the 160 and 240-acre class from 13 to 15 per cent. The group of over 250 acres decreased in the 15 years from three to two per cent.

Trend in Mortgage Indebtedness

The mortgage indebtedness on farms operated by the owners increased to about double during the 15-year period 1910 to 1925. (In the following discussion, numbers represent percentages or relatives and not dollars). In 1910 the highest ratio of indebtedness was in the south central district of the state with a percentage of 27. In 1925 the highest ratio was in the southeast at 46 per cent where the greatest increase had taken place. This is the area of small farms. (See Figure 14, page ____). In the southwest district, where large scale cotton farming is the typical practice, the mortgage indebtedness was second highest in 1910 and was the lowest in 1925. The northwest wheat section had the lowest ratio of indebtedness in 1910 and the second highest in 1925. The north central district, where wheat occupies the largest percentage of the crops, the indebtedness was 20 per cent or second lowest in 1910 and 37 per cent or second lowest in 1925.

The foregoing analysis shows that diversification is not necessarily associated with low mortgage indebtedness. The two areas with the lowest indebtedness are sections where cotton, in the southwest, and wheat, in the north-central, are the most concentrated or specialized crops. In these areas are to be found best farmsteads, equipment, and the most signs of prosperity. On the other hand, the data do not disapprove the merits of diversified practices, but indicate that success, if measured by the relative absence or increase of indebtedness, is the result of a combination of many factors, principally the soil, climate, and the farmers.

Trend in Tenure

The proportion of owned farms varies with different sections of the state. In the northwest, northcentral, and westcentral districts the proportion has shifted greatly from owners to renters during the years 1910 to 1925. The same condition is generally true in other parts of the state. The southeast and southcentral districts show an increase in ownership from 1910 to 1920. This apparent discrepency is due to Indian and school lands in those districts. Purchase of such lands was impractical previous to 1910; hence they were farmed as rented lands. Purchases were later made and the normal trend was not apparent until after the census of 1920 when tenancy increased in those districts.

Trend in the Use of Farm Capital

A slight increase in the proportion of farm capital invested in land, a decided increase in the proportion in buildings, and a most marked decline in the proportion in livestock, represent the general change taken during the past 15 years. The proportionate change has been greatest in livestock. In 1925 the percentage of farm capital invested in livestock was half of the proportion in 1910. Land, represented by two-thirds to three-fourths of the farm capital has remained rather constant, increasing only slightly. Build-

ings have increased about 10 to 30 per cent in importance and implements have remained constant. Changes in the price level accounts for some of the difference. The relatives or numbers in percentages used are not entirely accurate inasmuch as changes in the price of land lag considerably behind changes in the price of machinery, building material, etc. Changes in the price of land also lag behind changes in the price of farm products.

Changes in the Use of Crop Land Between 1924 and 1928 as Determined by the Crop Meter[1]

The proportion of farm land occupied by the different crops is determined each year by the State Statistician by use of a crop meter attached to an automobile. Two definite routes, one in the cotton area and one in the wheat area have been made for each of the past five years.

Appendix IV and V give the percentage of the crop land occupied by each crop for each of the past four and five years. The tables do not indicate the percentage each occupy of the total crop acreage. The exact number of acres varies from year to year due to crop failure.

Wheat Area: Wheat acreage varied from 57 per cent of the area in crops in 1924 to 85 per cent in 1927 throughout the wheat belt as a whole. Appendix IV indicates that for the entire route the crop meter registered wheat in 1924 as being grown on 57 per cent of the area in crops; 1925, 61 per cent; 1926, 68 per cent; 1927, 85 per cent; 1928, 83 per cent. Figures used do not account for abandoned cropland hence do not correspond to acreage of the crop. As previously mentioned, the increase of wheat has been consistantly stimulated by the increased use of the tractor and combine. All other crops have declined in importance. Corn decreased from 15 per cent in 1924 to five per cent in 1928. Oats decreased from 10 per cent in 1924 to five per cent in 1928. Hay decreased from 11 per cent in 1924 to three per cent in 1928. Grain sorghums, cotton, and all other crops decreased over the five-year period.

The route taken in the crop meter reading through the wheat district was from Oklahoma City to Woodward and from Woodward to Edmond. Appendix IV gives the percentage for each of these areas and indicates that the return route through the northern portion of the wheat belt made a greater shift in the five years than did the section to the south. In the northern route 88 per cent of the crop area was in wheat in 1927. This is an increase from 56 per cent in 1924. This region which shows the greatest increase is the most specialized wheat area of the state and is best adapted to the larger machinery. The decrease in corn has been most pronounced in the northern portion of the route. This crop occupied 17 per cent of the area in 1924 and four per cent in 1927 and five per cent in 1928. Along the route from Oklahoma City to Woodward the relative importance of corn did not change so much. The area contains more sandy land which partially limits the crop grown. Sandy soils still produce corn, and most of the land adapted to wheat was so used in 1924. From Oklahoma City to Woodward 65 per cent of the area was in wheat in 1924. A slight drop to 63 per cent took place in 1925. In 1926 the proportion was 67 per cent, in 1927, 78 per cent and in 1928, 75 percent. Corn declined from 12 per cent in 1924 to four per cent in 1928.

In interpreting the results of the crop-meter readings in the wheat area it should be remembered that the readings were taken in early June of each year at which time it is difficult to make accurate observations of grain sorghum, sorghum forage, and broomcorn, inasmuch as these crops are only coming out of the ground. Readings for the cereals are quite accurate.

Cotton Area: The crop meter data given in Appendix V indicate that in

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[1] Crop meter data have certain limitations. The meter is an instrument attached to an automobile, after the manner of a speedometer, but having a series of dials. The operator observes the crop growing on the right hand side of the road only and presses the proper dial to measure the crop being passed. The meter records only the linear area occupied by a crop. A careful check of the actual conditions in each county indicates the conclusions based upon the crop meter reading, as a sample, are very nearly accurate.

the entire distance covered in the cotton district, cotton occupied 32 per cent of the crop area in 1924, 62 per cent in 1925, 52 per cent in 1926, and 46 per cent in 1927.   Corn the second crop in importance occupied nine per cent of the crop area in 1924, eight per cent in 1925, 14 per cent in 1926, and 17 per cent in 1927.

Wheat occupied in 1924 seven per cent of the crop area, in 1925, 10 per cent in 1926 nine per cent and in 1927, 15 per cent. Oats, although less important, used four per cent of the crop area in 1924; nine per cent in 1925; 11 per cent in 1926; and one per cent in 1927.

Grain sorghum used less than five per cent in the years 1924 to 1926 while 14 per cent was devoted to this crop in 1927.

Hay, barley, and other crops utilize less than two per cent each and are thus relatively unimportant.

The increase for cotton was 30 per cent in 1925 as compared to 1924. For Oklahoma as a whole the increase was 35 per cent or from 3.9 million acres in 1924 to 5.2 million acres in 1925.   Compensating decreases in the cotton belt in 1925 were with corn, hay, broomcorn, and barley. Wheat increased three per cent and oats increased five per cent.   Crop acreage in 1926 was more similar to that of 1924 with a decline of 10 per cent on cotton and an increase of six per cent in corn.   In 1927 cotton decreased six per cent as compared to 1926 and wheat increased five per cent. Corn increased three per cent.

Appendix V gives in addition to the percentage of crop area used by each crop for the entire cotton district, similar data for three large divisions or frcm Oklahoma City to Altus to Durant, and from Durant to Oklahoma City. The data indicate that the greater increase in cotton in 1925 was in the southeast, where this crop occupied 36 per cent of the crop area. Changes in other crops were, in general, similar.

Appendix V also gives considerable detail of the crop meter readings dividing the cotton area into 14 divisions.   The route passes through a rather important wheat area from Carnegie in Caddo County to the north fork of the Red River in Kiowa County.   In tnis section about one-third of the crop area was in wheat and about half in cotton. From the river to Mangum 80 to 90 per cent of the area was in cotton.   This is the most highly specialized cotton district in the entire area. Tne wheat area was again crossed from Altus to Ringling.   (See Area 8 on Types-of-Farming map, Figure 6, page   ).

The increasing importance of grain sorghums in the southwest is evident from Mangum to Gould. This crop occupied seven per cent of the crop area in 1924 and 1925, 16 per cent in 1926 and 32 per cent in 1927. In the same district cotton occupied from 51 to 86 per cent and wheat was negligible.

Summary of Crop Meter Readings

Wheat is increasing in importance in areas especially adapted to the crop.   Tractors and combines, making possible larger acreage to each family, are the principal factors accounting for the increasing area devoted to wheat. Wheat is decreasing in acreage in the eastern part of the wheat belt where topography and small fields and small farms make the tractor and combine uneconomical.

Acreage in cotton fluctuates considerably. Area devoted to the crop was the highest in 1925 and declined steadily through 1926 to 1927. The 1928 reading for cotton was not available as this was being written.

Crcp meter readings each year in the future will make it posible to keep up to date these data.

PART IV

TYPICAL FARMING SYSTEMS IN DIFFERENT TYPE-OF-FARMING AREAS IN OKLAHOMA

In the preceding pages the extent and limits of the important type-of-

farming areas in Oklahoma have been indicated. Some idea also has been given of the crops and livestock which are most important in each type. No indication has been given, however, of what are the prevailing organiations found on the farms of different sizes. In this section of the bulletin data will be presented to show the most common farming systems found in each important size group as well as other organizations varying significantly from the most common organization.

In each type-of-farming area, as in every agricultural region of any size, will be found an organization which is more commonly followed than any other. This dominant organization is usually built around the main cash crop in the area. In Figure 11, page ___, is shown the most common farming systems by counties in each type-of-farming area of the state. Because of differences in size of farms in the different areas ,the relative importance of the crops and livestock in each organization in each area are shown on a percentage basis, so that they may be compared directly. The most common size of farm, as shown in Figure 14, page _____, varies from 320 acres in Texas County in the Panhandle to 40 acres in the southeastern corner of the state in Choctaw, McCurtain, LeFlore, etc., Counties. In other parts of the state, the most common size of farm is either 80 or 160 acres in size, with the 160-acre size found most frequently.

The dominant organizations in the different parts of the state vary from wheat and sorghum in the northwest to cotton and either wheat or sorghum in the southwest, to cotton and corn in the southeast, and to mixed farming with considerable hay in the northeast. Within the west central part of the state are found transitional areas having a mixture of the crops dominant in the contiguous areas both to the north and south.

While the above are the most common farming systems found in the different areas, they are not found to the exclusion of all other organizations. In fact, in all areas there will be found some farmers who are following farming systems which are quite distinct from those of the majority of the farmers. This difference may be one of degree as well as of kind. There are a number of factors responsible for this.

In the first place, even though conditions within a particular type-of-farming area on a whole are fairly homogeneous, in special localities and on particular farms, they may be quite different. Because of these variable conditions, individual farmers find it to their advantage to adopt a type of organization which is quite different from that which the group follow.

Farmers also vary widely in their abilities and financial circumstances. Some farmers are more alert in seeking profits than others, and will make an effort to capitalize every economic advantage open to them. They are very "price sensitive" and will make adjustments in their production very quickly. Others, due to lack of financial pressure, or because they feel less keenly the acquisitive urge, will respond more slowly, and will cling to an organization which the majority relinquished long before. There are always some farmers in a community who lead the way and are the first to adopt new methods and practices. Others follow along, lagging from one to several years behind the leaders. This probably accounts to a considerable degree for the differences in farming systems in a good many communities.

Conditions of tenure may also have an important influence on the rapidity of change in farming systems, both from year to year and from the long-time viewpoint. For instance, this influence may take the form of pressure by the landlord to continue that crop which gives the largest rental regardless of net returns to the tenant. The same effect may result from the pressure of an encumbered title or through lack of a sufficient working capital.

Tenant operators do not always have freedom of choice in selecting either the amounts or proportions of the crop and livestock enterprises they will handle. They also, because of limited possession of the farm, may not feel justified in making extensive improvements in the form of increased liming

and fertilization necessary for successful legume production, and will continue to grow the major portion of the farm in cash crops in which there is a more rapid cash return.

An encumbered owner, who has a considerable indebtedness on his farm, will be disposed to push his resources to the highest limit for immediate profitableness regardless of long-time returns. He will be inclined to make shifts in production with every apparent change in price. Such changes, unless based upon sound fact, which will be discussed later, usually result in loss. An unencumbered owner, on the other hand, may not feel this urge to the same degree, and hence is likely to react differently. This is particularly true of men who have passed the prime of life. Having had reasonable success, they are not interested in pushing themselves and their resources to the limit of endurance, but are content to work along in a more leisurely manner.

In the farming systems which are presented later there is to be noted in certain areas a difference in organization between owner and tenant farms. Just what has been the reason for this, or what effect the forces mentioned above have had upon it, this analysis does not definitely show, but it is very probable that such forces have been influential to a considerable degree in determining the existing type.

A final factor, although not the only one which determines differences in type in particular areas is the variation in amounts of family labor on different farms. Farmers having more family labor, in order to utilize it advantageously, are more likely to adopt a type-of-farming such as dairying which requires more labor. Likewise, farmers similarly situated in a cotton area likely will grow more cotton than would otherwise be the case if it were necessary to hire all the labor.

All these factors are responsible for differences in organizations in particular areas and account in large measure for the wide variation in the amount and proportion of the crop and livestock enterprises grown on the same size of farm in an area having homogeneous soil and climatic conditions.

Method of Determining the Typical Farming Systems in Each Area

In the following pages are presented the important farming systems found on farms of different sizes in each of the 10 type-of-farming areas in the state. These typical farming systems are based upon special tabulations of the 1925 census. Approximately 7,300 individual farm organizations were examined and used as a basis for the typical organizations presented. These records were taken in 22 different representative sections of country one to three, of which, are located in each of the important type-of-farming areas of the state. The number of records in each area varied from around 300 to over 600, giving a sample which is large enough to be reliable under the conditions usually met with in Oklahoma.

Since the method of determining these farming systems was the same in all the areas, an explanation of the procedure in one area will suffice for all the others.

Area 1, in the western part of the state (See Figure 6, page   ) will be used for this purpose. Two representative sub-areas were taken in Area 1, one in Texas County and the other in Ellis County. There was a total of 535 farms in both areas, representing about five or six per cent of all the farms in the area.

Size of Farm: Having a record of each individual organization in the selected area, the first concern in determining typical farming systems is to know something about the prevailing size of farms. In Table 2 the farms in the selected townships in Texas and Ellis Counties are distributed by size.

Although the table does not show it, the farms of both areas center about certain sizes. Thus, in the 141 to 220-acre group, most of the farms are 160 acres in size. Likewise in the 301 to 380-acre group, most of the farms are 320 acres in size, and in the 461 to 540-acre group, 480 acres in size, etc. The

Table 2—Distribution of Farms by Size Groups in Selected Areas in Texas and Ellis Counties

Size Group Acres	Per cent of Total Number of Farms in Each Size Group in	
	Texas Per cent	Ellis Per cent
0- 60	2.6	1.0
61-140	2.6	8.9
141-220	21.7	30.0
221-300	6.7	13.7
301-380	28.9	21.0
381-460	8.0	6.8
461-540	15.5	10.0
541-620	2.0	3.1
621-700	6.0	3.7
701 and over	6.0	1.6

majority of the farms also fall within a few size groups, notably the 80, 160, 320 and 480-acre sizes. The most common size of farm in Texas County was 320 acres. This was in 1924. Since that time the introduction of the combine harvester in that area has caused a shift toward larger-sized units. In Ellis County, the most common size in 1924 was 160 acres, however, there were almost as many 320-acre farms. The same tendency toward larger farms also has taken place in that county.

The prevailing sizes of farms, and the trend of change in size were indicated in the preceding section. Associated with such conditions, differences existed in the internal organization of the crops and livestock enterprises of farms of different sizes, also in farms of the same size.

For this purpose of study, the farms of the different sizes in both Texas and Ellis Counties were arrayed and classified according to the percentage of the crop area in wheat. The larger sized farms in both Texas and Ellis Counties have a larger proportion of their crop area in wheat than do the smaller sized farms. In Texas County, for example, 55 per cent of the farms, 300 acres or less in size, have from 0 to 20 per cent of their crop area in wheat. In the farms of over 300 acres in size, on the other hand, only 14 per cent have this amount of wheat. In Ellis County much the same thing is true. Seventeen and five-tenths per cent of the farms under 300 acres have from 0 to 20 per cent of their crop area in wheat.

Ellis County had a larger proportion than Texas County of the crop area in wheat. This is true of both the smaller and larger farms. For example, in Ellis County 81 per cent of the farms under 300 acres in size have more than 40 per cent of their crop area in wheat, while in Texas County, only 41 per cent of the farms of this size have this amount of wheat. Likewise, in the farms over 300 acres in size, 97 per cent in Ellis County as against 78 per cent in Texas County have over 40 per cent of their crop area in wheat.

Variation in Organization on Farms of a Particular Size

While the above classification indicates clearly the difference in the relative amount of the dominant crop grown on the farms of different sizes, and also whether there is a tendency for the different sized farms to grow about the same proportion of their crop area in this dominant crop, it does not show how the other crops are distributed nor what variation in organizations is found on farms of a particular size. A more detailed analysis is necessary
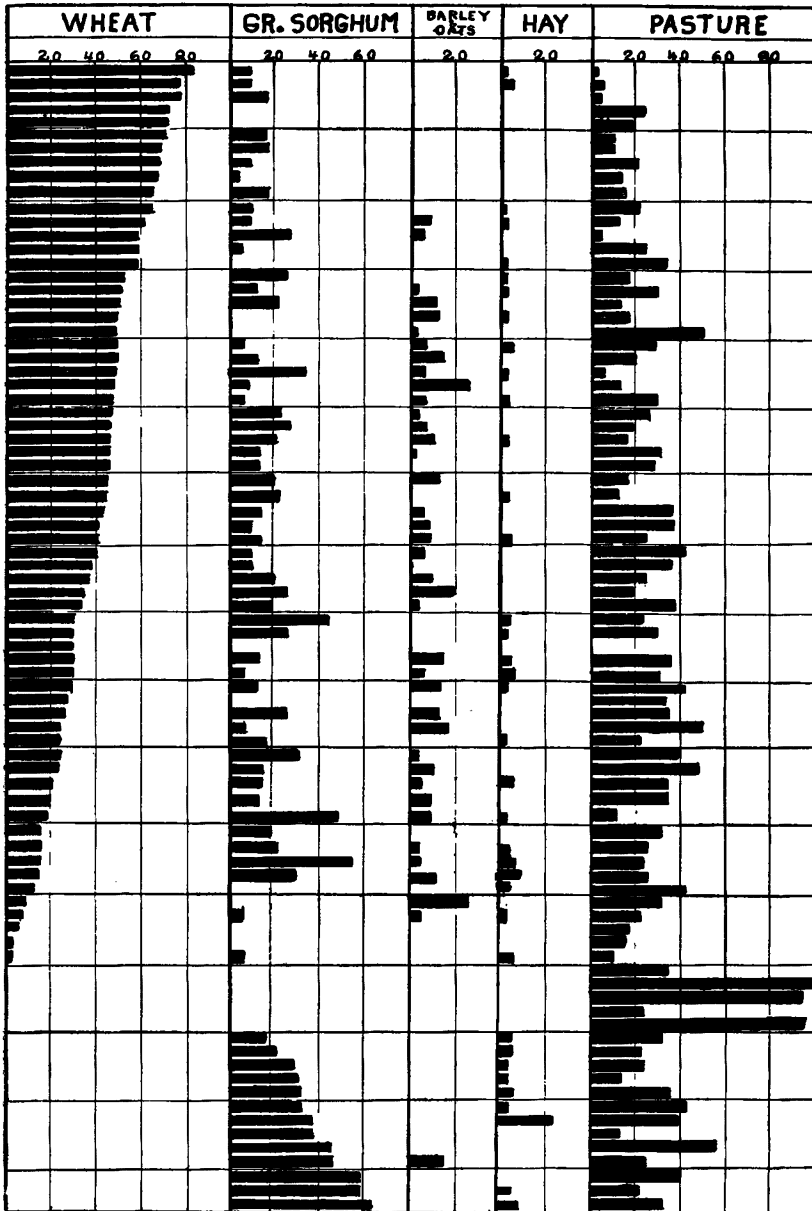
Figure 16—Variation in Organization on Farms of the Same Size in a Representative Type
of Farming Area in Northwestern Oklahoma, given in Percentage of the Farm Area
Devoted to Each Crop. Much Variation Exists in Farming Types Within the Same
Area[1] and on Farms of the Same Size.

[1] The number of livestock is not included inasmuch as all farms have very few, the average
being two cattle, three hogs, 90 poultry. The largest number of cattle was 35 on one farm.
The next highest was 12, next 10. Fifty per cent of the 84 farms had no cattle.

before this additional information can be obtained, or before the most common farming systems can be determined.

In Figure 16 is shown the complete organization of the farms on the·most common size (320 acres) of farm in a selected area in western Oklahoma. Of a total of 99 farms in this size group, 84 of them are 320 acres in size. These 84 farms have been arrayed on the basis of the proportion of the crop area in wheat. The distribution of the remainder of the crop area is also shown for each farm. No regular relationship existed in the organization of the live-stock enterprises.

Probably the most outstanding thing about this chart, which will first attract the reader's attention, is the wide variation in organization on these farms. They vary from 260 acres in wheat to no wheat, and from 190 acres of sorghum to no sorghum, etc. In this connection, it should be remembered that these farms are located, not only in the same type-of-farming area, but in the same two townships and are being farmed under very similar soil and climatic conditions.

Despite this wide variation, however, closer examination will show that there is a tendency for the farms to be grouped around certain organizations, particularly around wheat and sorghum which are the dominant crops. Thus (beginning at the top of the chart and going down), there are a group of about 15 farms that are growing about the same amount of their crop area in wheat. The amount of the other crops grown also may be ascertained by following across the page.

Immediately below these farms is another group, larger in number, that are doing about the same thing, yet are growing considerably less wheat than the group just above. This group comprises about 25 or 30 farms. Likewise, below this group are two other groups, one with a still smaller percentage of its crop area in wheat, and the other with no wheat at all but with high sorghum.

Thus, instead of one "average" organization on the 320-acre farm in this area, there are really four organizations each of which is distinctive enough to be kept separate from the others. Of these four organizations, the "most common" is the second one from the top which is followed by more farmers than any other. This most common organization, however, is not necessarily the most profitable organization. That depends upon a number of conditions, such as relative prices, yields, efficiency of operation, etc. It may be that the organization with high wheat would be the most profitable if the price of wheat were to go up, yet be least profitable if the price of wheat were to go down very low. Likewise, for the other organizations, a similar situation may obtain. From this it follows that blanket recommendations for either long or short-time adjustments in the acreage of the important crops on this size of farm in this area are not feasible, and likely to be decidedly misleading. This emphasizes one of the chief reasons for segregating the farms into size groups and for determining what are the typical or most common farming systems found in each.

A fairly close relationship is noted between wheat and sorghum, due in part to physical factors and in part to relative return from the two crops. On the high wheat farms, the sorghum is relatively low, and on the low wheat farms, sorghum is high. The same thing is observed in the pasture area. The high wheat farms have less pasture than the low wheat farms. Oats, barley, and hay, on the other hand, do not show the same tendency to any extent. The same thing is true of livestock. There is very little correlation between either the crops or pasture and the livestock. Much of the land that is classified as pasture, no doubt, is quite poor pasture land, and it may be that the livestock kept is about sufficient to utilize the supply. On the major-ity of the farms, however, it is probable that the pasture is not utilized most efficiently because of insufficient livestock.

As would be expected, the number of horses on these farms is quite con-stant. Since 1925, there has been a considerable replacement of horses with

tractors and the number of horses indicated likely would be somewhat smaller at the present time.

By the use of the foregoing method of analysis, typical farming systems were set up for the various selected areas in the state. These farming systems are presented later in detail. For convenience of presentation, the state will be divided into five areas which roughly follow the dominant types of farming: the wheat area in the northwestern part of the state, the cotton areas in the southwest and southeast, the feed crops or hay and pasture area in the northeast, and the mixed farming area through the middle part of the state overlapping the cotton and wheat areas.

Typical Farming Systems in the Wheat Region of Northwestern Oklahoma

The important wheat region in Oklahoma comprises the area adjacent to the Kansas line, extending from the Colorado line on the west to Osage County on the east, and then south along the eastern boundary line of Kingfisher County to the southern portion of Canadian County, and then northwest across Blaine to Ellis County, and along the southern edge of the Panhandle counties to the Colorado line. Within this region there is sufficient distinction between the farming systems to warrant the differentiation of two type areas (See Figure 6, page _____). One of these (Area 1), comprises the Panhandle Counties, Ellis and a portion of Harper and Woodward Counties, and the other (Area 2) includes all the other counties.

Typical Farming Systems in Area 1: As was indicated above, two representative sub-areas were selected in Area 1, one in Texas County and the other

Table 3—Texas County: Typical Farming Systems for Farms
of Different Sizes*

Size of Farms	160 Acres			320 Acres				480 Acres		
Frequency** ___	33	17	16	30	18	20	13	30	20	20
Acres Crops*										
All crops _____	115	100	130	255	240	180	190	365	310	215
Wheat _____	80	0	0	220	160	80	0	240	180	80
Sorghum _____	20	85	130	30	40	60	140	80	80	100
Oats & barley__	10	0	0	0	30	30	0	30	40	20
Hay _ _____	5	10	0	5	10	10	15	15	10	15
Broomcorn ____	0	10	0	0	0	0	35	0	0	0
Pastures _____	40	60	25	50	60	120	100	100	130	140
No. of Livestock										
Work animals_	4	5	5	8	8	6	6	10	10	8
Cows _ _____	2	4	3	4	5	2	3	5	6	6
Young stock__	1	2	1	1	3	1	1	4	4	5
Other cattle___	0	1	0	0	1	0	0	1	2	2
Sows _____	0	0	0	0	0	0	0	0	0	0
Other hogs ___	2	0	0	2	4	0	3	5	8	6
Poultry _____	80	80	180	120	120	60	60	125	125	125

*Organizations have also been set up for other sizes of farms in the area, but only the most important sizes are shown here. The 160-acre farms represents 22 per cent; the 320-acre farms, 29 per cent; and the 480-acre farms, 16 per cent of the farms of all sizes. Other size groups included 240-acre farms, 7 per cent; 400--acre farms, 8 per cent; 640-acre farms, 6 per cent; 800-acre farms, 4 per cent.

**Frequency refers to the percentage of all farms of the given-size group for which the organization shown in that column is typical.

***The figures in bold-faced type indicate the acreage of the main crop enterprise, the type determining element in most instances.

in Ellis. While there is very close similarity in the organizations on the different sized farms in the two selected sub-areas, they are sufficiently distinct to warrant their separation.

Texas County: The more common farming systems found in the different sized farms in Texas County are shown in Table 3. About two-thirds of the farms in this area are 160, 320 and 480 acres in size, with the half-section farm the most common, comprising 29 per cent of the farms of all sizes.

On the 320-acre farms, there are five distinct organizations ranging from no wheat to as high as 220 acres of the crop area in wheat. The most common organization is one having 220 acres in wheat, 30 acres in sorghum, five acres in hay, and 50 acres in pasture, eight horses, four cows, one head other cattle, two hogs, and 120 poultry. Approximately one-fourth of the farmers on the half-section farms follow this organization.   The other organizations have considerably less wheat, ranging from 160 acres down to a complete absence of wheat.

The farms with no wheat and high grain sorghum probably have either considerable sandy land, or had winter killing of wheat. In this territory, as will be observed from the soil map (See Figure 7, page _ _), are found both sandy land and "breaks."   Where such exist, sorghum is the principal crop grown.   In this region, also when winter wheat fails, grain sorghum is the most likely crop to be planted, as it withstands the light rainfall better than any other crop. The hay acreage is cane, sudan grass, or millet.

On the 160-acre farms which comprise the next most important size group, the most common organization is one having about 80 acres in wheat, 20 acres of sorghum, 10 acres of oats and barley, five acres of hay, and 40 acres of pasture.   About one-third of the farmers on the quarter-section farms follow this organization.

Three other organizations are quite common on the 160-acre farms. These are differentiated on the acreage in grain sorghum. None of them have wheat, but they have 45, 85 and 130 acres in sorghum respectively. From 14 to 17 per cent of the farmers on this size of farm follow each of these organizations.

The 480-acre farms are next in importance from the standpoint of number. Wheat is the predominant crop on all of the farms of this size, ranging from 80 acres in wheat and 100 acres of sorghum, to 280 acres in wheat and 40 acres of sorghum. About 30 per cent of the farmers in the 480-acre size group have 240 acres in wheat. About 22 per cent have 280 acres in wheat, 20 per cent have 180 acres, and 20 per cent have 80 acres in wheat. The proportion of the other crops and pasture, as well as the number of livestock on each, may be obtained from the table. (Organizations were omitted from the table for farms—sizes of 240, 400, 640, and 800 acres).   The larger size of farms, it will be noted, have large areas in wheat. These larger farms are the ones that are now rapidly adopting the combine-harvester. The use of this machine is causing the increase in the size of the farm unit. This increase in size sometimes represents the purchase of more land, but more frequently represents the renting of an additional 80, 160, or 320 acres. This rented land is likely to be put into wheat, if conditions are favorable, and this in large measure explains the high wheat acreage on these farms. The lower production costs accompanying the use of the combine enable many farmers to bring into profitable cultivation, wheat land which under binder or header conditions would be unprofitable. This also partially explains the tendency to have high wheat acreage on these larger farms.

Ellis County: The typical farming systems in Ellis County, the other sub-area in Area 1, are shown in Table 4. The chief difference between the farming systems in Ellis County and those in Texas is a somewhat lower acreage in sorghum.   The predominant type in both areas, however, is the same: viz, wheat and sorghum.

Table 4—Ellis County: Typical Farming Systems for Farms
of Different Sizes*

Size of Farms	160 Acres			240 Acres		320 Acres			480 Acres	
Frequency** ___	40	30	28	46	54	35	35	25	37	42
Acres Crops*										
All Crops _____	95	80	135	130	175	180	200	235	260	375
Wheat _____	80	50	120	80	140	120	160	200	200	300
Sorghum _____	15	30	15	40	20	60	30	20	45	55
Oats & barley_	0	0	0	10	15	0	10	15	15	20
Pasture _____	10	40	10	60	40	20	80	30	140	40
No. of Livestock										
Work animals_	5	5	5	5	8	7	7	8	9	11
Cows _ _____	4	4	4	5	6	6	6	6	8	10
Young stock__	3	3	2	4	4	4	4	5	9	8
Other cattle___	1	1	1	1	4	2	1	3	6	4
Sows _____	0	0	0	0	0	0	0	0	0	1
Other hogs ___	2	1	2	0	2	1	3	1	4	4
Poultry _____	80	80	100	150	125	100	100	100	175	160

*Organizations have also been set up for other sizes of farms in the area, but only the most
important sizes are shown here. The 160-acre farms represent 30 per cent; the 240-
acre farms, 14 per cent; the 320-acre farms, 21 per cent; and the 480-acre farms, 10
per cent of the farms of all sizes. Other size groups included 100-acre farms, 9 per
cent; 400-acre farms, 7 per cent; 640-acre farms, 7 per cent.

**Frequency refers to the percentage of all farms of the given size group for which the
organization shown in that column is typical.

***The figures in bold-faced type indicate the acreage of the main crop enterprise, the type
determining element in most instances.

The farms in Texas County, on the whole, are a little larger than in Ellis,
the most common size of farm in Ellis County being 160 acres instead of 320
acres as in Texas. Thirty per cent of the farms in Ellis County are 160 acres
in size, as against 21 per cent of 320 acres in size, the next most important size
group.

The "most common" organization on the 160-acre farms in Ellis County is
one having 80 acres in wheat. About 40 per cent of the farmers on quarter-
section farms follow this organization. There are two other organizations,
having 50 and 120 acres of wheat respectively, which are only slightly less im-
portant with about 30 and 28 per cent of the farmers respectively, following
this organization.

Sorghum is of considerably less importance than on the corresponding size
of farm in Texas County. This is to be explained probably by the presence of
a smaller acreage of sandy land.

On the 320-acre farms, much the same tendency to greater wheat acreage
and less sorghum is noted. About 70 per cent of the farmers on the half-sec-
tion farms follow an organization with either 120 or 160 acres in wheat, and
another 25 per cent follow one having about 200 acres in wheat. On this size
of farm, as well as on nearly all the other sizes, there also are found a few
more cows on the Ellis than on the Texas County farms.

Wheat makes up an even larger per cent of crop area on the larger farm
than in Texas County. The same factors operative in Texas are operative in
Ellis. The combine is coming in rapidly.

**Probable Extent to Which Changes in Size of Unit and Organization Have
Taken Place in Wheat Area Since 1924**

The rapid introduction of the combine in a large part of the wheat region
in the northwestern part of the state, with the lower costs and possibilities

of handling larger areas of wheat land accompanying its use, has probably resulted in shifts both in size of unit and in the organization of farms in the area.   Attention was called above to the probability of such a change, but no attempt was made to measure the shifts that may have taken place. At this time shifts which have occurred will be studied in more detail.

Since Oklahoma does not have an annual census, there are no available data in the state, except the crop meter readings previously given, to show the extent to which changes in farming systems and practices have taken place since 1924, the year to which the data presented in the tables apply. Across the line in Kansas annual data are available, and hence will be used. Also in view of the fact that the adjacent wheat area in Kansas is quite similar to that in Oklahoma, we may conclude that approximately the same changes have taken place in both areas. Meade County, Kansas, was taken as representative of the country across the line in Beaver, Harper, and contiguous counties in Oklahoma. Annual data were taken from the State Assessor's Rolls in Kansas for the years 1924 and 1927 and analyzed to see if they would indicate the changes taking place, with the following results:

Changes in Size of Unit: The changes taking place in the size of unit in Meade County and in selected townships of the same are shown in Figure 17. For the county as a whole, there apparently have been no changes in the sizes of farms shown. In certain of the townships in Meade County, however, there has been quite a distinct shift. This is particularly true of West Plains, and Mertilla Townships, which are heavy producers of wheat. In West Plains Township, for example, there has been a decided increase in the proportion of the farms of 301 to 540 acres in size, a decrease in the farms less than 300 acres in size, and a decrease in the 541 to 780-acre farms, but an increase in the section and one-quarter and a section and one-half farms.   In Mertilla Township, the biggest change has taken place in the farms between a section and a section and one-half in size. In Meade Center Township the farms of 300 acres and less have increased as have the 541 to 780-acre farms. The other groups have changed but little.

While a three-year period is quite short for measuring a trend, these data indicate a tendency, whether temporary or sustained, of farmers on the smaller farms to get into a large unit of 320 or 450 acres in size or that the farmers with small farms are leaving the business.   The farmers on section farms also apparently are renting or buying additional land and tending to operate an additional quarter or half-section of land.

Changes in Organization: As a measure of the changes in organization, the farms in the same township and for the same years were arrayed on the basis of the acreage of wheat handled.   Since wheat is the dominant crop, changes in the acreage of this crop handled should reflect changes in the organization of the farms very well.   Figure 18 indicates what the changes have been for the three-year period. That a shift has taken place in all the size groups is obvious.   Probably the most pronounced change occurred in the 461 to 540-acre group. In 1924 less than 10 per cent of the farmers on farms of this size (most of which are 480 acres) had over 321 acres in wheat, while in 1927, 66 per cent of them had this amount of wheat. In the 621 to 700 and 781 to 940-acre groups changes almost as great have taken place.

In the light of these shifts, assuming similar changes have taken place in comparable areas across the line in Oklahoma, it is apparent that certain adjustments in the typical farming systems presented for the area will have to be made as these farming systems are based on 1924 data.   In the first place, probably a larger proportion of the farms than are shown in Table 4, page _____, are 320, 480, and 640 acres, and over, in size. Also it is probable that more farmers are following the organizations having very heavy wheat than was true in 1924.   It even may be advisable to adjust the acreage of wheat upward somewhat for the organizations showing the heaviest proportion of wheat in 1924. This is particularly true on the 640 and 800-acre farms in Texas County,
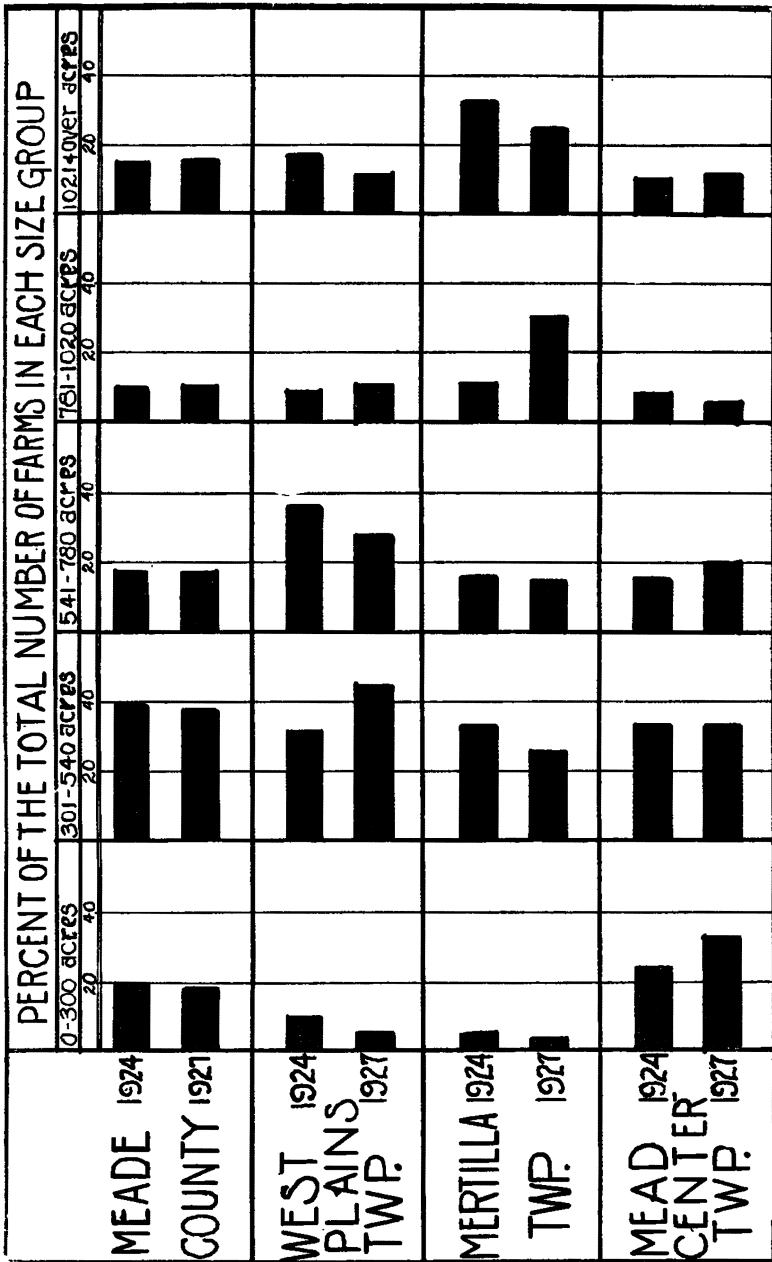
Figure 17—Shift in Size of Farms in Meade County, Kansas and in Three Selected Townships. 1924 and 1927.

(From Kansas Assessor Rolls)

and on the 640-acre farm in Ellis County. Likewise, in Ellis County, it is prob-able that there are enough 800-acre farms now to set up an organization for that size of farm.
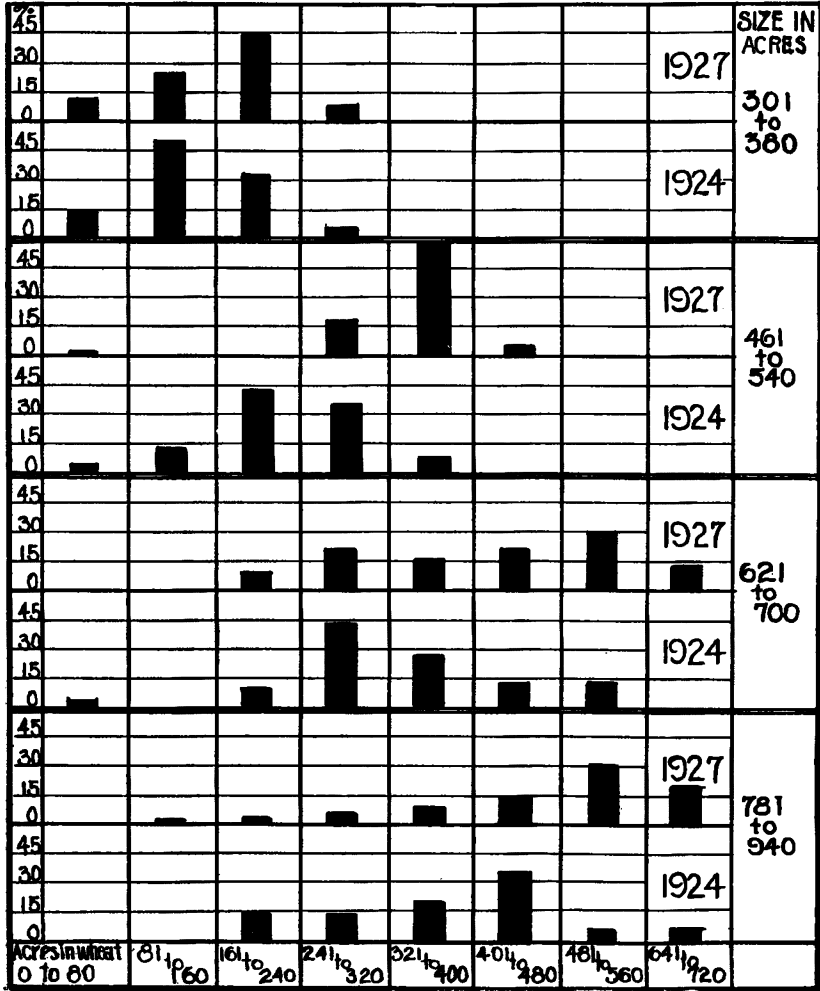
Figure 18—Changes in the Acreage of Wheat on Selected Sizes of Farms in West Plains and Mertilla Townships, Meade County, Kansas, 1924-1927.

The increase in wheat, of course, has come at the relative expense of some other enterprise and it will be necessary to reduce the acreage of that particu-lar one or more enterprises which have declined in importance.   Considerable of the increase in wheat probably has been at the expense of pasture, possi-bly in part to oats and barley, and in part to sorghum. The interchange be-tween wheat and sorghum, however, may be an enforced one because of failure of wheat except in the sandy land where sorghum is relatively better adapted.
It should be borne in mind that this discussion applies only to those areas

where heavy wheat production takes place. In other areas, the shift has been decidedly less pronounced. In many areas, in fact, changes may not have occurred at all as was evidenced by certain townships in Meade County.

Typical Farming Systems in Area 2

The principal difference to be noted between the farming systems in Area 2 and those in Area 1 is a somewhat lower percentage of the farm area in Sorghum in Area 2, but a higher percentage of hay and feed crops, particularly of corn, oats, and barley. There are also more livestock in Area 2 than in 1, while there is not a great deal of difference in the proportion of the area devoted to wheat, particularly on the most common sized farms in the two areas. On the whole, however, wheat probably occupies a greater proportion of the farm area in Area 2 than in 1. (See Figure 10, page ____).

Three representative sub-areas were selected in Area 2, one in the northwestern part of the area in Woods County, another in the central part in Garfield County, and the third in the southern part in Canadian County. There was a total of 633 farms in the three areas which were used for determining the typical farming systems.

Woods County: The typical farming systems found in Woods County which are representative of the northwestern part of the area (2) are shown in Table 5. The farms in Woods County vary widely in size. The 160-acre farm is the most common in size, comprising 22 per cent of the farms of all sizes. There are 13, 12, and 11 per cent of the farms, 320, 480, and 640 acres in size respectively. There are also a number of very large farms ranging from 1000 to 4000 acres, including about 13 per cent of all the farms.

The most common organization on the 160-acre farm has no wheat, but is high in sorghum and broomcorn. About 35 per cent of the farmers follow this

Table 5—Woods County: Typical Farming Systems for Farms of Different Sizes*

Size of Farms	160 Acres				320 Acres		480 Acres		640 Acres	
Frequency** ___	29		21		30	55	56	33	53	47
Acres Crops*										
All crops _____	50	70	70	110	100	155	115	220	170	300
Wheat _____	0	0	15	100	0	60	50	160	40	200
Sorghum _____	15	40	20	10	80	30	40	50	70	80
Oats & barley_	0	0	0	0	0	0	0	0	0	0
Corn _ _____	5	10	10	0	0	35	15	10	25	20
Broomcorn ____	30	20	25	0	20	30	10	0	25	0
Hay _ _____	0	0	0	0	0	0	0	0	10	0
Pasture _____	100	90	80	45	200	160	340	230	440	320
No. of Livestock										
Work animals_	5	4	5	4	7	8	7	10	8	12
Cows _ _____	4	7	7	3	10	10	18	15	18	20
Young stock__	3	4	3	2	4	7	6	7	12	10
Other cattle___	2	1	4	0	2	4	4	9	10	10
Hogs _ _____	1	2	2	0	1	7	4	8	5	20
Poultry _____	80	60	90	100	100	100	60	150	130	100

*Organizations have also been set up for other sizes of farms in the area, but only the most important sizes are shown here. The 160-acre farms reppresent 22 per cent; 320-acre farms 13 per cent; 480-acre farms, 12 per cent; 640-acre farms, 11 per cent. Other size groups included 240-acre farms, 8 per cent; 400-acre farms 8 per cent; 800-acre farms, 7 per cent; over 1000 acres, 13 per cent.

**Frequency refers to the percentage of all farms of the given size group for which the organization shown in that column is typical.

***The figures in bold-faced type indicate the acreage of the main crop enterprise, the type determining element in most instances.

organization. Another 29 per cent have less sorghum and more broomcorn, but still have no wheat. The remainder of the farmers have some wheat as well as sorghum and broomcorn. Twenty-one per cent have from 12 to 20 acres of wheat, and the remainder are very high in wheat with around 100 acres.

On the 320-acre farms the organization groups around two general systems, one with no wheat and high sorghum, and the other with 60 acres of wheat, 30 acres of broomcorn, and 160 acres of pasture. About 30 per cent of the farmers on the half-section farms follow a similar organization to the first and 55 per cent to the second.

On the 480-acre farms as well as on the other large farms, wheat is of more importance. There are two common organizations on the 480-acre farms, one with 50 acres of wheat and the other with 160 acres of wheat. Both groups also are quite heavy in livestock with 18 and 15 cows respectively. On the 640-acre farms much the same situation is found, one group with low wheat and high pasture and the other with high wheat and less pasture. On the 800-acre farms, most of the farms have about the same organization with 200 acres in wheat, 80 acres in sorghum, 20 acres of oats and barley, 15 acres of corn, and 460 acres of pasture.

On the very large farms of 1000 to 4000 acres, ranching is the dominant practice with from 40 to 100 cows, heavy pasture, and considerable feed crops, particularly sorghum.

Garfield County: The farms in the sub-area in Garfield County are more nearly of one size than those taken in Woods County. The 160-acre farms in Garfield County comprises 62 per cent of the total number of farms of all sizes. This is by far the most common size. The 240-acre farms, comprising

Table 6—Garfield County: Typical Farming Systems for Farms
of Different Sizes*

Size of Farms	80 A.	160 Acres			240 Acres		320 A.
Frequency** _____	90	30	32	30	56	44	90
Acres Crops*							
All crops _____	67	113	115	130	163	196	216
Wheat _ _____	**40**	**60**	**80**	**100**	**150**	**100**	**160**
Sorghum _____	7	15	10	10	15	15	10
Oats & barley _____	8	15	10	10	20	10	25
Corn _ _____	12	15	10	10	20	15	10
Alfalfa _ _____	0	5	5	0	8	6	5
Hay _ _____	0	3	2	3	8	5	5
Pasture _ _____	8	40	40	25	75	40	100
No. of Livestock							
Work animals_____	3	5	5	5	6	7	8
Cows _ _____	3	5	5	4	6	4	5
Young stock _____	1	4	4	3	4	5	6
Other cattle _____	1	2	2	0	1	2	9
Sows _ _____	0	0	0	0	0	0	3
Other hogs _____	0	2	2	2	1	2	4
Poultry _ _____	90	125	125	125	150	120	150

*Organizations have also been set up for other sizes of farms in the area, but only the most
    important sizes are shown here. The 160-acre farms represent 62 per cent; the 80-
    acre farms, 7 per cent; the 240-acre farms, 17 per cent; the 320-acre farms, 8 per cent.
**Frequency refers to the percentage of all farms of the given size group for which the
    organization shown in that column is typical.
***The figures in bold-faced type indicate the acreage of the main crop enterprise, the type
    determining element in most instances.

14 per cent of all farms, are next in importance, followed by the 320-acre farms and the 80-acre farms representing eight and seven per cent respectively of the farms of all sizes (See Table 6).

The most common organization on the 160-acre farms in Garfield County is one having 80 acres of wheat, 10 acres of grain sorghum, oats and barley, corn, 5 acres of hay, and 40 acres of pasture. About 32 per cent of the farmers on the quarter-section farms follow an organization similar to this. That this organization is not dominant by any means, is evidenced by the fact that almost as many farmers (30 per cent) follow an organization having either 60 acres of wheat or 100 acres of wheat.

On the 240-acre farms, 56 per cent of the farmers have about 100 acres of wheat, while the remainder have about 50 per cent more wheat or 150 acres. The principal difference in the wheat acreage seems to be accounted for by a much larger acreage of pasture·on farms with less wheat.

On the 320-acre farms, most of the farmers follow about the same organization. This organization has about 160 acres in wheat, 10 acres each in sorghum and corn, 25 acres in oats and barley, five acres in hay, and 100 acres in pasture. Since 1924, when these data were obtained, there probably has been an increase in the number of farms of this size, and some of the half-section farms have probably been increased to 400 or 480 acres in size. The evidence of such changes taking place in comparable acres across the line in Kansas (See Figure 17, page ____) is probably suggestive of a similar change taking place in this area. This shift toward larger farms also is accompanied by an increase in the proportion of the crop area devoted to wheat, as shown previously.

Canadian County: The third representative sub-area in area 2 is located in Canadian County in the southern part of the area. While the farming systems in this county and other comparable counties adjoining are built around wheat as the most dominant crop, they have a larger proportion of their crop area in some other crops, particularly oats, than do the farming systems in the other two representative sub-areas which have been discussed above. They also, or most of them, have a little cotton and many have considerable corn.

Canadian County typifies, in its farming system, some of the characteristics of the farming systems in the area to the south. This is particularly true of the southern part of the county. The major portion of the county, however, is more characteristic of the farming systems in Area 2 than in Area 8, the area to the south.

The most common farming system found in Canadian County are shown in Table 7. The most common size of farm in the county is the 160-acre farm. In 1924, 33 per cent of all the farms in the county were of this size. The next important size is the 80-acre farm, comprising 16 per cent of all farms. It is followed by the 320-acre farm having 14 per cent, the 240-acre farm with 11 per cent, and the 400-acre farm with five per cent of the total number of farms.

The most common organization on the 160-acre farm has 60 acres of wheat, 20 acres of corn, 25 acres of oats, and 40 acres of pasture. Appproximately two-fifths (39 per cent) of the farmers on the quarter-section farms follow this organization. This organization, it will be noted, however, is not found to the exclusion of all others. In fact, there are organizations, each of which has from 16 to 27 per cent of the farmers following them, that vary from no wheat to 25 acres of wheat and to 40 acres of wheat respectively. The variations in the other crops may be seen in the table.

On the 320-acre farms there are three organizations which are commonly followed. The most common of these has around 100 acres in wheat. About half of the farmers on the half-section farms follow this organization. The next most important organization from the standpoint of the number of farmers following it, is one having 50 acres in wheat. Approximately 36 per cent of the farmers follow this organization. The remaining 13 to 14 per cent of the

half-section farmers follow an organization having as high as 150 acres or more of wheat.

Table 7—Canadian County: Typical Farming Systems for Farms of Different Sizes*

Size of Farms	80 A.	160 Acres				240 Acres			320 Acres		
Frequency** _ _____	100	27	18	16	39	18	28	54	36	51	13
Acres Crops											
All Crops _ _____	55	95	90	100	105	115	115	175	165	210	230
Wheat _ _____	20	0	25	40	60	30	50	90	50	100	150
Corn _ _____	20	40	20	30	20	40	25	40	40	30	30
Cotton _ _____	5	15	15	10	0	15	10	20	25	20	5
Oats _ _____	10	20	20	20	25	25	25	20	30	40	40
Sorghum _ _____	0	20	10	0	0	5	5	5	20	20	5
Pasture _ _____	23	55	65	50	40	100	80	50	100	100	80
No. of Livestock											
Work animals _____	3	6	5	4	4	4	4	5	6	6	6
Cows _ _____	2	3	3	2	3	3	4	7	3	4	4
Young stock _____	0	0	0	0	0	0	0	0	0	0	0
Other cattle _____	1	2	2	2	4	6	6	6	6	6	1
Hogs _ _____ _	0	5	4	0	2	5	4	4	3	6	2
Poultry _ _ _____	75	80	80	100	100	100	150	150	125	150	100

*Organizations have also been set up for other sizes of farms in the area, but only the most important sizes are shown here. The 80-acre afrms represent 16 per cent; 160-acre farms, 33 per cent; 240-acre farms, 11 per cent; 320-acre farms, 14 per cent. Other size groups included 400-acre farms, 5 per cent.

**Frequency refers to the percentage of all farms of the given size group for which the organization shown in that column is typical.

The 400-acre farm is the next largest size of farm. Only five per cent of the farmers, however, had this size of farm in 1924. About 60 per cent of the farmers follow an organization with 150 acres of wheat. The remainder follow one having about half as much wheat, (80 acres). The pasture area on this size of farm, however, is much higher, as are the livestock, particularly cattle.

The foregoing groups represent the most important farming systems in the county except in the river bottoms. Along the rivers, particularly the Canadian, corn and alfalfa are more important than these "set-ups"[1] indicate. Much of this bottom land, extending from one to three miles back from the river, has considerable alfalfa reaching at times to 40 and 60 per cent of the crop area. Corn is the next important crop, the two together comprising the major portion of the crop area. The organizations presented in Table 7 are not representative of the organizations in these bottom lands and should not be considered so.

The livestock handled on all of these farms is relatively less important from the standpoint of its contribution to the total income than are the crops. The number of each class of livestock found on typical farms of each size may be seen in the table.

_____

[1] The term "set-up" refers to the organization of the number of livestock and the acres in crops for different farm organizations as are included in the tables in this section of the bulletin.

Typical Farming Systems in the Mixed Farming Areas of Northeastern, Central, and West Central Oklahoma

There are three general areas or regions in Oklahoma in which the prevailing type is best described as mixed.   The line of demarcation between these areas is determined by the emphasis placed upon particular crop enterprises in each.

Northeastern Oklahoma: In the northeastern part of the state there is an area extending from the eastern boundary of Osage along the Kansas line to the eastern corner of the state, south of Adair County, then west across the southern boundary of Mayes, and Rogers, to Tulsa County, and then northwest taking the southern portion of Osage County.   This area comprises the important feed crop and hay area of the state.   Cotton is found, but is of much less importance than in the counties to the south.

Three representative sub-areas, selected in this general area, and the organizations of all the farms therein were used as a basis for determining typical farming systems.   These three sub-areas are located one each in Craig, Rogers, and Nowata Counties.   Approximately 650 farms were used as a basis for determining the typical farming systems.

Craig County: The more common systems of farming followed on farms of different sizes in Craig County are shown in Table 8.   From the table it will be noted that there is considerable range in the size of farm, varying from 40 acres to as high as 560 acres in size.   (See footnote to Table 8).   The most common size is the 80-acre farm.   About one-fifth of the farms of all sizes are 80 acres in size.   The relative importance of the other sizes may be obtained by reference to the table.

**Table 8—Craig County: Typical Farming Systems for Farms
of Different Sizes***

Size of Farms	40 A.	60 Acres		80 Acres			120 A.	160 Acres		200 A.
Frequency** ___	74	49	33	30	32	16	90	47	45	75
Acres Crops*										
All crops _____	28	25	40	45	60	61	75	120	125	135
Corn _ _____	15	10	20	15	25	40	20	20	40	35
Oats _ _____	0	10	10	10	10	15	20	50	40	40
Hay _ _____	0	0	0	10	10	0	15	30	20	25
Wheat _ _____	0	0	0	0	0	0	0	0	15	15
Sorghum _ ____	5	5	5	5	10	6	10	10	10	10
Cotton _ _____	8	0	5	5	5	0	10	10	0	10
Pasture _ _____	10	30	15	30	15	15	40	35	25	60
No. of Livestock										
Work animals_	2	3	3	4	4	4	5	5	5	5
Cows _ ____	2	2	2	5	4	6	6	5	5	8
Young stock __	2	1	1	3	3	3	4	3	3	4
Other cattle __	0	0	0	2	0	2	2	3	2	3
Hogs _ _____	4	2	2	2	4	5	5	8	4	3
Poultry _ _____	60	60	50	100	60	60	100	100	100	100

*Organizations have also been set up for other sizes of farms in the area, but only the most important sizes are shown here.   The 160-acre farms represent 10 per cent; the 40-acre farms reprpesent 10 per cent; the 60-acre farms, 11 per cent; the 80-acre farms, 21 per cent; 200-acre farms, 8 per cent.   Other size groups included 100-acre farms, 7 per cent; 260-acre farms, 5 per cent; 560-acre farms, 5 per cent.

**Frequency refers to the percentage of all farms of the given size group for which the organization shown in that column is typical.

***The figures in bold-faced type indicate the acreage of the main crop enterprise, the type determining element in most instances.

The most common organization on the 80-acre farm, followed by one-third of the farmers, has approximately 25 acres of corn, 10 acres of oats, 10 acres of hay, 10 acres of sorghum, five acres of cotton, and 15 acres of pasture. There are two other organizations on the same size of farm, one followed by about 30 per cent of the farmers has approximately 15 acres of corn with about the same amount of the other crops, and the other followed by only 16 per cent of the farmers has about 40 acres of corn with no cotton or hay, and very little sorghum.

On the larger sized farms, the acreage of corn is about the same, but the hay acreage is considerably larger. On the 160-acre farms, there are two common organizations, each followed by about the same number of farms, one of these has approximately 10 acres of cotton, 20 acres of corn, and 30 acres of hay, and the other has no cotton, but has 10 acres of wheat and 40 acres of corn, and only 20 acres of hay. The livestock organizations are about the same as the two typical farms.

On the other large farms much the same proportion of the crops is grown except hay, which is of more importance. Thus, on the 560-acre farm, over 50 per cent of the crop area is in hay and on the 200 and 260-acre farms, from one-fifth to one-fourth of the crop area is in hay.

Rogers County: In Table 9 is presented the typical farming systems for the different sizes of farms in Rogers County. There is no one size of farm which is outstanding. The 40, 60, 80, 100, 160, and 240-acre farms occur in about equal proportions.

Table 9—Rogers County: Typical Farming Systems for Farms
of Different Sizes*

Size of Farms	40 A.	60 A.	80 Acres		100 Acres		160 A	240 A	320 A.	500 A.
Frequency** ___	90	90	59	41	66	33	90	90	90	90
Acres Crops*										
All crops _____	35	45	45	55	85	65	120	165	245	360
Corn _ _____	15	15	10	25	15	30	20	20	35	30
Hay _ _____	0	0	0	0	20	0	25	30	55	120
Oats _ _____	0	10	3	0	25	20	30	45	60	80
Cotton _ _____	20	20	25	30	25	15	30	25	30	10
Wheat _ _____	0	0	0	0	0	0	0	35	50	100
Sorghum _ ____	0	0	7	0	0	0	15	10	15	20
Pasture _ _____	4	12	30	20	10	30	35	70	65	120
No. of Livestock										
Work animals _	3	4	4	4	4	6	4	7	6	6
Young stock ___	0	0	2	2	1	1	4	3	5	20
Cows _ _____	1	1	5	4	3	5	4	7	10	35
Hogs _ _____	0	0	0	0	0	4	7	3	4	5
Poultry _ ____	40	40	40	60	60	65	100	130	150	100

*Organizations have also been set up for other sizes of farms in the area, but only the most important sizes are shown here. The 40-acre farms represent 19 per cent; the 60-acre farms, 10 per cent; the 80-acre farms, 14 per cent; the 100-acre farms, 13 per cent; the 160-acre farms, 16 per cent, the 240-acre farms, 11 per cent; the 320-acre farms, 7 per cent and the 500-acre farms, 5 per cent.

**Frequency refers to the percentage of all farms of the given size group for which the organization shown in that column is typical.

***The figures in bold-faced type indicate the acreage of the main crop enterprise, the type determining element in most instances.

The primary difference to be noted between the organizations in Rogers and Craig Counties is a somewhat larger acreage of cotton on the Rogers County farms, and a lower acreage of hay. Whereas, on the most common 80-acre

farm in Craig there were 25 acres of corn, 10 acres of hay, and only 5 acres of cotton, the most common organization on the same size of farm in Rogers County has 10 acres of corn, no hay, and 25 acres of cotton.

On the larger farms, the hay acreage increases as it did in Craig County. The livestock also increases, particularly cattle.

Nowata County: The typical organizations found on farms of different sizes in Nowata County, the third sub-area selected in Area 3 are presented in Table 10. Much the same thing is found in this county with respect to the wide range of size of farms as was noted in the other sub-areas above. There is no one size of farm that is outstanding.

Table 10—Nowata County: Typical Farming Systems for Farms
of Different Sizes*

Size of Farms	40 A.	80 Acres		100 A.	120 A.	160 A	200 A.	240 A.	280 A.	800 A.
Frequency** ___	59	44	38	61	67	67	83	88	90	82
Acres Crops*										
All crops _____	20	47	35	67	75	110	110	180	170	300
Corn _ _____	10	15	35	25	25	35	30	35	40	40
Sorghum _ _____	10	12	0	7	10	15	15	20	15	40
Wheat _ _____	0	10	0	5	10	15	25	40	35	50
Oats _ _____	0	10	0	10	15	25	20	45	40	70
Hay _ _____	0	0	0	20	15	20	20	40	40	100
Pasture _ _____	18	20	20	30	35	35	80	50	80	400
No. of Livestock										
Work animals _	3	4	5	5	6	7	8	8	8	12
Cows _ _____	2	3	3	4	6	6	7	12	10	25
Young stock __	1	2	2	2	3	3	4	6	6	20
Other cattle ___	0	0	0	0	2	2	3	4	4	15
Hogs _ _____	1	4	4	6	8	8	10	8	10	20
Poultry _ _____	40	100	100	75	75	100	100	125	100	150

*Organizations have also been set up for other sizes of farms in the area, but only the most important sizes are shown here. The 40-acre farms represent 8 per cent; the 80-acre farms, 33 per cent; the 100-acre farms, 9 per cent; the 120-acre farms, 7 per cent; the 240-acre farms, 7 per cent; the 280-acre farms, 8 percent and the 800-acre farm, 5 per cent.

**Frequency refers to the percentage of all farms of the given size group for which the organization shown in that column is typical.

***The figures in bold-faced type indicate the acreage of the main crop enterprise, the type determining elemnt in most instances.

The nature of the farming systems found on each size of farm in this area may be seen in the table. The chief difference to be noted between the organizations in. this county and in Craig and Rogers Counties is the absence of cotton and the presence of wheat in most of the organizations in Nowata County. This county also has considerably more poultry than the other two counties. Otherwise they are quite similar.

This region is well adapted to the production of livestock, because of the preponderance of hay and feed crops in the farming systems, also because of a relatively large area in pasture. Dairying is being encouraged in this whole general area, and probably will prove profitable so long as the market is not overdone.

North Central Oklahoma: The second important mixed farming area is located immediately south and west of the area which has just been discussed. This area designated as Area 5 in the type-of-farming map (See Figure 6, page ____) includes all of Pawnee, Payne, and Oklahoma Counties, the north-

west corner of Creek County, the southeastern portion of Noble, the southern two-thirds of Logan, and the northern half of Lincoln Counties.

This area is really a transitional area between the wheat and cotton areas, (Areas 2 and 9). While no one crop is dominant in this general area, cotton is the most important crop grown, followed by corn, sorghum, oats, and hay in relative importance. Wheat is found only on the larger farms.

Two representative townships were selected in Payne County and the complete organizations of all the 386 farms found therein were used as a basis for determining the typical farming systems for the whole area. These organizations are presented for the important sizes of farms in Table 11.

Table 11—Payne County: Typical Farming Systems for Farms of Different Sizes*

Siez of Farms	40 Acres		80 Acres				160 Acres			
Frequency** ___	26	31	17	21	38	18	22	22	25	17
Acres Crops***										
All crops _____	27	34	30	37	32	45	60	68	98	110
Cotton _ _____	8	27	0	7	15	30	0	8	18	30
Corn _ _____	8	3	10	10	7	10	20	15	10	20
Sorghum _ ____	6	4	10	10	10	5	20	15	25	25
Oats _ _____	0	0	10	0	0	0	0	20	20	20
Wheat _ _____	0	0	0	0	0	0	0	0	15	0
Hay _ _____	5	0	0	10	0	0	20	10	10	15
Pasture _ _____	12	0	40	35	35	30	80	60	55	45
No. of Livestock										
Work animals _	2	2	3	2	2	2	4	4	5	5
Cows _ _____	2	0	4	3	2	2	4	4	5	4
Young stock __	0	0	1	1	1	0	3	2	2	2
Other cattle __	0	0	0	0	0	0	1	2	2	2
Sows _ _____	0	0	0	0	0	0	0	1	1	1
Other hogs ____	0	0	0	0	0	0	0	2	2	2
Poultry _ _____	75	25	75	75	50	75	75	100	100	100

*Organizations have also been set up for other sizes of farms in the area, but only the most important sizes are shown here. The 40-acrefarms represent 10 per cent; the 80-acre farms, 20 per cent; the 160-acre farms, 36 per cent. Other organizations included 100-acre farms, 5 per cent; 120-acre farms, 8 per cent; 320-acre farms, 5 per cent.

**Frequency refers to the percentage of all farms of the given size group for which the organization shown in that column is typical.

***The figures in bold-faced type indicate the acreage of the main crop enterprise, the type determining element in most instances.

From the table it will be noted that the 80 and 160-acre farms are the most common. Approximately two-fifths of the farms are 160 acres in size and one-fifth 80 acres in size.

There are four fairly distinct organizations on the 160-acre farms based on the acreage of cotton grown. These organizations range from no cotton to as high as 50 acres in cotton.* The most common organization has 11 to 20 acres of cotton, 10 acres of corn, 25 acres of sorghum, 20 acres of oats, 15 acres of wheat, 10 acres of hay, and 45 acres of pasture. Approximately one-fourth of the farmers on quarter-section farms follow this organization. Almost as many farmers follow either an organization with no cotton at all. or with five to 10 acres of cotton. Somewhat smaller groups representing 14 and 17 per cent of the farmers respectively, have more cotton, usually either 30 acres or around 50 acres.

Much of the same general tendency is to be noted on the other sizes of

farms. The more common organizations prevailing on the different sizes of farms may be obtained by reference to Table 11.

West Central Oklahoma: The third and last mixed farming area in Oklahoma is found in a tier of counties in West Central Oklahoma, including all of Dewey, Custer and Roger Mills Counties, the northern part of Caddo, southwestern portion of Blaine, and a narrow strip along the western boundary of Canadian County. This region is designated Area 4 on the type-of-farming map for the state (See Figure 6, page   ).

This area is another transitional area similar to Area 5, which has just been discussed. It intervenes between the Areas 1 and 2, and the southwestern cotton areas 7 and 8.

It is unlike Area 5 in that wheat and sorghum are the dominant crops, rather than cotton. The lower rainfall probably has been instrumental quite largely in determining the dominance of wheat and sorghum. The sandy nature of much of the soil in this region also has played a part in determining the acreage devoted to sorghum. There are rather large strips of sandy and "Black-Jack" country which is devoted largely to sorghum and ribbon cane, or utilized by grazing with goats. This is particularly true of portions of Dewey County. The goats are not found on every farm, nor even on the majority of farms. On the 160-acre farms those who have goats usually have from 20 to 50 head. On the larger farms, the number kept is somewhat larger —ranging from 75 to 175 head.

Three townships were selected in Dewey County as representative of the general type throughout the area. The organizations of 339 farms were used as a basis for determining the typical farming systems shown in Table 12.

Table 12—Dewey County: Typical Farming Systems for Farms of Different Sizes*

Size of Farms	80 Acres		160 Acres				320 Acres			
Frequency** ___	71	29	36	20	14	22	25	17	14	26
Acres Crops***										
All crops _____	45	35	60	70	85	85	100	115	115	155
Wheat _____	0	25	0	0	30	60	0	30	50	80
Sorghum _ _	20	0	25	15	20	10	40	30	30	20
Oats & barley _	0	0	0	0	0	0	0	0	0	0
Corn _____	15	10	20	40	30	15	50	40	30	40
Broomcorn ___	5	0	15	15	5	0	0	15	5	15
Pasture _	35	35	90	80	70	70	185	175	170	140
No. of Livestock										
Work animals _	2	3	5	5	5	5	6	6	6	6
Cows _____	3	5	4	4	6	4	6	6	5	4
Young stock __	1	2	2	2	4	2	4	3	5	4
Other cattle ___	0	0	1	1	2	0	2	2	3	4
Hogs _____	3	3	3	3	6	2	8	6	5	4
Poultry _ ____	40	60	60	60	100	100	100	60	60	60

*Organizations have also been set up for other sizes of farms in the area, but only the most important sizes are shown here. The 80-acre farms represent 7 per cent; the 160-acre farm, 43 per cent; the 320-acre farms, 20 per cent. Other size groups included 240-acre farms, 9 per cent; 440-acre farms 8 per cent.

**Frequency refers to the percentage of all farms of the given size group for which the organization shown in that column is typical.

***The figures in bold-faced type indicate the acreage of the main crop enterprise, the type determining element in most instances.

From the table it will be noted that approximately two-fifths (34 per cent) of the farms in this area are 160 acres in size, 20 per cent are 320 acres, seven, eight, and nine per cent are 80, 240, and 440 acres in size respectively.

The most common orginization on the 160-acre farms has 25 acres in sorghum, 20 acres in corn, 15 acres in broomcorn, and 90 acres in pasture, with no wheat, oats, or barley. Approximately one-third (36 per cent) of the farmers on the 160-acre farms follow this organization. Another 20 per cent of them follow an organization quite similar but instead of 20 acres of corn, have 40 acres of this crop. The other 45 per cent of the farmers on the quarter-section farms have wheat, ranging from 20 to 100 acres. These farms have less of corn, sorghum, and broomcorn.

On the larger farms, wheat is more dominant. On the 320-acre farm, for example, the most common organization followed has 80 acres in wheat, which is more than 50 per cent of the crop area in crops. Likewise, on the 440-acre farms, much the same thing is true. However, corn is of more importance relatively on the 440-acre farms than on the 320-acre farms.

Broomcorn, it will be noted, is grown on a good many of the farms. The acreage of this crop, according to people living in the area, fluctuates rather widely from year to year. It is rather difficult, consequently, to determine what is a typical acreage from year to year on each of the different sizes of farms.

Typical Farming Systems in the Cotton Area of Southwestern Oklahoma

Situated to the south of the mixed farming area just discussed is found the most important cotton area of the state. This area includes all the counties south of the southern boundaries of Roger Mills, Custer, and Canadian Counties, and west of a line drawn along the western boundaries of Cleveland, Garvin, Stephens, and Jefferson Counties (See Figure 6, page _   ).

There is enough difference in the farming systems to warrant the division of the region into two type-of-farming areas. Cotton is the dominant crop in each area.   In one area, (No. 7), however, sorghum is the second most important crop, and in the other (No. 8), wheat has second place. Area 7 comprises all of the counties of Beckham, Harmon, Greer, and Jackson. Area 8 includes the counties to the east of the four mentioned, extending to the eastern boundaries of the region.

This southwestern cotton area is the large-scale cotton area of the state. The farms are larger in size, also have a larger proportion of their crop area in cotton than is usually found on the typical farms of the southeastern part of the state. The level topography in this section is much better adapted to large scale methods than the hill farms of the east and southeast.   In 1926 sledding of cotton was quite widely practiced, but in 1927 there was very little sledding done. Apparently, whether or not sledding is practiced is determined largely by the relative prices of cotton and labor.

Changes that have taken place in this area in size of unit, and in organization can not be definitely ascertained, since data are not available. It may be that there has been an increase in the cotton acreage since 1924, and also possibly in the size of units. The shift can be measured more satisfactorily after it has proceeded a little further and after more years have elapsed. The 1930 census should indicate to what extent, if any, there has been a shift in both of these factors.

Typical Farming Systems in Area 7

Two representative sub-areas were selected in Area 7, one in Beckham and the other in Jackson County. The organizations of approximately 700 farms were used as a basis for the typical farming systems presented.

Beckham County: The more common systems of farming found in Beckham County are presented in Table 13. While there is a range from 40 to 320 acres in size of farms, the 160-acre farm is the most common in size. Thirty-nine per cent of all the farms are of this size, and from 65 to 70 per cent of the farms in the county are 160 acres or larger in size.

Table 13—Beckham County: Typical Farming Systems for Farms of Different Sizes*

Size of Farms	80 Acres		120 Acres		160 Acres				200 A.
Tenure****	O.	T.	O.	T.	O.		T.		
Frequency**	100	74	50	44	7	9	14	7	93
Acres Crops*									
All crops	16	47	50	70	30	65	68	120	125
Cotton	6	30	20	40	0	15	25	70	40
Sorghum	8	15	20	30	5	20	25	20	25
Wheat	0	0	0	0	25	15	0	0	20
Corn	2	2	10	0	0	0	8	10	10
Oats & barley	0	0	0	0	0	0	0	0	10
Hay	0	0	0	0	0	0	0	0	0
Broomcorn	0	0	0	0	0	15	10	10	20
Pasture	60	30	60	45	120	80	85	35	65
No. of Livestock									
Work animals	4	4	4	4	5	4	6	5	6
Cows	4	2	5	4	6	2	5	4	5
Young stock	2	2	2	2	3	0	2	1	2
Other cattle	0	0	2	0	0	0	1	1	1
Hogs	0	0	1	1	0	2	0	2	3
Poultry	100	80	150	50	60	100	100	60	100

*Organizations have also been set up for other sizes of farms in the area, but only the most important sizes are shown here. The 160-acre farms represent 39 per cent; the 80-acre farms, 8 per cent; the 120-acre farms, 9 per cent and the 200-acre farms, 12 per cent. Other size groups included 40-acre farms, 6 per cent; 240-acre farms, 8 per cent, and 320-acre farms, 8 per cent.

**Frequency refers to the percentage of all farms of the given size group for which the organization shown in that column is typical.

***The figures in bold-faced type indicate the acreage of the main crop enterprise, the type determining element in most instances.

****O. refers to farms operated by owners, T. to farms operated by tenants. Where the kind of tenure is not differentiated in this tabulation, the tenure column is left blank.

It will be noted that on the farms of 160 acres and less in size, separate set-ups have been made for owner and tenant farms. While the difference between the tenant and owner organizations is not very pronounced, there is probably enough difference in them to justify their being kept separate. The tenant farms, as a whole, have a greater proportion of their crop area in cotton than do the owner farms. This is particularly noticeable on the 40, 80, and 120-acre farms.

On the 160-acre farms, there is a group of tenant farms that is very heavy in cotton, having from 60 to 80 acres. In the owner group, on the other hand, the largest amount of cotton on any typical organization is from 40 to 50 acres. There also is more broomcorn found on the tenant than on the owner farms, but the area in sorghum is about the same.

On the smaller farms there are more cows found on the owner than on the tenant farm, and the same is true of poultry, both on the smaller and larger farms up to 200 acres.

On the farms 200 acres and over, there is not enough difference between the owner and tenant farms to justify a separate classification; hence one organization has been set up for both.

Jackson County: The typical farming systems for Jackson County, the other sub-area selected in Area 7 are shown in Table 14.

Table 14—Jackson County: Typical Farming Systems for Farms of Different Sizes*

Size of Farms	40 A.	60 A.	80 A.	120 A.	160 Acres					320 A.
Tenure**** __	T.	T.	T.	T.	O.	O.	T.	T.	T.	
Frequency** _	73	80	85	42	9	11	12	18	18	79
Acres Crops***										
All crops _____	27	50	60	90	55	100	100	115	110	190
Cotton _____	25	45	50	60	20	80	40	60	80	120
Sorghum _	0	5	10	15	10	15	20	20	10	15
Sorghum Feed	2	0	0	5	5	5	5	5	10	15
Wheat	0	0	0	10	20	0	30	20	10	40
Oats & barley	0	0	0	0	0	0	5	10	0	0
Pasture __	10	10	10	20	80	40	50	30	35	90
No. of Livestock										
Work animals	2	2	4	4	4	6	5	6	6	8
Cows ___	0	1	1	4	5	3	4	3	2	3
Young stock __	0	0	1	2	3	2	2	1	1	2
Other cattle ___	0	0	0	0	0	0	0	0	0	0
Hogs _____	0	0	0	2	0	0	0	0	0	2
Poultry _____	0	25	25	50	50	80	75	75	70	100

*Organizations have also been set up for other sizes of farms in the area, but only the most important sizes are shown here. The 40-acre farms represent 6 per cent; the 60-acre farms, 8 per cent; the 80-acre farms, 10 per cent; the 120-acre farms, 8 per cent; the 160-acre farms, 36 per cent; and the 320-acre farms, 7 per cent.

**Frequency refers to the percentage of all farms of the given size group for which the organization shown in that column is typical.

***The figures in bold-faced type indicate the acreage of the main crop enterprise, the type determining element in most instances.

****O. refers to farms operated by owners, T. to farms operated by tenants. Where the kind of tenure is not differentiated in this tabulation, the tenure column is left blank.

The principal difference between the farming systems in Jackson County and those which have been presented for Beckham are a somewhat higher acreage of cotton on the Jackson County farms, and a lower acreage of sorghum. Also more wheat is found on the Jackson County farms, but broomcorn, which was of some importance in Beckham, is not found in Jackson County. It was not grown generally enough to warrant including it in the set-up.

It will be noted that all the organizations on the farms from 40 to 120 acres in size are tenant farms. There were not enough owner farms of this size to group separately, 80 to 90 per cent being tenant farms. There are less than one-third of the farms of all sizes in these size groups, however.

On the 160-acre farms, which are by far the most important size group, there is but little difference between the owner and tenant organizations. The tenants do have slightly more cotton. One group of tenants not included in the table had 120 acres in cotton.

On the 320-acre farms, the owner and tenant farms are combined, since there was not enough difference between them to justify their separation. The most common organization on this size of farm has 190 acres of crops, 120 acres of which are in cotton, 30 acres in sorghum, and 40 acres of wheat.

In addition, there are 90 acres in pasture. The livestock on this farm, as well as the other organizations, is of not much importance.

Typical Farming Systems in Area 8

Two representative sub-areas were selected in Area 8, the other type area in the southwestern cotton region. One of these is in Washita and the other in Comanche County.

Washita County: In Table 15 is shown the important typical farming systems found in Washita County. Forty per cent of the farms in this sub-area were 120 acres or less in size. One group of five acres in size contained ten per cent of all famrs.

Table 15—Washita County: Typical Farming Systems for Farms of Different Sizes*

Size of Farms	5 A.	80 Acres		160 Acres				200 Acres		320 A.
Tenure**** _ __	O.	O.	T.							
Frequency** _ __	100	44	56	28	19	18	25	61	37	57
Acres Crops*										
All crops _____	3	50	60	95	120	90	120	135	155	165
Cotton _ _____	2	25	40	10	25	40	60	30	75	20
Wheat _ _____	0	10	0	60	60	35	20	70	40	100
Sorghum _ ____	1	10	15	15	10	15	20	10	20	10
Corn _ _____	0	5	5	0	15	0	10	10	20	15
Oats & barley_	0	0	0	10	10	0	10	15	0	20
Pasture _ _____	0	25	15	40	30	40	30	50	30	110
No. of Livestock										
Work animals_	1	4	4	6	6	6	6	6	6	10
Cows _ _____	1	3	2	4-6	4-8	3-6	3	7	4	10
Young stock __	0	1	1	4	4-6	2	2	3	3	6
Other cattle ___	0	0	0	2	2	1	1	2	1	4
Hogs _ _____	0	2	0	5	8	8	3	8	6	10
Poultry _ _____	75	100	60	150	100	100	100	100	100	150

*Organizations have also been set up for other sizes of farms in the area, but only the most important sizes are shown here. The 5-acre farms represent 10 per cent; the 80-acre farms represent 9 per cent; the 160-acre farms, 29 per cent; the 200-acre farms, 9 per cent; and the 320-acre farms, 5 per cent.Other size groups included 15-acre farms, 6 per cent; 30-acre farms, 5 per cent; 60-acre farms, 3 per cent; 120-acre farms, 7 per cent; 240-acre farms, 7 per cent; and 480-acre farms, 3 per cent.

****O. refers to farms operated by owners, T. to farms operated by tenants. Where the kind of tenure is not differentiated in this tabulation, the tenure column is left blenk.

The principal difference to be noted between the farming systems in this area and those in area 7 is a somewhat lower percentage of the group area in cotton and a much higher acreage of wheat. More corn also is found.

In addition to the differences in crops, there also are differences in the livestock organizations—there being more cows and hogs, as well as poultry on the farms in Area 8.

On the smaller farms, there is enough difference between the owner and tenant farms to justify their separation, but on the larger farms, they are thrown together, and one set-up made for both owners and tenants. The farming systems presented for this county are representative of the systems prevailing in contiguous counties in the northern part of Area 8. Those in Comanche County, the other area, on the other hand, are more representative of those in the south.

Comanche County: The typical farming systems for Comanche County shown in Table 16 are not quite so reliable, as those shown for Washita and the other counties. They are based on a much smaller sample. The organizations shown for the 160-acre farms, however, are fairly accurate, as are those for the 320-acre farms. No other groups are shown, since there were too few of them to group and get a reliable set-up.

Table 16—Comanche County: Typical Farming Systems for Farms of Different Sizes*

Size of Farms	160 Acres				320 A.
Frequency** _ _____	28	40	20	12	90
Acres Crops***					
All Crops _ _____	75	75	80	80	155
Cotton _ _____	0	20	30	50	25
Wheat _ _____	55	15	25	20	50
Barley _ _____	20	25	20	10	70
Sorghum _ _____	0	15	5	0	10
Pasture _ _____	75	75	70	60	140
No. of Livestock					
Work animals _ _____	4	4	4	4	8
Cows _ _____	10	4	4	4	10
Young stock _____	8	3	2	2	5
Other cattle _ _____	2	2	2	2	4
Hogs _ _____	3	0	0	0	0
Poultry _ _____	100	60	60	75	100

*The 160-acre farms represent 51 per cent, and the 320 acre farms represent 12 per cent.

**Frequency refers to the percentage of all farms of the given size group for which the organization shown in that column is typical.

***The figures in bold-faced type indicate the acreage of the main crop enterprise, the type determining element in most instances.

Cotton and wheat, are the most important crops grown. Oats and barley are also of some importance as is sorghum. Likewise livestock, particularly cows, and other cattle, are quite important. The most common organization on the typical size of farm has 75 acres in crops, 20 acres of which are in cotton, 15 acres in wheat, 25 acres in oats and barley, and 15 acres in sorghum. There are 75 acres in addition in pasture. About 40 per cent of the farmers in the county follow this organization. There are three other organizations on the same size of farm, which are quite important although a smaller percentage of farmers follow each. They range from no cotton to 40 and 60 acres of cotton.

On the 320-acre farm, the most common organization is one with 155 acres in crops, 25 acres of which are in cotton, 50 acres in wheat, 70 acres in oats and barley, and 10 acres in sorghum. There are, in addition, 150 acres in pasture, and the remainder is in roads, farmstead and waste.

Typical Farming Systems in the Cotton and Corn Area in Southeastern Oklahoma

The last important type-of-farming area in the state which remains to be discussed is the cotton and corn area of the southern and southeastern part of the state. This is the most extensive area in the state which follows one prevailing type of farming. The area includes roughly all the counties south and east of a line starting at the eastern border of the state at Adair County, and running west to Tulsa County, thence southwest to Cleveland County, and south along the western boundaries of McClain, Stephens, and Jefferson Counties.

This is the small-farm cotton and corn section of the state. The common size of farm is from 40 to 80 acres. A very large proportion of the farms is handled by tenants and croppers. Tenancy runs as high as 65 to 70 per cent or more in some of the counties. The cropper farms comprise from one to 10 per cent of the total number of farms, depending upon the area.

These cropper farms do not really represent the prevailing unit of organization. Croppers are more nearly like hired men than like farm operators. They are paid in "kind" or in a portion of the production. One would expect in these areas on the larger farms, land of which is rented by fields to the croppers, that the owner farms likely would show a somewhat lower acreage of cotton than the tenant farms and would at the same time probably have more of the feed crops and pasture. In the farming systems for this area this tendency showed up in part, but not to any considerable extent. The organizations on the larger farms, 160 acres and more, were about the same on the owner and tenant farms. In the 80 and 100-acre groups, more cotton was found on the tenant farms, but even here there were found a large percentage of both owners and tenants with about the same proportion of the crop area in cotton and corn.

As would be expected in a cropper area, there were found a large number of small farms of 10, 15, 20, and 30 acres. However, there were also found quite a group of farms of this same size which were owner farms. The organization on these small farms also was about the same on the owner and tenant farms with slightly more cotton on the latter.

While the production of cotton and corn is general throughout this area, there is some justification for dividing it into three sub-areas. These divisions are based in part upon soil type and topography and in part upon the differences in organizations.

In the tier of counties running along the southern edge of the state, comprising the southern part of McCurtain County and all of Choctaw, Bryan, Marshall, Love, Carter, and Jefferson Counties, there is considerable bottom which with the areas of rolling black prairie land makes the soil type different from the other counties to the north. The prevailing soil type is sandy loam, while breaks and sandy land are also found.

In contradiction to this bottom land cotton area is found another area growing about the same amount of cotton and corn, located in the north, in the hill country of the southern Ozark region. This area includes all the counties to the east of a line running south along the western boundaries of Wagoner, Muskogee, McIntosh, Haskell, LeFlore, and McCurtain Counties. The prevailing soil type is sandy loam and silt loam.

The third rather distinct area includes the large group of counties extending from the western boundary of the hill country west to the western edge of the southeastern cotton region (See Figure 6, page _). This area is commonly known as the Eastern Prairies. The terrain is quite rolling and in places rough and broken in the eastern portion, but becomes more level as one travels westward. The prevailing soil types are sandy and clay loams. Cotton and corn are still the most important crops grown, but neither is quite as important as in the hill and bottom land areas. On the other hand, the pasture area is somewhat larger.

Approximately 3350 individual farm organizations were taken as representative of sub-areas scattered throughout the region, and used as a basis for the typical farming systems presented. Three of these sub-areas are located in the "Bottom land" area in Stephens, Bryan, and Choctaw Counties, two in the "Hill land" area in LeFlore and Muskogee Counties, and three in the "Eastern Prairies" in Garvin, Hughes, and Pittsburgh Counties.

In Tables 17 to 24 are presented the more common farming systems found in these various sub-areas. In view of their location and in view of the large number of farms used in each sub-area, these farming systems should be rep-

resentative of those prevailing on the different sizes of farms throughout the region.

While the hill and bottom farms grow a somewhat higher acreage of cotton and corn than do the prairie farms, the difference is not marked. Therefore, rather than have so much duplication in the discussion, the farming systems in different sub-areas will not be discussed separately in detail. Enough discussion will be given, however, to indicate the prevailing organizations in each area, and also to point out such differences as exist between those in the different areas.

As was previously mentioned, the most common size of farms throughout this region are the 40 and 80-acre farms. In Garvin and Stephens Counties in the extreme southwestern corner of the region, however, there is a larger percentage of the farms that are 80 acres and over in size than is found in the eastern counties.

In both of these western counties (See Tables 17 and 18) sorghum and broomcorn are found to be of considerably more importance than in the eastern part of the region. In Garvin County, particularly, broomcorn is a very important crop. Cotton and corn are still prominent, but broomcorn has a higher acreage than either in most of the farming systems commonly found. The most common organization on the 80-acre farm in Garvin County has 12 acres of cotton, 10 acres of corn, 35 acres of broomcorn, and 20 acres of pasture. About 30 per cent of the farmers on the 80-acre farms follow this organization on this same size of farm in this county which range from no cotton, 15 acres of corn, and 40 acres of broomcorn, to 30 acres of cotton, 15 acres of corn, and 20 acres of broomcorn.

Table 17—Garvin County: Typical Farming Systems for Farms of Different Sizes*

Size of Farms	40 A.	60 Acres		80 Acres		100 Acres		120 A.	160 A.	200 A.
Frequency** _ __	43	27	30	31	28	36	25	53	42	37
Acres Crops*										
All crops _____	37	47	45	57	65	70	85	87	120	165
Coton _ _____	15	7	25	12	20	15	35	12	30	45
Corn _ _____	10	10	15	10	15	15	15	20	20	30
Sorghum _ ____	0	0	0	0	0	0	5	5	10	10
Oats & barley__	0	0	0	0	0	0	0	10	10	10
Broomcorn _ __	12	30	5	35	30	40	30	40	50	70
Pasture _ _____	0	5	10	20	10	25	10	20	35	30
No. of Livestock										
Work animals _	2	4	3	4	4	5	4	6	6	8
Cows _ _____	1	1	1	2	1	3	2	3	4	4
Young stock __	1	1	1	2	1	1	1	2	3	2
Other cattle ___	0	0	0	0	0	0	0	0	0	0
Hogs _____	0	0	0	0	0	3	3	4	4	8
Poultry _ _____	40	40	30	60	50	70	50	60	60	75

*Organizations have also been set up for other sizes of farms in the area, but only the most important sizes are shown here. The 40-acre farms represent 9 per cent; the 60-acre farms, 13 per cent; the 80-acre farms, 15 per cent; the 100-acre farms, 13 per cent; the 120-acre farms, 10 per cent; the 160-acre farms, 10 per cent; and the 200-acre farms, 7 per cent. Other size groups included 140-acre farms, 6 per ecnt; and 180-acre farms, 5 per cent.

**Frequency refers to the percentage of all farms of the given size group for which the organization shown in that column is typical.

***The figures in bold-faced type indicate the acreage of the main crop enterprise, the type determining element in most instances.

Table 18—Stephens County: Typical Farming Systems for Farms of Different Sizes*

Size of Farms	40 Acres		60 Acres			80 A	100 A	130 A	160 A.
Frequency** _____	35	31	15	27	27	28	42	37	49
Acres Crops*									
All crops _____	30	34	48	56	50	65	75	108	110
Cotton _ _____	15	20	25	20	30	12	30	30	50
Corn _ _____	10	9	15	15	15	18	15	25	25
Sorghum _ _____	0	5	8	6	5	5	10	15	15
Oats & barley _____	0	0	0	0	0	5	0	3	0
Broomcorn _ _____	0	0	0	15	0	25	20	35	20
Pasture _ _____	10	5	8	8	0	12	20	15	45
No. of Livestock									
Work animals _____	2	2	3	2	2	3	4	4	5
Cows _ _____	1	1	3	1	0	4	2	2	4
Young stock _____	0	0	1	1	0	1	1	1	2
Other cattle _____	0	0	1	0	0	0	0	0	0
Hogs _ _____	0	0	3	1	0	2	3	0	3
Poultry _ _____	40	25	150	40	20	75	75	100	70

*Organizations have also been set up for other sizes of farms in the area, but only the most important sizes are shown here. The 40-acre farms represent 10 per cent; the 60-acre farms, 14 per cent; the 80-acre farms, 15 per cent; the 100-acre farms, 15 per cent; the 130-acre farms, 18 per cent; and the 160-acre farms, 8 per cent. Other size groups included 15-acre farms, 4 per cent; and -80-acre farms, 4 per cent.
**Frequency refers to the percentage of all farms of the given size group for which the organization shown in that column is typical.
***The figures in bold-faced type indicate the acreage of the main crop enterprise, the type determining element in most instances.

Table 19—Pittsburg County: Typical Farming Systems for Farms of Different Sizes*

Size of Farms	40 A.	60 Acres		80 Acres			100 Acres		120 Acres	
Frequency** ___	67	41	36	27	32	25	38	34	35	32
Acres Crops*										
All crops _____	38	45	50	50	60	65	60	90	80	100
Cotton _ _____	23	20	30	20	30	45	20	60	50	75
Corn _ _____	15	25	20	25	30	20	40	30	30	25
Oats _ _____	0	0	0	5	0	0	0	0	0	0
Pasture _ _____	0	10	5	25	17	10	35	5	35	15
No. of Livestock										
Work animals _	2	2	2	3	3	4	3	4	4	4
Cows _ _____	1	2	2	1	2	2	2	2	2	2
Young stock __	1	1	1	0	1	2	0	0	1	0
Other cattle __	0	0	0	0	0	0	1	0	0	1
Hogs _ _____	2	3	2	2	2	3	3	0	2	2
Poultry _ _____	40	60	50	50	50	60	50	60	50	50

*Organizations have also been set up for other sizes of farms in the area, but only the most important sizes are shown here. The 40-acre farms represent 23 per cent; the 60-acre farms, 20 per cent; the 80-acre farms, 16 per cent; the 100-acre farms, 12 per cent; the 120-acre farms, 12 per cent. Other size groups included are, 160-acre farms, 6 per cent.
**Frequency refers to the percentage of all farms of the given size group for which the organization shown in that column is typical.
***The figures in bold-faced type indicate the acreage of the main crop enterprise, the type determining element in most instances.

In Stephens County, on the same size of farm, (80 acres) the most common organization (See Table 18) has 30 acres of cotton, 10 acres of corn, 5 acres of sorghum, 5 acres of broomcorn, or it has more cotton and less broomcorn than is found in the comparable organization in Garvin County. This organization, as well as those in Garvin County, also, has from 20 to 25 acres of pasture.

There are other organizations on this same size of farm which have varying acreages of both cotton and corn, as well as of the other crops grown as may be seen readily from the table.

In the counties further east, as typified by Pittsburgh, Hughes, LeFlore, and Muskogee (Tables 19 to 22), the same dominant sizes of farms prevail and cotton and corn are still the dominant crops, but broomcorn is absent. There is, however, a little sorghum in LeFlore County.

Table 20—Hughes County: Typical Farming Systems for Farms of Different Sizes*

Size of Farms	40 Acres		60 A.	80 Acres				120 A.	160 A.	
Tenure**** _ __	O.	T.		O.	O.	T.	T.			
Frequency** ___	15	30	34	9	9	14	12	46	29	27
Acres Crops*										
All crops _____	27	30	40	35	60	55	60	75	55	94
Cotton _ _____	12	15	25	10	25	25	45	35	30	60
Corn _ _____	15	15	15	20	25	25	15	30	25	25
Oats _ _____	0	0	0	5	10	5	0	10	0	5
Sorghum _ ____	0	0	0	0	0	0	0	0	0	4
Pasture _ _____	12	8	15	45	18	20	15	35	80	60
No. of Livestock										
Work animals _	3	2	2	4	4	3	4	4	5	5
Cows _ _____	1	1	2	3	2	2	2	3	3	2
Young stock __	1	1	1	1	1	2	1	2	2	1
Other cattle __	0	0	0	0	0	0	0	1	1	1
Hogs _ _____	0	2	1	4	4	3	2	0	0	1
Poultry _ _____	50	30	50	50	50	70	40	75	50	50

*Organizations have also been set up for other sizes of farms in the area, but only the most important sizes are shown here. The 40-acre farms represent 17 per cent; the 60-acre farms, 12 per cent; the 80-acre farms, 29 per cent; the 120-acre farms, 15 per cent; and the 160-acre farms, 15 per cent.

**Frequency refers to the percentage of all farms of the given size group for which the organization shown in that column is typical.

***The figures in bold-faced type indicate the acreage of the main crop enterprise, the type determining element in most instances.

****O. refers to farms operated by owers, T. to farms operated by tenants. Where the kind of tenure is not differentiated in this tabulation, the tenure column is left blank.

The most common organization on the farms in these representative districts is from 20 to 30 acres of cotton, 20 to 25 acres of corn, and 25 to 30 acres of pasture. There is another organization, however, although not followed by quite as many farmers, which has about the same acreage of crops and pasture as has the most common organization in the other counties as presented above. In Pittsburg County, also, there is less pasture and a little more cotton and corn than is found in the other counties in this organization, but otherwise, the organization is quite generally representative.

In each of these sub-areas, from 35 to 45 per cent of the farmers on the 80-acre farms follow this "most common" organization. In Hughes County, separate organizations are set up on this size of farm for owners and tenants. The owner farms have about 10 acres in oats in addition to 25 acres each of

Table 21—LeFlore County: Typical Farming Systems for Farms of Different Sizes*

Size of Farms	40 Acres		60 Acres		80 Acres			100 A.
Frequency** _ _____	57	21	48	52	49	35	16	90
Acres Crops*								
All crops _____	35	37	35	44	37	43	65	65
Cotton _ _____	15	20	15	25	12	20	35	25
Corn _ _____	15	15	15	18	15	20	30	30
Oats _ _____	0	2	0	0	7	0	0	10
Sorghum _ _____	5	0	5	1	3	3	0	0
Pasture _ _____	0	0	15	10	30	25	10	40
No. of Livestock								
Work animals _____	3	2	2	2	4	3	4	4
Cows _ _____	2	2	3	3	3	3	3	4
Young stock _____	1	0	2	0	2	2	0	2
Other cattle _____	0	1	0	0	1	1	0	1
Hogs _ _____	0	0	3	0	4	4	2	2
Poultry _ _____	30	50	50	20	60	50	40	50

*Organizations have also been set up for other sizes of farms in the area, but only the most important sizes are shown here. The 40-acre farms represent 32 per cent; the 60-acre farms, 13 per cent; the 80-acre farms, 34 per cent; and the 100-acre farms, 10 per cent.

**Frequency refers to the percentage of all farms of the given size group for which the organization shown in that column is typical.

***The figures in bold-faced type indicate the acreage of the main crop enterprise, the type determining element in most instances.

Table 22—Muskogee County: Typical Farming Systems for Farms of Different Sizes*

Size of Farms	40 Acres		60 Acres			80 Acres			110 Acres	
Frequency** _ __	48	29	33	24	21	29	37	26	33	26
Acres Crops*										
All crops _____	30	35	40	45	55	50	50	65	60	100
Cotton _ _____	15	20	20	30	40	20	30	40	40	70
Corn _ _____	15	15	20	15	15	30	20	15	20	30
Oats _ _____	0	0	0	0	0	0	0	0	0	0
Sorghum _ ____	0	0	0	0	0	0	0	0	0	0
Pasture _ _____	8	4	18	5	0	25	25	10	40	5
No. of Livestock										
Work animals	2	3	3	4	4	4	4	4	4	4
Cows _ _____	2	1	1	2	1	2	2	2	3	2
Young stock __	0	0	0	0	0	0	0	0	0	0
Other cattle __	0	0	1	1	1	0	0	0	1	1
Hogs _ _____	0	0	0	2	3	2	0	2	0	0
Poultry _ _____	40	20	50	50	50	50	50	50	50	75

*Organizations have also been set up for other sizes of farms in the area, but only the most important sizes are shown here. The 40--acre farms represent 27 per cent; the 60-acre farms, 17 per cent; the 80-acre farms, 22 per cent; the 110-acre farms, 13 per cent; and the 160-acre farms, 5 per cent.

**Frequency refers to the percentage of all farms of the given size group for which the organization shown in that column is typical.

***The figures in bold-faced type indicate the acreage of the main crop enterprise, the type determining element in most instances.

cotton and corn and 18 acres of pasture. There also is a smaller proportion of the farmers in this county following this organization, only about one-fourth as compared with 40 per cent in the other counties.

From the tables it will be noted that this most common organization is only one of a number of other organizations commonly found in this size of farm in each of these representative sub-areas. To be sure, more farmers follow it than any other, yet smaller groups of farmers are following other organizations with both more or less cotton, corn, and the other crops. These other organizations may be as important and profitable, or more so than the most common, depending upon yields, prices, conditions of production, etc. They are presented therefore not only on this size of farm, but for all the other sizes of farms in each of these areas.

On the 40-acre farms the most common organization is found to be quite similar in the various representative counties. In Hughes, LeFlore, and Muskogee Counties, for example, the organization most commonly found is one having 15 acres of cotton and 15 acres of corn and around five to eight acres of pasture. In Pittsburg county, there is more cotton and less pasture, with about 23 acres of cotton and 15 acres of corn the most common. Other organizations, varying significantly from this most common are also found and are shown in the tables.

In the southern tier of counties along the Red River, much the same organizations are found on the dominant size of farms, (the 40 and 80-acre

Table 23—Bryan County: Typical Farming Systems for Farms of Different Sizes*

Size of Farms	10 Acres		40 Acres		50 Acres		80 Acres		100 Acres	
Tenure**** _ __	O.	T.	O.	T.	O.	T.	O.	T.	T.	T.
Frequency** _ __	45	51	36	15	29	26	15	31	33	22
Acres Crops*										
All crops _____	5	10	35	35	35	45	45	55	62	88
Cotton _ _____	5	10	20	35	20	35	15	20	25	60
Corn _ _____	0	0	15	0	15	10	20	15	20	18
Oats _ _____	0	0	0	0	0	0	10	20	12	10
Sorghum _ ___	0	0	0	0	0	0	0	0	5	0
Pasture _ _____	5	0	4	0	14	0	30	20	35	8
No. of Livestock										
Work animals_	1	2	2	2	3	3	3	2	3	4
Cows _ _____	1	1	0	0	1	1	3	2	2	2
Young stock __	0	0	0	0	2	0	1	1	1	0
Other cattle ___	0	0	0	0	0	0	0	0	0	1
Hogs _ _____	0	0	0	0	0	0	2	0	0	1
Poultry _ _____	25	35	40	25	60	40	50	50	40	60

*Organizations have also been set up for other sizes of farms in the area, but only the most important sizes are shown here. The 10-acre farms represent 17 per cent; the 40-acre farms, 15 per cent; the 50-acre farms, 12 per cent; the 80-acre farms, 15 per cent; and the 100-acre farms, 9 per cent. Other size groups included 120-acre farms, 7 per cent; 140-acre farms, 5 per cent; 160-a-cre farms, 6 per cent; and 200-acre farms, 5 per cent.

**Frequency refers to the percentage of all farms of the given size group for which the organization shown in that column is typical.

***The figures in bold-faced type indicate the acreage of the main crop enterprise, the type determining element in most instances.

****O. refers to farms operated by owners, T. to farms operated by tenants. Where the kind of tenure is not differentiated in this tabulation, the tenure column is left blank.

size) as on the other sizes. In Bryan and Choctaw Counties (Tables 23 and 24) there are some oats found on most of the organizations, except on the very small farms, and this is the chief difference to be noted.

Table 24—Choctaw County: Typical Farming Systems for Farms of Different Sizes*

Size of Farms	20 Acres		40 Acres				60 Acres		80 Acres	
Tenure**** _ __	O.	T.	O.	O.	T.	T.	O.	T.	O.	T.
Frequency** _ __	14	31	9	7	56	9	54	46	42	23
Acres Crops***										
All crops _____	15	20	25	32	39	39	45	50	45	75
Cotton _ _____	8	12	10	20	22	30	20	30	20	50
Corn _ _____	7	8	15	12	17	9	20	20	25	25
Oats _ _____	0	0	0	0	0	0	5	0	0	0
Pasture _ _____	4	0	8	0	0	0	5	0	25	0
No. of Livestock										
Work animals_	2	2	3	3	2	2	3	4	4	4
Cows _ _____	2	1	2	1	1	1	2	2	2	2
Young stock __	1	0	1	0	0	0	2	1	1	1
Other cattle __	0	0	0	0	0	0	0	0	0	0
Hogs _ _____	1	0	2	2	0	0	5	2	3	0
Poultry _ _____	40	0	30	35	30	30	50	40	35	35

*Organizations have also been set up for other sizes of farms in the area, but only the most important sizes are shown here. The 20-acre farms represent 18 per cent; the 40-acre farms, 35 per cent; the 60-acre farms, 13 per cent; the 80-acre farms, 11 percent. Other groups included 100-acre farms, 7 per cent; 120-acre farms, 4 per cent; and 160-acre farms, 5 per cent.

**Frequency refers to the percentage of all farms of the given size group for which the organization shown in that column is typical.

***The figures in bold-faced type indicate the acreage of the main crop enterprise, the type determining element in most instances.

****O. refers to farms operated by owners, T. to farms operated by tenants. Where the kind of tenure is not differentiated in this tabulation, the tenure column is left blank.

In this area also is found more trucking than in the other sub-areas just to the north. Potatoes, cantaloupes, onions, watermelons, and tomatoes are all grown. Also broomcorn occasionally is grown, as well as peanuts. Information is not available in sufficient quantity, however, to show just what proportions of the different truck crops are grown.

PART V

Application of Typical Farming Systems

Attention will be centered, in this section upon the application of the typical farming systems presented in the foregoing pages. The discussion will be divided into three parts including the relation of the typical farming systems to (1) Long-time systems of farming and agricultural programs; (2) the application of the Agricultural outlook to adjustment in farm organizations; (3) other lines of research in Agricultural Economics.

Relation of the Typical Farming Systems to Long-time Systems of Farming and Agricultural Programs

Much attention has been given in recent years by extension and research agencies to what may be termed the "programizing" of farming. Agricultural programs of one sort or another have been developed in various states and

agricultural regions as well as in local agricultural areas. The primary purpose of these programs has been to bring about a better adjustment in the organizations and practices of the rank and file of farmers with the view of making farming more profitable. If such programs are to be most effective, they must first correctly appraise the needs of the specific group, and secondly, in the light of present and prospective physical and economic conditions recommend changes in organizations and practices which will lead to a more profitable adjustment of production to meet the demands of the market. The diversity in organization of farms in different areas and with the same and different sizes of farms within a particular area, as shown in the foregoing tables, is sufficient evidence that the "needs" of all farmers are not the same. These variations in organizations must be taken into consideration if the recommendations are to be directly applicable. Blanket recommendations for the so-called "average" farm obviously are likely to be misleading because there is likely to be no such thing as an average farm as the term is generally used. An average farm may be quite definite, however, if it is representative of a group of farms of the same size and organization; but as usually considered, farms of all sizes and types are thrown together and in this sense the average is likely to be not representative of anything usuable.

The most important factor accounting for farmers not always acting upon the recommendations of advisory agencies is the fact that farmers have found that such recommendations did not apply to their individual conditions or needs. This, for example, is the weakness of all programs which call for "a flat decrease (or increase) of 10 per cent" (or some other figure) in the acreage of some crop or numbers of a particular class of livestock. Such recommendations overlook the fact that there is a wide variation in the amounts and proportions of such enterprises handled both by individual farmers, and typical groups of farmers. While it may be decidedly to the advantage of certain farmers to make a decrease as recommended, for others differently situated it may be advantageous for them actually to increase their production in spite of the low price.

By segregating the farms of a given size into specific groups in homogeneous type-of-farming areas a basis is provided for analyzing their difficulties and needs so that recommendations can be made to apply specifically to them. Type-of-farming studies such as this are designed to fill the need mentioned and to supply the background information for developing sound and sensible long-time systems of farming or agricultural programs.

Thus these typical farming systems are the places of beginning in making detailed farm organization studies. But the fact that a certain farmer or group of farmers is following a particular organization at a given time, does not mean necessarily that it is the most profitable one. It is at this point that the difference between these typical farms and the standard farm or long-time systems of farming is most clearly seen. The one represents what a group of farmers on farms of a certain size and in uniform type-of-farming areas are doing at a particular time. The other shows the goal toward which they are striving or toward which they should lead.

Starting with these typical farms and using yields and production practices typical of each area as well as the best information on the long-time outlook for the prices of the different products and cost goods, one can readily determine what changes should be made in them in order that the greatest returns may be obtained from them over a period of years.

The application of the foregoing is illustrated in the following typical farm in the wheat area of Garfield County in northwestern Oklahoma. Table 8 shows that the quarter-section farms are by far the most numerous size in Garfield County. There is sufficient variation in the organizations of the 160-acre farms to warrant the setting up of three distinct organizations. The chief variation found is in the acreage of wheat ranging from 60 to 100 acres.

For the purpose of illustrating the method of testing the profitableness of

a particular organization a budget or estimate of receipts and expenses is worked through in detail for the organization on the 160-acre farm having 80 acres of wheat, eight acres of sorghum, 10 acres each of oats and corn, five acres of alfalfa, two acres of cane hay, and 40 acres of pasture. The results are shown in Table 25.

Table 25—Budget of Receipts and Selected Expenses on a Typical 160-Acre Farm in Garfield County With 17-Year Average Yields and Prices

Enterprise	Acres or Number	Yield	Total Production	Surplus Sold	Price	Value Sales
Wheat	80	13 bu.	1040 bu.	940	1.15	$1081.00
Grain sorghum	8	20 bu.	160 bu.	10	.70	7.00
Oats	10	23 bu.	230 bu.	Fed	.49	
Corn	10	15 bu.	150 bu.	Fed	.85	
Alfalfa	5	3 T.	15 T.	Fed	15.00	
Cane Hay	2	5 T.	10 T.	1	10.00	10.00
Pasture	40					
Total Crops						$1099.00
Work stock	5					
Cows	5	75 lbs.	375 lbs.	225 lbs.	.33	74.25
Beef[1]	4	500 lbs.	2000 lbs.	1900 lbs.	5.81	110.39
Hogs	2	200 lbs.	400 lbs.	200 lbs.	9.51	19.00
Poultry	125	3 lbs.	375 lbs.	200 lbs.	.14	28.00
Eggs	0	6 doz.	744 doz.	644 doz.	.24	154.56
Total Livestock						$386.20
				Gross Sales	- - -	$1486.20

Feed Purchased:

Oats	24 bu. @	.49	$11.75
Corn	5 bu. @	.85	4.25
Bran	700 lbs. @ 1.50 cwt.		10.50
Cotton S.M.	700 lbs. @ 2.25 cwt.		15.75
Barley	25 bu. @ .60		15.00
Total	- - -		**$57.20**

Expenses which vary with change in organization:

Wheat harvest	$ 240.00
Oat harvest	27.00
Feed	57.20
Mis. crops	12.00
Mis. Livestock	30.00
Total	**$ 366.20**
Balance - - - -	**$1119.00**

[1] Four young stock as given in Table 8 are considered equivalent to two grown beef and are added to the two head "other cattle." Production is given as 1000 pounds in two years or 500 pounds per head per year.

[2] The sum of $1119.00 must pay taxes, interest, depreciation, repairs and labor of the family and operator.

In working out this budget both average yields and prices for 17 years were used. It will be noted that no overhead expenses such as taxes, interest, operator's labor, etc. have been charged, also that no machinery expenses has been included. The returns shown in the table consequently are not net. To obtain a net figure it would be necessary to consider all expenses, and were they taken out the returns would be much lower than here shown. The reason why the later expenses were not figured is the fact that in the illustration we are interested only in showing the relative returns from different typical farms

having a similar type of organization and producing under similar conditions, or to show the difference in returns to be expected from different organizations which might be followed on the same farm when yields and prices are constant.

The foregoing is really the procedure of the farmer when he is deciding whether to follow one particular organization or some other. He knows that by shifting from one crop to another or in varying the proportion of different crops the overhead expenses will remain practically constant. Interest, taxes, insurance, machinery expense, etc., will be about the same regardless of the shifts in organization so long as the changes are minor ones. If a shift is made from one type to an entirely different one, such as a shift from wheat to dairy farming, then it would be necessary to take into consideration all of the overhead expenses which would change with the shift in type as well as other operating expenses.

The probable returns for any organization may be calculated in the same way assuming any desired set of conditions such as high yields with average low or high prices, or low or medium yields and average high or low prices, etc. (See Appendix VI). In arriving at a decision as to the particular farming system which likely may prove most profitable from the long--time standpoint, it is necessary to use long-time prospective prices, and also to take into account the effect which the cropping system may have upon yields.

County Agents and Extension specialists will find the same method of approach of great assistance in determining what long-time system of farming or a long-time agricultural program may be desirable to recommend in a particular region or locality. One may test the effect of changing price conditions upon prevailing organizations and indicate adjustments which may be desirable for farmers to make.

Following this same general method of procedure budgets were worked out for the two other organizations on the 160-acre farms in Garfield County, one with 60 acres of wheat and one with 100 acres of wheat. The same yields and prices were used as in the illustration given above. Thus we have a direct comparison of the returns from the three typical farming systems and can attribute the differences in returns directly to the differences in organizations, since prices of products and cost factors as well as production practices are held constant.

The relative returns above expenses which vary with changes in the organization for the three 160-acre farms are as follows:

Number 1   (60 acres of wheat, etc.) _____ $1130.00
Number 2   (80 acres of wheat, etc.) _____ 1119.00
Number 3   (100 acres of wheat, etc.) _____ 1162.00

A farmer can estimate very closely in this way just about what returns he may expect from any organization he may adopt on his farm under any set of price and production conditions. He also can determine how changing economic conditions are likely to affect him as illustrated in the following section.

Relation of the Typical Farming Systems to the Application of the Annual Agricultural Outlook

At the beginning of each new crop year the farmer is confronted with the question of what to do. Shall he plant the same crops and maintain the livestock in the same amounts and proportions as in the preceding year, or shall he change? If he changes, what are best? What crops shall he increase or decrease, etc? These are some of the questions the farmer must answer and upon which he must make a decision.

In an endeavor to assist him in making his decisions as accurately as possible, the Federal and State agencies issue an annual Agricultural outlook report. In this report is brought together the best available information on

what the probable prices of the different crops and livestock will be for the ensuing year. Obviously this outlook will not apply to all farmers in the same way. A probable decrease in the price of a certain commodity like wheat, for example, may make it desirable for farmers with a large proportion of their crop area in wheat to reduce their acreage, while those who have only a moderate acreage in wheat may find it profitable to increase their wheat acreage if, in spite of possible lower prices, other crops promise a smaller return. It is these differences on individual farms which make changing prices affect different farmers in different ways. For typical groups of farmers following the same organization and producing under the same conditions the affect should be approximately the same.

By using farming systems which are typical of what particular groups are doing, it is possible to appraise quite accurately about what effect given price changes will have thereby enabling agricultural leaders to advise farmers regarding combinations which may give low returns, or to assist farmers in selecting the combinations of enterprises which likely will be most profitable for them to follow under the conditions which probably will obtain. Thus the

Table 26—Returns From Different Organizations of the Same Farm, and of Different Size Farms with Differing Price Relationships
Yields Held Constant as of the 17-Year Average

Enterprise	Unit	17-Year Av. Prices	1927 Price	Lw Wheat: H. Livest'k:	All Prices Low
Wheat	bu.	1.15	1.24	1.00	.80
Grain Sorghum	bu.	.70	.65	.70	.55
Oats	bu.	.49	.42	.49	.40
Corn	bu.	.85	.72	.85	.60
Alfalfa	ton	15.00	12.00	15.00	10.00
Cane Hay	ton	10.00	8.00	10.00	5.00
Beef Cattle	cwt.	5.81	7.56	9.00	5.00
Hogs	cwt.	9.51	9.00	10.00	7.00
Butter Fat	lb.	.33	.41	.45	.30
Poultry	lb.	.14	.18	.25	.10
Eggs	doz.	.24	.21	.35	.20

Size of Farm	Acres in Wheat	Probably returns above immediate cash expenses which vary with changes in organization with prices as follow:			
	60	$1130. [1]	$1208.	$1204.	$ 815.
160 Acres	80	1119.	1219.	1157.	791.
	100	1162.	1275.	1116.	796.
320 Acres	160	2327. [2]	2591.	2396.	1649.

[1] The farm with 60 acres of wheat shows slightly larger returns than the one with 80 acres of wheat. The livestock organization was the same as is evident from Table 8. The increased acreage of grain sorghum offset a part of the loss in wheat sales. The expenses of harvesting wheat and for feed purchased were sufficiently less to decrease the expenses $63.20.

[2] The 320-acre farm had double the wheat of the second 160-acre farm, also had three times the beef, which accounts for the balance being more than double that of the 160-acre farm.

typical farming systems previously presented provide a basis for interpreting the outlook and of indicating to typical groups of farmers just how it affects them. Unless this outlook is interpreted to the farmer in terms of a system of farming similar to the one he is following, its meaning may not be sufficiently definite to be helpful to him.

Just how changing price relationship affect the returns from different organizations and how necessary it is to keep acreage of crops and numbers of livestock adjusted to these changes if the largest returns are to be obtained is illustrated in the following table. The returns are from the three typical farming systems used above (See Table 26).

The prices used in the first column are average prices received by Oklahoma farmers for the past 17 years. Prices and returns are the same as used in Table 25. In the second column the prices received in 1927 are used. The returns, it will be noted, are not very different from those in column one and are in about the same proportion. In column three wheat prices are low, at $1.00 per bushel, while livestock prices are assumed to be high. The organization with high wheat is the least profitable of the three while the low wheat or high livestock one becomes the most profitable. In the last column all prices are assumed to be low with wheat at 80 cents per bushel. Again the low wheat organization is the most profitable.

This example illustrates very clearly how fluctuating prices affect the returns from different organizations and how important it is to take such fluctuations into account when planning what combination of crop and livestock enterprises to follow. That farmers cannot expect to make very much money on a farm of this size, organized in this way, seems quite apparent from the table.

The figures given are not net, as only the out-of-pocket expenses which change when a shift is made from one organization to the other were deducted. Overhead expenses such as taxes and the like must be included before the returns could be considered as net.

These returns are for 160-acre farms. At the bottom of the table are shown the probable returns which may be expected from the most common organizations found on the 320-acre farms. The returns have been calculated in the same way with the same prices and yields as those in the 160-acre farms. That a farmer stands a better chance of making a higher return on the larger farms is apparent. He has a larger business and receives a larger return for his labor and managerial skill. It is not reasonable to assume, however, that all farmers on 160-acre farms could handle a 320-acre farm. Such depends upon the managerial capacity of the farmer, and in this there is but little elasticity.

The figures are of value, however, in indicating the relative returns from different sizes of farms which a farmer might reasonably expect had he the requisite managerial skill to handle the larger farm.

If a farmer follows his economic interest, he will strive to obtain as large a product for his labor and managerial skill as possible. He should put the emphasis upon this and attempt to get onto a size of farm either by purchasing or renting which would afford him this opportunity. High returns per acre are important of course, but they are important only if at the same time they result in high returns per operator or individual worker. High product per man, other things being equal, means high economic well-being.

Appendix VI illustrates possible reorganization of the 160-acre Garfield County farm previously used (See Table 25, page 65) with budgeted receipts and expenses under different price and yield relationship.

Relation of Typical Farming Systems to Other Lines of Research

In addition to the foregoing uses, the type studies on typical farming systems may be used to clarify and make more definite other lines of research work.

Any studies made with the view of obtaining standard practices, standard requirements, typical yields, and the like, should be developed from the type area standpoint. They should indicate what prevails on representative farms in the area and go farther and indicate the extent to which the conclusions apply.

Likewise income studies would be much more definite and enlightening if made for typical groups of farms, segregated as to size and organization as well as to location. The value of such studies is largely thwarted when results are presented for all sizes and types thrown together.

Statistical studies of elasticity of supply likewise will be more trustworthy when localized and confined to type-of-farming areas. It is reasonable to suspect that the price-supply relationships will be closer when confined to type-of-farming areas where typical groups of farmers are doing about the same thing and producing under similar conditions. This presupposes that statistical data are available by type areas, which unfortunately is not true in all areas at the present time. In the future it is to be hoped that more of our basic statistical material will be obtained with the type-area as a unit rather than the political unit of county which largely prevails today. There is this difficulty, however; the type-area is not necessarily constant, whereas the political unit is. However, the change from year to year, except in rapidly changing areas, would not greatly impair the comparability of the data.

Appendix I—Acreage Devoted to Principal Crops in 1924 by Counties Taken from 1925 Census

(In thousands of acres)

| Counties | Cotton | Wheat | Corn | SORGHUM | | Oats | Barley | Hay | White Potatoes | Sweet Potatoes |
				Grain	Forage					
Adair	6.0	3.0	19.7	.05	.9	7.6	.01	6.9	.2	.1
Alfalfa	.02	229.5	32.8	12.4	7.6	12.4	9.0	12.1	.1	.03
Atoka	47.2	.3	39.6	.06	2.7	7.8	.01	4.8	.1	.06
Beaver	1.0	196.9	8.5	79.0	36.1	7.7	33.1	6.4	.03	.02
Beckham	88.5	28.4	12.7	30.1	15.1	5.4	3.9	6.6	.06	.04
Blaine	14.9	133.7	33.6	12.1	9.1	12.0	4.5	8.3	.1	.01
Bryan	142.4	.4	73.6	.4	3.3	40.6	.2	9.7	.4	.1
Caddo	153.9	58.5	74.4	27.4	26.5	12.5	3.1	15.3	.3	.08
Canadian	19.4	91.7	47.7	10.5	7.1	32.7	6.7	22.3	.2	.4
Carter	64.6	1.8	32.6	.7	7.4	9.0	.5	8.6	.1	.3
Cherokee	28.2	2.6	34.2	.2	2.8	9.6	.02	6.5	.3	.1
Choctaw	67.4	.1	48.2	.09	1.6	6.0	.02	5.3	.3	.1
Cimmaron	.3	50.4	12.0	33.0	13.8	1.5	10.0	1.9		
Cleveland	44.4	7.2	34.2	6.0	7.5	13.2	1.4	13.4	.2	.05
Coal	41.2	.7	30.0	.4	3.2	11.6	.05	5.6	.1	.04
Comanche	63.3	29.6	17.6	4.5	17.6	29.8	7.1	6.5	.3	.09
Cotton	69.0	45.1	8.1	.9	9.2	28.1	5.6	3.0	.1	.01
Craig	3.2	10.0	56.6	5.7	3.1	54.0	.01	44.0	.2	.04
Creek	55.8	1.2	41.6	4.2	6.6	4.4		14.7	.6	.6
Custer	30.0	117.5	36.3	28.3	15.5	15.6	6.9	15.4	.09	.009
Delaware	1.6	13.0	44.6	1.1	2.6	20.6	.2	17.1	.3	.09
Dewey	6.1	83.0	31.0	28.8	8.6	6.4	2.9	11.5	.05	.02
Ellis	1.0	125.4	8.8	42.6	18.0	6.0	4.4	5.5	.04	.006
Garfield	1.0	256.7	33.1	12.6	9.7	38.4	7.5	26.6	.4	.04
Garvin	95.6	2.4	54.1	1.2	9.7	15.4	.9	16.0	.1	.09

Counties	Cotton	Wheat	Corn	SORGHUM Grain	SORGHUM Forage	Oats	Barley	Hay	White Potatoes	Sweet Potatoes
Grady	109.3	38.3	79.8	6.1	22.4	15.1	5.0	17.6	.2	.1
Grant	.03	233.1	54.9	15.8	6.6	29.5	4.0	21.0	.2	.06
Greer	95.8	17.8	6.6	12.8	18.5	5.9	2.5	3.7	.03	.04
Harmon	91.5	15.0	2.6	39.8	5.0	2.2	.7	2.4	.06	.008
Harper	.01	153.1	7.9	33.2	14.4	3.8	3.6	5.6	.04	.01
Haskell	55.8	.4	29.7	.7	2.8	9.5	.02	6.8	.4	.1
Hughes	66.9	.6	53.1	1.1	3.1	11.9	.02	9.6	.2	.2
Jackson	182.5	20.1	6.5	27.1	10.2	8.0	2.2	4.2	.01	.03
Jefferson	85.6	2.0	14.1	.9	14.2	14.6	2.3	5.0	.05	.02
Johnson	56.1	.3	35.5	.1	4.4	9.4	.3	6.0	.2	.06
Kay	.07	145.3	90.4	17.6	11.1	41.1	1.2	32.9	.3	.07
Kingfisher	12.8	179.5	32.5	6.8	9.1	23.6	9.6	15.1	.4	.2
Kiowa	125.3	86.4	6.7	10.1	15.5	21.7	11.6	8.9	.03	.04
Latimer	12.7	.3	20.1	.3	1.6	3.1	--	5.3	.2	.07
LeFlore	83.6	.08	50.1	.5	3.8	6.9	--	10.2	2.4	.3
Lincoln	95.5	4.3	42.7	22.1	18.7	24.9	.6	34.4	.2	.1
Logan	44.1	40.9	28.6	12.8	7.8	26.6	1.1	21.8	.3	.3
Love	57.4	.3	25.6	.1	1.9	6.1	.6	4.2	.06	.03
McClain	69.1	2.9	42.5	2.5	9.6	11.1	.4	9.4	.2	.2
McCurtain	83.6	.2	46.6	.06	1.6	1.6	--	--	.2	.3
McIntosh	87.6	.5	59.4	.7	3.5	16.3	--	.	.3	.1
Major	.6	129.8	21.5	11.6	6.8	5.7	7.0	9.4	.1	.04
Marshall	50.7	.5	25.2	.05	1.0	12.6	.2	4.8	.05	.06
Mayes	24.0	9.7	42.0	4.0	3.0	26.9	.1	33.3	.3	.1
Murray	28.5	.9	18.2	1.5	4.2	7.2	.2	5.3	.04	.1
Muskogee	98.5	2.3	57.3	1.6	3.2	26.3	.2	18.0	3.1	.3

Appendix I—(continued)

Counties	Cotton	Wheat	Corn	SORGHUM Grain	SORGHUM Forage	Oats	Barley	Hay	White Potatoes	Sweet Potatoes
Noble	4.7	88.9	22.2	9.0	4.1	38.3	.8	25.9	.2	.02
Nowata	2.4	11.5	28.6	5.8	2.1	17.8	.2	33.7	.2	.02
Okfuskee	85.3	1.1	67.6	5.4	4.5	20.1	.1	9.1	1.0	.02
Oklahoma	45.2	19.9	27.8	12.4	10.8	18.9	1.8	20.6	.2	.04
Okmulgee	47.2	3.6	42.0	1.7	4.3	17.1	.03	20.9	.3	.005
Osage	18.0	10.6	55.1	13.7	22.3	11.3	.1	26.0	.1	.01
Ottawa	.4	14.0	47.1	1.0	3.5	24.2	.04	24.3	.05	.1
Pawnee	19.9	12.3	27.7	13.1	6.4	18.3	.07	26.2	.1	.002
Payne	37.8	9.3	29.4	20.1	9.2	23.8	.2	24.2	.1	.01
Pittsburg	76.68	.2	57.8	1.0	4.2	18.7	.05	16.3	.2	.03
Pontotoc	66.9	1.1	51.8	.3	9.8	11.6	.4	11.0	.2	.005
Pottawatomie	93.5	1.4	46.9	6.2	14.7	11.4	.2	18.0	.2	.01
Pushmataha	27.4	.1	34.4	.01	2.3	2.6	--	3.2	.4	.06
Roger Mills	25.7	20.2	22.9	24.5	12.0	3.4	1.4	7.5	.1	.004
Rogers	14.2	12.9	29.7	3.6	1.7	24.1	.2	24.5	.2	.2
Seminole	66.1	.7	47.7	1.0	5.6	9.1	.04	5.8	.06	.03
Sequoyah	61.7	.3	46.2	.1	3.0	4.5	--	5.7	1.3	.2
Stephens	93.9	.3	45.5	3.6	13.2	12.6	.6	12.0	.2	.1
Texas	1.6	222.7	6.9	115.4	37.2	8.5	20.4	12.6	.008	.002
Tillman	166.4	67.2	15.0	.9	12.8	20.4	4.6	4.4	.5	.05
Tulsa	16.8	8.2	35.9	2.7	6.5	15.7	.5	18.3	.3	.5
Wagoner	58.5	6.2	44.2	1.3	2.0	23.3	.09	18.1	.7	.11
Washington	.5	3.1	17.3	5.2	4.8	6.3	.05	14.7	.1	.04
Washita	117.2	110.2	32.3	29.5	13.0	15.6	6.5	9.9	.2	.06
Woods	.08	192.2	22.9	29.2	22.1	6.2	6.4	9.1	.1	.02
Woodward	.2	124.2	25.5	34.2	14.1	5.1	3.4	13.8	.2	.01

Appendix II—Percentage of Crop and Pasture Land Devoted to Each Crop and the Number of Livestock Per 100 Acres of Crops and Pasture, 1924

Counties	Cotton	Wheat	Corn	Sorghum	Oats	Barley	Hay	Pasture	Cows	Other Cattle	All Hogs	Poultry
Adair	5.2	4.1	27.0	1.9	10.4	--	9.5	31.1	5.1			10.4
Alfalfa	--	48.5	6.9	4.2	2.6	1.9	2.6	30.6	3.3	4.0	3.2	5.4
Atoka	19.5	.1	16.3	1.2	3.2	--	2.0	50.6	3.2	3.5	5.6	3.5
Beaver	.1	19.7	.8	11.5	.8	3.3	.6	55.7	2.5	2.1	1.5	2.4
Bevckham	19.4	6.2	2.8	9.9	1.2	.9	1.4	47.6	2.5	1.9	1.5	.4
Blaine	3.5	31.5	7.9	5.0	2.8	1.1	2.0	42.9	2.8	2.6	2.1	4.0
Bryan	36.0	.1	18.6	.9	10.3	--	2.5	28.5	2.5	2.0	4.6	5.2
Caddo	21.2	8.1	10.3	7.5	1.6	.4	3.1	41.2	2.7	2.2	2.9	5.1
Canadian	4.7	22.4	11.7	4.3	8.0	1.6	5.5	37.2	3.2	2.9	4.1	6.2
Carter	26.2	.7	13.2	3.3	3.7	.2	3.5	45.3	3.6	7.3	4.2	4.5
Cherokee	21.2	2.0	25.7	2.3	7.3	--	4.9	25.8	4.7	3.6	12.4	8.0
Choctaw	30.1	.1	21.6	.8	2.7	--	2.4	34.6	3.0	2.5	4.2	4.6
Cimarron	.1	8.4	2.0	7.8	.3	1.7	.3	75.4	2.4	2.1	.6	1.0
Cleveland	16.5	2.7	12.7	5.0	4.9	.5	5.0	47.2	3.0	1.7	3.5	6.0
Coal	20.3	.3	14.8	1.8	5.7	--	2.8	49.7	2.4	2.3	3.1	3.7
Comanche	13.9	6.5	3.9	2.7	6.5	1.6	1.4	50.3	3.4	3.4	2.0	4.6
Cotton	20.4	13.3	2.4	3.0	8.3	1.7	.9	38.1	2.7	2.2	1.2	3.6
Craig	1.0	3.2	18.1	2.8	17.3	--	14.1	36.6	3.2	3.4	4.3	5.7
Creek	23.1	.5	17.2	4.5	1.8	--	6.1	42.9	3.6	2.7	4.5	5.4
Custer	5.5	21.6	6.7	8.0	2.9	1.3	2.8	46.2	2.8	3.0	2.6	5.0
Delaware	.8	6.7	22.9	1.9	10.6	.1	8.8	37.6	2.6	2.7	2.8	3.3
Dewey	1.2	16.8	6.3	7.6	1.3	.6	2.3	55.5	3.6	3.4	13.0	7.0
Ellis	.2	21.8	1.5	10.5	1.0	.8	1.0	31.2	3.0	2.5	1.1	2.8
Garfield	.2	43.1	5.5	3.7	6.4	1.3	4.5	30.2	3.1	3.1	2.3	5.6

Appendix II—(continued)

Counties	Cotton	Wheat	Corn	Sorghum	Oats	Barley	Hay	Pasture	Cows	Other Cattle	All Hogs	Poultry
Garvin	25.9	.6	14.6	3.0	4.2	.2	4.3	33.6	2.6	2.0	4.6	4.9
Grady	21.2	5.5	15.5	5.5	2.9	1.0	3.4	33.0	2.7	2.2	4.2	5.6
Grant	--	42.5	10.0	2.3	5.4	1.7	3.8	30.1	2.8	3.8	3.5	5.5
Greer	32.3	6.0	2.2	10.6	2.0	.8	1.2	35.3	2.3	1.8	1.4	4.0
Harmon	33.5	5.5	1.0	16.4	.4	.3	.9	36.0	2.0	1.5	2.4	3.8
Harper	--	29.2	1.5	9.1	.7	.7	1.1	54.5	2.9	3.0	1.4	2.3
Haskell	30.0	.2	26.7	5.6	5.1	--	2.7	29.1	3.1	3.0	5.4	5.3
Hughes	27.7	.3	22.0	1.7	4.9	--	4.0	36.9	2.9	2.3	5.0	5.3
Jackson	53.2	5.9	1.9	10.9	2.3	.6	1.2	20.3	1.8	1.3	1.3	4.4
Jefferson	26.3	.6	4.3	4.6	4.5	.7	1.5	53.0	3.8	5.5	1.4	3.6
Johnson	24.0	.1	15.2	1.9	4.0	.1	2.6	49.4	3.1	3.4	3.2	4.0
Kay	--	25.7	16.0	5.1	7.3	.2	5.8	35.1	3.1	3.7	5.9	5.2
Kingfisher	2.8	37.1	6.7	3.3	4.9	2.0	3.1	35.5	2.8	8.5	3.3	5.4
Kiowa	32.1	15.9	1.2	4.7	4.0	2.1	1.6	36.6	2.8	2.4	1.6	4.5
Latimer	12.0	.3	19.0	1.9	3.0	--	5.0	54.4	3.9	4.4	6.1	4.9
LeFlore	35.9	--	25.3	1.8	3.0	--	4.3	25.2	4.7	3.8	5.9	7.4
Lincoln	18.0	.8	8.1	7.7	4.7	.1	6.5	48.3	2.8	1.7	1.7	5.8
Logan	11.5	10.7	7.5	5.4	7.0	.3	5.7	47.1	2.9	2.2	2.5	5.6
Love	29.0	.1	12.9	1.0	3.1	.3	2.1	48.7	3.0	2.9	3.6	3.5
McClain	27.3	1.2	16.8	4.8	4.3	.2	3.7	29.9	2.4	2.4	2.8	5.9
McCurtain	37.8	.1	21.1	.8	.7	--	1.3	35.0	5.0	4.5	8.2	4.5
McIntosh	34.6	.2	23.5	1.3	6.5	--	3.0	25.0	3.0	2.2	5.3	5.6
Major	.1	25.2	4.2	3.6	1.1	1.4	1.8	56.6	2.7	2.5	1.6	3.8
Marshall	31.2	.3	15.5	.7	7.7	.2	3.0	40.5	2.5	3.2	4.2	4.1
Mayes	10.2	4.1	17.9	3.0	11.9	.1	14.2	30.3	3.4	2.9	5.6	6.6
Murray	21.0	.7	13.4	4.2	5.3	.2	3.9	47.8	3.3	3.2	4.7	4.4
Muskogee	34.4	.8	20.0	1.7	9.2	.1	4.3	29.5	3.4	4.3	4.8	5.5

Counties	Cotton	Wheat	Corn	Sorghum	Oats	Barley	Hay	Pasture	Cows	Other Cattle	All Hogs	Poultry
Noble	1.2	23.7	5.9	3.4	10.2	.2	6.9	49.8	3.3	3.7	2.2	4.9
Nowata	1.0	4.9	12.1	3.4	7.5	.1	14.3	48.8	2.9	5.2	3.6	4.1
Okfuskee	25.5	.3	20.2	3.0	6.0	--	2.7	39.1	4.5	2.7	9.2	10.3
Oklahoma	13.4	5.9	8.2	6.9	5.6	.5	6.1	46.4	3.7	2.4	2.7	7.5
Okmulgee	20.0	1.5	17.8	2.6	7.3	--	8.9	38.5	4.3	3.7	5.1	5.2
Osage	2.7	1.6	8.1	5.3	1.7	--	4.0	74.5	3.7	6.8	3.3	2.4
Ottawa	.2	7.6	25.4	2.4	31.1	--	13.1	30.6	4.1	3.7	7.3	6.9
Pawnee	7.0	4.3	9.7	6.9	6.4	--	9.2	52.4	3.3	4.1	2.9	5.3
Payne	10.9	2.7	8.5	8.5	6.9	.1	7.0	48.2	3.0	2.4	3.0	6.8
Pittsburg	20.8	.1	15.6	1.4	5.1	--	4.4	49.8	3.1	2.8	4.9	5.4
Pontotoc	21.9	.3	17.0	3.3	3.8	.1	3.6	46.0	2.7	2.8	4.1	5.0
Pottawatomie	26.3	.4	13.2	5.9	3.3	.1	5.1	41.4	2.7	1.7	2.6	5.6
Pushmataha	16.1	.1	20.2	1.3	1.5	--	1.9	50.3	4.9	5.0	8.0	4.4
Roger Mills	5.3	4.1	4.7	7.5	.8	.3	1.5	63.5	2.8	2.8	2.0	2.6
Rogers	5.7	5.2	11.9	2.1	9.6	.1	9.8	45.4	3.3	3.9	4.4	4.8
Seminole	25.0	.3	18.0	2.9	3.4	--	2.2	44.2	2.4	1.7	3.9	4.8
Sequoyah	37.5	.2	28.0	1.9	2.7	--	3.5	18.7	4.6	3.1	7.4	6.9
Stephens	23.8	.9	11.6	4.3	3.3	.2	3.1	45.1	3.2	3.1	3.3	4.5
Texas	.1	13.4	.4	9.2	.5	1.2	.8	69.8	1.1	1.2	0.6	1.3
Tillman	39.6	16.0	3.6	3.2	4.9	1.1	1.1	22.9	1.9	1.4	1.2	4.5
Tulsa	9.2	4.5	19.6	5.1	8.5	.3	10.0	33.3	6.0	5.1	7.8	9.1
Wagoner	23.9	2.5	18.1	1.4	9.5	--	7.4	28.7	2.5	3.0	4.7	5.6
Washington	.4	2.3	12.6	7.3	4.6	--	10.7	52.2	4.0	8.6	4.6	4.7
Washita	23.2	21.8	6.4	8.4	3.1	1.3	2.0	29.4	3.1	2.5	2.8	2.7
Woods	--	27.2	3.3	7.3	.9	.9	1.3	55.0	3.2	2.1	1.5	3.2
Woodward	--	19.7	4.0	7.7	.8	.5	2.2	58.0	2.5	3.0	1.5	2.8

Appendix III—Average Annual Precipitation, in Inches and Hundredths,

For All Stations Having Ten or More Years Record

(Supplied by the U. S. Weather Bureau)

Stations	Amount	Stations	Amount
Ada	36.48	Kingfisher	25.07
Altus	28.95	Lawton	31.41
Alva	28.19	Mangum	27.12
Apache	28.28	Marlow	33.70
Arapaho	36.11	McAlester	42.45
Ardmore	36.61	McComb	33.42
Bartlesville	19.86	Meeker	33.31
Beaver	23.57	Muskogee	35.98
Buffalo	38.65	Mutual	23.24
Calvin	33.13	Neola	29.48
Chandler	30.17	Newkirk	33.74
Chattanooga	29.12	Oakwood	26.90
Chickasha	38.62	Okeene	28.59
Cleveland	28.35	Oklahoma City	30.78
Cloud Chief	39.55	Okmulgee	35.19
Durant	25.22	Pauls Valley	34.68
Eldorado	29.76	Pawhuska	42.53
Enid	30.55	Perry	34.03
Erick	25.20	Rankin	25.07
Eufaula	35.82	Ravia	36.76
Fairland	40.77	Sac & Fox	33.08
Fort Gibson	37.24	Shawnee	33.54
Fort Reno	30.15	Snyder	27.72
Frederick	28.15	Stillwater	33.76
Geary	29.03	Tahlequah	42.95
Goodwell	17.24	Tulsa	35.90
Guthrie	33.05	Vinita	42.90
Hartshorne	40.33	Wagoner	38.54
Hearldton	37.51	Waukomis	30.32
Hennessey	29.39	Waurika	30.64
Hobart	28.20	Weatherford	28.29
Holdenville	36.67	Webbers Falls	39.88
Hooker	18.32	Whiteagle	33.41
Hurley	23.31	Wichita Nat'l Forest	32.04
Jefferson	29.52	Woodward	23.71
Kenton	17.90		

Appendix IV—Changes in the Use of Crop Land in the Wheat Belt, Taken With a Crop Meter and Given in Percentage Each Crop Occupies of the Total Crop Area

AREA	Year	Wheat Per Cent	Cotton Per Cent	Corn Per Cent	Oats Per Cent	G. Sorghum Per Cent	Hay Per Cent
Oklahoma City	1924	57.3	1.5	14.7	9.6	.7	10.8
and	1925	61.0	5.1	7.9	8.0	5.6	10.4
Return	1926	68.2	3.4	7.3	10.1	.4	3.5
	1927	84.6	.3	4.9	4.6	.2	3.8
	1928	83.2	2.4	4.8	5.2	--	3.3
Oklahoma City	1924	64.7	2.4	12.2	7.5	.8	8.8
to	1925	63.2	6.4	5.6	5.9	7.0	8.6
Woodward	1926	66.8	2.6	7.2	11.6	.5	2.1
	1927	77.9	.0	7.3	7.6	.5	3.2
	1928	75.5	4.3	4.5	8.4	.0	4.9
Woodward	1924	46.3	1.0	16.7	11.1	.1	12.0
to	1925	60.5	4.0	9.2	9.5	4.5	11.3
Edmond	1926	72.4	3.9	7.5	9.2	.3	4.7
	1927	88.0	.5	3.6	3.0	.0	4.6
	1928	85.4	1.7	4.5	4.1	.0	2.8
	1924	51.5	6.9	15.8	12.4	1.1	8.2
Oklahoma City	1925	54.1	15.6	3.1	11.5	7.1	5.4
to	1926	48.5	5.6	8.2	22.8	1.5	2.0
Kingfisher	1927	55.5	.0	8.2	20.2	.3	1.0
	1928	61.4	5.0	9.1	13.6	.0	8.2
	1924	70.0	.5	13.4	4.1	.05	8.8
Kingfisher	1925	76.5	1.5	3.2	5.8	1.8	7.8
to	1926	74.4	2.2	6.0	5.7	.1	1.4
Fairview	1927	83.9	.0	4.7	8.7	.0	.0
	1928	73.1	7.0	3.4	8.7	.1	5.6
	1924	62.2	3.2	24.0	6.0	.2	2.5
Fairview	1925	58.5	6.0	12.2	.0	9.3	9.7
to	1926	58.5	.5	13.9	18.5	.0	2.5
Seiling	1927	65.2	.0	8.0	18.8	.0	3.6
	1928	89.0	--	3.4	1.4	--	4.3
	1924	64.9	.2	9.8	7.3	1.9	11.4
Seiling	1925	67.1	1.6	7.2	.8	11.4	10.1
to	1926	82.3	.6	4.0	2.7	.0	3.0
Woodward	1927	89.8	.0	2.2	1.7	.0	3.2
	1924	60.0	.0	18.0	3.3	2.1	8.6
Woodward	1925	64.4	.0	5.7	.5	13.6	13.2
to	1926	72.6	.0	10.2	4.9	.0	7.2
Waynoka	1927	80.1	.0	8.4	3.9	.0	7.4
Waynoka	1924	78.1	.1	8.1	3.8	.0	5.9
to	1925	80.2	.0	.7	4.0	4.0	10.0
Cherokee	1926	83.1	.0	.5	5.0	.9	4.0
	1927	75.2	.0	.0	3.3	.0	4.2
	1928	93.5	.0	.8	3.6	--	1.5

Appendix IV—(Continued)

AREA	Year	Wheat Per Cent	Cotton Per Cent	Corn Per Cent	Oats Per Cent	G. Sorghum Per Cent	Hay Per Cent
VII	1924	64.2	.0	11.3	3.8	1.0	4.5
Cherokee	1925	69.0	.2	11.3	7.2	2.8	8.8
to	1926	82.9	.0	4.4	6.0	.2	3.0
Tonkawa	1927	91.0	.0	.7	2.2	.0	4.6
	1928	76.4	.0	8-1	4.4	.0	10.3
VIII	1924	40.8	.8	16.5	18.1	.0	19.1
Tonkawa	1925	58.5	.0	13.2	19.4	1.5	6.7
to	1926	72.2	2.0	2.8	17.6	.0	1.5
Perry	1927	84.5	.0	3.2	3.9	.0	8.4
	1928	56.1	.0	20.8	20.8	.0	2.1
IX	1924	20.8	8.9	22.1	19.4	.8	11.6
Perry	1925	23.7	26.4	12.8	17.7	5.4	12.3
to	1926	40.4	24.0	15.1	18.6	.0	1.7
Edmond	1927	56.7	7.2	21.8	11.2	.0	2.3
	1928	73.6	.0	23.2	2.3	.0	.3

**Appendix V—Changes in the Use of Crop Land in the Cotton Belt, Taken
With a Crop Meter and Given in Percentage Each Crop Occupies
of the Total Crop Area**

AREA	Year	Wheat Per Cent	Corn Per Cent	Cotton Per Cent	Oats Per Cent	G. Sorghum Per Cent	Others Per Cent
Oklahoma City	1924	6.7	9.0	31.5	4.1	1.6	40.4
and	1925	10.0	8.3	62.0	9.3	3.2	.6
Return	1926	9.3	13.9	52.0	11.3	4.6	3.2
	1927	14.6	17.2	45.6	1.1	13.5	4.1
Oklahoma City	1924	10.7	8.4	36.4	2.2	1.9	31.1
to	1925	11.7	6.6	65.9	3.3	1.9	.6
Altus	1926	14.1	7.7	54.2	4.5	9.5	2.1
	1927	12.2	12.1	48.9	1.0	17.2	3.6
Altus	1924	8.4	8.0	34.6	6.6	1.7	36.8
to	1925	14.0	6.8	59.0	11.7	4.2	.5
Durant	1926	19.7	10.1	44.5	16.4	3.8	1.4
	1927	24.0	19.2	42.8	.5	8.6	2.9
Durant	1924	.9	10.8	24.0	3.0	1.3	52.9
to	1925	2.2	12.6	59.6	14.8	3.6	.8
Oklahoma	1926	.9	19.8	54.5	13.2	1.3	4.7
City	1927	2.0	28.2	42.7	2.7	13.3	6.7
Oklahoma	1924	9.7	25.1	38.4	5.6	1.1	17.1
City	1925	14.2	13.8	52.3	8.2	1.0	10.5
to	1926	8.2	18.0	39.0	11.6	9.1	11.8
Chickasha	1927	3.0	30.4	36.6	1.6	16.8	11.6

(Continued)

AREA	Year	Wheat Per Cent	Corn Per Cent	Cotton Per Cent	Oats Per Cent	G. Sorghum Per Cent	Others Per Cent
Chickasha	1924	7.4	11.8	51.8	.6	.5	25.6
to	1925	.7	13.2	67.2	.5	.0	18.4
Carnegie	1926	6.8	9.9	16.3	1.0	8.4	12.6
	1927	.9	28.4	45.0	1.1	11.4	13.2
Carnegie	1924	30.2	7.4	38.8	5.2	1.5	5.5
to	1925	28.4	1.4	51.2	6.2	.8	10.0
Red River	1926	25.3	3.5	47.6	6.2	7.6	9.3
	1927	35.6	4.3	40.2	2.2	9.9	7.8
Red River	1924	4.9	1.2	86.3	3.2	.7	3.7
to	1925	3.4	.0	90.0	.4	3.3	2.9
Mangum		11.7	.7	81.5	3.0	1.9	1.2
	1927	3.0	1.5	78.4	1.1	11.9	4.1
Mangum	1924	4.6	12.2	71.3	.0	7.0	3.4
to	1925	2.7	6.0	86.3	.6	3.9	.4
Gould	1926	9.8	7.2	58.2	1.1	15.5	1.4
	1927	9.1	1.2	51.6	.2	32.5	5.4
Gould	1924	18.2	4.6	65.9	2.9	3.4	3.8
to	1925	8.6	1.1	78.8	.0	5.6	6.0
Altus	1926	22.4	1.3	55.9	3.5	7.7	9.2
	1927	15.4	2.9	66.7	.0	9.4	7.5
VII	1924	43.8	7.1	24.4	12.0	6.1	6.0
Altus	1925	25.2	1.2	58.3	5.7	5.7	4.0
to	1926	28.5	4.1	45.9	11.0	4.9	5.0
Devol	1927	32.1	7.5	46.8	.5	8.1	5.0
VIII	1924	15.3	8.0	58.0	12.3	2.9	3.3
Devol	1925	10.4	5.8	55.3	21.0	4.2	3.4
to	1926	28.5	7.8	37.7	22.6	1.4	2.0
Ringling	1927	35.3	10.8	42.4	.0	10.8	.5
IX	1924	.2	28.0	53.5	9.2	4.3	4.7
Ringling	1925	.0	16.0	68.5	1 6.2	4.7	4.7
to	1926	.2	21.0	55.3	9.0	2.4	11.9
Ardmore	1927	3.5	38.5	39.2	.0	1.5	7.3
X	1924	.6	16.6	58.0	5.0	1.5	15.3
Ardmore	1925	.0	16.6	60.5	16.7	.6	5.6
to	1926	.3	20.6	44.0	24.1	4.6	6.3
Durant	1927	.2	48.2	35.5	1.4	5.9	8.7
XII	1924	.3	29.5	46.6	4.8	3.5	15.3
Atoka	1925	.0	14.7	63.2	12.7	4.5	4.7
to	1926	.3	17.6	54.6	20.2	1.9	5.3
Ada	1927	.2	32.5	41.1	2.2	14.2	9.8
XIII	1924	.2	19.1	50.8	4.1	5.7	20.1
Ada	1925	.0	15.9	17.2	2.0	3.7	7.4
to	1926	.3	15.4	66.0	5.9	3.0	9.5
Stratford	1927	.0	32.0	51.4	.0	7.2	9.4
XIV	1924	2.1	19.4	53.5	5.6	3.8	15.6
Stratford	1925	.0	10.6	64.1	12.0	2.8	10.4
to	1926	.0	16.7	48.3	10.4	5.9	18.7
Purcell	1927	6.4	14.7	34.5	.0	26.6	13.8

Appendix VI—A. Comparative Summary of Two Organizations of 160-Acre Farm in Garfield County

		Past Organization			**Reorganization**		
Wheat	80 A.	Cane Hay	2	Wheat 100 A.	Pasture	15 A
Sorg.	8 A.	Cows	5	Oats	4 A.	Horses	
Oats	10 A.	Young stock	4	Alfalfa 10 A.	Cows	
Corn	10 A.	Steers	2	S Clover 10 A.	Young stock 10	
Alfalfa	5 A.	Hogs	2	Sorg.	15 A.	Poultry	200
Pasture	40 A.	Poultry	125	Cane F. 5 A.	Sow	1
		Horses	5			

Yield and Price Relationship 17-Yr. Av.	Gross Income	Variable Expense	Balance	Gross Income	Variable Expense	Balance
Yield and Price	1486	366	1120	2896	721	2175
4 High Yield Years	2446	379	2067	4081	611	3470
4 Low Yield Years	1078	339	739	2312	712	1600
Highest Yield Year	2000	404	1596	3493	643	2850
Lowest Yield Year	1066	327	739	3354	634	1620
High Yields 17-Yr. Av. Price	2095	363	1732	4849	564	4285
4-Yr. High Price	3067	383	2684	6233	598	5635
4-Yr. Low Price	1559	361	1198	3650	550	3100
Low Yields 17-Yr. Av. Price	1086	335	751	3167	647	2520
4-Yr. High Price	1532	339	1193	3933	713	3220
4-Yr. Low Price	821	326	495	2443	618	1825

Apppendix VI—B. Reorganization Budget of 160-Acre Farm in Garfield County. Compare to Table 28 in Last Section Preceding the Appendix. Based Upon 17-Year Average Prices and Yields

Enterprise	Acres or Number	Yield	Total Production	Surplus Sold	Price	Value Sales
Wheat	100	13 bu.	1300 bu.	1175	1.15	$1351.25
Oats	5	23 bu.	115 bu.		.49	
Alfalfa	10	3 bu.	30 T.		15.00	75.00
Sweet Clover	15					
Grain Sorghum	5	20	300 bu.		.70	
Cane Forage	15	5	25 T.	18	10.00	180.00
Pasture and Waste						
Total Crops						$1606.25
Horses	4					
Cows	6	250 lbs.	1500	1350	.33	445.50
Young stock	10	300 lbs.	3000	2900	5.81	168.49
Hens	200	4 lbs.	800	625	.14	87.59
Hogs	1 Sow	1600 lbs.	1600	1300	9.51	123.63
Eggs		10 doz.	2000	1900	.24	456.00
Total Livestock						$1281.12
					Gross Income	$2896.37

Feed Purchased						Variable Expense	
Bran	3300 lbs.	@ 1.50 cwt.	$33.00		Feed		355.28
Cotton S. M.	33 lbs.	@ 2.25 cwt.	49.50		Wheat harvest		300.00
Barley	117 bu.	@ .74	86.58		Oat harvest		13.80
Sorghum	117 bu.	@ .74	86.58		Livestock Mis.		30.00
Oats	120 bu.	@ .49	58.80		Crops Mis.		27.29
	Total - - -		$355.28				$ 721.31
					Balance - - - -		$2175.06

Appendix VI—C. Past Organization Budget of 160-Acre Farm in Garfield County, Based Upon Four High Yields and Corresponding Prices

Enterprise	Ares or Number	Yield	Total Production	Surplus Sold	Price	Value Sales
Wheat	80	18 bu.	1440 bu.	1340	1.40	1876.00
Grain Sorghum	8	30 bu.	240 bu.	40	.85	34.00
Oats	10	27 bu.	270 bu.		.50	
Corn	10	13 bu.	130 bu.		.90	
Alfalfa	5	4 T.	20 T.	5	21.00	105.00
Cane Hay	2	6 T.	12 T.	3	15.00	45.00
Total						$2060.00
Cows	5	75 lbs.	375 lbs.	225	.33	74.25
Beef	4	500 lbs.	2000 lbs.	1900	5.81	110.39
Hogs	2	200 lbs.	400 lbs.	200	9.51	19.00
Poultry	125	3 lbs.	375 lbs.	200	.14	28.00
Eggs		6 dz.	744 dz.	644	.24	154.56
Total Livestock						$386.20
					Gross Sales	$2446.20

Feed Purchased					Variable Expenses Only	
Oats	4 bu.	@ .56	2.25	Wheat harvest		240.00
Corn	15 bu.	@ .85	12.74	Oat harvest		32.40
Bran	700 lbs.	@ 1.50 cwt.	10.50	Feed		61.24
Cotton S. M.	700 lbs.	@ 2.25 cwt.	15.75	Mis. Crops		10.00
Barley	25 bu.	@ .80	20.00	Mis. Livestock		30.00
	Total - - - -		$66.24	Total expenses - -		$ 378.64
				Balance - - -		$2067.56

Appendix VI—D. Reorganization Budget of 160-Acre Farm in Garfield
County, Based Upon Four Year High Yields and
Corresponding Prices

Enterprise	Acres or Number	Yield	Total Production	Surplus Sold	Price	Value Sales
Wheat	100	18 bu.	1800 bu.	1675	1.40	2345.00
Oats	5	27 bu.	135 bu.		.56	
Alfalfa	10	4 T.	40 T.	15	15.00	225.00
Sweet Clover	10					
Grain Sorghum	15	30 T.	450 bu.		.85	
Cane Forage	5	6 T.	30 T.	23	10.00	230.00
Pasture	15					
Total Crops						$2800.80
Horses	4					
Cows	6	250 lbs.	1500 lbs.	1350	.33	445.50
Young stock	10	300 lbs.	3000 lbs.	2800	5.81	168.49
Hens	200	4 lbs.	800 lbs.	625	.14	87.50
Hogs	1 sow	1600 lbs.	1600 lbs.	1300	9.51	123.63
Eggs		10 dz.	2000 dz.	1900	.24	456.00
Total Livestock						$1281.92
					Gross Sales	$4081.92

Feed Purchased   Variable Expense

Feed	235.90
Wheat harvest	300.00
Oat harvest	16.20
Livestock Mis.	30.00
Crop Mis.	29.82

Total Expense - - $ 611.92
Balance - - - - $3470.00

Appendix VI—E. Past Organization Budget of 160-Acre Farm in Garfield County Based Upon Four Year Average Low Yields and Corresponding Prices

Enterprise	Acres or Number	Yield	Total Production	Surplus Sold	Price	Value Sales
Wheat	80	8 bu.	640 bu.	540	1.15	621.00
Sorghum	8	25 bu.	200 bu.	50	.65	32.50
Oats	10	16 bu.	160 bu.		.43	
Corn	10	20 bu.	200 bu.	40	.70	28.00
Alfalfa	5	3 T.	15 T.		12.00	
Cane Hay	2	5 T.	10 T.	1	8.00	10.00
Total Crops						**$ 691.50**
Cows	5	75 lbs.	375 lbs.	225	.33	74.25
Beef	4	50%, 1000	2000 lbs.	1900	5.81	110.39
Hogs	2	200 lbs.	400 lbs.	200	9.51	19.00
Poultry	125	3 lbs.	375 lbs.	200	.14	28.00
Eggs		6 dz.	744 dz.	644	.24	154.56
						$ 386.20
					Gross Sales	**$1077.70**

Feed Purchased					Variable Expense	
Oats	29 bu. @ .43		12.74	Wheat harvest	240.00
Bran	350 lbs. @ 2.25 cwt.		5.25	Oat threshing	19.20
Cotton S.M.	350 lbs. @ 2.25 cwt.		7.78	Feed	40.50
Barley	25 bu. @ .60		15.00	Mis. Crops	10.00
				Mis. Livestock	29.00
Total - - - - - -			$40.50		
				Total Expense - -	$338.70
				Balance - - - - -	$739.00

Appendix VI—F. Reorganization Budget of 160-Acre Farm in Garfield County, Based Upon Four Year Low Yields and Corresponding Prices

Enterprise	Acres or Number	Yield	Total Production	Surplus Sold	Price	Value Sales
Wheat	100	8 bu.	800 bu.	675	1.15	776.25
Oats	5	16 bu.	80 bu.		.43	
Alfalfa	10	3 T.	30 T.	5	15.00	75.00
Sweet Clover	10					
Grain Sorghum	15	25 bu.	275 bu.		.65	
Cane Forage	5	5 T.	25 T.	18	10	180.00
Pasture	15					
Total Crops						
						$1031.25
Horses	4					
Cows	6	250 lbs	1500 lbs.	1350	.33	445.50
Young stock	10	300 lbs.	3000 lbs.	2900	5.81	168.44
Hens	200	4 lbs.	800 lbs.	625	.14	87.50
Hogs	1 sow	1600 lbs.	2000 lbs.	1300	9.51	123.63
Eggs		10 dz.	2000 dz.	1900	.24	456.00
Total Livestock						$1281.17
					Gross Sales	$2312.1

Feed Purchased   **Variable Expense**

Barley	117 bu. @ .65	76.05	Feed	359.75
Oats	155 bu. @ .43	66.65	Wheat harvest	300.00
Grain Sorg	207 bu. @ .65	134.55	Oat harvest	9.60
Bran	2200 lbs. @ 1.50 cwt.	33.00	Livestock Mis.	30.00
Cotton S.M.	2200 lbs. @ 2.25 cwt.	49.50	Crop Mis.	13.02
Total - - - - - -		$359.75	Total Expense - -	$ 712.37
			Balance - - - -	$1600.00