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Farm Ownership in the Midwest

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FOREWORD

Most of the farms in the Midwest were established during the last 75 to 125 years. The people who came into the region wanted to own the land they operated, and in the early days a very high proportion of the farmers had an equity in the land on which they were living. From the beginning it has been the general policy of the federal and state agencies to encourage a pattern of owner-operated family-type farms. Public opinion has favored this policy.

Mechanized farming has made it possible for a farm family to operate larger acreages, and as a result many farms have grown in size. Likewise, there has been a large increase in the capital invested in the land, buildings and other improvements. Acquiring ownership of a good farm in the Midwest in 1949 is far more complicated and expensive than it was a century ago.

The 1945 Agricultural Census seemed to offer an unusual opportunity to obtain the additional facts which would explain what has been happening regarding ownership changes. Through the cooperation and generosity of the Bureau of the Census, special arrangements were worked out between the Census officials, the Bureau of Agricultural Economics of the U. S. Department of Agriculture, and the North Central Land Tenure Committee, whereby many new and significant data were secured on Midwest farm ownership.

This report summarizes these data and tells us who owns the farms in the Midwest, how they were acquired, and the form in which they are now held. We believe it will interest those who are concerned with such matters as land valuation, land tenure and the financial status of farm people in this North Central Region.

The authors of this report, John F. Timmons and Raleigh Barlowe, have won the gratitude of the North Central Land Tenure Committee for their skilled and effective work in compiling and writing the report. Acknowledgment also is given to the subcommittee on farm ownership which gave guidance and assistance. The study would not have been possible except for the special arrangements and services provided by the Bureau of Agricultural Economics, U. S. Department of Agriculture, and the Bureau of the Census, U. S. Department of Commerce. Special acknowledgment goes to the more than 17,000 land owners throughout the North Central states who filled out and returned the questionnaires which provided much of the information on which this report is based. The Farm Foundation has provided financial assistance and highly efficient technical aid in the research reported in this bulletin.

Very helpful statistical advice on the analysis and tabulation of the information was given by the Statistical Laboratory of Iowa State College. The Iowa Agricultural Experiment Station has rendered a much appreciated service to the entire region by printing the report.

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Farm Ownership in the Midwest¹

BY JOHN F. TIMMONS² AND RALEIGH BARLOWE³

INTRODUCTION

THE STRUGGLE FOR OWNERSHIP

Midwestern farm families have a strong desire to own the land on which they live. This desire has been the backbone of a long and continuous struggle for land ownership throughout the region. In the struggle, many farm families have been rewarded by the satisfactions that come with paying off the mortgage and achieving complete ownership of a farm. Others, less fortunate, have experienced the despair of losing their farms, together with years of toil and savings. The struggle for ownership has seldom been easy. But it has always been characterized by the determination of farm people to achieve farms of their own.

Over the years, farm ownership has become generally accepted as the top rung on the agricultural ladder. Farm ownership has also been a cornerstone of land policies affecting the region's agriculture. Long before midwestern states were formed, the famous ordinances of 1785 and 1787 outlined a land system for the Northwest Territory. These ordinances set up a land survey, forbade feudal land practices and began to pave the way for the settlement of the region by independent owners of family farms. The lands of the region, originally in public ownership, were transferred to private ownership as rapidly as possible. Land transfers, at first for cash, soon gave way in the early nineteenth century to credit sales more in keeping with the desires and needs of the settler. Land sales in large tracts were later changed to sales in smaller acreages more in line with the settler's ability to pay for and improve his purchase. The Pre-emption Act of 1841 gave settlers priority to buy the lands they were developing ahead of the federal survey. Finally, the various homestead acts beginning in 1862 gave land to settlers upon condition that they improve and live upon it for a period of years.

When the supply of free land in the region became exhausted toward the close of the nineteenth century, attention turned to the

¹ Includes the states of Illinois, Indiana, Iowa, Kansas, Kentucky, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota and Wisconsin.

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This report was prepared in consultation with other members of the North Central Subcommittee on Farm Ownership, including Joseph Ackerman, John Bondurant, Buis T. Inman, O. G. Lloyd and Rainer Schickele. All other members of the North Central Regional Land Tenure Research Committee reviewed the report. To these members, as well as other associates in the Bureau of Agricultural Economics and agricultural experiment stations in the region, the authors are deeply indebted. However, the authors assume full and sole responsibility for the analysis and interpretation of all data presented in the report.

problems of achieving ownership of land already in farms. Credit legislation setting up the Federal Land Banks and later the Farm Security Administration, now the Farmers' Home Administration, was enacted to help remove financial obstacles to ownership. Within the states, special home-ownership credit, settlement programs, homestead tax exemptions, debt moratoria and similar laws were effected at various times, particularly during the depressed 1930's, to throw public support behind farm ownership.

Despite individual desires and public support, midwestern farm families have experienced many difficulties in becoming farm owners. Although millions of acres of free land were transferred to farmers under the homestead acts, one farmer out of each four in the Midwest was a tenant as early as 1880. By 1935 two farmers out of each five were tenants, and over 50 percent of all farm land in the Midwest was owned by landlords. Following the inflation in land values after World War I, farm mortgage debt jumped to almost 7 billion dollars—about one-half the total value of mortgaged farms. Ownership passed from farm families back to the public through tax delinquency, thus forming a new public domain. Much more land passed to corporations and other holders of mortgages. An equivalent of one farm out of each four was foreclosed or transferred under distress between the two World Wars. The rungs of the ladder leading to ownership seem to have become barriers rather than stepping stones.

During the past decade, however, owner operatorship of midwestern farms has been strongly reinforced by the good yields and higher prices of the war era. By 1945 more midwestern farmers than ever before—over 1½ millions—owned part or all of their farms. There were fewer tenants than at any time in the past quarter century. Mortgage debt of farm operators in the region dropped from the high of \$6.8 billions in 1923 to \$2.3 billions in 1948—the lowest amount since 1913.

EMERGING PROBLEMS AND NEEDED INFORMATION.

Despite the apparent strength of the current ownership situation, certain trends are under way which presage trouble ahead. Practically no unsettled farm land remains in the area. This means that prospective owners in the region must acquire farms from present owners. Land prices in the region have increased steadily until the average 1949 price per acre is about double the 1935-39 average price. If farmers pay cash for farms, high land prices probably will not seriously affect future ownership. The real danger arises when farm buyers go into heavy debt to acquire land at inflated prices which they expect to pay for out of uncertain future earnings.

Only about one-half of the farm sales in the region have been cash transactions during the past few years. The remaining one-half were combination cash and credit. Of the credit-financed sales since 1944, over 45 percent involved mortgages amounting to from 50 to 74 per-

cent of the sales price. Over 25 percent of the credit sales involved mortgages averaging 75 percent or more of the sales price. Judging from past loan experiences, there is some evidence that the period for which many new mortgages are written is far too short to permit liquidation of the loan. Nearly one-half of the farm loans (made for land purchases) in the North Central States in 1948, for example, were for periods of 5 years or less. About one-third of these short-term loans have no provisions for amortization.

Farms in the region are getting larger in size. The average Midwest farm size has increased from 122 acres in 1880 to an all-time high of 188 acres in 1945, an increase of 54 percent. To the extent that increased size means more efficient operation, ownership should be more easily achieved. But, increasing size of farms means fewer farms and correspondingly fewer opportunities for farm people to operate farms of their own. As acreages and farm prices increase, it becomes increasingly difficult for prospective owners without outside help to accumulate the necessary capital to purchase, equip and pay for a farm. Because of these increases in both size and price, the capital needed to achieve full ownership in some Midwest areas may run as high as \$50,000 to \$60,000.

Some of the most serious farm ownership problems grow out of transferring farms within families from one generation to the next. The average midwestern farm family has three or four children all of whom are prospective heirs to the home farm. Yet most farm-owning parents have only one farm, which cannot be split up among several children without seriously disrupting its operation. If one of the children takes over the farm as owner, he has to buy out the others. During periods of high land prices like the present, the person remaining on the farm may find himself hopelessly in debt in buying out his brothers and sisters. Furthermore, midwestern farmers generally use their lands as their "savings bank" and possess only limited outside investments. Thus, it becomes necessary for many farm parents to maintain ownership of the family farm to provide themselves with economic security during their declining years. Faced with these problems which are aggravated by inertia and lack of information, farm parents frequently fail to make wills or other property transfer arrangements needed to bridge the gap in farm ownership between generations.

OBJECTIVES OF THIS STUDY

The purpose of this study is to obtain and present information needed for a better understanding of farm ownership conditions in the Midwest. More specifically, the study is concerned with (1) who owns midwestern farms, (2) how these farms are owned, (3) how farms are acquired and transferred, (4) owners' plans for transferring farms to the next generation, (5) characteristics of farm owners in terms of sex, age, occupation, residence, kinship to operator and amount of land owned and (6) interrelationships of these various factors.

NATURE AND METHOD OF SURVEY

In order to obtain this information, the Bureau of Agricultural Economics, USDA, in cooperation with the North Central Regional Land Tenure Committee and other regional tenure committees, developed a survey of land ownership. Questionnaires⁴ of needed ownership information were prepared and mailed to a random sample of owners throughout the nation during 1946 by special agent employees of the Bureau of the Census. In obtaining this sample, names and addresses of owners were drawn at random from the list of owners as reported in the 1945 Census of Agriculture. Every county in the nation was represented in this sample. As shown in table 1, 48,158 questionnaires were mailed out to owners in the 13 North Central States, and 36 percent, or 17,420 of them, returned usable questionnaires.

The high proportion of farm owners who returned questionnaires indicates a genuine interest of owners in the study, as does the large number of letters and comments from respondents going into greater detail than was requested on the questionnaire. This interest was stimulated in part by the members of the North Central Regional Land Tenure Committee who explained the purpose and nature of the survey in their respective states through press releases, radio broadcasts, and letters to county extension agents and vocational agriculture teachers.

All answers to the ownership questionnaires were edited, coded, punched on I.B.M. cards and tabulated by the U. S. Bureau of Agricultural Economics. Further tabulations and analysis of the data were carried out at the Iowa State College Statistical Laboratory, Ames, Iowa, under the sponsorship of the North Central

⁴ See appendix (page 952) for copy of questionnaire sent to landowners.

TABLE 1. NUMBER OF QUESTIONNAIRES MAILED OUT AND PROPORTION OF THEM RETURNED FOR EACH STATE INCLUDED IN THIS STUDY, 1946.

State	Questionnaires mailed out	Questionnaires returned	
	(Number)	(Number)	(Percent)
Illinois -----	4,357	1,551	36
Indiana -----	3,862	1,326	34
Iowa -----	4,034	1,564	39
Kansas -----	4,149	1,235	30
Kentucky -----	3,916	1,246	32
Michigan -----	3,599	1,283	36
Minnesota -----	3,993	1,574	39
Missouri -----	4,148	1,313	32
Nebraska -----	3,272	1,236	38
North Dakota -----	2,769	1,153	42
Ohio -----	4,056	1,334	33
South Dakota -----	2,634	1,070	40
Wisconsin -----	3,349	1,535	46
Midwest -----	48,158	17,420	36

Regional Land Tenure Research Committee in cooperation with the Bureau of Agricultural Economics and the Farm Foundation. In addition to the questionnaires, certain U. S. census data and information drawn from local ownership studies in the region were used.

SOME QUALIFICATION OF METHODS USED

Although this study is based upon 36 percent of all questionnaires mailed out, the question arises as to who were the 64 percent of the farm owners who failed to return usable answers. In other words, did biases arise because of differences between the farm owners who responded and those who did not? To determine this, certain checks were made. In the first place similarities and differences between the two groups were tested by using census data available for both groups. This information included tenure status, sex, type of ownership and age. In the second place, a small sample of non-respondents was interviewed in person by representatives of state agricultural experiment stations to determine whether their responses to the questions differed from those of owners returning the questionnaires. These two comparisons failed to show material differences between the two groups on most of the items. In those instances where differences were found, appropriate qualifications are made in the interpretations of the information affected. Results of the analysis of respondents and non-respondents are summarized in the appendix on methodology.

THE LAND OWNERSHIP SITUATION

The 13 midwestern states cover a land area of 509,274,240 acres, slightly over one-fourth of the total land area of the United States. The region accounts for over one-half of the nation's cropland acreage, about one-fifth of its non-forested pasture and range land and almost one-sixth of its forested area (appendix table 1).

EXTENT OF PUBLIC LAND OWNERSHIP

Except for Kentucky, parts of Ohio and a few small areas patented to fur traders, all of the Midwest was once part of the nation's public domain. Approximately one-sixth of this public domain area was granted by the federal government to the states for various public improvement and educational purposes. Through land sales, homesteading programs and grants for the construction of railroads, roads and canals, the federal and state governments have long since turned most of this public domain over to private owners.

In 1945 only 65 million acres, approximately 13 percent of the land in the region, were in public ownership. Of this area in public ownership, a little over 24 million acres were owned by the federal government while an established 41 million acres (including roads, airports, etc.) were administered by the state, county

and local units of government. However, distribution of land area in public ownership is not evenly proportioned among the states (table 2). For example, in Ohio, Indiana, Illinois, Iowa and Kansas, public lands account for only 2 to 4 percent of the total land area while in North Dakota and South Dakota and the three Lake States—Michigan, Minnesota and Wisconsin—between 16 and 30 percent of the total area is in public ownership.⁵

Over nine-tenths of the federally owned rural lands in the region are administered by four principal agencies—the U. S. Forest Service, the Office of Indian Affairs, the Army and Navy Departments, and the Soil Conservation Service (appendix table 4). Of these agencies, only the Army and Navy Departments have lands scattered throughout all the states. National Forest holdings are concentrated primarily in the three Lake States, South Dakota and Missouri. Almost three-fourths of the Indian reservation lands are in South Dakota with other large holdings in Minnesota, North Dakota and Wisconsin. Land holdings of the Soil Conservation Service are concentrated mostly in the four Great Plains States—Kansas, Nebraska, North Dakota and South Dakota.

Lack of detailed inventory data relative to the ownership holdings of the state and local units of government makes it difficult to classify these lands by administering agencies. Land in highways and public roads, however, accounts for most of the

⁵ For further information see: Raleigh Barlowe, Public land ownership in the Lake States, North Central Regional Publication 12. Mich. Agr. Exp. Sta. Bul. 351. August, 1948.

TABLE 2. DISTRIBUTION OF TOTAL LAND AREA BETWEEN PRIVATE AND PUBLIC OWNERS,* NORTH CENTRAL STATES, 1945.

States and region	Total land area**	Approximate proportion of total area in	
		Private ownership	Public ownership
	(acres)	(percent)	(percent)
Illinois -----	35,806,080	96	4
Indiana -----	23,171,200	96	4
Iowa -----	35,831,040	97	3
Kansas -----	52,552,320	97	3
Kentucky -----	25,669,760	95	5
Michigan -----	36,494,080	78	22
Minnesota -----	51,205,760	70	30
Missouri -----	44,332,800	95	5
Nebraska -----	49,057,920	93	7
North Dakota -----	44,834,560	84	16
Ohio -----	26,318,080	97	3
South Dakota -----	49,983,040	70	30
Wisconsin -----	35,017,600	81	19
North Central Region...	509,274,240	87	13

* Cf. appendix table 2 for a more complete state breakdown of the areas held in public ownership (including areas held in highways and highway rights-of-way) by the federal government and by the state, county and local units of government. Appendix table 4 reports the holdings of the principal federal land-owning agencies by states.

** Total area as reported by U. S. census.

state administered lands in the region except in Michigan, Minnesota, North Dakota, South Dakota and Nebraska.⁶ School grant lands account for the large state holdings in Nebraska, while grant lands and lands acquired through foreclosure by state-controlled credit agencies represent the bulk of the state-owned lands in both North Dakota and South Dakota. School trust fund lands are also important in Minnesota and to a lesser extent in Wisconsin. Except in the four Plains States, parks, forests and conservation areas account for the majority of the state-owned lands not in highways and roads. Michigan and Minnesota have more than 4 million acres each in state forest and conservation lands. State institutions (colleges, hospitals, prisons, etc.) account for a moderate amount of state ownership in all states.

In most of the states comparatively small acreages are held by county and local units of government. But in Wisconsin, Minnesota, North Dakota and South Dakota, county ownership has been particularly important in recent years because of the nature of state tax reversion laws. Much of the large acreage acquired by counties in these four states through tax forfeitures during the 1920's and 1930's has been returned to private ownership. In the northern counties of the Lake States, however, a large proportion of the tax-reverted land has not proved well suited for farming. In many of these counties, public policy enforced through rural zoning ordinances and public forestry programs has favored the retention of these lands in public ownership. In 1945 the counties of northern Wisconsin held almost 3 million acres of these lands, almost 2 million acres of which were in organized county forests. At the same time the counties of northern Minnesota administered almost 5 million acres.

LAND IN FARMS

Approximately 82 percent of the land of the region is in farms (table 3). This accounts for practically all the lands in the Mid-

⁶ In some states the land used for highways and roads is publicly owned. In other states the public has (easement) rights to use the land for road purposes. In either case, the land is publicly administered and is subject to public control.

TABLE 3. PROPORTION OF TOTAL LAND AREA IN FARMS, NORTH CENTRAL STATES, 1945.*

State	Proportion of land in farms (percent)	State	Proportion of land in farms (percent)
Illinois -----	88.3	Missouri -----	79.6
Indiana -----	86.4	Nebraska -----	97.3
Iowa -----	96.2	North Dakota -----	91.4
Kansas -----	92.5	Ohio -----	83.3
Kentucky -----	76.8	South Dakota -----	87.9
Michigan -----	50.4	Wisconsin -----	67.4
Minnesota -----	64.7	North Central Region	82.2
		United States -----	60.0

*Data from U. S. Census of Agriculture, 1945.

west not covered by forests, parks, urban properties, roads and highways, and other special public use areas.

The proportion of the total land area in farms by states ranges from slightly over 50 percent in Michigan to 97 percent in Nebraska. This wide range reflects the varying climatic and topographical conditions found in the region.

The remainder of this report is concerned almost exclusively with the 82 percent of the land of the region now in farms.

WHO OWNS MIDWESTERN FARMS

For more than a century and a half, the concept of widely distributed owner operatorship of family farms has been generally accepted as a principal goal in national land policy. This popular concept implies that farm operatorship should be closely associated with farm ownership. But frequently no identity exists between operatorship and ownership. This fact is shown by the census data on the rise of farm tenancy. How far away from this goal are farmers in the North Central Region? Census data give a very incomplete picture of the farm ownership situation. To answer such questions as "Who owns the farms in the Midwest?" "How do they own them?" and "How did they acquire them?" it was necessary to go beyond census data.

TYPES OF OWNERS

Farm land is owned by several different types of owners. Ownership rights can be held by single individuals or by groups of individuals. They can be held in unsettled estates, by corporate bodies, by private institutional owners such as churches, colleges or benevolent societies, or by units of government.

Approximately 94 percent of the farm land in the region is held in individual ownership. (Table 4.) The bulk of this area is owned by single individuals or jointly by husbands and wives. Some of this area, however, represents farms owned by groups of individuals and farms held in unsettled estates.⁷

In addition to the 94 percent of the farm area owned by individuals, approximately 3 percent is owned by public agencies, 2 percent by corporate and private institutional owners, and 0.5 percent by a miscellaneous group of owners made up mostly of

⁷An attempt was made to separate the farms held in unsettled estates from those held in individual ownership. This classification showed that around 2.5 percent of the total farm area—approximately 10 million acres—was held in unsettled estates. After this separation was made, however, it was found that many farms listed as individually owned were actually held in estate. Very little special attention has been given to these farms in the analysis that follows, estate ownership being on the whole a transitional form of individual ownership. Were one to compute the area held in estates, however, it would be necessary to add the totals for the two groups of estate farms.

TABLE 4. DISTRIBUTION OF LAND AREA IN FARMS BY TYPE OF OWNERSHIP, NORTH CENTRAL STATES AND UNITED STATES, 1945.*

State and region	Total farm land area	Percentage distribution by type of ownership			
		Individual	Corporate**	Public†	Other††
	(acres)				
Illinois -----	31,602,186	97.6	1.4	0.1	0.9
Indiana -----	20,027,015	98.4	0.5	0.9	0.2
Iowa -----	34,453,936	96.4	1.9	0.2	1.5
Kansas -----	48,589,418	97.2	2.0	0.1	0.7
Kentucky -----	19,724,834	97.7	1.4	0.5	0.4
Michigan -----	18,392,227	99.2	0.4	0.1	0.3
Minnesota -----	33,139,997	96.8	2.0	0.7	0.5
Missouri -----	35,278,251	98.0	1.2	0.2	0.6
Nebraska -----	47,752,941	95.2	2.3	2.3	0.2
North Dakota -----	41,001,158	89.0	4.1	6.6	0.3
Ohio -----	21,927,844	98.8	0.5	0.6	0.1
South Dakota -----	43,031,964	74.7	4.0	21.0	0.3
Wisconsin -----	23,615,031	97.7	1.5	0.5	0.3
North Central Region	418,536,802	94.1	2.1	3.3	0.5
United States‡ -----	1,141,615,364	85.4	5.6	7.9	1.1

*The total farm land area is from the reports of the 1945 Census of Agriculture. Percentages have been computed from unpublished data obtained from a special tabulation from the census for the farm owners to whom the special questionnaires were mailed.

**Includes farm lands owned by private institutional owners (colleges, churches, fraternal groups, etc.).

†Includes Indian tribal lands as follows: Nebraska 0.1 percent, North Dakota 0.8 percent, and South Dakota 6.3 percent.

††Primarily lands held in partnerships which approach corporations in organization. Also includes some land not readily classified.

‡United States totals present in this report are taken from: Buis T. Inman and William H. Fippin, Farm land ownership in the United States, in process of publication by the BAE, USDA.

partnerships which approach corporations in organization.⁸

As individual owners are the most numerous of these four owner types, they provide the subject for most of the remainder of this study. Before focusing attention entirely on this group, however, brief consideration will be given to public farm land ownership and to corporate and private institutional ownership.

PREVALENCE OF PUBLIC AND CORPORATE OWNERSHIP

The state data on public farm land ownership reported in table 4 show that only around 0.1 to 0.2 percent of the farm land was owned by governmental units in 1945 in Illinois, Iowa, Kansas, Michigan and Missouri. Most of this limited area was used for public institutional purposes in connection with colleges, state and county hospitals, poor farms, asylums and prisons. In some states, sizable tracts of federally owned lands, particularly lands acquired early in the war for prospective military use, were rented out to

⁸This "other" group includes many, but not all of the farm partnerships. It probably includes most of the more formally organized partnerships. It seems probable, however, that many cases of farm partnerships were reported as individual ownerships.

farmers in 1945 and 1946.⁹

South Dakota has the greatest concentration of public farm land ownership in the region; there more than one-fifth of the farm land area is publicly owned. Most of this area is Indian reservation lands leased for grazing purposes. The leasing of school grant lands in Nebraska, North Dakota and South Dakota and the leasing of state-foreclosed lands and county tax-reverted lands in North Dakota and South Dakota also help to account for the extensive areas of farm land held in public ownership in these states.

The extent of corporate farm land ownership in the region in 1945 followed an east to west pattern of increase in importance. Only around one-half of 1 percent of the farm land was reported in corporate ownership in Michigan, Indiana and Ohio. A little farther west in Illinois, Kentucky, Missouri and Wisconsin, slightly over 1 percent of the farms were held in this type of ownership. In Iowa, Minnesota, Kansas and Nebraska, around 2 percent of the farms were corporate owned, while in North Dakota and South Dakota more than 4 percent of the farms were reported held by this type of owner.

Subclassification by type of corporate owner shows that almost two-thirds of the more than 10 million acres held by these owners were held by loan and investment companies. Here again there were wide differences between the eastern and western states of the region. The loan and investment companies held relatively small acreages in Indiana, Ohio, Michigan, Wisconsin and Kentucky. In Kansas and Minnesota they held a little under half of the corporate-owned lands, while in Illinois, Iowa and Missouri they owned over half of these lands, and in Nebraska, North Dakota and South Dakota they held over three-fourths of the corporate-owned land.

Recent data on corporate farm land ownership largely reflect the effects of major business cycle trends upon the holdings of the loan and investment companies. Most of these companies are primarily interested in loans and mortgages, not in the ownership and operation of farms. Many of them acquired farm ownership during the 1930's when they took over heavily mortgaged properties and decided to hold them until they could sell at a price sufficient to redeem their equities.

An indication of the effect that mortgage foreclosures and quit claim deed transactions had upon corporate ownership in the region during the 1930's is suggested by studies made in Iowa and Minne-

⁹Alvin T. M. Lee, Acquisition and use of land for military and war production purposes—World War II (USDA—BAE, War Records Monograph 5, August 1947), p. 115, reports 507,361 acres of War Department lands leased in 1945 in the North Central Region and 549,681 acres leased in 1946. Approximately two-thirds of this leased acreage was in South Dakota.

sota.¹⁰ In Iowa the amount of corporation-owned land increased from 7.9 percent of the total farm land area in 1933 to 11.9 percent in 1939. In Minnesota corporate ownership reached a peak of 10.4 percent of the farm area in 1938. In both states corporate ownership accounted for almost a third of the farm land in some counties.

Legislation in some states, limiting the time corporations can hold lands or the acreages they can hold, forced some loan and investment companies to dispose of their lands. But, since 1940, rising farm land values are mostly responsible for the big reduction in this type of corporate ownership. Practically all of the foreclosed lands held by corporate owners in the region that lies east of the Mississippi River had been returned to individual ownership by 1945. Since then most of the remaining corporate-owned lands in the western part of the region also have been sold.

The one-third of the corporate and institutionally-owned land not held by loan and investment companies was owned by land and realty companies, industrial owners, churches, private colleges, fraternal organizations, charitable institutions and a group of miscellaneous and unclassified owners. Of these owners the land and realty companies and the industrial owners each held around 10 percent of the corporate and institutionally-owned total in 1945. The largest land and realty company holdings occurred in Iowa and the four Plains States.

Holdings of industrial owners are largest in Kentucky, Illinois and Indiana where large areas of farm land are owned by coal mining companies, and in Michigan and Minnesota where copper and iron mining companies own considerable areas. Lumber companies and various manufacturing companies also own numerous farms. Many of these industrial owners expect to hold their lands permanently or until they are ready to use them for mining or other non-agricultural purposes. Few of these owners attempt to operate their farms.

CHARACTERISTICS OF INDIVIDUAL OWNERS

The individual owner group owns and controls approximately 394 million acres of farm land in the region. This is held in about 2 million separate individual ownerships. It is with this farm land area, and particularly with the individuals who own it, that this study is primarily concerned.

TENURE STATUS AND SEX OF OWNER

The individual owners can be divided into four owner tenure groups: (1) owner-operators, (2) part-owner operators, (3) owner-

¹⁰ Cf. William G. Murray, *Corporate land, foreclosures, mortgage debt and land values, Iowa, 1939*, Iowa Agr. Exp. Sta., Res. Bul. 266, 1939; A. A. Dowell, *Corporate owned farm land in Minnesota, 1936-1940*, University of Minnesota, Bul. 357, 1942; and William G. Murray, *An economic analysis of farm mortgages in Story County, Iowa, 1854-1931*, Iowa Agr. Exp. Sta., Res. Bul. 156, 1933.

operator landlords and (4) nonoperating landlords.¹¹ The first of these groups is made up of those who operate all the farm land they own and own all the land they operate. The part-owner operators operate all the farm land they own but rent in additional land. The owner-operator landlords operate part of their farm land but rent out part of their land to others. A few of these operator landlords rent in additional land at the same time they are leasing land to others. The nonoperating landlords are those owners who rent out all of the farm land that they own. This group includes a few cases of tenant landlords, tenants who rent in all the land they operate, but who own land that they rent to others.

The relative importance of these four tenure groups in the North Central States is indicated by table 5. This table shows that 47.7 percent of the owners reporting were owner-operators, 14.2 percent part-owner operators, 12.6 percent operator landlords, and 25.5 percent nonoperating landlords. The distribution of these owners by states is far from uniform. In Wisconsin, Michigan, Kentucky, Ohio, Missouri and Minnesota over half the farms belong to owner-operators. In the Plains States, on the other hand, a much smaller proportion of the ownership holdings belong to owner-operators while a considerably larger than average proportion belongs to the part-owner operators. In North Dakota and South Dakota the number of part-owner operators actually exceeds the number of owner-operators. This situation reflects both the large amount of public and Indian-owned land in these states and the popular practice of leasing range land from its public or private owners.

Further examination of the state tenure data shows that the proportion of all landlords is relatively low in the three Lake States, that there are more than twice as many operator landlords as nonoperating landlords in Kentucky, and that the highest proportions of nonoperating landlords are found in Illinois, Iowa and the four Plains States. Compared with the nation as a whole, the Midwest has a higher proportion of part-owners and nonoperating landlords and a lower proportion of owner-operators and operator landlords.

Table 5 also shows that 11.5 percent or approximately one-ninth of the owners are women. The highest proportion of women owners is found in Illinois, Iowa, Kansas and Nebraska, the same states that reported the highest proportion of nonoperating landlords. The lowest proportion of ownership by women occurs in the three Lake States and Kentucky, the states with the lowest proportion of nonoperating landlords.

Separate classification of the men and women by tenure reveals that over two-thirds of the women as compared with only one-fifth of the men are nonoperating landlords. Between three-fourths and seven-eighths of the women in Iowa and the four Plains States are nonoperating landlords.

¹¹ This classification of owner-tenure groups is different from that used by the U. S. census in describing farm operators.

TABLE 5. DISTRIBUTION OF INDIVIDUAL OWNERS BY SEX AND TENURE, NORTH CENTRAL STATES, 1946.

Tenure status and sex of owner	Number and percentage distribution by states														
	United States	North Central Region	Illinois	Indiana	Iowa	Kansas	Kentucky	Michigan	Minnesota	Missouri	Nebraska	North Dakota	Ohio	South Dakota	Wisconsin
Number reporting		14,355	1,256	1,155	1,285	956	1,337	1,169	1,371	1,477	750	472	1,487	511	1,129
Men	89	88.5	83.2	88.5	86.5	85.5	90.7	90.5	90.9	89.0	82.9	89.6	88.5	89.0	93.5
Women	11	11.5	16.8	11.5	13.5	14.5	9.3	9.5	9.1	11.0	17.1	10.4	11.5	11.0	6.5
All owners															
Owner-operators	56	47.7	37.1	48.2	37.6	31.7	60.2	63.5	51.3	52.9	25.1	26.7	56.4	23.7	65.3
Part-owner operators	11	14.2	16.4	14.6	11.2	19.5	6.6	12.6	16.2	10.7	21.5	34.7	17.8	30.5	29.9
Operator landlords	15	12.6	11.5	13.1	12.4	16.2	22.7	8.3	8.8	14.7	13.1	10.2	13.0	12.3	5.5
Nonoperating landlords	18	25.5	35.0	24.1	38.8	32.6	10.5	15.6	23.7	21.7	40.3	28.4	22.8	33.5	19.3
Men owners															
Owner-operators	59	51.3	41.7	50.9	42.3	35.7	61.9	66.2	54.0	56.4	28.6	29.1	60.3	26.4	67.2
Part-owner operators	12	15.7	18.9	16.0	12.8	22.4	7.0	13.6	17.4	11.9	25.9	38.8	8.8	34.1	10.4
Operator landlords	15	13.0	12.4	12.6	13.8	16.9	22.7	8.1	9.2	15.3	14.7	10.4	13.3	12.5	5.6
Nonoperating landlords	14	20.0	27.0	20.5	31.1	25.0	8.4	12.1	19.4	16.4	30.8	21.7	17.6	27.0	16.8
Women owners															
Owner-operators	35	20.8	14.2	27.8	7.5	7.9	43.6	38.7	24.0	25.2	7.8	6.1	25.7	1.8	37.0
Part-owner operators	2	2.2	4.3	3.8	1.2	2.2	2.4	2.7	4.0	1.2	.8	--	.6	1.8	2.7
Operator landlords	15	9.9	7.6	16.6	4.0	12.2	22.6	9.9	4.8	9.8	5.5	--	11.1	10.7	4.1
Nonoperating landlords	48	67.2	73.9	51.8	87.3	77.7	31.4	48.7	67.2	63.8	85.9	85.7	62.6	85.7	56.2

NUMBER, SIZE AND VALUE OF HOLDINGS

Operator landlords own more farms, more acreage, and have larger farms in relation to their numbers than do the owners in any other tenure group. (Table 6.) By the same standards of measurement the owner-operators have the lowest average number of farms or farm tracts and the farm holdings of the smallest average size and value.¹² The nonoperating landlords rank next to the operator landlords in average number of farms owned and in average reported value of land. The part-owner operators, however, due to their concentration in the Plains States, ranked next to the operator landlords in average acreage owned.

¹² The data reported on number of farms or farm tracts are based on answers to the question, "How many farms, ranches or plantations do you own?" It is realized that this question left considerable room for individual interpretation as to what constitutes a farm unit. Some owners who acquired and consolidated adjoining farms may have answered that they had but one farm. Others who acquired two or more tracts at different times or by different methods may have reported the ownership of two or more farms even though they now constitute but one operating unit. Similarly some landlords may have counted each rented tract as a separate farm while others counted adjacent tracts as parts of the same unit. The fact that table 6 shows the average owner-operator and part-owner operator owning 1.1 farms suggests that many farmers thought in terms of farm tracts rather than farm operation units. Despite this, however, it is felt that the data reported in the North Central Region on number of farms owned are generally reliable.

TABLE 6. COMPARATIVE IMPORTANCE OF OWNER TENURE GROUPS MEASURED BY NUMBER, ACREAGE AND VALUE OF FARMS OWNED, NORTH CENTRAL REGION, 1946.

Items reported	Number reporting	Average number of farms, acres or value owned and percentage distribution by owner tenure groups			
		Owner-operators	Part-owner operators	Operator landlords	Non-operating landlords
Farm owners -----	14,355	47.7%	14.2%	12.6%	25.5%
Farms (farm tracts) owned -----	14,442	43.8%	13.2%	15.9%	27.1%
Acreage owned -----	14,442	32.5%	18.6%	19.5%	29.4%
Value of land owned ----	13,395	36.9%	13.1%	17.6%	32.4%
Average number of farms (farm tracts) per owner -----	-----	1.09 farms	1.11 farms	1.49 farms	1.26 farms
Average owned acreage per owner -----	-----	127 acres	245 acres	286 acres	215 acres
Average value of land per owner -----	-----	\$9,198	\$10,871	\$17,714	\$16,159
Average size of each farm (farm tract) owned -----	-----	117 acres	227 acres	193 acres	188 acres
Average value of each farm (farm tract) owned -----	-----	\$8,439	\$9,794	\$11,889	\$12,825

The distribution of the owners by number of farms owned and by states is reported in table 7. This distribution shows that 93 percent of the owner-operators and 91 percent of the part-owner operators, as compared with 66 percent of the operator landlords and 83 percent of the nonoperating landlords, owned only one farm or farm tract. In contrast, only 1 percent of the owner-operators and part-owner operators, as compared with 9 percent of the operator landlords and 5 percent of the nonoperating landlords, reported ownership of three or more farms (or farm tracts).

The state comparisons show that approximately one out of every four owners in Kentucky and one out of every five in Nebraska owns more than one farm (or farm tract). Multiple ownership varies between 23 percent in Kentucky and 7 percent in Wisconsin. It averages about 13 percent for the region. In Michigan, Ohio and Wisconsin, multiple farm ownerships were reported by less than 10 percent of the owners; in fact in Wisconsin only 1 out of every 12 owners was in this class. The data show that over 80 percent of the owner-operators have only one farm in all the states except Kentucky.

With the two landlord groups, however, the story is different. More than half of the operator landlords in Kentucky reported owning more than one farm (or farm tract.) Above average proportions of operator landlords with more than one farm also were reported in Illinois, Iowa, Nebraska and North Dakota, while considerably less than average proportions of operator landlords reporting multiple farm ownership are found in Michigan, Ohio, Indiana and Wisconsin. These four states also reported the smallest proportion of nonoperating landlords with more than one farm, while above average proportions were reported for Kentucky, Kansas, Nebraska and South Dakota.

Comparisons based on average acreage and average value of farm real estate owned show that the two landlord groups almost invariably have holdings of larger average size and higher average value than those owned by the two owner-operator groups (appendix tables 3 and 5). For the region as a whole the average farm operated by an owner contained 127 acres and was valued at \$9,198. This compares with average holdings containing 245 acres and valued at \$10,871 for the part-owner operators, 286 acres worth \$17,714 for the operator landlords, and 215 acres valued at \$16,159 for the nonoperating landlords.

These regional averages hide a number of important state-to-state differences. The large farm acreages reported by the part-owner operators in the four Plains States, for example, bring the regional average up to more than twice the average size of holdings reported by this group in the nine eastern states of the region. Similarly, the large holdings reported by the operator landlords in

TABLE 7. DISTRIBUTION OF OWNERS BY TENURE BY NUMBER OF FARMS OWNED, NORTH CENTRAL STATES, 1946.

Tenure groups and number of farms owned	Number reporting	Distribution within states													
		North Central Region	Illinois	Indiana	Iowa	Kansas	Kentucky	Michigan	Minnesota	Missouri	Nebraska	North Dakota	Ohio	South Dakota	Wisconsin
Number of cases.....	14,442	14,442	1,269	1,166	1,297	957	1,350	1,173	1,379	1,486	754	472	1,495	512	1,132
	(No.)	%	%	%	%	%	%	%	%	%	%	%	%	%	%
<i>All tenures</i>	12,499	86.5	90	85	85	82	77	92	89	87	80	85	91	86	93
1 farm.....	1,491	10.3	8	12	12	12	17	7	9	10	14	12	8	10	10
2 farms.....	1,391	2.7	3	2	3	5	5	1	2	3	5	2	1	3	1
3-4 farms.....	61	0.5	*	*	*	1	1	*	*	*	1	1	*	1	*
5 or more farms.....															
<i>Owner-operators</i>	6,382	92.6	94	94	93	92	85	93	94	94	91	87	94	93	96
1 farm.....	441	6.4	5	5	7	6	12	6	5	5	8	11	6	6	4
2 farms.....	62	0.9	1	1	1	2	3	1	1	1	1	2	2	1	*
3-4 farms.....	7	0.1	*	*	*	*	*	*	*	*	*	*	*	*	*
5 or more farms.....															
<i>Part-owner operators</i>	1,851	90.8	93	89	92	88	92	92	90	88	88	90	95	92	93
1 farm.....	168	8.3	5	11	7	11	8	7	10	11	10	9	4	5	7
2 farms.....	17	0.8	1	1	1	1	*	1	*	1	2	1	1	2	*
3-4 farms.....	2	0.1	*	*	*	*	*	*	*	*	*	*	*	*	*
5 or more farms.....															
<i>Operator landlords</i>	1,208	66.2	61	80	59	66	50	80	67	67	61	63	81	73	76
1 farm.....	450	24.6	30	16	32	23	32	16	28	23	27	25	16	21	21
2 farms.....	141	7.8	8	4	8	10	14	4	5	8	9	10	2	6	3
3-4 farms.....	26	1.4	1	*	1	1	4	*	*	2	3	2	1	1	*
5 or more farms.....															
<i>Nonoperating landlords</i>	3,058	82.9	80	85	82	77	77	91	86	85	76	86	87	80	88
1 farm.....	432	11.7	15	9	12	13	16	8	10	11	15	11	9	13	9
2 farms.....	171	4.6	5	5	6	8	6	1	3	4	7	2	4	5	3
3-4 farms.....	26	0.8	*	1	*	2	1	*	1	*	2	1	*	2	*
5 or more farms.....															

* Less than 0.5 percent.

the Plains States cause the regional average to suggest a greater difference in the size of the holdings of the two landlord groups than actually exists in the eastern part of the region.

Even with these differences, however, the data show that the two landlord groups had holdings of larger average size than owner-operators in all of the states except Nebraska, North Dakota and South Dakota, and in these states the operator landlords rank first in average acreage owned. A similar situation applies with regard to average farm values. Only in North Dakota did both of the two landlord groups fail to report ownerships of higher value than those reported by the owner-operator groups; and here again the operator landlords reported average values far higher than those reported by either the owner-operators or the part-owner operators.

AGE OF OWNERS

Forty-eight percent of the men and 72 percent of the women owners of the region are 55 years of age or older. (Table 8.) Generally speaking, the women concentrate in the older age brackets to a much greater extent than the men.

Comparison of the tenure groups shows that the part-owner operators are slightly younger on the whole than the owner-operators. The median for both groups, however, falls in the 45 to 54 age interval. The operator landlords average several years older than the owner-operators, and the nonoperating landlords on the whole are still older. The median for the operator landlord group falls in the 55 to 64-year interval while the median for the nonoperating landlords falls in the 65 to 74 age bracket. Only 28 percent of the part-owner operators are over 54 years of age; yet they hold next to the largest average acreage per owner (see table 6). This figure compares with 41 percent of the owner-operators, 64 percent of the operator landlords and 74 percent of the nonoperating landlords. One out of every eight operator landlords and one out of every five nonoperating landlords are 75 years of age and over.

Altogether, approximately 71 percent of the owners in the two landlord groups were over 54 years of age in 1946. This proportion can be compared with the 63 percent of the landlords (owners of rented farms) in this region who were reported in the 55-year-and-over age bracket in the 1920 study of farm land ownership.¹⁵

¹⁵ Cf. Howard A. Turner, The ownership of tenant farms in the United States, U. S. Dept. Agr. Bul. 1432. 1926. p. 30. Percentage data calculated from figures reported in table 17.

TABLE 8. DISTRIBUTION OF FARM OWNERS BY SEX AND TENURE BY AGE, NORTH CENTRAL REGION, 1946.

Sex and tenure groups	Number reporting age, sex and tenure (number)	Distribution by age groups						
		Under 25	25-34	35-44	45-54	55-64	65-74	75 and over
		(%)	(%)	(%)	(%)	(%)	(%)	(%)
Men owners								
Owner-operators ----	6,388	1	10	22	27	24	16	
Part-owner operators	2,190	1	13	27	31	19	9	
Operator landlords---	1,672	*	4	11	20	28	37	
Nonoperating land- lords -----	2,581	*	2	9	16	24	49	
North Central Re- gion -----	12,831	1	8	19	24	24	24	
Women owners								
Owner-operators ----	305	*	4	12	26	28	30	
Part-owner operators	39	2	--	13	41	31	13	
Operating landlords --	148	--	5	10	24	22	39	
Nonoperating land- lords -----	1,018	2	--	6	14	23	56	
North Central Re- gion -----	1,510	1	1	8	18	24	48	
All owners								
Owner-operators ----	6,693	1	9	22	27	24	14	3
Part-owner operators	2,229	1	13	27	31	19	8	1
Operator landlords---	1,820	*	4	11	21	27	25	12
Nonoperating land- lords -----	3,504	1	1	8	16	25	29	20
North Central Re- gion -----	14,246	1	7	18	24	24	18	8
United States -----	35,948	1	8	18	25	24	18	7

* Less than 0.5 percent

OCCUPATIONAL STATUS

As a part of the study every owner was asked to indicate what he regarded as his principal occupation. The occupations reported were classified into the five major groups reported in table 9. From the data summarized in this tabulation it appears that almost two-thirds of the owners are farmers, while an additional 10 percent are retired farmers (owners who have retired by turning over most or all of their farm work and management to others). These data raise the question, when does a farmer consider himself "retired"? As shown in the table, 20 percent of the nonoperating landlords called themselves "farmers," 17 percent of the operator landlords called themselves "retired."

An additional 3 percent of the owners reported that they were housewives, while 9 percent were business or professional workers (merchants, salesmen, doctors, lawyers, bankers, teachers, etc.), and 12 percent were classed as laborers (or others). This last group includes a wide variety of workers ranging from unskilled to highly skilled technicians.

TABLE 9. DISTRIBUTION OF FARM OWNERS BY TENURE AND SEX BY OCCUPATIONS, NORTH CENTRAL REGION, 1946.

Tenure and sex groups	Owners reporting	Distribution by occupation				
		Farmer	Retired farmer	House-wife	Business professional, public service or retired other*	Laborer and other**
	(number)	(%)	(%)	(%)	(%)	(%)
All owners-----	12,708	65.9	10.0	3.2	9.3	11.6
Owner-operators	6,202	79.7	1.4	0.8	4.9	13.2
Part-owner operators ----	1,893	95.0	0.9	0.1	1.3	2.7
Operator landlords ----	1,714	61.4	16.8	2.2	7.6	12.0
Nonoperating landlords ----	2,899	19.7	30.5	11.0	25.0	13.8
Men owners --	11,491	69.0	10.1	---	8.8	12.1
Women owners	1,138	35.0	9.3	35.3	13.2	7.2

* This group includes merchants and salesmen, professional men (doctors, lawyers, bankers, etc.) public servants (government employees and teachers) and retired nonfarmers. For convenience sake, it will be referred to throughout this manuscript as the "business and professional group."

** This group includes unskilled workers, white collar and factory workers and skilled technicians (carpenters, railroad engineers, plumbers, etc.) as well as a few cases of owners who did not fall into the other classifications.

More than one-fifth of the owners are nonfarmers. These owners hold their farms for a wide variety of reasons. The importance of some of these reasons is illustrated by the following comments made by nonfarmers in answering their questionnaires:

Profitable investment—"I have been a banker most of my life but have owned considerable land and have kept sheep for the past 25 years . . . This was mostly profitable and I enjoyed it as a side issue from my banking duties."

Home and garden—"I live here because I don't like living in town. I think this [5 acres] is more just a lot than a farm. I garden a little for myself but don't intend to make it a business unless I should leave my job in industry."

Job security—"This land is in my wife's and also mother-in-law's name with right of survivorship. Am leaving the land (70 acres) lay idle at present. Have worked in the shops most of the time but farmed when times were slack."

Holding land for future use—"These 23 acres are highway frontage [near a large city] and not suitable for farming. It is now idle except for some hay crop. It is my intention to divide this among four children."

Legal technicalities—"I only have a 20-acre farm [located almost 800 miles from the owner's urban residence]. Inherited from an uncle and cultivated by a nephew. I can sell in 2 years when my son reaches maturity."

Sentimental reasons—"Keeping farm only for sentiment. Always has been in the family."

Family considerations—"This property [40 acres] was purchased with the sole purpose of restoring the health of our son. We've tried to make the land show even a slight gain, but so far it's failed to do so . . . for this reason it is necessary for me to work in the city for an income."

Ninety-five percent of the part-owner operators regarded themselves as farmers. (Table 9.) In contrast, about one-fifth of the owner-operators indicated that they were not full-time farmers. Approximately one-sixth of the operator landlords reported that they were retired farmers, while close to 20 percent classified themselves as business or professional men or as laborers rather than as farmers. Only one-fifth of the nonoperating landlords considered themselves as farmers. Almost 40 percent were retired farmers or housewives, while 26 percent were business or professional men, and 14 percent were laborers or members of other occupations.

Slightly over one-third of the women owners—roughly the same proportion as reported themselves as owner-operators or operator landlords—indicated that they were farmers. (Table 5.) About one-fifth of the women claimed nonfarm occupations, while the rest were either retired farmers or housewives. Approximately one-fifth of the men reported nonfarm occupations.

The state data on occupational status show many interesting variations and inter-state differences. (Table 10.) The proportion of retired owners, for example, is highest in Iowa, Kansas, Nebraska and Illinois, and lowest in Kentucky, Michigan, Wisconsin, Indiana and Missouri. The proportion of owners who are business or pro-

TABLE 10. OCCUPATIONS OF FARM OWNERS, NORTH CENTRAL STATES, 1946.

States	Cases reporting (number)	Distribution by present occupation				
		Farmer	Retired farmer	House-wife	Business and professional	Laborer and other
		(%)	(%)	(%)	(%)	(%)
Illinois -----	1,087	57	13	5	12	13
Indiana -----	1,000	58	8	2	13	19
Iowa -----	1,167	65	16	4	9	6
Kansas -----	821	62	15	4	12	7
Kentucky -----	1,231	71	6	2	8	13
Michigan -----	1,036	65	6	2	9	18
Minnesota -----	1,221	72	10	2	7	9
Missouri -----	1,313	69	8	3	11	9
Nebraska -----	630	66	14	5	10	5
North Dakota -----	423	78	10	3	6	3
Ohio -----	1,327	54	10	3	10	23
South Dakota -----	426	68	11	5	10	6
Wisconsin -----	1,026	77	8	1	5	9
North Central Re- gion -----	12,708	66	10	3	9	12
United States -----	32,667	65	8	3	10	14

TABLE 11. RESIDENCE AND TENURE OF FARM OWNERS BY OCCUPATION, NORTH CENTRAL REGION, 1946.

Occupation groups	Owners reporting residence	Distribution by tenure and residence							
		Distribution by residence		Owner-operators		Operator landlords		Non-operating landlords	
		On a farm	Off farm	On a farm	Off farm	On a farm	Off farm	On a farm	Off farm
(No.)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
Farmers	8,199	94.6	5.4	78.1	2.6	11.6	0.9	4.9	1.9
Retired farmers...	1,230	66.6	33.4	7.8	0.5	20.7	2.1	38.1	30.8
Housewives	398	39.2	60.8	10.0	1.7	5.8	3.3	23.4	55.8
Business and professional	1,142	35.9	64.1	16.3	10.4	6.1	5.1	13.5	48.6
Laborers and others	1,429	68.0	32.0	48.6	9.6	11.3	3.1	8.2	19.2
All owners	12,398	81.5	18.5	59.8	3.9	11.8	1.8	9.9	12.8

professional men is highest in Indiana, Kansas and Illinois, and lowest in Wisconsin, Minnesota and North Dakota. The proportion who are skilled or unskilled laborers or technicians is high in Ohio, Indiana and Michigan— all states with numerous well distributed industries—while it is lowest in the largely rural states of North Dakota, South Dakota and Iowa.

RESIDENCE AND EXTENT OF ABSENTEE OWNERSHIP

A considerable proportion of the owners, particularly those who reported nonfarm occupations, did not live on farms. As table 11 indicates, only 82 percent of the owners reported that they lived on farms.¹⁴ Nearly all the farmers and about two-thirds of the retired farmers lived on farms. But considerably over one-half of the housewives and the owners in the business and professional occupational group did not live on farms. The great majority of the owner-operators and operator landlords lived on farms, but 56 percent of the nonoperating landlords reported off-farm residence. Almost one-half the retired farmers, over two-thirds of the housewives, nearly four-fifths of the business and professional owners and over two-thirds of the laborers who were nonoperating landlords reported nonfarm residences.

While a majority of the nonoperating landlords do not live on farms, less than one-half of those living off farms live in counties other than those in which their farms are located. Table 12 indicates that three-fourths of the nonoperating landlords live in the same counties as their farms, while 11 percent live in adjoining counties and 7 percent reside in other states. More than 10 percent

¹⁴ As part of the study, all owners were asked whether or not they lived on a farm. In most cases, an affirmative answer means that they lived on their own farms. Some of the retired farmers and others, however, lived on farms owned by others.

TABLE 12. DISTRIBUTION OF NONOPERATING LANDLORDS BY RESIDENCE, NORTH CENTRAL REGION, 1945.*

County of residence in relation to farms	Owners reporting	All nonoperating landlords	Women	Men
	(number)	(percent)	(percent)	(percent)
Same county	2,412	74.9	71.8	76.3
Adjoining county, same state	344	10.7	11.2	10.5
Non-adjointing county, same state	202	6.3	5.9	6.4
Same state, county unknown	21	0.6	1.0	0.5
Other state.....	242	7.5	10.1	6.3
Total	3,221	100.0	100.0	100.0

* Residence data derived from unpublished data of U. S. Census of Agriculture.

of the women nonoperating landlords as compared with 6 percent of the men lived in states other than those where their farms were located.

TENURE EXPERIENCE OF OWNERS

The owners have very different backgrounds of farm and non-farm experience. An indication of the scope of these differences is suggested by table 13, which summarizes the tenure experiences reported by the men farm owners of the region.¹⁵

Almost three-fifths of the owners had some nonfarm experience. Not all of this nonfarm experience involved off-farm work, however, because the term "nonfarm experience" was interpreted very broadly to include many types of experience besides nonfarm employment. The report of one Indiana owner illustrates the error one might fall into if he assumed that all the reported nonfarm experience represents immediately remunerative employment. He explained that his 12 years of nonfarm experience included 4 years in high school, 4 years in college, 2 years in the army during World War I and 2 years in an army hospital. In spite of this data limitation, the fact that only 45 percent of the part-owner operators reported nonfarm experience as compared with 67 percent of the nonoperating landlords suggests that nonfarm employment and experience has some effect upon ownership.

The data on tenure experience reported in table 13 show that the basic agricultural ladder experience (experience as a farm worker, a tenant and an owner-operator) was reported by over one-half of the part-owner operators, but by only about one-third of the owner-operators and operator landlords and by only a little over one-

¹⁵ The tenure experience reported by the women owners sometimes reflected the personal experience of the owner herself and sometimes that of her husband. Because of this confusion, no attempt was made to analyze or to report the tenure experience data for the women owners.

TABLE 13. SUMMARY OF TENURE EXPERIENCE REPORTED BY MEN OWNERS BY TENURE GROUPS, NORTH CENTRAL REGION, 1946.*

Tenure experience groups	Tenure groups					
	Cases reporting	All owners	Owner-operators	Part-owner operators	Operator landlords	Nonoperating landlords
	(No.)	(%)	(%)	(%)	(%)	(%)
Owners reporting nonfarm experience -----	5,619	59.1	62.2	45.2	55.8	67.2
Owners reporting farm experience only -----	3,890	40.9	37.8	54.8	44.2	32.8
Combinations involving: Basic agricultural ladder experience -----	3,479	36.6	34.0	53.2	35.1	26.9
Other patterns of farm experience previous to owner-operatorship -----	4,761	50.1	55.4	43.4	55.9	37.2
Owner-operatorship without previous farm experience---	755	7.9	10.6	3.4	9.0	4.5
Nonoperating landlord with previous farm experience but no experience as an owner-operator -----	390	4.1	**	**	**	23.8
Nonoperating landlords with no previous farm experience---	124	1.3	**	**	**	7.6
Number reporting -----	9,509	9,509	4,757	1,820	1,293	1,639

* For a more complete discussion of the data contained in this table see the section on "Ladders to Ownership."

** Not applicable.

fourth of the nonoperating landlords.¹⁶ When the cases of those owners who had some farm experience previous to becoming owner-operators are added to this group, it is seen that 97 percent of the part-owner operators, around 90 percent of the owner-operators and operator landlords and 64 percent of the nonoperating landlords are accounted for. The remaining owners for all the groups, ex-

¹⁶ To many people the term "agricultural ladder" implies steady progress toward farm ownership. Data were not collected in the study relative to the exact order in which owners had experience on the home farm, or as farm laborers, renters, off-farm workers, owner-operators or landlords. It is assumed that the vast majority of those with basic agricultural ladder experience were farm-reared or had worked as farm laborers first, then were renters and finally became owners. Many of the owners also have had nonfarm experience somewhere along the way, and many of them have become landlords.

Some of the owners have not followed the exact steps outlined above. Many broken patterns of experience are possible, though only a few are likely. The broken sequences usually involve individuals who have dropped down the ladder a rung or two after once becoming renters or owners. These cases do not undermine the basic agricultural ladder classification. The important point with this classification is that every individual is now an owner and has had each of the types of experience represented on the basic agricultural ladder. In the discussions of the agricultural ladder, the various tenure experience groups are made up of all owners reporting the combinations of tenure experiences listed, regardless of the sequence in which each type of experience occurred.

cept the nonoperating landlords, are individuals who became farm owner-operators without any previous farm tenure experience.

In analyzing tenure experience of nonoperating landlords, consideration must be given to two other tenure combination groups. The first of these groups accounts for almost one-fourth of the nonoperating landlords and is made up of owners who have had some farm experience, but who became landlords without ever being owner-operators. The final group representing 8 percent of the nonoperating landlords (1.3 percent of all owners) is made up of individuals who became landlords without ever having had any farm experience.

DEPENDENCE UPON RENTS FOR INCOME

Another important characteristic of the owners—more particularly the two landlords groups—involves their relative dependence upon the rents from their lands for income. Table 14 shows that 97 percent of the women and 63 percent of the men nonoperating landlords who are over the age of 50 are dependent upon the rents from their lands for the major portion of their incomes. Approximately 59 percent of the women and 49 percent of the men operator landlords are similarly dependent upon rents for income. The fact that more than half of the operator landlords expressed this dependence upon their rental receipts suggests that many of them have turned the active operation of their farm holdings largely over to tenants.

Of the landlord occupation groups, the retired farmers are most dependent upon rents for income. A majority of the housewife nonoperating landlords, the women farmers and the men nonoperating landlords who reported that they were farmers also reported dependence upon rents for most of their income. Among all the landlord groups except the men operators, the farms held by owners who are primarily dependent upon rents for income tend to be slightly larger than average.

TABLE 14. DEPENDENCE OF LANDLORDS WHO ARE OVER 50 YEARS OF AGE UPON RENTS FOR INCOME, NORTH CENTRAL REGION, 1946. DISTRIBUTION BY SEX AND TENURE.

Sex of landlords	Cases reporting (number)	Landlords over 50 years of age dependent upon rents from their land for major portion of their income		
		All landlords (percent)	Operator landlords (percent)	Non-operating landlords (percent)
Women.....	697	87.7	59.2	96.6
Men.....	2,931	57.6	49.3	62.9
Total	3,628	63.4	50.2	70.3

WHO ARE THE OWNERS?

Who owns the farm land in the Midwest? The data reported above show that about 94 percent of the farm land in the region is owned by individuals. The rest, for the most part, is held by public agencies and by corporate and private institutional owners. Of the individual owners about one out of every nine is a woman. Almost half of these owners are owner-operators, while 14 percent are part-owner operators, 13 percent operator landlords and 25 percent nonoperating landlords.

While the owner-operators are most numerous they tend to average several years younger in age than the two landlord groups; on the average they hold fewer farms and farms of smaller size, and their holdings are of lower values than those of the landlord groups. The landlords, and particularly the nonoperating landlords, account for a larger proportion of nonfarmers, a larger proportion of owners who have had nonfarm experience, and a larger proportion of owners with limited pre-ownership farm experience than do the owner-operator groups.

About 56 percent of the nonoperating landlords do not live on farms. Approximately half of this 56 percent live in counties or states other than those where their farms are located. About 70 percent of the nonoperating and 50 percent of the operating landlords who are over 50 years of age reported that they were dependent upon the rents from their farms for the major portion of their income.

HOW MIDWESTERN FARMS ARE OWNED

The kind and extent of rights in land held by an owner are important factors affecting how the land is used and the stability of the ownership. For example, when ownership is limited to the lifetime of the owner with the owner not permitted to name the heir, it becomes difficult to develop a long-term system of farming involving capital expenditures for terracing, buildings and other kinds of major farm improvements. When the holder of life interests is well along in years, the uncertainty of ownership may become serious to the tenant operator, who is never sure when the land will change hands due to death of the present life estate owner. In order to find out how midwestern farms are owned and some of the characteristics of various kinds of ownership, it is important to try to answer the following questions: What kinds of interests do owners have in the land they own? How are holders of these various interests distributed throughout the region? What is the tenure, age and sex of holders of these various interests? Information obtained from the census and ownership survey pertinent in answering these and closely related questions is included in this section of the report.

FARM OPERATORSHIP AND OWNERSHIP

Some indication of how farms are owned may be obtained from the United States census. This information on tenure of farm operators divides farm operators into the following four groups primarily on the basis of whether or not they own land: full-owners, part-owners, managers and tenants. According to census definitions, full-owners own all the land they operate; part-owners own part and rent part of their farm land; managers operate farms for others and are paid wages or salaries for their services; tenants operate land hired or rented from landlords. Thus, the ownership of all land in the latter two groups is completely separated from operation of the land. This is also true of the rented portion of part-owner farms.

For the entire region, 55 percent of the farms were operated by full-owners in 1945 (table 15). Yet these owners operated only about 35 percent of the farm land acreage of the region. In value this land represented 39 percent of all farm real estate in the Midwest. On the other hand, part-owners, who made up only 16 percent of the farm operators, operated 33 percent of the farm land in the Midwest. Managers operated less than 1 percent of the farms in the Midwest, but 2 percent of the land. The remaining 29 percent of the operators were tenants who operated 30 percent of the region's farm land, which was valued at 35 percent of the value of all farm real estate.

As a result of unusually high farm incomes during the World War II period, many farm tenants have become owners and many mortgaged farm owners have paid part or all of their debts. The 1945 census reported an all-time record number of operating farm owners in the Midwest. Altogether more than 1½ million mid-western farmers owned part or all of the land they operated. Farm owners constituted 70.6 percent of all farmers in the Midwest, of which 54.7 percent were full-owners and 15.9 percent were part-owners as stated above.

TABLE 15. FARMS, ACRES AND VALUE OF LAND OPERATED, BY TENURE OF OPERATOR FOR NORTH CENTRAL REGION, 1945.*

Item	Total for North Central Region	Proportion operated by			
		Full owners	Part owners	Managers	Tenants
	(number)	(percent)	(percent)	(percent)	(percent)
Farms -----	2,224,291	54.7	15.9	0.5	28.9
Acres -----	418,536,802	35.5	32.9	1.9	29.7
Dollars -----	\$23,089,616,393	39.1	23.7	1.9	35.3

* U. S. Census of Agriculture.

When ownership is considered from the viewpoint of farm acreages, part-owners become one of the most important tenure groups. Although only 16 percent of the midwestern farmers are part-owners, they farm one-third of all the farm land. About 45 percent of the land they operate is rented from landlords. Although 7 out of every 10 farmers in the Midwest own part or all of the land they operate, ownership varies from a low of 52 percent in Nebraska to a high of 88 percent in Michigan (appendix table 6). The proportion of farmers owning all of the land they operate (full-owners) varies from 25 percent in South Dakota to 72 percent in Michigan; the regional average is 55 percent. Similar variations are noted among the part-owners. They account for 40 percent of the operators in North Dakota but only 6 percent in Kentucky. The Midwest average is 16 percent. Tenancy has decreased materially in all states. Michigan is low—only 12 percent of its farmers are tenants. Nebraska has the largest proportion of tenant farmers—almost one-half of all farmers rent all of the land they operate. While there is some variation in the proportion of farms operated by managers, in no state does this proportion exceed 1 percent.

Farm acreages in the several tenure groups also vary materially among states (appendix table 7). Almost three-fourths of all farm land in Michigan and Kentucky is owned by the operator, although the proportion drops to 40 percent in South Dakota. Or, stated another way, 56 percent of all farm land in South Dakota is rented as compared with only 24 percent in Michigan and the Midwest average of 45 percent. The proportion of farm land operated by tenants also varies significantly from a low of 14 percent in Wisconsin to a high of 46 percent in Iowa. Altogether, 230 million acres of farm land in the Midwest—55 percent of all farm land in the area—are held by owner-operators. In addition, 124 million acres are rented by tenants and the remaining 64 million acres by part-owners. The proportion of land operated by managers ranges from less than 1 percent in Minnesota and Iowa to 3.9 percent in Nebraska and accounts for 1.9 percent of the farm land of the region.

NATURE OF OWNERSHIP INTERESTS

In using the census information, there is a tendency to lump all owners together into owner-operator and landlord groups. Yet there are important differences in kinds of ownership interests. Some owners, both owner-operators and landlords, hold complete interests in their land. These ownership interests may be subject to mortgage claims of a mortgagee or other specific claims such as mineral rights, but the basic ownership rights are held by the owner. In order to find out the prevalence of complete ownership interests in the Midwest, all landowners in the survey were asked this question: "How many farms, ranches, or plantations do you (and your wife or husband) own? (Do not include land held under

purchase contracts, partnerships, undivided interests, and life estates.)”

Other owners may be in the process of buying their farms through purchase contract arrangements. These owners have fewer rights in their land than complete owners (even though there may be mortgage claims against the complete owner farm), since the title to contract-purchased land remains with the seller. In order to find out the proportion of contract purchase arrangements in the Midwest, the following question was asked of all owners included in the survey: “How many farms, ranches, or plantations are you (and your wife or husband) buying under purchase contract arrangements?”

Another group of owners share interests in land by holding undivided interests with several individuals. In order to find out the prevalence of this kind of ownership, all owners in the survey were asked: “How many farms, ranches, or plantations do you own with someone else other than your wife or husband? (Refers to land which you hold in partnership or in which you own undivided interests with other people.)”

Still other owners may hold only life estate interests in land which last only for the lifetime of the owner and cannot be sold or otherwise transferred. To obtain information on life estates the following question was asked of all owners in the survey sample: “In how many farms, ranches, or plantations do you (and your wife or husband) own life interests only? (Refers to land which you use and control during your lifetime, but which you cannot sell, trade, or otherwise transfer.)”

PREVALENCE OF OWNERSHIP INTERESTS

About 84 percent of all farm owners answering the questionnaires reported holding complete ownership interests. Seven percent reported undivided interests, 6 percent had purchase contracts, and the remaining 3 percent held only life estates. An additional 4 percent of all those reporting held various combinations of ownership interests which are not shown in table 16. This includes those individuals who held interests in estates pending court settlement.

Table 16 shows that the kinds of ownership vary considerably among the North Central states. This variation is particularly noticeable with purchase contracts, which account for 12 percent of all the farms owned in Michigan but only 3 percent in Kentucky and Missouri. North Dakota and Minnesota also have a relatively high proportion of purchase contract farms—10 and 9 percent, respectively. Some variation also exists in owners of undivided interests. Ten percent of all owners in Nebraska and Kentucky reported holding undivided interests in their farms. Wisconsin was low with only 4 percent of the owners reporting undivided interests.

TABLE 16. KINDS OF OWNERSHIP INTERESTS REPORTED BY FARM OWNERS, NORTH CENTRAL STATES, 1946.

State	Ownership interests reported (number)	Complete ownership (percent)	Undivided interests (percent)	Purchase contracts (percent)	Life estates (percent)
Illinois -----	1,519	85.1	7.4	3.7	3.8
Indiana -----	1,324	85.1	6.0	6.6	2.3
Iowa -----	1,560	82.7	7.8	6.9	2.6
Kansas -----	1,222	83.3	8.4	5.7	2.6
Kentucky -----	1,804	84.1	9.5	3.1	3.3
Michigan -----	1,286	80.8	4.9	11.7	2.6
Minnesota -----	1,574	81.6	6.9	8.8	2.7
Missouri -----	1,740	87.2	6.4	2.7	3.7
Nebraska -----	979	81.9	10.4	3.7	4.0
North Dakota ---	569	79.8	7.9	9.8	2.5
Ohio -----	1,665	86.6	5.9	5.2	2.3
South Dakota ---	623	81.7	8.7	6.4	3.2
Wisconsin -----	1,232	90.5	3.9	4.4	1.2
North Central Re- gion -----	17,097	84.3	7.1	5.8	2.8

Considerably less variation was reported in life estates. Illinois, Missouri and Nebraska were high with 4 percent and Wisconsin low with 1 percent.

The different kinds of ownership interests did not vary greatly in size. Except for the undivided interest group, around one-third of the properties in all groups were between 70 and 139 acres in size. Between two-thirds and three-fourths of the properties were between 30 and 219 acres in size. (Appendix table 8.) Properties held as undivided interests averaged slightly larger than those held in other kinds of ownership interests.

TENURE OF OWNERS HOLDING VARIOUS INTERESTS

Owners reporting various ownership interests were grouped according to tenure of owner as summarized in table 17. These groupings show that of all the complete owners, 63 percent were owner-operators, 25 percent were landlords, and the remaining 12 percent were both operators and landlords of farm land. With life estates, the situation was reversed—landlords held 53 percent of all life estates reported and the owner-operators only 37 percent. On the other hand, 85 percent of all purchase contracts were held by owner-operators and only 10 percent by landlords.

TABLE 17. KINDS OF OWNERSHIP INTERESTS BY TENURE OF OWNER, NORTH CENTRAL REGION, 1946.

Kind of ownership interest	Cases reporting (number)	Proportion of various interests held by owners who are		
		All owner-operators (percent)	Operator landlords (percent)	Non-operating landlords (percent)
Complete ownership -----	11,984	62.5	12.3	25.2
Purchase contract -----	776	84.7	5.5	9.8
Undivided interest -----	610	52.1	10.8	37.1
Life estate -----	352	36.9	9.9	53.2
Combination of interests -----	633	46.2	31.1	22.7
All -----	14,355	62.0	12.5	25.5

Variations in ownership interests according to tenure of owner suggest certain explanations regarding the origin of particular interests. For example, purchase contract interests were largely confined to farm operators. These were largely the younger operators who were beginning to acquire land. Since they apparently did not have sufficient capital to buy land under mortgage arrangements, these farmers had to begin ownership through the purchase contract route. Most life estate interests were held by landlords and particularly the older landlords. This situation arises out of the nature of life estates, which come into existence mainly through wills and operation of state laws of descent. Life estates in terms of tenure and age of holders suggest instability of operatorship as well as ownership of the life estate land.

The high proportion of landlords indicates that most of the life estate land is rented. In addition to the usual problems which may accompany tenant operatorship, life estate land may involve additional problems. Ownership rights of the landlord are limited to use privileges during his lifetime, since he is not permitted to sell, bequeath or materially change the nature and value of the land. This limitation is necessary to protect the remainderman who will succeed the life tenant in ownership. Consequently, the landlord with life estate ownership interests is limited in his use of the land. Occasionally this type of landlord may be interested in exploiting the land during his lifetime, since he has no basic interests in the land to bequeath or otherwise transfer. Further interpretation of these and similar implications must await additional studies concerned with the effects of ownership interests upon the use of land and stability of ownership.

AGE OF OWNERS HOLDING VARIOUS INTERESTS

When grouped by age of owner, 80 percent of all owners of life estates are over 54 years of age, and 58 percent are over 64 years.

TABLE 18. KINDS OF OWNERSHIP INTERESTS BY AGE OF OWNER, NORTH CENTRAL REGION, 1946.

Kind of ownership interest	Ownership interests reported (number)	Owners					
		Under 25 years	25-34 years	35-44 years	45-54 years	55-64 years	65 years and over
		(%)	(%)	(%)	(%)	(%)	(%)
Complete ownership--	11,421	1	6	16	24	25	28
Purchase contract ---	754	2	19	35	28	12	4
Undivided interest---	567	1	9	22	23	23	22
Life estate -----	314	—	3	5	12	22	58
Combination of interests -----	604	1	8	17	27	23	24
All -----	13,660	1	7	18	24	24	26

(Table 18.) As indicated previously, the life estate group is an extremely uncertain kind of ownership since the life expectancy of over one-half of these owners is not over a few years at most.

The situation is different with holders of purchase contracts. One-fifth of them are less than 35 years of age, and an additional 35 percent between 35 and 44 years of age. Undivided interests, many of which arise out of estate settlements, are quite evenly distributed among the last four age groups beginning with the 35- to 44-year-old group.

OWNERSHIP INTERESTS OF MEN AND WOMEN

Ownership interests were next grouped by sex of owner to discover whether particular kinds of ownership interests were associated with women or men. These groupings, summarized in table 19, show 46 percent of all life estates were held by women even though women accounted for less than 12 percent of all owners reporting ownership interests. Approximately four-fifths of these women owners of life estates are nonoperating landlords.

The chief differences in interests between men and women owners are found in the purchase contracts, undivided interests and life estates (table 20). Purchase contract arrangements were about three times more prevalent among men than women. One possible explanation suggested earlier was that purchase contracts were used primarily by younger farmers to get a start toward ownership. The women owners were considerably older and fewer of them were farm operators, so few women owners held contracts to purchase. It is possible that the few who did hold purchase contracts may have taken over the contracts at the deaths of their husbands.

Life estates were five times more prevalent among women than men owners, and undivided interests were twice as numerous. Since

TABLE 19. SEX OF OWNERS HOLDING VARIOUS KINDS OF OWNERSHIP INTERESTS, NORTH CENTRAL REGION, 1946.

Kind of ownership interest	Cases reporting (number)	Various interests held by owners	
		Men (percent)	Women (percent)
Complete ownership -----	11,984	89.3	10.7
Purchase contract -----	776	95.8	4.2
Undivided interest -----	610	78.9	21.1
Life estate -----	352	54.5	45.5
Combination of interests -----	633	90.1	9.9
All -----	14,355	88.4	11.6

TABLE 20. PERCENTAGE OF KINDS OF OWNERSHIP INTERESTS HELD BY MEN AND WOMEN, NORTH CENTRAL REGION, 1946.

Kind of ownership interests	Ownership interests held by all owners	
	Men (percent)	Women (percent)
Complete ownership -----	84.3	76.9
Purchase contract -----	5.9	2.0
Undivided interest -----	3.8	7.7
Life estate -----	1.5	9.6
Combination of interests -----	4.5	3.8
Total number reporting -----	12,687	1,668

TABLE 21. PERCENT OF MEN AND WOMEN NONOPERATING LANDLORDS HOLDING VARIOUS KINDS OF OWNERSHIP INTEREST, NORTH CENTRAL REGION, 1946.

Kind of ownership interest	Landlords reporting (number)	Ownership interests held by nonoperating landlords	
		Men (percent)	Women (percent)
Complete ownership -----	3,026	72.2	27.8
Purchase contract -----	76	72.4	27.6
Undivided interest -----	227	55.5	44.5
Life estate -----	187	34.2	65.8
Combination of interests -----	143	74.8	25.2
All -----	3,659	69.3	30.7

husbands generally precede their wives in death, it seems probable that women acquired their life estate interests through the settlement of their deceased husbands' estates.

Approximately two-thirds of the women owners are nonoperating landlords, and as table 21 shows, they account for 31 percent of the owners in the nonoperating landlord group. This tabulation also shows that women land owners hold 66 percent of all life estates and 45 percent of the undivided ownership interests. Women landlords, however, have only 28 percent of the complete ownership and purchase contract farms.

Within the men landlord group, complete ownership interests appear most numerous with little differences noted among the other kinds of interests (table 22). The same general pattern of ownership interests held by women landlords discussed earlier in the case of women owners also prevails. Life estates and undivided interests account for about one-fifth of all ownership interests held by women landlords.

TABLE 22. PERCENTAGE OF KINDS OF OWNERSHIP INTERESTS HELD BY MEN AND WOMEN NONOPERATING LANDLORDS, NORTH CENTRAL REGION, 1946.

Kind of ownership interest	Proportion of men and women landlords holding various interests	
	Men landlords (percent)	Women landlords (percent)
Complete ownership -----	86.1	75.0
Purchase contract -----	2.2	1.9
Undivided interest -----	5.0	9.0
Life estate -----	2.5	10.9
Combination of interests -----	4.2	3.2
Total number reporting -----	2,536	1,123

MORTGAGE CLAIMS AGAINST OWNERSHIP

All of the foregoing kinds of ownership interests may be subject to certain claims of a mortgagee or creditor who lends funds to buy land. These mortgage claims stand between the owner and full and free ownership of his land. Although data are not available on mortgage debt of farms owned by landlords, their debts may be expected to be lower than debts against farms operated by owners. Estimates of owner-operators' farm mortgage debt for the North Central Region since 1910 show two major trends (appendix table 9). One trend of increasing mortgage debt began in 1910 and 1911, the earliest years for which mortgage data for the region are available. This trend ran through 1923. Beginning in 1924, farm mortgage

debt has shown a steady decline with the exception of one year, 1928, when the amount remained constant. This trend of decreasing mortgage debt is still in progress although there is some indication a new upward trend may be in the making. In 1947, farm mortgage debt in five North Central States (Ohio, Indiana, Michigan, Missouri and Kentucky) started upward. In 1948, all of these states plus Wisconsin continued their upward trend in farm mortgage debt.¹⁷

Thus, for the past quarter century, farm mortgage debt in the Midwest has followed a general pattern of reduction. Of course part of the decrease during the early 1920's and again in the early 1930's was due to foreclosures or assignments of farms to creditors. During the past few years, however, the decline in mortgage debt has meant greater equities in farms by their owners. The peak years of farm mortgage debt in the Midwest were 1923-24, when midwestern farmers owed over 6.8 billions of dollars on their land. By 1948 high farm incomes and yields enabled midwestern farmers to reduce their farm mortgage debt to 2.3 billion dollars—the lowest amount since 1911. In terms of dollars of similar purchasing power, the 1948 debt was about one-half that of 1911.

In 1948 there was only a 4 percent decrease in mortgage debt under the previous year. As stated earlier, six states showed a small increase. Thus there are indications that the mortgage debt may be close to the bottom and may again be rising following increased land prices. But averages may cover up differences in the actual situation. Current information does not show how much beginning farmers are going into debt and how fast older farmers are paying off old debts. However, available information indicates that about one-half of all farm sales are on a cash basis. This reduces the likelihood of later credit difficulties. Down payments on farms purchased on a partial credit basis average 40 percent of the sales price. Despite both debt reductions and the large cash down payments on new farm purchases, an increasing number of farms are carrying heavy encumbrances. More people went into debt to buy farms during 1946, for example, than any time since 1920. And in one-third of the credit-financed purchases, mortgages amounted to three-fourths of the purchase price. With land prices double the prewar average it is not difficult to see how these owners would be in serious difficulty if farm product prices again drop appreciably while farm costs tend to remain relatively high.

Certain financial weaknesses are suggested by the kind and amount of credit used to finance new purchases of farm land. An increasing proportion of short-term mortgage loans are being used to finance farm purchases.¹⁸ For example, in recent years, about three-fourths of all farm mortgage loans in the Midwest are for

¹⁷ Farm mortgage debt in the United States, 1940-47. BAE, USDA, Washington, D. C., November 1947. Also, release of May 1948, by same agency.

¹⁸ Data on file in the USDA Bureau of Agricultural Economics, Ames, Iowa.

terms of 5 years or less, and about one-third of these have no provision for amortization. Unless these types of mortgages are paid off rapidly while farm profits are up, the mortgages may fall due when net farm incomes have declined. In this event, farm owners may be faced with problems of refinancing their mortgages under unfavorable credit conditions.

HOW OWNERSHIP IS ACQUIRED

The problem of how farm ownership is or can be acquired is always of great importance to farm people. The problem often is simplified by gifts, inheritance or considerable family assistance. Usually, however, the process of acquiring full ownership involves many years of work and capital accumulation.

METHODS OF ACQUIRING FARM OWNERSHIP

Farm ownership in the North Central Region has been acquired through: (1) purchase, either from relatives or from non-relatives or possibly from both; (2) gift, marriage, or inheritance through will or estate settlement; (3) foreclosure or transfer under threat of foreclosure; (4) homesteading from either the federal or state governments; or (5) some combination of these methods. The data summarized in table 23 indicate that all of these farm ownership acquisition methods have been used extensively throughout the region.

TABLE 23. DISTRIBUTION OF FARM OWNERS BY METHOD OF FARM OWNERSHIP ACQUISITION, NORTH CENTRAL REGION, 1946.

Method of acquisition	All owners (percent)	Men (percent)	Women (percent)
Single methods			
1. Land purchase -----	67.1	70.8	38.0
a. -From relatives only -----	(11.0)	(11.5)	(7.0)
b. -From non-relatives only -----	(52.0)	(54.8)	(29.5)
c. -Both relatives and non-relatives -----	(4.1)	(4.5)	(1.5)
2. Gift or inheritance -----	11.7	8.1	40.2
3. Foreclosure -----	} 2.0	0.6	} 3.5
4. Homesteading -----		0.8	
5. Other or undetermined method -----		0.4	
Combinations of methods			
6. Combinations involving gift or inheritance -----	16.2	16.2	16.2
7. Combinations involving purchase from relatives but no gift or inheritance -----	0.7	0.7	0.3
8. Combinations involving no family assistance -----	2.3	2.4	1.8
Total -----	100.0	100.0	100.0
Number reporting -----	12,237	10,863	1,374

Most of the farms owned by men have been acquired through purchase, primarily from individuals (or corporate or public owners) not related to the buyer. The majority of the farms held by the women, however, have been acquired either by gift or inheritance or by a combination of methods involving gift or inheritance. The high proportion of the women with farms acquired through gift or inheritance reflects the tendency for farm women to outlive their husbands and the usual practice of husbands to bequeath the major portion of their estates to their widows.

Table 23 also shows that 71 percent of the men purchased all of their land and 24 percent acquired all or part of their land through gift, will or inheritance, as compared with 38 percent and 56 percent, respectively, for the women. Furthermore, only 2 percent of the men and 3.5 percent of the women acquired their farms by foreclosure, homesteading or some undetermined other method.

These proportions are not surprising. It seems probable that most of the individuals who received farms through foreclosure during the 1930's have long since found an opportunity to redeem their equities by selling their land. Fifty or sixty years ago homesteading would have accounted for a large proportion of the farms in the western part of the region. Today, however, very few of the original homesteaders still survive.

Combinations of land acquisition methods were reported by 18 percent of the women and 19 percent of the men. These combinations can be divided into three groups: (1) those involving some element of gift or inheritance, (2) those involving purchase from

TABLE 24. DISTRIBUTION OF MEN OWNERS BY SINGLE AND JOINT LAND ACQUISITION METHODS, NORTH CENTRAL REGION, 1946.

Method of acquisition	Proportion of men owners who acquired		
	All of their land by a single method	All of their land by combinations of methods involving the single method	All or part of land by methods involving the single method
	(percent)	(percent)	(percent)
1. Land purchase -----	70.8	16.8	87.6
a. -From relatives -----	(11.5)	(15.3)	(26.8)
b. -From non-relatives -----	(54.8)	(12.8)	(67.6)
c. -From both relatives and non-relatives -----	(4.5)	(*)	(*)
2. Gift or inheritance -----	8.1	16.2	24.3
a. -Gift only -----	(1.5)	(4.4)	(5.9)
b. -Will or estate settlement -----	(6.6)	(*)	(*)
3. Foreclosure -----	0.6	0.4	1.0
4. Homesteading -----	0.8	1.4	2.2
5. Other or undetermined method ---	0.4	2.0	2.4

* Not computed.

relatives but no gift or inheritance, and (3) those involving neither gift or inheritance nor purchase from relatives. The proportions of the men owners who used each acquisition method singly or in combination with other methods are compared in table 24. This table shows that approximately 88 percent of the men owners purchased all or part of their holdings. Almost 27 percent bought all or part of their land from relatives, and 28 percent acquired at least part of their lands through gift or inheritance.

The state data on the methods of farm acquisition reported by men (appendix table 10) show that the proportion of men ownerships acquired all or in part through gift or inheritance is highest in Illinois, Nebraska, Kansas and South Dakota. Two-thirds or more of the men who used this method of acquisition in all states except Wisconsin, Michigan and Ohio reported using their gifts and inheritances in combination with other acquisition methods. This situation reflects the steadily increasing average size of farms during recent decades as well as the tendency to divide farms among several heirs. Wisconsin, Michigan and Minnesota had the smallest proportions of owners reporting land acquisition through gift or inheritance. But these same states, Wisconsin in particular, had above-average proportions of men owners reporting purchase from relatives. This suggests that father-to-son land sales arrangements have been worked out in many cases as alternatives to transfer by inheritance. Iowa, Nebraska and Kentucky also reported above regional average proportions of owners acquiring land all or in part through purchase from relatives.

The data on the acquisition methods reported by the women are somewhat confusing (appendix table 11). They often refer to the methods used by the present owner's deceased husband or to the methods used by husband and wife as joint owners of the land rather than to the acquisition methods used by the woman owner herself. Even so, these data show numerous state variations. Over 60 percent of the women owners acquired all or part of their land through gift or inheritance in Illinois, Iowa, Kentucky, Missouri, Kansas, Nebraska and North Dakota. Less than one-half of the women owners reported this method of acquisition in Ohio, Michigan, Wisconsin and Minnesota. So far as the data on acquisition by homesteading and foreclosures are concerned, the data for men and women owners alike show the largest proportions of acquisitions by these methods in Iowa, Minnesota, North Dakota and South Dakota.

CHARACTERISTICS OF OWNERS USING VARIOUS ACQUISITION METHODS

The distribution of owners by method of acquisition by tenure and sex reported in table 25 indicates that a higher percentage of the owner-operators, both men and women, than landlords purchased their farms. Of the men almost 35 percent of the operator

TABLE 25. TENURE AND SEX OF OWNERS BY METHOD OF ACQUISITION, NORTH CENTRAL REGION, 1946.

Method of acquisition	All cases reporting		Proportion of owners							
	(No.)	(%)	Owner-operator		Part-owner operator		Owner-operator landlords		Nonoperating landlords	
			Men	Women	Men	Women	Men	Women	Men	Women
Gift or inheritance only	1,410	11.5	7.2	22.3	7.4	33.4	9.0	34.8	10.1	45.7
Combinations involving gift or inheritance	1,980	16.2	13.0	12.4	14.0	13.3	25.6	27.4	19.4	16.2
Purchase only	8,217	67.3	75.8	59.2	73.3	46.7	59.5	34.1	64.1	33.1
Combinations involving no gift or inheritance	357	3.0	2.0	1.1	3.8	3.3	5.1	3.7	3.9	1.4
Homesteading, foreclosure or other	246	2.0	2.0	5.0	1.5	3.3	0.8	---	2.5	3.6
Total cases	12,210	100.0	5,290	265	1,845	30	1,422	135	2,314	909

landlords and approximately 30 percent of the nonoperating landlords as compared with about 20 percent of the two owner-operator groups acquired all or part of their land through gift or inheritance. At the same time 62 percent of the women landlords, as compared with 35 percent of the women owner-operators and 47 percent of the women who are part-owner operators, obtained land through gifts or inheritances.

These distributions strongly suggest that many operator landlords would still be owner-operators and that many nonoperating landlords would be nonowners if they had not received a farm through gift or inheritance. This theory is supported by the fact that many owners do not receive their land by inheritance or gift until they have already established themselves on farms of their own or in nonfarm businesses. A farm obtained under these conditions makes it possible for the new owner to become a landlord by merely retaining his already established farm or business while he leases his newly acquired farm.

This suggests that many of the owners who did not report farming as an occupation may have acquired their lands through gift or inheritance. Table 26 lends a certain amount of credence to this view. Approximately 31 percent of the business and professional men, as compared with 26 percent of the farmers, 30 percent of the retired farmers, 63 percent of the housewives and 21 percent of the laborers, acquired their farms all or in part through gift or inheritance.

The high proportion of housewives who acquired their farms by gift or inheritance suggests that most of the members of this group are either the widows or daughters of the last male owner.

TABLE 26. DISTRIBUTION OF FARM OWNERS BY OCCUPATION AND BY METHOD OF FARM ACQUISITION, NORTH CENTRAL REGION, 1946.

Occupation groups	Cases reporting	Distribution by method of acquisition				
		Gift or inheritance	Combinations involving gift or inheritance	Purchase	Combinations without gift or inheritance	Foreclosure, homesteading, other
	(number)	(percent)	(percent)	(percent)	(percent)	(percent)
Farmers -----	7,191	8.9	17.0	69.7	2.1	2.3
Retired farmers---	1,072	8.5	21.4	62.6	3.2	4.3
Housewives -----	354	49.4	13.3	30.8	2.3	4.2
Business and professional	1,078	14.5	16.5	65.6	1.7	1.7
Laborers and others -----	1,262	10.7	10.4	76.3	0.6	2.0
All owners -----	10,957	10.9	16.5	68.1	2.0	2.5

Almost one-third of the business and professional men and slightly over one-fifth of the laborer group reported land gifts and inheritances. This helps to explain the presence of these nonfarmers in the ownership class. Equally important, however, is the fact that two-thirds of the business and professional men and three-fourths of the laborers who own farms chose to invest in land by purchasing all of their holdings. Some of these investment farms are probably held for strictly economic reasons, others because of the owner's affection for the old home farm or a nostalgic feeling toward rural life. A fair proportion of these owners, particularly among the laborer group, have farms that could be used as rural residences or for part-time farming. Often their purchase of farms has been prompted by plans for escaping from the congestion of the city and by the desire for such security as comes with farm ownership.

A higher proportion of retired farmers than of active farmers indicated that they had acquired land by gift or inheritance. Part of the reason for this is that some women owners classified themselves as retired farmers rather than as housewives. Age also is an important factor because retired owners frequently are older than active farmers and so have had a longer period in which to acquire land through inheritance or gift. Too much significance should not be assigned to this factor, however, because it seems likely that the receipt of gifts or inheritances has made it possible for many of these owners to retire—often at a younger age than they otherwise would have done.

Although the retired farmers are older, there is no evidence to indicate that they could have profited from a higher rate of land transfer through gift or inheritance in the past than at present. The proportion of the landlords in the region who received all their farm land by gift or inheritance increased from 11 percent in 1920 to 17 percent in 1946 (table 27.) The proportion who received all or part of their holdings by this method increased from 33 percent in 1920 to 38 percent in 1946.

These data, limited as they are, suggest that more rather than less land in the Midwest is now being transferred from one generation to the next through the processes of gift, will and inheritance. As the farm economy of the North Central Region becomes more stable and as the days of settlement and homesteading become more remote, it seems plausible to expect an even greater reliance upon gift, inheritance and other intra-family transfer arrangements in the passing of farm land from one generation to the next.

The data on ages at which the men in different acquisition groups first acquired farm land show that the median age for all methods except gift or inheritance falls in the 25 to 35 age interval. The median for this group falls in the less than 25-year age interval. Though a significant proportion of the owners who obtained land

TABLE 27. COMPARISON OF PROPORTIONS OF LANDLORD-OWNED FARMS ACQUIRED THROUGH GIFT OR INHERITANCE, NORTH CENTRAL REGION, 1920 AND 1946.*

Area	Landlords acquiring farms through gift, marriage or inheritance			
	All of farm by gift or inheritance		All or part by gift or inheritance	
	1920	1946	1920	1946
	(percent)	(percent)	(percent)	(percent)
Men -----	7	10	28	31
Women -----	34	44	62	62
Region -----	11	17	33	38

* The data for 1920 are from Howard A. Turner, The ownership of tenant farms in the United States, U. S. Dept. Agr., Bul. 1433, 1926. These statistics are based on a study of all landlords in 85 counties located in Illinois, Iowa, Kansas, Michigan, North Dakota, Ohio, South Dakota and Wisconsin.

from gifts or inheritances did so at an early age, it does not mean that they acquired their farms at an earlier age than those who obtained farms by purchase or other methods. Actually a large proportion of the owners in all the acquisition groups acquired ownership at an early age.

The owners who received gifts and inheritances were widely distributed over all the age groups. While 27 percent of these owners acquired land before they were 25, only 6 percent did so entirely from gifts or inheritances, and 3 percent who used this method of acquisition in combination with other methods reported

TABLE 28. DISTRIBUTION OF MEN OWNERS BY METHOD OF FARM ACQUISITION ACCORDING TO AGE AT FIRST ACQUISITION, NORTH CENTRAL STATES, 1946.

Method of acquisition	Cases reporting	Percentage distribution by age at first land acquisition				
		Under 25	25-34	35-44	45-54	55 and over
	(number)	(percent)	(percent)	(percent)	(percent)	(percent)
Purchase from relatives -----	1,248	19	46	24	9	2
Purchase from non-relatives -----	5,964	19	39	27	11	4
Purchase from both Gift or inheritance -----	489	29	53	15	3	
Homesteading, fore-closure and other -----	878	27	26	25	16	6
Combinations with gift or inheritance -----	198	27	35	17	14	7
Combinations without gift or inheritance -----	1,751	27	40	21	9	3
Combinations without gift or inheritance -----	335	33	46	15	5	1
All groups -----	10,863	22	40	25	10	3

acquiring their first land after they were 55.

Two other methods-of-acquisition groups, the individuals buying from non-relatives and the foreclosure and homesteading group, reported significant proportions of owners first acquiring land at late ages. Many of the older buyers in the first group are non-farmers who either buy land as an investment or purchase rural residence sites or small farms. The few owners who first acquired farms by foreclosure or homesteading after the age of 55 probably represent non-farm investors who acquired their lands through foreclosure.

USE OF GIFTS OR INHERITANCES OTHER THAN LAND

At the time the questionnaires were mailed out, it was realized that gift and inheritance of land and favorable purchase arrangements from relatives were not the only measures of family assistance. Accordingly, every owner was asked: "Have you *used* money or proceeds from property acquired through gift, will or estate settlement to purchase, improve or operate any of your land?" Some 18 percent of the owners reported that they had used moneys from inheritances other than land in this manner. Relative to their proportionate distribution, almost twice as many women owners as men in this group reported using funds from inheritances other than land for this purpose. (Appendix table 12.) Similarly concentration of women in the two landlord tenure groups is almost double that in the owner-operator groups. Recipients of non-land gifts and inheritances account for above-average proportions of the housewives, retired farmers, and business and professional men. The active farmers, representing two-thirds of all owners, reported use of less than their pro-rated share of these non-land gifts and inheritances. The laborers reported the least use of these "other" inheritances.

The fact that the landlord groups, and the housewife, retired farmer, and business and professional groups received more than their proportionate share of these inheritances is partly explained by the large proportion of these receipts going to the women owners. Even with this explanation, however, one is justified in asking: How many of the landlords who benefited from gifts or inheritances or from inheritances other than land owe their tenure status to this family assistance? How many of the retired farmers retired as a result of their receipt of these inheritances? How many business and professional men are in their businesses today because of family assistance, and how many obtained their farms by inheritances?

The relationship between method of farm acquisition and the receipt and use for farming purposes of inheritances other than land is tabulated in table 29. Almost one-third of the men and almost

TABLE 29. PROPORTION OF FARM OWNERS REPORTING RECEIPT OF GIFTS OR INHERITANCES OTHER THAN LAND, BY SEX AND BY METHOD OF FARM ACQUISITION, NORTH CENTRAL REGION, 1946.

Method of acquisition of farms	Men		Women	
	(number)	(percent)	(number)	(percent)
Gift or inheritance.....	742	32.7	431	48.0
Combinations involving gift or inheritance	1,507	28.9	183	41.0
Purchase	6,670	10.3	408	18.4
Combinations involving no gift or inheritance	290	14.1	23	17.4
Homesteading, foreclosure and other.....	166	10.2	35	20.0
All groups	9,375	15.2	1,080	34.1

one-half of the women who received their land by gift or inheritance also received other inheritances. A slightly smaller proportion of those who acquired their farms by combinations of methods involving gifts and inheritances reported using moneys acquired through gift or inheritance in purchasing, improving or operating their farms. Between one-tenth and one-seventh of the men and between one-sixth and one-fifth of the women dependent upon other acquisition methods reported the receipt and use of inheritances other than land. Apparently the beneficiaries of gifts and inheritances of farm land also benefit most from other inheritances.

HOW THE FARMS HAVE BEEN ACQUIRED

How have the individual owners in the Midwest acquired their farms? About two-thirds of them, 71 percent of the men and 38 percent of the women, obtained their farms directly by purchase. Some element of gift or inheritance entered into 28 percent of the ownerships; 24 percent of the cases involved men and 56 percent women. Homesteading and foreclosures were responsible for only 2 percent of the ownerships.

Comparison of the groups shows that the landlords benefited more from gifts and inheritances than the owner-operators, while housewives, business and professional men and retired farmers benefited more than the active farmers or laborers. The data on age at first acquisition show that the recipients of gifts and inheritances often acquire land at a slightly earlier than average age. Many, however, inherit or are given farms late in life and long after they have acquired farms by other means.

Approximately 18 percent of the owners reported using gifts or inheritances other than farm land to buy, improve or operate their farms. A high proportion of these other inheritances were received by owners who also were given or inherited land.

LADDERS TO OWNERSHIP

If there has been a theory of farm tenure progress in the United States and more particularly in the midwestern states it has been the theory of the agricultural ladder. The concept of the agricultural ladder, long recognized in a general way by students of farm tenure, is that one gains experience and accumulates the necessary funds to purchase a farm and the working capital to operate it by advancing from an unpaid family laborer or hired hand to tenant, mortgaged owner and finally full owner. About 30 years ago the concept of the agricultural ladder was formalized and described by W. J. Spillman.¹⁹ Since then it has been used and elaborated on by a number of students, including L. C. Gray²⁰ and B. H. Hibbard.²¹

The agricultural ladder offered a fairly realistic explanation of the farm ownership process in the Midwest a half century ago. Does this relationship still exist or is it true—as many people have asserted—that the ladder concept now has little relevance? Data on this general subject, showing the tenure experiences of the owners and indicative of the ladders or processes they used in climbing to ownership, were collected as a part of the agricultural ownership survey.

THE AGRICULTURAL LADDER

Basically the ladder concept has involved four fundamental steps or rungs. These rungs are often characterized by the letters P-H-R-O: "P" for a period (usually counted after the age of 14) when the individual is on the home farm doing unpaid family labor for his parents; "H" for hired hand; "R" for renter (sometimes designated as "T" for tenant); and "O" for owner. Other rungs to the ladder have often been recognized and used in descriptions of the functioning of the ladder. For instance, the tenant group is sometimes broken down into different types of tenants. An "N" classification is sometimes used to cover periods of nonfarm employment, an "MO" group is used at times to designate the mortgaged owners, a "PO" group may be used to indicate part ownership, and an "L" group frequently is used to designate time spent as a landlord.

The concept of a ladder with a number of separate rungs rising from the P and H rungs to the O and L rungs suggests a definite gradation of tenure status groups and implies that each successive group has higher tenure status than the preceding one. This concept is highly artificial and cannot be accepted without numerous reservations. As was observed in the 1923 Agricultural Yearbook article on "Farm Ownership and Tenancy"²²:

¹⁹ W. J. Spillman. "The Agricultural Ladder," *American Economic Review*, Supplement, March, 1919, pp. 29-38.

²⁰ L. C. Gray, C. L. Stewart, H. A. Turner, J. T. Sanders and W. J. Spillman. "Farm Ownership and Tenancy," *Yearbook of Agriculture*, 1923, pp. 547-561.

²¹ B. H. Hibbard and Guy A. Peterson. How Wisconsin farmers become farm owners, *Wis. Agr. Exp. Sta., Bul. 402*. 1928.

²² *Op. cit.*, p. 548.

"In the first place, the various successive stages may not always represent progress. It is probable that the various stages do represent some progress in independence of control, although not always, for an owner under heavy mortgage may be less independent than a tenant who is out of debt. Moreover, progress in independence does not always mean progress in well-being. Many a tenant who is subject to the supervision of a capable and honest landlord may be better off than a farm owner who has not sufficient experience or capital to operate his farm efficiently.

"Those who employ the ladder analogy frequently have in mind that each succeeding step indicates higher financial standing, or net worth. It is obvious, however, that a mortgaged owner farmer may have a smaller equity in the farm capital than a tenant or part-owner free of mortgage. Moreover, a tenant in some parts of the United States possesses more property on the average than an owner in other parts."

Although written more than a quarter of a century ago, the above quotation presents important problems in current consideration of the agricultural ladder concept. In Iowa, for example, the average valuation of machinery and livestock per farm (usually owned by the tenant) was reported by the 1945 Census as \$5,507. This is more than the total average value of the land, buildings, implements and livestock held by owner-operators in a number of other states.

Another problem arises from the fact that the ladder concept implies constant progress toward ownership. In actual practice many of the would-be owners who start out to climb the ladder never achieve their goal, while some of those who have climbed even as high as the top rung sometimes find themselves slipping to a lower rung. Except in studies involving limited numbers of cases, it is difficult to give much attention to the cases of those individuals who have climbed down the ladder, as well as up, or to the number of years of experience they reported on each tenure rung.

In studies involving all groups of farmers, both those who have succeeded and those who have failed to acquire and retain ownership should be considered. In studies involving farm owners only, however, less concern need be felt for the exact sequences in farm tenure experience. The fact that all of the individuals studied are farm owners suggests that those who did slip down the ladder did so only temporarily. In any case they are now owners, and one can assume that they have usually moved upward even though they may have had temporary reverses.

Despite its limitations, the concept of the agricultural ladder provides a useful tool of analysis for studying the farm ownership process. The testing of the ladder hypothesis usually involves one of two methods. One test involves an examination of the age distributions of the farmers found in the various tenure groups. The other test calls for examination of the tenure histories and experiences of the various farm operators.

AGES OF PEOPLE IN VARIOUS TENURE GROUPS

The agricultural ladder concept of the farmer beginning at the bottom and gradually climbing the ladder implies the passing of time. This gives each of the tenure status groups its own particular age distribution. The average age of the owner groups, for example, is older than that of the tenants. This is illustrated by table 30, which shows the proportion of the farm operators and workers in each age group in 1940 by tenure groups and sub-groups for the North Central Region. The underscored figures indicate the most dominant age groups for each tenure class. By following these underscored figures across the table it soon becomes obvious that the average age of each group increases as one climbs the ladder.

The arrangement of tenure group age data in this order tends "to exaggerate somewhat the impression of movement from group to group."²³ The steady increase in the percentage of the farmers in each age group who are owners is not due entirely to the rise of farmers from the hired hand and renter stages. Many farmers remain on their parents' farms for several years as paid or unpaid workers and then become owners without ever going through the renter stage. The high proportion of owners in the older age groups also is affected by the acquisition of ownership by persons with no previous farm experience and by the movement of many of the younger non-owners from farm to nonfarm employment. It has been further affected during recent decades by the increase in the average age of farm owners. (Appendix table 13.)

While there have always been a significant number of owners in the younger age groups, the proportion of owners who are over 45 years old increased from 57.3 percent in 1900 to 72.3 percent in 1940. During this same period the proportion of owners over 55 increased from 32.5 to 45.0 percent. This upward trend in age reflects both the increasing difficulties associated with the acquisition of ownership and the movements of thousands of rural youth, who were raised on farms and who have some farming experience, from agricultural to nonagricultural employment. By thus taking care of the majority of the tenants and wage hands who do not become owners, this population movement helps to explain the higher average age of the men who do buy land and continue as farm owners.

Further evidence of the working of the ladder is presented in table 31, which shows the proportion of the total number of farm operators (owners and tenants) in each age group who were classified as full or part-owners in the decennial censuses between 1890 and 1940. This tabulation indicates a concentration of tenants in

²³ Ibid., p. 550.

TABLE 30. DISTRIBUTION OF FARM TENURE GROUPS BY AGE, NORTH CENTRAL REGION, 1940 AND 1946.

Tenure groups	Cases reporting (number)	Percentage distribution by age groups					
		Under 25 (percent)	25-34 (percent)	35-44 (percent)	45-54 (percent)	55-64 (percent)	65-74 (percent)
Laborer and operating tenures*							
Unpaid family laborers	353,320	77	15	4	2	1	1
Wage workers	338,061	39	27	13	10	8	3
Share tenants	155,172	9	30	27	30	11	3
Cash tenants	190,465	5	25	28	23	15	6
Share-cash tenants	229,013	5	27	29	23	12	4
Part owners	300,633	1	10	24	33	23	9
Full owners	1,156,000	1	8	18	26	25	23
Owner tenure groups**							
Part-owner operators	1,969	1	13	27	31	19	8
Full owner operators	6,646	1	9	22	27	24	14
Operator landlords	1,772	†	4	11	21	27	25
Nonoperating landlords	3,273	†	1	8	16	25	29

* Data from 1940 Census.

** Data from regional farm ownership survey.

† Less than 0.5 percent.

TABLE 31. PROPORTION THAT OWNERS ARE OF ALL FARM OPERATORS IN EACH AGE GROUP CLASSIFIED BY THE CENSUS, NORTH CENTRAL REGION, 1890-1940.

Age groups	Operators classified by census as owners					
	1890	1900	1910	1920	1930	1940
	(percent)	(percent)	(percent)	(percent)	(percent)	(percent)
Under 25 -----	37.9	34.4	28.4	27.7	19.2	22.6
25-34 -----	55.3	50.4	48.9	44.8	35.7	35.5
35-44 -----	71.3	70.5	70.0	66.1	58.2	55.1
45-54 -----	81.2	79.1	81.2	79.2	74.3	69.8
55-64 -----	88.5	86.9	86.5	86.7	83.5	79.4
65 and over-----	88.5	91.5	92.1	91.1	89.9	88.3

the younger age groups and a concentration of owners among the older farmers. The rate of change from group to group or the rate of climb up the ladder, however, seems to have slackened during the past half century. In 1900, for example, 50.4 percent of the operators in the 25-34 age group were owners as compared with 35.5 percent of the operators in 1940 (table 31). Similarly in 1900 only 20.9 percent of the operators in the 45-54 age group were tenants as compared with 30.2 percent in 1940.

These data suggest that it took longer about 1940 for the average farmer to accumulate enough capital to buy a farm than was formerly the case. The reasons for this longer pre-ownership period were numerous and included such factors as higher land values, the disappearance of the homestead frontier and the longer periods spent in school by most farm youths. These reasons do not tell the complete story; for while the pre-ownership period was getting longer, the period of mortgage ownership also remained long. Since the owner does not have full ownership until his mortgage is paid off, this period together with the years required to accumulate the capital used as a down payment constitute the period spent in paying for the farm. This period can be short under favorable conditions, as it has been for many farmers since 1940. But when farms are bought with the use of liberal credit at high prices and are paid for out of reduced farm incomes in less favorable times, the period required to pay for the farm can be long indeed.

TENURE EXPERIENCE OF OWNERS

The general tenure experience of the men owners of the region was briefly summarized in table 13. From this tabulation and the more detailed breakdown of the tenure experience data reported in table 32 it appears that 37 percent of these owners had the basic

agricultural ladder experience (P/HRO and P/HNRO groups).²⁴ That is to say, 37 percent of the men started as unpaid workers on their parents' farms or as hired hands, then climbed to the renter rung of the ladder where they spent some time gaining experience and accumulating capital before acquiring ownership. Another 41 percent of the owners passed almost directly from workers or boys on their parents' farms to ownership (PO and PNO groups). More than half of these owners reported nonfarm experience and some of them had worked as hired hands. But the fact still remains that more of them skipped than used the tenancy rung of the ladder.

The difference between these two tenure experience groups is not always significant. The farmers who go directly from parental farm (or parental farm plus hired hand) experience to ownership frequently go with family assistance and after a period of farm internship that gives them close intimacy with the problems of farm operatorship. This point can be illustrated by the following four cases, in which the owners themselves described their tenure experiences.

(Indiana owner—PHRO group) "When I was married 53 years ago I went to work for \$200 a year for 2 years, rented 2 years, then I worked 10 years for \$200 per year and then I rented till I bought part of this farm and I kept working and buying more till now."

(Kansas owner—PHO group) "Worked for father on farm until 21. Father gave me two horses. Worked on a farm one year and came to Kansas in 1885 where I now live. Worked as farm hand for 5 years when I married and settled on homestead. Two years later purchased adjoining 160 acres. This 320 acres I still own but rent. By 1904 we had accumulated two sections (1280 A.) of land when we rented it all out and moved to our town . . . and built a home where I still live."

(Michigan owner—PO group) "We are the third generation to live on and work this farm. I have never received any regular wages, but only a share in the produce sold. I stayed at home and worked. I saved the place from foreclosure during depression. After my father's death 3 years ago I was given a deed to the farm."

(Illinois owner—PRO group) "Inherited 240 acres from my parents, lived on same 44 years. Paid rent to parents till about 10 years ago. Land willed to me for my lifetime, then to go to my children. . . . Bought 60 acres some 25 years ago, joining the above 240. Been renting land from neighbors the past 10 years, farming about 500 acres."

Only one of these four owners touched all four rungs of the ladder. Yet except for the element of inheritance their tenure experiences are very comparable.

Between these two tenure experience groups there is a third group representing 9 percent of the owners (H/RO and H/RNO groups). The men in this group reported pre-ownership experience as either renters or hired hands, but not as both. None of these owners reported initial experience on parental farms. In addition

²⁴ Cf. footnote 16, page 871.

to the above groups 8 percent of the owners reported that they had become owner-operators without any previous farm tenure experience (NO group). Their nonfarm backgrounds suggest that many of them may have acquired part-time farms.

The four experience groups described above account for over 94 percent of the men who reported their tenure histories. The remaining owners are nonoperating landlords who skipped over the owner-operator rung of the ladder. Slightly over 1 percent reported experience as farm renters, with or without other farm experience before becoming nonoperating landlords (RL and RNL groups). Another 2.5 percent reported experience on their parents' farm or as hired hands, but not as renters or owner-operators before becoming landlords (P/HL and P/HNL groups). Only 1.3 percent reported that they were nonoperating landlords without any previous farm tenure experience (NL group).

In addition to the above classification on the basis of farm tenure experience, tables 13 and 32 indicate that 59 percent of the owners reported nonfarm experience, which includes all the time since the individual owners were 14 years of age that cannot be classified as farm experience. With such a broad definition, this experience includes time spent in college, in the army and in other miscellaneous nonfarm work as well as actual employment on a non-agricultural job. The scope of this definition makes it easy to explain the large proportion of the owners who reported nonfarm experience. Even so, however, it seems probable that a large percentage of those who reported nonfarm experience have worked at nonfarm occupations and have in many cases used funds derived from such employment in their farming operations.

TENURE EXPERIENCE GROUPINGS

Before attempting to interrelate tenure experience with such other factors as occupation and method of farm acquisition, it is first necessary to identify the tenure experience groupings that will be used in this analysis. Basically, these groupings involve two types of owners. The first set of groupings applies to the more than 94 percent of the owners who have had owner-operator experience, while the second set applies to the nonoperating landlords who have never been owner-operators. Both sets apply only to men because no attempt has been made to classify the tenure experiences of women owners.

The group with owner-operator experience can be divided into the four principal groups described earlier: (1) the basic agricultural ladder group—referred to in the table headings as the P/HRO group; (2) the owners who have been hired hands or renters but not both—the H/RO group; (3) the owners who have jumped from what appears to be parental farm experience to ownership—the PO group; and (4) the owners who had nonfarm but no farm

TABLE 32. PATTERNS OF TENURE EXPERIENCE REPORTED BY MEN OWNERS, NORTH CENTRAL REGION, 1946.

Tenure experience groups*	Proportion of total	Tenure experience subgroups	Proportion of total
	(percent)		(percent)
1. Basic agricultural ladder experience			
a. Without nonfarm experience (P/HRO grouping) -----	20.4	PHRO and PHROL PRO and PROL HRO and HROL	6.8 11.5 2.1
b. With nonfarm experience (P/HNRO grouping) -----	16.2	PHNRO and PHNROL PNRO and PNROL HNRO and HNROL	7.1 6.2 2.9
2. Farm experience previous to owner-operatorship -----			
a. Without nonfarm experience (H/RO grouping) -----	2.0	HO and HOL RO and ROL	1.5 0.5
b. With nonfarm experience (H/RNO grouping) -----	7.2	HNO and HNOL RNO and RNOL	5.0 2.2
3. Owner operatorship without previous farm operating experience			
a. Without nonfarm experience (PO grouping) -----	17.7	PHO and PHOL PO and POL O and OL	4.4 13.2 0.1
b. With farm and nonfarm experience (PNO grouping) -----	23.2	PHNO and PHNOL PNO and PNOL	7.8 15.4
c. No previous farm experience (NO grouping) -----	7.9	NO and NOL	7.9
4. Nonoperating landlords with previous experience as farm operators but not as owner-operators			
a. Without nonfarm experience (RL grouping) -----	0.4	PHRL PRL HRL RL	0.1 0.2 0.1 **
b. With nonfarm experience (RNL grouping) -----	0.8	PHNRL PNRL HNRL RNL	0.3 0.3 0.1 0.1
5. Nonoperating landlords with no previous experience as farm operators			
a. Without nonfarm experience (P/HL grouping) -----	0.4	PHL PL HL L	0.1 0.2 0.1 †
b. farm and nonfarm experience (P/HNL grouping) -----	2.5	PHNL PNL HNL	0.8 1.1 0.6
c. No farm experience (NL grouping) -----	1.3	NL	1.3
All cases -----	100.0		100.0

* Each of the code letters used in describing these tenure experience groupings represents a period spent by the owner since his fourteenth birthday: P- on his parents' farm, H- as a hired farm worker, R- as a farm renter, N- in nonfarm experience, O- as an owner-operator, and L- as a farm landlord. In these groupings the landlords who have had owner-operator experience are combined in all cases with the owner-operator groups that have the same pre-ownership experience.

** Less than 0.05 percent.

† No cases reported.

experience previous to ownership. When these groups are divided again according to whether or not the owner has reported nonfarm experience, seven tenure experience groups emerge. These groups can be described in simplified code as P/HRO, P/HNRO, H/RO, H/RNO, PO, PNO and NO.

These code descriptions are meant to be suggestive, not all-inclusive. Actually they represent groupings of the 35 different possibilities in tenure experience patterns detailed in the first three parts of table 32. The logic of most of these groupings is obvious. A word, however, should be said about the two basic agricultural ladder groups. The concept of the ladder has usually involved the four rungs, PHRO. According to table 32, 14 percent of the owners reported this combination, while 18 percent reported a PRO and 5 percent an HRO pattern of experience. In actual practice both the P and H rungs represent periods during which the would-be owner accumulates farming experience and some capital. It seems logical therefore to assume that either type of experience might be substituted for the other as a part of the first rung on the ladder. This assumption plus the necessity for limiting the number of tenure experience groupings explains the composition of the P/HRO and P/HNRO groupings.

Groupings similar to those mentioned above can be used in classifying the smaller group of owners who have never been owner-operators. The first major group includes all those who reported experience as renters—the RL group—regardless of whether or not they had any other pre-ownership farm experience. The second group concerns those with either parental farm or hired hand experience but with no experience as a renter. This is the P/HL group. The final group reported no pre-ownership farm tenure experience. When these groups are divided according to whether the owner reported nonfarm experience, five groups emerge—the RL, RNL, P/HL, P/HNL and NL groups.

The classification of tenure experience groups outlined above provides a meaningful approach to the study of the agricultural ladder. This grouping scheme, however, represents only one of the many ways in which the 48 different patterns of tenure experience reported by the owners can be classified into a smaller number of groups.

The importance of many other factors or combinations of factors can be determined by rearranging the data reported in table 32. For instance, the data show that 76 percent of the owners had parental farm experience while 40 percent had experience as hired farm workers and 27 percent had both parental farm and hired worker experience. Only 40 percent of the owners reported renter experience, while 59 percent reported nonfarm experience. This last fact is particularly significant in that it indicates that half

again as many owners have nonfarm experience as have renter experience.

DIFFERENCES IN PATTERNS OF TENURE EXPERIENCE

Table 33 shows the distribution of the 12 tenure experience groupings by states and reveals a number of significant interstate variations. The number of owners reporting nonfarm experience, for example, is much higher in the eastern industrialized states of the region than in the western Plains States; the proportions in Ohio (73 percent) and Michigan (73 percent) are almost double those in Nebraska (42 percent), North Dakota (43 percent) and South Dakota (46 percent).

The basic agricultural ladder was used by almost half of the owners in the Plains States and Iowa as compared with less than a third of the owners in Michigan, Wisconsin, Ohio, Kentucky and Indiana. The PO and PNO groups account for a significant proportion of the owners in all the states, but especially so in Wisconsin (56 percent), Kentucky (49 percent) and Michigan (47 percent). The PNO group, which is made up primarily of farm boys who worked for a while in non-agricultural occupations and then returned to take over their home farms or to buy farms of their own, accounts for more than one-fourth of the tenure histories in Ohio, Indiana, Michigan, Wisconsin, Missouri and Kentucky. The NO group is relatively important in Ohio (17.5 percent), Michigan (15 percent) and Indiana (13 percent), but of only minor significance in the Plains States (2 to 5 percent). The non-farm investors (NL group) account for about 2 to 3 percent of the owners in Ohio, Indiana, Illinois and Iowa, but for only around 0.5 percent of the owners in Minnesota, Missouri and Wisconsin.

RELATIONSHIP TO TENURE AND OCCUPATIONAL STATUS

The relationship between owner tenure status and tenure experience is reported in table 34 and appendix table 14. These tabulations indicate that a high proportion of the part-owner operators (53 percent) and an above-average proportion of the operator landlords (35 percent) have had the basic agricultural ladder experience. While a lower than average proportion of the owner-operators reported P/HRO experience (34 percent), a higher than average proportion reported H/RNO, PNO and NO experience. Altogether 62 percent of the owner-operators as compared with 45 percent of the part-owner operators reported nonfarm experience. This fact together with the wide difference between the proportions of part-owner operators and owner-operators reporting basic agricultural ladder experience reflects (1) the large number of part-time farmers in the owner-operator group and (2) the heavy concentration of the part-owner operators in the Plains States where industrial and other nonfarm work opportunities have had less effect

TABLE 33. TENURE EXPERIENCE OF MEN OWNERS, NORTH CENTRAL STATES, 1946.

States	Cases reporting (number)	Distribution by types of tenure experience*											
		P/HRO (%)	P/HNRO (%)	H/RO (%)	H/RNO (%)	PO (%)	PNO (%)	NO (%)	RL (%)	RNL (%)	P/HL (%)	P/HNL (%)	NL (%)
Illinois	740	22.0	17.7	2.2	7.2	11.2	21.5	8.7	0.5	1.6	0.1	5.0	2.3
Indiana	732	15.6	17.5	1.5	7.8	11.9	25.9	13.1	0.3	0.3	0.1	3.1	2.9
Iowa	929	27.2	22.5	0.8	7.3	10.8	18.0	5.3	1.1	1.5	0.5	3.1	1.9
Kansas	558	28.0	20.3	2.3	3.9	16.8	18.3	5.2	0.2	0.7	0.2	2.9	1.2
Kentucky	781	18.8	12.8	3.6	5.8	20.2	28.9	6.4	0.2	0.4	0.5	1.4	1.0
Michigan	754	7.8	10.9	1.6	14.2	17.1	29.8	15.0	0.1	0.7	0.1	1.9	0.8
Minnesota	913	22.0	16.1	1.6	6.8	21.7	20.3	7.8	0.2	0.5	0.5	2.1	0.4
Missouri	604	20.0	19.3	2.1	5.7	18.1	25.8	4.8	—	0.4	0.3	2.9	0.6
Nebraska	540	32.8	18.5	1.8	3.0	21.7	15.2	2.4	1.3	1.8	0.2	2.2	0.9
North Dakota	627	26.9	13.2	3.0	7.8	25.7	2.9	2.4	0.2	0.3	1.0	2.7	1.1
Ohio	804	12.4	12.4	1.6	0.0	11.7	30.3	17.5	0.1	0.4	0.4	2.0	2.0
South Dakota	501	30.9	19.0	1.6	5.0	20.0	12.7	2.2	0.8	1.6	0.4	4.4	1.4
Wisconsin	975	11.7	13.6	2.7	6.8	23.7	30.3	7.0	0.2	0.2	0.5	0.9	0.4
North Central Region	9,518	20.4	16.2	2.0	7.2	17.7	23.2	7.9	0.4	0.8	0.4	2.5	1.3

* The composition of each of the 12 tenure experience groups used in this table is illustrated in table 32 and described in the accompanying text.

TABLE 34. TENURE EXPERIENCE OF MEN OWNERS BY TENURE GROUPS, NORTH CENTRAL REGION, 1946.*

Tenure experience groups**	Distribution by pattern of tenure experience				
	All owners	Owner-operators	Part-owner operators	Operator landlords	Nonoperating landlords
	(percent)	(percent)	(percent)	(percent)	(percent)
P/HRO -----	20.4	17.8	32.7	21.0	13.8
P/HNRO -----	16.2	16.1	20.5	14.1	13.1
H/RO -----	2.0	2.2	1.9	2.5	1.4
H/RNO -----	7.2	8.8	5.5	7.0	4.3
PO -----	17.7	17.8	20.2	19.6	13.1
PNO -----	23.2	26.7	15.8	26.8	18.4
NO -----	7.9	10.6	3.4	9.0	4.5
Landlords without owner-operator experience -----	5.4	-----	-----	-----	31.4
Total -----	100.0	100.0	100.0	100.0	100.0
Owners reporting--	9,509	4,757	1,820	1,293	1,639

* The distribution of owners in each tenure experience group by tenure status is reported in appendix table 14.

** The symbol "R" applies only to periods when the operator was a full-time renter or tenant. It does not apply to rental operations carried on by part owners.

upon tenure histories than in the eastern states of the region. Aside from the fact that almost a third of the nonoperating landlords had had no owner-operator experience, there were no marked differences between the tenure experiences reported by the two landlord groups.

The owners are classified by occupation and by tenure experience in table 35, which shows that 42 percent of the farmers and 38 percent of the retired farmers have had basic agricultural ladder experience. Another 42 percent of the farmers and 46 percent of the retired farmers reported PO or PNO experience. Both groups are fairly evenly divided between owners reporting nonfarm experience and those reporting no such experience.

As one would expect, most of the owners in the business, professional and laborer groups reported nonfarm experience while only a relatively small proportion of them (12 to 15 percent) reported basic agricultural ladder experience. More than half (52 percent) of the professional men who own farms and 39 percent of the businessmen had either PNO or P/HNO patterns of tenure experience. Inheritances and early associations with farm life explain many of these ownerships. Another 28 percent of the businessmen and 21 percent of the professional men are found in the NO and NL groups—the groups whose members became owner-operators or landlords without any previous farm tenure experience. Over half of the laborers (56 percent) reported PNO and NO patterns of experience.

TABLE 35. TENURE EXPERIENCE OF MEN OWNERS BY OCCUPATION, NORTH CENTRAL REGION, 1946.*

Tenure experience groups	Distribution by pattern of tenure experience				
	Farmers	Retired farmers	Businessmen**	Professional workers†	Laborers
	(percent)	(percent)	(percent)	(percent)	(percent)
P/HRO -----	24.5	21.1	3.8	3.9	3.6
P/HNRO -----	17.8	17.2	11.3	7.7	9.4
H/RO -----	2.2	2.4	0.3	0.3	1.3
H/RNO -----	6.7	7.1	8.7	3.2	10.7
PO -----	20.2	24.2	3.8	5.5	4.8
PNO -----	21.7	22.0	22.3	28.5	33.7
NO -----	5.5	4.1	18.0	8.7	22.6
RL -----	0.5	0.2	0.6	0.3	0.1
RNL -----	0.4	0.4	1.7	4.9	2.2
P/HL -----	0.1	0.5	2.6	1.9	0.4
P/HNL -----	0.3	0.5	16.5	23.2	7.9
NL -----	0.1	0.3	10.4	11.9	3.3
Total -----	100.0	100.0	100.0	100.0	100.0
Owners reporting..	6,679	1,005	345	310	938

* The occupational distribution of the owners by tenure experience is reported in appendix table 15.

** Includes merchants and salesmen.

† Includes professional men, public service workers and retired nonfarmers.

Classification of the tenure experience groups by occupational status (appendix table 15) shows that more than two-thirds of the owners are farmers in all except the NO and the last four nonoperating landlord groups. Almost half of the owners in the NO group are nonfarmers, the largest number being laborers. This suggests that a major proportion of the laborers, two-thirds of whom are classified as owner-operators, are in reality part-time farmers or the owners of rural residences and gardens.

The occupational data for the last four of the five nonoperating landlord groups that reported no owner-operator experience show a heavy concentration of ownership in the hands of the business and professional men and the laborers. It is understandable that some of the landlords who had farmed as renters or who had been raised on farms before becoming nonoperating landlords may have regarded themselves as farmers. A small proportion of nonoperating landlords who reported no farm work or operator experience also described themselves as farmers.

TENURE EXPERIENCE AND METHOD OF ACQUISITION

Going from occupational status to method of acquisition, it appears from table 36 that the owners without nonfarm experience benefited somewhat more from gifts and inheritances than those who reported this type of experience. Of the owners with owner-operator experience, a larger proportion (33 percent) of those who

went directly from parental farm experience to ownership benefited from gifts or inheritance than did any other group. An additional 23 percent of the owners in this group bought all or part of their farms from relatives. Next to the PO group the PNO (26 percent), the P/HRO (24 percent), and the H/RO (22 percent) groups benefited most from gifts and inheritances.

The importance of inheritances or gifts as a method of acquisition for the PO and PNO groups might easily be supposed. It is surprising, however, that this method accounted for only 33 percent of the PO group when it was accounting for 26 percent of the PNO group. While the owners in this first group often stay on the parental farm until they either receive the farm or find it possible to buy a farm—frequently with family help—many of the owners in the second group look to nonfarm employment for part or all of the savings they need to start as owners.

Much the same situation applies to the P/HRO and P/HNRO groups. Many of the owners in the first group stayed on the farm because of their prospects for receiving farms by inheritance or gift. Many of the owners in the second group, however, deliberately turned to nonfarm employment in the hope that they could accumulate savings faster there than in agriculture. Although most of the NO group reported acquiring their farms by purchase, 15

TABLE 36. TENURE EXPERIENCE OF MEN OWNERS BY METHOD OF FARM ACQUISITION, NORTH CENTRAL REGION, 1946.

Tenure experience	Cases reporting	Distribution by general method of acquisition				
		Gift or inheritance	Combinations with gift or inheritance	Purchase	Combinations without gift or inheritance	Homesteading, foreclosure, or other
	(number)	(%)	(%)	(%)	(%)	(%)
Owners with owner-operator experience -----	8,065	6.7	16.5	72.5	2.9	1.4
P/HRO -----	1,739	5.7	17.9	72.5	2.8	1.1
P/HNRO -----	1,422	4.4	12.9	80.5	1.4	0.8
H/RO -----	165	8.5	13.4	72.1	4.8	1.2
H/RNO -----	597	5.7	6.5	81.7	3.6	2.5
PO -----	1,495	10.1	23.2	61.2	3.7	1.8
PNO -----	1,971	7.0	18.6	69.6	3.2	1.6
NO -----	676	6.5	8.9	81.1	2.5	1.0
Owners without owner-operator experience -----	520	12.1	17.1	66.4	1.3	3.1
RL -----	77	16.9	9.1	71.4	*	2.6
RNL -----	71	12.7	22.5	60.6	1.4	2.8
P/HL -----	34	17.6	26.5	47.1	8.8	*
P/HNL -----	222	8.6	20.3	67.5	0.4	3.2
NL -----	116	13.8	10.4	69.8	1.7	4.3

* No cases reported.

percent reported inheritance of all or part of their land.

According to table 36, 29 percent of the nonoperating landlords who have never been owner-operators, as compared with only 23 percent of the owners who have had owner-operator experience, were given or inherited farm property. Of the nonoperating landlord groups the P/HL (44 percent) and the RNL (35 percent) groups reported large proportions of their ownerships acquired in this manner. Approximately 24 percent of the NL group, the landlords with no pre-landlord farm experience, acquired all or part of their farm land by gift or inheritance. Over 4 percent of the NL owners reported acquiring their farms by foreclosure.

The data on inheritances other than land (appendix table 16) show that these inheritances were distributed between the various tenure experience groups in approximately the same proportions as were the inheritances of land. Among the owners with owner-operator experience, the P/HRO group (17 percent) benefited slightly more than the PO and PNO groups and considerably more than the H/RO, H/RNO and NO groups.

Among the five special nonoperating landlord groups without owner-operator experience, the NL group reported the highest proportion (20 percent) of owners using nonfarm inheritances for farming purposes. Since this group is largely composed of non-farmers with available capital for investment, it is not surprising that a high proportion of its members reported inheritances other than land. Except for the P/HL groups a high proportion of all the other groups also reported use of non-land inheritances. The lack of other inheritances received and used by the P/HL groups is largely compensated for by the inheritances of land reported by the members of the group.

Table 37 reports the ages at which the owners in the various tenure experience groups first acquired ownership. For the groups with owner-operator experience, the median age in all cases falls in the 25 to 34-year interval. There was considerable variation between groups, however. Approximately 87 percent of the PO group and 65 percent of the PNO group became owners before they were 35. This compares with 58 percent of the P/HRO, 47 percent of the P/HNRO, 77 percent of the H/RO, 54 percent of the H/RNO and 56 percent of the NO owners. These data suggest that non-farm experience retarded rather than helped the men to acquire ownership at an early age. The data hint, however, that at least some of the 42 percent of the PO group and the 35 percent of the H/RO group who became owners before they were 25 probably were able to do so as a result of gifts, inheritances or other special family help.

For the five special nonoperating landlord groups, the median age at which land was first acquired falls in the 35 to 44 age in-

TABLE 37. TENURE EXPERIENCE OF MEN BY AGE AT WHICH LAND OWNERSHIP WAS FIRST ACQUIRED, NORTH CENTRAL REGION, 1946.

Tenure experience groups	Cases reporting	Distribution by age group intervals				
		Under 25	25-34	35-44	45-54	55 and over
	(number)	(%)	(%)	(%)	(%)	(%)
P/HRO -----	1,920	11	47	30	10	2
P/HRNO -----	1,516	8	39	33	16	4
H/RO -----	189	35	42	18	4	1
H/RNO -----	676	14	40	27	14	5
PO -----	1,676	42	45	10	2	1
PNO -----	2,191	17	48	24	9	2
NO -----	752	17	39	29	12	3
RL -----	36	3	22	39	30	6
RNL -----	73	7	19	40	23	11
P/HL -----	36	53	22	14	6	5
P/HNL -----	243	11	35	31	16	7
NL -----	124	12	27	35	20	6
Region -----	9,432	19	43	25	10	3

interval for the RL, RNL and NL groups. The median falls in the 25 to 34 age interval for the P/HL group and in the under-25-year interval for the P/HRNO group. In many ways these last two groups mentioned are comparable to the PO and PNO groups in inheritance and family assistance. A few of the owners in the PNL group may have grown up on farms, have gone into nonfarm work and later acquired farms which they hold for investment, security or sentimental reasons. Some of these owners have had plans for becoming farmers but have never got around to returning to their farms as owner-operators. Data such as those presented in tables 35 and 36, however, suggest that the majority of these owners acquired their farms at an early age, frequently by inheritance or gift.

IMPORTANCE OF THE AGRICULTURAL LADDER

The data on tenure experience suggest that the basic ladder concept still has considerable meaning for a significant proportion of the farm owners. This is particularly true of the operating owners who reside in the areas least affected by contact with the industrial and nonfarm labor market. Nonfarm employment is a decidedly important factor in many areas, particularly in the eastern states of the region. Data are still needed, however, to show the exact importance of this nonfarm experience factor. Is it a stepping stone to ownership, a stumbling block that retards the ownership process, or merely an incidental item?

Family assistance and inheritances in ownership acquisition are the principal factors now competing with the basic agricultural ladder concept in explaining the road to ownership. As the agricultural economy becomes more stable in the North Central Region, it is

reasonable to assume that family assistance will become a still more important factor in helping young men to become owners. This will be particularly true if the capital investment costs of ownership continue to rise and if new means are not provided for helping farm boys to become owners of going farm units without relying on nonfarm employment.

EXTENT AND CONCENTRATION OF OWNERSHIP

In a study of agricultural land ownership one must consider the number, acreage and value of the farm properties held by various types of owners. While the census has regularly reported data on the size of farm operating units, it has collected no data relative to the extent of ownership holdings since 1900. This lack of factual data on ownership has made it difficult to give reliable answers to the many questions involving the extent and concentration of land ownership.

So far as the Midwest is concerned now, it appears that the more important cases of land ownership concentration involve holdings of forest or wild lands, mineral lands, or range lands rather than farm cropland. Instances of concentration in farm land ownership nevertheless do exist. The collection and reporting of data on this situation constitute one of the purposes of this study.

LAND HOLDINGS BY TENURE AND OCCUPATIONAL GROUPS

Consideration has been given to the distribution of the number of farms, the farm land acreage and farm real estate values among the four owner tenure groups (table 6). These data indicated that relative to their numbers the operator landlords own a larger proportion of the farms, acreage and value than does any other tenure group. The operator landlords are closely followed in relative importance by the nonoperating landlords, with the owner-operator group accounting for the smallest average holdings per owner.

Part of this concentration of ownership in the hands of the two landlord groups can be attributed to the fact that they are older age groups than the owner-operators. As was indicated in table 8, the median age for the two owner-operator groups falls in the 45 to 54-year interval, while the median age of the operator landlords falls in the 55 to 64-year interval and that of the nonoperating landlords in the 65 to 74-year interval. Many of the older owners have used the additional time represented by their more advanced ages to advantage in accumulating and building up their farm holdings. The operator landlords around 65 years of age have often reached their lifetime peak in farm property ownership. Many of the nonoperating landlords who are 65 years of age or over, especially those who are retired farmers, have probably passed this peak. Many of these owners have transferred part of their holdings to others.

Another reason for the larger holdings held by the landlords than the owner-operator groups is that the landlord groups contain a significantly larger proportion of retired farmers and business and professional occupation owners than do the owner-operator groups (table 9). As table 38 indicates, these two occupational groups reported farm ownerships of larger than average size and higher average value than those held by the other occupation groups.

The distribution by states of the total farm acreage by occupation groups (appendix table 17) tends to verify the regional findings reported in table 38. The farms of the largest average size are held by either the retired farmer or the business and professional group in all the states except Nebraska and South Dakota. In these two states the largest farms are held by owners who classified themselves as farmers. In eight of the states both the retired farmer and business and professional groups have farms of larger average size than the farmer group. In every case except South Dakota, the laborer group holds the farms of smallest average size. Some indication of the range in farm sizes across the region is suggested by the fact that the laborer-owned farms average less than 50 acres each in Michigan, Indiana and Ohio as compared with over 200 acres each in Nebraska, North Dakota and South Dakota. Similarly the average farmer-owned holding contained only slightly over 100 acres in the three easternmost states of the region as compared with average holdings of over 500 acres in Nebraska, North Dakota and South Dakota.

The distribution of ownership holdings by acreage intervals tabulated in table 39 indicates a wide but relatively consistent distribution of farms by size for both men and women owners and

TABLE 38. COMPARATIVE DISTRIBUTION OF NUMBER OF FARM OWNERS, ACRES AND VALUE OF LAND OWNED BY PRINCIPAL OCCUPATION OF OWNER, NORTH CENTRAL REGION, 1946.*

Owners, acres and value	Cases reporting	Distribution of acres, value and owners				
		Farmers	Retired farmers	Housewives	Business and professional	Laborers and others
	(number)	(%)	(%)	(%)	(%)	(%)
Owners	12,708	65.9	10.0	3.2	9.3	11.6
Acres owned	12,695	70.4	11.7	2.8	10.1	5.0
Value of farm real estate.....	11,933	66.4	12.9	3.3	11.3	6.1
Average acres per owner.....	12,699	198 acres	218 acres	164 acres	201 acres	80 acres
Average value per owner....	11,933	\$12,247	\$16,583	\$13,146	\$14,926	\$6,393

* Cf. appendix table 17 for a distribution of acreage data by occupations by states.

TABLE 39. OWNERS BY SEX AND OCCUPATION, BY ACRES OWNED, NORTH CENTRAL REGION, 1946.

Occupation and sex	Cases reporting	Distribution by acreage intervals							
		Under 30	30-69	70-139	140-219	220-499	500-999	1000-1499	1500-over
	(No.)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
Sex									
Men.....	11,492	11.3	15.6	31.1	20.6	15.7	3.9	0.9	0.9
Women.....	1,134	9.2	15.9	31.3	24.0	15.2	3.5	0.8	0.1
Both.....	12,626	11.1	15.6	31.2	20.9	15.6	3.9	0.9	0.8
Occupation groups									
Farmers.....	8,323	6.7	15.4	33.7	22.2	16.2	4.1	0.9	0.8
Retired farmers.....	1,260	4.1	9.7	32.4	25.6	21.5	4.7	1.2	0.8
Housewives.....	402	10.2	16.4	28.1	26.1	14.4	3.5	1.0	0.3
Business and professional.....	1,168	16.1	13.9	24.4	19.3	18.7	5.3	1.0	1.3
Laborers and others.....	1,473	38.5	23.2	21.8	9.9	5.0	1.0	0.3	0.3

for all of the occupation groups except the laborers. A relatively high proportion of the farms owned by the laborers are comparatively small in size.

The acreage data for the laborer (and other occupation) group suggests that at least two types of laborers are involved. The larger size of the laborer-owned farms in the western portion of the region hints that most of these farms are owned by skilled workmen (carpenters, railroad engineers, etc.) who are nonoperating landlords. On the other hand, the small size of the average laborer-owned farm in the industrial and mining areas of Indiana, Kentucky, Michigan, Ohio and Wisconsin, suggests ownership by laborers who are part-time farmers. The data reported in table 40 tend to substantiate this hypothesis. The largest concentration of laborers is found in the eastern group of states, and almost two-thirds of the laborer-owners in these states are owner-operators as compared with about half of the laborer-owners in the middle group of states and a little over a third in the four Plains States. This concentration

TABLE 40. DISTRIBUTION OF LABORER (AND OTHER) OCCUPATIONAL GROUP BY TENURE OF OWNER, BY SUB-REGIONS OF NORTH CENTRAL REGION, 1946.

Tenure groups	Indiana, Kentucky Michigan, Ohio and Wisconsin	Illinois, Iowa, Minnesota and Missouri	Kansas, Nebraska North Dakota and South Dakota
	(percent)	(percent)	(percent)
Owner-operator groups---	65.5	50.8	38.5
Operator landlords-----	15.8	11.9	7.4
Nonoperating landlords---	18.7	37.3	54.1
	100.0	100.0	100.0
Number reporting-----	920	437	122

of small laborer-owned holdings in the owner-operator tenure group helps to account for the smaller-than-average size and value of the farms owned by this group.

INCREASING SIZE OF THE AVERAGE FARM

Increased mechanization and other technological advances in farming during recent decades have made it both feasible and desirable for many midwestern farmers to expand the scale of their farming operations. According to the census, the size of the average farm operating unit in the region increased from 140 acres in 1900 to 188 acres in 1945 (appendix table 18). The largest increases in average farm sizes are reported in the four Plains States. But some increase in average size since 1900 is reported for all of the states except Kentucky; and even in Kentucky the average farm (census farm including croppers) was larger in 1945 than in 1920.

While there has been an increase of 48 acres in the size of the average farm in the region since 1900, many owners still operate farms that differ very little in size from those operated by their grandfathers in 1900 or by their fathers in 1920. It is a marked increase in the size of the units held by a small proportion of the farm operators rather than a smaller general increase in the size of most farms that explains the higher average farm sizes of 1945.

According to table 41, the proportion of census-enumerated

TABLE 41. PROPORTION OF FARM OPERATING UNITS IN DIFFERENT SIZE GROUPS BY CENSUS YEARS, NORTH CENTRAL REGION.

Size groups	1920	1930	1940	1945
	(percent)	(percent)	(percent)	(percent)
Under 10 acres.....	3.2	3.8	5.6	6.0
10 - 99.....	37.9	35.0	35.3	32.6
100 - 174.....	31.0	30.8	28.9	28.3
175 - 259.....	12.7	13.6	13.1	13.8
260 - 499.....	11.2	12.2	12.1	13.4
500 - 999.....	3.0	3.6	3.6	4.2
1000 - and over.....	1.0	1.0	1.4	1.7
Total.....	100.0	100.0	100.0	100.0

farms in the 175- to 499-acre groups increased from 24 to 27 percent between 1920 and 1945. The proportion of farms having more than 500 acres increased from 4 to 6 percent. During this same period there was also a significant increase in the number of farms containing less than 10 acres. Meanwhile the proportion of farm operating units containing from 10 to 174 acres declined from 69 to 61 percent of the total.

The increase in the proportion of very small farms indicates a trend toward parcellation of holdings. This trend is an outgrowth

of the suburbanization movement and reflects the activity of many urban workers in acquiring rural home-sites where they sometimes practice part-time farming. The increase in the proportion of large operating units, on the other hand, suggests a trend toward more concentration in ownership.

CONCENTRATION OF OWNERSHIP

As has been pointed out, ownership concentration appears where ownerships involve several farms (or farm tracts) or large acreages. The acquisition of these large tracts and the equipment needed to operate them usually requires sizable amounts of capital. This being true, it is not surprising that the well established farmers and nonfarm investors have often been responsible for the trend toward increased concentration in ownership. This competition in the land market is seldom appreciated by the less favorably situated farm operators who are striving to acquire farm units of family size. Their reaction is reflected by marginal notes such as the following from the questionnaires:

(Illinois farmer) "The conditions in this locality find the 'city man' owning and buying all the land. Doctors, lawyers and retired businessmen are the only ones who can pay from \$300 to \$500 an acre for this land."

(Kansas farmer) "What is wrong with the set-up over the state, is suitcase farmers hogging section upon section. No poor boy has a chance. Laws should be passed so no one man could own or farm but a certain amount of land; then all would have a chance to live."

As has been pointed out, the two landlord groups own more than their proportionate share of the farms, the acreage and the farm property values of the region. On the basis of the data presented in table 7, it appears that the 13 percent of the owners who are operator landlords and the 25 percent who are nonoperating landlords each control approximately one-third of the multiple unit ownerships. The remaining one-third of these multiple ownerships is held by the 62 percent of the owners who are owner-operators.

Very similarly, the data showing the distribution of ownership holdings by size (appendix table 19) show that a higher proportion of the landlord groups have large holdings than is true of the owner-operator groups. For the region as a whole, less than 4 percent of the owner-operators, as compared with over 12 percent of the operator landlords and 7 percent of the nonoperating landlords, hold more than 500 acres. Concurrently 34 percent of the owner-operators, as compared with 19 percent of the operator landlords and 16 percent of the nonoperating landlords, hold less than 70 acres.

These data indicate that the two landlord groups are most responsible for the concentration of ownership found in the region. Actually, however, only a minority of the landlords are involved. Altogether only one out of every four landlords—as compared with

TABLE 42. DISTRIBUTION OF LANDLORDS BY NUMBER OF FARMS OR TRACTS OWNED AND BY ACREAGE AND VALUE OF FARMS OWNED, NORTH CENTRAL REGION, 1946.

Items reported	Number, acreage and value	Distribution by owners having—				
		1 farm	2 farms	3 farms	4 farms	5 or more farms
		(%)	(%)	(%)	(%)	(%)
Owners -----	5,745	77.3	16.0	4.4	1.3	1.0
Farms -----	7,575	58.6	24.3	8.7	3.8	4.6
Acreage in farms -----	1,751,082	61.3	20.8	8.5	3.9	5.5
Value of farms -----	\$85,322,460	58.9	23.7	9.7	3.1	4.6

1 out of every 12 owner-operators—owns more than one farm. In studying the landlord groups, one should also remember that it is the graduation of the owner-operators and part-owner operators into the two landlord groups that accounts for many, if not most, of the large holdings.

More data relative to the extent and concentration of landlord holdings are presented in table 42. This tabulation concerns only the holdings of the operator landlord and nonoperating landlord groups and reports the proportion of the number, acreage and value of the farms owned by number of farms (or tracts) owned. For example, the data show that the 77 percent of the landlords who owned only one farm (or tract of land) controlled only 59 percent of the farms, 61 percent of the farm acreage and 59 percent of the farm real estate value. The 16 percent who owned two farms controlled 24 percent of the farms, 21 percent of the acreage and 24 percent of the value. The 6 percent who had three or four farms owned 13 percent of the farms, 12 percent of the land and 13 percent of the value, while the 1 percent with five or more farms had 4.6 percent of the farms and the value and 5.5 percent of the farm acreage.

These data not only show considerable concentration of ownership in the cases of multiple farm ownership, but also suggest that any of the three measures—number of farms, acreage in farms or value in farms—may be used as a measure of landlord ownership concentration in the North Central Region.

The distribution of landlord owners by states by number of farms owned is reported in table 43. Except for Kentucky (where it seems probable that some landlords listed cropper tracts as separate farms—a definition that would agree with the concept of a farm as used by the census) the highest concentration in ownership is reported in the Great Plains States, and in Illinois, Iowa and Missouri. The lowest ownership concentration is reported in Michigan, Wisconsin, Ohio and Indiana.

TABLE 43. OWNERS OF RENTED FARMS BY NUMBER OF FARMS OWNED, NORTH CENTRAL STATES, 1946.

States	Cases reporting (number)	Distribution by number of farms owned				
		1 farm (%)	2 farms (%)	3 farms (%)	4 farms (%)	5 or more farms (%)
Illinois -----	584	75.3	18.8	4.5	0.9	0.5
Indiana -----	429	83.9	11.2	3.5	0.9	0.5
Iowa -----	658	76.6	16.9	5.2	0.9	0.4
Kansas -----	467	73.4	16.1	6.2	2.6	1.7
Kentucky -----	444	58.8	26.6	10.1	1.6	2.9
Michigan -----	278	87.4	10.8	1.4	0.4	*
Minnesota -----	446	80.9	15.0	2.5	0.9	0.7
Missouri -----	403	78.7	14.9	4.2	1.5	0.7
Nebraska -----	518	72.8	18.0	5.6	1.9	1.7
North Dakota -----	370	79.5	13.2	3.5	1.6	2.2
Ohio -----	419	84.0	13.1	1.9	0.5	0.5
South Dakota -----	389	75.3	17.2	4.1	2.1	1.3
Wisconsin -----	340	86.5	10.6	2.0	0.6	0.3
North Central Region -----	5,745	77.3	16.0	4.4	1.3	1.0

* None reported.

An indication of the trend in ownership concentration on landlord-owned farms (or farm tracts) in the Midwest is reported in table 44. This tabulation refers to all of the states of the region except Kentucky and indicates a pronounced tendency toward more concentration of ownership on landlord-owned farms. By every measure of concentration, the multiple farm owners were in stronger positions in 1946 than in either 1900 or 1920.

The proportion of landlords with more than one farm climbed from 12 percent in 1900 and 13 percent in 1920 to 21 percent in 1946. The proportion of the total number of landlord-owned farms (or farm tracts) held by these multiple farm owners jumped from 26 percent in 1900 and 27 percent in 1920 to 40 percent in 1946. Their share of the acreage increased from 26 percent in 1900 and 28 percent in 1920 to 41 percent in 1926. Their share of the total landlord-owned farm real estate value climbed from 28 percent in 1900 and 32 percent in 1920 to 40 percent in 1926.

The landlords owning two farms account for much of this increasing concentration. The proportion of landlords with three or four or five or more farms, however, has also increased. The proportion of landlords owning three or four farms has increased in terms of number of landlords, number of farms, acres, and value of farm real estate. The proportion of landlords owning five or more farms shows little change for the same items.

METHODS USED IN ACQUIRING LARGE HOLDINGS

Is any one method of land acquisition more responsible than the others for the large holdings of some owners? Table 45 re-

TABLE 44. CONCENTRATION OF OWNERSHIP OF RENTED FARMS, NORTH CENTRAL REGION, 1900, 1920 AND 1946*.

Item and year	Cases reporting	Distribution by no. of rented farms held				
		1 farm	2 farms	3 or 4 farms	5 or more farms	Total studied
	(number)	(%)	(%)	(%)	(%)	(%)
Landlords						
1900 -----	474,894	88.4	8.3	2.5	0.8	100.0
1920 -----	71,397	86.9	9.7	2.9	0.5	100.0
1946 -----	5,301	78.8	15.1	5.2	0.9	100.0
Rented farms						
1900 -----	570,195	73.6	13.8	6.9	5.7	100.0
1920 -----	85,472	72.7	16.0	7.6	3.7	100.0
1946 -----	7,046	60.3	23.7	11.8	4.2	100.0
Acres in rented farms						
1900 -----	72,928,715	73.5	13.7	7.1	5.7	100.0
1920 -----	15,012,820	70.5	16.3	8.5	4.7	100.0
1946 -----	1,540,745	58.8	22.3	13.2	5.7	100.0
Value of rented farm real estate						
1900 -----	\$2,633,833,027	71.8	14.6	7.6	6.0	100.0
1920 -----	2,903,038,944	67.5	17.7	9.6	5.2	100.0
1946 -----	81,308,269	59.8	23.5	12.6	4.1	100.0

* The 1900 and 1920 data are from Howard A. Turner, The ownership of tenant farms in the North Central States, U. S. Dept. Agr., Bul. 1433, 1926, table 1. The 1900 figures are from the 1900 Census tables on landlord ownership for all of the North Central States except Kentucky. The 1920 data are based on a study of all the landlords in 85 counties located in Illinois, Iowa, Kansas, Michigan, North Dakota, Ohio, South Dakota and Wisconsin. Kentucky is not included in the 1946 totals because it was not included in either the 1900 or the 1920 data.

ports the relationship between number of farms owned and method of acquisition and shows that gifts and inheritances account for a substantial proportion of the larger ownerships. The use of gifts or inheritances was reported by 21.5 percent of the men who owned only one farm, 35 percent of those with two farms, 46 percent of those with three farms, 49 percent of those with four farms, and 48 percent of those with five or more farms. This method of acquisition was reported by 55 percent of the women with one farm, 73 percent of those with two farms and 54 percent of the small number who indicated they owned three or more farms.

While the group of owners who acquired their farms all or partly through gifts or inheritances accounts for more than its proportion of the ownerships involving two or more farms, the owners who reported this as a single method of acquisition account for only a relatively small proportion of the multiple unit ownerships. Table 46 indicates that no more than 1 out of every 12 men owners who acquired all their land by single methods had more than one farm. As one might expect, most of the owners reporting multiple farm

TABLE 45. DISTRIBUTION OF OWNERS BY NUMBER OF FARMS BY METHODS OF ACQUISITION, NORTH CENTRAL REGION, 1946.

Sex and number of farms owned	Cases reporting	Distribution by method of acquisition				
		Gift or inheritance	Combinations involving gift or inheritance	Purchase	Combinations not involving gift or inheritance	Homesteading, foreclosure and other
	(number)	(%)	(%)	(%)	(%)	(%)
Men						
1 farm -----	9,275	8.8	12.7	74.4	2.1	2.0
2 farms -----	1,337	4.2	31.2	56.9	7.3	0.4
3 farms -----	254	4.3	41.7	43.3	9.1	1.6
4 farms -----	74	---	48.6	37.8	13.6	---
5 or more farms -----	54	1.9	46.2	42.6	9.3	---
Total (men) -----	10,994	8.0	16.0	71.1	3.1	1.8
Women						
1 farm -----	1,198	42.2	12.6	40.3	1.4	3.5
2 farms -----	135	28.2	44.5	20.0	5.1	2.2
3 or more farms -----	37	24.3	29.7	32.4	8.1	5.4
Total (women) -----	1,370	40.4	16.2	38.1	1.9	3.4

ownerships used more than one method of acquisition. Over one-third of the owners who used combinations of methods involving gift or inheritance reported multiple ownerships. Still higher proportions of the groups using combinations not involving gifts or inheritances reported ownership of more than one farm.

Findings very similar to those reported in table 46 result when

TABLE 46. DISTRIBUTION OF MEN OWNERS BY METHOD OF ACQUISITION BY NUMBER OF FARMS OWNED, NORTH CENTRAL REGION, 1946.

Method of acquisition	Cases reporting	Distribution by number of farms owned				
		1 farm	2 farms	3 farms	4 farms	5 or more farms
	(number)	(%)	(%)	(%)	(%)	(%)
Purchase from relatives -----	1,367	88.3	11.6	0.1	---	---
Purchase from nonrelatives ..	5,966	90.1	7.8	1.4	0.3	0.4
Purchase from both -----	490	64.5	28.6	5.1	1.4	0.4
Gift or inheritance -----	879	92.3	6.4	1.2	---	0.1
Homesteading, foreclosure and other -----	199	95.0	3.0	2.0	---	---
Combinations with gift or inheritance -----	1,757	66.8	23.7	6.1	2.0	1.4
Combinations with purchase from relatives but no gift or inheritance -----	76	52.6	36.8	4.0	6.6	---
Combinations with no family assistance -----	260	61.9	26.6	7.7	1.9	1.9
All cases -----	10,994	84.4	12.1	2.3	0.7	0.5

the farm holdings of the various method of acquisition groups are classified by acreage or value intervals. (Appendix tables 20A and 22.) For the most part, the farm holdings of every group are distributed over a wide range of sizes and values. The largest proportion of the farms of small size and value, however, were acquired by a single method. Concurrently, a high proportion of the farms acquired by a combination of methods—whether they involved gifts and inheritances, purchase from both relatives and nonrelatives, or other combinations—were found in the groups having the largest acreages and the highest farm values. These distributions suggest that most of the larger and more valuable farm ownership holdings have been acquired over an extended period of time, frequently by using more than one method of acquisition.

EFFECT OF TENURE EXPERIENCE ON EXTENT OF HOLDINGS

The relationship between number of farms owned and tenure experience is reported in table 47. This tabulation shows only slight differences in the number of farms held by the seven groups

TABLE 47. TENURE EXPERIENCE OF MEN OWNERS BY NUMBER OF FARMS OWNED, NORTH CENTRAL REGION, 1946.

Tenure experience groups	Cases reporting (number)	Distribution by number of farms owned				
		1 farm	2 farms	3 farms	4 farms	5 or more farms
		(%)	(%)	(%)	(%)	(%)
P/HRO	1,942	83.9	12.9	2.6	0.2	0.4
P/HRNO	1,537	87.3	10.1	1.9	0.4	0.3
R/HO	191	84.3	13.6	1.6	*	0.5
R/HNO	680	91.9	6.2	1.5	0.4	*
PO	1,691	83.7	12.5	2.7	0.7	0.4
PNO	2,207	85.2	11.3	2.5	0.7	0.3
NO	755	90.1	8.1	1.0	0.1	0.7
RL	36	86.1	11.1	2.8	*	*
RNL	73	74.0	20.6	2.7	*	2.7
P/HL	37	81.1	13.5	*	2.7	2.7
P/HNL	243	76.1	12.3	6.2	3.7	1.7
NL	125	76.8	14.4	3.2	1.6	4.0
Region	9,517	85.4	11.2	2.3	0.6	0.5

* None reported.

with owner-operator experience. The greatest amount of multiple ownership (16 percent) is reported by the PO, P/HRO and R/HO groups, all groups reporting no nonfarm experience. The highest proportions of single farm ownership (92 and 90 percent) are reported by the R/HNO and the NO groups, respectively.

In contrast to these groups a significantly larger proportion of the nonoperating landlords with no owner-operator experience (approximately one-fourth of the RNL, P/HNL and NL tenure experience groups) reported the ownership of two or more farms. The data on acreage and value distribution by tenure experience groups

(appendix tables 23 and 24) substantiate the findings reported in table 47 concerning the general relationship between tenure experience and concentration of ownership.

EXTENT AND SIZE OF HOLDINGS

Over the past half century the average size of farms in the Midwest has steadily increased. At the same time there has been a tendency toward greater concentration of farm land ownership in the hands of some owners. In 1946 1 out of every 12 owner-operators and one out of every four landlords held two or more farms. So far as acreages are concerned, 4 percent of the owner-operators, 12 percent of the operator landlords and 7 percent of the nonoperating landlords reported ownerships involving 500 acres or more. This represents an increase over the amount of concentrated ownership reported in the region in 1900 and 1920.

The two landlord groups hold more than their proportionate share of the larger farm ownerships. Among the occupational groups, the retired farmers and the business and professional men reported farms of larger average size than those reported by the owners who classified themselves as farmers. A high proportion of the larger holdings were acquired at least in part by gift or inheritance. Combinations of acquisition methods were used by most of the owners reporting multiple farm ownerships.

FARM OWNERSHIP TRANSFER ARRANGEMENTS

Since ownership rights in land are perpetual and outlast the lives of individual owners, arrangements must be made to transfer ownership between generations. These transfer arrangements may be of three general types: (1) complete transfer of land during the lifetime of the present owner; (2) transfer plans made during lifetime of owner to take effect at owner's death; and (3) distribution of land according to the state laws of descent.

The first two types of land transfers involve voluntary action by the owner. Within wide limits the individual owner can transfer and plan for the transfer of land as he pleases. The third type of transfer takes place when the individual does not take advantage of his right to provide for the transfer of his property during his lifetime, at the time of his death, or at some later date. Since landed property in this country cannot be without an owner, state laws stipulate how land is to be distributed and how succeeding owners are to be ascertained. State laws also provide for probate courts to carry out the law.

Although students of land ownership have long appreciated the importance of ownership transfers between generations, only fragmentary and inconclusive ownership transfer data are available. Based upon replies from farm owners cooperating in the ownership survey, this section of the report is concerned with the follow-

ing questions: What proportion of the farm owners have transferred part of their farm property to their children? What proportion of the owners have made out wills? At what ages do owners make wills and other property transfer arrangements? Are wills frequently "deathbed" documents or are wills made out early in life as part of a well-planned arrangement for continuing ownership into the next generation? What are the relationships between tenure experiences of owners and property transfer plans? Do methods of acquiring ownership seem to affect the owner's transfer plans? Is there a tendency for particular occupational groups to make wills and other farm transfer plans? To what extent are landlords related to their tenants? What is the prevalence of "father and son" farm operating arrangements?

ALTERNATIVE TRANSFER PLANS

In an effort to determine how and to what extent midwestern farm owners made specific plans during their lifetime for transferring ownership of their land, the following questions were asked those cooperating in the study: "Have you already transferred ownership in any land to your children?" "Have you made definite plans for any of your children or other relatives to eventually acquire ownership of your land?" "Have you made out a will covering your land?"

Replies to those questions as summarized in table 48 indicate that about one out of five owners have either transferred land or have made definite plans to transfer their land. Of the 10,499 owners replying to the question, "Have you already transferred ownership in any land to your children?" 3.4 percent reported they had. Of the 12,140 owners answering the question on whether or not they had made out wills, 17 percent stated they had.²⁵ An additional 4.6 percent of the 9,095 owners reporting stated they had made definite ownership transfer plans other than wills.

Table 48 shows that about 3.4 percent of the owners reporting had already transferred land to their children. The proportion

²⁵ In Iowa, a detailed study of non-respondents showed that only 23.8 percent had made wills as compared with 31.3 percent of the respondents returning questionnaires. This study indicates an upward bias in the proportion of owners making wills.

TABLE 48. OWNERS REPORTING LAND TRANSFERS AND PLANS FOR LAND TRANSFERS, NORTH CENTRAL REGION, 1946.

Nature of transfer	Cases reporting*	Reporting ownership transfers and plans for transfers
	(number)	(percent)
Have transferred ownership----	10,499	3.4
Have made out wills-----	12,140	16.8
Have made other definite plans to transfer ownership-----	9,095	4.6

* Not mutually exclusive categories.

varied by states from a high of 6 percent in North Dakota to a low of 3 percent in Indiana. (Appendix table 21.) It should be pointed out, however, that no information was obtained from those who had already transferred all their land, since such individuals are no longer landowners and hence would not be included in a sample of landowners.

As indicated earlier, all landowners have rights within broad limits to determine by will or other means how their land is to be owned and who the next owners are to be. However, only 17 percent of the 12,140 owners replying to the question, "Have you made out a will covering your land?" reported they had made wills. Unless other means are used to transfer their land or unless they make wills before they die, the property owned by the remaining 83 percent of the owners will be distributed according to the laws of descent and distribution of the state within which their property is located. (Table 49.)

TABLE 49. PROPORTION OF FARM OWNERS WHO REPORTED HAVING MADE WILLS, NORTH CENTRAL STATES, 1946.

State	Cases reporting	Owners reporting wills
	(number)	(percent)
Illinois -----	1,001	23.6
Indiana -----	927	13.3
Iowa -----	1,093	31.3
Kansas -----	733	17.7
Kentucky -----	1,117	12.3
Michigan -----	942	10.9
Minnesota -----	1,093	11.3
Missouri -----	901	12.2
Nebraska -----	738	22.4
North Dakota -----	747	13.0
Ohio -----	986	21.5
South Dakota -----	668	14.5
Wisconsin -----	1,194	12.9
North Central Region -----	12,140	16.8
United States -----	30,122	16.0

The proportion of owners reporting wills varies from a high of 31 percent in Iowa to a low of only 11 percent in Michigan. States above the regional average of 17 percent include Illinois, Iowa, Kansas, Nebraska and Ohio. The remaining states were below the regional average. From these data, there is no apparent regional distribution of farm owners with wills. Information obtained in the survey does not suggest any particular reasons for the considerable variation in proportion of owners reporting wills in the various states.

AGE OF OWNERS WHO HAVE TRANSFERRED OWNERSHIP AND MADE WILLS

When replies to the land transfer questions are grouped by age of owner, several important differences are noticed. No owners under 25 years of age had already transferred ownership of land

TABLE 50. OWNERS BY AGE REPORTING OWNERSHIP TRANSFERS, NORTH CENTRAL STATES, 1946.

State	Under 55 years of age		55 years of age and over	
	(number)	(percent)	(number)	(percent)
Illinois -----	361	0.8	510	4.1
Indiana -----	411	0.5	406	4.7
Iowa -----	452	0.4	509	4.9
Kansas -----	237		375	5.3
Kentucky -----	490	2.0	451	8.6
Michigan -----	420	1.2	411	7.3
Minnesota -----	496	0.8	513	6.2
Missouri -----	492	0.8	304	7.0
Nebraska -----	255	0.4	390	5.4
North Dakota -----	303	2.0	312	9.9
Ohio -----	354	0.8	457	5.0
South Dakota -----	173	1.7	382	3.9
Wisconsin -----	525	1.0	512	4.9
Midwest -----	4,969	0.9	5,532	5.8

and only a few under 35 years of age reported such transfers. As shown in table 50, only 1 percent of the 4,969 owners under 55 years of age replying to this question reported transferring ownership. The situation was considerably different, however, with the owners 55 years of age and older. Of the 5,532 replies in this group, 6.5 percent reported transfers of ownership. This is over six times the proportionate number in the age group less than 55 years.

The same general situation exists among owners who have made out wills covering the disposition of their land. (Appendix table 25.) A breakdown of the 2,030 owners reporting wills and age shows only 2 percent of the wills were made by owners under 35 years of age. (Table 51.) On the other hand, 46 percent, or

TABLE 51. PROPORTION OF OWNERS REPORTING WILLS WITHIN VARIOUS AGE GROUPS, NORTH CENTRAL STATES, 1946.

State	Cases reporting	Owners with wills in ages					
		Under 25	25-34	35-44	45-54	55-64	65 and over
	(number)	(%)	(%)	(%)	(%)	(%)	(%)
Illinois -----	236	*	2	6	20	27	45
Indiana -----	121	*	3	7	18	31	41
Iowa -----	340	*	1	10	22	26	41
Kansas -----	129	*	1	5	11	29	54
Kentucky -----	134	*	*	19	23	26	32
Michigan -----	104	1	1	8	21	21	48
Minnesota -----	129	1	*	10	12	25	52
Missouri -----	108	*	1	5	15	23	56
Nebraska -----	165	*	1	6	18	26	49
North Dakota -----	98	*	2	8	11	26	53
Ohio -----	218	1	4	8	34	14	39
South Dakota -----	95	*	2	7	10	23	58
Wisconsin -----	153	*	4	9	16	20	51
Midwest -----	2,030	0.2	1.7	9.3	18.4	24.3	46.1

* Less than 0.5 percent.

almost one-half of all owners having wills, were 65 years of age and over. Table 51 shows considerable variation among states regarding the age distribution of owners reporting wills. On the whole, there appears to be a strong relationship between age and wills.

TENURE EXPERIENCE OF OWNERS WITH AND WITHOUT TRANSFER PLANS

Since age appears to be an important factor related to whether or not owners make wills, this and several succeeding cross-classifications are concerned with only those owners 50 years of age and over in an effort to hold the analysis to a particular age group—the older owners. Also, this group of owners accounts for over three-quarters of all owners reporting farm transfer plans.

The tenure experience of owners appears to influence their plans for transferring ownership. Table 52 groups all owners 50 years of age and over who have made wills by tenure experience and indicates that the nonoperating landlord groups with no owner-operator experience have more wills in relation to their numbers than owners with owner-operator experience. For example, 42 percent of the owners in the NL group have made out wills, while as few as 18 percent of the owners with only farm work experience have wills. It is possible that urban business experiences are more conducive to planning land transfers than farming experiences. However, other factors such as higher average age of the nonoperating landlord group make it inadvisable to draw definite conclusions on this point. The data on transfer plans of older owners who have not made out wills show that 9 percent of them have made plans for transferring their property. (Appendix table 26.)

METHOD OF ACQUIRING OWNERSHIP AS RELATED TO TRANSFER PLANS

All owners 50 years of age and older who reported wills were next divided into two groups according to whether or not they had received any family assistance in acquiring ownership. (Appendix table 27.) For the North Central Region as a whole, little difference was found between the two groups. However, some of the individual states showed considerable variation. The frequency of family assistance was between one-third and one-half greater in Kansas, Michigan and Ohio. Missouri and South Dakota reported a higher proportion of owners with no family assistance.

OWNERS' OCCUPATIONS AS RELATED TO TRANSFER PLANS

Closely related to tenure experience is occupation of owner. Table 53 shows that almost one-half (48 percent) of all the owners reporting wills are farmers. Of the remaining owners, 23 percent are retired farmers, 9 percent retired nonfarm workers, 7 percent merchants and salesmen, 7 percent laborers and others and 5 percent housewives. (Appendix table 28.)

TABLE 52. TENURE EXPERIENCE OF MEN OWNERS 50 YEARS OF AGE AND OLDER WHO HAVE MADE OUT WILLS, NORTH CENTRAL REGION, 1946.

Tenure experience of owners	Cases reporting	Owners with wills
	(number)	(percent)
P/HRO -----	918	20
P/HNRO -----	810	18
H/RO -----	107	18
H/RNO -----	369	21
PO -----	866	23
PNO -----	1,159	20
NO -----	395	23
RL -----	18	28
RNL -----	40	33
P/HL -----	116	34
P/HNL -----	24	29
NL -----	59	42
All owners -----	4,881	21

TABLE 53. OCCUPATIONS OF OWNERS REPORTING WILLS WITHIN VARIOUS AGE GROUPS, NORTH CENTRAL STATES, 1946.

Age groups of owners	All owners	Owners who are					
		Farmers	Retired farmers	Housewives	Merchants and salesmen	Retired non-farmers	Laborers and others
	(%)	(%)	(%)	(%)	(%)	(%)	(%)
Under 35 years -----	2	3	—	2	2	2	6
35-44 years -----	9	11	1	4	15	9	16
45-54 years -----	18	24	3	13	35	17	22
55-64 years -----	26	31	18	29	19	19	32
65 years and over -----	45	31	78	52	29	53	24
Number reporting -----	1,859	892	437	90	130	174	136

KINSHIP OF LANDLORDS TO TENANTS

Farm boys frequently rent land from their parents or their wives' parents as a step in the process of acquiring a farm. This working relationship between parents and children is commonly known as the "father and son" arrangement. These children are sometimes described as "owners-in-prospect." This relationship between parent owners and related tenants not only is an important step on the ladders to ownership as described earlier, but it is also a significant kind of renting arrangement in the Midwest.

In an effort to find out the extent to which farm owners rent land to their mature children, each owner in the survey was asked this question: "How many of these tenants and croppers [previously listed] are your sons or sons-in-law?" Of the 5,513 landlords answering, 20 percent replied that they were renting land to their children. These replies, grouped by states, are summarized

TABLE 54. LANDLORDS REPORTING LAND RENTED TO SONS OR SONS-IN-LAW, NORTH CENTRAL STATES, 1946.

State	Cases reporting (number)	Landlords renting to children		
		All landlords (percent)	Non-operating landlords (percent)	Operator landlords (percent)
Illinois -----	590	19	22	12
Indiana -----	435	21	24	16
Iowa -----	665	27	30	19
Kansas -----	468	20	22	16
Kentucky -----	448	17	27	13
Michigan -----	280	18	22	11
Minnesota -----	449	23	26	14
Missouri -----	543	15	17	13
Nebraska -----	402	21	21	20
North Dakota -----	182	24	27	16
Ohio -----	534	19	24	12
South Dakota -----	235	19	18	21
Wisconsin -----	282	25	32	4
North Central Region -----	5,513	20	24	14

in table 54. Considerable variation in the proportion of landlords to tenants who are kin is found throughout the North Central States. The highest proportion of kinship is reported in Iowa, where 27 percent of all landlords reported renting land to their children. The lowest percentage of kinship is in Missouri with only 15 percent of the landlords reporting land rented to their children.

When classified by type of landlord, the data show that 24 percent of the nonoperating landlords and only 14 percent of the operator landlords rented land to their children. An explanation of this difference may be found in the larger proportion of nonoperating landlords who have retired from farming and turned the farm operations over to their children. On the other hand, operator landlords are still actively engaged in farming although many of them are beginning to retire from the farm by sharing operations with a son or son-in-law. Here again, however, the survey does not provide sufficient information to show how renting land to children fits into the process of transferring land to the next generation. Such conclusions must await more detailed studies.

OWNERSHIP TRANSFER SITUATION

In summary, only about one out of six owners reported having made wills providing for the transfer of their farms; an even smaller proportion reported having already transferred ownership of part of their land. In analyzing owners making wills and other transfer plans, age appears to be one of the most important factors on which data were obtained. The proportion of owners reporting wills, for example, goes up rapidly with successively older age groups

of owners. Consequently, any cross-classifications of owners with and without wills must consider the age of the groups being analyzed.

Experiences and occupations of owners appear to affect materially whether or not owners have made farm transfer plans. Non-farm experiences seem to be more conducive to making wills and other farm transfer plans than farm experience. Method of acquiring ownership appears to bear little relationship to owners' transfer plans.

About one out of every five landlords rents land to his son or son-in-law. This proportion approaches one in four for landlords who rent out all the land they own. Such rental arrangements within families may constitute early steps in the farm ownership transfer process. However, data obtained in the survey are not sufficient to warrant conclusions on the precise role of father-son rental arrangements in farm transfers. Such conclusions as well as needed information on many other phases of ownership mentioned in this report must await more thorough study and analysis. The mail questionnaire type of survey on which this report is primarily based does not permit the kind of analysis needed to understand this and many other important basic relationships in the ownership of farm land in the Midwest.

SUMMARY AND CONCLUSIONS

Farm ownership is generally accepted as the top rung on the agricultural ladder of the nation and the Midwest in particular. Throughout the development of midwestern agriculture, land ownership always has been one of the top goals of farm people. It also has been a cornerstone of land policies of the region. Soon after the Revolutionary War when most of the region was still only a territory, the famous Ordinances of 1785 and 1787 began to lay the foundations for independent owners of family farms. Since then, numerous land acts including the Pre-emption Act of 1841, the Homestead Act of 1862, the Farm Credit Act of 1916 and the Bankhead-Jones Act of 1937 have thrown legislative and financial support toward ownership of farms by farmers.

The high prices and good yields of the recent war era have strongly reinforced the ownership structure of midwestern agriculture. More farmers than ever before now own part or all of their farm land. Furthermore, there are fewer tenants than at any time in the past 25 years. Mortgage debt of all farm operators in the region gradually dropped from the high of \$6.8 billions in 1923 to \$2.3 billions by 1948, the lowest amount in 38 years.

Despite these apparent indexes of favorable ownership conditions, ownership problems are emerging. It is becoming increasingly difficult for young farmers without parental help to acquire

farms of their own. Both higher land prices and larger size of farms are adding to these difficulties. By 1948 land prices in the region were double the 1935-39 average price per acre and near the highs following World War I. About one-fourth of the farm transfers in recent years have involved credit up to 50 to 74 percent of the sales price. Many of these mortgages are for short periods and contain no amortization or flexible payment provisions. Such loans may well come due at the wrong time for the owner to maintain ownership, judging from experiences during the first 15 years after the first World War.

Serious problems of farm ownership also develop in transferring farms within families from one generation to the next. The average midwestern farm family has three or four children, yet has only one farm to divide among them. Generally this farm must contribute to the support of the parents during their old age. Faced with these problems, parents, who now live considerably longer than they did several decades ago, frequently fail to make farm property arrangements that will transfer the farm as a going concern to the next generation.

These and closely allied ownership problems have been stressed by the North Central Regional Land Tenure Committee through reports issued during each of the past 5 consecutive years. Also, the need for more complete ownership information has been emphasized repeatedly by the Committee. In an attempt to obtain needed ownership information, the Committee worked with the U. S. Bureau of Agricultural Economics on a survey of ownership conditions in 1946. As part of the survey, 48,158 questionnaires were mailed to a random sample of landowners throughout the 13 midwestern states. Approximately 17,420 or 36 percent of the owners in the sample returned questionnaires containing the desired information. The survey was directed specifically towards finding out: Who owns midwestern farms? How are these farms owned? How are farms acquired and transferred? What are owners' plans for transferring farms to the next generation? What are the characteristics of farm owners in terms of sex, residence, kinship of owner to operator and amount of land owned? Results of this survey together with additional relevant ownership information from other sources have been summarized in this report in an effort to improve our understanding of the nature and characteristics of farm ownership throughout the region. The information obtained in the survey and summarized in this report should improve our understanding of regional ownership conditions and also provide a framework for further research directed toward the delimitation and solution of specific ownership problems.

In interpreting results of the ownership survey, it must be kept in mind that the findings are based on questionnaires returned by

slightly over one-third of the owners to whom questionnaires were sent. This return is exceptionally high for a mail survey, and indicates considerable interest in the study by farm owners. This interest was further shown by the many additional comments and suggestions written on the questionnaires by the respondents. Despite this interest and high response on the part of cooperating owners, the question arises concerning whether there were appreciable differences between the two-thirds who did not return the questionnaires and those who did. Census data for both groups, including age, sex, residence and size of farm, were used to check upon possible differences. Also, a few of the nonrespondents were interviewed in person to determine other points on which the two groups might differ. Slight differences between the two groups were found. For example, the proportionate response of men owners appeared to be slightly greater than for women owners, to be somewhat greater for young owners than older owners, to be slightly greater for owners living in the country than for those living in town. In discussing information throughout the report for which differences in respondents and nonrespondents appear to exist, appropriate qualifications are made.

The 13 North Central States contain 509 million acres or slightly more than one-fourth of the total land area of the United States. Of this land, approximately 13 percent is in public ownership and the remaining 87 percent is privately owned. This is the highest proportion of privately owned land of any major region of the nation.

About 82 percent or 419 million acres of the land in the North Central Region is in farms—a higher proportion than any other major region in the nation. Of this land in farms, only 3 percent is in public ownership, leaving 97 percent in private ownership. Of this area about 2 percent is owned by corporations and institutions and the remaining 95 percent by individuals. Probably the most significant change in type of ownership in recent years has been the shift from corporate owners to individual owners. Only 9 years ago, in 1939, as much as 10 and 12 percent of all the farm land in Minnesota and Iowa, for example, was held by corporations. Most of this land passed from farmers to corporate owners through foreclosures or distressed transfers during the 1920's and 1930's. By 1945, much of this land had been resold to farmers again. By 1948, only about 2 percent of the farm land in these two states was held by corporations and institutions.

From the viewpoint of farm operatorship in relation to ownership, the situation in the Midwest is as follows: Full owners operate 55 percent of the farms, 36 percent of the acres and have 39 percent of the value of farm land; part-owners have 16 percent of the farms, 33 percent of the acres and 24 percent of the value; tenants, who own none of the land they farm, account for 29 per-

cent of the farm operators of the region, operate 30 percent of its farm acreage and 35 percent of the value of its farm real estate. Less than 1 percent of the operators are managers, and they account for the remaining 2 percent of the acreage and value of land.

In recent years, the number and proportion of tenant operators have been declining. Full and part-owners have been increasing. A notable trend in the farm tenure situation has been the increase in part ownership of land—those who own part and rent part of their farm unit. Although the number of operators in this group make up only about one-sixth of all operators, they now operate about one-third of all the farm land in the region. In terms of value, the land operated by part-owners constitutes almost two-fifths of the total value of the region's farm land.

Of all the individual owners (who own about 95 percent of the farm land of the region) 48 percent own all the land they operate, while 14 percent operate all the land they own and rent additional land. Thirteen percent operate part of the land they own and rent out the remainder. The remaining 25 percent of the farm owners are landlords who rent out all of their land. This means that about two-fifths of all the landowners in the region are landlords to the extent that they rent out part or all of the land they own. The remaining three-fifths of the region's farm owners operate all the land they own and frequently rent some additional land to round out their operating unit. A small number of landowners reported renting in all the land they were operating and renting out all the land they owned. Such owners are listed as tenants by the census even though they may own more land than many farmers counted in the owner-operator group by the census. More needs to be known about the characteristics and distribution of this group than this survey reveals in order to interpret tenure changes reported by the census and to understand important changes in farm ownership.

In discussing ownership conditions, the question of multiple land holdings generally receives considerable emphasis. Interest in concentration of land holdings grows, partly at least, out of our generally accepted policy of widely distributed ownership of land among people who till the soil. According to this survey, 87 percent of the owners owned only one farm while 10 percent owned two farms and 3 percent owned three or more farms. Seventy-nine percent of the landlord owners held only one farm. This landlord group held 60 percent of the farms (tracts), 59 percent of the acreage and 60 percent of the value of all the land. The two-tract landlord owners account for 15 percent of the land owned by landlords in the region and for 24 percent of the tracts, 23 percent of the acreage and 24 percent of the value. Landlords possessing three or four tracts account for 5 percent of the owner-

ships, 12 percent of the tracts, and 13 percent of the acreage and value of farms held by landlords. The remaining 1 percent of the landlords own five or more tracts and have 4 percent of the tracts and values and 6 percent of the acres.

Another important phase of farm ownership concerns the type of ownership. Four kinds of ownership interests were used in the survey to classify ownership. One kind, termed complete ownership, included all owners who held complete title to their land including titles subject only to mortgage claims. This group accounted for 84 percent of all ownerships reported. Another kind of ownership interest, termed undivided interests, indicates land shared with other owners (partly at least as a result of estate settlements). This accounted for 7 percent of all ownerships. A third group of owners holding only purchase contracts for their farms made up 6 percent of the total ownerships reported. The remaining 3 percent of the ownerships involved life interests in land. This latter group consists largely of women who received life estate interests as a result of settlement of their deceased husbands' estates.

Type of ownership is accompanied by important variations in characteristics of owners. For example, over one-half, 56 percent, of all purchase contract owners were under 45 years of age. In contrast, four-fifths of the life estate owners were over 55 years of age. The nature of ownership interests has important implications for land use and stability of ownership. For example, owners of life estates are extremely limited in their use of the land. Since their interests expire at their deaths and cannot be transferred to persons of their own choosing, there may be a tendency for these owners to exploit the land during their lifetime. Since the holders of these life interests are in the upper age groups, the instability of ownership, and particularly farm operatorship in case the land is rented, becomes important because of uncertainties of life of the owner. Full implications of the effects of life estates and the other kinds of ownership interests upon land use and ownership stability, however, must await further studies of a more detailed nature.

The age of owners indicates when ownership may be expected to change hands. It also indicates the relative success people have in achieving ownership at certain ages. Of all the owners reporting in the survey, less than 8 percent were under 35 years of age; about 18 percent were in the 35- to 44-year age group; 24 percent in each of the 45 to 54 and 55 to 64 age groups; 18 percent in the 65 to 74 age group; and 8 percent in the 75 and over age group. As might be expected, the landlord groups were considerably older than the owner-operator groups. Almost one-half of the non-operating landlords were 65 years of age and older. Of the women nonoperating landlords, 56 percent were 65 years of age and older. On the other hand, the youngest group of owners was the part-owner operator group, those owning part and renting part

of their farm land. More than two-fifths of the owners in this group were less than 45 years of age.

Owners cooperating in the survey also were grouped by occupation. This classification shows that two-thirds of all owners considered themselves as farmers. Another 10 percent were retired farmers, 12 percent nonfarm laborers, 9 percent business and professional people, and the remaining 3 percent housewives.

A basic part of the midwestern philosophy of achieving ownership has assumed that it is feasible to climb the agricultural ladder to ownership through the individual's own strength and resources. Difficulties experienced by owners in maintaining farm ownership have raised some serious doubts about the validity of this assumption. Of all the owners reporting in the survey, two out of every five stated that they had either purchased their farms from relatives or had received family help of various kinds in achieving ownership of their land. About 15 percent purchased farms from relatives; 12 percent received farms through gift and inheritance; 16 percent acquired ownership through combinations of means involving some element of gift and inheritance. Within the non-operating landlord group, 36 percent reported some element of family help in achieving ownership. When grouped by sex of landlord, 62 percent of the women reported family help as compared with 30 percent of the men.

The importance of the role played by family help in assisting farmers in achieving and maintaining ownership has some significant implications for the future of farm ownership in the region. Does this mean that farm ownership is being limited to those youths whose parents possess land that is transferred to them with at least some element of gratuity? If so, what is the ownership future of young people trying to become owners but who cannot look forward to receiving help from their relatives? If owner-operatorship is to become widely available to all beginning farmers, what are the implications for public policy in aiding them? This survey does not propose to answer all of these questions. It does, however, present some information needed to appreciate the importance of the situation and to emphasize the need for studying further the implications raised by these questions.

Residence of owners in relation to their farms is another important aspect of ownership. In grouping landlords by residence, the survey showed three-fourths of all landlords residing within the same county in which at least some of their land was located. An additional 11 percent resided in an adjoining county, 6 percent in a non-adjoining county within the same state, and 8 percent resided in a state other than the one in which their land was located.

A large proportion of the landlords over 50 years of age (63

percent) reported dependence upon rents from their farms as the major part of their total income. As might be expected, a relatively larger proportion of the women landlords—88 percent as compared with 56 percent of the men landlords—reported dependence upon farm rents as their major source of income. The dependence upon rent from the land for a living by the landlord may help explain why rented farms sometimes have neither the farm improvements needed for the conservation and proper use of the land resources nor the home improvements needed for the welfare of the farm family. If future studies find that landlords do not have the funds to make needed improvements on their farms, then attention may need to be focused upon ways of providing credit for such improvements or means whereby the tenant may make the improvements out of current farm earnings.

How farm ownership is transferred from one generation to the next is exceedingly important. It is surprising to find so few owners with concrete plans for transferring ownership to the next generation. Only 3 percent of the owners reported completed transfers to the next generation, excepting sales to people outside the family. About 17 percent of the owners reported making wills prescribing the disposition of their land. An additional 5 percent reported various kinds of other definite plans for transferring land to the next generation. As might be expected, there is a fairly close relationship between age of owner and plans for transferring farms to the next generation. Less than 1 percent of the owners under 25 years of age reported making out wills as compared with 46 percent of the owners 65 years of age and older. The proportions of owners reporting wills in the middle age groups are as follows: 25 to 34 years of age, 2 percent; 35 to 44 years, 9 percent; 45 to 54 years, 18 percent; 55 to 64 years, 24 percent.

Although the survey does not show why land owners do or do not make wills or other transfer plans, some inferences may be made from the information. It would appear that more than one out of every six owners would take advantage of the opportunity provided by law and stipulate how their land is to be distributed. Perhaps they are satisfied with state laws directing distribution and descent. Perhaps the land owner is confused over the problem of distributing a limited amount of land among several children when the farm must continue to provide support for the father and mother during their remaining years. Or, perhaps failure to make farm transfer plans may be attributed to inertia and lack of information on how to do it, or lack of appreciation of the importance of farm transfer plans. Further studies are needed to show more precisely why farm transfer plans are not made and what remedial steps should be taken to help land owners with their farm transfer problems. Further studies are also needed to show how present satisfactory transfer plans may be extended to more owners.

As part of the process of transferring farms to the next generations, an appreciable proportion—20 percent—of the landlords reported renting farms to their sons and sons-in-law. Many of these undoubtedly are prospective owners of the farms they now operate. The proportion of landlords renting land to close relatives varies from 24 percent of the landlords who do not operate land themselves to 14 percent of those still operating part of their land.

Throughout this report emphasis has been placed upon “how many” and “how much” types of ownership questions. The weakness of such quantitative information is that it fails to provide explanations of why certain ownership situations exist or the full significance of implied relationships. The strength of this quantitative information is that it provides an inventory of ownership conditions. This provides a framework for further studies directed toward specific ownership problems. Also, this report suggests areas of inquiry for future studies needed to understand, appraise and analyze ownership problems and their possible solutions. Some of the more important ownership problems requiring additional research include: How can family farms be transferred from one generation to the next most advantageously to all concerned? How can beginning farmers with limited capital and no family assistance acquire ownership of farms? How do particular ownership interests such as purchase contracts, life estates and undivided interests come into existence and how do they fit into the process of acquiring and transferring ownership? How do particular ownership interests and transfer arrangements facilitate or obstruct the conservation and best use of farm resources?

The limitations and contributions of this study are implicit in the method of obtaining information upon which the study is largely based. The mail questionnaire method used in the study is necessarily limited to obtaining relatively few items of a quantitative nature that can be answered easily with a minimum of instructions. These limitations can be overcome largely by the use of personal interviews and analysis of ownership data on file in county offices. These methods may be used in follow-up studies of a more detailed nature throughout the region. It is important that the studies be planned and conducted in such a manner that the results will be complementary and aid in analyzing major ownership problems of regional significance.

In this summary, an attempt has been made to point out some of the highlights of the ownership survey from the regional viewpoint. Many readers may be interested in data for particular states of the region and in more detailed data than was feasible to include in this report. Much of this information may be found in the appendixes of this report.

APPENDIX A—TABLES

APPENDIX TABLE 1. MAJOR USES OF LAND, NORTH CENTRAL STATES AND REGION, AND UNITED STATES, 1945.*

State	Total land area**	Cropland†	Pasture and range land (non-forested)	Forest land††	Special use areast	Miscellaneous other land, mostly having, but slight agricultural value††
	(000 A.)	(000 A.)	(000 A.)	(000 A.)	(000 A.)	(000 A.)
Illinois -----	35,806	21,433	6,053	3,326	2,509	2,485
Indiana -----	23,171	11,723	4,292	3,397	1,571	2,188
Iowa -----	35,831	22,330	8,371	2,224	2,055	851
Kansas -----	52,552	27,549	21,202	1,101	2,038	662
Kentucky -----	25,670	6,361	7,722	9,684	1,441	462
Michigan -----	36,494	9,424	4,073	18,821	2,443	1,733
Minnesota -----	51,206	20,976	5,141	19,656	2,615	2,818
Missouri -----	44,333	13,941	12,553	15,187	1,934	718
Nebraska -----	49,058	22,486	23,315	892	1,774	591
North Dakota ---	44,835	24,393	15,135	557	1,752	2,998
Ohio -----	26,318	11,435	6,419	4,820	1,960	1,684
South Dakota ---	49,983	17,862	25,823	1,545	1,996	1,757
Wisconsin -----	35,018	10,891	5,745	15,983	1,972	427
N. Central Region	509,274	220,804	145,844	97,193	26,060	19,374
United States ---	1,905,362	403,245	706,947	601,717	100,031	93,422

* From Reuss, Wooten and Marschner, Inventory of major land uses in the United States, U. S. Dept. Agr., Misc. Pub. 663, 1948, table 32.

** Data from U. S. Census, 1945.

† Cropland harvested, crop failure, and cropland idle or fallow from U. S. Census, 1945. This total does not include cropland used for pasture.

†† Exclusive of forest land area in parks, preserves, etc., and woodland area reported as open farm pasture land. Includes grazed forest land.

‡ Estimated area included in the following: farm roads and lanes, farmsteads, rural public highways and roads, rural railroad right-of-way, parks, game refuges, airports, military lands, etc.

‡‡ Estimated area of marshes, sand dunes, rock, desert and similar areas having slight surface use value except for wildlife and watershed protection and recreation.

APPENDIX TABLE 2. AREAS IN PUBLIC OWNERSHIP, NORTH CENTRAL STATES, 1945.

State	Total land area*	Rural area in federal ownership**	Approximate area in state, county and local ownership†	Approximate proportion of land in public ownership
	(acres)	(acres)	(acres)	(percent)
Illinois -----	35,806,080	418,011	890,000	3.7
Indiana -----	23,171,200	333,920	545,000	3.8
Iowa -----	35,831,046	99,346	990,000	3.0
Kansas -----	52,552,320	308,721	1,035,000	2.6
Kentucky -----	25,669,760	947,444	423,000	5.3
Michigan -----	36,494,080	2,525,857	5,440,000	21.8
Minnesota -----	51,205,760	3,864,974	11,455,000	29.9
Missouri -----	44,332,800	1,600,261	695,000	5.2
Nebraska -----	49,057,920	739,420	2,485,000	6.6
North Dakota -----	44,834,560	2,165,188	4,825,000	15.6
Ohio -----	26,318,080	181,973	605,000	3.0
South Dakota -----	49,983,040	9,010,130	6,095,000	30.2
Wisconsin -----	35,017,600	2,078,286	4,455,000	18.7
North Central Region	509,274,240	24,273,531	40,935,000	12.8

* Total area as reported by U. S. Census.

** Acreage totals reported by L. A. Reuss and O. O. McCracken, Federal rural lands, U. S. Dept. Agr., BAE (mimeographed report), June 1947.

† Data for Michigan, Minnesota and Wisconsin from R. Barlowe, Public land ownership in the Lake States, Mich. Agr. Exp. Sta., Sp. Bul. 351, 1948. (Minnesota and Wisconsin totals include extensive areas of federally owned Fish and Wildlife lands administered by the states under long term lease.) Kentucky figures from John E. Mason and John H. Bondurant, Land ownership and use in Kentucky, Ky. Agr. Exp. Sta., Bul. 519, 1948. The estimate for North Dakota is based on data reported by Northern Great Plains Agricultural Advisory Council, Improving farm and ranch tenure in the Northern Plains, Mont. Agr. Exp. Sta., Bul. 436, 1946. The acreage totals for South Dakota are derived from estimates based on state data. Data for the other states, in the absence of specific public land inventory studies, are based on Bureau of Agricultural Economics estimates of state-owned acreages plus conservative estimates of the areas in county and local ownership.

APPENDIX TABLE 3. DISTRIBUTION OF FARM ACREAGE OWNED AND AVERAGE ACRES PER OWNER BY TENURE OF OWNER, NORTH CENTRAL STATES, 1946.

State	Cases reporting	Distribution by tenure groups				Average acres owned per owner by tenure			
		Owner-operator	Part-owner	Operator landlord	Nonoperating landlord	Owner-operator	Part-owner	Operator landlord	Nonoperating landlord
	(No.)	(%)	(%)	(%)	(%)				
Illinois -----	1,269	29.0	11.7	17.0	42.3	108	99	204	167
Indiana -----	1,166	37.3	13.4	15.2	34.1	76	90	113	138
Iowa -----	1,297	31.4	8.0	18.4	42.2	152	130	267	198
Kansas -----	957	19.0	17.0	21.7	42.3	183	265	405	395
Kentucky -----	1,350	40.4	2.9	41.4	15.3	80	54	218	174
Michigan -----	1,173	60.5	12.5	10.0	17.0	86	89	109	98
Minnesota -----	1,379	43.9	15.7	10.3	30.1	137	156	188	203
Missouri -----	1,486	43.0	10.5	22.8	23.7	127	153	240	170
Nebraska -----	754	18.7	34.4	22.7	24.2	400	850	931	320
North Dakota -----	472	23.0	30.6	22.4	24.0	421	429	1,072	414
Ohio -----	1,495	46.7	6.8	15.1	31.4	80	85	113	134
South Dakota -----	512	18.7	37.6	18.7	25.0	351	545	671	328
Wisconsin -----	1,132	58.9	9.5	6.5	25.1	116	124	151	166
North Central Region	14,442	32.5	18.6	19.5	29.4	127	245	286	215
United States -----	38,008	33	16	29	22	135	322	437	280

APPENDIX TABLE 4. CLASSIFICATION OF FEDERALLY OWNED AND ADMINISTERED RURAL LANDS BY ADMINISTERING AGENCY, NORTH CENTRAL STATES, 1945.*

State	Total rural land area subject to federal control (acres)	Federal administrative agency							Other agencies (acres)
		Forest Service (acres)	Office of Indian Affairs (acres)	War and Navy depts. (acres)	Soil Conservation Service (acres)	Fish and Wildlife Service (acres)	General Land Office (acres)	National Parks Service (acres)	
Illinois	418,011	207,584	-----	177,667	21,729	9,729	-----	-----	1,302
Indiana	313,920	83,895	-----	246,750	-----	153	-----	-----	3,113
Iowa	393,346	47,49	-----	60,780	-----	26,923	-----	-----	1,161
Kansas	308,721	-----	3,763	169,480	1,910	153	-----	-----	1,493
Kentucky	947,444	432,935	-----	306,637	102,734	48,309	2,971	-----	92,768
Michigan	2,525,857	2,204,480	26,301	49,995	14,772	79,294	15,942	-----	8,208
Minnesota	3,864,974	2,557,600	860,980	233,329	7,798	115,851	94,830	-----	4,269
Missouri	1,600,261	1,263,558	-----	272,323	-----	-----	-----	-----	25,479
Nebraska	739,420	206,026	-----	146,042	13,511	126,551	28,917	-----	20,872
North Dakota	2,165,188	520	74,571	1,174	133,986	156,963	104,191	-----	27,659
Ohio	181,973	76,706	-----	94,232	-----	299	-----	-----	9,828
South Dakota	9,010,130	1,114,104	6,129,947	328,763	837	32,148	324,219	-----	71,574
Wisconsin	2,078,286	1,405,538	451,531	105,213	831,160	105,279	6,195	-----	4,530
North Central Region total	24,273,531	9,557,695	8,319,720	2,189,404	2,214,296	701,702	575,265	444,110	271,339

* Data from Reuss and McCracken, Federal rural lands, Table 25.

APPENDIX TABLE 5. DISTRIBUTION OF TOTAL FARM REAL ESTATE VALUE AND AVERAGE VALUE PER OWNER BY TENURE OF OWNER, NORTH CENTRAL STATES, 1946.

State	Cases reporting (number)	Average value of land owned by				Value of real estate owned by				
		Owner-operator (dollars)	Part-owner (dollars)	Operator landlord (dollars)	Nonoperating landlord (dollars)	All owners (dollars)	Owner-operator (percent)	Part-owner (percent)	Operator landlord (percent)	Nonoperating landlord (percent)
Illinois	1,158	14,742	12,812	26,919	23,600	18,702	29.9	12.1	16.0	42.0
Indiana	1,091	8,267	10,445	12,079	16,757	11,037	36.7	14.3	14.2	34.8
Iowa	1,218	19,310	16,444	32,313	24,061	22,331	33.7	18.7	17.8	39.8
Kansas	1,658	10,723	13,755	17,085	16,071	14,172	24.8	19.7	19.3	36.3
Kentucky	1,244	5,282	3,286	15,105	12,927	8,077	39.9	12.7	41.4	16.0
Michigan	1,108	6,518	7,502	8,574	7,744	6,998	39.4	13.7	9.7	17.2
Minnesota	1,308	8,974	9,337	13,869	13,569	10,457	44.7	14.9	10.2	30.2
Missouri	1,386	6,464	5,993	15,066	9,210	8,181	42.9	8.0	23.5	23.6
Nebraska	682	15,327	17,172	30,487	18,299	18,748	21.8	21.1	20.0	37.1
North Dakota	436	11,550	9,855	19,822	10,261	11,386	27.9	32.2	16.8	23.1
Ohio	1,381	8,086	8,961	12,154	14,723	10,129	46.1	6.8	14.8	32.3
South Dakota	472	11,599	11,748	18,088	12,823	12,783	22.1	29.4	16.2	32.3
Wisconsin	1,083	7,876	9,473	12,866	11,152	9,839	58.2	10.7	7.3	23.8
North Central Region	13,395	9,198	10,871	17,714	16,159	12,173	36.9	13.1	17.6	32.4
United States	34,951	8,146	10,759	17,757	15,409	11,122	41	11	24	24

APPENDIX TABLE 6. PROPORTION OF FARM OPERATORS IN VARIOUS TENURE GROUPS, NORTH CENTRAL STATES. U. S. CENSUS, 1945.

State	Farm operators (number)	Farm operators who are			
		Full-owners (percent)	Part-owners (percent)	Managers (percent)	Tenants (percent)
Illinois -----	204,239	42.9	17.3	0.8	39.0
Indiana -----	175,970	61.5	15.3	0.5	22.7
Iowa -----	208,934	45.3	12.1	0.4	42.2
Kansas -----	141,192	37.2	25.9	0.4	36.5
Kentucky -----	238,501	67.0	6.0	0.2	26.8
Michigan -----	175,268	72.2	15.5	0.6	11.7
Minnesota -----	188,952	54.7	18.2	0.4	26.7
Missouri -----	242,934	59.9	13.0	0.3	26.8
Nebraska -----	111,756	30.1	22.0	0.4	47.5
North Dakota -----	69,520	31.9	40.0	0.4	27.7
Ohio -----	220,575	66.3	11.3	0.6	21.8
South Dakota -----	68,705	25.2	36.2	0.5	38.1
Wisconsin -----	177,745	67.4	11.5	0.7	20.4
Midwest -----	2,224,291	54.7	15.9	0.5	28.9

APPENDIX TABLE 7. PROPORTION OF FARM LAND OPERATED IN DIFFERENT TENURE GROUPS, NORTH CENTRAL STATES. U. S. CENSUS, 1945.

State	Total acres of farm land (number) (000 omitted)	Farm land operated by:				
		Full-owners (percent)	Part-owners		Managers (percent)	Tenants (percent)
			Owned (percent)	Rented (percent)		
Illinois -----	31,602	28.3	12.4	12.5	1.6	45.2
Indiana -----	20,027	44.4	12.9	11.8	1.7	29.2
Iowa -----	34,454	36.4	9.4	7.5	0.9	45.8
Kansas -----	48,589	22.6	21.0	22.6	1.6	32.2
Kentucky -----	19,725	68.2	5.0	3.0	1.1	22.7
Michigan -----	18,392	59.1	14.5	10.1	2.3	14.0
Minnesota -----	33,140	43.4	15.6	11.1	0.9	29.0
Missouri -----	35,278	51.3	11.7	9.4	1.3	26.3
Nebraska -----	47,753	22.3	24.0	15.4	3.9	34.4
North Dakota -----	41,001	21.7	29.6	25.2	1.1	22.4
Ohio -----	21,928	51.7	10.2	8.4	2.0	27.7
South Dakota -----	43,032	11.8	28.6	33.2	3.2	23.2
Wisconsin -----	23,615	60.2	9.8	5.8	1.8	22.4
Midwest -----	418,537	35.5	17.5	15.4	1.9	29.7

APPENDIX TABLE 8. PROPORTION OF LAND OWNED BY KINDS OF OWNERSHIP INTERESTS, NORTH CENTRAL REGION, 1946.

Kind of ownership interests	Reported interests	Size of ownership holdings in acres							
		Under 10	10-29	30-69	70-139	140-219	220-499	500-999	1000 and over
	(number)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
Complete owners --	12,645	4.9	7.6	16.2	31.1	20.8	14.5	3.4	1.5
Life estates -----	442	4.1	7.2	20.5	31.4	20.0	12.4	3.2	1.2
Undivided interests..	1,081	2.7	5.3	13.7	25.9	23.4	21.3	5.1	2.6
Purchase contracts..	934	6.6	5.9	15.7	33.3	22.3	13.2	1.7	1.3
All: -----	15,102	4.8	7.3	16.2	30.9	21.0	14.9	3.4	1.5

APPENDIX TABLE 9. ESTIMATED AMOUNT AND CHANGE IN FARM MORTGAGE DEBT ON LAND OPERATED BY THE OWNER IN THE MIDWEST, ANNUALLY SINCE 1910.*

Year	Mortgage debt (000 omitted)	Change from previous year	Year	Mortgage debt (000 omitted)	Change from previous year
	(dollars)	(percent)		(dollars)	(percent)
1910-----	2,120,248	-----	1929-----	5,769,616	-0.1
1911-----	2,330,965	+14.6	1930-----	5,570,143	-3.5
1912-----	2,554,181	+ 9.6	1931-----	5,396,131	-3.1
1913-----	2,767,931	+ 8.4	1932-----	5,189,085	-3.8
1914-----	2,993,518	+ 8.1	1933-----	4,816,237	-7.2
1915-----	3,212,729	+ 7.3	1934-----	4,350,529	-9.7
1916-----	3,424,002	+ 6.6	1935-----	4,304,850	-1.0
1917-----	3,829,622	+11.8	1936-----	4,217,564	-2.0
1918-----	4,253,974	+11.1	1937-----	4,038,644	-4.2
1919-----	4,567,567	+ 7.4	1938-----	3,919,068	-3.0
1920-----	5,286,074	+15.7	1939-----	3,820,926	-2.5
1921-----	6,485,489	+22.7	1940-----	3,708,758	-2.9
1922-----	6,766,264	+ 4.3	1941-----	3,674,018	-0.9
1923-----	6,844,404	+ 1.2	1942-----	3,660,031	-0.4
1924-----	6,836,528	- 0.1	1943-----	3,473,141	-5.1
1925-----	6,317,030	- 7.6	1944-----	3,164,571	-8.9
1926-----	6,001,998	- 6.0	1945-----	2,929,383	-7.4
1927-----	5,774,034	- 3.8	1946-----	2,780,808	-4.7
1928-----	5,775,439	0.0	1947-----	2,406,553	-10.2
			1948-----	2,313,858	-3.8

* For years 1910 to 1939 inclusive, see "Revised Annual Estimates of Farm Mortgage Debt by States, 1930-43," issued April 1944, by BAE, USDA, Washington, D. C. For years 1940 to 1947 inclusive, see "Farm Mortgage Debt in the U. S., 1940-47," BAE, USDA, Washington, D. C., Nov. 1947. For 1948, see "Farm Mortgage Debt Shows a Further Rise in 1947," BAE, USDA, Washington, D. C., May, 1948.

APPENDIX TABLE 10. DISTRIBUTION OF MEN OWNERS BY METHOD OF ACQUISITION, NORTH CENTRAL STATES, 1946.

State	Cases reporting	Men owners acquiring land by:							
		Purchase from relatives	Purchase from non-relatives	Purchase from both	Gift, will and estate settlement	Homestead, foreclosure and other	Family assistance combinations	Purchase from relative combinations with no gift or inheritance	Combinations involving no family assistance
	(number)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
Illinois -----	871	9.9	50.4	3.9	11.4	1.7	21.6	0.4	0.7
Indiana -----	831	9.8	57.6	4.1	8.7	1.3	17.9	0.1	0.5
Iowa -----	972	12.9	55.3	4.7	5.5	2.0	17.8	0.8	1.0
Kansas -----	643	8.2	55.2	3.1	10.1	0.3	20.7	0.2	2.2
Kentucky -----	903	11.7	50.6	5.0	9.0	1.4	18.7	1.2	2.4
Michigan -----	873	11.8	63.6	3.3	7.2	1.5	10.4	0.7	1.5
Minnesota -----	1,044	11.7	58.2	4.0	6.3	2.9	13.5	1.1	2.3
Missouri -----	733	10.1	57.6	4.4	8.5	1.4	15.8	0.6	1.6
Nebraska -----	659	11.8	45.5	3.7	10.8	1.2	22.3	0.9	3.8
North Dakota -----	714	7.4	47.8	3.7	7.1	4.1	14.0	1.6	10.2
Ohio -----	869	12.0	57.7	2.8	9.3	1.7	15.5	0.1	0.9
South Dakota -----	597	6.5	51.1	4.0	6.9	3.2	20.1	1.5	6.7
Wisconsin -----	1,114	19.7	56.7	6.9	6.3	1.4	8.0	0.2	0.8
North Cent. Region	10,863	11.5	54.8	4.5	8.1	1.8	16.2	0.7	2.4

APPENDIX TABLE 11. DISTRIBUTION OF WOMEN OWNERS BY METHOD OF ACQUISITION, NORTH CENTRAL STATES, 1946.

State	Cases reporting	Women owners acquiring land by:							
		Purchase from relatives	Purchase from non-relatives	Purchase from both	Gift, will and estate settlement	Homestead, foreclosure and other	Family assistance combinations	Purchase from relative combinations with no gift or inheritance	Combinations involving no family assistance
	(number)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
Illinois -----	173	8.1	19.6	1.7	45.7	2.9	20.2	1.2	0.6
Indiana -----	94	8.5	31.9	2.1	37.3	2.1	17.0	---	1.1
Iowa -----	149	5.4	24.2	2.7	47.6	3.4	15.4	---	1.3
Kansas -----	101	7.9	28.7	1.0	39.6	2.0	20.8	---	---
Kentucky -----	99	4.0	28.3	1.0	36.4	1.0	24.3	1.0	4.0
Michigan -----	82	6.1	41.5	2.4	35.4	2.4	11.0	---	1.2
Minnesota -----	101	5.9	47.5	1.0	31.7	5.0	7.9	---	1.0
Missouri -----	101	4.9	33.7	1.0	36.6	1.0	21.8	---	1.0
Nebraska -----	130	3.9	29.2	0.8	44.6	3.8	13.8	0.8	3.1
North Dakota -----	82	7.3	19.5	---	48.8	8.5	12.2	---	3.7
Ohio -----	109	12.9	34.9	2.8	28.4	1.8	18.3	---	0.9
South Dakota -----	80	7.5	18.7	---	42.3	8.8	16.2	---	6.3
Wisconsin -----	73	9.6	35.6	1.4	42.5	4.0	5.5	---	1.4
North Cent. Region	1,374	7.0	29.5	1.5	40.2	3.5	16.2	0.3	1.8

APPENDIX TABLE 12. PROPORTIONS OF FARM OWNERS BY SEX, TENURE AND OCCUPATION RECEIVING INHERITANCES OTHER THAN LAND COMPARED WITH ALL OWNERS, NORTH CENTRAL REGION, 1946.

Classification	Receiving inheritance other than land (percent)	Proportion of all owners (percent)
Sex		
Men -----	79.6	88.5
Women -----	20.4	11.5
Tenure		
Owner-operator -----	31.7	47.7
Part-owner -----	11.9	14.1
Operator landlord -----	19.6	12.7
Nonoperating landlord -----	36.8	25.5
Occupation		
Farmer -----	62.3	65.9
Retired farmer -----	13.5	10.0
Housewife -----	7.3	3.2
Business or professional -----	10.1	9.2
Laborer -----	6.8	11.7
All owners -----	17.9	100.0

APPENDIX TABLE 13. DISTRIBUTION OF FARM OWNERS AND TENANTS BY AGE GROUPS, NORTH CENTRAL REGION, 1890-1940.*

Tenure and age groups	1890 (percent)	1900 (percent)	1910 (percent)	1920 (percent)	1930 (percent)	1940 (percent)
Owner-operators						
Under 25 -----	2.0	1.7	2.1	1.9	1.0	1.0
25-34 -----	17.9	14.6	15.2	14.3	9.1	8.3
35-44 -----	24.2	26.4	25.3	24.5	22.4	18.4
45-54 -----	24.3	24.8	27.3	27.0	27.4	27.3
55-64 -----	} 31.6	19.2	18.6	20.6	23.6	24.9
65 and over -----		13.3	11.5	11.7	16.5	20.1
All -----	100.0	100.0	100.0	100.0	100.0	100.0
Tenants						
Under 25 -----	8.5	8.5	12.6	10.5	8.1	6.7
25-34 -----	39.3	36.4	37.6	38.0	31.0	27.8
35-44 -----	26.1	28.0	25.7	27.0	30.5	27.4
45-54 -----	15.1	16.6	14.9	15.2	18.0	21.5
55-64 -----	} 11.0	7.4	6.9	6.8	8.9	11.8
65 and over -----		3.1	2.3	2.5	3.5	4.8
All -----	100.0	100.0	100.0	100.0	100.0	100.0

* Data from U. S. Census reports for 1890, 1900, 1910, 1920, 1930 and 1940.

APPENDIX TABLE 14. TENURE OF MEN OWNERS BY TENURE EXPERIENCE, NORTH CENTRAL REGION, 1946.

Tenure experience groups	Cases reporting	Distribution by owner tenure groups			
		Owner-operators	Part-owner operators	Operator landlords	Non-operating landlords
	(number)	(percent)	(percent)	(percent)	(percent)
P/HRO -----	1,942	43.7	30.6	14.0	11.7
P/HNRO -----	1,537	50.0	24.3	11.8	13.9
H/RO -----	191	53.4	17.8	16.7	12.1
H/RNO -----	680	61.6	14.7	13.2	10.5
PO -----	1,684	50.3	21.8	15.1	12.8
PNO -----	2,206	57.6	13.1	15.7	13.6
NO -----	755	66.7	8.2	15.3	9.8
Landlords who have never been owner-operators -----	514	---	---	---	100.0
All men owners -----	9,509	51.3	15.7	13.0	20.0

APPENDIX TABLE 15. OCCUPATIONAL DISTRIBUTION OF MEN OWNERS BY TENURE EXPERIENCE GROUPS, NORTH CENTRAL REGION, 1946.

Tenure groups	Cases reporting	Distribution by occupation				
		Farmers	Retired farmers	Merchants or salesmen	Professional, public service or retired other	Laborer or other
	(number)	(percent)	(percent)	(percent)	(percent)	(percent)
P/HRO -----	1,907	85.8	11.1	0.7	0.6	1.8
P/HNRO -----	1,516	78.6	11.4	2.6	1.6	5.8
H/RO -----	185	79.5	13.0	0.5	0.5	6.5
H/RNO -----	658	67.9	10.8	4.6	1.5	15.2
PO -----	1,668	80.9	14.6	0.8	1.0	2.7
PNO -----	2,150	67.3	10.3	3.6	4.1	14.7
NO -----	712	52.0	5.7	8.7	3.8	29.8
RL -----	36	83.3	5.5	5.6	2.8	2.8
RNL -----	70	34.3	5.7	8.6	21.4	30.0
P/HL -----	32	25.0	15.6	28.1	18.8	12.5
P/HNL -----	229	9.2	2.2	24.9	31.4	32.3
NL -----	115	6.9	2.6	31.3	32.2	27.0
All men owners --	9,278	72.0	10.8	3.7	3.3	10.2

APPENDIX TABLE 16. TENURE EXPERIENCE OF FARM OWNERS REPORTING RECEIPT OF INHERITANCE OTHER THAN LAND, NORTH CENTRAL REGION, 1946.

Tenure experience groups	Cases reporting	Those reporting receipt and use of inheritance other than land
	(number)	(percent)
P/HRO -----	1,695	17.0
P/HNRO -----	1,366	15.2
H/RO -----	166	11.4
H/RNO -----	590	8.1
PO -----	1,454	16.4
PNO -----	1,942	15.3
NO -----	641	8.9
RL -----	30	16.7
RNL -----	67	19.4
R/HL -----	34	8.8
P/HNL -----	217	17.1
NL -----	116	19.8
Men owners -----	8,318	14.9

APPENDIX TABLE 17. DISTRIBUTION OF FARM ACREAGE OWNED AND AVERAGE ACRES PER OWNER BY OCCUPATION, NORTH CENTRAL STATES, 1946.

State	Cases reporting (number)	Distribution of acreage					Average land per owner				
		Farmer (percent)	Retired farmer (percent)	Housewife (percent)	Business, professional, public service and other (percent)	Laborer and other (percent)	Farmer (acres)	Retired farmer (acres)	Housewife (acres)	Business, professional, public service and other (acres)	Laborer and other (acres)
Illinois	1,087	58.7	15.2	5.2	14.2	6.7	145	165	133	173	73
Indiana	1,000	65.0	10.1	2.5	13.8	8.6	108	126	93	103	45
Iowa	1,167	64.0	17.9	3.9	11.3	2.9	182	201	173	240	92
Kansas	821	61.2	18.5	3.5	13.9	2.9	287	370	219	344	125
Kentucky	1,228	72.4	7.0	1.8	9.1	9.7	122	138	109	144	92
Michigan	1,036	72.5	6.0	1.9	10.0	9.6	103	94	79	111	49
Minnesota	1,211	72.8	10.8	2.5	8.2	5.7	160	190	184	203	98
Missouri	1,313	73.9	8.7	2.4	8.4	6.6	168	177	126	123	122
Nebraska	430	70.9	11.2	2.8	7.3	2.1	626	441	292	375	237
North Dakota	423	72.7	11.4	1.4	7.9	11.6	500	572	273	597	233
Ohio	1,327	58.5	12.9	3.7	13.4	11.5	105	125	114	128	49
South Dakota	426	76.8	8.3	2.4	9.6	9.6	518	341	226	436	248
Wisconsin	1,026	77.0	7.8	2.4	7.8	5.0	128	139	238	199	76
North Central Region	12,695	70.4	11.7	2.8	10.1	5.0	198	218	164	201	80
United States	-----	70	9	2	14	5	244	261	153	314	88

APPENDIX TABLE 18. AVERAGE SIZE OF FARMS BY STATES BY CENSUS YEARS.*

State	1945	1940	1930	1920	1910	1900
	(acres)	(acres)	(acres)	(acres)	(acres)	(acres)
Illinois -----	154.7	145.4	143.1	134.8	129.1	124.2
Indiana -----	113.8	107.3	108.4	102.7	98.8	97.4
Iowa -----	164.9	160.1	158.3	156.8	156.3	151.2
Kansas -----	344.1	308.2	282.9	274.8	244.0	240.7
Kentucky -----	82.7	80.2	80.8	79.9	85.6	93.7
Michigan -----	104.9	96.2	101.1	96.9	91.5	86.4
Minnesota -----	175.3	165.2	166.9	169.3	177.3	169.7
Missouri -----	145.2	135.6	131.8	132.2	124.8	119.3
Nebraska -----	427.3	391.1	345.4	339.4	297.8	246.1
North Dakota -----	589.8	512.9	495.8	466.1	382.3	342.9
Ohio -----	99.4	93.7	98.1	91.6	88.6	88.5
South Dakota -----	626.3	544.8	438.6	464.1	335.1	362.4
Wisconsin -----	132.8	122.5	120.3	117.0	118.9	117.0
North Cent. Region	188.2	173.8	170.4	161.6	149.5	139.6

* Based on U. S. Census of Agriculture.

APPENDIX TABLE 19. DISTRIBUTION OF OWNER TENURE GROUPS BY SIZE OF FARMS OWNED, NORTH CENTRAL REGION AND SUB-REGIONS, 1946.

Sub-regions and tenure groups	Cases reporting	Distribution of owners by tenure and acres owned						
		Under 30	30-69	70-139	140-219	220-499	500-999	1000 and over
		(number)	(%)	(%)	(%)	(%)	(%)	(%)
Eastern group (Indiana, Kentucky, Michigan, Ohio and Wisconsin)								
Owner-operators* -----	4,312	21.9	24.2	35.6	12.8	5.0	0.3	0.2
Operator landlords -----	807	11.0	20.4	34.4	16.4	13.0	3.8	1.0
Nonoperating landlords..	1,157	7.8	18.6	41.0	17.6	11.9	2.7	0.4
Middle group (Illinois, Iowa, Minnesota and Missouri)								
Owner-operators* -----	3,164	12.1	15.1	35.1	23.6	12.4	1.5	0.2
Operator landlords -----	643	2.6	10.4	27.4	23.3	28.5	5.9	1.9
Nonoperating landlords..	1,582	4.1	10.7	30.4	29.3	21.4	3.4	0.7
Great Plains States (Kansas, Nebraska, North Dakota and South Dakota)								
Owner-operators* -----	1,406	6.5	5.7	13.3	26.5	30.5	11.9	5.6
Operator landlords -----	364	1.1	1.4	12.4	17.0	31.9	21.4	14.8
Nonoperating landlords..	919	2.0	3.0	14.0	30.9	33.0	10.8	6.3
North Central Region								
Owner-operators* -----	8,882	17.0	18.0	31.9	18.8	11.7	2.6	1.0
Operator landlords -----	1,814	6.0	13.1	27.5	18.9	22.3	8.1	4.1
Nonoperating landlords..	3,658	4.7	11.3	29.6	26.0	21.3	5.0	2.1
All owners North Central Region -----	14,354	11.9	15.7	30.8	20.7	15.4	3.9	1.6
United States -----	38,008	19.0	18.5	25.9	15.9	13.3	4.5	2.9

* Includes both full-owner operators and part-owner operators.

APPENDIX TABLE 20. DISTRIBUTION OF MEN OWNERS BY METHOD OF ACQUISITION BY SIZE OF ACREAGE OWNED, NORTH CENTRAL REGION, 1946.*

Method of acquisition	Cases reporting	Distribution by acres owned									
		Under 10 acres	10-29 acres	30-69 acres	70-139 acres	140-219 acres	220-499 acres	500-999 acres	1,000-1,499 acres	1,500-2,499 acres	2,500 acres and over
	(number)	(percent)	(percent)	(percent)	(percent)	(percent)	(percent)	(percent)	(percent)	(percent)	(percent)
Four Plains States Number reporting	2,613	1.3	2.2	3.4	10.6	25.6	33.7	14.6	4.1	2.5	2.0
Purchase from relatives	223	0.5	0.9	7.2	22.4	35.9	26.0	6.3	0.4	0.4	---
Purchase from non-relatives	4,301	2.1	3.5	3.4	10.2	27.5	33.9	11.8	3.5	2.4	1.7
Purchase from both	124	1.6	---	---	3.2	8.9	47.6	23.4	7.3	4.0	4.0
Gift or inheritance	228	0.9	0.4	8.3	19.3	39.5	23.7	7.9	---	---	---
Homesteading or foreclosure	58	---	1.7	5.2	12.1	48.3	22.4	10.3	---	---	---
Family assistance combination	500	---	1.2	1.4	7.8	18.4	37.8	22.0	5.6	2.8	3.0
Purchase from relatives combination	27	---	---	---	---	7.4	33.4	22.2	18.5	11.1	7.4
No assistance combination	152	---	0.6	0.6	1.3	5.9	37.5	29.0	13.2	6.6	5.3

* See appendix table 20A for nine Eastern States.

APPENDIX TABLE 20A. DISTRIBUTION OF MEN OWNERS BY METHOD OF ACQUISITION BY SIZE OF ACREAGE OWNED, NORTH CENTRAL REGION, 1946.*

Method of acquisition	Cases reporting	Distribution by acres owned							
		Under 10 acres	10-29 acres	30-69 acres	70-139 acres	140-219 acres	220-499 acres	500-999 acres	1,000 acres and over
Nine Eastern States of region	8,261	4.5	7.2	17.4	35.5	20.3	12.7	1.9	0.5
Number reporting ---	No.	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
Purchase from relatives -----	1,027	3.4	7.4	16.0	43.0	22.3	7.8	---	0.1
Purchase from non-relatives -----	4,664	6.0	8.7	20.1	35.4	18.5	9.6	1.3	0.4
Purchase from both... Gift or inheritance...	365	1.4	1.9	8.8	30.9	23.6	28.8	4.1	0.5
Homesteading or foreclosure -----	651	5.6	8.4	21.2	34.2	19.5	9.7	1.2	0.2
Combinations with gift or inheritance -----	142	4.2	10.6	19.0	31.0	27.5	7.0	0.7	---
Combinations with purchase from relatives but no gift or inheritance -----	1,257	0.9	3.0	10.8	32.7	23.6	23.6	4.5	0.9
Combinations with no family assistance --	49	---	---	2.0	34.7	24.5	32.7	6.1	---
	106	---	2.8	4.7	26.4	23.6	30.2	10.4	1.9

* See appendix table 20 for four Plains States.

APPENDIX TABLE 21. PROPORTION OF FARM OWNERS REPORTING THAT THEY HAVE ALREADY TRANSFERRED OWNERSHIP OF PART OF THEIR LAND TO NEXT GENERATION, NORTH CENTRAL STATES, 1946.

State	Cases reporting	Proportion of owners who have transferred ownership
	(number)	(percent)
Illinois -----	871	2.7
Indiana -----	817	2.6
Iowa -----	961	2.8
Kansas -----	612	3.3
Kentucky -----	941	5.2
Michigan -----	831	4.2
Minnesota -----	1,006	3.6
Missouri -----	797	3.1
Nebraska -----	645	3.4
North Dakota -----	615	6.0
Ohio -----	811	3.2
South Dakota -----	555	3.2
Wisconsin -----	1,037	2.9
Midwest -----	10,499	3.5

APPENDIX TABLE 22. DISTRIBUTION OF MEN OWNERS BY METHOD OF LAND ACQUISITION BY VALUE OF LAND OWNED, NORTH CENTRAL REGION, 1946.

Method of acquisition	Cases reporting (number)	Distribution of cases by value groups									
		Under \$500 (percent)	\$500-2,499 (percent)	\$2,500-4,999 (percent)	\$5,000-9,999 (percent)	\$10,000-14,999 (percent)	\$15,000-24,999 (percent)	\$25,000-49,999 (percent)	\$50,000-74,999 (percent)	\$75,000-99,999 (percent)	\$100,000 and over (percent)
Number reporting ---	10,276	1.3	11.2	16.9	26.1	16.2	16.0	9.3	1.9	0.6	0.5
Purchase from relatives ---	1,186	1.3	12.9	18.0	25.7	17.0	17.4	7.0	0.3	0.2	0.2
Purchase from non-relatives ---	5,720	1.2	12.4	19.3	28.8	15.3	13.9	7.1	1.3	0.3	0.4
Purchase from both relatives and non-relatives ---	459	1.5	3.9	12.9	21.1	19.2	18.5	15.3	4.8	1.5	1.3
Gift or inheritance ---	843	1.8	14.1	17.7	20.7	17.5	17.1	7.4	1.7	0.6	1.4
Homesteading, foreclosure and other ---	191	3.2	24.1	18.8	19.4	15.2	11.5	6.8	1.0	---	---
Combinations with gift or inheritance ---	1,571	1.3	4.6	8.7	22.0	17.4	21.0	17.8	4.3	1.8	1.1
Combinations with purchase from relatives but no gift or inheritance ---	73	---	8.2	12.3	24.7	12.3	26.0	13.7	---	2.8	---
Combinations with no family assistance ---	233	0.9	8.6	13.3	24.0	17.2	18.4	14.2	2.6	0.4	0.4

APPENDIX TABLE 23. TENURE EXPERIENCE BY ACRES OWNED, EASTERN STATES OF NORTH CENTRAL REGION, 1946.*

Tenure experience groups	Cases reporting (number)	Distribution by acreage intervals									
		Under 10 acres	10-29 acres	30-69 acres	70-139 acres	140-219 acres	220-499 acres	500-999 acres	1,000 acres and over		
		(percent)	(percent)	(percent)	(percent)	(percent)	(percent)	(percent)	(percent)	(percent)	(percent)
9 Eastern States	7,291	4.0	7.1	17.1	36.4	20.7	12.6	1.7	0.4		
Subregional total	1,285	1.3	3.6	12.9	37.6	26.7	15.8	2.0	0.1		
HRNO	1,158	1.9	5.3	15.0	40.2	24.4	11.2	1.0	0.4		
R/HO	1,141	3.5	6.4	22.7	46.8	10.2	10.6	0.7			
R/HNO	568	7.2	12.0	18.7	37.1	15.8	7.7	1.1	0.4		
PO	1,220	1.8	7.8	18.2	36.1	23.1	16.3	1.9	0.3		
PNO	1,862	4.5	7.9	23.4	36.9	17.3	10.3	2.1	0.5		
NO	684	11.7	16.1	23.0	28.7	12.1	7.5	0.7	0.2		
RL	22	---	4.5	9.1	34.7	46.5	18.2	---	---		
RNL	49	---	---	8.2	27.7	25.5	28.6	---	---		
P/HL	27	---	3.7	7.4	34.7	29.6	18.5	3.7	---		
P/HNL	177	---	6.8	14.1	26.6	23.7	20.3	4.0	---		
NL	98	---	5.1	7.1	27.6	23.5	22.4	4.1	---		

APPENDIX TABLE 23A. TENURE EXPERIENCE BY ACRES OWNED, GREAT PLAINS STATES OF NORTH CENTRAL REGION, 1946.*

Tenure experience group	Cases reporting (number)	Distribution by acreage intervals									
		Under 10 acres	10-29 acres	30-69 acres	70-139 acres	140-219 acres	220-499 acres	500-999 acres	1,000-1,499 acres	1,500-2,499 acres	2,500 acres and over
		(percent)	(percent)	(percent)	(percent)	(percent)	(percent)	(percent)	(percent)	(percent)	(percent)
4 Plains States	2,227	1.2	1.7	10.6	25.6	34.4	15.0	3.9	2.5	1.9	
Subregional total	657	0.1	2.9	11.6	28.5	34.1	15.4	3.3	2.6	0.6	
HRNO	379	1.6	2.4	10.5	28.0	34.8	11.6	4.0	1.8	1.6	
R/HO	50	4.0	2.0	4.0	20.0	36.0	20.0	6.0	2.0	6.0	
R/HNO	112	0.9	3.6	12.5	25.0	35.7	10.7	4.5	1.8	1.7	
PO	472	0.4	1.7	8.3	22.7	36.8	19.1	4.9	3.4	2.9	
PNO	345	2.6	2.9	11.6	22.6	30.2	15.4	4.6	1.7	2.9	
NO	71	5.6	7.0	12.7	12.7	33.8	11.4	1.4	2.8	7.0	
RL	14	---	---	28.6	28.6	28.6	14.2	---	---	---	
RNL	24	---	4.2	16.7	33.3	33.3	4.2	8.3	---	---	
P/HL	10	---	---	30.0	30.0	40.0	10.0	10.0	10.0	---	
P/HNL	67	---	1.5	10.4	29.8	40.3	7.5	1.5	3.0	1.5	
NL	26	---	---	3.8	38.5	23.1	23.1	---	3.8	7.7	

APPENDIX TABLE 24. TENURE EXPERIENCE BY VALUE OF LAND OWNED, NORTH CENTRAL REGION, 1946.

Tenure experience groups	Cases reporting (number)	Distribution by value of land owned										
		\$1-499	\$500-2,499	\$2,500-4,999	\$5,000-9,999	\$10,000-14,999	\$15,000-24,999	\$25,000-49,999	\$50,000-74,999	\$75,000-99,999	\$100,000-149,999	\$150,000 and over
	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
P/HRO	1,880	0.7	7.1	11.9	24.5	20.0	19.5	12.8	2.3	0.8	0.3	0.1
P/HNO	1,491	0.9	9.7	16.4	26.3	16.8	17.3	10.4	1.3	0.5	0.3	0.1
R/HO	180	3.3	13.0	21.1	21.7	11.7	16.7	9.4	0.6	0.5	---	---
R/HNO	652	1.8	13.8	19.6	33.1	12.1	13.5	4.0	1.4	0.5	0.2	---
PO	3,603	1.3	8.8	15.5	27.0	17.7	18.3	8.7	1.6	0.5	0.3	0.3
PNO	2,112	1.1	13.3	20.7	27.9	14.5	16.3	7.5	1.9	0.5	0.4	0.1
NO	719	1.0	17.2	23.0	26.8	11.1	10.2	5.6	1.7	0.7	0.7	---
RL	33	---	3.0	6.1	18.2	21.2	30.3	13.1	6.1	---	---	---
RNL	69	1.4	11.6	7.3	21.7	14.5	23.2	13.9	4.4	---	---	---
P/HL	35	---	5.7	11.4	17.1	14.3	31.4	8.6	8.6	2.9	---	---
P/HNL	238	0.8	7.2	14.7	22.7	21.9	18.5	8.4	2.9	2.1	0.8	---
NL	118	1.7	8.5	10.2	17.8	15.3	18.6	20.3	5.1	0.8	1.7	---
Region.....	9,130	1.1	10.7	17.1	26.6	16.3	16.2	9.2	1.8	0.6	0.3	0.1

APPENDIX TABLE 25. PROPORTION OF LANDLORDS AND OWNER-OPERATORS REPORTING WILLS WITHIN VARIOUS AGE GROUPS, NORTH CENTRAL STATES, 1946.

State	Landlords					Owner-operators				
	Cases reporting (number)	Under 35 (percent)	35-54 (percent)	55-64 (percent)	65 and over (percent)	Cases reporting (number)	Under 35 (percent)	35-54 (percent)	55-64 (percent)	65 and over (percent)
	Illinois	119	0.8	19.3	26.1	53.8	77	2.6	40.2	29.9
Indiana	52	0.0	25.0	19.2	55.8	51	5.9	33.3	39.2	21.6
Iowa	176	1.1	17.1	26.7	55.1	116	1.7	55.2	24.2	19.9
Kansas	67	1.5	8.9	22.4	67.2	33	0.0	24.2	39.4	36.4
Kentucky	33	0.0	30.3	18.2	51.5	59	0.0	44.0	32.2	23.8
Michigan	38	2.6	7.9	26.3	63.2	53	1.8	47.2	17.0	34.0
Minnesota	50	2.0	12.0	22.0	64.0	56	0.0	37.5	28.6	33.9
Missouri	41	2.4	12.2	19.5	65.9	44	0.0	31.8	29.6	38.6
Nebraska	92	0.0	16.3	21.7	62.0	48	2.1	47.9	33.3	16.7
North Dakota	51	2.0	17.6	21.6	58.8	29	3.5	31.0	31.0	34.5
Ohio	72	2.8	22.2	23.6	51.4	114	7.1	37.7	26.3	28.9
South Dakota	52	1.9	7.7	17.3	73.1	27	3.7	33.4	33.3	29.6
Wisconsin	56	1.8	17.8	14.3	66.1	85	5.9	30.6	24.7	38.8
Midwest	899	1.3	16.7	22.6	59.4	792	3.1	39.9	28.5	28.5

APPENDIX TABLE 26. TENURE EXPERIENCE OF MEN OWNERS 50 YEARS OF AGE AND OLDER WITHOUT WILLS BUT HAVING OTHER TYPES OF FARM TRANSFER PLANS, NORTH CENTRAL REGION, 1946.

Tenure experience of owners	Cases reporting	Owners with plans
	(number)	(percent)
P/HRO -----	753	6.4
P/HNRO -----	691	9.6
P/HO -----	90	10.0
P/HNO -----	308	9.1
PO -----	721	9.6
PNO -----	966	8.0
NO -----	319	10.3
RL -----	15	6.7
RNL -----	29	6.9
P/HL -----	87	11.5
P/HNL -----	21	14.3
NL -----	45	6.7
All owners -----	4,045	8.6

APPENDIX TABLE 27. METHOD OF ACQUIRING OWNERSHIP USED BY OWNERS 50 YEARS OF AGE AND OLDER WHO HAVE MADE WILLS, NORTH CENTRAL STATES, 1946.

State	Cases reporting	Owners with wills reporting	
		Family assistance	No family assistance
		(percent)	(percent)
Illinois -----	506	29.3	25.6
Indiana -----	420	16.9	14.8
Iowa -----	523	36.4	32.7
Kansas -----	366	26.7	19.0
Kentucky -----	420	16.6	16.3
Michigan -----	421	18.0	12.2
Minnesota -----	498	17.8	17.0
Missouri -----	394	13.8	19.3
Nebraska -----	376	24.2	27.4
North Dakota -----	326	16.1	18.3
Ohio -----	472	32.6	23.9
South Dakota -----	287	18.6	24.7
Wisconsin -----	559	18.3	16.2
Midwest -----	5,568	22.9	20.3

APPENDIX TABLE 28. OCCUPATION OF FARM OWNERS REPORTING WILLS, NORTH CENTRAL STATES, 1946.

State	Cases reporting	Owners who are:					
		Farmers	Retired farmers	Housewives	Business and professional	Retired non-farmers	Laborers and others
	(number)	(%)	(%)	(%)	(%)	(%)	(%)
Illinois -----	225	46.3	20.4	5.8	8.4	12.0	7.1
Indiana -----	110	48.2	17.3	2.7	10.9	10.0	10.9
Iowa -----	313	48.6	28.1	5.1	7.0	6.7	4.5
Kansas -----	116	33.6	29.3	9.5	3.4	18.2	6.0
Kentucky -----	131	61.8	13.0	2.3	4.6	11.4	6.9
Michigan -----	92	45.7	14.1	6.5	8.7	9.8	15.2
Minnesota -----	115	44.4	33.0	3.5	1.7	6.1	11.3
Missouri -----	101	46.6	17.8	5.9	8.9	8.9	11.9
Nebraska -----	147	46.2	25.8	4.8	7.5	11.6	4.1
North Dakota -----	87	42.5	32.2	3.4	8.1	6.9	6.9
Ohio -----	204	49.5	17.6	4.4	10.3	8.4	9.8
South Dakota -----	81	43.2	30.9	7.4	2.5	12.3	3.7
Wisconsin -----	143	58.7	25.9	2.1	5.6	4.9	2.8
Midwest -----	1,859	48.0	23.5	4.8	7.0	9.4	7.3

LAND OWNERSHIP SURVEY QUESTIONNAIRE

1. How many farms, ranches, or plantations do you (and your wife or husband) own? (Do not include land held under purchase contracts, partnerships, undivided estates, and life interests.)
2. How many farms, ranches, or plantations are you (and your wife or husband) buying under purchase contract arrangements?
3. How many farms, ranches, or plantations do you own with someone else other than your wife or husband? (Refers to land which you hold in partnership or in which you own undivided interests with other people.)
(a) How many of these acres are in an estate under an executor or administrator pending final court settlement?
4. In how many farms, ranches, or plantations do you (and your wife or husband) own life interests only? (Refers to land which you use and control during your lifetime, but which you cannot sell, trade, or otherwise transfer.)
5. How much would you estimate your land would sell for?
6. How many acres of your land did you get entirely through: (a) purchase from relatives, (b) purchase from others, (c) foreclosure, (d) gift, (e) will, (f) estate settlement other than will, (g) inherited part interest and purchased rest from other heirs, (h) homesteading, and (i) other (please explain)?
7. Have you used money or proceeds from property acquired through gift, will, or estate settlement to purchase, improve, or operate any of your land? Yes_____ No_____ If yes, about how much?
8. How many children have you? _____ Have you already transferred ownership in any land to your children? Yes_____ No_____ If yes, how many acres?
9. Have you made definite plans for any of your children or other relatives to eventually acquire ownership of your land? Yes_____ No_____ Have you made out a will covering your land? Yes_____ No_____
10. At what age did you first own land? What is your present age? Since you were 14 years old how many years have you spent: (a) working on your parents' farm without wages, (b) working on farms as a hired hand, (c) working at nonfarm employment, (d) renting from others all the land you farmed, and (e) operating your own land?
11. Do you live on a farm? Yes_____ No_____ What do you regard as your principal occupation?
12. Have you retired from farming by turning over most or all of the farm work and management to someone else? Yes_____ No_____
(a) If yes, what year did you retire?
(b) If no, do you plan to retire within the next 5 years?
13. How many acres do you rent out to tenants and croppers? How many tenants do you rent to? How many croppers? How many of these tenants and croppers are your sons or sons-in-law?
14. How many of your tenants and croppers pay you rent in the form of: (a) cash only, (b) share of the crops only, (c) part cash and part share of crops, (d) share of the livestock and crops, and (e) other (please explain)?
15. Are you depending on your rented lands as your principal source of income? Yes_____ No_____

APPENDIX B — Methodology¹

Selection of sample—The source of data for the land ownership study was largely a mail questionnaire sent to a sample of land owners in the region. A random sample of owners was prepared by special agent employees of the Bureau of the Census from the records of the 1945 Census of Agriculture. A systematic sample of every n^{th} line in every k^{th} book of the census records was drawn. Each line contained the name and address of a farm operator and owner(s) (if owner and operator were different). Sampling rates in the several states varied from a 1/30 sample in South Dakota to a 1/60 sample in Ohio in order to get a sufficient number of farms in the sample to support state analyses. Regardless of the sampling rate, every county in the region contributed at least some schedules to the sample total. The rate of sampling was determined by the number of farms per state reported in the 1940 Census since, at the time the sample was drawn for this study, summarization of the 1945 Census data had not proceeded to the point where numbers of farms per state were known.

Each individual owner in the sample was mailed a questionnaire. Upon the lapse of sufficient time (from 2 to 3 weeks) for the respondents to answer the first mailing, a second mailing was made to all of those who had not answered the first request. This second mailing almost doubled the number of questionnaires returned. These mail-outs were made during 1946. Approximately 35 percent of the schedules were returned.

Correction for sample bias—The procedure by which the sample was selected caused a bias for which approximate corrections were made. The names of owners who owned all or part of only one farm appeared only once in the listing. However, the names of those persons who owned two or more parts of farms, or whole farms under separate operatorships, occurred according to the number of farms or portions of farms they owned. This gave the multiple-farm owners as many chances to enter the sample as they had farms or portions of farms listed separately in the census books. This resulted in a relatively larger proportion of multiple farm owners in the sample than there were in the universe of farm owners.

The basic assumption underlying the method for correcting this bias was that the census farm and the farm as reported by respondents were roughly comparable except for part-owners, in which cases two or more ownership units constitute one farm. Since there were few part-owners, the unit reported by the census and the unit reported by the owners as being a complete farm tended to correspond.

Another assumption made was that the several farms of any one owner were scattered throughout the census enumeration books rather than listed in consecutive order. The probabilities of multiple farm owners entering the sample were adjusted as follows: for the two-farm owners, one-half of the schedules were discarded, for the three-farm owners, two-thirds of the schedules were thrown out, etc. This process tended to reduce the effect of the multiple owners on such averages as acres per owner, value of real estate per owner, number of tenants per owner, etc. This method of correction for bias was tested in several states, and it was found that considerable improvements in estimates were made in all the states tested.

All data in this report based on the sample are corrected for the bias introduced by the way in which the sample was drawn, with the exception of those data in the section in this appendix entitled "Possible mail bias."

¹Prepared by Norman V. Strand, Statistical Laboratory, Iowa State College, and Bureau of Agriculture Economics, and Buis T. Inman, Bureau of Agricultural Economics, USDA, in consultation with the authors.

Correction for variation in sampling rates—Adjustments in the sampling rates used in the various states were necessary in combining state data into regional totals. For regional totals, the adjustment was made by discarding or duplicating the data from a portion of schedules in order to arrive at a uniform sampling rate for each of the states within the region. For example, the sampling rate for the North Central Region was 1 in 135 (figured on the return, not the mail-out), while for Wisconsin it was 1 in 111. In order to give Wisconsin a sampling rate comparable to the rest of the region, every fifth schedule was discarded after arraying them on the basis of size of holding.

Nature of biases arising from misinterpretation of questionnaires—Representatives from the Agricultural Experiment Station and the Statistical Laboratory, Iowa State College, visited a small sub-sample of respondents in Iowa in order to check the respondent's interpretation of the questions on the mail questionnaire.

Findings from these interviews are summarized as follows: The problem of a respondent putting the same land in two or more cells in questions 1-4 (see questionnaire) was negligible. Purchase contracts could cause some confusion, but the number of observations was insufficient to reach conclusions as to the extent of possible errors. It is known, however, that sometimes farms held in fee simple but mortgaged were classed as held under purchase contract. The purchaser was not always sure if his farm was still under purchase contract, or if the title had passed to him. Many deeds to property are made out to both husband and wife (joint tenancy). However, even in the absence of such joint tenancy, many owners feel that wives are in essence co-owners. It was possible to interpret the questions on ownership to include joint or understood co-ownership, which was intended, as well as completely separate ownership of different tracts by each spouse. Replies indicated room for doubt as to similarity of interpretation by all respondents. The widow's homestead rights are, in cases settled according to laws governing descent of property, a life interest only. A spouse may create a life estate by will or the children may agree among themselves, either formally or informally, to give their mother or father the use of the place until death. Informal arrangements, while they may lack legal effect, may be as satisfactory and real as those which are executed and recorded. It thus develops that when respondents said they had a life estate they very probably had one regardless of the record. In questions 1 to 4, it was not possible to answer correctly the actual number of farms held if a single operating unit was composed of tracts held in more than one way.

There were variations in the responses to question 5 ranging from reports on the value of land and buildings to the value of land only. When no value was given, the value shown on the corresponding census schedules was inserted by the editors.

In answering question 6, some respondents failed to distinguish between property acquired by process of law alone and that acquired by will. There was lack of uniformity on reporting land acquired through will or estate settlement; purchased from relatives; and inherited part and purchased rest from other heirs. Homesteading was sometimes interpreted as "home place" or "home farm." Widows frequently indicated their husband's method of acquisition, and "other" was frequently used by a respondent when in doubt or confused as to the exact method.

Question 7 was asked in order to determine the assistance in the form of cash or other gratuities that owners used in acquiring farm ownership. Land was to be excluded unless it had been sold to buy the present place.

It appears doubtful that this question was answered accurately (as to amount of gratuity) in a good many cases, but the small number of cases prohibits making a categorical statement on this point. The proportion of owners reporting gratuities appears reliable.

Question 8 concerning transfer of land by parents to children could have been answered only in the special case where the parent either had two or more farms or fractionated his own farm.

Question 9 concerned plans to transfer land to children or other relatives. An analysis indicated that plans from the majority really could not be expected. Many people have no children, or the children are established on other farms or in other occupations. The small percentage who have made plans is thus more or less to be anticipated.

Question 10 on years spent working at home, as a hired hand, etc., was answered with various interpretations. A number of respondents failed to answer altogether. Women frequently gave their husband's age at first acquisition rather than their own. It is believed that editing improved this section materially. Even though a large proportion failed to answer this question satisfactorily and were edited out, the large number remaining in the sample yielded satisfactory data.

Question 11 relative to the principal occupation could have been based upon past or present activity, or on major income. Through the editing processes, consistencies in those data were improved.

Question 12 on retirement was quite difficult for the respondent to answer. The analysis indicated that partial, as well as complete retirement, was included in the term "retired." Thus, an older farmer who had reduced appreciably his farming activities may have replied that he had retired.

Questions 13, 14 and 15 were quite easily understood and answered satisfactorily.

The ownership unit and the census farm—As was indicated in previous sections, some differences existed between ownership units as reported by respondents and farms (or operating units) as reported by the census. In the North Central Region, however, they did essentially correspond. In this survey, the owner was the unit of observation and ownership units the primary basis for analyses and discussion.

Possible "mail" bias—It is common in mail surveys for a considerable proportion of those who were mailed questionnaires not to respond. In this study, for the region as a whole, about 65 percent of those who were mailed questionnaires failed to respond. Is there any reason to believe that these 65 percent are different in important characteristics from the 35 percent who did respond?

This problem was examined in some detail in Iowa. A random sample of nonrespondents was drawn to determine differences, if any, which existed between those who responded by mail and those owners who did not.² Percentages and averages derived from this sample were compared with similar percentages and averages computed from the sample of respondents. (See appendix table 29.) The figures in appendix table 29 are uncorrected for sample selection bias and hence may not be compared with other figures given in the main body of this report and in appendix tables. The figures in the two columns of appendix table 29 are treated alike, however, and hence are comparable.

²Study was made by the Statistical Laboratory, Iowa State College, in cooperation with the Bureau of Agricultural Economics, U. S. Department of Agriculture.

APPENDIX TABLE 29. CHARACTERISTICS OF RESPONDENTS IN COMPARISON WITH INTERVIEWED NONRESPONDENTS IN LAND OWNERSHIP SURVEY, 1947.*

Items	Respondents	Non-respondents
Acres per farm -----	152.2	159.8
Acres per owner -----	222.5	224.1
Average number children per owner -----	2.8	2.7
Present age of owner -----	56.9	54.9
Retirement age -----	60.0	60.0
Age first owned land -----	34.4	35.2
Live on farm, percent -----	70.8	71.0
Made will, percent -----	36.6	23.8
Farms owned by men, percent -----	87.3	85.3
Owner resides on farm, percent -----	66.8	71.0
Acres per owner by sex		
Men -----	228.3	231.9
Women -----	176.9	186.6
Acres per owner by occupation		
Farmers -----	195.1	204.1
Retired farmers -----	256.2	238.0
Housewives -----	191.9	167.8
Professional and business -----	323.5	663.6
Laborer -----	63.2	145.2

* Based on a stratified, random sample of nonrespondents in 20 counties of Iowa. Number of nonrespondents in the sample interviewed was 290. The estimates in the nonrespondent column are based on these 290 interviews. 346 questionnaires, the total returned from the same 20 counties, were used for the respondent estimates.

Differences existing in the two columns may be attributed to sampling variation and to bias caused by nonrespondents and respondents being dissimilar in the respects tested. Small numbers in the "professional and business" and "labor" classifications for the nonrespondent group tend to limit the usefulness of the comparisons given.

For most of the items compared the table indicates very close correspondence in the two estimates. It may reasonably be said that no appreciable mail bias existed in Iowa for most items compared.

A study of a random sample of nonrespondents on a region-wide basis was also undertaken in order to gain knowledge of the possible mail biases for the area of study as a whole.³ Sample nonrespondents were drawn in the states of Illinois, Indiana, Iowa, Kansas, Kentucky, Michigan, South Dakota, Missouri, North Dakota, Minnesota, Ohio and Wisconsin. (The sample for Iowa in this particular study is independent of that discussed in the preceding paragraphs.) The results are summarized in appendix table 30. Since the sample should have been taken in all the states indicated in order to be fully representative of the region, the results given in appendix table 30 must be interpreted with some care. However, by eliminating the states indicated for the sample but not furnishing questionnaires from the respondent side of the table as well as the nonrespondent side, a rough comparison is obtained of the states represented. Like the more detailed data obtained in the Iowa sample shown in appendix table 29, the regional data indicate few or no appreciable biases arising out of respondents differing from nonrespondents.

³Study was made under the auspices of the experiment stations of the several states concerned in cooperation with the Bureau of Agricultural Economics, U. S. Department of Agriculture.

APPENDIX TABLE 30. CHARACTERISTICS OF RESPONDENTS IN COM-
PARISON WITH INTERVIEWED NONRESPONDENTS,
FOR 14 SAMPLE COUNTIES.*
(North Central Region)

Items	Respondents	Non-respondents
Acres held per owner	198	191
Value of real estate per owner.....	\$16,878	\$25,257**
Average age (years)	57	60
Percent of men	83.0	84.8
Percent by tenure:		
Owner-operator	47.7	46.7
Owner-operator landlord	17.0	12.7
Landlord	35.3	40.6
Percent by occupation:		
Farmer	69.2	54.3†
Retired farmer	3.8	20.8†
Retired other	2.6	1.3
Housewife	6.0	6.0
Business or professional.....	9.4	6.0
Laborer and other	9.0	7.2
Percent having made wills for disposition of land..	26.8	28.3
Percent residing on a farm.....	75.1	75.3
Percent dependent upon farm income.....	60.2	61.6
Percent of owners by method of acquisition of land†		
Purchase	66.0	66.5
Gift or estate settlement.....	19.3	21.6
Inherited part—purchased part.....	9.1	9.7
Other	5.6	2.2

* These counties were in Illinois, Iowa, Kansas, Ohio, South Dakota and Wisconsin.

**These differences in values are accounted for in part at least by inflation in land values taking place between the date questionnaires were returned and the date interviews with the nonrespondents were made.

† These large differences are due largely to confusion over when a farmer considers himself as retired. In reply to the questionnaire, fewer farmers considered themselves as retired than were reported by the farmers who were interviewed.

SELECTED BIBLIOGRAPHY

- Barlowe, Raleigh. Public land ownership in the lake states, North Central Regional Pub. 12, Mich. Agr. Exp. Sta., Sp. Bul. 351. 1948.
- Berry, R. L., Henderson, S., and Hill, E. B. How to keep your farm in the family. Mich. Agr. Exp. Sta., Sp. Bul. 357. 1949.
- Bondurant, John H., and Binkley, Wendell C. Land-tenure classification and areas in Kentucky. Ky. Agr. Exp. Sta., Bul. 421. 1942.
- Dowell, A. A. Corporate-owned farm land in Minnesota, 1936-1940. Minn. Agr. Exp. Sta., Bul. 357. 1942.
- Farm mortgage debt in the United States, 1940-1947. U. S. Dept. Agr., Bur. Agr. Econ. November 1947. (Also release of May 1948.)
- Farm-mortgage indebtedness in the United States, U. S. Dept. Com., Bur. of the Census, and U. S. Dept. Agr., Bur. Agr. Econ., 1943.
- Garey, L. F. Land transfers in twelve counties in Nebraska, 1928-1933, Neb. Agr. Exp. Sta., Res. Bul. 107. 1938.
- Graphic summary of farm tenure in the United States, U. S. Dept. Com., Bur. of the Census, and U. S. Dept. Agr., Bur. Agr. Econ. 1948.
- Gray, L. C., Stewart, C. L., Turner, H. A., Sanders, J. T., and Spillman, W. J. Farm ownership and tenancy. U. S. Dept. Agr. Yearbook, 1923: 509-600.
- Harris, Marshall D. The genesis of the land tenure system of the United States. Thesis abstract. Univ. of Ill. 1945.
- Hawley, H. L. Small agricultural holdings in two industrial areas in Indiana. Ind. Agr. Exp. Sta., Bul. 460. 1941.
- Hibbard, Benjamin H., and Peterson, Guy A. How Wisconsin farmers become farm owners. Wis. Agr. Exp. Sta., Bul. 402. 1928.
- Hill, Elton B. Father and son farm partnerships. Mich. Agr. Exp. Sta., Sp. Bul. 330. 1944.
- Hoglund, C. R., and Anderson, A. W. Father-son farming plans. S. D. Agr. Exp. Sta., Bul. 390. 1948.
- Hoglund, C. R. What size farm or ranch for South Dakota. S. D. Agr. Exp. Sta., Bul. 387. 1947.
- Howe, Harold. Corporations as landlords on Kansas farms. Kan. Agr. Econ. Rpt. No. 17 (mimeographed). 1943.
- Johnson, O. R. Acquiring farm ownership by payments in kind. Mo. Agr. Exp. Sta., Bul. 378. 1937.
- Johnson, O. R. Transferring the farm to the next generation. Mo. Agr. Exp. Sta., Bul. 515. 1948.
- Mason, John E., and Bondurant John H. Land ownership and use in Kentucky. Ky. Agr. Exp. Sta., Bul. 519. 1948.
- Morison, F. L. Ohio farm land acquired by life insurance companies through foreclosure in 1932. Ohio State Univ. Dept. of Agr. Econ., Bul. 57 (mimeographed). 1933.
- Murray, William G. Corporate land foreclosures, mortgage debt and land values in Iowa, 1939. Iowa Agr. Exp. Sta., Res. Bul. 266. 1939.
- Murray, W. G., and Bentley, R. C. Corporate-owned land in Iowa. Iowa Agr. Exp. Sta., Bul. 307. 1933. (Also Bul. 362.)
- North Central Regional Land Tenure Committee. Farming opportunities in the midwest, Ind. Agr. Ext. Ser., Bul. 325. 1946.
- North Central Regional Publication 11. Farm land prices in the midwest. Mich. Agr. Exp. Sta., Sp. Bul. 349. 1948.
- North Central Regional Land Tenure Committee. Capital needed to farm in the midwest. Minn. Agr. Exp. Sta., Bul. 389. 1946.
- North Central Regional Land Tenure Committee. Improving farm tenure in the midwest. Ill. Agr. Exp. Sta., Bul. 502. 1944.

- Northern Great Plains Agricultural Advisory Council. Improving farm and ranch tenure in the northern plains. Mont. Agr. Exp. Sta., Bul. 436. 1946.
- Parsons, Kenneth H., and Waples, Eliot O. Keeping the farm in the family. Wis. Agr. Exp. Sta., Res. Bul. 157. 1945.
- Parsons, Kenneth H., and Legrid, Clara J. Planning for the descent of property in the family. Wis. Agr. Ext. Ser., Cir. 364. 1945.
- Penn, R. J., and Loomer, C. W. County land management in northwestern South Dakota. S. D. Agr. Exp. Sta., Bul. 326. 1938.
- Pond, George A. Farm tenancy in Minnesota. Minn. Agr. Exp. Sta., Bul. 353. 1941.
- Quackenbush, G. G., and Lloyd, O. G. Farm tenure in Indiana by type-of-farming areas. Ind. Agr. Exp. Sta., Bul. 488. 1943.
- Rankin, J. O. Steps to Nebraska farm ownership. Neb. Agr. Exp. Sta., Bul. 210. 1926.
- Rankin, J. O. Landlords of Nebraska farms. Neb. Agr. Exp. Sta., Bul. 202. 1924.
- Reuss, L. A., Wooten, H. H., Marschner, F. J. Inventory of major land uses in the United States. U. S. Dept. Agr., Misc. Bul. 663. 1948.
- Salter, Leonard A., Jr. Land tenure in process. A study of farm ownership and tenancy in a Lafayette County (Wisconsin) township. Wis. Agr. Exp. Sta., Res. Bul. 146. 1943.
- Sitterley, J. H., and Falconer, J. I. Change in size of farms in Ohio—1900-1940. Ohio Agr. Exp. Sta., Bul. 669. 1947.
- South Dakota State Planning Board. Ownership of farm land in South Dakota. September 1938.
- Spillman, W. J. The agricultural ladder. Am. Econ. Rev. Supplement: 29-38. 1919.
- Spillman, W. J., and Goldenweiser, E. A. Farm tenantry in the United States. U. S. Dept. Agr. Yearbook Separate No. 715. 1916.
- Steele, Harry A. Farm mortgage foreclosures in South Dakota 1921-1932. S. D. Agr. Exp. Sta., Cir. 17. 1934.
- Stewart, C. E., and Engelking, R. The land market in North Dakota. N. D. Agr. Exp. Sta., Bimo. Bul. 8 No. 6, July-August. 1948. (Quarterly or semi-annual reports have been published on land market developments since 1942.)
- Stewart, Charles L. Some economic aspects of farm ownership. U. S. Dept. Agr., Bul. 1322. 1925.
- Timmons, John F. Farm ownership in the United States: An appraisal of the present situation and emerging problems. Jour. Farm Econ., XXX: 78-100. 1948.
- Turner, Howard, A. The ownership of tenant farms in the north central states. U. S. Dept. Agr. Bul. 1433. 1926.
- Turner, Howard A. The ownership of tenant farms in the United States. U. S. Dept. Agr. Bul. 1432. 1926.
- U. S. Department of Interior. Report of the commissioner of the general land office. Statistical appendix 1946.
- Wallin, Lyman W. and Engelking, Reuben. Land ownership trends in North Dakota, selected years, 1929-1944. N. D. Agr. Exp. Sta., Bul. 337. 1945.
- Wehrwein, George S. Who owns the agricultural land in the United States? Jour. Farm Econ. IV: 34-45. 1922.
- Westbrook, R. B. Tax delinquency and county ownership of land in South Dakota. S. D. Agr. Exp. Sta., Bul. 322. 1938.
- Wilner, Stanley, and Schafer, Raymond L. Statistical analysis of land ownership in North Dakota in 1935. N. D. Agr. Exp. Sta. Processed, March 1939.