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The Commercial Orchard Industry of Calhoun County, Illinois

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Eastern Illinois University

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THE COMMERCIAL ORCHARD INDUSTRY OF

CALHOUN COUNTY ILLINOIS

(TITLE)

BY

Myrl D. Shireman

THESIS

SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS
FOR THE DEGREE OF

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1964

YEAR

I HEREBY RECOMMEND THIS THESIS BE ACCEPTED AS FULFILLING
THIS PART OF THE GRADUATE DEGREE CITED ABOVE

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INTRODUCTION

The manner in which man utilizes the earth and its resources is of primary interest to the student of geography. Though a knowledge of how land is utilized is of value, those persons who lay claim to being a part of the family of geography must delve deeper and seek to answer the more enlightening questions pertaining to where and why man chooses the alternative he does in land utilization. If one is to answer these questions of where and why, he must forsake the comfort of armchair philosophy and meet his problem face to face through field research. Such a meeting was found to be necessary to aid in compiling the data for the study of the following region.

Calhoun County, Illinois, has been noted for its orchard industry since the early 1900's. One can evaluate many factors to ascertain just how or why such an industry evolves where it did. However, in the last analysis, there are many intangibles which are associated with the development of specific land uses in some regions. Olmstead, in research on a similar, but more extensive project, states:

"One could determine the economic activities that were available for selection. He could learn which alternative was selected by particular individuals or groups. Finally, he could study to what degree that alternative became adopted and successful, and responsible for change in the area and its economy. But one could not claim to know definitely why the heart and mind of a particular person or those of a

particular group arrived at a given decision."¹

One cannot live in proximity to a small commercial orchard district and not wonder at its uniqueness. The folklore, sentimentality, and attention directed to the commercial orcharding in Calhoun County, Illinois, far surpasses that associated with general farming in the county. Is commercial orcharding that important in the county? What is there which intrigues one to drive miles to look at an apple or peach blossom? These questions are just examples to indicate the motive behind the writers choosing the Calhoun commercial orchards as his thesis topic.

Scope of the Study

The scope of this paper will cover various aspects of the Calhoun commercial orchard economy. The importance of location, present and past distributions, trends in the industry, the significance of orcharding to agriculture in Calhoun and the State of Illinois, marketing, labor, and transportation, all of which will be used to analyze and interpret the geographic problem.

Statement of Purpose

Aside from the primary stimuli to this investigation, a secondary purpose of this research is that of presenting a substantial paper to Eastern Illinois University. Such a paper is necessary to meet the University standard for

¹ Clarence Olmstead, American Orchard and Vineyard Regions, Economic Geography, Vol. 32, No. 3, July 1956, pp. 204-205.

completion of the Master's Degree and consequent expansion of ones horizon of knowledge. The compilation and collection of data was conducted under the auspices of the Department of Geography of which Dr. Dalias Price is head.

Why did orcharding become established in Calhoun? How did it evolve? What changes have transpired and why? What factors favored commercial orcharding in the county? What is responsible for the shift in orchard distribution in the county? What are the associations between orcharding and other economic endeavors in the region? What is the future of orcharding in Calhoun? The remainder of this thesis will be devoted to a search for tangible factors to answer the above questions.

CHAPTER I

PHYSICAL ENVIRONMENT

A unique location in southwestern Illinois between the meandering Mississippi River, on the west and south, and the Illinois River, on the east, gives Calhoun a narrow peninsula character (Fig. 1). From its northern border with Pike County to the meeting of the Illinois and Mississippi Rivers at The Point in southeastern Calhoun, the horn shaped county extends for approximately thirty-six miles. In traversing the countryside of this colorful region, one continually feels the influence of the bounding rivers as east to west dimensions vary from a narrow four miles, just south of the county seat at Hardin, to sixteen miles along the northern boundary with neighboring Pike County. The accessibility of the rivers providing cheap transportation was an impetus to the establishment of commercial orcharding in the county.

Topography

The physical aspect of the county is dominated by a maturely dissected upland with elevations of 600-700 feet, becoming lower in the southeastern portion of the county, near Brussels. The upland, with its ubiquitous interfluves and valleys, is fringed on the east and west by the floodplain and alluvial terraces of the bounding rivers (Fig. 2). It is on these interfluves that one finds the select sites for

CALHOUN GEOGRAPHIC
LOCATION

Mississippi
River

Illinois
River




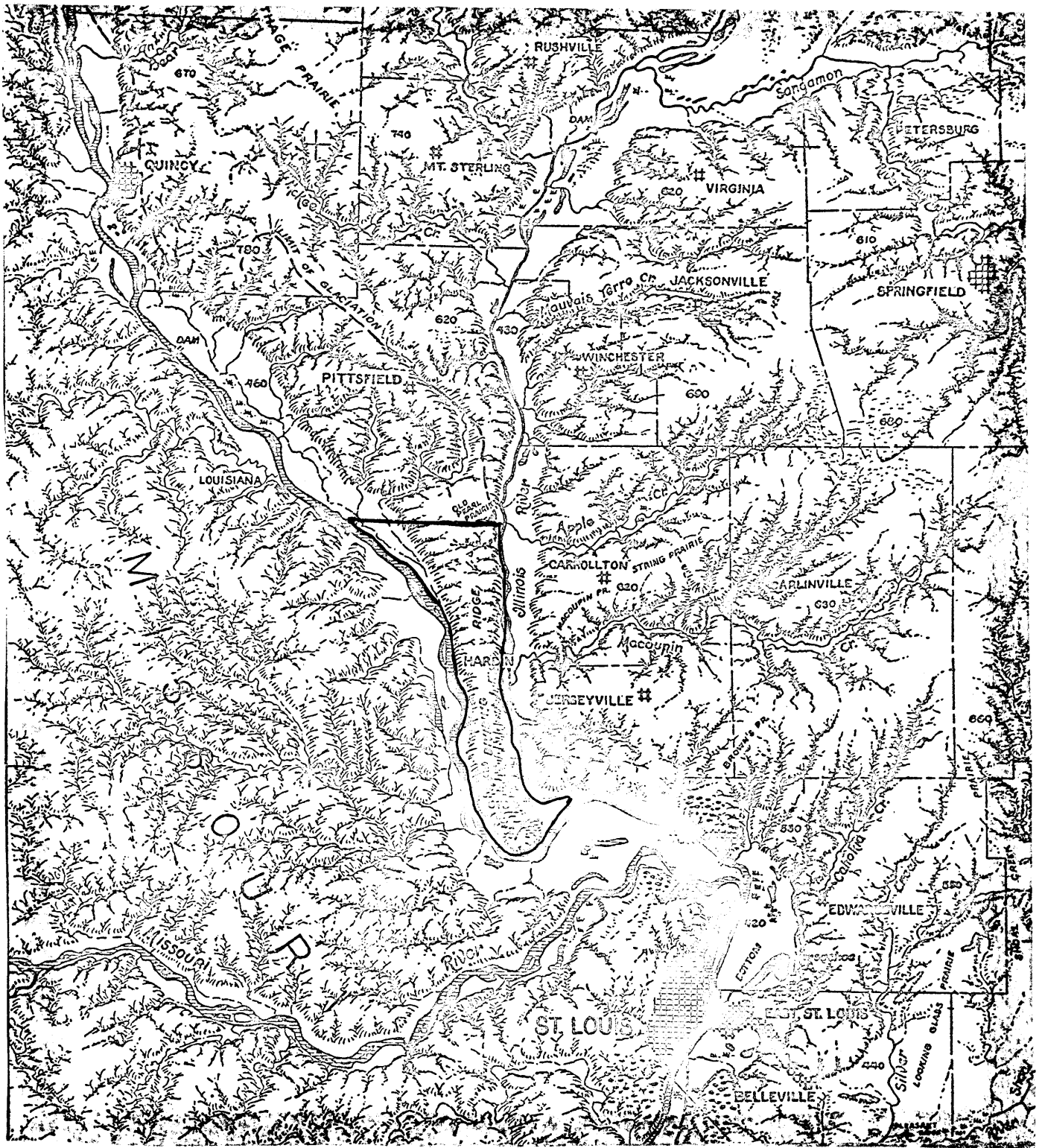
-  CALHOUN COUNTY
-  GLACIAL EXTENT
-  ST. LOUIS
METROPOLITAN AREA

Fig. 1



CALHOUN COUNTY LANDFORMS

□ CALHOUN

Fig. 2

Climata

orchard locations, a consequence of the excellent air and water drainage.

Climate of Calhoun County is humid continental (Dfa), with a growing season varying from 180 days, in the northeastern

Soils

sector of the county, to 210 days in the southern portion (Fig. 4).

The uplands are characterized by a covering of brownish yellow-gray silt loam soil. The silt loam soil, being very permeable and friable, allows for deep root penetration, a necessity to prohibit the tendency of the trees to break over during periods when laden with fruit or exposed to strong winds. The latter is more predominant on the interfluves.

Although Calhoun was not glaciated, what is more important was the generous 100-300 inch covering of loess (fine wind blown soil), with which it was mantled during and after the glacial periods (Fig. 3). It is from this loess that the brownish yellow-gray silt loam soil has evolved. The accumulation of loess becomes more predominant in the southern and eastern sectors of the county.



Fig. 3. Loess deposit near Batchtown.

Climate

The climate of Calhoun County is humid continental (Dfa), with a growing season varying from 160 days, in the northeastern sector of the county, to 210 days in the southern portion (Fig. 4). The long growing season is very favorable to apple and peach production within the county. It is notable that Calhoun, though located approximately 100 miles farther north, has a growing season equal to, and often longer than is experienced by southern Illinois fruit producing counties, such as Marion, Jackson, and Union (Fig. 4).

An interpretation of the data pertaining to the occurrence of killing frosts in Calhoun is very revealing. The county normally experiences its last killing frost of spring between April 10th and 15th, and the first killing frost in the fall usually occurs between October 20th and 25th (Fig. 5-6). These Figures 5-6 indicate that frost damage to Calhoun fruit should be no greater than that occurring in fruit producing counties of southernmost Illinois.

Precipitation, in Calhoun, averages 37-38 inches annually, with the maximum coming in the summer.² Rainless periods, exceeding forty days, are considered injurious to apple and peach crops. However, a check of climatic records for Calhoun does not reveal this to be a problem.

Climatic conditions, in Calhoun, are favorable to the commercial growing of apples and peaches. This factor was soon capitalized upon by the early settlers of the county.

2

Water Resources and Climate, Atlas of Illinois Resources
(Section 1), Springfield, Illinois, Nov., 1958.

AVERAGE LENGTH OF GROWING SEASON FOR VARIOUS ILLINOIS LOCALITIES

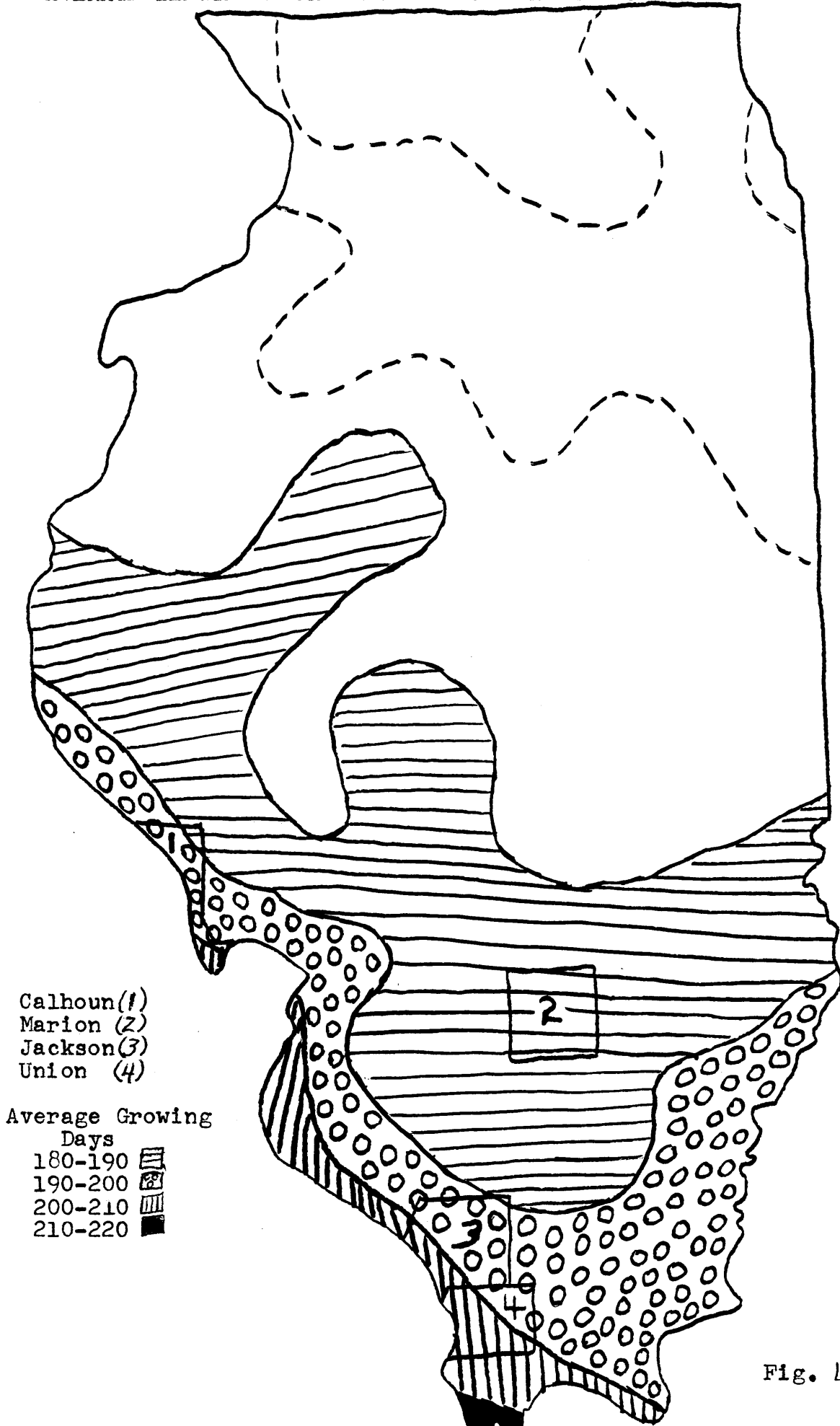
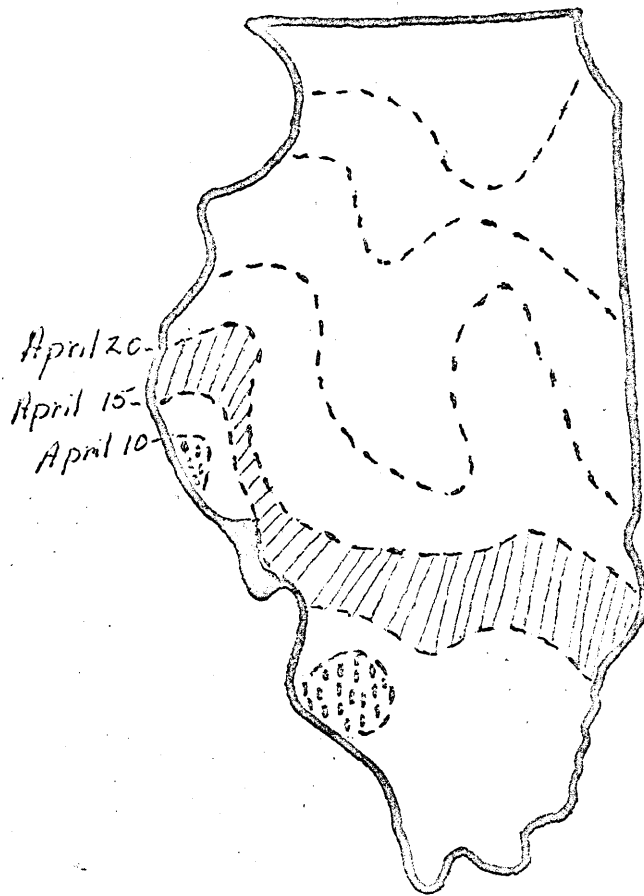
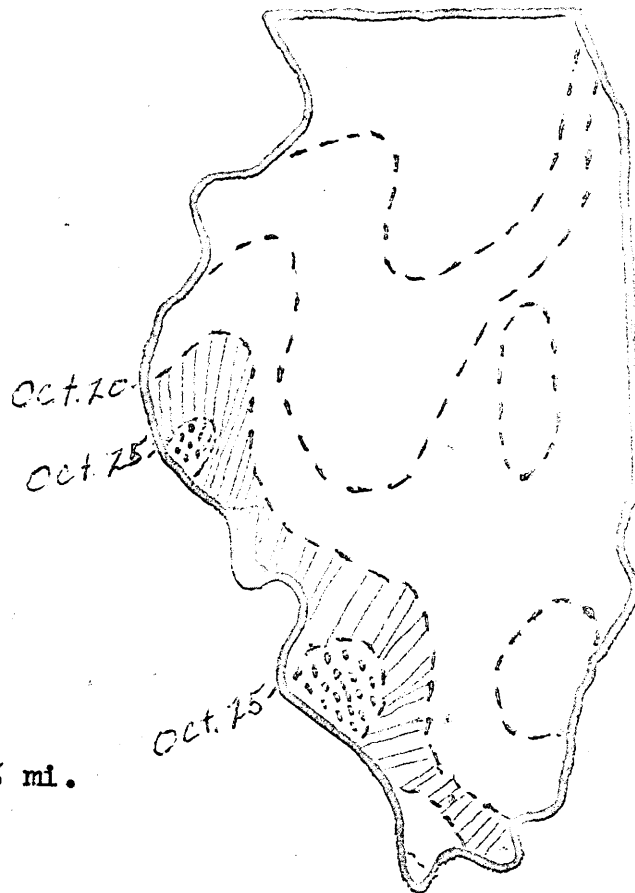


Fig. 4



Mean Date of
Last Freeze IN
Spring
▣ Callow County

Fig. 5



Mean Date of
First Freeze IN
The Fall
▣ Callow County

Fig. 6

scale: 1" = 75 mi.

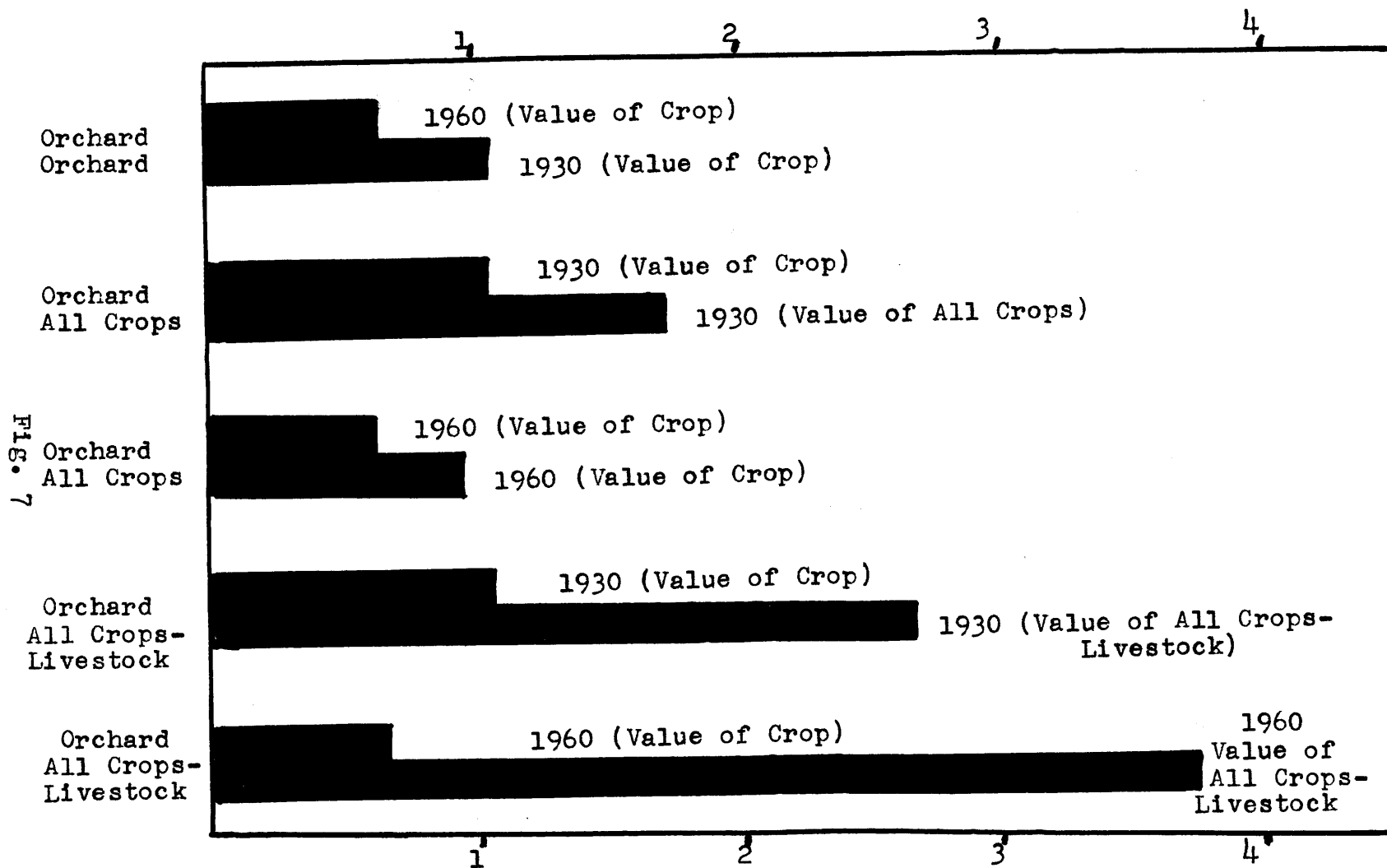
CHAPTER II

TRENDS AND SIGNIFICANCE OF CALHOUN COUNTY ORCHARDING

The commercial orchard industry of Calhoun was an outgrowth of the small kitchen orchards which once prevailed on most farms throughout the Central United States. The evolution of kitchen to commercial orcharding is understandable in light of the counties location on two navigable rivers within 40 miles of the excellent market provided by the rapidly growing city of St. Louis. Although the orchard industry was more significant, percentage wise, to the economy of Calhoun in 1930 than in succeeding years, the county still derives approximately 16 per cent of its income from orcharding. A comparison of the value of orchard crops between 1930 and 1960 indicates that orchard crop value in 1930 was \$1,113,540, while the orchard crop value in 1960 was \$713,541, or 64 per cent of the value 30 years earlier. A more revealing comparison is an analysis of orchard crop value versus all other crop values for the years 1930 and 1960. The 1930 orchard crop value of \$1,113,540 was approximately 3/5 of all other crop values, which was \$1,816,262 for the same year. In 1960, the orchard crop value had declined to \$713,541, or 65 per cent of the value of all other crops which had decreased to \$1,088,480 (Fig. 7).³ This would indicate that orcharding is more vital

³ Calhoun County Overall Economic Development Plan, Report by Joint Extension Councils of Calhoun County, Hardin, Illinois, 1962.

COMPARISON OF DOLLAR VALUE SIGNIFICANCE OF ORCHARDS, LIVESTOCK,
AND CROPS TO CALHOUN COUNTY ECONOMY



MILLION DOLLARS

to the county's economy than 30 years previously. However, this is not true, when the value from livestock is included with the value of all other crops for 1930, the orchard crop value is approximately $2/5$ of the combined value of other crops and livestock, which was \$2,711,188. A look at the same data for the year 1960 shows the orchard crop value to be approximately $1/5$ of the other crop-livestock value, which was \$3,784,891 for that year (Fig. 7). An interpretation of this data indicates very poignantly that the fruit industry has maintained its importance to the economy when compared to the value of other crops.

The real comer has been livestock production, which increased from \$894,926 in 1930 to \$2,696,411 in 1960. This increase in the value of livestock and the corresponding decrease in orchard crop value for the period 1930 to 1960 is indicative of a shift from orcharding to livestock production on many farms, a shift which was borne out by observation during the interviews. To evaluate this increase in livestock value and the decrease in orchard value, one must look to land use data for each item. It is found that the number of acres devoted to orchards has decreased from 21,398 in 1930 to 3,364 in 1960.³ While orchard acreage decreased, beef cow numbers experienced an increase from 428 in 1930 to 4,700 in 1960. The beef cow herds have been selected to utilize the pasture planted on the rougher lands from which orchards have been removed.

³
Ibid. p. 22.

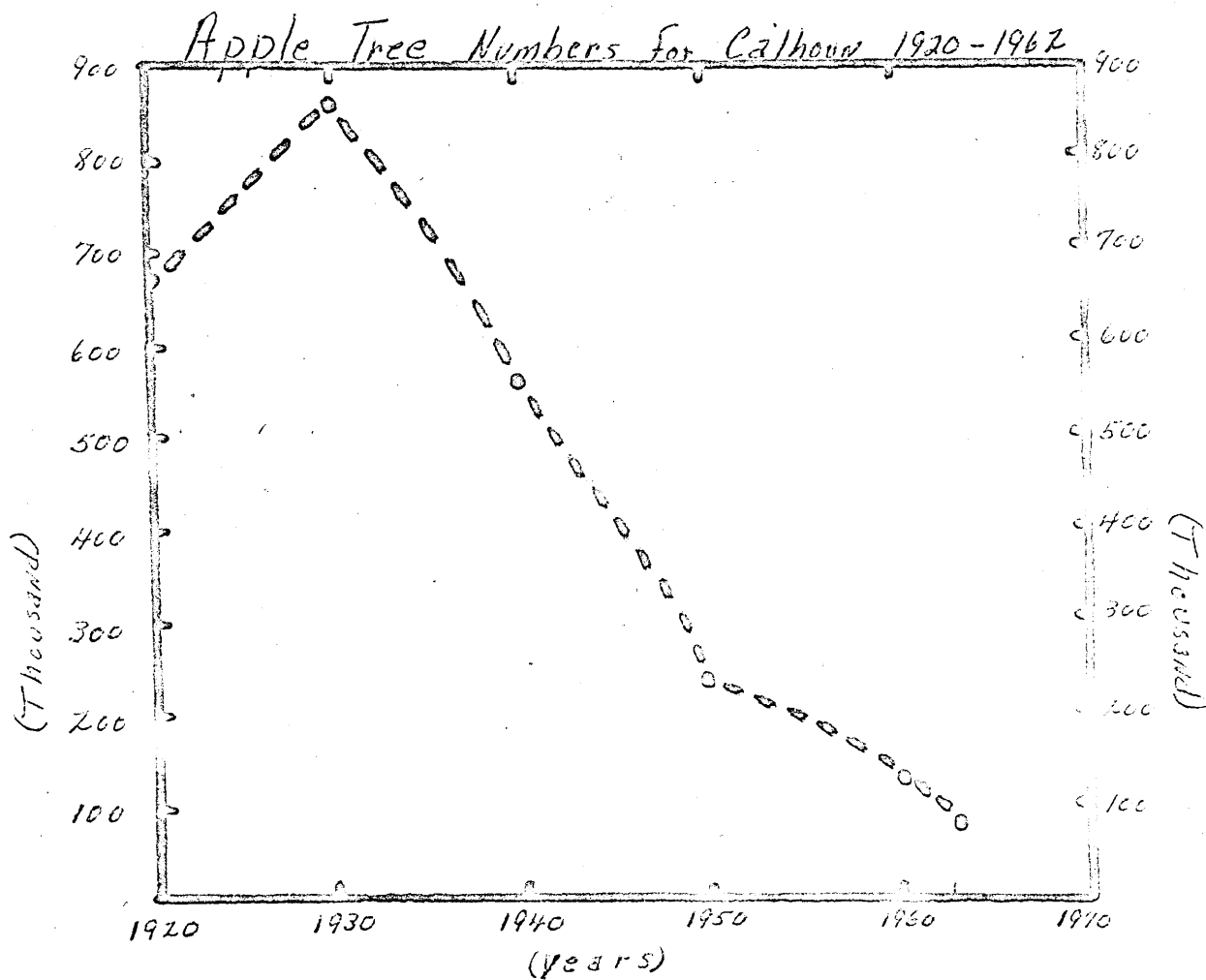


Fig. 8

Source: United States Census of Agriculture, 1940-1959.
 Illinois Agricultural Statistics, circular 445.
 Illinois Agricultural Statistics, 1962.

Though the Trends in Apple Production illustrates vividly the

drastic reduction in apple tree numbers, there are definite signs that the trend is stabilizing with the possibility of apple producing county of Illinois, with a total of 680,000 trees, a position which it maintained until 1962, when it was surpassed by Union County. Even though the county is a young orchards which would indicate a possible regeneration leading apple producer, the trend following the 1930's has been toward a rapid decrease in the number of trees (Fig. 8). (Fig. 9).

The trend toward fewer trees is a result of overexpansion in the 1920's and 1930's, loss of market to other more progressive producers in the West and North Central United States, a nationwide tendency toward the consumption of fewer apples, inadequate labor supply to maintain orchards properly, (a result of younger persons leaving the county and seeking employment in the St. Louis metropolitan area), and failure of growers to maintain and develop a modern transportation network. This is based on the general tendency in agriculture

for marginal producers (producers with little net income after paying production costs) to find it harder to compete, due to the necessity of purchasing necessary equipment such as graders, and hydro-coolers. The county farm advisor felt the number of orchards would decrease, but the total tree numbers would increase his operation via the plantation. A more numerous orchard operation permits a greater per acre



Fig. 9. A young orchard in Calhoun County, near Brussels. Corn stalks indicate intercropping during the early growth of trees. Robert Cultural Advisor, interview, June, 1964.

Though the preceding Figure 8 illustrates vividly the drastic reduction in apple tree numbers, there are definite signs that the trend is stabilizing with the possibility of a slight increase in apple tree planting in the future. The writer, while conducting interviews, observed a number of young orchards which would indicate a possible regeneration of commercial apple orchards within the county (See Preceding Fig. 9).

When orchardists were questioned concerning their future plans, they often expressed the opinion that they would maintain their present acreage or they planned to increase. A consultation with the county agricultural advisor, who conducts meetings with county orchard owners, substantiated the preceding observation.⁴ The county farm advisor felt the number of growers would decrease, but the total tree numbers would increase. This is based on the general tendency in agriculture for marginal producers (producers with little net income after paying production costs), to find it progressively harder to compete, due to rising production costs and investments in necessary equipment such as tractors, sprayers, graders, and hydro-coolers. These rising costs force an orchardist to increase his operation to spread the costs of production or get into some other vocation. The increase in total apple tree numbers would result from the expansion of the orchard operation via the planting of new dwarf varieties, which permits a more numerous population of trees per acre and, therefore, a greater per acre production of apples (Fig. 10).

⁴Robert Lane, Calhoun County Agricultural Advisor, Interview, June, 1964.

The outstanding disadvantage of the dwarf variety has
**Average Apple Trees Planted Per Acre
 for Standard and Dwarf Trees**

West Southwest (Inc. Calhoun)	1962	1961	1960	1959	1954	1949	1939
Standard	47.5	46.8	45.7	45.3	45.6	37.6	37.2
Dwarf	117.8	106.7	73.9	87.1	92.4	98.2	

Fig. 10. Source: Illinois Agricultural Statistics (1962).

Calhoun Significance to Illinois Apple Production

The dwarf tree's ability to reach full production at approximately 4 years, compared to 8 years for the standard apple tree varieties, also encourages acceptance of the newer species among growers. An added advantage of the dwarf tree is concerned with labor at harvest time. Being a shorter tree, there is less time consumed in moving ladders since the picker can harvest much of the fruit standing on the ground (Fig. 11).



Fig. 11. Dwarf apple tree orchard near Mozier.

The outstanding disadvantage of the dwarf variety has been its inability to develop a root system which will support the tree. The poor root development tended to make some growers skeptical of the merits of the dwarf apple tree. However, improved breeds of the dwarf variety, having the characteristic of better root development, are being introduced.

Calhoun Significance to Illinois Apple Production

The apple industry in Calhoun County has some unique characteristics when compared to other leading Illinois apple producing counties. In 1962, Calhoun was the leading county in apple orchard acreage with 2,055 acres devoted to apple production (Fig. 12). A reference to Figure 13 reveals Calhoun as having a total of 114 commercial apple orchard farms, eighty more than Union County, the second leading Illinois County. A comparison of Calhoun and Union County commercial apple orchard on an acre basis indicates the average commercial apple orchard in Calhoun to be approximately 17 acres in size, while those in Union County average 57 acres per holding. When compared to the next three leading counties, Calhoun is unique in that it leads in the number of commercial apple orchards having less than 500 trees (approximately 10-12 acres) as well as leading in the number of orchards having more than 500 trees.

Further analysis indicates that approximately 1/4 of the 445 commercial apple orchards of Illinois are in Calhoun County. A consideration of orchards having more than 500 trees will show a total of 259 for the state with 24 percent or 64

(Counties) Apple Orchard Acreage For Leading Illinois Counties (1962)

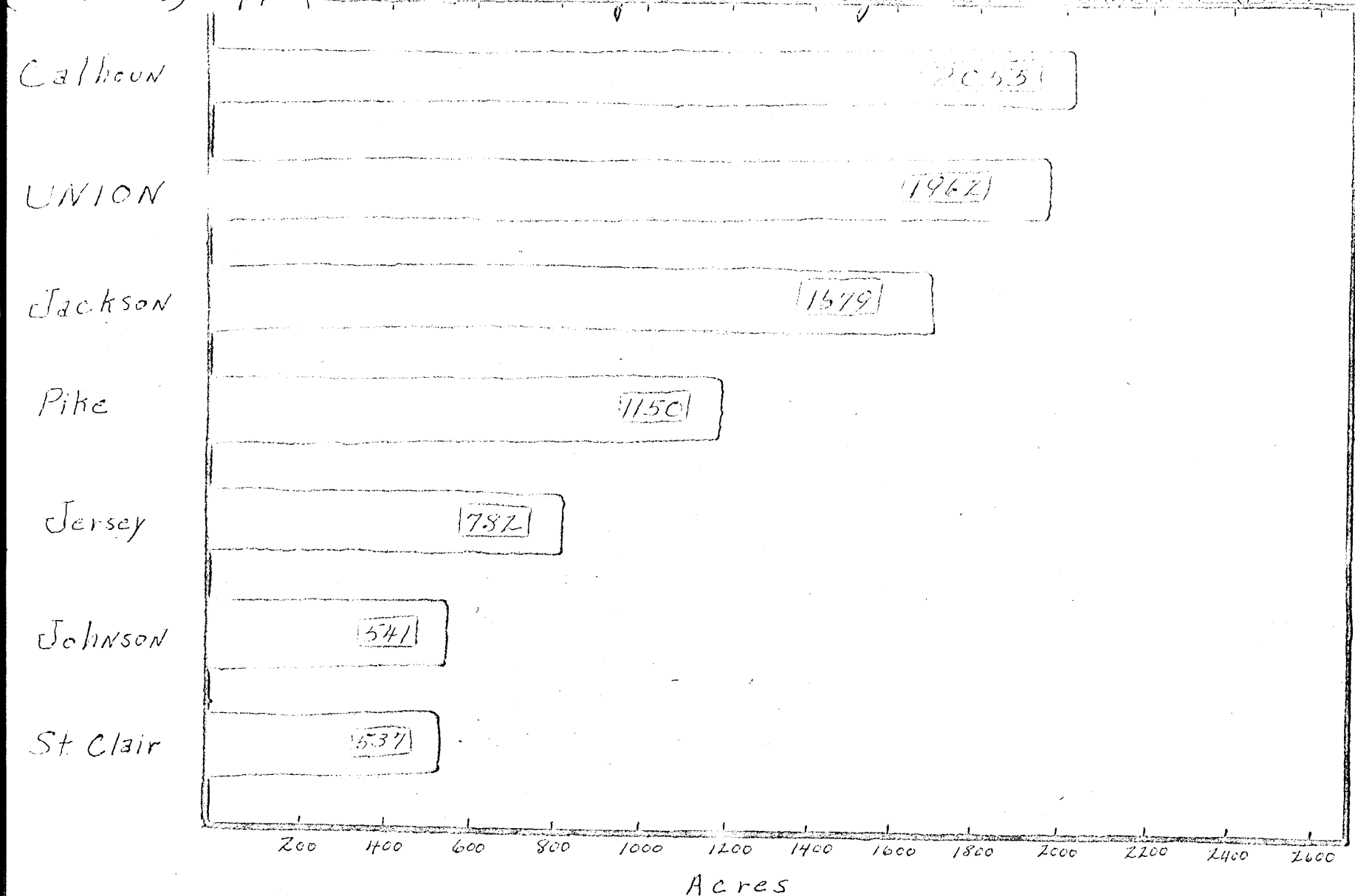


Fig. 12

Source: Illinois Agricultural Statistic (1962).

located in Calhoun County. Referring to orchards with less than 500 trees, one finds a state total of 186 with 50 or 26 per cent located in Calhoun. A distinct characteristic of Calhoun orchards is the tendency toward a balance between the number of orchards having more than 500 trees and those having less than 500 trees, a characteristic which is not found in other leading counties. For example, Union County, while having only 34 commercial apple orchard farms, showed only 5.8 per cent of its orchards having less than 500 trees, while Jackson, also a leading county, had a total of 23 commercial holdings with 13 per cent having less than 500 trees. An interpretation of the factors involved would indicate that Calhoun is characterized by smaller orchard operations than is found in other leading counties in the state. Orchardling, in Calhoun County, is often a part time or a one man operation, while commercial holdings in other areas of Illinois are larger. Dalias A. Price, in his work on *The Commercial Orchard Economy in Southern Illinois*, which excludes Calhoun County, notes that there is a trend toward concentration of many of the orchards in the region into a few large holdings.⁵ He also states that orchard farms are well painted, well kept, and have an air of prosperity about them. Such was not always true with the smaller holdings in Calhoun. The data presented in Figure 13 would substantiate his findings.

When investigating the high proportion of small orchards

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Dalias A. Price, *The Commercial Orchard Economy in Southern Illinois*, Ph. D. Dissertation: University of Wisconsin, 1954.

NUMBER OF APPLE ORCHARDS BY SIZE IN LEADING ILLINOIS COUNTIES

COUNTY	ORCHARD 100-499 TREES	ORCHARD 500-MORE TREES	ORCHARD TOTAL
CALHOUN	50	64	114
UNION	2	32	34
JACKSON	3	20	23
JOHNSON	5	14	19
FRANKLIN	10	7	17
ROCK ISLAND	7	7	14
GERSEY	0	13	13
MARION	7	6	13

Fig. 13

Source: Illinois Agricultural Statistic (1962).

in Calhoun, compared to other leading counties, the following was noted:

1. Many of these small orchards are part of a larger farm operation. A number of the large grain farmers were found to have a small commercial orchard as a part of their general farm operation. The orchard and general farm combination provides (a) employment for the farmer when he is engaged in grain farming and, (b) the opportunity to substantially enhance total farm income in good orchard years without risking the entire farm operation.
2. Some were small orchard farms of only a few acres, but possessing a desirable location near the main highway where fruit could be sold to passing motorist. It is significant that a location only a very short distance from the main highway would be most unfavorable for this type of orchard farm, a result of the motorist's disdain for country roads and inaccessible orchard locations. The large tourist trade is associated with the nearness to the St. Louis metropolitan region and the location of Pierre Marquette State Park across the river from the southern end of Calhoun. There is also a steady weekend trade for some of the more favorably located small orchards, which cater to the influx of city people who have built club houses in the lowlands near

the river. These persons stop for fresh fruit when returning from a trip to one of the small grocery stores in Brussels or Golden Eagle.

3. A few orchardmen were employed in the St. Louis metropolitan complex and maintain a few acres of orchards to supplement their urban employment.

Data for the year 1960 reveals that Calhoun produced 288,089 bushels of apples or approximately 1/7 of the total Illinois crop of 2,083,607 bushels for that year. A comparison with the year 1930 indicates that Calhoun produced 641,898 bushels or 18 per cent of a total state production of 3,528,000 bushels. The declining production has not been peculiar to Calhoun as the decreasing number of bushels between 1930 and 1960 was indicative of a trend experienced throughout the apple orchard districts of Illinois. Reflection on the above data is misleading unless attention is directed to tree numbers for the same periods. Though Calhoun County production in 1960 was only 44 per cent of the county production in 1930, a comparison of apple tree numbers for the same years reveals the county to have approximately 1/10 of the number of bearing trees in 1960 when compared with bearing trees in 1930.

The preceding manifests vividly that those persons who have remained in the orchard industry have been getting a much better per tree yield than was typical of the 1930's. The increased production per tree is a testimony of the application of good orchard practice by contemporary commercial orchardist. Today's orchardist must devote a large part of his time to a diligent study of literature and attend agricultural

meetings, which pertains to the most recent advances in commercial orcharding. The end result is increased per tree production through better plant breeding, a more scientific spray schedule, the proper applications of fertilizer, and greater care in pruning and thinning the trees.

An analysis of Calhoun's part of the total number of trees in Illinois for the period 1920 through 1960 discloses that Calhoun possessed a greater percentage of Illinois apple trees in 1960 than in 1930. Although the period of 1920 through 1930 was the period of the most abundant tree numbers (for Calhoun and the state), it is noteworthy that Calhoun possessed approximately 12 per cent of the apple trees growing in Illinois for that period. In 1940, Calhoun possessed 1/5 of all Illinois apple trees, while 1950 and 1960 showed 13 per cent and 15 per cent respectively (Fig. 14). Data for 1962 shows approximately 14 per cent of the apple trees in Illinois are located in Calhoun.⁶

Production figures for the period 1940 through 1959 are presented in Figure 15. The information in Figure 15 denotes a trend toward a large share of the Illinois apple crop being produced by Calhoun until 1959, when the county produced only 1/7 of the state crop. Analysis of data for the years 1954 and 1959 however indicates that 43 per cent or 47,915 of the apple trees in Calhoun were non-bearing in 1959, but only 17 per cent or 31,324 were non-bearing in 1954, with the total

6

Illinois Agricultural Statistics, Apple and Peach Survey (1962), Illinois Co-operative Crop Reporting Service (Bulletin 63-5), Springfield, Illinois, 1962.

COMPARISON OF APPLE TREE NUMBERS FOR
ILLINOIS--CALHOUN COUNTY

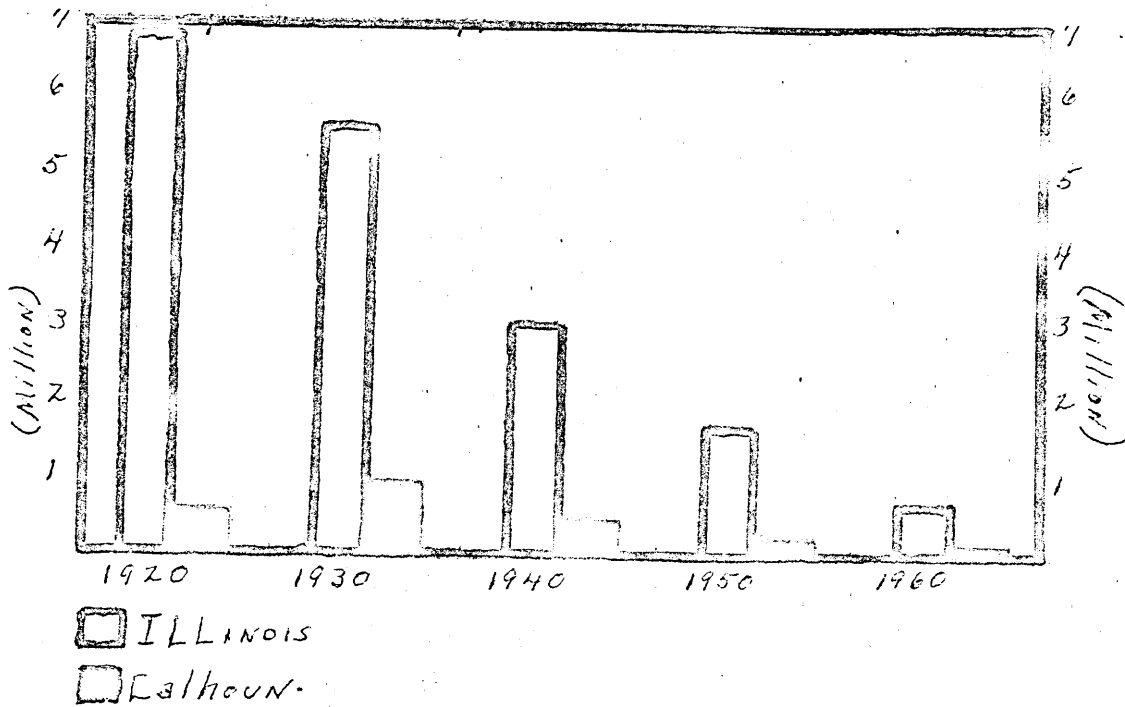


Fig. 14

Source: U.S. Census of Agriculture
Illinois Agricultural Statistics.

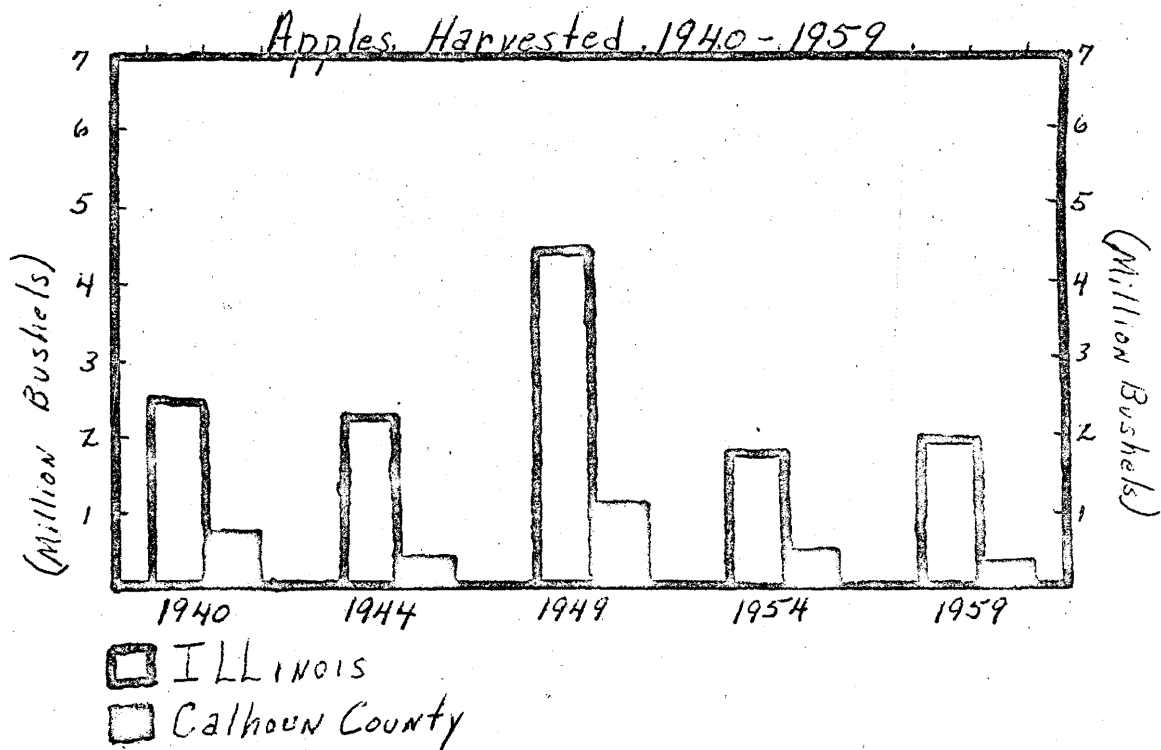


Fig. 15

Source: United States Census of Agriculture (1940, 1950, 1959),
 Illinois Agricultural Marketing Statistics (1960),
 Illinois Agricultural Statistics, Circular 445.

tree numbers of 110,397 and 184,982 respectively for 1959 and 1954. The above points out that Calhoun is as significant in commercial orcharding or possibly more so, in comparison with the rest of the state than it was during the 1940's and early 1950's.

Trends in Peach Production

Peach orchards, traditionally, have not been so important in Calhoun as apple orchards. Nevertheless, peaches are becoming more prevalent. A reference to data for 1949 shows Calhoun as being the 9th county in Illinois in total peach tree numbers, while the information in Figure 16, based on 1962 figures, places Calhoun as the 3rd leading county in total peach tree numbers in Illinois.⁶ The 1962 position of Calhoun is related to (a) the farmers belief that peaches are a profitable enterprise, and (b) the removal of peach orchards from some of the other leading counties, such as Marion and Jefferson. The tendency toward increased plantings in Calhoun and corresponding decrease in the other counties can best be pointed out by a comparison of peach tree numbers for Union, Jackson, and Calhoun, (the leading Illinois peach counties in 1962) for the years 1949 and 1962. The 1949 apple and peach survey listed Union County with 229,102 trees, Jackson 85,813, and Calhoun with 28,833.⁷ Referring to Figure 16, one

6 Ibid.

7 Illinois Apples and Peaches, Illinois Dept. of Agriculture, U. S. Dept. of Agriculture, Springfield, Illinois, 1949.

Number of Peach Trees in Leading Illinois Counties (1962)

County (1)	Total Number trees (2)	Planted 1959 and later (3)
UNION	109,831	14,470
JACKSON	57,795	10,519
CALHOUN	46,161	18,193
MARION	27,708	5,187
FRANKLIN	19,502	2,832
MASSAC-POPE	17,296	6,000
JERSEY	15,087	3,801

Source: Illinois Agricultural Statistics (1962)

Fig. 16

notes that Union County has dropped to 109,831 trees, Jackson to 57,795, while peach trees in Calhoun have increased to 46,161.⁶

A reference to data pertaining to peach trends in Calhoun County discloses some revealing data. While the total apple production and the number of bearing and non-bearing apple trees have been decreasing in Calhoun, the peach industry has shown an increase in total production and in the number of bearing and non-bearing trees. (Fig. 17).

Trends in Peaches (Calhoun)		
	1930	1960
Peach trees of bearing age	21,550	28,047
Peach trees of non-bearing age	12,790	15,341
Bushels of peaches harvested	30,112	48,307

Fig. 17. Sources: Calhoun County Overall Development Plan (1960).

When delving into the causes for these increasing trends shown in Figure 17, a number of possible explanations presented themselves. All persons interviewed were asked: What prompted you to convert some of your orchard acreage to peach production? The responses are listed below:

- a. The waiting period between planting and bearing is only four years for peaches, compared to eight to nine years for the standard apple tree. Therefore, a return on the investment is realized much sooner.
- b. Some orchardist felt they could compete with the

⁶
Ibid.

commercial orchard regions of the West and North Central United States, on a quality basis, with peaches much easier than they could with apples.

- c. Orchardist with a favorable location for tourist and weekend trade have found peaches easier to market than apples. Many orchard owners have found they can market peaches on the tree without the expense of picking, grading, packing equipment, and hydro-coolers, all of which increase production cost.
- d. It was often expressed that for many years people had generally felt that peaches could not be successfully grown in Calhoun because of frost. When it was established that climatic conditions within the county were favorable for peach production, many farmers began using them to diversify their orchard program (Fig. 5-6). The combination of apples and peaches is particularly desirable because of the difference in blooming habits and their susceptibility to winter kill.
- e. The planting of both apples and peaches helps the orchardist to spread the risks of crop losses and market failures. It also enhances the opportunity for sharing the economic benefits of a market boom in either crop.
- f. It is well known that orchardist are much like other farmers in that they tend to follow closely the leadership of the more prominent men in their neighborhood.

Once the peach was accepted by the leading commercial growers, planting becomes more widespread.

Peach planting trends in Calhoun do not show the period of boom followed by rapid decline in plantings which characterized apples during the 1920's through 1950 (Fig. 18 A-B). Consequently, one does not find the tendency for overexpansion in peaches, but rather a more consistent pattern in the size of peach blocks from one farm to another. A comparison of peach block sizes per farm with apple blocks per farm show the majority of peach plantings in the 1 to 15 acre category, while apple blocks fall within the 5 to 70 acres category. The peach blocks are smaller holdings and do not vary so much in size from farm to farm, as is true of apple planting.

Calhoun Significance in Illinois Peach Production

Calhoun ranks 3rd in Illinois in acreage devoted to peach orchards with a total of 769 acres (Fig. 19). However, more revealing data are shown in column 3, Figure 16. When analyzing column 3, one notes that approximately 39 per cent of Calhoun peach trees were planted after 1959. A comparison with Union and Jackson Counties reveals that only 13 per cent of Union and 18 per cent of Jackson County peach trees were planted after 1959. This would indicate that the trend toward Calhoun's increased significance as a peach producer will continue and, in coming years, the county will produce a larger share of the Illinois peach crop as the young trees reach bearing age.

In 1962, there were approximately 428,700 peach trees

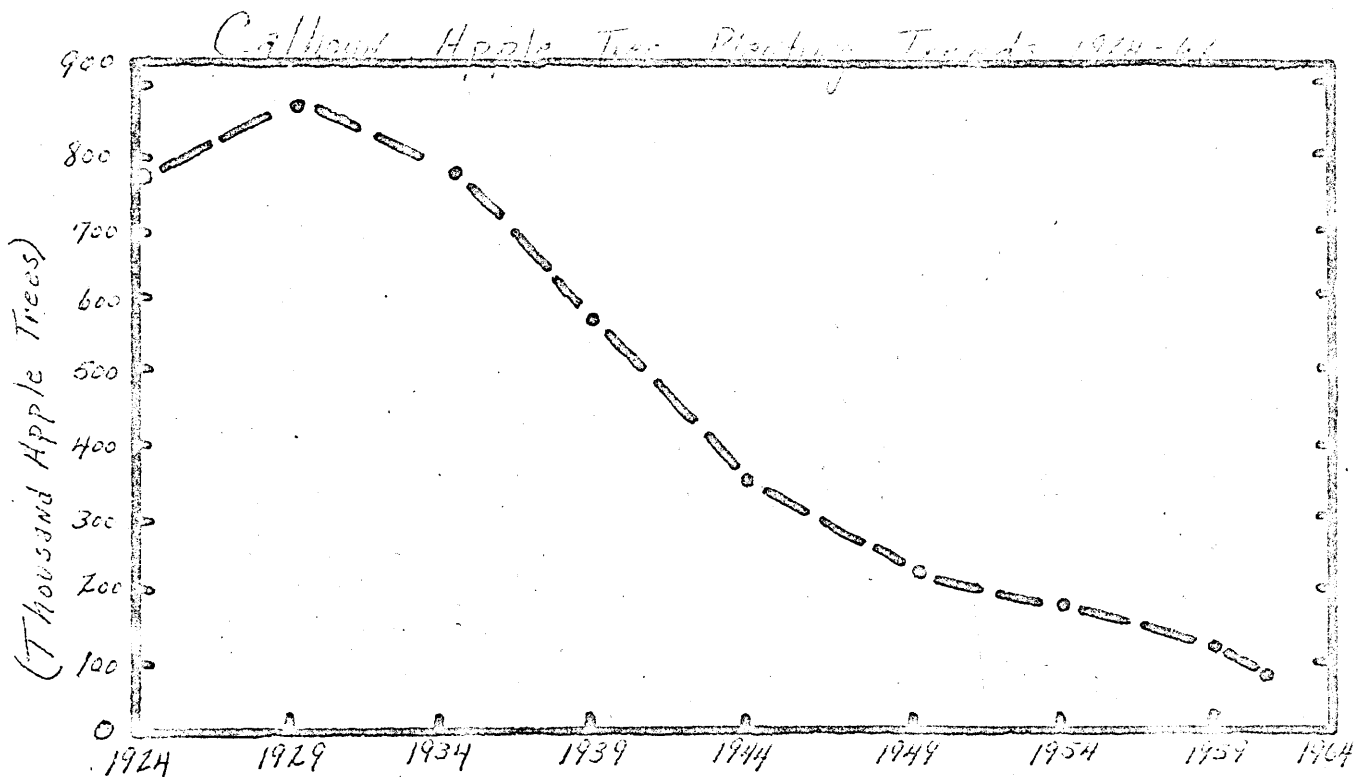


Fig. 18A

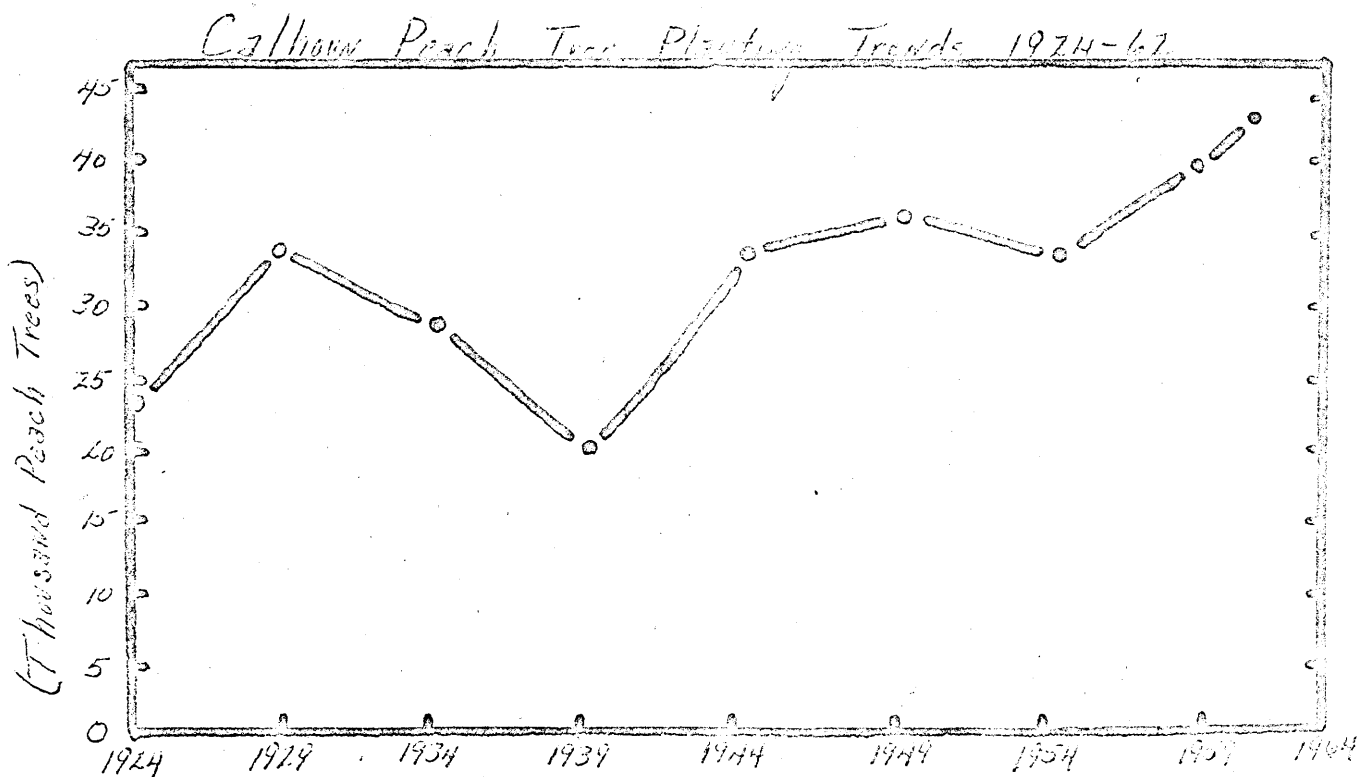


Fig. 18B

Source: Illinois Agricultural Statistic (1962)
 Illinois Agricultural Marketing Statistic (1960)
 United States Census of Agriculture (1958)

County

Peach Orchard Acreage For Leading Illinois Counties (1962)

Jersey

1167

Union

1096

Calhoun

769

Jackson

736

Marion

473

St. Clair

370

Franklin

327

100 200 300 400 500 600 700 800 900 1000 1100 1200 1300

(Acres)

Source: Illinois Agricultural Statistics (1962).

Fig. 19

in the State of Illinois. The three leading counties, Union, Jackson, and Calhoun, possessed approximately 1/2 of all commercial trees. Calhoun, alone, contained approximately 10 per cent of the commercial peach trees in Illinois in 1962. However, when consideration is given to trees planted in Illinois after 1959, Calhoun possesses 19 per cent of the 93,030 peach trees planted during that period. Union County accounts for 15 per cent of the trees planted after 1959 and Jackson has approximately 11 per cent of the same. Calhoun County may well be the foremost peach producing county in Illinois in the near future.

Although Calhoun is a leader in the number of acres and number of peach trees in Illinois, it differs from other leading peach producing counties in one primary respect. Calhoun has a total of 87 peach orchards, which ranks it number one in total number of commercial peach holdings (Fig. 20). It is pertinent to point out, however, that a large portion of these holdings are small operations in combination with other uses on a given farm. Assuming a planting of 74 trees per acre, the average for West Southwest orchard district (of which Calhoun is a part), one finds that approximately 2/3 of the commercial peach orchards in the county are less than 7 acres in size.⁶ When a comparison is made with two other leading counties, it is noted that approximately 94 per cent of Union County and approximately 92 per cent of Jackson County commercial peach orchards were larger than 7 acres (Fig. 21).

⁶
Ibid.

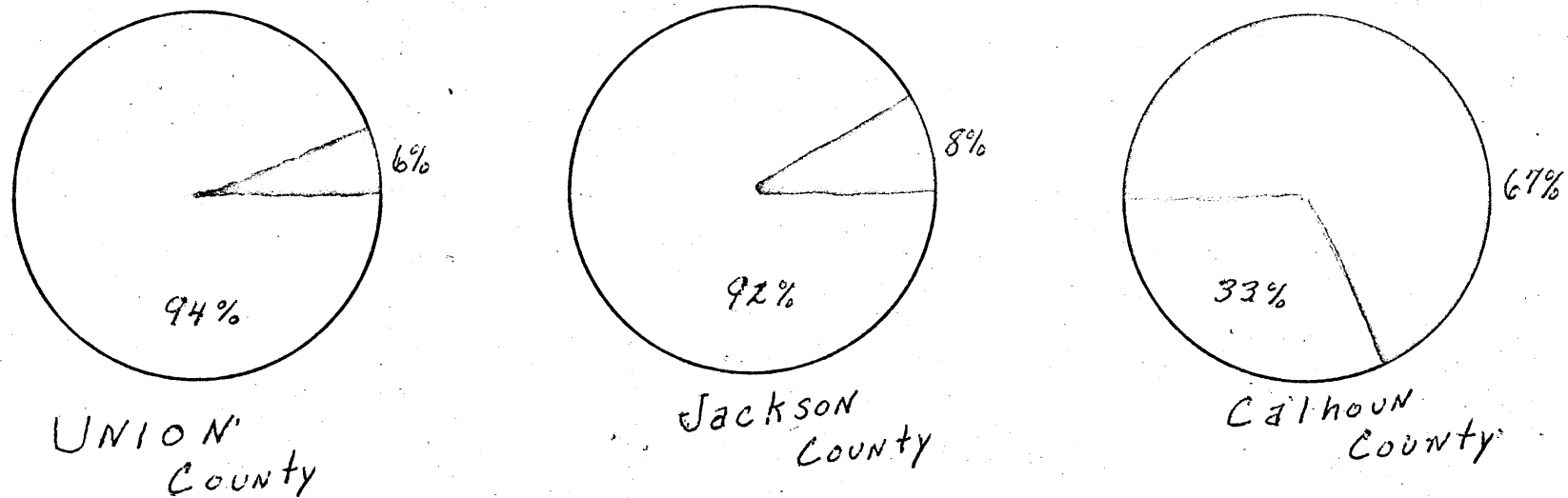
Number of Peach Orchards by Size Including Illinois Counties

County	Orchards 100-499 Trees	Orchards 500 or more Trees	Orchards Total
Calhoun	58	29	87
Marion	16	21	37
Union	2	33	35
Jackson	2	22	24
Franklin	8	9	17
Jefferson	4	10	14
Torrey	4	9	13

Fig. 20

Source: Illinois Agricultural Statistic (1962).

Comparison of peach block sizes for 3 leading Illinois Counties



□ Percent of peach orchards less than 7 acres in size.
□ Percent of peach orchards greater than 7 acres in size.

Fig. 21 Source: Illinois Agricultural Statistic (1962).

It is not atypical to find apple and peach orchards on the same farm in Calhoun. Whether they occur on the same holding or separately, the large number of small peach orchards in Calhoun is associated with the same type of operation as is true for the small apple orchards. These operations are:

- a. Small peach orchards associated with a larger grain and livestock farm operation.
- b. Small orchardist with only a few acres, but having a unique location, on a paved highway. This advantageous location makes it possible for the orchardist to market his fruit to motorist who tour the county to enjoy the rustic atmosphere.
- c. St. Louis employed orchardists who maintain a small acreage of peaches to supplement urban income.

There is a definite tendency for the smaller peach operation to be located in the southern part of the county.

This is a result of the following:

1. Climatically speaking, a location farther south decreases the crop losses associated with frost damage. It was expressed by some orchardist that the meeting of the Illinois and Mississippi Rivers made orcharding in the south less hazardous. Their opinion was that the water had a tendency to ameliorate the climatic conditions of the surrounding land. The writer is doubtful of the relevance of this opinion because the water bodies are not large enough to exert much influence over the orchard locations which are on the higher ground, away from the rivers, yet there

is a tendency for the growing season to be longer in the southern part of the county (Fig. 4).

2. Nearness to the St. Louis metropolitan complex provides an excellent opportunity to work in the city during the day and still return to the farm in time to care for a small orchard operation in the evening.
3. Location of the Illinois and Mississippi Rivers attracts large numbers of persons for recreation (fishing, boating, hunting). The influx of these people provides an added transient market.
4. A location near the St. Louis urban complex and its potential market for fresh fruit. The St. Louis metropolitan complex is only 30-40 miles from the southern part of Calhoun and has numerous fruit stands, stores and the large St. Louis fruit market serving as possible outlets for fresh peaches. When dealing with a perishable fruit, such as peaches, nearness to a market is a definite advantage.

CHAPTER III

COMMERCIAL ORCHARD REGION OF CALHOUN COUNTY

Northern Calhoun Orchard District

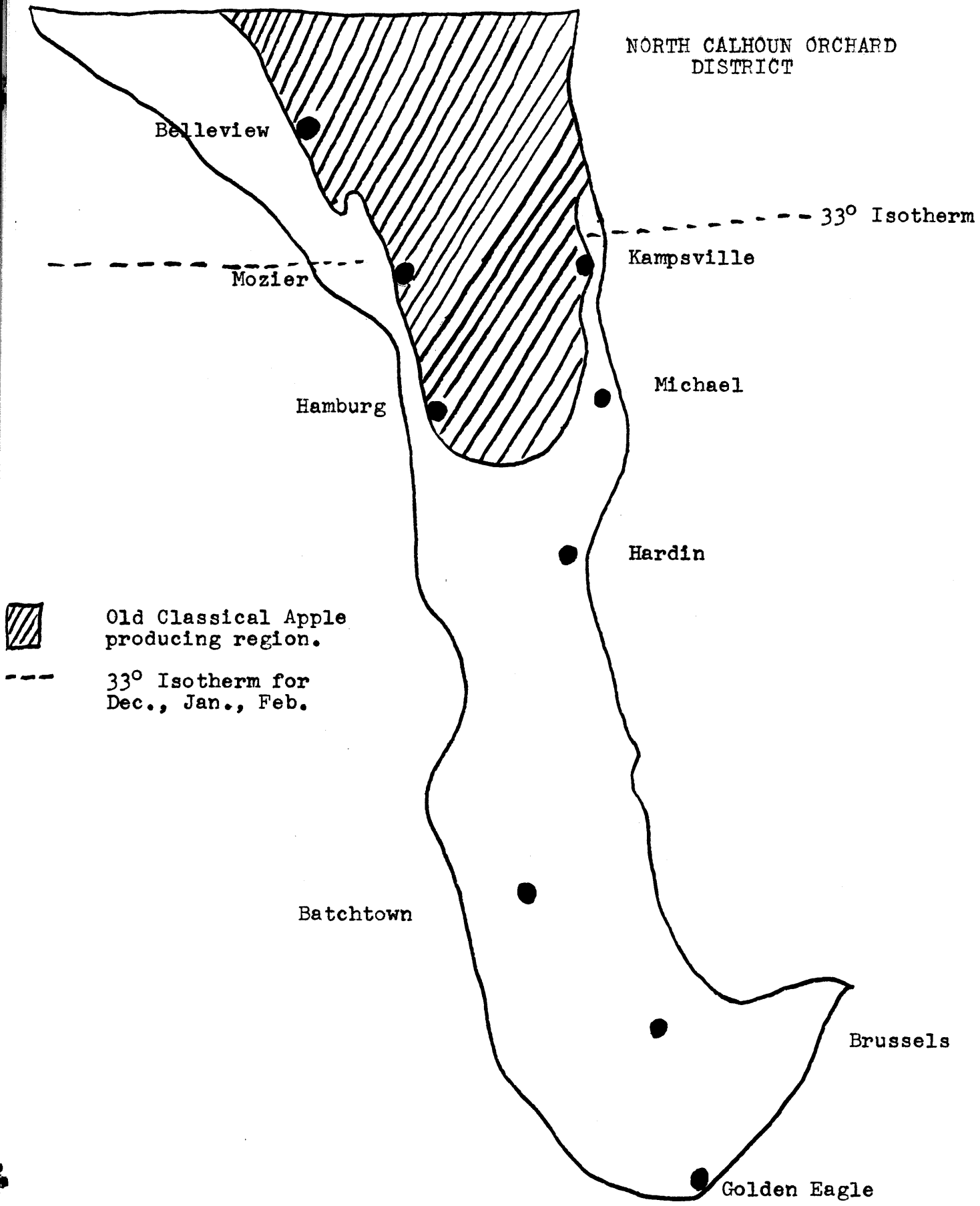
An investigation of the orchard distributions for Calhoun reveals the main orchard regions to be located in the central and southern portion of the county. In the 1920's and 1930's, there existed a number of large apple orchards in the region north of Micheal (Fig. 22). However, orcharding has tended to die out in northern Calhoun. It is not uncommon to find that many, once productive orchards, have been removed or left uncared for and are now out of commercial production.

In the early 1900's, Spicer Advertising Agency in Alton, Illinois, published a booklet entitled, "The Land of the Big Red Apple", which gave a resume of the leading orchardist in the county.⁸ The booklet contained a list of 134 growers ranked according to number of trees from 400, the smallest, to 27,000 trees for the largest, with most holdings having 1,000 to 3,000 trees. From this list of 134 growers, 66 or approximately 1/2 were located north of Hardin (in northern Calhoun), with a large number in the Hamburg, Mozier, Belleview, and Kampsville area (Fig. 22). In 1962, the State

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The Land of the Big Red Apple, Spicer Advertising Agency, Alton, Illinois, 1929.

NORTH CALHOUN ORCHARD DISTRICT



Old Classical Apple producing region.

33° Isotherm for Dec., Jan., Feb.

Fig. 22

of Illinois classified a commercial orchard as one having 100 or more trees. Information obtained from the Calhoun County Agricultural Advisor revealed a total of 117 commercial orchards in the county having 100 or more trees in 1963.⁴ When checking their location, it is noted that only 24 or approximately 1/5 are presently located in the old classical apple producing region in the Hamburg, Mozier, Belleview, and Kampsville locales (Fig. 22).

From observation of the north Calhoun orchard region, the writer is of the opinion that there would be many orchards which would barely qualify by having the 100 trees necessary to meet the State of Illinois classification of a commercial orchard.⁶ It was also apparent that there are more old orchards in the northern Calhoun district, with the occurrence of fewer newly planted trees. One north Calhoun orchardist commented that when he recently planted a new apple block, he was unaware that there were so many newly planted trees in the county, since his only observation had been in the northern region.

An inquiry into the causes for the shift in orchard distribution from north to south leads to the following possible explanations:

1. Climatically speaking, it is noted that the location of the 33° isotherm for December, January, and February runs across the northern part of the county (Fig. 22).

⁴ Ibid.

⁶ Ibid.

2. During the interviews, there were more complaints concerning frost damage, particularly in conversation concerning peaches, by northern orchardist than was true for the orchardist in the southern part of the county. However, the writer does not feel that the climatic boundary between the northern and southern part of the county can be so sharply defined. Reference to Figures 2, 5, and 6 indicates that so far as the upland orchard locations are concerned, the entire county would experience, essentially, the same conditions in reference to the frost free period.
3. The more rugged topography of the north Calhoun district finds orchard sites higher in elevation and therefore, more exposed than those in the south. Olmstead, in his work on American Orchard and Vineyard Regions, comments on the unfavorable aspect of a high, exposed orchard site during the passage of the winter cold fronts which often bring strong, cold winds and consequent tree damage.¹ Since all of Calhoun is located in a region where cold fronts occur, this may be a factor of some small importance.
4. Soil in the northern part of the county is an eroded silt loam, which is not so favorable for orcharding as the brown yellow-gray silt loam, which is so

¹ Ibid.

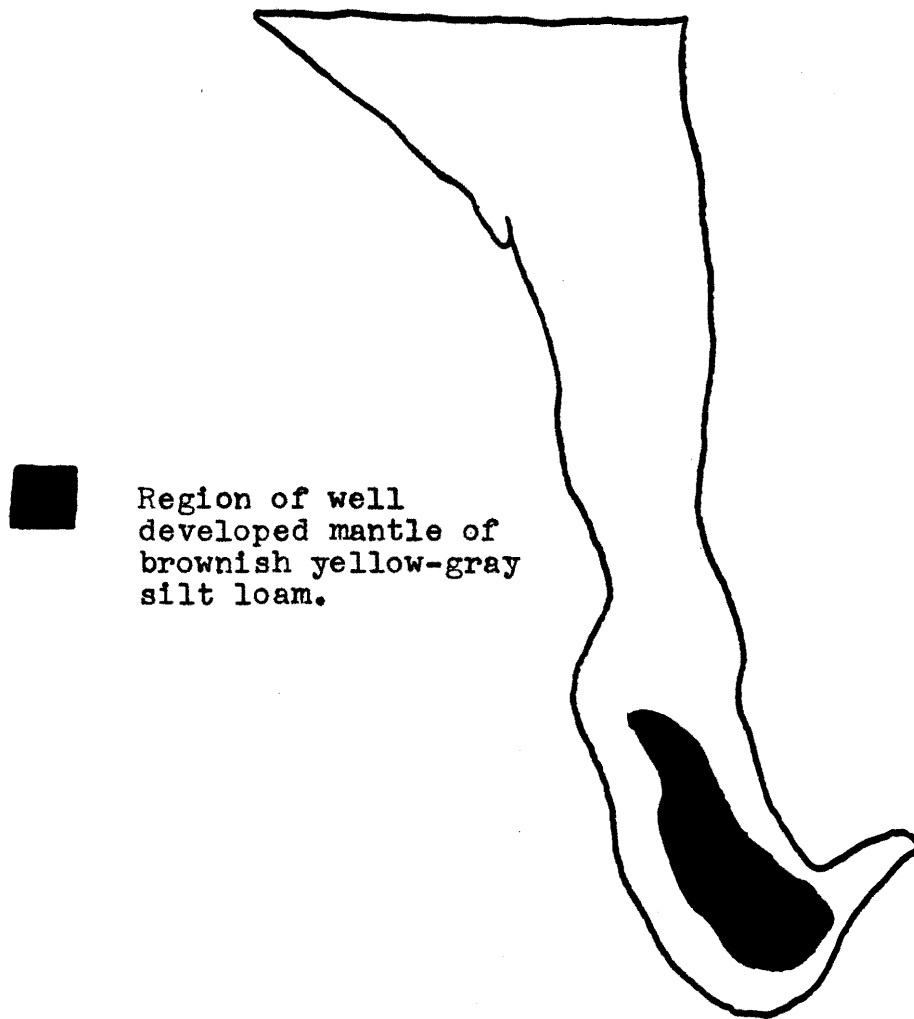
predominant in the southern part of the county (Fig. 23). The erosion is a result of the more rugged physiography in northern Calhoun.

5. Another factor influencing the decreasing orchard numbers in northern Calhoun is associated with the relative location of orchards and transportation. The advent of the modern transportation network throughout the United States (excluding Calhoun) created a situation whereby apples from north Calhoun were forced to compete against those produced in south Calhoun. Now that most of the fruit is transported by truck, the per mile expense is greater than it was when the county used water transportation. Since the major Calhoun markets are south of Calhoun County, transportation costs are greater for the north Calhoun fruit.

The comparative location of north and south Calhoun in relation to the St. Louis market, possible tourist trade, and transient peddlers from Arkansas, Missouri, and Tennessee, is shown in Figure 24. Persons entering the county from the states of Missouri or Arkansas are more likely to enter at Golden Eagle, Batchtown, or Deer Plain via the ferries. A fording of the river at any of these latter three locations, places one in a vicinity of numerous orchards.

It is actually easier to ford the Illinois River at Hardin by bridge, placing one on the fringe

SOUTH CALHOUN DEPOSIT OF BROWNISH YELLOW-GRAY SILT LOAM



Source: Modified from Calhoun County Soils (Report 53).

Fig. 23

COMPARATIVE LOCATION OF NORTH-SOUTH CALHOUN IN RELATION TO POSSIBLE MARKETS



Source: Missouri Highway, May, 1963, H. M. Gousha Co.

Fig. 24

of the north Calhoun orchard region. However, the location of the bridge is on the eastern side of the county and one does not find the peddler coming from the states to the east, but rather from the south. It should also be noted that the larger urban areas, favorably located to the Calhoun orchards, are to the south of the county rather than on the east. One north Calhoun orchardist told the writer that he had to sell his apples cheaper than those produced in south Calhoun to try to entice buyers to drive the added mileage to northern Calhoun. The more rugged topography and, therefore, roads which are harder to traverse disuade the transient market provided by the peddler and tourist.

The sum total of the above resume is the fact that transportation and the relative location of orchards definitely placed north Calhoun in the category of being a marginal fruit producing region. It is one of those regions where the income derived from sales is often barely sufficient to cover the expense of production.

6. Labor poses a problem throughout the county, but northern Calhoun orchardists have greater difficulty in obtaining orchard labor than those in the southern region. An investigation of the labor problems will be discussed more fully in Chapter IV.

The removal of orchards has resulted in a switch in land utilisation in the northern part of the county. A large part of the old orchard land has been converted to pasture with beef cattle herds utilizing the land. However, in many instances the land has remained idle resulting in an actual depreciation of the farm during a period of time when land values are rising in Calhoun County. One former orchardist who owned 200-300 acres of apple orchards informed the writer that the land utilized by orchards was valued at \$400 per acre while in orchards, but once the orchards were removed the land sold for \$50 to \$100 per acre. Even though utilization of the land for beef production is a good agricultural practice, the income per acre derived from beef would be far less than that derived from an acre of apples or peaches properly cared for. However, one must keep in mind the fact that once the cost of orchard removal is absorbed the cost for equipment, labor, and total investment for a beef herd is less than one would experience in orcharding.

Southern Calhoun Orchard District

A distinct characteristic of the orchard industry in southern Calhoun is a notable increase in orchard numbers as one progresses toward the southern terminus of the county. This clustering of orchard locations reaches its greatest density in the Brussels - Golden Eagle region in the southeastern sector of the county. The increase in orchards in the southern district manifests the effect of better market outlets than are found in the northern part of the county. These market

outlets are a result of the location of the southern constituent of the county, when compared to the northern orchard district. The potential market possibilities of an orchard located in southern Calhoun is enhanced by a circumstance of being closer to (1) the St. Louis markets, consisting of the St. Louis commission fruit market, (2) Pierre Marquette State Park, with its influx of recreation seekers who often cross the river and tour the countryside to enjoy its rustic atmosphere, and (3) the Golden Eagle and Deerplain Ferries located at the southern tip of Calhoun, providing the nearest entrance to Calhoun for peddlers from Missouri and Arkansas (Fig. 25).

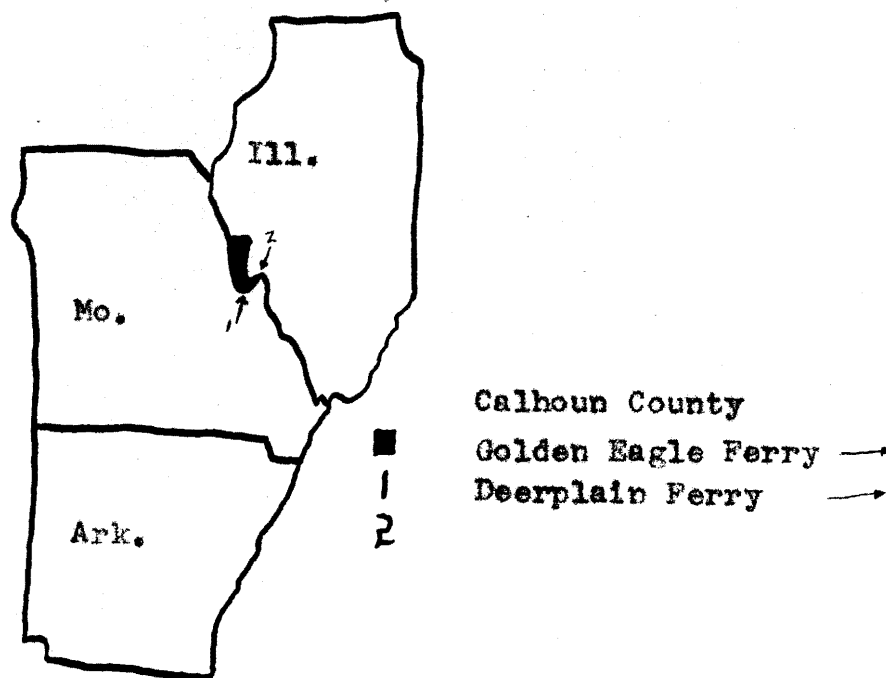


Fig. 25. Golden Eagle and Deerplain Ferries in relation to Missouri and Arkansas.

Another factor which influences the district clustering of orchards in the southeastern sector of Calhoun is the mantle of deep brownish yellow-gray silt loam soil, which is so favor-

able to successful orcharding. The soil is deeper and less likely to erode in this sector, indicative that topography is not so rugged as that of other orchard sites within the county (Fig. 2). During interviews, orchardist in the Brussels-Golden Eagle area often comment favorably on the soil and its adaptability to orcharding.

CHAPTER IV

PROBLEMS

Labor

One of the most acute problems facing the orchard economy in Calhoun hinges on labor. Calhoun's location, only 30-40 miles from the Greater St. Louis - Alton urban area, is favorable, when considered from the standpoint of a potential fruit market. However, the industrial region tends to impose a hardship on the orchard economy by draining off the excess labor supply; thereby, forcing the orchard industry to compete for the potential labor. The orchardist cannot compete successfully with the employment opportunities offered by the metropolitan St. Louis industrial complex for the following reasons:

1. The industrial area offers steady employment with minimum lay off. This is in contrast to orchard work, which is seasonal.
2. Farm wages are less attractive than those paid in the city. Orchard labor is remunerated at a wage of \$1.00 to \$1.50 per hour, while urban industries commonly pay \$2.00 or more per hour, with many fringe benefits.
3. The hours worked and the general working conditions are better in the industrial segment than one commonly finds in orchard work.

4. Much orchard work is seasonable and requires greater skill than is commonly known. The orchard employee must know the complicated spray schedule, various sprays and their particular chemistry and uses, and must have an understanding of pruning practices, thinning practices, and have an entomologists knowledge of various diseases and insects.
5. A great deal of the orchard work is manual, compared to industrial occupations where machinery is so common. Therefore, one finds that industrial work does not require so much physical labor. Another factor is the workers status when associated with industrial work is higher than that accorded to farm labor, which includes orcharding.

Some commercial orchard regions of the United States depend upon migrating labor during the harvest season. However, Calhoun does not use migratory labor (persons who travel from one commercial orchard region to another during the harvest season). During interviews, not one housing facility for migrating help was observed. Here again, the disadvantage of the small commercial orchard operation in the county is apparent. Some orchardists indicated that they could not afford the housing facility which would be desirable to accommodate migratory labor.

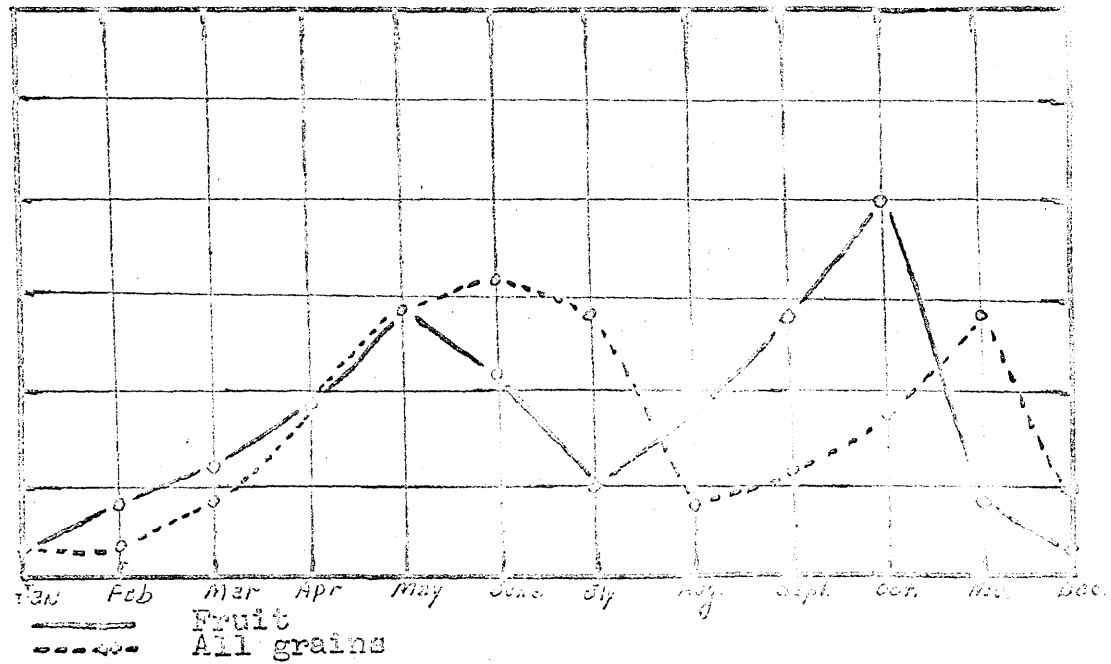
A number of former orchardists said that one of their main reasons for getting out of the orchard business was associated with the labor problem. Many contended they had been able to maintain their orchard operation for a number of years

through the help of neighbors, but many neighbors had now died or were too old for work, and the younger ones have often moved to urban areas. The loss of a dependable labor supply forced the orchard owner to remove his orchards or reduce the size of his orchard operation.

The major source of labor in the southern part of the county is obtained from grain farmers who want to supplement their income and who have a slack season during the time when orchards require more labor (Fig. 26). However, the northern orchardist were confronted with a very serious labor problem. They indicated they were unable to obtain help from the surrounding grain farmers. The inability of the northern orchardist to obtain labor is a result of the following three reasons:

1. A difference in the ethnic background of the two regions, the southern area being characterized by a large segment of German and Dutch, who are traditionally a thrifty group. The population of the north is characterized by various ethnic backgrounds without the traditions of any one specific group being dominant.
2. The northern part of the county has witnessed a greater decline in population than is true in the southern sector of the county.
3. Farms in the northern portion of Calhoun are typically engaged in livestock, along with the grain, thereby leaving less free time for the farm operator to work at some other occupation.

Monthly % Distribution of Labor Required for Farm Work by Selected Enterprises. Illinois-1944.



Source: Modified from Price, Commercial Orchards Economy in Southern Illinois

Fig. 26

Northern orchard owners pointed out that they must scavenge for labor, a very uncertain and perplexing method, when dealing with a perishable commodity, such as fruit. In the last analysis, one would conclude that the only relatively stable supply of labor is that provided by grain farmers, and this source of labor is confined to the orchard areas in the southern part of the county.

When one analyzes the labor problem for the county, it becomes one of the major factors which may limit commercial orcharding in Calhoun. The commercial orchard holding is limited to that acreage and number of trees which one individual or family can successfully maintain, excluding the extra labor they can obtain during the harvest season from surrounding grain farmers. When interviewing orchardist with commercial orchard acreages of 40-60 acres, they were prompt to point out the fallacy of overexpansion beyond the acreage they could handle individually. If they did not exercise care, they could get to the point where per tree production actually declined, since they would be forced to spread their time over too great a number of trees.

Specialization

Specialization is becoming universal to all aspects of agriculture. However, the acme of specialization is associated with the orchard industry. The orchardist must devote a great deal of time and study to the latest development concerning better species, marketing, fertilization, pruning, planting, and spray practices. This presents a problem to many Calhoun

orchardists where orcharding is only one segment of a general farm operation. When a farmer must make a decision as to how he will allocate his time between the orchard and other types of farming, one must suffer. This dilemma is often the plight of the farmer who possess both bottomland and hill land. Desiring to utilize the rougher land to its best advantage, the farmer plants a block of fruit trees. Eventually the work schedule for orcharding conflicts with that for the rest of the farm operation. In most cases, in this particular county, it is the orchard that is neglected because it is not the major farm operation. Many farmers who operate a combination grain-livestock-orchard enterprise commented concerning their inability to keep abreast of the latest orchard practices and also give proper attention to the total farm agency. The orchard, with its exacting schedule of pruning, thinning, and spray schedule requires a great deal of time. Even though many Calhoun farmers realize they are not devoting the necessary time to their orchard operation, they try to stay in the business because of the high economic return from the few acres devoted to fruit.

The failure of so many orchardist to specialize and produce a quality fruit has had a tendency to create a rather dubious reputation for Calhoun fruit. The mass of this poor quality fruit finds its market outlet through the transit peddler, who often misrepresents his merchandise as being a quality product.⁵ The apples and peaches sold by the peddler

⁵
Ibid.

are often marketed to housewives who in turn purchase other apples through various chain stores. A large portion of the apples sold through the chain stores are from competing and highly commercialized orchard areas, such as Michigan and Washington. The enforcing of a rigid quality control in these latter areas places a high quality apple on the market. Consequently, the apple from Calhoun, which the peddler misrepresents as a high quality product, is placed in competition with the quality controlled produced apples from more progressive areas. It is easily understood why the Calhoun fruit gains a reputation for being inferior in quality.

High Production Costs

Cost of production is another obstacle facing the orchardist. Although, he is prone to over exaggerate this problem, it does exist. To be assured of a good crop, the orchardist is forced to invest in equipment and chemicals associated with the rigorous spray schedule which one must follow as a result of the many diseases and insects which occur periodically throughout the growing season. A reference to orchardist spray practices in Illinois reveals an average of 10-14 sprayings per year, which requires a great deal of time, expense, and knowledge of a variety of chemicals and their uses (See Appendix).

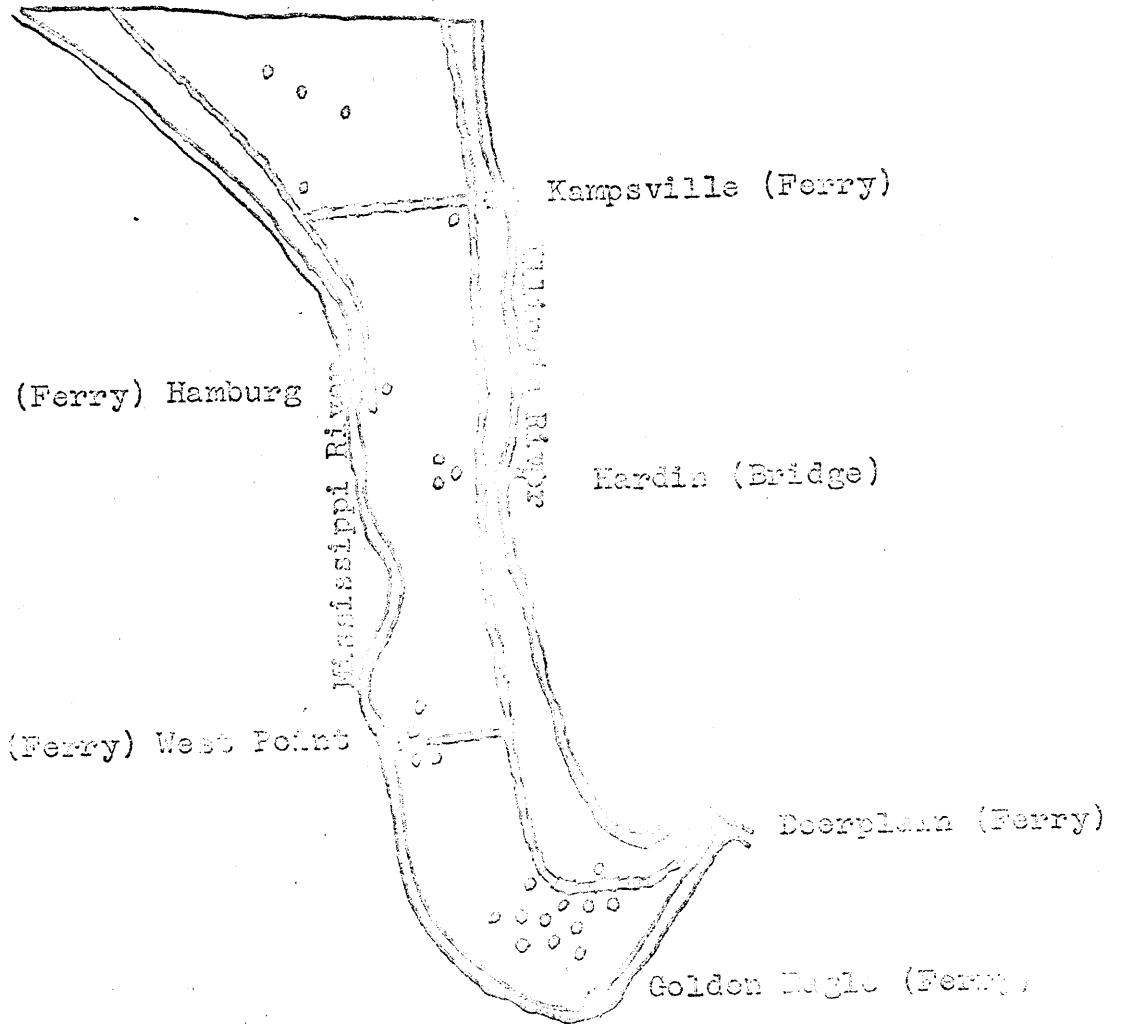
Transportation

The availability of cheap water transportation to St. Louis via the navigable Illinois and Mississippi Rivers was an impetus to the development of commercial orcharding in

Calhoun in the early 1900's. However, with the development of a modern network of highways and railways throughout the United States, apples and peaches from other Illinois orchard districts, Michigan, and the West were soon competing with Calhoun for the St. Louis market. The net result has been that the waterways, which had provided an advantage in earlier years, were now a disadvantage because of the slow speed of the boats when compared to that of trucks and trains. The barrel was the common method for packing fruit for shipment by boat. However, today's trucks and trains usually carry their fruit in small neatly packaged containers, under refrigeration, to assure freshness on arrival at market. Rapid transportation facilities are particularly vital in peach production because of the highly perishable nature of the peach. Speedy marketing of the early apple crop is often desirable since prices are more lucrative during the early harvest when apples are scarce and the orchardist is endeavoring to take advantage of the early demand.

The real crux of Calhoun's transportation problem is associated with the semi-isolation of the county. This stems from the poor access by highway, and a total absence of railways within its jurisdictional boundary. Calhoun is the only county in Illinois that does not possess one single mile of railroad. Since there is an absence of railroads, the only method of shipping refrigerated fruit is by truck. This, too, presents a problem when trucks are limited by bad roads with numerous creeks which are not easily forded as a result of too few bridges.

TRANSPORTATION NETWORK



- Hard surface highway (state road)
- Ferries
- Rivers
- Orchardist interviewed

Fig. 27

hours at the various ferries by a waiting line of farmers and tourists. Calhoun, being in essence a peninsula, must rely upon one bridge, constructed at Hardin in the early 1930's, and five ferries to ford the bounding rivers (Fig. 27). Ferries, often providing a delay in time, add further to the problems of the fruit industry as transportation becomes more vital in the increasingly competitive fruit market.



Fig. 28. Ferry transportation at Hamburg, Calhoun County, Missouri.

Once the orchardist harvests his crop, he must be serviced by adequate transportation facilities. There is a dire need for a better maintained county highway system. Roads throughout the county are often rough and extremely hard to navigate.

For some years there has been a study of the feasibility of a bridge at Golden Eagle, which would expedite transportation (Fig. 24). The inconvenience of ferry crossings, undoubtedly, discourages some prospective fruit buyers. The writer has found it not uncommon to be detained for as long as two

hours at the various ferries by a waiting line of farmers and tourist who desire to cross the two bounding rivers. Even though the Golden Eagle bridge project is under consideration, it is not likely to be constructed in the near future. Many persons feel that it would only service the backdoor of the county and that this does not justify such an undertaking. Then one must consider the political problems involved since the bridge would be linking Illinois and Missouri. Missouri residents do not experience the pressing need for bridging the river as do their isolated Illinois neighbors.

Climatic Factors

The outstanding climatic problems in Calhoun are associated with hail and frost with drought and winter kill occurring sporadically.

In the southern sector of the county, below Michael, growers did not feel that frost was a major problem. Some of the peach orchards suffered from the frost hazard, but according to most growers this was not a serious problem. In general, growers ranked hail as being more destructive and more of a problem. Calhoun County is located in the humid continental (Dfa) climatic region where thunderstorm activity and associated hail are predominant during spring and summer with consequent damage to the fruit at intervals.

Extremely low winter temperature sometimes results in a damage to the wood of fruit trees. The occurrence of such a condition is known as winter kill. Peach trees may experience winter kill at temperature of -15°F . while most

apple tree varieties will withstand temperatures of -30°F .¹ Although parts of Calhoun may, on rare occasion, experience a temperature of -15°F ., orchardist did not consider winter kill to be a problem to commercial orcharding in the county.

A few growers in the southern Calhoun region felt that the climate was responsible for their inability to produce an apple with color and size that could compete with those produced in the Western regions. They attributed this to the cloudy weather of Washington and other regions, plus the controlled irrigation of some western orchard districts. The writer would point out that research does not substantiate the opinion among growers that cloudiness is associated with better coloring in fruit. R. V. Lott says it is not cloudiness, but rather sunlight which influences the amount of red color in apples.⁹ It is worthwhile to point out that there were other growers who said they could, and have, produced an apple with color to compete with Western grown apples. It was their contention that early harvesting, before the fruit had been given an opportunity to color was responsible for failure of Calhoun fruit to color as well as that of other orchard districts.

The size of apples in Calhoun versus that of Western areas also brought a difference of opinion. Some orchardist attribute the large size of Western apples to the controlled

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Ibid.

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Richard V. Lott, "Color in Apples and Peaches: Principles And Affecting Factors", Transaction of Illinois State Horticultural Society, Vol. LXXXII (1948), pp. 201-208.

application of water derived from co-operative irrigation projects. However, some of Calhoun's more progressive commercial growers contended that it would be possible to produce an apple which would compete in size with the apple from other orchard districts. The progressive growers felt the failure of Calhoun apples to develop in size was a result of the poor production practice of not thinning the fruit during the formative stage, thereby leaving the larger and better fruit to mature and gain greater size. It is pertinent to emphasize that this divergent opinion between the smaller and larger orchardist is indicative of the difference in technological know how and production practice of the part time and full time grower.

Orcharding, A Long Range Project

The requirement of a long time investment is one of the deterrents to many persons entering the orchard industry. It would be very difficult for a young man to enter the orchard business if he was forced to depend on borrowed capital. During the interviews, the general consensus of opinion among growers was that they felt the future for orcharding in the county was promising, but the time between planting and the full bearing age of a tree (four years for peaches and eight years for the standard apples), discourage young farmers from entering the fruit business as a separate enterprise. The initial capital investment is a common problem in all phases of present day agriculture, but orcharding has the added problem of a

long waiting period for a return on the initial investment. Most of the young orchardmen in the county obtain their orchards through one of the three ways: (1) buying or renting the orchards from a family member, who has already established an orchard, (2) inheritance, or (3) engaging in the general farming along with orcharding and phasing out the grain and livestock as orchards begin to reach full bearing age.

It is not unusual to find that many orchard farms are a family heritage. Orchards seem to pass on from generation to generation. In fact, it often becomes a problem to dispense with the orchard if no one in the family will stay in the business. The owner often finds it a problem to sell his investment, if he wishes to retire, because many potential buyers of land are not interested in orcharding. They desire the land for some purpose other than commercial orchards and see the orchards as a detriment since trees must be removed before utilizing the land for crops or livestock.

Marketing

Marketing the fruit is one of the major problems of Calhoun County orchardists. The major market outlets for the the fruit produced in the county are six: (1) peddlers, (2) tourist, (3) fruit stand owners in Missouri and Illinois, (4) St. Louis commission firms, (5) out-of-state truckers who do not peddle the fruit, but haul for out-of-state stores etc., and (6) co-operatives, at times. These markets will be discussed in the pages which follow.

Peddlers

One of the main outlets for Calhoun orchard products is the peddler. This person usually comes through the county in a small truck, with which he can negotiate the roads, and buys his product on the farm. He is not overly concerned with quality and is one of the main factors which discourages a more diligent effort to produce quality apples within the county. Peddlers often take a large proportion of the fruit produced by the small orchard and part time fruit grower. Peddlers usually come into the county from the states of Arkansas, Tennessee, and Missouri, although some are from Illinois.

Even though marketing through a peddler has many disadvantages, many growers felt this to be a very good market method and one to which they actually cater. Some orchardmen expressed concern for the fact that peddlers are not as numerous as they once were and felt this was a result of expensive transportation cost. The greatest expenses are gas, license, and tires. However, a major factor is probably associated with the outlet the peddler has for the fruit he purchases. Buyers, both retailers and housewives, are becoming more quality and package conscientious and, therefore, a large segment of the peddler market is diminishing. The loss of the peddlers market is a result of the modern affluent society with its increased purchasing power. Apples and peaches sold by peddlers are usually bulk or in bushel baskets. A change in the buying desires of the public makes this a poor way to

market since the bushel is no longer the quantity in which people desire to purchase fruit. The American housewife is no longer favorably disposed to the drudgery of canning and packing fruit. She can now purchase the fruit in small attractively packaged quantities, fresh during the summer months and frozen in the winter.

The peddler, although providing a form of market, provides an inferior market for the county fruit industry. Some factors follow:

- a. Peddlers are not concerned with quality and therefore present an image of Calhoun fruit as being of inferior quality.
- b. The fruit grower is never certain when the peddler will arrive.
- c. Peddlers, often, employ sharp trading tactics and are skilled at their trade, often misrepresenting prices to farmers by telling them he can buy the product cheaper at another orchard. Once he succeeds in getting one orchardist to lower his price, the tendency quickly spreads throughout the orchard district.
- d. The peddler actually has no reputation to maintain as a market agency because he does not depend on the same source or market outlet for his wares from one season to the next. He buys and sells as though he will not be seen again.

Tourist

A number of orchardist with location in the Brussels - Golden Eagle region in southern Calhoun, have found that they can market their fruit to passing tourist. However, most orchardist who operate in this fashion are not the larger growers. Numerous owners have found it a favorable practice to let the buyer pick his own fruit and, therefore, save the expense of harvesting.

The sales to this market are usually small quantities of less than a bushel, with the buyer eating much of the fruit out of hand. Although this is a major market for a few favorably located orchards, it does not take a large proportion of the county fruit crop because of the small per customer sale. The significant factor for this market is location on the major highway, preferably near the river, where one finds large numbers of sight-seers and recreation seekers.

Fruit Stand Owners

A number of orchardmen have a market through small fruit stands located throughout Illinois and Missouri. This type of marketing usually consists of sales to fruit stand owners, who buy a small truck load per purchase (Fig. 29). It is pertinent to point out that many of these fruit stands are located in the Greater St. Louis area with the stand owner coming to the orchard to pick up his produce after his market closes in the evening.



Fig. 29. Fruit stands serve as one type of a market outlet for Calhoun apples and peaches.

St. Louis Commission Market

During the booming apple producing decades of the 1920's and 1930's, the St. Louis commission market served as one of the major outlets for Calhoun apples. However, the interviews revealed that presently a large degree of dissatisfaction exists among orchardist when questioned concerning the St. Louis commission market. This dissatisfaction stems from a number of causes:

1. Most orchardist are not acquainted with the commission firm they are selling through and are, generally, rather suspicious of the market procedure.
2. Prices on the St. Louis market fluxuate as supply and demand vary. Calhoun apples often command a good price early in the year, but experience a rapid decline as apples from competing orchard

regions come on the market. It should be pointed out that this decline in price is a result of the failure of the Calhoun apple to compete with apples from other orchard regions on a quality basis. The Calhoun orchardist eventually reaps the adverse results of his freedom from production and marketing controls.

3. Orchardists often send their fruit to 3 or 4 different commission firms and creates a situation whereby his own fruit competes against itself. This situation occurs when the commission firms are trying to market their consignments to the same outlet. The orchardist who follow this practice do so with the objective of trying to find the commission firm which pays the best price. The end result is a lower price for the fruit and consequent general dissatisfaction.
4. There is a tendency for orchardist to market partially ripe fruit during the early part of the harvest season when the supply of apples on the market is low, but demand is high. During the early part of the harvest season when the first fruit begins to ripen the price of apples is normally high because of insufficient supply. It is during this period that commission men will often call for apples and offer lucrative prices to encourage the orchardist to market his product. This poor quality early fruit brings an enticing price, but the unripened

character of the apple tends to establish a questionable reputation for the Calhoun product. It is not uncommon for the Calhoun orchardists to break their own market during this period of excellent prices. The flood of partially ripe fruit soon surpasses the demand for such an inferior product and prices drop with the bulk of the crop still in the orchard waiting to be marketed, but at the lowered price.

Out-of-State Truckers

This group of buyers is classed separately from the peddler because, unlike the peddler, this person is purchasing fruit which will be marketed through specific prearranged outlets, such as stores, and not from the trucker to the general public. This type of market is sought by some of the larger growers. They felt it furnished one of the best market outlets by enabling the orchardist to market all, or a large portion, of his crop through one market. Another advantage furnished by this buyer was the possibility for establishing a permanent year to year market with liaison between buyer and seller. The desire for a steady dependable market is of utmost concern to the larger orchardist.

Co-operative Marketing

Although marketing in Calhoun is unorganized and at the present time uncontrolled so far as any co-operation among

producers is concerned, there is a movement afoot toward better marketing. Among the larger and more progressive growers one of their main objectives is the hope to organize and develop a better marketing system.

The operator who derives his livelihood solely from the fruit business realizes that one of the outstanding improvements which must be made in the Calhoun orchard industry is concerned with putting the fruit from the county on a competitive basis with fruits from other areas. To do this, there is a need for the production of a fruit with uniform quality, better packaging methods, grading improvements, the development of an exclusive trade mark, and some form of specialized selling agency to seek and analyze possible markets. The fruit industry has become so specialized elsewhere that it is virtually impossible for a grower to compete and excel both in production and marketing. Organized marketing would free the grower from sales and make it possible for him to devote his efforts to producing a high quality product, which the marketing agency could devote its time and effort to selling. There is a definite need for packaging the Calhoun fruit in a more attractive bag and a switch from the bushel type of sales to sales of smaller uniform quantities.

Another facet of the industry, which would make the fruit more competitive, is concerned with the development of a better color in the fruit. This can be achieved through better production practices. Growers must realize that not only are they competing with other apple and peach areas, they are

competing with the customers tendency to buy citrus fruits instead of apples and peaches. Modern efficient marketing is essential and, as yet, Calhoun does not have such a system. A marketing association could aid and is probably vital to the future success of the county orchard industry.

Although marketing is one of the needed improvements for the county, there are many divergent opinions concerning the marketing co-operative. The general consensus of opinion among the smaller growers was not favorable to co-operative marketing, their main concern being a fear of control of any kind. One would think that with a predominance of small orchards within the county, they would look to such a marketing organization for power. However, here again, the particular character of many of the Calhoun orchards must be considered.

Many Calhoun orchards are small operations in combinations with a larger general farm program. The operators of these small orchards want to market their fruit with the least amount of labor and time possible. They would not want to become involved in the added investments and rigid controls which would be necessary for controlled marketing. This is also true for the small orchard owner who is strictly an orchard man, but because of the type of market to which he caters, he sees no value in strictly controlled marketing and production. The small full time orchardist depends on a transient trade (such as tourist) that is not particularly worried about quality and price under the conditions of an afternoon drive and the appetite for a fresh peach.

Calhoun County commercial orchard growers have been unsuccessful in their attempts in co-operative marketing. The failure has left some doubts as to the feasibility of marketing associations. A skepticism which is not peculiar to Calhoun farmers, but exists throughout the Illinois Agricultural population. Failure of the early marketing association was probably a result of five factors: (1) small quantity of quality apples and peaches, (2) control and support was not strict enough within the organization, (3) marketing associations require that members have a specific knowledge of its needs and necessities for success, (4) a general tendency of farmers to be independent, and (5) fear of rigid controls.

The problem of marketing in Calhoun is one of the main obstacles which must be overcome if commercial orcharding survives as a distinct way of life in Calhoun County. The large progressive fruit grower recognizes this and there is a movement to solve this problem. The large fruit producer sees the solution to his problem solved if he can (a) become more efficient and specialized in his production, (b) improve his market outlet, (c) work to produce a quality fruit which will compete with out-of-state fruit areas, (d) use modern methods for packaging, bagging, and grading the fruit, and (e) improve the transportation network to accommodate larger trucks.

CHAPTER V

SUMMARY AND PROSPECT

Summary

Commercial orcharding in Calhoun is an outgrowth of the small kitchen orchard, which once existed throughout the Middle West. The early settlers in Calhoun soon recognized the adaptability of the mature topography to commercial orcharding. The loess mantled uplands, with their excellent air and water drainage, became select sites for orchards. Once the kitchen orchard was established, the advantageous location of the county on two large navigable rivers, near the rapidly growing St. Louis complex, provided the impetus for the evolvement from kitchen to commercial orcharding, which had become a going business by the early 1900's.

During the 1920's, Calhoun became the leading Illinois apple producing county with a total of 680,000 trees. The county experienced a decline in apple tree numbers, beginning in the 1930's and continuing through 1962, although there are signs the trend is stabilizing. Though total apple tree numbers have declined, Calhoun has maintained its significance as a leading Illinois fruit producer. The ability of Calhoun to retain its importance as an Illinois apple producer results from the fact that the decline experienced by Calhoun has been no greater, percentage wise, than the general decline characteristic of the state following the boom years of the 1920's-30's.

Calhoun has 114 commercial apple orchards, with 43 per cent having fewer than 499 trees. It is a unique characteristic of the Calhoun orchard industry to have a larger portion of its orchards in small holdings than the other leading Illinois counties.

While the apple tree numbers in Calhoun have been declining, peach tree numbers have shown a marked increase. The tendency for Calhoun to become more significant in Illinois peach production will become more apparent in the near future. This is based on the numerous blocks of newly planted peach trees mapped within the county in 1964. An analysis of the Illinois Agricultural Statistic data for 1962 shows that 39 per cent of Calhoun's peach trees were planted after 1959. This is a much higher percentage of new plantings than is characteristic for other leading Illinois peach producing counties. An average Calhoun peach orchard holding would be less than 7 acres in size and characterized by newly planted trees.

An investigation of the Calhoun orchard industry indicates that there has been a tendency for orcharding to shift from the northern sector of the county to the southern portion. This distributional displacement results from the isolation of northern Calhoun and the relative location of the orchards in relation to the St. Louis market. When transportation became outmoded by a modern network of highway and railway facilities the south Calhoun fruit producing region was more favorably located, since most of the potential markets are south of the county. Transportation costs are, therefore, greater for the north Calhoun fruit. Southern Calhoun, also,

experiences more tourist and motorist trade than northern Calhoun, and has been able to capitalize on this transient market.

Commercial orcharding, in Calhoun, is beset with various problems. The outstanding ones deal with (1) an inadequate labor supply, (2) failure of many orchardists to specialize in commercial orcharding, since a large portion of Calhoun orchards are part of a general farm operation, (3) the high cost of equipment and chemicals, (4) a poorly maintained transportation network, at both state and county level, without the service of railways, (5) an unorganized marketing system which often encourages the sale of poor quality fruit, (6) competition from other commercial orchard district in the United States, and (7) a tendency for the United States population to eat more citrus fruits and less apples and peaches.

Calhoun County has been subjected to the capricious nature of an ever changing society. A society which no longer consumes apples and peaches in the quantities they once did, developing instead an increased appetite for the various citrus fruits. The buying habits of the American housewife have changed. In todays affluent society, the housewife prefers a small, neat, attractively packaged product over the bushel or crate. In many ways, the Calhoun orchardist has been hesitant to change his production and marketing methods to keep abreast of the changing desires of the public. Presently, the commercial orchard industry is at a crossroads. Those who believe in the county's potential as a commercial orchard producer must band together and forge ahead, or fall victim to the efforts

of their fellow orchardist in the more progressive regions of the Western and North Central United States.

Prospect

The location of Calhoun within a short distance of the large potential St. Louis market is definitely an advantage for this county and the market should be capitalized upon. However, the failure of Calhoun to produce a fruit which can compete with other United States orchard districts has created a situation whereby the unique location is of all too little value. The future possibility for utilizing this large St. Louis market will depend on how willing the Calhoun orchardist is to accept new production methods, and co-operate in efforts to establish a co-operative marketing association.

The large number of small or part time orchard operators is a result of a combination of location factors. Although many of these smaller orchardist will be able to remain in the orchard business, the trend would seem to point toward fewer, but larger growers. The size of orchard holdings in Calhoun will be limited, however, to that size which one individual can maintain. This limitation will exist so long as the St. Louis industries continue to provide employment for persons who seek it and, thereby, drain off the excess labor supply which might, otherwise, be available for orchard work.

One of the pressing needs in Calhoun is a better system of transportation. This is one problem which may exist in the county for some time. Calhoun, definitely, needs a better maintained highway system and there is a need for bridges to

replace the outdated ferry system presently used at five locations. Progress in developing better transportation facilities is apparently destined to move slowly.

The need for an organized marketing system is vital to commercial orcharding in Calhoun. Although, there are presently divergent opinions among orchardists concerning marketing procedure, the full time orchardist looks to some form of controlled marketing. It is likely that as the small operators phase out and the full time orchardist becomes more influential, some form of co-operative marketing will evolve. However, from present indication, this may be a slow painful process.

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Personal Interviews

18. Calhoun Agricultural Advisor, Hardin, Illinois, Personal Interview with Robert Lane.
19. Calhoun County, Illinois, Personal Interview with selected list of commercial orchardist throughout county, May, June, July, 1964.

APPENDIX

Supplementary Illustrations

The illustrations which follow were not received in time to be placed in the main body of the thesis. However, the writer feels that the inclusion of these photos is necessary to aid the reader in his interpretation of the Calhoun County Orchard Industry.



1.

Tractors and sprayers are part of the expensive equipment necessary in commercial orcharding.



2.

Calhoun Apple Growers Exchange in Hardin, Illinois. An example of a cooperative effort that has failed.



3.

An apple storage facility on the Mississippi River in Hamburg, Illinois. This building is now vacant as river transportation is no longer used for Calhoun fruit.



4.

An orchard located on one of the better maintained county roads near Micheal.



5.

Orchard removal and the planting of a grain crop. An example of a change in land utilization in North Calhoun.



6.

Apple blossoms attract many tourists and sight seers.



7.

Topography characteristic of Calhoun County uplands. Note the orchard in the far distance.



8.

A small fruit stand located on an orchard farm. Note the sacks and baskets of fruit.

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