

I.

INTRODUCTION.

The problem of farm tenure, as it appears in the United States, presents two distinct economic aspects. On the one hand, it has to do with the relation between the farm operator and the land which he operates. On the other hand, it concerns the distribution of the wealth produced by farming among the several factors of production, or more specifically the shares of that wealth received by those who furnish the land, those who furnish the capital (machinery, live stock, supplies, etc.), and those who perform the labor. From the first point of view we compare the status of the farm tenant with that of the farm owner. From the second point of view we ought also to compare the status of the farm tenant with that of the farm laborer working for wages.

OWNERSHIP AND TENANCY.

Agriculture is one of those industries in which land occupies a dominant position as compared with the other factors of production; that is, with capital-goods and labor. The amount of money investment required to provide the land for a farm is very much greater than the amount required to provide all the working capital, including live stock and machinery. Further, the land for a farming enterprise of a given type must ordinarily be acquired as a unit, all at once, while the stock and equipment may be built up gradually.

Since the absolute purchase of a farm requires so large an amount of money, the alternative methods by which a prospective farm operator whose money capital is limited may obtain control of the land which he needs are of great significance. Two such methods are available. He will usually find it possible to purchase farm land by paying a small part of the purchase price in cash and giving a mortgage for the balance; or he may hire a farm, either for a stated cash rental to be paid annually, or for a share of the crops. In the first case the farm operator becomes nominally a farm owner and participates in any speculative profits that may arise from increasing land values—and likewise runs the risk of losing all that he has invested, in case of a considerable decline in the price of farm land. In the second case, where he hires the farm, the farm

operator avoids the speculative features of ownership and pays directly for what he gets, namely, the use of the land for a stated period. Further, the method of hiring a farm is available to many men whose money capital is not sufficient even to make a first payment toward the purchase of land.

During a period of stable land values the annual cost of the possession of the land for the owner (whether he owns it free or subject to mortgage) is the interest on the money which is invested in the land or on the amount for which it could be sold at current prices. During a period of increasing land values the annual increment in value must be deducted from the interest charge; and during a period of declining land values the annual depreciation must be added to the interest charge. The annual cost of the possession of the land for the tenant who farms without supervision or other service from the landlord, is the amount of rent which he pays each year to the landlord. The tenant's cost is not affected directly by the trend of land values, though, as explained in Chapter VI, the rent is likely to be lower in a period of rising land values.

The owner's cost for the use of the land (except for the amount, if any, which is actually paid as interest on a farm mortgage or other loan) does not represent an actual money payment, and for this reason it is often lost sight of in the computation of profits. The tenant's cost, on the other hand, since it takes the form of an annual payment, is always prominently in view. And yet the owner's cost is just as real as the tenant's; for if the owner's money were not tied up in his land he could invest it in safe securities and receive therefrom an assured income equal to the interest on the amount.

Theoretically, then, one might figure out the economic or financial advantage of ownership or tenancy by comparing the annual cost of the possession of the land under the two forms of tenure. As a matter of fact this is seldom done, partly because farmers have not yet learned to compute their costs accurately, but even more because of the very strong preference for ownership which prevails in the United States. It is accepted as a foregone conclusion that ownership is preferable. This preference is based in part upon conditions purely accidental and having little connection either with the net income of the individual farmer or with the productivity of agriculture in general.¹

¹ The three "accidental" conditions or factors which are presented herewith are suggested by Prof. T. N. Carver in his *Principles of Rural Economics*, p. 226.

In the first place, the method adopted by the Federal Government for the distribution of the greater part of the public land was one designed to put the land directly into the possession of the men who would cultivate it. These men, either for the payment of a nominal price per acre or by virtue of having spent a certain number of years upon the tract and having made certain specified improvements, became the owners of the land. There was no alternative. The men who first cultivated the public land after it was distributed were bound to cultivate it as owners.

Second, the tendency of farm land to increase in value, which has been manifest for the greater part of the last half century, has formed a strong argument in favor of ownership. This increase in the value of farm land, which has been commonly considered a part of the profits of farming, could be secured, of course, only by the man who farmed as an owner.

Third, the lack of an efficient system of leases for farm land has indirectly added greatly to the preference for ownership through increasing the disadvantages and annoyances connected with tenancy. The customary short leases, frequently with numerous restrictions and with no satisfactory provision for renewal or extension, offer little encouragement to the tenant farmer who wishes to plan his work for a period of years—as a farmer must plan, if his farming is to attain a high degree of success. The faults of the existing system of leases are partly a result of the hit or miss fashion in which the system has grown up. To a large extent, however, they seem to be an outgrowth of the speculative aspect of the ownership of land, which is discussed in some detail in Chapter VII.

In addition to the preference for ownership which is based on those more or less accidental conditions, there are certain real advantages, both economic and social, connected with the ownership of the farm which one operates. First, ownership gives the cultivator a more permanent interest in the farm and in the community than even the most stable form of lease. Second, it gives him a sense of responsibility which tends to increase initiative, and in other ways makes for progress. Third, the ownership of the land does away with all disagreement and contention with regard to the terms or interpretation of the lease contract and frees the farm operator from the dictation and oversight of the landlord.

The last-named advantage could be gained to a great extent, to be sure, under a sufficiently improved form of farm tenancy. In fact, it is quite possible to develop a good system of agriculture without placing the ownership of land in the hands of those who cultivate it. One of the best systems of general farming in the world has been developed in England, where 90 per cent of the land is operated by tenants and most of the remainder by hired managers, leaving only a very small fraction operated directly by the owners. These results have been obtained, of course, only by a carefully devised system of lease contracts, giving the tenant a reasonable assurance of permanent tenure and also giving him a claim for compensation for any improvements he has made in the land, the benefits of which remain at the expiration of his tenancy. Under such conditions the better farmers will simply strive to get possession of the better farms among those that are available for lease.

Under the unsatisfactory lease conditions prevailing in the United States, however, the better farmers will strive to become owners at the first possible moment, if only in defense of their own self-respect. They will even prefer to become owners when they know that it is more expensive to purchase land than it is to hire land of the same quality.

THE FARM TENANT AND THE FARM LABORER.

In the discussion of farm tenure it is usually assumed that the only alternative is between farm tenancy and farm ownership. As a matter of fact, the real alternative is, in very many cases, between farm tenancy and working on a farm for wages.

If the renting of farms were prohibited on and after July 1, 1927, by an amendment to the Federal Constitution, then a large fraction of the two and one-half million farm tenants now in the United States would become, not farm owners, but farm laborers; and very many of them would remain permanently in that class. These are the men for whom the tenure question relates mainly to the distribution of the wealth produced in farming rather than to the control of the land. They are farming now for a share of the products under the supervision of their landlords. It is the landlords rather than they who take most of the risk involved in the farming enterprise, while the tenants supply little besides the labor. Since this is the only contribution which these men are in a position to make, they would, perforce, become wage

hands rather than owners in case there were only these two alternatives.

With one group of these tenants—namely, the southern croppers—the payment for their services in the form of a share of the production rather than in the form of a stated weekly or monthly wage is a part of a plan whereby the landlord is able to assure himself of their continued services throughout the season. If these men received wages for their own labor and that of their families, they would doubtless be better off financially, in addition to being free to come and go as they chose. It is essential for the landlord, however, that they remain on the land until the crop is harvested; hence the advantage of giving them a share of the crop in payment for their labor in place of paying them wages in the ordinary fashion.

TENANCY AND THE FARM.

So far we have considered the question of farm tenure from the point of view of the farmer. It may be considered also from the point of view of the farm, and in this connection, too, the main shortcomings of tenancy may be charged against the shortness or uncertainty of the tenure of the typical American farm tenant—against tenancy under the present form of leasing rather than against any essential feature of tenancy as such. A man who rents land on a short-term lease is interested primarily in his immediate returns, without regard to the future welfare of the soil. In fact, tenancy in the United States has been characterized as a conspiracy between the owner and the tenant to rob the land. The reason for this cynical characterization is that without security of tenure the tenant has no incentive to preserve the quality of the land but, on the contrary, has every incentive to extract as much plant food as possible.

American agriculture in general (including farms operated by their owners as well as tenant farms) has in another instance been described as being in the mining stage of development, because plant food has been extracted from the soil as rapidly as possible, leaving the land exhausted, in contrast to husbanding the resources of the land so as to make it yield an annual return without diminishing its fertility. It is no longer true, however, that our agriculture is of the mining type, though traces of this condition are still to be found among owners as well as among tenants, especially in sections where a one-crop system prevails; and there is no doubt that insecure tenancy is conducive to this undesirable exploitation of the soil.

THE SOCIAL ASPECT OF TENANCY.

Again, we may consider farm tenure from the point of view of society—as a social problem. And once more we find many of the differences between farm ownership and farm tenancy based, essentially, not on tenancy as such, but on the particular kind of tenancy which we have, namely, a short-term, uncertain tenancy. Such a tenancy affects the spirit of a community. A group of farmers who are permanently settled on the land take a greater interest in civic affairs and are more willing to contribute to good roads, schools, and churches, than are farmers who know not from year to year whether they will remain in the same locality.

The migratory tenant is not the most desirable member of a community, but there is nothing inherent in tenancy as such that would prevent the development of permanent residence on the land. This is largely a matter of working out lease contracts which will assure the tenant of continued occupancy so long as he gives satisfactory service, and will also grant him an interest in such unexhausted improvements as he may have put on the land and not used up at the expiration of his lease. The landlord, too, if he is to lease his land for a long period, may demand additional safeguards for his interests. As the terms on which farm land is leased in this country become more satisfactory, the bad effects of tenancy on social institutions will become less and less pronounced. There are even now many cases in which the landlords and tenants have solved the problem, the land being leased on such terms that the tenants take no less interest in community affairs than do their neighbors who operate farms of their own. It is difficult to consider farming from a strictly business point of view, as one might consider a factory industry, for example, partly because the affairs of the farm family are so closely bound up with the affairs of the farm.

An eminent preacher has said that the unpardonable sin is "mixing things," and many a business man has learned to his sorrow that it is usually unwise to mix business affairs with family or personal affairs. For the farmer, nevertheless, this mixing of business and family affairs seems to be inevitable. The farm home is a part of the farm, and the members of the family usually perform a considerable part of the work required on the farm. Conversely, a considerable part of the supplies consumed by the family are taken from the products of the farm. The farm also supplies a place for the family to live, and thus eliminates from

the farm family's expense budget the item of rent, which is one of the largest items in the city family's budget. Even where the farmer keeps some sort of production or cost records, no account is kept between the family and the farm. The farm is not debited with the value of the family labor, nor is it credited with the value of the farm products consumed by the family.

Nor is this close relation between the farm and the farm family a transitory condition, peculiar to the present stage of agricultural and social development. On the contrary, it seems likely to persist, with modifications, to be sure, but with most of the essential characteristics of its present form. Farming is practically the only gainful occupation in which a man can engage where, under wholesome and socially approved conditions, his wife and children may render services of direct economic value to him—where a family is really an asset and not a liability. This condition is largely responsible for the greater number of children found in the families of the native white stock in farming communities than in families of the same stock in the cities and towns.¹ It is not evidence of a mercenary motive, either; the urban families are small because the urban income is not sufficient to bring up children according to accepted standards where their every need must be supplied by the expenditure of cash. It is rather testimony to the effect that a farm is a good place to raise a family—a fact that might be taken into consideration by a man in process of deciding whether to take up farming or some urban occupation as a life work. Indeed, one writer² has gone so far as to suggest that all the farms in the country should eventually be reserved for those who wished to use them as places where they might bring up families of children and that other persons be not permitted to operate farms.

That particular aspect of the question of farm tenure which will most affect the welfare of the farm family is again the question of permanency and certainty of tenure. If the family is to prosper and become an integral part of the community, so as to share in the community life, then it must remain for a long period in one location. Further, if the social standing of the farm owner is

¹ In the native white population of native parentage in 1920 there were 120 children under 15 years of age to every 100 persons from 20 to 44 years of age in rural territory, as compared with a ratio of 77 to 100 in urban territory.

² Thomas Forsyth Hunt, dean of the College of Agriculture, University of California; *The Relation of a Permanent Agriculture to Social Welfare*, 1915.

higher than that of the tenant, it may be better for the enterprising farmer, even at some apparent financial sacrifice, to become a farm owner. For the sanctions of society, particularly of rural society, are firmly fixed, so far as concerns any single generation; and the stimulus of social approval may readily enable a man to overcome by more efficient management the disadvantages of that economic arrangement which has the social approval.

It is apparent, then, that the problem of farm tenure, though primarily an economic problem, presents in its larger aspects many sides for discussion, appealing to the sociologist and the statesman as well as to the economist and to those scientists working strictly within the field of agriculture. It would be presumptuous, therefore, to expect to cover the whole field in a study based, as this one is, primarily on the available statistical data. There is to be found, however, in the results of the decennial censuses and in numerous special studies of selected areas which have been made, especially those undertaken by the Department of Agriculture,¹ a great bulk of very definite statistical information; and it has been the purpose in the following chapters to present this material in convenient form, with sufficient explanation, comment, and interpretation to make it of interest to the general reader as well as to the special student of farm tenure.

The most important of the census data are presented by States in the general tables at the end of this volume and certain items are also shown by counties.

¹ In connection with the use of material from the Department of Agriculture, the writers wish especially to acknowledge their indebtedness to O. E. Baker, of the Bureau of Agricultural Economics, who placed at their disposal manuscript materials and many graphs and maps, and to W. J. Spillman, former chief of the Office of Farm Management, in collaboration with whom several of the interpretations here presented were first developed.

II.

THE GROWTH OF FARM TENANCY:

1880 TO 1920.

In the expansion of the agricultural industry in the United States there has been a fairly close relationship between the stage of its development in any particular part of the country and the prevalence of farm tenancy. In general, it has been true that when a given area was newly settled, especially so long as free land was to be had, there was little tenancy; and that the practice of renting farms grew more common as the section became older and its agriculture more thoroughly established. This feature in the development of tenancy is to be noted especially in those parts of the country where a large proportion of the present-day owners of rented farms are themselves retired farmers. In a new country, obviously, there are no farmers ready to retire; and it is only when the pioneers or their immediate successors have grown old that they offer their farms for rent.

These conditions do not prevail, however, in all parts of the country. In the South the great source of increase in the number of tenant farms has been the breaking up of the old plantations. In Oklahoma and in some other States of recent settlement, speculators obtained possession of considerable areas of farm land which they very soon offered for rent. Hence we have, in limited areas, the development of tenancy following very quickly upon the settlement of the land. Again, in the Atlantic Coast States as far south as Virginia, an area including most of the earliest settlements in the country, we find that there has been a general decline in the percentage of tenancy in recent years.

Where tenancy has thus grown up with the development of a permanent system of agriculture, it may, up to a certain limit at least, be considered a desirable part of the economic program. "Few young farmers," says Taylor,¹ "are financially able to own the amount of land they can operate to best advantage." And again, "Farm tenancy is an institution which provides for getting the land into the hands of those who are in a position to cultivate it, but who are unable to buy farms."

¹ Dr. H. C. Taylor, chief of the Bureau of Agricultural Economics, U. S. Department of Agriculture: *Agricultural Economics*, 1921, p. 270.

The whole number of farms in the United States in 1920 was 6,448,343, of which 2,454,804, or 38.1 per cent, were operated by tenants. Table 1 shows the number of farms, by tenure, and the number of tenants per 1,000 farm operators, for each census from 1880 to 1920, together with the increase, actual and relative, in each item.

Incidentally it may be noted that in all data from the census of agriculture the number of farms and the number of farmers is identical, since a farm is defined as all the land operated by one person, either as owner, as hired manager, or as tenant. For convenience, then, the terms may be used interchangeably. The percentage of all farms operated by tenants, for example, is the same as the percentage which tenants form of all farm operators.

TABLE 1.—NUMBER OF FARMS IN THE UNITED STATES, BY TENURE, WITH INCREASE AND NUMBER OF TENANTS PER 1,000 FARMERS: 1880 TO 1920.

[Figures for divisions and States in Tables 15, 16, and 53.]

ITEM AND CENSUS YEAR.	All farms.	FARMS OPERATED BY—					Number of tenants per 1,000 farm operators.
		Owners and managers.	Owners.	Managers.	Tenants.		
					Number.	Per cent of total.	
Number of farms:							
1920.....	6,448,343	3,993,539	3,925,090	68,449	2,454,804	38.1	38.1
1910.....	6,361,502	4,006,826	3,948,722	58,104	2,354,676	37.0	37.0
1900.....	5,737,372	3,722,408	3,653,323	59,085	2,024,964	35.3	35.3
1890.....	4,564,641	3,269,728	.....	.....	1,294,913	28.4	28.4
1880.....	4,008,907	2,984,306	.....	.....	1,024,601	25.6	25.6
Increase, 1910-1920:¹							
Number.....	86,841	-13,287	-23,632	10,345	100,128	.....	1.1
Per cent.....	1.4	-0.3	-0.6	17.8	4.3	.....	3.0
Increase, 1900-1910:¹							
Number.....	624,130	294,418	295,399	-981	329,712	.....	1.7
Per cent.....	10.9	7.9	8.1	-1.7	16.3	.....	4.8
Increase, 1890-1900:							
Number.....	1,172,731	442,680	.....	.....	730,051	.....	6.9
Per cent.....	25.7	13.5	.....	.....	56.4	.....	24.3
Increase, 1880-1890:							
Number.....	555,734	285,422	.....	.....	270,312	.....	2.8
Per cent.....	13.9	9.6	.....	.....	26.4	.....	10.9

¹ A minus sign (-) denotes decrease.

The rate of increase in the number of farms operated by tenants has not been regular. During the decade from 1880 to 1890 the increase amounted to 26.4 per cent; from 1890 to 1900, it was

56.4 per cent; from 1900 to 1910, 16.3 per cent; and from 1910 to 1920, 4.3 per cent. Except for the most recent decade, there has been a considerable increase during each period in the total number of farms, which has accounted for a large part of the increase in tenant farms. To eliminate the effect of this general increase, the percentages of increase in the number of tenants per 1,000 farm operators have been computed. These rates of increase for the respective decades are as follows: 1880 to 1890, 10.9 per cent; 1890 to 1900, 24.3 per cent; 1900 to 1910, 4.8 per cent; and 1910 to 1920, 3 per cent.

There is no statistical information on American land tenure prior to 1880, but there is evidence that farm tenancy in the United States is nearly as old as the settlement of the country, though the number and proportion of tenants doubtless remained small, so long as free land was abundant. It was during the last 10 years of the nineteenth century that the greatest increase in farm tenancy occurred, as shown by the percentages quoted above. The notable increase in tenancy during this decade (1890 to 1900) was due in part to the fact that the free land was practically exhausted by 1900, and in part to the hard times which prevailed in the nineties and caused a large number of mortgages to be foreclosed, making it necessary for many farm operators to rent farms in order to continue farming.

During the 40 years from 1880 to 1920 the total number of farms increased 2,439,436, or 61 per cent. This increase may be subdivided into an increase in tenant farms amounting to 1,430,203 and an increase in farms operated by owners and managers amounting to 1,009,233. (Farms operated by owners alone were not shown separately until 1900.) During the 40-year period the number of tenant farms increased 139.6 per cent, while the number of farms operated by owners and managers increased only 33.8 per cent, and the number of tenant farms in each 1,000 of all farms increased from 256 to 381, or 49 per cent.

The percentage of all farms operated by tenants at each census from 1880 to 1920, inclusive, is given, by geographic divisions,¹ in Table 2 and is shown graphically in Figure 1. Both table and diagram show the relatively great increase in the tenancy percentage between 1890 and 1900.

¹ For boundaries of geographic divisions, see map on p. 8.

FARM TENANCY IN THE UNITED STATES.

FIG. 1.—PERCENTAGE OF ALL FARMS OPERATED BY TENANTS, BY GEOGRAPHIC DIVISIONS: 1880 TO 1920.

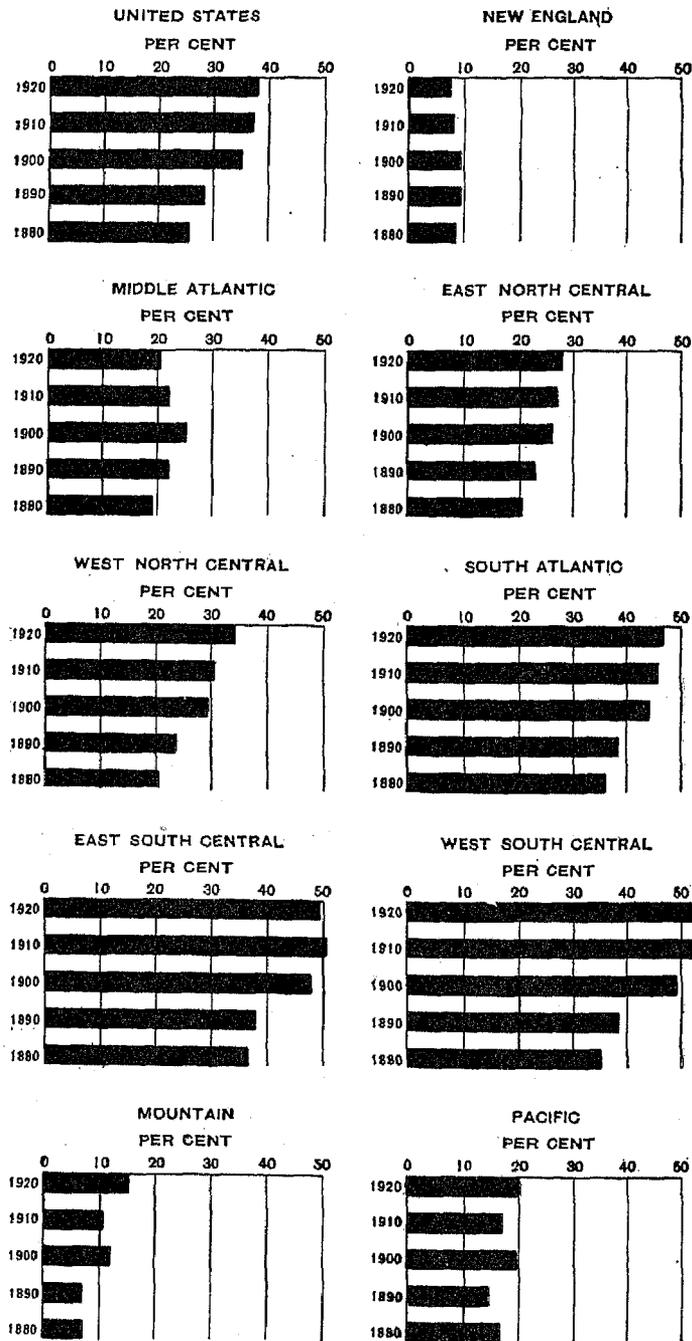


TABLE 2.—PERCENTAGE OF ALL FARMS OPERATED BY TENANTS, BY GEOGRAPHIC DIVISIONS AND SECTIONS: 1880 TO 1920.

[Figures for divisions and States in Table 53.]

DIVISION OR SECTION.	1920	1910	1900	1890	1880
UNITED STATES.....	38.1	37.0	35.3	28.4	25.6
New England.....	7.4	8.0	9.4	9.3	8.5
Middle Atlantic.....	20.7	22.3	25.3	22.1	19.2
East North Central.....	28.1	27.0	26.3	22.8	20.5
West North Central.....	34.2	30.9	29.6	24.0	20.5
South Atlantic.....	46.8	45.9	44.2	38.5	36.1
East South Central.....	49.7	50.7	48.1	38.3	36.8
West South Central.....	52.9	52.8	49.1	38.6	35.2
Mountain.....	15.4	10.7	12.2	7.1	7.4
Pacific.....	20.1	17.2	19.7	14.7	16.8
The North.....	28.2	26.5	26.2	22.1	19.2
The South.....	49.6	49.6	47.0	38.5	36.2
The West.....	17.7	14.0	16.6	12.1	14.0

In the New England and Middle Atlantic States the development of farm tenancy has not gone so far as it has in the rest of the country. New England has a much lower percentage of farms operated by tenants than any other section of the country, and both the New England and the Middle Atlantic divisions showed the maximum number and percentage of tenants in 1900. The decline of tenancy in these States has been to a considerable extent a corollary to the decline in the number of farms. The record of these two divisions for the last 40 years appears in Table 3, which shows, by geographic divisions, both the absolute and the relative increase or decrease in the number of farms, by tenure, for each decade from 1880 to 1920.

Although the number of owners operating farms in the New England and Middle Atlantic States had begun to decline as early as the decade from 1880 to 1890, the decline in tenancy did not begin until after the year 1900. In general, however, what little increase in tenancy there has been within the 40 years in this region has appeared in the States of New York and Pennsylvania, which account for 17,380 of the increase of 19,349 tenants in the Middle Atlantic division during the decade from 1890 to 1900. It is worthy of note that in the State of New Hampshire the decline in the number of tenants apparently started before the first comparative figures for farm tenure were obtained (in 1890), as the number of tenants has shown a decrease at each enumeration since that time. This is the only State with such a record. (See Table 53.)

TABLE 3.—INCREASE OR DECREASE IN NUMBER OF FARM OPERATORS,
BY GEOGRAPHIC DIVISIONS AND SECTIONS: 1880 TO 1920.

[A minus sign (-) denotes decrease. Actual numbers for each census year in Table 1.]

DIVISION OR SECTION.	INCREASE, 1910-1920.				INCREASE, 1910-1880.		
	Owners.		Tenants.		Owners.		Net
	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.	
UNITED STATES.....	-23,632	-0.6	100,128	4.3	295,399	8.1	3
New England.....	-28,248	-16.8	-3,413	-22.7	-786	-0.5	-
Middle Atlantic.....	-27,932	-7.9	-16,081	-15.4	625	0.2	-
East North Central.....	-42,258	-5.2	810	0.3	-17,269	-2.1	-
West North Central.....	-47,790	-6.3	32,401	9.5	21,036	2.9	-
South Atlantic.....	13,935	2.3	31,659	6.2	65,642	12.4	-
East South Central.....	15,356	3.0	-6,452	-1.2	46,766	10.1	-
West South Central.....	23,423	5.3	29,162	5.9	61,621	16.2	1
Mountain.....	41,671	25.9	17,788	90.3	75,343	88.1	1
Pacific.....	28,211	18.6	14,254	43.5	42,421	38.7	-
The North.....	-146,228	-7.0	13,717	1.8	3,606	0.2	-
The South.....	52,714	3.4	54,369	3.5	174,029	12.7	30
The West.....	69,882	22.3	32,042	61.1	117,764	60.4	1

DIVISION OR SECTION.	INCREASE, 1890-1900.				INCREASE, 1880-1890.		
	Owners and managers.		Tenants.		Owners and managers.		Net
	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.	
UNITED STATES.....	442,680	13.5	730,051	56.4	285,422	9.6	27
New England.....	1,687	1.0	240	1.4	-17,329	-9.1	-
Middle Atlantic.....	-2,339	-0.6	19,349	18.7	-30,142	-7.6	-
East North Central.....	59,020	7.6	67,772	29.4	-5,265	-0.7	20
West North Central.....	50,735	7.3	95,218	43.4	129,126	22.8	71
South Atlantic.....	75,570	16.4	137,055	47.5	49,384	12.0	51
East South Central.....	64,032	15.8	183,515	73.0	44,041	12.2	41
West South Central.....	119,616	45.2	204,231	122.7	59,375	28.9	54
Mountain.....	43,043	93.7	8,906	254.2	22,696	97.8	1
Pacific.....	31,336	38.1	13,765	97.4	33,536	68.7	1
The North.....	109,103	5.4	182,579	32.0	76,390	3.9	121
The South.....	259,218	22.9	524,801	74.3	152,800	15.6	152
The West.....	74,359	58.0	22,671	128.5	56,232	78.1	5

Farm tenancy, as the figures show, is most prevalent in the South Atlantic, East South Central, and West South Central divisions. Before the Civil War the agricultural land of the South was owned and cultivated chiefly in large areas by white planters. But the Civil War, in which nearly all the able-bodied white men of the South were engaged, made an immediate and radical change in the agricultural system of that region. The large plantations could not be cultivated, as before, by slave labor. The problem of taking care of the freedman and of working out a plan for cultivating the land was complex, in view of the difficulties inherited from the past and the economic upheaval caused by the war. Gradually a system developed whereby the owner provided the land, seed, a team, and often rations, and in return received a share of the products. This system was slow in developing and appeared in slightly different forms in different parts of the South. It resulted in a form of tenancy quite different from that represented by the independent tenants of the North. This development of the tenant system, with the breaking up of the old plantations into small tenant farms, has been the principal factor in reducing the average size of farms in the South from 335.4 acres in 1860 to 109.2 acres in 1920. The average size of farms in the North increased considerably during the same period, as shown in Table 4, while the average for the West made but little net change.

TABLE 4.—AVERAGE ACREAGE OF ALL LAND AND OF IMPROVED LAND PER FARM, FOR THE NORTH, SOUTH, AND WEST: 1850 TO 1920.

CENSUS YEAR.	AVERAGE ACREAGE OF ALL LAND PER FARM.				AVERAGE ACREAGE OF IMPROVED LAND PER FARM.			
	United States.	The North.	The South.	The West.	United States.	The North.	The South.	The West.
1920.....	148.2	156.4	109.2	362.7	78.0	105.7	49.0	113.0
1910.....	138.1	143.0	114.4	296.9	75.2	100.3	48.6	101.7
1900.....	146.2	133.2	138.2	386.1	72.2	90.9	48.1	111.8
1890.....	136.5	123.7	139.7	324.1	78.3	87.8	58.8	157.8
1880.....	133.7	114.9	153.4	312.9	71.0	76.5	56.2	185.9
1870.....	153.3	117.0	214.2	336.4	71.0	69.2	69.2	168.1
1860.....	199.2	126.4	335.4	366.9	79.8	68.3	101.3	106.4
1850.....	202.6	127.1	332.1	694.9	78.0	65.4	101.1	51.8

Since 1860, although there have been no great additions to the total farm acreage in the South Atlantic and East South Central divisions, the number of farms has increased to such an extent

that the average acreage per farm has shown a decrease at each succeeding enumeration since 1860; and in the West South Central division, where there has been a rapid expansion in farm land, the average size of farms in 1920 was only 174.1 acres, as compared with 445.6 acres in 1860. The figures for improved land show a similar tendency.

There were 553,848 tenant farms in the South in 1880, 706,343 in 1890, 1,231,144 in 1900, 1,536,752 in 1910, and 1,591,121 in 1920. The most important increase took place, then, here as in most other parts of the country, in the decade between 1890 and 1900; and during the last decade, from 1910 to 1920, the increase was almost negligible. The figures representing the increases, both in tenant farms and in farms operated by their owners, are shown, by geographic divisions, in Table 3.

The East North Central and West North Central divisions have shown an increase both in the number of farms operated by tenants and in the percentage of tenancy from census to census since 1880. The East North Central division has actually reported smaller numbers of farms since 1900, but the decreases have been almost entirely in the owner class, and consequently the increase in the proportion of tenants is due not so much to the increase in tenants as to the decline in the number of owners. In parts of the West North Central division, especially in the Dakotas, the country has been but recently settled, and is therefore somewhat behind the Eastern States in the development of tenancy. Nevertheless, the percentage of tenancy for the division as a whole has increased from 20.5 in 1880 to 34.2 in 1920, a figure decidedly higher than that shown for any other division outside the South.

It is significant to compare the increasing percentage of tenancy shown for most of the States along the northern border with the decreasing percentages of tenancy shown for the Dominion of Canada. Data for Canada and for the principal border States are presented in Table 5.

TABLE 5.—PERCENTAGE OF TENANCY AMONG FARMERS IN CANADA AND IN SELECTED BORDER STATES: 1880 TO 1920.

CENSUS YEAR.	Canada.	CENSUS YEAR.	Maine.	New York.	Michigan.	Minnesota.	North Dakota.	Montana.	Washington.
1921.....	7.9	1920.....	4.2	19.2	17.7	24.7	25.6	11.3	18.7
1911.....	11.4	1910.....	4.3	20.8	15.8	21.0	14.3	8.9	13.7
1901.....	12.9	1900.....	4.7	23.9	15.8	17.3	8.5	9.2	14.4
1891.....	15.4	1890.....	5.4	20.2	14.0	12.9	6.9	4.8	8.5
1881.....		1880.....	4.3	16.5	10.0	9.1	2.1	5.3	7.2

In the Mountain and Pacific divisions tenancy has not yet developed to any great extent. The number of farm tenants in the Mountain division in 1920 was 37,478, as compared with 19,690 in 1910; and the number in the Pacific division in 1920 was 46,987, as compared with 32,733 in 1910.

The pioneer is not likely to be a tenant. A man is not willing to break in land unless he owns it. It is of interest to note, however, the increasing speed with which tenancy is developing as the most recently settled sections of the country are becoming more fully developed.

In connection with the question of farm tenancy in the Pacific division, mention should also be made of the situation arising out of the Alien Land Act, which makes it necessary for the Japanese and Chinese who desire to farm to become tenants rather than owners.

Although the four decades under consideration have all shown increases in the proportion of farms operated by tenants, the growth has not been by any means uniform, either in its nature or in its extent and geographic distribution. At the beginning of the period under consideration, in the year 1880, farm tenancy was already firmly established in the United States. During the decade from 1880 to 1890, the first decade for which actual quantitative measurement is available, the proportion of farm tenancy increased generally throughout the country, except in the Mountain and Pacific divisions.

It was in the decade from 1890 to 1900, however, that the greatest increases recorded in the 40-year period were shown. Every State in the Union except three—Maine, New Hampshire, and Vermont—showed an increase in the proportion of farms operated by tenants. The increase for the country as a whole was from 28.4 per cent to 35.3 per cent. This increase was especially pronounced in the South, and within the South, in the West South Central division. The South as a whole showed an increase from 38.5 per cent in 1890 to 47 per cent in 1900. But this rapid rate of increase did not continue, and during the next decade, from 1900 to 1910, the proportion of farm operators who were tenants had actually declined in four of the nine geographic divisions. The New England and Middle Atlantic divisions had apparently passed their maximum percentage of tenancy and had begun a decline which has continued to the present time. The increase in the number of owners in the West was again sufficient to reduce

the proportion of tenants in that region, although the rate of increase in the number of tenants was actually higher than in the North or the South.

In the last decade, from 1910 to 1920, the increase in tenancy was relatively small. In this decade the most important increases took place in the West and in the North Central States. The New England and Middle Atlantic States continued their decrease of the previous decade, and even in the North Central States the continued increase was found mainly in the newer States. In the South the percentage of tenancy remained approximately stationary.

In New England the increase in tenancy practically came to an end as early as 1890; in the Middle Atlantic States it continued to 1900. In the East and West North Central and South Atlantic States the increase still continues but is not very marked except in the West North Central States. In the East and West South Central States the changes during the last decade were small, but in the Mountain and Pacific divisions decided advances were recorded. The slight increase in tenancy shown for the last decade for the United States as a whole is thus an average covering a group of States in which tenure conditions have apparently become stable, another group in which tenancy is still on the increase, and a third group in which a decline in tenancy has set in. There is no evidence of a continuous widespread growth in tenancy. On the contrary, there is clear indication of an approach of stabilized conditions in this respect, particularly in the older settled portions of the country.

III.

SIGNIFICANCE OF INCREASE IN TENANT FARMS AND IN LEASED LAND.

In the discussion of farm tenancy it is important to distinguish between the number of farms and the farm acreage operated under the different forms of tenure. Table 6 shows, for each census year from 1900 to 1920, inclusive, the acreage of all land in farms classified according to tenure and the improved acreage likewise classified, together with the amount and percentage of increase or decrease from census to census. Similar figures for the number of farms are given in Table 1.

TABLE 6.—ACREAGE OF ALL LAND AND OF IMPROVED LAND IN FARMS IN THE UNITED STATES, BY TENURE, WITH INCREASE, AND PERCENTAGE OPERATED BY TENANTS: 1900 TO 1920.

[For number of farms, by tenure, see Table 1. Acreage figures by divisions and States in Table 54.]

ITEM AND CENSUS YEAR.	All farms.	FARMS OPERATED BY--					Tenant-operated acres per 1,000 acres in all farms.
		Owners and managers.	Owners.	Managers.	Tenants.		
					Acreage.	Per cent of total.	
ALL LAND IN FARMS:							
1920.....acres..	955,883,715	690,904,172	636,775,015	54,129,157	264,979,543	27.7	277
1910.....acres..	878,798,325	652,285,482	598,554,617	53,730,865	226,512,843	25.8	258
1900.....acres..	838,891,774	643,558,237	556,040,051	87,518,186	195,033,537	23.3	233
Increase, 1910-1920:							
Amount.....acres..	77,085,390	38,618,690	38,220,398	398,292	38,466,700	.....	19
Per cent.....	8.8	5.9	6.4	0.7	17.0	.....	7.4
Increase, 1900-1910: ¹							
Amount.....acres..	40,206,551	8,727,245	42,514,566	-33,787,321	31,479,306	.....	25
Per cent.....	4.8	1.4	7.6	-38.6	16.1	.....	10.7
IMPROVED LAND IN FARMS:							
1920.....acres..	503,073,007	327,318,482	314,107,483	13,210,999	175,754,525	34.9	349
1910.....acres..	478,451,750	322,164,436	309,850,421	12,314,015	156,287,314	32.7	327
1900.....acres..	414,498,487	289,140,752	278,231,252	10,909,500	125,357,735	30.2	302
Increase, 1910-1920:							
Amount.....acres..	24,621,257	5,154,046	4,257,062	896,984	19,467,211	.....	22
Per cent.....	5.1	1.6	1.4	7.3	12.5	.....	6.7
Increase, 1900-1910:							
Amount.....acres..	63,953,263	33,023,684	31,619,169	1,404,515	30,929,579	.....	25
Per cent.....	15.4	11.4	11.4	12.9	24.7	.....	8.3

¹ A minus sign (-) denotes decrease.

It may be noted that while the number of farms operated by tenants, as shown in Table 1, increased 4.3 per cent between 1910 and 1920, the acreage of land in tenant farms increased 17 per cent. During the past decade, then, the acreage of the tenant farms increased more rapidly than their number. This may be explained, however, by the fact that most of the new tenant farms were in the Northwest, which is a region of relatively large farms and low-value lands. In the preceding decade (from 1900 to 1910) the increase in the acreage of tenant farms was 16.1 per cent, as compared with an increase of 16.3 per cent in the number of tenant farms.

In addition to the farm land operated by tenants, a considerable area of land is hired by farm owners and operated in connection with the land which they own. A summary of some unpublished figures obtained in the census of 1910, recently made by the Department of Agriculture, shows 46.3 per cent of the total acreage operated by part owners to have been rented, and 46.6 per cent of the improved acreage. No data are available relative to the rented acreage in the farms operated in 1920 by part owners, but it probably formed as great a percentage of the total as in 1910. Table 7 shows the number of farms operated by part owners in 1920, 1910, and 1900, together with the acreage of all land in these farms and the acreage of improved land.

The number of owners renting additional land actually declined between 1910 and 1920, but the acreage of all land in their farms increased 31.4 per cent, and the acreage of improved land increased 3.8 per cent. All of the increase in the acreage of part-owned farms took place in the four divisions west of the Mississippi River, however, while the acreage in the eastern part of the country declined nearly 20 per cent; and the greater part of the increase consisted of unimproved land (mainly grazing land). The figures are shown by geographic divisions in Table 8.

From some points of view the question of the acreage hired by these part owners is relatively immaterial, while from other points of view it is important. When the subject is approached from the point of view of the economic status of the American farmer and his chances for acquiring economic independence, the figures showing the amount of land operated by owners who rent additional land are relatively immaterial. The part owner is an owner, nevertheless, and the fact that he is able to operate additional rented land, as well as the land which he owns, does not make his economic status worse, but possibly improves it.

TABLE 7.—NUMBER AND ACREAGE OF FARMS OPERATED BY TENANTS AND BY PART OWNERS: 1900 TO 1920.

[Part owners are owner-operators who rent some land in addition to what they own.]

ITEM.	1920		1910		1900	
	Number or amount.	Per cent.	Number or amount.	Per cent.	Number or amount.	Per cent.
Number of farms operated by—						
Tenants.....	2,454,804		2,354,676		2,024,964	
Part owners.....	558,580		593,825		451,376	
Acreage of land in farms operated by—						
Tenants.....	264,979,543		226,512,843		195,033,537	
Part owners.....	175,524,882		133,631,302		124,778,802	
Acreage of improved land in farms operated by—						
Tenants.....	175,754,525		156,287,314		125,357,735	
Part owners.....	78,930,019		76,041,824		56,742,335	

ITEM.	INCREASE, 1910-1920. ¹		INCREASE, 1900-1910. ¹	
	Number or amount.	Per cent.	Number or amount.	Per cent.
Number of farms operated by—				
Tenants.....	100,128	4.3	329,712	16.3
Part owners.....	-35,245	-5.9	142,449	31.6
Acreage of land in farms operated by—				
Tenants.....	38,466,700	17.0	31,479,306	16.1
Part owners.....	41,893,580	31.4	8,852,500	7.1
Acreage of improved land in farms operated by—				
Tenants.....	19,467,211	12.5	30,929,579	24.7
Part owners.....	2,888,195	3.8	19,299,489	34.0

¹ A minus sign (--) denotes decrease.

From the point of view, however, of the land which is operated by owners and by tenants, with reference to the difference in the type of farming and the degree of care and quality of husbandry, the problem of the amount of land operated under lease is an important one. It is probably true that the land rented by a part owner is likely to be adjoining his own land, and since the land is bound to remain there year after year he is quite likely to wish to rent it repeatedly. Even under these conditions, however, he will hardly take as great care of the rented land as he does of his own, though he will surely take better care of it than would a tenant who expected to use it for a single year only.

While there is not sufficient information available for a conclusive judgment, it may be said in general that from the point of view which is believed to be the most pertinent for American

agriculture and which is largely followed in this study, namely, the social point of view, the most significant figures are those representing the status of the farmer rather than the status of the land, or the number of farms operated under the different forms of tenure rather than the proportion of the land so operated.

TABLE 8.—NUMBER, ACREAGE, AND IMPROVED ACREAGE OF FARMS OPERATED BY PART OWNERS, BY GEOGRAPHIC DIVISIONS: 1920 AND 1910.

[Part owners are owner-operators who rent some land in addition to what they own.]

DIVISION.	1920	1910	INCREASE. ¹	
			Amount.	Per cent.
NUMBER OF FARMS.				
UNITED STATES.....	558,580	593,825	-35,245	-5.9
New England.....	6,319	5,869	450	7.7
Middle Atlantic.....	22,501	25,613	-3,112	-12.2
East North Central.....	106,839	131,805	-24,966	-18.9
West North Central.....	167,907	178,880	-10,973	-6.1
South Atlantic.....	60,526	71,596	-11,070	-15.5
East South Central.....	57,754	71,475	-13,721	-19.2
West South Central.....	73,183	72,050	1,133	1.6
Mountain.....	37,421	15,815	21,606	136.6
Pacific.....	26,130	20,722	5,408	26.1
ACREAGE OF ALL LAND IN FARMS.				
UNITED STATES.....	175,524,882	133,631,302	41,893,580	31.4
New England.....	832,083	834,725	-2,642	-0.3
Middle Atlantic.....	2,752,251	3,207,856	-455,605	-14.2
East North Central.....	14,078,448	16,445,954	-2,367,506	-14.4
West North Central.....	66,028,983	55,682,972	10,346,011	18.6
South Atlantic.....	4,869,577	6,567,369	-1,697,792	-25.9
East South Central.....	4,545,703	6,496,127	-1,950,424	-30.0
West South Central.....	29,533,191	23,361,144	6,172,047	26.4
Mountain.....	38,761,520	9,884,746	28,876,774	292.1
Pacific.....	14,123,126	11,150,409	2,972,717	26.7
ACREAGE OF IMPROVED LAND IN FARMS.				
UNITED STATES.....	78,930,019	76,041,824	2,888,195	3.8
New England.....	317,088	315,441	1,647	0.5
Middle Atlantic.....	1,809,120	2,228,086	-418,966	-18.8
East North Central.....	11,038,667	13,175,589	-2,136,922	-16.2
West North Central.....	38,891,600	38,672,144	219,456	0.6
South Atlantic.....	2,567,435	3,265,820	-698,385	-21.4
East South Central.....	2,704,995	3,630,161	-925,166	-25.5
West South Central.....	7,782,321	6,949,567	832,754	12.0
Mountain.....	7,980,265	2,308,565	5,671,700	245.7
Pacific.....	5,838,528	5,496,451	342,077	6.2

¹ A minus sign (-) denotes decrease.

IV.

TENANCY AND TYPE OF FARMING.

There is a close relationship between the type of farming pursued in a given community and the percentage of tenancy in that community. It is rather difficult, to be sure, to secure statistical data on this point, but studies made by the Office of Farm Management in the Department of Agriculture bear out the general conclusion. A suggestive table published in the Twelfth Census Reports shows the percentage of tenancy in 1900 among farmers classified according to principal source of income. The results are summarized in Table 9.

TABLE 9.—PERCENTAGE OF TENANCY AMONG FARMERS CLASSIFIED ACCORDING TO PRINCIPAL SOURCE OF INCOME: 1900.

PRINCIPAL SOURCE OF INCOME.	Per cent of tenancy.	PRINCIPAL SOURCE OF INCOME.	Per cent of tenancy.	PRINCIPAL SOURCE OF INCOME.	Per cent of tenancy.
Wheat.....	67.7	Hay and grain.....	39.3	Dairy products.....	23.3
Cotton.....	47.9	Sugar crops.....	35.1	Live stock.....	20.3
.....	45.7	Vegetables.....	30.4	Fruits.....	16.5

One relation stands out prominently in this tabulation, namely, that the higher percentages of tenancy are found on farms whose principal products are cash crops, involving a relatively small investment in working capital and providing a relatively rapid turnover. The annual crops are the tenant crops; cotton, tobacco, rice, grain, and vegetables show high percentages of tenancy. On the other hand, fruits, live stock, and dairy products show low percentages of tenancy. The line of demarcation is quite clear. It is the type of farming which requires a large investment and a long time to realize on the investment that is shunned by tenants and undertaken mostly by owners. On the other hand, an annual crop, readily marketable, and requiring little investment that will be returned within a year, is what attracts the tenant. These statements must be made, of course, with a certain degree of qualification. There are places, for example, where a system of partnership between landlords and tenants has been worked out on dairy farms which makes it possible for the tenant to engage in this business without undue risk. In general, however, the

percentages given above are suggestive and the conclusions to which they point are borne out by intensive studies of local areas and by the knowledge of experts in farm management.

A bit of evidence on this point is available from a tabulation of tenancy by zones in the twelfth Federal reserve district, which includes the States of California, Idaho, Nevada, Oregon, Utah, and Washington, and most of Arizona. The Federal Reserve Bank of San Francisco has divided each of these States into economic districts or zones, in accordance with the principal products, and has courteously furnished the writers a list of the counties included in each zone and a general description of its economic characteristics.

Table 10 gives for each of these zones the number of farms, the number and percentage operated by tenants, and a brief statement as to the prevailing type of agriculture in the zone.

TABLE 10.—FARM TENANCY AND TYPE OF FARMING IN THE TWELFTH FEDERAL RESERVE DISTRICT: 1920.

STATE AND ZONE.	Total number of farms.	TENANT FARMS.		Type of agriculture or principal product.
		Number.	Per cent of total.	
ARIZONA:				
Zone 1.....	3,930	1,010	25.7	Cotton.
Zone 2.....	598	81	13.5	Cattle.
Zone 3.....	582	90	15.5	Stock.
Zone 4.....	630	148	23.5	Cotton.
Zone 5.....	1,170	97	8.3	Stock.
CALIFORNIA:				
Zone 1.....	2,843	1,403	49.3	Cotton, cantaloupes, and live stock.
Zone 2.....	3,200	646	20.2	Diversified.
Zone 3.....	4,188	496	11.8	Farming and orchards.
Zone 4.....	3,949	594	15.0	Oranges and general farming.
Zone 5.....	4,544	386	8.5	Oranges and general farming.
Zone 6-7 ¹	12,444	3,174	25.5	Oranges and general farming.
Zone 8.....	3,028	972	32.1	General farming and beans.
Zone 9.....	10,563	1,842	17.4	General farming, oranges, and grapes.
Zone 10.....	5,274	1,553	29.4	Diversified.
Zone 11.....	6,585	1,232	18.7	Diversified.
Zone 12.....	10,393	1,565	15.1	General farming, fruit, and cattle.
Zone 13.....	7,779	1,723	22.1	General farming, fruit, and cattle.
Zone 14.....	7,475	2,132	28.5	General farming, fruit, and cattle.
Zone 15-16 ²	4,527	1,399	30.9	Diversified.
Zone 17.....	8,656	1,584	18.3	Diversified.
Zone 18.....	2,971	890	30.0	Diversified.
Zone 19.....	6,279	1,155	18.4	Rice.
Zone 20.....	4,036	762	18.9	Orchards.
Zone 21.....	4,914	684	13.9	Stock.
Zone 22.....	4,022	949	23.6	Stock.

¹ Includes the city of Los Angeles.

² Includes the city of San Francisco.

TENANCY AND TYPE OF FARMING.

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TABLE 10.—FARM TENANCY AND TYPE OF FARMING IN THE TWELFTH FEDERAL RESERVE DISTRICT: 1920—Continued.

STATE AND ZONE.	Total number of farms.	TENANT FARMS.		Type of agriculture or principal product.
		Number.	Per cent of total.	
IDAHO:				
Zone 1.....	5,647	425	7.5	Sheep.
Zone 2.....	4,435	673	15.2	Sheep.
Zone 3.....	4,574	623	13.6	Sheep.
Zone 4.....	4,314	879	20.4	Sheep.
Zone 5.....	3,828	638	16.7	Sheep.
Zone 6.....	3,723	644	17.3	Sheep and apples.
Zone 7.....	6,105	1,022	16.7	Sheep and apples.
Zone 8.....	3,564	842	23.6	Wheat, hay, and live stock.
Zone 9.....	2,970	617	20.8	Diversified.
Zone 10.....	2,946	338	11.5	Diversified.
NEVADA:				
Zone 1.....	2,102	214	10.2	Stock.
Zone 2.....	1,061	82	7.7	Stock.
OREGON:				
Zone 1-2 ¹	6,542	1,307	20.0	Diversified.
Zone 3.....	2,236	352	15.7	Diversified.
Zone 4.....	5,682	1,049	18.5	Diversified.
Zone 5.....	5,442	1,037	19.1	Diversified.
Zone 6.....	8,407	1,727	20.5	Diversified.
Zone 7.....	3,453	633	18.3	Diversified.
Zone 8.....	2,786	461	16.5	Diversified.
Zone 9.....	3,683	838	22.8	Wheat and live stock.
Zone 10.....	3,858	842	21.8	Wheat and live stock.
Zone 11.....	4,665	738	15.8	Wheat and live stock.
Zone 12-13.....	3,452	443	12.8	Wheat and live stock.
UTAH:				
Zone 1-2 ²	4,027	591	14.7	Wheat, hay, sugar beets, potatoes, and fruit.
Zone 3.....	2,447	282	11.5	Wheat, hay, sugar beets, potatoes, and fruit.
Zone 4.....	4,325	477	11.0	Wheat, hay, sugar beets, potatoes, and fruit.
Zone 5.....	4,992	584	11.7	Sheep.
Zone 6.....	3,214	262	8.2	Sheep.
Zone 7.....	4,208	326	7.7	Sheep.
Zone 8.....	2,449	265	10.8	Sheep.
WASHINGTON:				
Zone 1-2 ³	4,830	1,004	20.8	Wheat.
Zone 3.....	3,535	1,313	37.1	Wheat.
Zone 4.....	2,537	816	32.2	Wheat, barley, and live stock.
Zone 5.....	1,933	326	16.9	Wheat, barley, and live stock.
Zone 6.....	2,944	1,036	35.2	Wheat.
Zone 7.....	4,043	488	12.1	Diversified.
Zone 8.....	4,951	615	12.4	Apples, hay, and sheep.
Zone 9.....	2,733	550	20.1	Wheat.
Zone 10.....	5,755	1,344	23.4	Apples, hay, and sheep.
Zone 11.....	5,966	798	13.4	Diversified.
Zone 12.....	4,490	561	12.5	Diversified.
Zone 13.....	7,679	1,013	13.2	Diversified.
Zone 14-15 ⁴	4,729	1,133	24.0	Diversified.
Zone 16.....	3,858	446	11.6	Diversified.
Zone 17.....	6,305	976	15.5	Diversified.

¹ Includes the city of Portland.

² Includes Salt Lake City.

³ Includes the city of Spokane.

⁴ Includes the city of Seattle.

It will be noted at once that in Arizona, zones 1 and 4, which are cotton-producing regions, have a much higher percentage of tenancy than the remainder of the State, whose agricultural activities consist primarily in the raising of live stock. In California the situation is considerably complicated by the variety of products and their overlapping. Nevertheless, zone 1, which includes the Imperial Valley with its cotton production, shows the highest proportion of tenancy anywhere in the district, namely, 49.3 per cent.

Though the figures are not altogether consistent or convincing, they do support in a general way the conclusions based on the tabulation made in 1900 for the country as a whole. Tenancy is higher where general diversified farming is practiced and particularly where one annual cash crop, like wheat or cotton, is raised. On the other hand, where live stock is raised, or where fruit is the principal product, tenancy is less common. In the State of Washington, for instance, the highest percentage of tenancy is found in zone 3, which is devoted to wheat; zone 4, whose principal products are wheat and barley; and zone 6, which also produces wheat. It is true that there are some wheat zones in the State with lower percentages of tenancy, but zone 8, which produced apples, hay, and sheep, has only 12.4 per cent of tenants, which is third from the lowest percentage in the State.

FARM LAND BY TENURE.

There is no census information as to the relative productivity of farms operated by owners as compared with farms operated by tenants, since the production of crops has not been tabulated by tenure. In so far as any evidence on the subject is available there appears to be little difference in the yield per acre for the two tenure classes, the average for owners probably being slightly the larger. It might be expected that tenants, operating as they do the better grades of land, would produce higher yields than do owners, whose farms are, in general, somewhat lower in average value per acre. This is not the case, however, for various reasons. In the first place, the yield per acre is related only to that part of the land which is cultivated, so that the waste land which tends to reduce the average value of owner-operated farms per acre is not included. In the second place, many of the small farms operated by owners without assistance receive greater care than do the larger farms operated by tenants.

Table 11 shows, by geographic divisions, for farms classified according to tenure, the percentage of the farm acreage that was improved in 1920, and Figure 2 shows the same data in graphic form for selected States. In the table, separate figures are given for full owners (those who own all the land they operate) and part owners (those who hire some additional land).

FIG. 2.—PERCENTAGE OF IMPROVED LAND IN FARMS OPERATED BY TENANTS, OWNERS, AND MANAGERS, FOR SELECTED STATES: 1920.

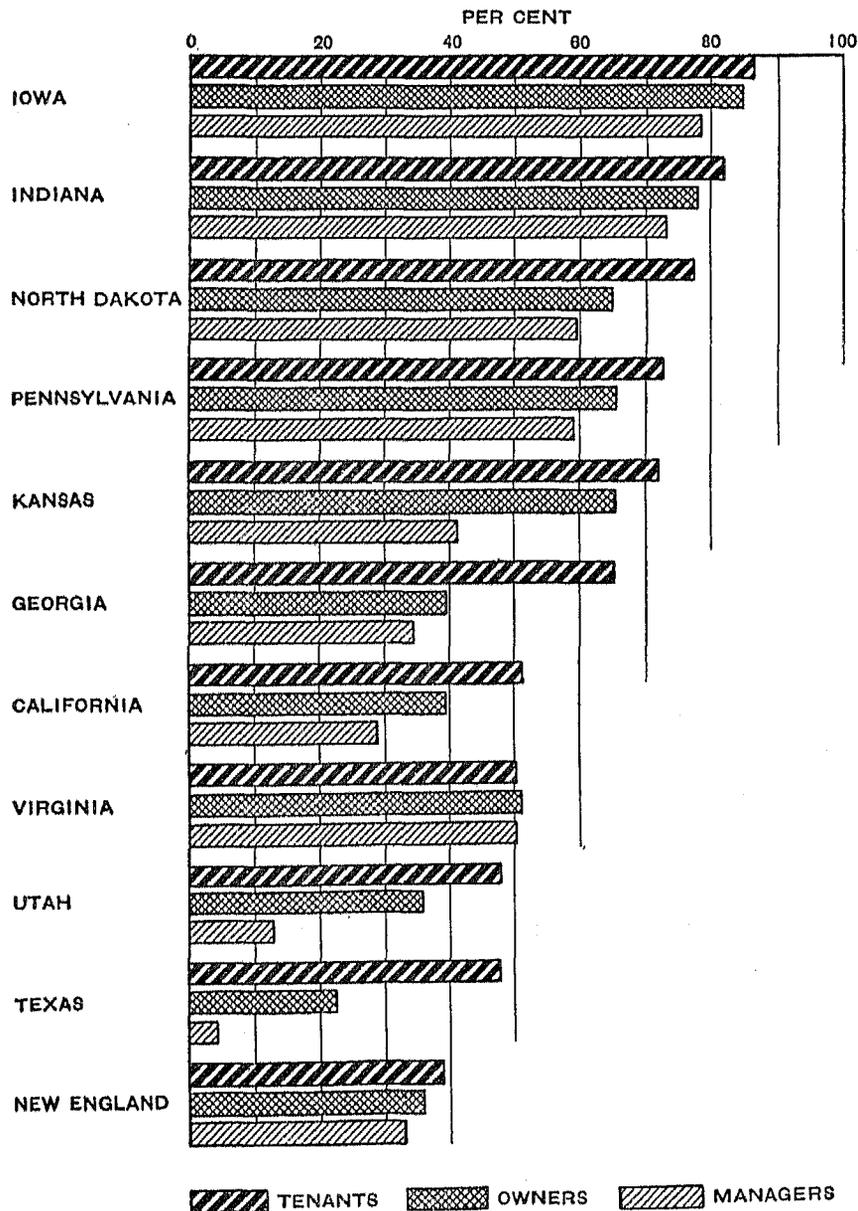


TABLE 11.—PERCENTAGE OF FARM ACREAGE IMPROVED, BY TENURE, BY GEOGRAPHIC DIVISIONS: 1920.

(Figures for States in Table 56.)

DIVISION.	All farms.	FARMS OPERATED BY—						
		Owners.			Managers.	Tenants.		
		Total.	Full owners.	Part owners.		Total.	Other than croppers. ¹	Croppers. ¹
UNITED STATES.....	52.6	49.3	51.0	45.0	24.4	66.3	65.6	73.9
New England.....	36.0	35.9	35.8	38.1	33.0	39.2	.....	.....
Middle Atlantic.....	65.5	64.7	64.6	65.7	53.4	70.2	.....	.....
East North Central.....	74.7	72.0	70.6	78.4	63.8	80.7	.....	.....
West North Central.....	66.7	63.5	66.5	58.9	47.0	74.6	.....	.....
South Atlantic.....	49.6	45.4	44.7	52.7	33.4	60.2	56.5	70.0
East South Central.....	56.3	51.3	50.6	59.5	44.8	68.4	64.1	80.5
West South Central.....	37.0	32.2	34.6	26.4	8.1	55.7	52.7	73.1
Mountain.....	25.7	26.0	30.0	20.6	11.8	36.9	.....	.....
Pacific.....	42.6	40.2	39.6	41.3	31.2	55.4	.....	.....

¹ Reported in Southern States only.

That the percentage of land improved is uniformly larger for tenant farms is significant; that croppers have a proportion of improved land even larger than other tenants is to be expected from the nature of their farming operations. It is among managers, many of whom run large farms or ranches, that the proportion of improved land is lowest, particularly in the West South Central and Mountain divisions, where most of the ranches are situated.

Table 12 shows, by geographic divisions, the average acreage of all land and of improved land in farms operated under the different forms of tenure.

For the country as a whole full owners had a larger average acreage than tenants—137 as compared with 107.9. A large part of the difference, however, is due to the inclusion of the croppers, with their 40-acre farms, the average for all the other tenants being 128 acres. The part owners and managers had much larger averages, 314.2 and 790.8, respectively. The significant comparisons, however, are to be made between the full owners and the tenants, and in all the divisions of the North and West the tenant farms are larger in average acreage than are the farms operated by full owners.

In the South, even after eliminating the croppers, the owners have much larger farms than the tenants, because many of the tenants are Negroes and because the tenant in the South in very many cases operates a part of a broken up plantation consisting mainly of a tract of land adapted to the raising of cotton, while many owners still hold large plantations and estates, only portions of which are under cultivation. In the South Atlantic and East South Central divisions the farms operated by part owners are smaller than those operated by full owners, while in the West South Central division, as in all the rest of the country, the part owners' farms are the larger—frequently two or three times as large.

TABLE 12.—AVERAGE ACREAGE AND AVERAGE IMPROVED ACREAGE PER FARM, BY TENURE, BY GEOGRAPHIC DIVISIONS: 1920.

[Figures for States in Table 55.]

DIVISION.	All farms.	FARMS OPERATED BY—						
		Owners.			Man-agers.	Tenants.		
		Total.	Full owners.	Part owners.		Total.	Other than crop-pers.	Crop-pers. ¹
AVERAGE ACREAGE OF ALL LAND PER FARM.								
UNITED STATES.....	148.2	162.2	137.0	314.2	790.8	107.9	128.0	40.2
New England.....	108.5	104.9	103.6	131.7	204.2	112.5		
Middle Atlantic.....	95.4	88.7	86.2	122.3	195.2	109.2		
East North Central.....	108.5	99.8	94.6	131.8	211.6	126.0		
West North Central.....	234.3	237.0	188.8	393.2	564.1	219.5		
South Atlantic.....	84.4	101.8	104.2	80.5	449.2	58.2	67.7	42.4
East South Central.....	75.0	102.7	105.7	78.7	436.0	44.7	53.7	30.4
West South Central.....	174.1	225.7	192.4	403.6	3,293.6	99.0	119.8	49.8
Mountain.....	480.7	448.8	315.7	1,035.8	3,152.0	359.5		
Pacific.....	239.8	202.5	145.1	540.5	976.0	272.7		
AVERAGE ACREAGE OF IMPROVED LAND PER FARM.								
UNITED STATES.....	78.0	80.0	69.9	141.3	193.0	71.5	84.0	29.7
New England.....	39.1	37.7	37.1	50.2	67.3	44.1		
Middle Atlantic.....	62.5	57.4	55.7	80.4	104.3	76.6		
East North Central.....	81.0	71.9	66.8	103.3	135.0	101.6		
West North Central.....	156.2	150.6	125.6	231.6	265.0	163.8		
South Atlantic.....	41.9	46.2	46.6	42.4	150.0	35.1	38.3	29.7
East South Central.....	42.2	52.7	53.5	46.8	195.4	30.6	34.4	24.5
West South Central.....	64.4	72.8	66.5	106.3	267.1	55.2	63.1	36.4
Mountain.....	123.3	116.5	94.6	213.3	373.3	132.8		
Pacific.....	102.2	81.5	57.4	223.4	304.9	151.0		

¹ Reported in Southern States only.

DISTRIBUTION OF THE FARM INVESTMENT.

A significant index of the difference in type between tenant farming and ownership farming is found in the difference in distribution of the farm investment for farms of the two tenure classes. The total farm investment, in the case of the tenant farms, of course, includes the landlord's investment in the land, as well as the tenant's investment in stock and tools.

Table 13 shows, by geographic divisions, what percentage of the value of all farm property in 1920 was represented, respectively, by land, buildings, implements and machinery, and live stock. Figure 3 shows graphically, for owners and tenants in the North, South, and West, the same distribution of farm values. The data in Table 13 are presented for tenants and owners, and also for the two classes of owners which have already been distinguished, namely, full owners, who own all the land they operate, and part owners, who hire some additional land. The most significant comparisons are to be made between tenants and full owners, since the part owners, in some sections, partake somewhat of the characteristics of tenants.

FIG. 3.—PERCENTAGE OF TOTAL VALUE OF FARM PROPERTY REPRESENTED BY EACH CLASS, FOR OWNERS AND TENANTS IN THE NORTH, SOUTH, AND WEST: 1920.

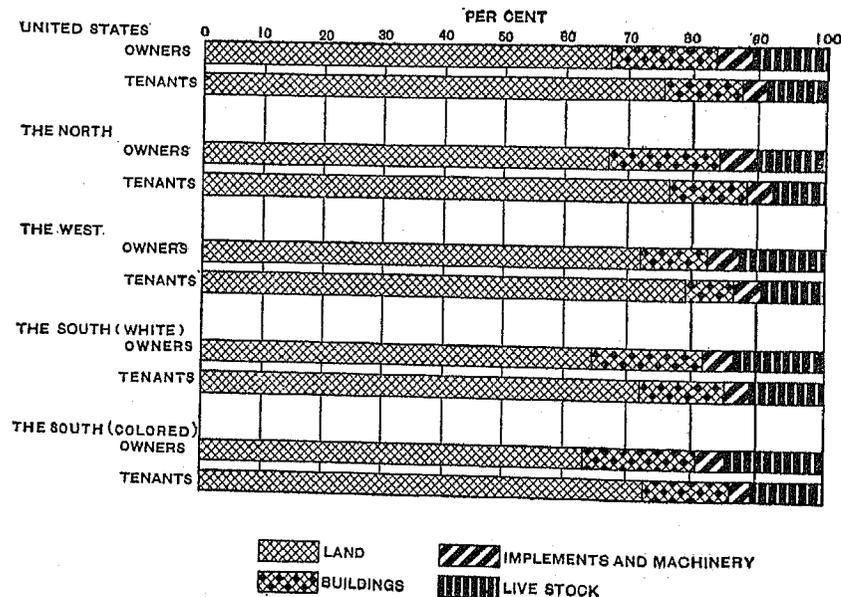


TABLE 13.—PERCENTAGE OF TOTAL VALUE OF FARM PROPERTY REPRESENTED BY EACH CLASS, BY TENURE, BY GEOGRAPHIC DIVISIONS: 1920.

[Figures for States in Tables 59 and 60.]

DIVISION AND TENURE.	PER CENT OF VALUE OF ALL FARM PROPERTY REPRESENTED BY—				
	Land and buildings.	Land alone.	Buildings.	Implements and machinery.	Live stock.
UNITED STATES:					
Owners.....	83.7	67.2	16.5	5.1	11.1
Full owners.....	83.4	65.3	18.1	5.3	11.3
Part owners.....	85.0	73.6	11.4	4.5	10.5
Tenants.....	87.5	75.9	11.6	3.8	8.6
NEW ENGLAND:					
Owners.....	77.2	40.5	36.7	8.4	14.4
Full owners.....	77.2	40.3	36.9	8.4	14.4
Part owners.....	76.7	42.4	34.4	8.4	14.9
Tenants.....	77.1	44.3	32.8	6.6	16.3
MIDDLE ATLANTIC:					
Owners.....	74.6	39.1	35.5	9.9	15.5
Full owners.....	74.6	38.7	35.9	9.9	15.5
Part owners.....	75.0	43.7	31.4	9.6	15.4
Tenants.....	77.0	47.8	29.2	8.1	14.8
EAST NORTH CENTRAL:					
Owners.....	85.0	65.4	19.6	5.2	9.8
Full owners.....	84.4	63.5	20.9	5.4	10.2
Part owners.....	87.3	72.7	14.6	4.4	8.4
Tenants.....	88.9	76.5	12.4	3.7	7.4
WEST NORTH CENTRAL:					
Owners.....	86.4	73.9	12.5	4.5	9.1
Full owners.....	86.3	72.8	13.6	4.5	9.1
Part owners.....	86.5	76.5	10.0	4.4	9.1
Tenants.....	89.1	80.0	9.1	3.7	7.2
SOUTH ATLANTIC:					
Owners.....	83.7	62.1	21.6	5.2	11.0
Full owners.....	83.7	61.9	21.9	5.3	11.0
Part owners.....	83.6	64.2	19.4	4.7	11.7
Tenants.....	86.1	69.9	16.2	3.7	10.2
Tenants, excluding croppers.....	85.3	68.9	16.4	4.0	10.6
Croppers.....	88.0	72.2	15.8	3.0	9.0
EAST SOUTH CENTRAL:					
Owners.....	81.9	63.5	18.4	4.4	13.7
Full owners.....	81.9	63.2	18.7	4.5	13.7
Part owners.....	82.2	66.3	16.0	4.1	13.6
Tenants.....	84.5	70.1	14.4	3.2	12.3
Tenants, excluding croppers.....	82.5	68.2	14.4	3.6	13.8
Croppers.....	89.0	74.6	14.4	2.3	8.8
WEST SOUTH CENTRAL:					
Owners.....	80.6	67.6	13.0	4.7	14.7
Full owners.....	80.7	66.6	14.1	4.8	14.5
Part owners.....	80.3	71.1	9.2	4.2	15.5
Tenants.....	85.5	75.2	10.3	3.5	11.0
Tenants, excluding croppers.....	84.5	74.3	10.2	3.7	11.8
Croppers.....	89.9	79.1	10.8	2.5	7.6

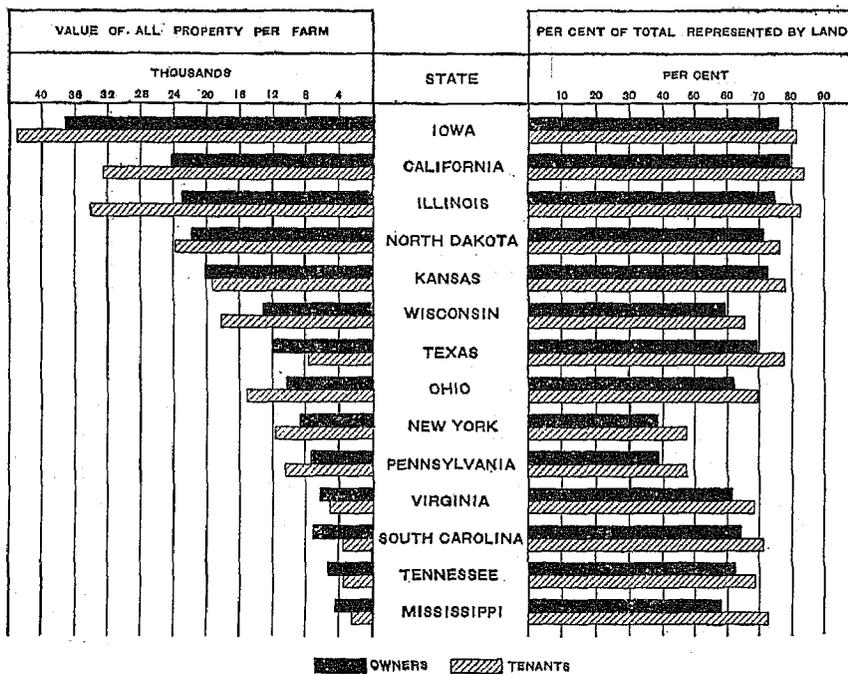
TABLE 13.—PERCENTAGE OF TOTAL VALUE OF FARM PROPERTY REPRESENTED BY EACH CLASS, BY TENURE, BY GEOGRAPHIC DIVISIONS: 1920—Continued.

DIVISION AND TENURE.	PER CENT OF VALUE OF ALL FARM PROPERTY REPRESENTED BY—				
	Land and buildings.	Land alone.	Buildings.	Implements and machinery.	Live stock.
MOUNTAIN:					
Owners.....	76.8	67.4	9.4	5.0	18.2
Full owners.....	76.2	65.9	10.2	5.2	18.6
Part owners.....	78.1	70.7	7.4	4.4	17.4
Tenants.....	83.1	75.3	7.7	4.2	12.7
PACIFIC:					
Owners.....	87.4	76.4	11.0	4.8	7.8
Full owners.....	87.4	75.1	12.3	4.9	7.8
Part owners.....	87.5	80.0	7.5	4.6	7.9
Tenants.....	88.7	82.1	6.6	4.0	7.4

Figure 4 shows graphically, for selected States, the average value of farm property per farm for owners and tenants and the percentage of the total value of farm property represented by land.

FIG. 4.—AVERAGE VALUE OF FARM PROPERTY PER FARM, AND PERCENTAGE REPRESENTED BY LAND, FOR OWNERS AND TENANTS IN SELECTED STATES: 1920.

[Figures for all States in Tables 58, 59, and 60.]



Uniformly throughout, land represents a larger proportion of the total value of farm property in the case of farms operated by tenants than in the case of farms operated by owners. Crop-
pers are shown separately in Table 13 for the Southern divisions, and for them the difference is even more pronounced. This is in accordance with the fact that a larger proportion of the land in tenant farms is improved (see Table 11). On tenant farms buildings constitute uniformly a smaller proportion of the total investment than on owner-operated farms. The tenants have to have good land, but they need not have good buildings. Moreover, expensive buildings go with live-stock farming, which is not a type of farming commonly practiced by tenants. Tenants also have a smaller proportion of their investment in machinery and live stock.

Table 14, on page 44, shows the average value per farm and per acre of the different classes of farm property in 1920 and 1910, for the different tenure classes.

The average investment in machinery on tenant farms in 1920 was \$425, as compared with \$624 on owner-operated farms. In the case of live stock, also, the difference is decided and is in agreement with the fact already noted, that tenants do not engage in live-stock farming to the extent that owners do.

Figure 5 shows the average value of all live stock per farm and the average value of specified classes of live stock in selected States, on owner-operated farms and on tenant farms.

FIG. 5.—PER CENT DISTRIBUTION OF VALUE OF LIVE STOCK, BY CLASSES, AND AVERAGE VALUE PER FARM, FOR OWNERS AND TENANTS IN SELECTED STATES: 1920.

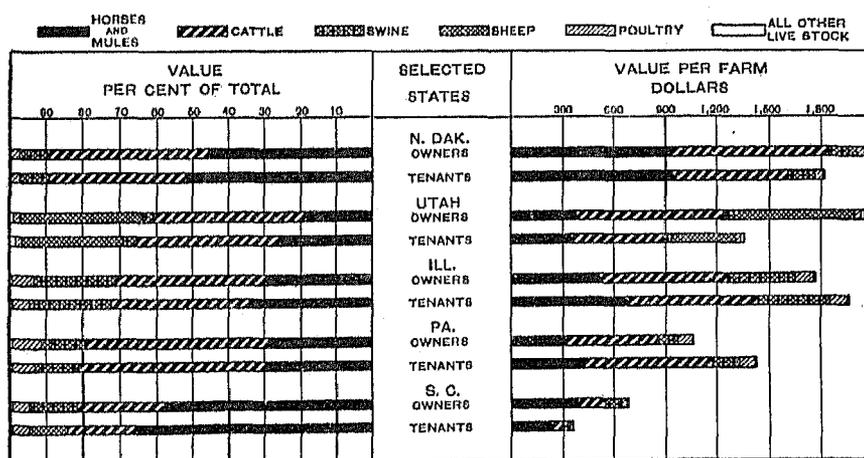


TABLE 14.—AVERAGE VALUE OF FARM PROPERTY PER FARM AND PER ACRE, BY TENURE, FOR THE UNITED STATES: 1920 AND 1910.

[Figures for divisions and States in Table 58.]

TENURE.	All farm property.	LAND AND BUILDINGS.			Implements and machinery.	Live stock.	
		Total.	Land.	Buildings.			
AVERAGE VALUE PER FARM:							
All farms.....	1920..	\$12,084	\$10,284	\$8,503	\$1,781	\$557	\$1,243
	1910..	6,444	5,471	4,476	994	199	774
Owners.....	1920..	12,130	10,156	8,149	2,007	624	1,350
	1910..	6,754	5,664	4,509	1,155	228	862
Full owners.....	1920..	10,942	9,122	7,146	1,976	582	1,238
	1910..	6,179	5,160	4,007	1,153	218	802
Part owners.....	1920..	19,288	16,387	14,190	2,197	877	2,025
	1910..	10,001	8,515	7,349	1,165	284	1,202
Managers.....	1920..	45,761	38,937	32,252	6,685	1,516	5,307
	1910..	29,269	25,075	20,977	4,098	738	3,455
Tenants.....	1920..	11,072	9,690	8,407	1,283	425	958
	1910..	5,360	4,662	4,014	648	137	562
AVERAGE VALUE PER ACRE:							
All farms.....	1920..	\$31.52	\$69.38	\$57.36	\$12.02	\$3.76	\$8.38
	1910..	46.64	39.60	32.40	7.20	1.44	5.60
Owners.....	1920..	74.77	62.60	50.23	12.37	3.84	8.32
	1910..	44.56	37.37	29.75	7.62	1.50	5.68
Full owners.....	1920..	79.86	66.58	52.16	14.42	4.25	9.04
	1910..	44.59	37.23	28.91	8.32	1.57	5.78
Part owners.....	1920..	61.38	52.15	45.16	6.99	2.79	6.44
	1910..	44.44	37.84	32.66	5.18	1.26	5.34
Managers.....	1920..	57.87	49.24	40.78	8.45	1.92	6.71
	1910..	31.65	27.12	22.68	4.43	0.80	3.74
Tenants.....	1920..	102.58	89.77	77.88	11.89	3.94	8.87
	1910..	55.72	48.46	41.72	6.74	1.42	5.84

It will be seen that in these States tenants have a larger proportion of their live-stock investment in horses and mules; that is, in work animals rather than in cattle and sheep, which are raised for sale. The difference in the case of cattle is clearly pronounced except in Pennsylvania, where tenants have a larger proportion of their live-stock investment in cattle than do owners. In the case of swine the difference is not pronounced or uniform for the reason that hog raising is closely connected with the corn-raising industry and tenants engage in it to the same extent that owners do.

V.

GEOGRAPHIC DISTRIBUTION OF TENANCY.

The percentage of tenancy for the United States (38.1) is the result of averaging widely varying percentages for different parts of the country, ranging from 4.2 per cent in Maine to 66.6 per cent in Georgia, and incidentally counting on an equal basis the small cropper farms of the South and the large tenant farms (larger than the owner-operated farms) of the corn belt. Again, the figure for the United States as a whole is an average of widely differing percentages for the different race and nativity groups—18.9 per cent for the foreign-born white, 33.2 per cent for the native white, and 75.2 per cent for the colored farmers. (See Table 62.) Most of the colored farmers are in the three Southern divisions, where the percentages of tenancy are highest; most of the foreign-born white farmers are in the East and West North Central divisions; and yet, outside of the South, these two divisions show the highest percentages of tenancy. It is evident, then, that any real understanding of the tenancy situation in the United States must be based upon an analysis in some detail at least of the figures for different parts of the country and for the different elements of the farm population.

The number of farms and the per cent distribution by tenure, for 1920 and 1910, are shown, by divisions and States, in Tables 15 and 16, together with the increase during the decade in the number of farms operated by owners and by tenants. Further data for individual States are to be found in the detailed tables at the end of this volume (Tables 53 to 62, inclusive); and certain items are also shown by counties in Table 63.

The map on page 46 (Fig. 6) indicates the proportion of tenants among all farmers in each county in the United States in 1920, and the map on page 47 (Fig. 7) shows corresponding data for 1880.

FIG. 6.—PERCENTAGE OF FARMS OPERATED BY TENANTS, BY COUNTIES, 1920.

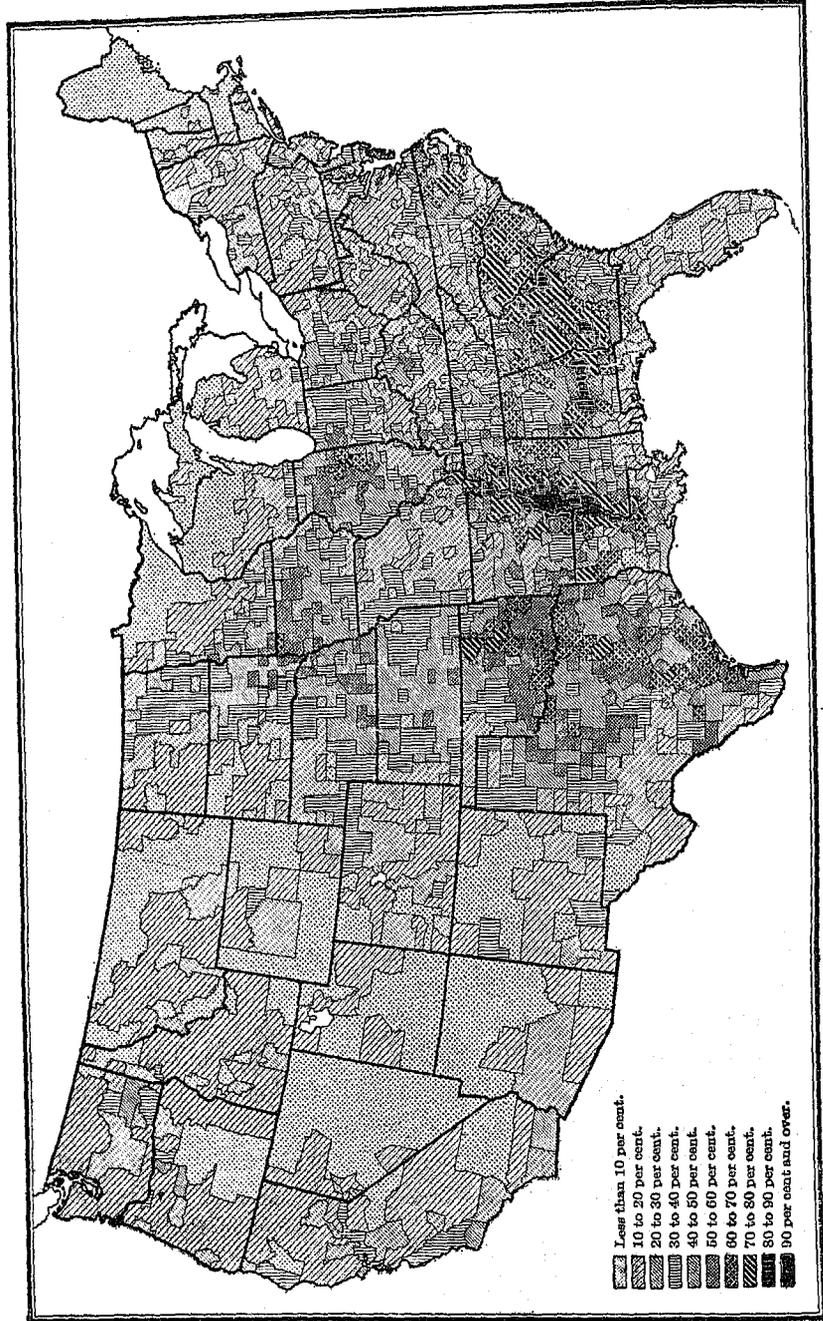


FIG. 7.—PERCENTAGE OF FARMS OPERATED BY TENANTS, BY COUNTIES: 1880.
 [Areas left blank on the map represents counties which had less than 100 farms in 1880.]

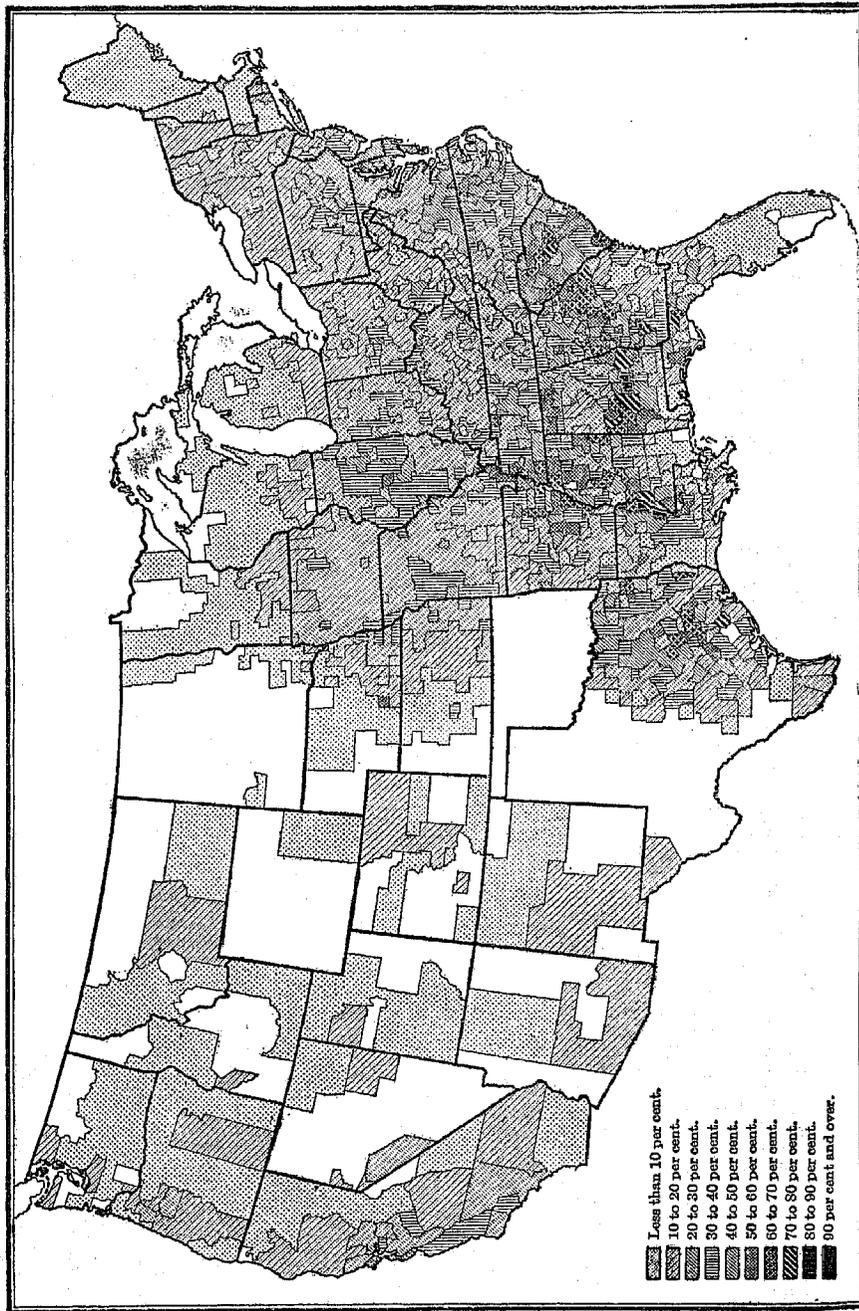


TABLE 15.—NUMBER OF FARMS, BY TENURE, BY DIVISIONS AND STATES:
1920 AND 1910.

DIVISION AND STATE.	TOTAL NUMBER OF FARMS.		NUMBER OF FARMS OPERATED BY—					
	1920	1910	Owners.		Managers.		Tenants.	
			1920	1910	1920	1910	1920	1910
UNITED STATES..	6,448,343	6,361,502	3,925,090	3,948,722	68,449	58,104	2,454,804	2,354,676
GEOGRAPHIC DIVISIONS:								
New England.....	156,564	188,802	140,160	168,408	4,802	5,379	11,602	15,015
Middle Atlantic.....	425,147	468,379	379,104	355,036	9,853	9,072	88,190	104,271
East North Central.....	1,084,744	1,123,489	766,786	809,044	13,551	10,848	304,407	303,597
West North Central.....	1,096,951	1,109,948	711,156	758,945	10,776	8,384	375,019	342,618
South Atlantic.....	1,158,976	1,111,881	607,089	593,154	9,799	8,298	542,088	510,429
East South Central.....	1,051,600	1,042,480	525,808	519,452	3,506	3,200	523,286	528,738
West South Central.....	996,088	943,186	464,328	440,905	5,013	4,606	526,747	497,585
Mountain.....	244,109	183,446	202,575	169,844	4,116	2,912	37,478	19,690
Pacific.....	234,164	189,891	180,144	151,933	7,033	5,225	46,987	32,733
NEW ENGLAND:								
Maine.....	48,227	60,016	45,437	56,454	786	999	2,004	2,563
New Hampshire.....	20,523	27,053	18,604	24,493	546	681	1,373	1,879
Vermont.....	29,075	32,709	25,121	28,065	568	636	3,386	4,008
Massachusetts.....	32,001	36,017	28,087	32,075	1,627	1,863	2,287	2,979
Rhode Island.....	4,083	5,292	3,245	4,087	205	251	633	954
Connecticut.....	22,655	26,815	19,666	23,234	1,070	949	1,919	2,632
MIDDLE ATLANTIC:								
New York.....	193,195	215,597	151,717	166,674	4,376	4,051	37,102	44,872
New Jersey.....	29,702	33,487	21,889	24,133	987	1,060	6,226	8,294
Pennsylvania.....	202,250	219,295	153,498	164,229	4,490	3,951	44,262	51,105
EAST NORTH CENTRAL:								
Ohio.....	256,695	272,045	177,986	192,104	3,065	2,753	75,644	77,188
Indiana.....	205,126	215,485	137,210	148,501	2,329	2,297	65,587	64,687
Illinois.....	237,181	251,872	132,574	145,107	3,411	2,386	101,196	104,379
Michigan.....	196,447	206,960	159,406	172,310	2,319	1,961	34,722	32,689
Wisconsin.....	189,295	177,127	159,610	151,022	2,427	1,451	27,258	24,654
WEST NORTH CENTRAL:								
Minnesota.....	178,478	156,137	132,744	122,104	1,596	1,222	44,138	32,811
Iowa.....	213,439	217,044	121,888	133,003	2,487	1,926	89,064	82,115
Missouri.....	263,004	277,244	185,030	192,285	2,247	2,001	75,727	82,958
North Dakota.....	77,690	74,360	56,917	63,212	855	484	19,918	10,664
South Dakota.....	74,637	77,644	47,815	57,984	781	429	26,041	19,211
Nebraska.....	124,417	129,678	69,672	79,250	1,315	987	53,430	49,441
Kansas.....	165,286	177,841	97,090	111,108	1,495	1,335	66,701	65,388
SOUTH ATLANTIC:								
Delaware.....	10,140	10,836	6,010	6,178	144	123	3,986	4,535
Maryland.....	47,908	48,923	32,805	33,519	1,262	988	13,841	14,416
District of Columbia.....	204	217	100	118	19	15	85	84
Virginia.....	186,242	184,018	136,363	133,664	2,134	1,625	47,745	48,729
West Virginia.....	87,289	96,685	72,101	75,978	1,090	872	14,098	19,835
North Carolina.....	269,763	253,725	151,376	145,320	928	1,118	117,459	107,287
South Carolina.....	192,693	176,434	67,724	64,350	738	863	124,231	111,221
Georgia.....	310,732	291,027	102,123	98,628	1,655	1,419	206,954	190,980
Florida.....	54,005	50,016	38,487	35,399	1,829	1,275	13,689	13,342
EAST SOUTH CENTRAL:								
Kentucky.....	279,626	259,185	179,327	170,332	969	993	90,330	87,860
Tennessee.....	252,774	240,012	148,082	144,125	807	826	103,885	101,061
Alabama.....	256,099	262,901	107,089	103,929	741	646	148,269	158,326
Mississippi.....	272,101	274,382	91,310	92,066	989	825	179,802	181,491
WEST SOUTH CENTRAL:								
Arkansas.....	232,624	214,678	112,647	106,649	736	763	119,221	107,266
Louisiana.....	135,463	120,546	57,254	52,989	828	950	77,381	66,607
Oklahoma.....	191,988	190,192	93,217	85,404	935	651	97,836	104,137
Texas.....	436,033	477,770	201,210	195,863	2,514	2,332	232,309	219,575
MOUNTAIN:								
Montana.....	57,677	26,214	50,271	23,365	899	505	6,507	2,344
Idaho.....	42,106	30,807	34,647	27,169	758	450	6,701	3,188
Wyoming.....	15,748	10,987	13,493	9,779	377	311	1,968	897
Colorado.....	59,934	46,170	45,291	30,993	880	787	13,763	8,390
New Mexico.....	29,844	35,676	25,726	33,398	433	321	3,655	1,957
Arizona.....	9,975	9,227	7,869	8,203	305	103	1,801	861
Utah.....	25,662	21,676	22,579	19,762	296	194	2,787	1,720
Nevada.....	3,163	2,689	2,699	2,175	168	181	296	333
PACIFIC:								
Washington.....	66,288	56,192	52,701	47,595	1,168	961	12,419	7,726
Oregon.....	50,206	45,502	39,863	37,796	916	847	9,427	6,859
California.....	117,670	88,197	87,580	66,632	4,949	3,417	25,141	18,148

GEOGRAPHIC DISTRIBUTION OF TENANCY.

TABLE 16.—PER CENT DISTRIBUTION OF ALL FARMS BY TENURE, 1920 AND 1910; AND INCREASE IN NUMBER OF FARMS OPERATED BY OWNERS AND TENANTS, 1910 TO 1920.

DIVISION AND STATE.	PER CENT OF ALL FARMS OPERATED BY—						INCREASE, 1910-1920. ¹			
	Owners.		Managers.		Tenants.		Owners.		Tenants.	
	1920	1910	1920	1910	1920	1910	Number.	Per cent.	Number.	Per cent.
UNITED STATES.....	60.9	62.1	1.1	0.9	38.1	37.0	-23,632	-0.6	100,128	4.3
GEOGRAPHIC DIVISIONS:										
New England.....	89.5	89.2	3.1	2.8	7.4	8.0	-28,248	-16.8	-3,413	-22.7
Middle Atlantic.....	76.9	75.8	2.3	1.9	20.7	22.3	-27,932	-7.9	-16,081	-15.4
East North Central.....	70.7	72.0	1.2	1.0	28.1	27.0	-42,258	-5.2	810	0.3
West North Central.....	64.8	68.4	1.0	0.8	34.2	30.9	-47,790	-6.3	32,401	9.5
South Atlantic.....	52.4	53.3	0.8	0.7	46.8	45.9	13,935	2.3	31,659	6.2
East South Central.....	50.0	49.0	0.3	0.3	49.7	50.7	15,356	3.0	-6,452	-1.2
West South Central.....	46.6	46.7	0.5	0.5	52.9	52.8	23,423	5.3	29,162	5.9
Mountain.....	83.0	87.7	1.7	1.6	15.4	10.7	41,671	25.9	17,788	90.3
Pacific.....	76.9	80.0	3.0	2.8	20.1	17.2	28,211	18.6	14,254	43.5
NEW ENGLAND:										
Maine.....	94.2	94.1	1.6	1.7	4.2	4.3	-11,017	-19.5	-559	-21.8
New Hampshire.....	90.6	90.5	2.7	2.5	6.7	6.9	-5,889	-24.0	-506	-26.9
Vermont.....	86.4	85.8	2.0	1.9	11.6	12.3	-2,944	-10.5	-622	-15.5
Massachusetts.....	87.8	86.9	5.1	5.0	7.1	8.1	-3,988	-12.4	-692	-23.2
Rhode Island.....	79.5	77.2	5.0	4.7	15.5	18.0	-842	-20.6	-321	-33.6
Connecticut.....	86.8	86.6	4.7	3.5	8.5	9.8	-3,568	-15.4	-713	-27.1
MIDDLE ATLANTIC:										
New York.....	78.5	77.3	2.3	1.9	19.2	20.8	-14,957	-9.0	-7,770	-17.3
New Jersey.....	73.7	72.1	3.3	3.2	23.0	24.8	-2,244	-9.3	-1,468	-17.7
Pennsylvania.....	75.9	74.9	2.2	1.8	21.9	23.3	-10,731	-6.5	-6,843	-13.4
EAST NORTH CENTRAL:										
Ohio.....	69.3	70.6	1.2	1.0	29.5	28.4	-14,118	-7.3	-1,544	-2.0
Indiana.....	66.9	68.9	1.1	1.1	32.0	30.0	-11,291	-7.6	900	1.4
Illinois.....	55.9	57.6	1.4	0.9	42.7	41.4	-12,533	-8.6	-3,183	-3.0
Michigan.....	81.1	83.3	1.2	0.9	17.7	15.8	-12,904	-7.5	2,033	6.2
Wisconsin.....	84.3	85.3	1.3	0.8	14.4	13.9	8,588	5.7	2,604	10.6
WEST NORTH CENTRAL:										
Minnesota.....	74.4	78.2	0.9	0.8	24.7	21.0	10,640	8.7	11,327	34.5
Iowa.....	57.1	61.3	1.2	0.9	42.7	37.8	-11,115	-8.4	6,949	8.5
Missouri.....	70.4	69.4	0.9	0.7	28.8	29.9	-7,255	-3.8	-7,231	-8.7
North Dakota.....	73.3	85.0	1.1	0.7	25.6	14.3	-6,295	-10.0	9,254	86.8
South Dakota.....	64.1	74.7	1.0	0.6	34.9	24.8	-10,169	-17.5	6,810	35.4
Nebraska.....	56.0	61.1	1.1	0.8	42.9	38.1	-9,578	-12.1	3,989	8.1
Kansas.....	58.7	62.5	0.9	0.8	40.4	36.8	-14,018	-12.6	1,303	2.0
SOUTH ATLANTIC:										
Delaware.....	59.3	57.0	1.4	1.1	39.3	41.9	-168	-2.7	-549	-12.1
Maryland.....	68.5	68.5	2.6	2.0	28.9	29.5	-714	-2.1	-575	-4.0
District of Columbia.....	49.0	54.4	9.3	6.9	41.7	38.7	-18	-15.3	1	1.2
Virginia.....	73.2	72.6	1.1	0.9	25.6	26.5	2,699	2.0	-984	-2.0
West Virginia.....	82.6	78.6	1.2	0.9	16.2	20.5	-3,877	-5.1	-5,737	-28.9
North Carolina.....	56.1	57.3	0.3	0.4	43.5	42.3	6,056	4.2	10,172	9.5
South Carolina.....	35.1	36.5	0.4	0.5	64.5	63.0	3,374	5.2	13,010	11.7
Georgia.....	32.9	33.9	0.5	0.5	66.6	65.6	3,495	3.5	15,974	8.4
Florida.....	71.3	70.8	3.4	2.5	25.3	26.7	3,088	8.7	347	2.6
EAST SOUTH CENTRAL:										
Kentucky.....	66.3	65.7	0.4	0.4	33.4	33.9	8,995	5.3	2,470	2.8
Tennessee.....	58.6	58.6	0.3	0.3	41.1	41.1	3,957	2.7	2,824	2.8
Alabama.....	41.8	39.5	0.3	0.2	57.9	60.2	3,160	3.0	-10,057	-6.4
Mississippi.....	33.6	33.6	0.4	0.3	66.1	66.1	-756	-0.8	-1,689	-0.9
WEST SOUTH CENTRAL:										
Arkansas.....	48.4	49.7	0.3	0.4	51.3	50.0	5,998	5.6	11,955	11.1
Louisiana.....	42.3	44.0	0.6	0.8	57.1	55.3	4,265	8.0	10,774	16.2
Oklahoma.....	48.6	44.9	0.5	0.3	51.0	54.8	7,813	9.1	-6,301	-6.1
Texas.....	46.1	46.9	0.6	0.6	53.3	52.6	5,347	2.7	12,734	5.8
MOUNTAIN:										
Montana.....	87.2	89.1	1.6	1.9	11.3	8.9	26,906	115.2	4,163	177.6
Idaho.....	82.3	88.2	1.8	1.5	15.9	10.3	7,478	27.5	3,513	110.2
Wyoming.....	85.1	89.0	2.4	2.8	12.5	8.2	3,624	37.1	1,071	119.4
Colorado.....	75.6	80.1	1.5	1.7	23.0	18.2	8,298	22.4	5,373	64.0
New Mexico.....	86.3	93.6	1.5	0.9	12.2	5.5	-7,642	-22.9	1,698	86.8
Arizona.....	78.9	88.9	3.1	1.8	18.1	9.3	-334	-4.1	940	109.2
Utah.....	88.0	91.2	1.2	0.9	10.9	7.9	2,817	14.3	1,067	62.0
Nevada.....	85.3	80.9	5.3	6.7	9.4	12.4	524	24.1	-37	-11.1
PACIFIC:										
Washington.....	79.5	84.5	1.8	1.7	18.7	13.7	5,196	10.9	4,693	60.7
Oregon.....	79.4	83.1	1.8	1.9	18.8	15.1	2,067	5.5	2,568	37.4
California.....	74.4	75.5	4.2	3.9	21.4	20.6	20,948	31.4	6,993	38.5

¹ A minus sign (-) denotes decrease.

As indicated by these maps and by the figures in Table 15, the North Atlantic States, including the New England States, New York, New Jersey, and Pennsylvania, have relatively few tenants. Generally speaking, the topography of this section is hilly and the soil is thin as compared with the great level lowland stretches and the deep soil of the Mississippi Valley or the Prairie States.¹

Owing to the fact that it is not practicable to use machinery for large-scale operations on the stony, hilly soil in these North Atlantic States, the farms are relatively small, the average improved acreage in 1920 being 39.1 in New England and 62.5 in the Middle Atlantic States, as compared with 156.2 in the West North Central division, and with 78, the average for the United States. The dense population of these sections encourages intensive agriculture, dairying, vegetable growing, and fruit growing. On the whole, all of these circumstances tend to encourage ownership and to discourage tenancy. Fruit farming, which is quite important in the North Atlantic States, is adapted to tenancy even less than is dairying. A large proportion of the tenants in these States are engaged in the raising of vegetables. Hibbard² sums up the situation in regard to tenancy in this geographic area as follows:

The low proportion of tenancy in the North Atlantic States is the result of a combination of circumstances, the most important of these being, first, the low price of land per acre; second, a set of circumstances resulting in comparatively small farms, these two factors combining to give a low value to the farm as a unit; third, the relatively small amount of farming such as leads easily to a system of tenancy, and in its stead a type requiring ownership of the land in order to insure good results. That there are other factors involved can not be doubted, but these appear to be the decisive factors.

The East and West North Central divisions form a large section of the country, extending from the eastern boundary of Ohio to the western boundaries of Kansas, Nebraska, and the two Dakotas and comprising 12 States. Taken together these States have an area of over three-fourths of a million square miles, comprising 25.4 per cent of the land area of the United States. They had a population in 1920 of 34,019,792, or nearly one-third of the United States total. In this section were situated about one-third of all the farms of the country, valued at more than the remaining two-thirds. These farms had 46.6 per cent of the

¹ Much of the discussion of tenancy in the different regions of the United States is based on studies of tenancy by B. H. Hibbard, published originally in the *Quarterly Journal of Economics* and reprinted in T. N. Carver's *Selected Readings in Rural Economics*, p. 498, et seq.

² *Op. cit.*

cattle, 55.9 per cent of the horses, and in value 54 per cent of the agricultural implements and machinery. This section raises about two-thirds of the wheat crop of the whole country, about the same proportion of the corn crop, seven-eighths of the oats crop, and nearly six-tenths of the hay and forage crop. The great bulk of the grain foods and a large part of the dairy products come from these States. There is a great diversity in the character of the soil and other conditions in the different parts of this great district. As a consequence there is a decided difference in the type of farming. Portions of Ohio are engaged in sheep raising; Illinois is a cereal-producing State; Wisconsin is a dairy State; Iowa, a cattle and swine raising State; Minnesota and the Dakotas grow chiefly wheat, barley, and flaxseed; and Michigan is noted for fruit and sugar beets. The dissimilarities are not confined to a comparison between the States but can be found within one State, so that the conditions are not by any means uniform, even though certain broad characteristics may prevail. The proportion of tenants in these States is somewhat closely related to the value of the land per acre and also to the recent increase in the value of the land. Generally speaking, the character of the farming in these States is well adapted to tenancy. Grain production, as has been stated before, is well suited to the needs of the tenant, and of the different types of live-stock farming hog raising is the least difficult for a tenant, because the process can be completed in one year. The raising of cattle is not well adapted to tenancy, but an important branch of the industry in these corn States is to feed the cattle raised on the western plains, an operation which does not involve a long period of time or a very large investment.

In some of the northern States of this general region tenancy is relatively infrequent, partly because the land has only recently been settled. In North Dakota the proportion of tenants in 1920 was 25.6 per cent, as compared with 42.7 per cent in Illinois and 41.7 per cent in Iowa. In South Dakota, 34.9 per cent of the farms in 1920 were operated by tenants, a proportion considerably higher than that shown for North Dakota. In Minnesota, however, the percentage of tenancy was only 24.7, being slightly lower than in North Dakota, though the latter State was the more recently settled.

It may perhaps be said that in this great agricultural region tenancy in the United States has found its approximate level under present economic conditions. It is in these States that the

tenant graduates into the owner class at middle age, and it is also in these States that the general type of farming is such as to permit a considerable proportion of the farms to be operated under lease.

In the South tenancy is much more common than in the North. In 1920 the proportion of tenants in the South as a whole was 49.6 per cent, as compared with 28.2 per cent in the North and 17.7 per cent in the West. It is true that the difference is partly a matter of definition, because the croppers, who are numerous in the South and are defined as tenants, are in many respects more like farm laborers. A cropper is a tenant who works the land for his landlord without supplying any of the working capital, but he might almost as well be regarded as a laborer who accepts a share of the crop as his wages. The landlord furnishes the land, the house, the mule, the plow, the fertilizer, or part of it, and receives in return half of the crop, which is mostly cotton. Many of these croppers work on plantations under the supervision of overseers and differ but slightly from wage hands, except that their pay is a share of the crop. In some legal cases in the South it has been held that the status of these croppers is, in fact, that of laborers and not of tenants.

The census of 1920 was the first in which croppers were separately reported, and according to this census there were 561,091 croppers out of a total number of 1,591,121 tenants in the South. If these croppers are eliminated, as is done in Table 17, the number of tenants in the South is reduced to 1,030,030 and the percentage of tenancy to 38.9, which is still very much higher than the rate for the rest of the country (26.6). The elimination of the croppers affects the colored farmers and the white farmers almost exactly alike, relatively speaking. Among the white farmers the percentage of tenancy in the South, which is 38.9, including croppers, drops to 32.1 when they are excluded, while among the colored the percentage is reduced from 76.2 to 62.8 by the elimination of the croppers.

The raising of a very valuable cash crop, the presence of a large number of colored farmers, and a fertile soil are conducive to a high percentage of tenancy, such as is found in the South. In the States where the proportion of Negroes is smaller and where agriculture is not so closely related to cotton growing, the percentage of tenants is much lower. This is true of the border States—Delaware, Maryland, Virginia, and Kentucky. Florida,

which is south of the cotton belt and whose agriculture is devoted chiefly to the production of live stock, fruits, and vegetables, also shows a low percentage of tenants. If the States are arranged in descending order of percentage of tenancy (see Table 19), the first nine States are Southern States, and in all of these, except North Carolina, the percentage of tenancy is more than 50, a proportion which is not reached in any State outside the South.

TABLE 17.—NUMBER AND PERCENTAGE OF TENANTS (INCLUDING AND EXCLUDING SOUTHERN CROPPERS), BY COLOR, FOR THE UNITED STATES AND FOR THE SOUTH: 1920.

ITEM.	UNITED STATES.			THE SOUTH.		
	All farmers.	White farmers.	Colored farmers.	All farmers.	White farmers.	Colored farmers.
ALL FARMERS.....	6,448,343	5,498,454	949,889	3,206,664	2,283,750	922,914
Tenants:						
Number.....	2,454,804	1,740,363	714,441	1,591,121	887,566	703,555
Per cent of all farmers.....	38.1	31.7	75.2	49.6	38.9	76.2
FARMERS, EXCLUDING CROPPERS.....						
Number.....	5,887,252	5,271,076	616,176	2,645,573	2,056,372	589,201
Tenants, excluding croppers:						
Number.....	1,893,713	1,512,985	380,728	1,030,030	660,188	369,842
Per cent of farmers.....	32.2	28.7	61.8	38.9	32.1	62.8

In the Western States the proportion of tenancy, generally speaking, is low. In California the grain and vegetable farms are more frequently operated by tenants, while the fruit farms are generally operated by their owners. The large ranches in the Mountain States are not adapted to tenancy because they involve a long period of waiting for returns.

VI.

TENANCY AND FARM VALUES.

Even a casual examination of the statistics of tenancy and farm values brings out the fact that a high price of farm land per acre and a high percentage of tenancy are frequently associated, as in the State of Iowa, and that, conversely, areas of low-priced land are very often of infrequent tenancy, as in the case of New Hampshire or Montana. Further, it is a generally accepted theory that high-priced land and a high rate of tenancy usually or always go together. In explanation of the relationship it is stated that the high price of the land (with the consequent difficulty of purchase), on the one hand, makes tenancy necessary, while the high productive value of the land, on the other hand, makes tenancy possible, for a farm in order to be rentable must produce sufficient income to enable the tenant to pay his rent and make his own living besides. In fact, the statement has frequently been made that in order to be a tenant farm a farm must be capable of supporting two families—that of the tenant and that of the landlord. This is an overstatement, to be sure, since few landlords depend for their whole income upon the rent of a single farm; but it gives effective expression to the idea that a tenant farm must produce decidedly more than what is required for the support of the operator's family.

Two methods of statistical approach to the problem of the relation between tenancy and high land values have been found available, one which confirms the idea that the correlation above mentioned is general and fairly consistent and one which, while indicating that the correlation exists in a majority of cases, nevertheless shows that the number of cases in which high land values are coupled with low tenancy percentages, or vice versa, is large enough to constitute a substantial and by no means negligible minority.

The first is based upon a special tabulation of selected items from the 1920 farm census for the nine geographic divisions, which was designed to show the relation between tenancy and a number of other factors. The counties in each division were first arranged in descending order of percentage of tenancy—that is, of the percentage which tenants formed of all farmers. The list of counties for each division was then divided into four groups, the first group comprising the first quarter of the total number of coun-

ties—that is, the quarter having the highest percentage of tenancy; the second group, the second quarter; the third group, the third quarter; and the fourth group, the last quarter. The results of this tabulation are presented in Table 18, the figures shown representing aggregates or averages for the counties in each group, regardless of their location within the geographic division.

TABLE 18.—MISCELLANEOUS FARM DATA FOR COUNTIES GROUPED ACCORDING TO PERCENTAGE OF TENANCY, BY GEOGRAPHIC DIVISIONS, WITH FIGURES ALSO FOR IOWA AND KANSAS: 1920.

[Group 1 in each division comprises the first one-fourth of the counties in the division, arranged in descending order of percentage of tenancy; group 2 the second one-fourth; and so on. Group 1 thus contains the counties in which the percentage of farms operated by tenants is highest, and group 4, those in which this percentage is lowest.]

DIVISION (OR STATE) AND GROUP.	PER CENT OF TENANCY.		VALUE OF LAND ALONE PER ACRE.			AVERAGE VALUE PER FARM OF—		Average size of farms (acres).	Per cent of farm land improved.	PER CENT OF VALUE OF ALL FARM PROPERTY IN—	
	Maximum.	Minimum.	1920	1910	Per cent of increase.	All farm property.	Land and buildings.			Implements and machinery.	Live stock.
NEW ENGLAND:											
Group 1.....	36.7	9.4	\$28.99	\$21.07	37.6	\$8,565	\$6,576	119.4	40.6	7.4	15.8
Group 2.....	9.0	7.0	36.08	22.96	57.1	8,925	7,198	106.4	35.1	7.0	12.4
Group 3.....	6.9	4.7	28.88	20.60	40.2	7,276	5,690	99.7	33.8	7.9	13.9
Group 4.....	4.6	2.7	22.62	14.38	57.3	5,829	4,458	112.1	35.5	9.4	14.1
MID. ATLANTIC:											
Group 1.....	61.7	26.0	63.27	52.76	19.9	11,495	9,011	84.3	76.8	8.6	13.0
Group 2.....	25.4	18.8	40.53	33.43	21.2	9,373	7,085	96.2	68.8	9.4	15.0
Group 3.....	18.2	13.8	34.40	27.27	26.1	8,761	6,539	100.5	63.7	9.2	16.2
Group 4.....	13.7	4.7	28.66	25.32	13.2	7,349	5,481	100.6	52.9	9.3	16.2
E. N. CENTRAL:											
Group 1.....	70.5	39.1	179.93	102.97	74.7	29,460	26,544	128.5	86.9	3.4	6.5
Group 2.....	39.1	26.6	103.71	62.81	65.1	15,139	13,070	100.6	80.3	4.5	9.1
Group 3.....	26.6	16.5	60.23	38.37	57.0	10,502	8,656	103.0	71.1	5.8	11.8
Group 4.....	16.3	0.8	47.24	29.22	61.7	8,675	6,993	103.1	55.0	7.0	12.4
W. N. CENTRAL:											
Group 1.....	79.1	42.8	142.16	63.57	123.6	37,741	33,740	211.9	83.5	3.8	6.8
Group 2.....	42.8	35.1	91.43	46.13	98.2	28,151	24,707	236.3	74.0	4.1	8.1
Group 3.....	35.1	23.8	69.91	37.69	85.5	21,794	18,801	230.4	66.5	4.3	9.4
Group 4.....	23.8	1.9	35.95	22.32	61.1	13,645	11,293	259.8	45.2	5.1	12.1
SOUTH ATLANTIC:											
Group 1.....	87.8	62.9	49.63	18.19	172.8	4,864	4,152	66.9	57.7	4.8	9.9
Group 2.....	62.7	34.9	40.29	16.31	147.0	5,052	4,301	82.6	45.0	4.8	10.1
Group 3.....	34.8	18.3	34.95	18.01	94.1	5,361	4,503	94.7	46.0	4.8	11.2
Group 4.....	18.2	1.0	37.55	20.80	80.5	6,477	5,471	109.5	49.4	4.0	11.5
E. S. CENTRAL:											
Group 1.....	95.4	54.2	42.50	16.81	152.8	3,947	3,287	63.4	60.5	4.1	12.6
Group 2.....	53.2	40.0	36.12	16.36	120.8	4,493	3,663	79.6	54.3	4.0	12.9
Group 3.....	40.0	29.4	38.62	18.23	111.8	4,809	4,004	81.7	55.9	4.0	12.8
Group 4.....	29.3	4.0	27.54	13.13	109.7	3,718	3,011	84.7	52.7	3.9	15.1

TABLE 18.—MISCELLANEOUS FARM DATA FOR COUNTIES GROUPED ACCORDING TO PERCENTAGE OF TENANCY, BY GEOGRAPHIC DIVISIONS, WITH FIGURES ALSO FOR IOWA AND KANSAS: 1920—Continued.

[Group 1 in each division comprises the first one-fourth of the counties in the division, arranged in descending order of percentage of tenancy; group 2 the second one-fourth; and so on. Group 1 thus contains the counties in which the percentage of farms operated by tenants is highest, and group 4, those in which this percentage is lowest.]

DIVISION (OR STATE) AND GROUP.	PER CENT OF TENANCY.		VALUE OF LAND ALONG PER ACRE.			AVERAGE VALUE PER FARM OF—		Average size of farms (acres).	Per cent of farm land improved.	PER CENT OF VALUE OF ALL FARM PROPERTY IN—	
	Maximum.	Minimum.	1920	1910	Per cent of increase.	All farm property.	Land and buildings.			Implements and machinery.	Live stock.
W. S. CENTRAL:											
Group 1.....	93.0	57.4	\$57.83	\$24.59	135.2	\$7,127	\$6,123	91.8	59.1	3.7	10.4
Group 2.....	57.3	46.6	33.91	17.97	88.7	7,078	5,849	145.7	45.3	4.3	13.0
Group 3.....	46.6	34.4	28.88	15.25	89.4	8,372	6,787	201.6	38.4	4.8	14.2
Group 4.....	34.0	3.7	13.37	8.24	62.3	9,587	7,301	475.9	15.0	3.6	20.3
MOUNTAIN:											
Group 1.....	36.8	19.2	37.46	28.49	31.5	20,293	16,546	392.1	30.4	4.5	13.9
Group 2.....	19.0	12.9	24.99	20.35	22.8	16,796	13,097	464.6	26.9	4.7	17.3
Group 3.....	12.9	7.7	19.87	14.85	33.8	15,074	11,285	500.9	26.2	4.8	20.3
Group 4.....	7.7	1.6	13.29	11.02	20.6	13,065	9,196	611.4	19.5	4.8	24.8
PACIFIC:											
Group 1.....	63.3	23.4	89.10	50.41	76.8	29,500	26,291	267.4	55.1	4.1	6.7
Group 2.....	23.3	16.3	63.19	38.96	62.2	19,742	17,190	237.5	40.9	4.8	8.1
Group 3.....	16.3	13.1	73.78	41.07	79.6	21,239	18,566	225.1	35.7	4.4	8.1
Group 4.....	13.0	5.4	59.75	39.99	49.4	16,805	14,638	215.0	27.9	4.2	8.7
IOWA:											
Group 1.....	62.7	49.9	235.18	83.39	182.02	52,328	47,220	179.9	89.5	3.5	6.3
Group 2.....	49.7	42.5	228.21	95.00	140.22	44,181	39,744	154.5	88.5	3.5	6.6
Group 3.....	42.3	35.5	185.07	82.98	123.03	36,048	31,890	149.4	85.2	3.6	7.9
Group 4.....	35.3	20.6	140.46	66.91	109.92	27,742	24,101	145.3	77.7	4.1	9.0
KANSAS:											
Group 1.....	53.0	43.6	69.54	45.56	52.6	23,489	20,410	260.4	78.4	4.8	8.3
Group 2.....	43.4	39.7	50.38	32.33	55.8	18,825	15,983	277.2	64.1	4.6	10.5
Group 3.....	39.4	34.4	53.66	33.73	59.1	18,232	15,563	250.3	69.2	4.7	10.0
Group 4.....	34.3	18.2	40.23	26.44	72.7	18,235	15,444	332.2	54.4	4.6	10.7

An inspection of this table shows that, with one exception, the value of the land in 1920 was highest (in each division) in the county group having the highest percentage of tenancy. The one exception appears in New England, where the average value of the land per acre in group 1 was lower than the value in group 2. It should be noted, however, that tenants comprise only a small proportion of the farm operators in New England in any case.

And with only a few other unimportant exceptions the average values show a decrease from group to group for all of the nine divisions. Figures worked out in the same way for the counties of Iowa and Kansas, taken separately, show similar relations.

In some cases the correspondence between the tenancy percentage and the value of the land per acre is very close and striking. In the East North Central division, for example, in the first group of counties, comprising those with a percentage of tenancy above 39.1 in 1920, the average value of farm land was \$179.93 per acre; in the second group, with tenancy from 26.6 to 39.1 per cent, the value was \$103.71; in the third group, with tenancy from 16.5 to 26.6 per cent, the average value was \$60.23; and in the fourth group, with tenancy ranging from 0.8 to 16.5 per cent, the average value of the land per acre was only \$47.24. In the West North Central division the averages for the four groups were, respectively, \$142.16, \$91.43, \$69.91, and \$35.95, showing again a rapid and consistent decline, following the decline in the percentage of tenancy from group to group.

Taking the State of Iowa alone, while the difference between the values in the first and second groups was not as great as in the two divisions just noted, the 1920 figures show a very satisfactory trend, as follows: Group 1, \$235.18; group 2, \$228.21; group 3, \$185.07; and group 4, \$140.46. In Kansas, a State in which there is a very wide range in agricultural conditions, while the values do not show quite the same regular progression, the average for the first group was \$69.54, as compared with \$40.23 for the fourth group.

The results of the tabulation just presented are in the form of averages, and, like all averages, they tend to smooth over the variations of the individual items within the group. A further study of the same statistical data, following a method which puts more emphasis upon the correlation of the individual units concerned, indicates that while tenancy generally stands in close relation with high land values, the exceptions to this relation are rather numerous. In Table 19 the 32 States of the North and West and the 16 States of the South are arranged separately in descending order of percentage of tenancy, and the four columns show, respectively, the percentage of tenancy, its deviation, plus or minus, from the average for the total area, the value of farm land per acre, and its deviation from the average.

TABLE 19.—PERCENTAGE OF FARMS OPERATED BY TENANTS, AND AVERAGE VALUE OF LAND PER ACRE, WITH DEVIATIONS FROM AVERAGE, BY STATES, FOR THE NORTH AND WEST, AND THE SOUTH: 1920.

SECTION AND STATE.	PROPORTION OF ALL FARMS OPERATED BY TENANTS.		AVERAGE VALUE OF LAND PER ACRE.		SECTION AND STATE.	PROPORTION OF ALL FARMS OPERATED BY TENANTS.		AVERAGE VALUE OF LAND PER ACRE.	
	Per cent.	Deviation from average.	Amount.	Deviation from average.		Per cent.	Deviation from average.	Amount.	Deviation from average.
THE NORTH AND WEST	26.6	.....	\$70.17	.....	THE NORTH AND WEST—Con.				
Nebraska.....	42.9	+ 16.3	78.87	+ \$8.70	Utah.....	10.9	- 15.7	\$41.78	-\$28.39
Illinois.....	42.7	+ 16.1	164.20	+ 94.03	Nevada.....	9.4	- 17.2	25.18	- 44.99
Iowa.....	41.7	+ 15.1	199.52	+ 129.35	Connecticut.....	8.5	- 18.1	53.28	- 16.89
Kansas.....	40.4	+ 13.8	54.50	- 15.67	Massachusetts.....	7.1	- 19.5	51.17	- 19.00
South Dakota.....	34.9	+ 8.3	64.42	- 5.75	New Hampshire.....	6.7	- 19.9	18.21	- 51.96
Indiana.....	32.0	+ 5.4	104.57	+ 34.40	Maine.....	4.2	- 22.4	21.09	- 49.08
Ohio.....	29.5	+ 2.9	85.69	+ 15.52	THE SOUTH	49.6	.....	35.20	.....
Missouri.....	28.8	+ 2.2	74.60	+ 4.43	Georgia.....	66.6	+ 17.0	35.28	+ 0.08
North Dakota.....	25.6	- 1.0	35.33	- 34.84	Mississippi.....	66.1	+ 16.5	35.27	+ 0.07
Minnesota.....	24.7	- 1.9	91.00	+ 20.83	South Carolina.....	64.5	+ 14.9	52.08	+ 16.88
New Jersey.....	23.0	- 3.6	62.29	- 7.88	Alabama.....	57.9	+ 8.3	21.24	- 13.96
Colorado.....	23.0	- 3.6	31.22	- 38.95	Louisiana.....	57.1	+ 7.5	38.29	+ 3.09
Pennsylvania.....	21.9	- 4.7	41.12	- 29.05	Texas.....	53.3	+ 3.7	28.46	- 6.74
California.....	21.4	- 5.2	94.77	+ 24.60	Arkansas.....	51.3	+ 1.7	34.82	- 0.38
New York.....	19.2	- 7.4	38.45	- 31.72	Oklahoma.....	51.0	+ 1.4	36.66	+ 1.46
Oregon.....	18.8	- 7.8	43.29	- 26.88	North Carolina.....	43.5	- 6.1	42.84	+ 7.64
Washington.....	18.7	- 7.9	60.22	- 9.95	Tennessee.....	41.1	- 8.5	41.40	+ 6.20
Arizona.....	18.1	- 8.5	26.93	- 43.19	Delaware.....	39.3	- 10.3	44.59	+ 9.39
Michigan.....	17.7	- 8.9	50.40	- 19.77	Kentucky.....	33.4	- 16.2	48.62	+ 13.42
Idaho.....	15.9	- 10.7	61.11	- 9.06	Maryland.....	28.9	- 20.7	54.62	+ 19.42
Rhode Island.....	15.5	- 11.1	43.75	- 26.42	Virginia.....	25.6	- 24.0	40.75	+ 5.55
Wisconsin.....	14.4	- 12.2	73.09	+ 2.92	Florida.....	25.3	- 24.3	37.78	+ 2.58
Wyoming.....	12.5	- 14.1	17.86	- 52.31	West Virginia.....	16.2	- 33.4	32.11	- 3.09
New Mexico.....	12.2	- 14.4	8.04	- 62.13					
Vermont.....	11.6	- 15.0	19.58	- 50.59					
Montana.....	11.3	- 15.3	19.73	- 50.44					

The first significant feature of a table of this kind, considered as a general indication of the correlation between the two items represented, is the correspondence of the deviations in the two columns, first, as to agreement of signs—a plus against a plus or a minus against a minus—and, second, as to approximate agreement in relative magnitude of deviations—a large plus deviation in one column against a large plus deviation in the other.

In this table there are 27 agreements in signs and 5 disagreements for the 32 States in the North and West; that is, in 27 States both percentage of tenancy and price of farm land per acre are either above or below the average, while in only 5 States is one item above and the other below. There is, therefore, a fairly close correlation between tenancy and high land values in these sections, which comprise the whole of the United States, exclusive of the Southern States. Among the 16 Southern States themselves, however, there are 10 disagreements as against 6 agreements. That is, in almost two-thirds of the Southern States, the percentage of tenancy is on one side of the average for the whole South and the average value of farm land per acre is on the other side. For the South, then, this arrangement of the data does not show a very close relation between tenancy and high land values. But the tenancy of the South differs in other respects also from that of the North, mainly because of the effects of the breaking up of the old plantation system and because of the large number of permanent tenants among the Negroes. Hence we may assume that in this area the working out of the normal relation between tenancy and land values has so far been overshadowed and "swamped" by these other factors.

Another tabulation of tenancy percentages and land values, with their deviations from the average, is presented in Table 20, which gives the data for the States of Iowa and Kansas, by counties. These States were chosen as typical of those Northern States where there is considerable tenancy, the first being a State with fairly uniform conditions throughout its area and the second a State presenting considerable variations in agricultural conditions. This table indicates the correlation between tenancy and high land values within a small area, just as Table 19 does for the larger areas.

TABLE 20.—PERCENTAGE OF FARMS OPERATED BY TENANTS AND AVERAGE VALUE OF LAND PER ACRE, WITH DEVIATIONS FROM AVERAGE, BY COUNTIES, FOR IOWA AND KANSAS: 1920.

STATE AND COUNTY.	PROPORTION OF ALL FARMS OPERATED BY TENANTS.		AVERAGE VALUE OF LAND PER ACRE.		STATE AND COUNTY.	PROPORTION OF ALL FARMS OPERATED BY TENANTS.		AVERAGE VALUE OF LAND PER ACRE.	
	Per cent.	Deviation from average.	Amount.	Deviation from average.		Per cent.	Deviation from average.	Amount.	Deviation from average.
Iowa.....	41.7	.....	\$199.52	.....	IOWA—CON.				
Lyon.....	62.7	+ 21.0	279.30	+ \$79.78	Dallas.....	46.1	+ 4.4	\$234.63	+ \$35.11
Osceola.....	62.4	+ 20.7	233.40	+ 33.88	Adair.....	46.0	+ 4.3	187.59	- 11.93
Dickinson.....	58.7	+ 17.0	193.42	- 6.20	Boone.....	45.9	+ 4.2	245.96	+ 46.44
Cherokee.....	58.2	+ 16.5	273.53	+ 74.01	Pottawattamie..	45.8	+ 4.1	224.67	+ 25.15
Grundy.....	58.0	+ 16.3	247.71	+ 48.19	Crawford.....	45.3	+ 3.6	228.20	+ 28.58
Stoux.....	57.6	+ 15.9	309.82	+ 110.30	Black Hawk... ..	45.3	+ 3.6	209.00	+ 9.48
Plymouth.....	57.1	+ 15.4	237.56	+ 38.04	Scott.....	44.7	+ 3.0	203.47	+ 3.95
O'Brien.....	56.6	+ 14.9	285.35	+ 85.83	Shelby.....	44.4	+ 2.7	279.61	+ 80.09
Calhoun.....	56.2	+ 14.5	285.08	+ 85.56	Fremont.....	44.1	+ 2.4	208.35	+ 8.83
Ida.....	56.1	+ 14.4	270.53	+ 71.01	Buchanan.....	43.1	+ 1.4	157.93	- 41.58
Palo Alto.....	54.3	+ 12.6	203.96	+ 4.44	Tama.....	43.0	+ 1.3	222.03	+ 22.51
Greene.....	54.0	+ 12.3	271.46	+ 71.94	Montgomery... ..	42.8	+ 1.1	231.68	+ 32.16
Franklin.....	53.5	+ 11.8	203.49	+ 3.97	Guthrie.....	42.7	+ 1.0	195.08	- 4.44
Wright.....	53.3	+ 11.6	220.06	+ 20.54	Polk.....	42.6	+ 0.9	251.80	+ 52.28
Emmet.....	53.1	+ 11.4	200.00	+ 0.48	Harrison.....	42.5	+ 0.8	185.32	- 14.20
Sac.....	52.9	+ 11.2	303.59	+ 104.07	Winnnebago.....	42.3	+ 0.6	166.88	- 32.64
Kossuth.....	51.5	+ 9.8	202.92	+ 3.40	Cass.....	42.2	+ 0.5	236.25	+ 36.73
Clay.....	51.5	+ 9.8	218.45	+ 18.93	Worth.....	42.0	+ 0.3	152.28	- 47.24
Butler.....	51.3	+ 9.6	174.19	- 25.33	Poweshiek.....	41.2	- 0.5	244.23	+ 44.71
Buena Vista... ..	51.3	+ 9.6	277.76	+ 78.24	Cedar.....	41.1	- 0.6	231.04	+ 31.52
Hancock.....	51.2	+ 9.5	190.46	- 9.06	Muscatine.....	40.7	- 1.0	205.55	+ 6.03
Cerro Gordo.....	51.2	+ 9.5	187.47	- 12.05	Delaware.....	40.1	- 1.6	154.16	- 45.36
Monona.....	50.8	+ 9.1	165.45	- 34.07	Union.....	40.1	- 1.6	148.49	- 51.03
Woodbury.....	50.0	+ 8.3	205.87	+ 6.35	Jasper.....	40.0	- 1.7	224.37	+ 24.85
Hardin.....	49.9	+ 8.2	224.97	+ 25.45	Audubon.....	39.3	- 2.4	230.31	+ 30.79
Story.....	49.7	+ 8.0	279.63	+ 80.11	Clarke.....	39.0	- 2.7	140.21	- 59.31
Pocahontas.....	49.6	+ 7.9	257.22	+ 57.70	Clinton.....	39.0	- 2.7	170.40	- 29.12
Carroll.....	49.1	+ 7.4	263.23	+ 63.71	Howard.....	37.9	- 3.8	115.46	- 84.06
Webster.....	47.9	+ 6.2	247.67	+ 48.15	Adams.....	37.9	- 3.8	168.29	- 31.23
Floyd.....	46.8	+ 5.1	169.91	- 29.61	Marion.....	37.8	- 3.9	172.45	- 27.07
Hamilton.....	46.6	+ 4.9	252.74	+ 53.22	Page.....	37.2	- 4.5	237.69	+ 38.17
Humboldt.....	46.5	+ 4.8	256.28	+ 56.76	Mahaska.....	37.1	- 4.6	215.70	+ 16.18
Mills.....	46.4	+ 4.7	232.71	+ 33.19	Fayette.....	36.9	- 4.8	140.92	- 58.60
Benton.....	46.3	+ 4.6	235.86	+ 36.34	Louisa.....	36.3	- 5.4	181.97	- 17.55
Marshall.....	46.1	+ 4.4	243.75	+ 44.23	Linn.....	36.2	- 5.5	193.32	- 6.20

TABLE 20.—PERCENTAGE OF FARMS OPERATED BY TENANTS AND AVERAGE VALUE OF LAND PER ACRE, WITH DEVIATIONS FROM AVERAGE, BY COUNTIES, FOR IOWA AND KANSAS: 1920—Continued.

STATE AND COUNTY.	PROPORTION OF ALL FARMS OPERATED BY TENANTS.		AVERAGE VALUE OF LAND PER ACRE.		STATE AND COUNTY.	PROPORTION OF ALL FARMS OPERATED BY TENANTS.		AVERAGE VALUE OF LAND PER ACRE.	
	Per cent.	Deviation from average.	Amount.	Deviation from average.		Per cent.	Deviation from average.	Amount.	Deviation from average.
IOWA—Con.					KANSAS—Con.				
Iowa.....	36.1	- 5.6	\$193.15	- \$6.37	Kiowa.....	49.2	+ 8.8	\$42.37	- \$12.13
Chickasaw.....	35.9	- 5.8	134.49	- 65.03	Pratt.....	49.0	+ 8.6	66.38	+ 11.88
Taylor.....	35.8	- 5.9	132.11	- 17.41	Sedgwick.....	48.9	+ 8.5	98.21	+ 43.71
Mitchell.....	35.6	- 6.1	155.55	- 43.97	Barton.....	48.7	+ 8.3	68.44	+ 13.94
Madison.....	35.5	- 6.2	178.76	- 20.76	Ford.....	48.7	+ 8.3	40.70	- 13.80
Warren.....	35.3	- 6.4	167.68	- 31.84	Stafford.....	48.2	+ 7.8	71.13	+ 16.63
Wapello.....	35.2	- 6.5	167.27	- 32.25	Ottawa.....	48.1	+ 7.7	63.19	+ 8.69
Jones.....	34.6	- 7.1	166.81	- 32.71	Mitchell.....	47.6	+ 7.2	62.20	+ 7.70
Wayne.....	34.1	- 7.6	142.38	- 57.14	Cloud.....	47.4	+ 7.0	69.53	+ 15.03
Bremer.....	34.0	- 7.7	133.49	- 66.03	McPherson.....	47.0	+ 6.6	97.60	+ 43.10
Henry.....	33.5	- 8.2	194.22	- 5.30	Cherokee.....	46.9	+ 6.5	61.34	+ 6.84
Washington.....	33.3	- 8.4	221.65	+ 22.13	Rice.....	46.9	+ 6.5	80.17	+ 25.67
Decatur.....	32.2	- 9.5	124.45	- 75.07	Clay.....	45.5	+ 5.1	74.91	+ 20.41
Ringgold.....	31.9	- 9.8	129.27	- 70.25	Rush.....	45.3	+ 4.9	45.03	- 9.47
Keokuk.....	31.7	- 10.0	194.70	- 4.82	Barber.....	45.2	+ 4.8	33.19	- 21.31
Lucas.....	31.2	- 10.5	125.95	- 73.57	Brown.....	44.7	+ 4.3	179.52	+ 125.02
Jefferson.....	30.4	- 11.3	162.87	- 36.65	Marshall.....	44.4	+ 4.0	98.98	+ 44.48
Lee.....	29.5	- 12.2	118.79	- 80.73	Kingman.....	44.2	+ 3.8	54.46	- 0.04
Johnson.....	29.3	- 12.4	193.16	- 6.36	Republic.....	44.2	+ 3.8	82.67	+ 28.17
Des Moines.....	28.9	- 12.8	170.89	- 28.63	Haskell.....	44.1	+ 3.7	18.46	- 36.04
Monroe.....	28.5	- 13.2	100.81	- 98.71	Edwards.....	43.9	+ 3.5	51.15	- 3.35
Clayton.....	28.1	- 13.6	116.62	- 82.90	Reno.....	43.6	+ 3.2	79.96	+ 25.46
Van Buren.....	26.3	- 15.4	115.64	- 83.88	Marion.....	43.4	+ 3.0	83.26	+ 28.76
Jackson.....	26.0	- 15.7	111.29	- 88.23	Comanche.....	43.2	+ 2.8	34.02	- 20.48
Winneshiek.....	24.8	- 16.9	115.34	- 84.18	Clark.....	43.1	+ 2.7	25.73	- 28.77
Davis.....	24.3	- 17.4	103.64	- 95.88	Gray.....	43.0	+ 2.6	24.85	- 29.65
Appanoose.....	23.8	- 17.9	107.75	- 91.77	Wilson.....	42.7	+ 2.3	51.91	- 2.59
Dubuque.....	21.9	- 19.8	121.89	- 77.63	Allen.....	42.5	+ 2.1	59.58	+ 5.08
Allamakee.....	20.6	- 21.1	87.29	- 112.23	Scott.....	42.3	+ 1.9	19.04	- 35.46
KANSAS.....	40.4	.....	54.50	.....	Woodson.....	41.9	+ 1.5	47.46	- 7.04
Sumner.....	53.0	+ 12.6	75.65	+ 21.15	Saline.....	41.7	+ 1.3	88.23	+ 33.73
Pawnee.....	51.4	+ 11.0	61.26	+ 6.76	Washington.....	41.6	+ 1.2	72.50	+ 18.00
Harvey.....	50.4	+ 10.0	89.48	+ 34.98	Chautauqua.....	41.6	+ 1.2	31.34	- 23.16
Butler.....	49.4	+ 9.0	51.58	- 2.92	Ellsworth.....	41.4	+ 1.0	54.93	+ 0.43
Harper.....	49.2	+ 8.8	59.19	+ 4.69	Sheridan.....	41.3	+ 0.9	26.34	- 28.16

TABLE 20.—PERCENTAGE OF FARMS OPERATED BY TENANTS AND AVERAGE VALUE OF LAND PER ACRE, WITH DEVIATIONS FROM AVERAGE, BY COUNTIES, FOR IOWA AND KANSAS: 1920—Continued.

STATE AND COUNTY.	PROPORTION OF ALL FARMS OPERATED BY TENANTS.		AVERAGE VALUE OF LAND PER ACRE.		STATE AND COUNTY.	PROPORTION OF ALL FARMS OPERATED BY TENANTS.		AVERAGE VALUE OF LAND PER ACRE.	
	Per cent.	Deviation from average.	Amount.	Deviation from average.		Per cent.	Deviation from average.	Amount.	Deviation from average.
KANSAS—Con.					KANSAS—Con.				
Cowley.....	41.3	+ 0.9	\$61.09	+ \$6.39	Trego.....	35.9	- 4.5	\$26.45	-\$28.05
Neosho.....	41.2	+ 0.8	56.11	+ 1.61	Hodgeman.....	35.9	- 4.5	25.06	- 29.44
Jewell.....	41.2	+ 0.8	62.32	+ 7.82	Atchison.....	35.9	- 4.5	122.77	+ 68.27
Greenwood.....	40.8	+ 0.4	45.76	- 8.74	Douglas.....	34.4	- 6.0	91.82	+ 37.32
Crawford.....	40.8	+ 0.4	57.92	+ 3.42	Wyandotte.....	34.3	- 6.1	178.86	+ 124.36
Chase.....	40.7	+ 0.3	59.82	+ 5.32	Linn.....	34.2	- 6.2	54.25	- 0.25
Smith.....	40.6	+ 0.2	58.53	+ 4.03	Finney.....	34.0	- 6.4	19.60	- 34.90
Nemaha.....	40.5	+ 0.1	114.42	+ 59.92	Pottawatomie.....	33.8	- 6.6	64.31	+ 9.81
Russell.....	40.4	- 0.0	41.76	- 12.74	Riley.....	33.7	- 6.7	67.24	+ 12.74
Osborne.....	40.4	+ 0.0	44.04	- 10.46	Geary.....	33.2	- 7.2	59.85	+ 5.35
Graham.....	40.3	- 0.1	25.17	- 29.33	Meade.....	32.9	- 7.5	23.36	- 31.14
Norton.....	40.0	- 0.4	34.67	- 19.83	Franklin.....	32.9	- 7.5	72.66	+ 18.16
Rooks.....	39.7	- 0.7	38.37	- 16.13	Ness.....	32.7	- 7.7	27.60	- 26.90
Seward.....	39.4	- 1.0	21.35	- 33.15	Gove.....	32.5	- 7.9	18.88	- 35.62
Elk.....	39.1	- 1.3	39.54	- 14.96	Shawnee.....	32.3	- 8.1	102.65	+ 48.15
Coffey.....	39.1	- 1.3	58.67	+ 4.17	Leavenworth.....	32.2	- 8.2	89.23	+ 34.73
Thomas.....	38.8	- 1.6	26.84	- 27.66	Osage.....	30.4	- 10.0	61.83	+ 7.33
Morris.....	38.8	- 1.6	67.33	+ 12.83	Rawlins.....	29.8	- 10.6	28.58	- 25.92
Phillips.....	38.6	- 1.8	41.80	- 12.70	Sherman.....	29.6	- 10.8	24.40	- 30.10
Doniphan.....	38.6	- 1.8	140.88	+ 86.38	Jefferson.....	28.8	- 11.6	92.21	+ 37.71
Dickinson.....	38.5	- 1.9	96.63	+ 42.13	Kearny.....	28.7	- 11.7	18.55	- 35.95
Labette.....	38.4	- 2.0	55.33	+ 0.83	Hamilton.....	28.2	- 12.2	11.97	- 42.53
Stevens.....	38.3	- 2.1	25.85	- 28.65	Ellis.....	27.6	- 12.8	36.88	- 17.62
Montgomery.....	38.2	- 2.2	52.13	- 2.37	Wichita.....	27.2	- 13.2	14.18	- 40.32
Anderson.....	38.0	- 2.4	57.01	+ 2.51	Cheyenne.....	26.7	- 13.7	33.24	- 21.26
Lincoln.....	37.9	- 2.5	54.47	- 0.03	Wallace.....	25.5	- 14.9	16.17	- 38.33
Lane.....	37.8	- 2.6	20.84	- 33.66	Morton.....	20.7	- 19.7	16.80	- 37.70
Bourbon.....	37.5	- 2.9	58.67	+ 4.17	Grant.....	20.6	- 19.8	16.00	- 38.50
Jackson.....	36.9	- 3.5	84.73	+ 30.23	Greeley.....	20.3	- 20.1	13.93	- 40.57
Wabaunsee.....	36.5	- 3.9	54.63	+ 0.13	Stanton.....	18.2	- 22.2	17.39	- 37.11
Johnson.....	36.4	- 4.0	130.97	+ 76.47					
Lyon.....	36.2	- 4.2	68.40	+ 13.90					
Miami.....	36.0	- 4.4	75.07	+ 20.57					
Logan.....	35.9	- 4.5	14.08	- 40.42					
Decatur.....	35.9	- 4.5	29.66	- 24.84					

Of the 99 counties in Iowa 79 show both percentage of tenancy and value of farm land per acre either above or below the average for the State, while 20 counties show one of these items above and one below. In this State, therefore, where agricultural conditions are relatively uniform, the comparison of the individual county figures shows a considerable degree of correlation. In Kansas, however, where there is a great variation in agricultural conditions, the correlation is not so close. Out of the 105 counties in this State only 64 show both percentage of tenancy and value of farm land on the same side of the State average, while 41 counties show a plus variation for one item and a minus variation for the other. And in a number of cases the disagreement is considerable; that is, a very high percentage of tenancy is found in connection with a very low land value, or vice versa. We may conclude, then, that the correlation is fairly close within limited areas where general conditions are relatively uniform, but that for larger areas, and especially for areas where conditions vary in many important respects, the correlation is less evident.

The price or value of farm land per acre is based, in large part at least, on the productivity of the land. Some interest attaches, therefore, to a tabulation which was made for a number of individual States on the basis of the 1910 census figures, in which the average value of farm products per acre was compared with the percentage of tenancy. The counties were arranged in descending order of average value per acre and divided into four groups from the top, somewhat as in Table 18. The results of this tabulation are presented in Table 21, which shows that for the four States included (Illinois, Ohio, Pennsylvania, and South Carolina) the percentage of tenancy diminished directly with the average value of farm products per acre.

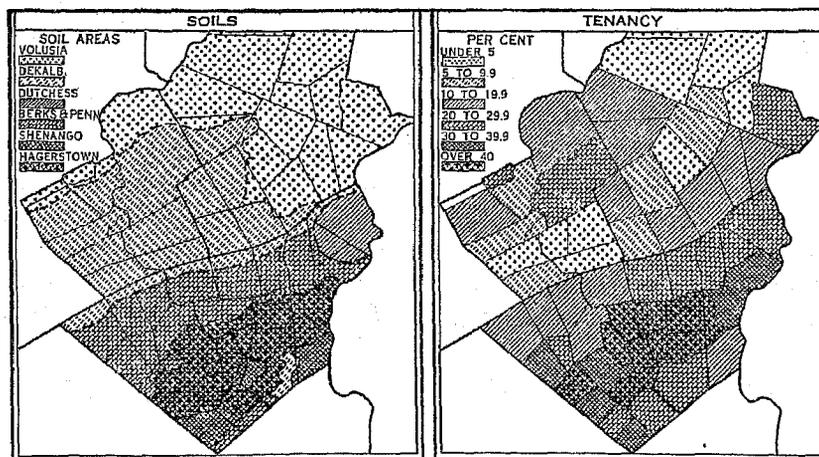
In Illinois, the percentage of tenancy in group 1, with products valued at \$12.55 per acre, was 50.1; in group 2, with products valued at \$9.98 per acre, 45.5 per cent of the farms were operated by tenants; in group 3, with products valued at \$8.03 per acre, the tenancy percentage was 38.9; and in group 4, with products valued at \$5.77 per acre, the tenancy percentage was only 29.6. In Ohio, the tenancy percentages for the four groups were, respectively, 34.5, 33.3, 26.8, and 18; in Pennsylvania, 31.9, 22.7, 18, and 14.4; and in South Carolina, 69.3, 67.4, 66.1, and 43.1.

TABLE 21.—VALUE OF FARM PRODUCTS PER ACRE AND PERCENTAGE OF TENANCY, FOR COUNTIES IN FOUR STATES, GROUPED ACCORDING TO VALUE OF PRODUCTS PER ACRE: 1910.

STATE AND GROUP.	Average value of farm products per acre.	Per cent of all farms operated by tenants.	STATE AND GROUP.	Average value of farm products per acre.	Per cent of all farms operated by tenants.
ILLINOIS:			PENNSYLVANIA:		
Group 1.....	\$12.55	50.1	Group 1.....	\$14.71	31.9
Group 2.....	9.98	45.5	Group 2.....	8.17	22.7
Group 3.....	8.03	38.9	Group 3.....	6.29	18.0
Group 4.....	5.77	29.6	Group 4.....	4.79	14.4
OHIO:			SOUTH CAROLINA:		
Group 1.....	12.83	34.5	Group 1.....	13.18	69.3
Group 2.....	10.39	33.3	Group 2.....	10.14	67.4
Group 3.....	8.51	26.8	Group 3.....	8.05	66.1
Group 4.....	5.47	18.0	Group 4.....	5.58	43.1

The relationship existing between the quality of agricultural land and the percentage of tenancy is illustrated by the maps below, which show for four counties in Pennsylvania the general character of the soil and the percentage of tenancy in 1910. The soils are arranged in ascending order of quality from Volusia, which is represented by dots, to Hagerstown, which is represented by heavy, black squares. A comparison of the soil map with the tenancy map shows in general a correspondence between the lighter and the darker areas, the lighter areas representing poorer

FIG. 8.—RELATION BETWEEN QUALITY OF SOIL AND PERCENTAGE OF TENANCY: MONROE, NORTHAMPTON, LEHIGH, AND CARBON COUNTIES, PA.



soils and small percentages of tenancy, while the darker represent better soils and larger percentages of tenancy. This supports the view that tenants are likely to lease farms situated on better land, while the farms on poorer soil are more likely to be operated by their owners.

RELATION BETWEEN RENT PAID AND VALUE OF FARMS RENTED.

While the primary object of this study of the relation between tenancy and land values has been to discover to what extent high land values might be considered in any sense a cause for a high percentage of tenancy among farm operators, the possibility that tenancy might be one of the causes of high prices for land should not be overlooked. As an indication of the returns to landlords from the rental of tenant farms, there is available an interesting tabulation made by the Department of Agriculture on the basis of the 1920 census figures, which shows the percentage return on capital invested in farms rented for cash in a number of States. This tabulation covered 567 counties, located for the most part in those States where cash tenancy is important, and including 32.9 per cent of all cash-tenant farms in the country. It was therefore sufficiently extensive to be accepted as representative. The results of this tabulation¹ are presented in Table 22.

These representative figures show that the average return on the farm valuation, where the farm was rented for cash, was 3.54 per cent. The lowest rates are shown for South Dakota (2.52), Nebraska (2.59), Minnesota (2.86), Iowa (2.88), and Illinois (2.97). In these important agricultural States rents are so low that to buy a farm is almost a business blunder, as well as a difficult undertaking; for where the purchase price represents a capitalization at so low a rate, the purchaser can have little hope of deriving a reasonable profit on his investment if he buys the farm.

Throughout the North and West, and especially in the corn belt, a considerable proportion of the tenants—perhaps as high as 40 per cent in some States—are relatives (most frequently sons or sons-in-law) of the landlord, and for this reason may rent the farm on especially favorable terms. Hence the very low rates for some of the Northern States can not be taken to represent

¹ See Hearings before the Subcommittee of the House Committee on Appropriations, in charge of the agricultural appropriation bill for 1923, 67th Congress, second session, p. 592. The figures are further discussed in Department of Agriculture Bulletin 1224, *Relation of Land Income to Land Value*, by C. R. Chambers.

exactly the amount of return on rented land under competitive conditions.

The highest rates of return are shown for the Southern States, where land values are relatively low and where cotton farmers pay high rents. In 1920 cotton prices were high and were no doubt reflected in the rents, while the translation of these prices into land values would be a slower process, even if the high prices were maintained.

TABLE 22.—PERCENTAGE WHICH CASH RENT FORMED OF VALUE OF RENTED FARMS (LAND AND BUILDINGS) IN SELECTED COUNTIES, BY STATES: 1920.

[Column 1 shows the number of counties covered by the investigation and column 2 the percentage which the cash-tenant farms in these counties represented of all cash-tenant farms in the area.]

STATE.	Num-ber of coun-ties in-cluded.	Percent-age of all cash-tenant farms in-cluded.	Percent-age cash rent was of farm valua-tion.	STATE.	Num-ber of coun-ties in-cluded.	Percent-age of all cash-tenant farms in-cluded.	Percent-age cash rent was of farm valua-tion.
UNITED STATES...	567	32.9	3.54	Virginia.....	2	1.2	4.56
Vermont.....	5	40.1	4.92	North Carolina.....	7	13.5	6.03
Massachusetts.....	6	38.9	4.22	South Carolina.....	4	6.3	7.63
New York.....	13	26.7	4.91	Georgia.....	32	26.0	6.94
Pennsylvania.....	9	10.3	3.68	Kentucky.....	12	9.2	4.47
Ohio.....	34	46.3	3.66	Tennessee.....	7	16.4	6.91
Indiana.....	18	25.0	3.88	Alabama.....	19	49.8	5.80
Illinois.....	42	43.6	2.97	Mississippi.....	18	48.9	10.04
Michigan.....	10	22.4	3.93	Arkansas.....	15	50.6	10.66
Wisconsin.....	8	18.9	3.63	Louisiana.....	11	11.0	7.02
Minnesota.....	43	58.6	2.86	Oklahoma.....	25	40.0	4.81
Iowa.....	44	50.1	2.88	Texas.....	35	20.4	4.82
Missouri.....	25	23.2	3.38	Idaho.....	17	50.9	6.33
North Dakota.....	6	15.2	3.14	Colorado.....	15	35.3	5.31
South Dakota.....	9	37.7	2.52	Arizona.....	1	43.6	8.37
Nebraska.....	23	41.9	2.59	Washington.....	5	25.0	4.01
Kansas.....	21	33.4	3.36	Oregon.....	11	48.4	3.37
				California.....	15	36.9	4.46

VII.

TENANCY AND THE SPECULATIVE ELEMENT IN LAND OWNERSHIP.

There is usually a close relation between the rise in the value of farm land and the percentage of tenancy. Wherever land increases rapidly in value the owners are inclined to hold their land in order to realize the profit; and since they depend for part of their returns on the rise in value they can afford to rent their land at a comparatively low rate. In their eagerness to make the land pay something while they hold it for a higher price the owners underbid each other in the matter of rent, but they will not sell. Thus, it becomes difficult for the tenant to buy, since the purchase price is high, and at the same time it becomes profitable for him to keep on renting, since the rent is low.

The data in Table 18 show a general correspondence between the percentage of tenancy and the increase in the value of land per acre. Take, for instance, the East North Central and the West North Central divisions, which together comprise the corn belt. For the West North Central division, in the group showing the highest percentage of tenancy, the average value of land per acre rose 123.6 per cent during the decade; in the second group, 98.2 per cent; in the third group, 85.5 per cent; and in the fourth group, 61.1 per cent. In the East North Central division the correspondence is nearly as close, the percentages being, respectively, 74.7, 65.1, 57, and 61.7. The difference is just as pronounced in the Southern States but not so clear in the Mountain States or in the Pacific States, where local conditions, such as irrigation, the opening up of new land, mostly of poor quality, etc., constitute disturbing factors.

Where the value of farm land is high, a longer time is required for the tenant to accumulate the capital necessary for making the first payment on a farm. Further, where the value of land is increasing, there is a tendency to capitalize the annual rate of increase in establishing the price at which the land is held. Where this condition exists, it becomes exceedingly difficult for the man who buys a farm on deferred payments to succeed. He must not only make the farm produce a living for himself and family, but he must make it pay interest on a purchase price based partly on rental

value and partly on an expected annual increase in valuation, in addition to saving enough to pay off at least a part of his mortgage.

This matter may be illustrated by the results of a survey made in 1914 by the Office of Farm Management of the United States Department of Agriculture, in Ellis County, Tex. The average value of the land in the farms included in this survey was \$139 per acre. The rental income from this land amounted to 3.7 per cent of this valuation. The rate of interest on borrowed capital in this section averaged about 8 per cent, but those owning land were usually content to accept a smaller income on their investment in the land. They were justified in this because of the greater security of the investment and the other advantages that arise from land ownership, in particular the expectation of an increase in the value of the land. If we assume that 5 per cent was a satisfactory income for real estate investments in this region, while the rental income was only 3.7 per cent, then the price of the land included the capitalization of an annual increase in value amounting to 1.3 per cent; that is, the man who bought this land at the average price of \$139 per acre looked to the direct income from his investment in the form of rent for a return of 3.7 per cent and to the annual increase in value for 1.3 per cent. As a matter of fact, the increase in the value of land in Ellis County in recent years has been at a higher rate than 1.3 per cent per year. This shows that only part of the expected rise in value is capitalized, but this part is sufficient to discourage the purchase of land by farmers of limited means, and thus to encourage tenancy in the States where farm values have been rising rapidly.

The speculative element in land ownership is therefore directly responsible for the high and increasing proportion of farms operated by tenants in many localities. It is also directly responsible in large measure for the short-term tenure, which is in turn accountable for most of the undesirable features in American farm tenancy. As long as the owner of a rented farm is holding his land either primarily or incidentally for the sake of selling it at a higher price, so long will he be unwilling either to give a long-term lease or to make any positive agreement with regard to the renewal of a lease running from year to year; for in order to realize his speculative profit he must be in a position to sell the farm on short notice when offered an attractive price.

This factor, of course, operates also to make the owner-operator less likely to remain a long time on the same farm. While there

is some disadvantage in this from the point of view of good agriculture, it is much less serious with the owner, since any improvements which he makes on his farm add to its selling value, while improvements made by the tenant add nothing to his financial interest so long as he has no assurance of staying on the farm long enough to make a profitable use of the improvements. In fact, the more the tenant improves the farm the more likely it is to be sold, with the consequent loss to him of his improvements and the inconvenience and economic loss attendant upon removal and the establishment of his business on another farm.

Many farms have been leased in recent years, as shown in Table 22, for a cash rental amounting to less than a fair rate of interest on the market price of the land. Such a rental must be explained, of course, either by the speculative advantage in holding the land or by some other advantage, economic or social, accruing to the landowner. Up to the year 1920 the increase in the value of the land possibly constituted a sufficient advantage. Since that time the value of farm land in many localities has declined, and the present indications are that the very rapid increase which prevailed from 1900 to 1920 is not likely to be experienced again.

If the price of farm land should remain stationary or should commence a period of slow decline (there seems to be no likelihood of a rapid decline) running over a period of years, then the advantage in farm ownership which depended on the continued increase in the value of the land would disappear; and, further, with the disappearance of the chance for speculative profit in owning farm land would disappear one of the principal reasons for landowners insisting on short-time leases. In fact, if there were a downward tendency in farm-land prices it would be to the advantage of the landlord to obtain a lease contract running over a long period of years, since he might thereby obtain a higher rental than he could obtain by making a new lease each year.

As already stated, there are two ways in which a man without sufficient funds to purchase the land outright may obtain the use of land for farming purposes. He may hire the land, either for a fixed rental or for a share in the products, in which case the landlord takes all the risk of possible changes in the value of the land, both the chances of gain from an increase in land values and the chances of loss from a decrease in land values; or he may purchase the land, paying a small amount of cash down and assuming a mortgage for the greater part of the purchase price, in which

case he must assume all the risk of loss from falling land prices together with the chances of gain from rising land prices. So long as there was a practical assurance of continued increase in farm-land prices the method of purchase subject to mortgage was the more attractive to an enterprising young farmer, and the enormous increase in the amount of the farm mortgage debt from 1910 to 1920¹ was probably due largely to such purchases.

On the other hand, if there were no assurance of higher land prices, and especially if land prices were likely to decline, the method of hiring land would appear in a more favorable light. Under this plan the young farmer would be a farmer pure and simple, instead of partly a farmer and partly a speculator in land. This elimination of the speculative idea might be profitable, even at a time when the chances of gain were greater than the dangers of loss; for after a man has once or twice made by speculation a sum greater than he would be able to make by a year's diligent labor, he is no longer as willing to devote himself to the actual work of farming as he would be if he had never had a taste of the profits of speculation. If, therefore, the speculative element could be removed from American agriculture, then the whole industry would be greatly stabilized and one of the principal causes of short-term tenancy would be removed.

The speculative element will persist, in all probability, so long as land values are increasing. And even with a gradual decline in the general price level the price of farm land may not decline, since the supply of desirable land is limited. If there should be a general and continued decline in farm values, however, a new element would be brought into the situation. One effect of such a movement would probably be to force many recent purchasers who had bought subject to a heavy mortgage to give up ownership, just as a similar movement operated in England between 1875 and 1895. Such an experience would bring into the foreground the disadvantage or danger of the speculative element in land ownership and would doubtless result in an increase in farm tenancy. After the time of stress was over, however, the country might find itself with a type of tenancy very much better than that which it now has.

¹ The debt on fully owned farms (excluding those operated by part owners, managers, and tenants) was \$4,023,767,192 in 1920, as compared with \$1,726,172,851 in 1910; the total debt on all farms has been estimated at \$7,857,700,000 for 1920, as compared with an estimate of \$3,320,470,000 for 1910.

VIII.

RACE AND NATIVITY OF FARM TENANTS.

Among the factors affecting the percentage of tenancy in the United States none is more important than the racial composition of the farming population. Table 23 shows the number of owners, managers, and tenants and the percentage of tenancy for the principal color and nativity classes, together with the acreage of land and of improved land operated by each class, distributed by tenure.

TABLE 23.—FARMS AND FARM ACREAGE IN THE UNITED STATES, BY COLOR, NATIVITY, AND TENURE OF FARMER: 1920.

[Number of farms, by divisions and States, in Table 61.]

COLOR AND NATIVITY.	All farms.	FARMS OPERATED BY—			
		Owners.	Managers.	Tenants.	
				Number or amount.	Per cent of total.
NUMBER OF FARMS.					
All farmers.....	6,448,343	3,925,090	68,449	2,454,804	38.1
White farmers.....	5,498,454	3,691,868	66,223	1,740,363	31.7
Native ¹	4,917,386	3,227,521	59,035	1,630,830	33.2
Foreign born.....	581,068	464,347	7,188	109,533	18.9
Colored farmers.....	949,889	233,222	2,226	714,441	75.2
ACREAGE OF ALL LAND IN FARMS.					
All farmers.....	958,883,715	636,775,015	54,129,157	264,979,543	27.7
White farmers.....	910,939,194	620,070,823	53,653,478	237,214,893	26.0
Native ¹	799,767,149	534,507,308	48,956,294	216,303,547	27.0
Foreign born.....	111,172,045	85,563,515	4,697,184	20,911,346	18.8
Colored farmers.....	44,944,521	16,704,192	475,679	27,764,650	61.8
ACREAGE OF IMPROVED LAND IN FARMS.					
All farmers.....	503,073,007	314,107,483	13,210,999	175,754,525	34.9
White farmers.....	473,774,566	306,029,220	13,009,436	154,735,910	32.7
Native ¹	411,266,350	259,480,553	11,674,897	140,110,900	34.1
Foreign born.....	62,508,216	46,548,667	1,334,539	14,625,010	23.4
Colored farmers.....	29,298,441	8,078,263	201,563	21,018,615	71.7

¹ Includes farmers with country of birth not reported.

The average of 38.1 per cent of tenancy among all farmers in 1920 is the resultant of an average of 31.7 per cent for white farmers

and an average of 75.2 per cent for colored farmers. Thus, while less than one-third of the white farmers were tenants, more than three-fourths of the colored farmers were working as tenants. In the South alone, where most of the colored farmers are found, the tenancy percentage for white farmers was 38.9, and for colored farmers, 76.2, with an average of 49.6 for all farmers, white and colored together. Of the land in farms operated by white farmers in the United States as a whole, 26 per cent was in tenant farms, while of the land operated by colored farmers, 61.8 per cent was in tenant farms.

Of the colored farmers the great majority were Negroes, among whom the percentage of tenancy was 76.2. Among the Chinese and Japanese, who in some States are not permitted to purchase land, the percentages were still higher, being 84.4 and 87.8, respectively. Among the Indians, many of whom have acquired land by inheritance under treaty rights, the percentage of tenancy is extremely low, being only 16.8 per cent.

Among the white farmers the natives had a much higher percentage of tenancy than the foreign born—33.2 per cent as compared with 18.9 per cent. This difference is due partly to the fact that the foreign-born white farmers as a group are considerably older than the native white farmers, and partly to the fact that the immigrants of a generation ago had a very strong desire to acquire the ownership of land and found it relatively easy to do so. The percentage of the land in farms operated by foreign-born white farmers which was in the hands of tenants was 18.8, or almost exactly the same as the percentage of tenants in the number of farmers.

Table 24 shows the number of farmers by tenure and by race and nativity, for 1920 and 1910, with the amount and percentage of increase.

During the decade from 1910 to 1920 the number of farms operated by owners declined 0.6 per cent, while the number operated by tenants increased 4.3 per cent. Decreases for owners and increases for tenants are shown for both white and colored farmers. Among the native white farmers, however, there was an increase in the number of owners as well as in the number of tenants, while among the foreign born both classes of farmers decreased in number, the decline for owners amounting to 14.8 per cent and for tenants to 7.3 per cent. Among the colored races the Negroes showed a slight decline in owners and an increase of 4.8 per cent in tenants, while the Indians showed a decline in

owners amounting to 36.9 per cent (due mainly, however, to a change in the method of reporting Indians on reservations) and an increase in the number of tenants amounting to 21.3 per cent.

TABLE 24.—NUMBER OF FARM OPERATORS IN THE UNITED STATES, BY RACE, NATIVITY, AND TENURE: 1920 AND 1910.

RACE, NATIVITY, AND TENURE.	1920	1910	INCREASE. ¹	
			Number.	Per cent.
ALL FARMERS.....	6,448,343	6,361,502	86,841	1.4
White.....	5,498,454	5,440,619	57,835	1.1
Native ²	4,917,386	4,771,063	146,323	3.1
Foreign born.....	581,068	669,556	-88,488	-13.2
Colored.....	949,889	920,883	29,006	3.1
Negro.....	925,708	893,370	32,338	3.6
Indian.....	16,680	24,251	-7,571	-31.2
Japanese.....	6,892	2,502	4,390	175.5
Chinese.....	609	760	-151	-19.9
FARM OWNERS.....	3,925,090	3,948,722	-23,632	-0.6
White.....	3,691,868	3,707,501	-15,633	-0.4
Native ²	3,227,521	3,162,584	64,937	2.1
Foreign born.....	464,347	544,917	-80,570	-14.8
Colored.....	233,222	241,221	-7,999	-3.3
Negro.....	218,612	218,972	-360	-0.2
Indian.....	13,821	21,892	-8,071	-36.9
Japanese.....	717	294	423	143.9
Chinese.....	72	63	9	14.3
FARM MANAGERS.....	68,449	58,104	10,345	17.8
White.....	66,223	56,560	9,663	17.1
Native ²	59,035	50,087	8,948	17.9
Foreign born.....	7,188	6,473	715	11.0
Colored.....	2,226	1,544	682	44.2
Negro.....	2,026	1,434	592	41.3
Indian.....	54	47	7	14.9
Japanese.....	123	45	78	173.3
Chinese.....	23	18	5	27.8
FARM TENANTS.....	2,454,804	2,354,676	100,128	4.3
White.....	1,740,363	1,676,558	63,805	3.8
Native ²	1,630,830	1,558,392	72,438	4.6
Foreign born.....	109,533	118,166	-8,633	-7.3
Colored.....	714,441	678,118	36,323	5.4
Negro.....	705,070	672,964	32,106	4.8
Indian.....	2,805	2,312	493	21.3
Japanese.....	6,052	2,163	3,889	179.8
Chinese.....	514	679	-165	-24.3

¹ A minus sign (-) denotes decrease.

² Includes farmers with country of birth not reported, as follows: For 1920 (all farmers), 99,540; for 1910, 7,807.

Among the Japanese both owners and tenants increased at very high relative rates, though the total numbers even in 1920 were small, comprising only 717 owners and 6,052 tenants.

Table 25 shows, for the native white and the foreign-born white, the number of owners, managers, and tenants, and the percentage of tenants.

TABLE 25.—NATIVE AND FOREIGN-BORN WHITE FARMERS IN THE UNITED STATES, BY TENURE, BY GEOGRAPHIC DIVISIONS: 1920.

[Figures for States in Table 62.]

DIVISION.	Total.	Owners.	Managers.	TENANTS.	
				Number.	Per cent of total.
NATIVE WHITE FARMERS.¹					
UNITED STATES.....	4,917,386	3,227,521	59,035	1,630,830	33.2
New England.....	128,028	114,804	3,754	9,470	7.4
Middle Atlantic.....	376,701	287,821	8,478	80,402	21.3
East North Central.....	935,492	641,233	12,086	282,173	30.2
West North Central.....	883,809	545,283	9,509	329,017	37.2
South Atlantic.....	767,771	498,214	8,508	261,049	34.0
East South Central.....	740,862	467,447	3,045	270,370	36.5
West South Central.....	724,302	382,668	4,407	337,226	46.6
Mountain.....	197,678	163,248	3,592	30,838	15.6
Pacific.....	162,744	126,803	5,656	30,285	18.6
FOREIGN-BORN WHITE FARMERS.					
UNITED STATES.....	581,068	464,347	7,188	109,533	18.9
New England.....	28,265	25,138	1,030	2,097	7.4
Middle Atlantic.....	46,910	38,308	1,285	7,317	15.6
East North Central.....	144,775	122,469	1,394	20,912	14.4
West North Central.....	206,223	160,997	1,183	44,043	21.4
South Atlantic.....	7,373	6,212	334	827	11.2
East South Central.....	3,506	2,821	54	631	18.0
West South Central.....	39,937	22,274	200	17,463	43.7
Mountain.....	40,984	34,905	497	5,582	13.6
Pacific.....	63,095	51,223	1,211	10,661	16.9

¹ Includes farmers with country of birth not reported.

It will be seen that the percentage of tenancy in 1920 was smaller among the foreign-born white farmers than among the native white in every division except New England, where there was no difference. In the West South Central division the percentage of tenancy among the foreign born was high, evidently because a large number of Mexican tenants were included.

In 1910, 17.6 per cent of the foreign-born farm operators were tenants. In 1920 this proportion had increased to 18.9 per cent. Out of a total decrease in foreign-born operators amounting to 88,488, the owner group lost 80,570 during the decade, while the tenant group decreased only 8,633 (see Table 24). The result of these changes was the increased proportion of tenants noted above.

This increase in the proportion of tenants occurred in the face of a sharply checked immigration. Because of the World War, immigration after 1914 was very slight. This decrease in immigration, preventing as it did the influx of young persons into the foreign-born group, resulted in an increase in the average age of the foreign born in the United States. In accordance with the tendency discussed in Chapter X, for the proportion of tenants to decrease with increasing age, such a development ought to have resulted in a decrease of the proportion of tenancy among the foreign born. In this case, however, there were modifying conditions.

Although the decade from 1910 to 1920 showed little actual change in the total number of foreign-born persons in the United States, there were considerable changes in the actual constitution of that group. Even before the opening of this decade the so-called "old" immigration had given place to the enormous influx from southern and eastern Europe. Variations in regard to age and death rate, in the strength of the call for war service, and in the number of immigrants entering the country during the first five years of the decade resulted in the important shifts among the nationalities which were revealed by the 1920 census of population. These shifts were reflected in the constitution of the foreign-born farmer class as well. The changes by nationality during the decade are shown in Table 26, which gives both the number and the percentage of increase or decrease between 1910 and 1920.

The data in this table afford the chief explanation for the increase in tenancy among the foreign born during the decade. In the first place, the nationalities showing decreases are mainly those which reached the height of their immigration before 1890 and which, therefore, have grown old in this country. Such nationalities would naturally have a very high percentage of ownership. On the other hand, most of the nationalities which show an increase in the number of farm operators are those whose immigration is in the main of recent years and whose proportion

of ownership would be relatively lower. Such a shift of nationalities, then, because of the resulting change in the aggregate age distribution alone, would result in an increase in tenancy in the foreign-born group as a whole.

TABLE 26.—INCREASE OR DECREASE IN NUMBER OF FOREIGN-BORN FARM OPERATORS IN THE UNITED STATES, BY COUNTRY OF BIRTH: 1910 TO 1920.

COUNTRY OF BIRTH.	DECREASE.		COUNTRY OF BIRTH.	INCREASE.	
	Number.	Per cent.		Number.	Per cent.
Total.....	151,019	26.3	Total.....	62,531	65.8
Germany.....	85,133	36.6	Poland.....	10,124	140.1
Ireland.....	16,918	50.5	Italy.....	7,653	72.1
Canada.....	13,210	21.3	Russia.....	6,600	25.6
England.....	13,114	33.0	Hungary.....	3,295	86.1
Norway.....	8,143	13.6	Netherlands.....	1,799	13.0
Sweden.....	6,992	10.4	France.....	287	4.9
Austria.....	3,164	9.5	Other countries ¹	32,773	117.0
Denmark.....	2,810	9.9			
Scotland.....	2,615	25.6			
Wales.....	1,638	39.9			
Switzerland.....	1,282	8.9			

¹ Includes Finland, Rumania, Greece, Portugal, and Mexico, for which figures were shown separately in 1920 but not in 1910.

No all-embracing conclusions can be reached on the basis of this table, but some of the elements involved in it may be worthy of mention. The immigrants who came to this country 20 or 30 years ago were more likely to go onto farms than are present-day immigrants, and it is in the States of the East and West North Central divisions, where the older immigrants chiefly settled, that the great majority of the foreign-born farm owners are found. In these divisions the percentage of tenancy among the foreign born is decidedly smaller than among the natives, largely because of the relatively high average age of the foreign-born farmers. Further, while the native white group is being recruited year by year as the sons of the older farmers take up farming (very often as tenants at the start), the foreign-born group is growing older each year without any material additions of younger men, for the children of the immigrants are not foreign born but native, and those of their number who do start their farming careers as tenants only go to swell the percentage of tenancy among the native white farmers.

Significant data with regard to the general period of immigration and the tendency to settle on farms are presented in Table 27, which shows, by country of birth, the foreign-born white population in 1890 and in 1920, with the percentage of increase during the 30-year period, and also the number of farm operators and the farm population for 1920, with the percentage which each formed of the foreign-born white population.

TABLE 27.—FOREIGN-BORN WHITE POPULATION, 1920 AND 1890, AND FOREIGN-BORN WHITE FARM OPERATORS AND FARM POPULATION, 1920, BY COUNTRY OF BIRTH.

COUNTRY OF BIRTH.	TOTAL FOREIGN-BORN WHITE POPULATION.			FOREIGN-BORN WHITE FARM OPERATORS: 1920.		FOREIGN-BORN WHITE FARM POPULATION: 1920.	
	1920	1890	Per cent of increase. ¹	Number.	Per cent of foreign-born white population.	Number.	Per cent of foreign-born white population.
Total ²	13,712,754	9,121,867	50.3	581,068	4.2	1,471,040	10.7
England.....	812,828	909,092	-10.6	26,614	3.3	67,376	8.3
Scotland.....	254,567	242,231	5.1	7,605	3.0	19,253	7.6
Wales.....	67,066	100,079	-33.0	2,472	3.7	6,258	9.3
Ireland.....	1,037,233	1,871,509	-44.6	16,562	1.6	41,929	4.0
Norway.....	363,862	322,665	12.8	51,599	14.2	130,629	35.9
Sweden.....	625,560	478,041	30.9	60,461	9.7	153,064	24.5
Denmark.....	189,154	132,543	42.7	25,565	13.5	64,721	34.2
Netherlands (Holland).....	131,766	81,823	61.0	15,589	11.8	39,465	30.0
Switzerland.....	118,659	104,069	14.0	13,051	11.0	33,040	27.8
France.....	152,890	113,174	35.1	6,119	4.0	15,491	10.1
Germany.....	1,686,102	2,784,894	-39.5	140,667	8.3	356,114	21.1
Poland.....	1,139,978	147,440	673.2	17,352	1.5	43,929	3.9
Austria.....	575,625	241,377	138.5	30,172	5.2	76,384	13.3
Hungary.....	397,282	62,435	536.3	7,122	1.8	18,030	4.5
Russia ³	1,400,489	182,644	748.8	32,388	2.3	81,994	5.9
Finland ³	149,824			14,988	10.0	37,944	25.3
Rumania.....	102,823			693	0.7	1,754	1.7
Greece.....	175,972	1,887	9,225.5	846	0.5	2,142	1.2
Italy.....	1,610,109	182,580	781.9	18,267	1.1	46,245	2.9
Portugal.....	67,453	15,956	321.7	4,254	6.3	10,769	16.0
Mexico.....	478,383	77,853	514.5	12,142	2.5	30,739	6.4
Canada.....	1,117,878	975,496	14.6	48,668	4.4	123,209	11.0

¹ A minus sign (-) denotes decrease.

² Includes persons born in countries other than those listed.

³ In 1900, the first year for which separate figures are available, the number of persons reporting Russia as country of birth was 423,726, and the number reporting Finland was 62,641.

Since the foreign-born white farm population was not tabulated by country of birth, the total for this item has been distributed among the several countries in the same proportion as the farm operators. The total number of foreign-born white farm operators in the United States in 1920 was 581,068 and the total foreign-born white farm population was 1,471,040, or slightly more than two and one-half times the number of farm operators.

Two interesting classifications can be made on the basis of the figures in Table 27. First, those countries from which the so-called "older" immigration came are indicated by a low percentage of increase in the foreign-born white population between 1890 and 1920; and, second, those countries from which the immigrants have settled most extensively on farms are those for which the farm population represents a high percentage of the total population, as shown in the last column of the table. The general correspondence of these two classifications bears out the statement made above, to the effect that the older immigrants went more generally to the farms than the newer immigrants have done. Of the total foreign-born white population in the United States reporting Norway as country of birth 35.9 per cent (the highest percentage for any country) were included in the farm population, and the number of persons in the United States in 1920 who were born in Norway represents only 12.8 per cent more than the number in 1890. Among the next six countries of birth, in order of relative importance of farm population in total foreign born in the United States, namely, Denmark, the Netherlands, Switzerland, Finland, Sweden, and Germany, only two, the Netherlands and Finland, show an increase of as much as 50 per cent in the general population figures between 1890 and 1920. On the other hand, Italy, Poland, Hungary, and Greece, with enormous increases in the number of their contributions to the foreign-born population of the United States between 1890 and 1920, show very small percentages in the 1920 farm population.

Table 28 gives the number of farms, the number of owners and managers, and the number and percentage of tenants among the foreign born of different nationalities.

TABLE 28.—NUMBER OF FOREIGN-BORN FARM OPERATORS IN THE UNITED STATES, BY COUNTRY OF BIRTH AND TENURE: 1920.

COUNTRY OF BIRTH.	Total.	Owners.	Managers.	TENANTS.	
				Number.	Per cent of total.
Total.....	581,068	464,347	7,188	109,533	18.9
England.....	26,614	21,840	858	3,916	14.7
Scotland.....	7,605	6,004	414	1,187	15.6
Wales.....	2,472	2,071	53	348	14.1
Ireland.....	16,562	13,925	582	2,055	12.4
Norway.....	51,599	43,815	361	7,423	14.4
Sweden.....	60,461	50,114	622	9,725	16.1
Denmark.....	25,565	19,523	336	5,706	22.3
Netherlands (Holland).....	15,589	10,364	197	5,028	32.3
Switzerland.....	13,051	10,324	166	2,561	19.6
France.....	6,119	4,942	100	1,077	17.6
Germany.....	140,667	116,962	1,203	22,502	16.0
Poland.....	17,352	14,874	114	2,364	13.6
Austria.....	30,172	24,534	235	5,403	17.9
Hungary.....	7,122	5,439	80	1,603	22.5
Russia.....	32,388	24,244	179	7,965	24.6
Finland.....	14,988	13,730	46	1,212	8.1
Rumania.....	693	533	7	153	22.1
Greece.....	846	540	13	293	34.6
Italy.....	18,267	13,403	234	4,630	25.3
Portugal.....	4,254	2,896	49	1,309	30.8
Other European countries.....	20,107	15,238	180	4,689	23.3
Mexico.....	12,142	1,625	117	10,400	85.7
Canada.....	48,668	41,864	910	5,894	12.1
Other countries.....	7,765	5,543	133	2,089	26.9
Country of birth not reported.....	99,540	65,298	1,595	32,647	32.8

It is of some interest to see how the 109,533 foreign-born tenants are distributed by country of birth. The largest number of foreign-born tenants (22,502) were born in Germany and the next largest (10,400) in Mexico. The percentages of tenancy vary materially from country to country, the highest being shown for Mexico (85.7) and the lowest (8.1) for Finland.

IX.

TENANCY AND FARM INCOME.

There are no recent census figures relating to the income of farmers. There is available, however, a large body of information collected by agents of the Office of Farm Management of the Department of Agriculture who have studied the subject in restricted areas in numerous sections of the United States. The uniform conclusion of the farm management surveys on this point is that tenants have larger labor incomes than have owners.

It should be explained that in farm management surveys labor income is what is left when the net income of the farm is reduced by an amount representing a fair return on the capital invested in the business, including, in the case of a tenant farm, both that furnished by the landlord and that furnished by the tenant. Labor income is not particularly significant as a measure of the welfare of the farmer; it is merely an index by which the efficiency of his labor can be compared with the efficiency or productivity of his neighbor's labor, regardless of whether the size of the farm or the intensiveness of its cultivation is the same or not.

A tenant must live on what he earns with his own labor (plus the profits from his superior management, if any), the return on his investment being a relatively small portion of his entire income. Consequently, the tenant in order to exist must make enough by his own efforts to cover his living expenses; whereas the owner, and especially one who is free from debt, may earn little or nothing with his own labor and still have a very satisfactory income derived from the return on his investment in the farm. The owner, therefore, has not the same incentive as the tenant to raise his income to the maximum, and hence may not work as hard. Further, taking the whole number into consideration, the tenants are younger men than the owners and are doubtless capable of doing more work for this reason.

Another reason why the labor income of the tenant farmers averages larger than the labor income of the farm owners in some localities is that the tenant, particularly the share tenant, receives a considerable amount of expert supervision from the landlord and therefore handles his farm business better than he would do if left to his own resources. Without any question the farming

skill of the landlords taken as a group is much higher than that of the owner-operators taken as a group. A part of this skill is lost, of course, in transmitting it to the tenants through the medium of supervision; but even with this loss the landlord-supervised farms show the effects of better management as compared with many of the owner-operated farms in the same locality.

There is a general consensus of opinion, however, among students of farm management, to the effect that tenants' labor incomes are larger chiefly because they operate larger enterprises in proportion to the capital which they are able to invest. That these conclusions are reached as a result of farm management surveys made in different parts of the country under different types of agriculture emphasizes the fact that tenancy is a wise method of operating a farm so long as the capital at the command of the prospective farmer is limited. The pioneer farm management survey, made by E. H. Thomson and H. M. Dixon in 1911, in three representative areas in Indiana, Illinois, and Iowa, showed that the average labor income of farm owners was \$408 and of tenants \$870. Prof. W. J. Spillman's classic survey of Chester County, Pa., also made in 1911, shows the following results:

TABLE 29.—FARM MANAGEMENT DATA FOR OWNERS AND TENANTS IN CHESTER COUNTY, PA.: 1911.

ITEM.	Owners.	Tenants.
Number of farms.....	378	124
Average acreage per farm.....	90	106
Capital per farm.....	\$10,486	\$12,030
Farm income.....	\$1,313	\$1,617
Labor income.....	\$548	\$739

Professor Spillman's comment is as follows:

Approximately half of this difference ¹ is due to the fact that the tenant farms on the average are more than one and one-sixth times as large as the average of the owned farms, but part is also due to the fact that the tenant farms on the average have a larger number of dairy cows, usually of somewhat more than average quality. While these tenants make larger labor incomes than the owners, it must be remembered that the owners have the interest on their investment in addition to this labor income. This bulletin contains ample evidence that the young farmer who has relatively little capital will find it to his best interest to become a tenant on a farm of considerable magnitude rather than to undertake the same type of farming on a much smaller farm which his capital will enable him to own.²

¹ The difference between labor incomes amounting to \$548 for owners and \$739 for tenants.

² Department of Agriculture Bulletin 341, *Farm Management Practice of Chester County, Pa.*, by W. J. Spillman, H. M. Dixon, and G. A. Billings.

Of the many surveys pointing to similar conclusions, those in Ellis County, Tex., in a cotton region, and in Lenawee County, Mich., a diversified farming and dairy region, might be mentioned. But in spite of the larger labor income of tenants, most farmers with considerable capital prefer to be owners. A large amount of capital invested entirely in equipment necessitates the operation of a large business which, in many cases, exceeds the managerial ability of the average farmer. It is only within the limits of his managerial ability that it is wise for the farmer with considerable capital to remain a tenant for the sake of operating a larger farming enterprise.

It is the conclusion drawn from a large number of farm management surveys that while tenants derive a larger income from their farms than do owners, after allowance has been made for interest on the investment, this is true only within the limits of what may be called the economic size of the farm business, which varies from place to place and in accordance with the type of farming pursued. A quarter of an acre of land under glass devoted to the cultivation of flowers or hothouse vegetables may be as large a business as a 400-acre wheat farm and require as much care and ability for its operation. Apparently there is a limit to the size of a farm that can be economically operated under normal circumstances, and beyond that limit it does not pay to operate a farm either as a tenant or as an owner; but within that limit a tenant generally succeeds better with the same amount of capital, because he operates a larger farm on which labor, machinery, and horses can be utilized to greater advantage.

X.

THE AGRICULTURAL LADDER—FARMERS BY AGE.

A popular idea with regard to the relation between the farm worker and the land finds expression in the theory of the "agricultural ladder." According to this theory the typical farmer starts his agricultural career as a farm hand working for wages (or working at home on his father's farm); then, after he has saved enough from his earnings to provide the working capital for a rented farm, he becomes a farm tenant; and finally, he is able to purchase a farm and becomes an owner. The fundamental question involved is the question of a man's progress from one economic status to another.

Three different groups of census data throw light upon the question, namely, those relating to farmers classified by age and tenure, which are available for four censuses, from 1890 to 1920; those relating to farmers classified by age and by size of farm, which are available for 1910 only; and the 1920 data on farm experience.

Farm tenancy considered as one step in the process whereby a man starting in life with a limited capital, or with nothing but his own energy and enterprise, may after a time acquire the ownership of a farm, presents a social and economic aspect quite different from farm tenancy regarded as a permanent status, though permanent tenancy, if it be the right kind of tenancy, need not be placed *per se* in the category of the undesirable. A certain amount of permanent tenancy without doubt exists in the United States, especially in the South, and the amount of such tenancy may be increasing slightly from decade to decade. Nevertheless, both the available statistical data and the results of special investigations indicate that for a large fraction of the farm tenants tenancy represents one of the normal stages on the way toward ownership.

FARMERS BY AGE AND TENURE.

The census data relative to farmers classified by age and tenure are summarized for the United States in Tables 30 and 31, which show not only the number in each group but also the per cent distribution by age for owners and tenants and the percentage of tenants in each age group.

TABLE 30.—FARM OPERATORS IN THE UNITED STATES, BY AGE AND TENURE, WITH PER CENT DISTRIBUTION BY AGE: 1890 TO 1920.

[Number of farmers by age and tenure for 1920 and 1910, by divisions and States, in Table 61.]

TENURE AND AGE.	FARM OPERATORS.		OCCUPANTS OF FARM HOMES.		PER CENT DISTRIBUTION BY AGE.			
	1920	1910	1900	1890	1920	1910	1900	1890
ALL FARMERS, total....	6,448,343	6,361,502	5,649,008	4,767,179	.....	.....	.....	100.0
Reporting age.....	6,364,163	6,339,476	5,635,747	(²)	100.0	100.0	100.0	.....
Under 25 years.....	383,680	419,330	275,098	218,531	6.0	6.6	4.9	4.6
25 to 34 years.....	1,333,020	1,413,876	1,194,482	1,082,620	20.9	22.3	21.2	22.7
35 to 44 years.....	1,587,519	1,571,469	1,409,829	1,282,056	24.9	24.8	25.0	24.8
45 to 54 years.....	1,482,494	1,432,707	1,296,147	1,034,792	23.3	22.6	23.0	21.7
55 years and over.....	1,577,450	1,502,094	1,460,191	1,249,180	24.8	23.7	25.9	26.2
55 to 64 years.....	993,771	947,524	864,769	.....	15.6	14.9	15.3	.....
65 years and over.....	583,679	554,570	595,422	.....	9.2	8.7	10.6	.....
Not reporting age.....	84,180	22,026	13,261	(²)	.....	.....	.....	.....
OWNERS, total.....	3,925,090	3,948,722	3,638,403	3,142,746	.....	.....	.....	100.0
Reporting age.....	3,873,034	3,934,568	3,631,036	(²)	100.0	100.0	100.0	.....
Under 25 years.....	87,400	97,690	76,419	71,140	2.3	2.5	2.1	2.3
25 to 34 years.....	561,442	620,961	541,064	539,470	14.5	15.8	14.9	17.2
35 to 44 years.....	938,174	969,859	908,250	756,555	24.2	24.6	25.0	24.1
45 to 54 years.....	1,021,445	1,036,493	916,375	748,609	26.4	26.3	25.2	23.8
55 years and over.....	1,264,573	1,209,965	1,188,928	1,026,972	32.7	30.7	32.7	32.7
55 to 64 years.....	780,579	741,614	683,475	.....	20.2	18.8	18.8	.....
65 years and over.....	483,994	468,351	505,453	.....	12.5	11.9	13.9	.....
Not reporting age.....	52,056	13,754	7,367	(²)	.....	.....	.....	.....
MANAGERS.....	68,449	58,104	(³)	(³)	.....	.....	.....	.....
TENANTS, total.....	2,454,804	2,354,676	2,010,605	1,624,433	.....	.....	.....	100.0
Reporting age.....	2,424,493	2,347,662	2,004,711	(²)	100.0	100.0	100.0	.....
Under 25 years.....	290,796	316,820	198,679	147,391	12.0	13.5	9.9	9.1
25 to 34 years.....	753,595	777,215	653,418	543,150	31.1	33.1	32.6	33.4
35 to 44 years.....	630,588	585,398	501,579	425,501	26.0	24.9	25.0	26.2
45 to 54 years.....	446,986	384,490	379,772	286,183	18.4	16.4	18.9	17.6
55 years and over.....	302,528	283,739	271,263	222,208	12.5	12.1	13.5	13.7
55 to 64 years.....	205,966	200,070	181,294	.....	8.5	8.5	9.0	.....
65 years and over.....	96,562	83,669	89,969	.....	4.0	3.6	4.5	.....
Not reporting age.....	30,311	7,014	5,894	(²)	.....	.....	.....	.....

¹ Excludes 40,872 occupants of farm homes with form of tenure not reported.² Not shown in the reports of the census of 1890, as the number not reporting age was distributed among the several age groups.³ Included with tenants.

The data for farmers classified by age in 1920 and 1910 are based on the farm census and represent farm operators, while the figures for 1900 and 1890 are based on the population census and represent occupants of farm homes. For general comparative

purposes the difference should not be material, however, since most farm operators are also occupants of farm homes, and vice versa; and for 1900 the actual differences between the two sets of figures are negligible. For 1890, however, especially in some of the Southern and Western States, a considerably larger number of farm homes than of farms was reported, and especially a larger number of rented farm homes than of tenant farms. Even these differences probably have little effect on the distribution of the tenure classes by age; hence the base figures and the age distribution are presented in Table 30 without modification. But in the case of the percentages of tenancy shown for the several age groups in Table 31 all of the percentages, both for 1890 and 1900, have been so adjusted that the figure for all ages combined may agree with the percentage of tenancy shown by the farm census.

TABLE 31.—PERCENTAGE OF TENANCY AMONG FARM OPERATORS IN EACH AGE GROUP: 1890 TO 1920.

[Percentages for 1900 and 1890 based on data for occupants of farm homes, but adjusted to conform with total percentage of tenancy among farm operators. Data for the groups of farmers discussed on page 89 in bold-faced type. Figures for 1920 and 1910, by divisions and States, in Table 61.]

AGE.	1920	1910	1900	1890
Total.....	38.1	37.0	35.3	28.4
Under 25 years.....	75.8	75.6	71.8	56.2
25 to 34 years.....	56.5	55.0	54.3	42.1
35 to 44 years.....	39.7	37.3	35.3	30.1
45 to 54 years.....	30.2	26.8	29.0	23.0
55 to 64 years.....	20.7	21.1	20.7	14.7
65 years and over.....	16.5	15.1	14.9	

In Figure 9 the number of farm tenants and the number of owner-operators (including managers) are shown graphically, by age, for the North, South, and West, in such manner as to bring out the progression from tenancy to ownership as the age increases. Figure 10 shows, for selected States, the decreasing percentage of tenancy from age group to age group—a rapid decrease for the Northern and Western States and a slower decrease for the Southern States, with a much larger percentage of tenancy remaining in the older age groups.

FIG. 9.—NUMBER AND PERCENTAGE OF TENANTS AND OWNERS, BY AGE, FOR THE NORTH, SOUTH, AND WEST: 1920.
 [Managers are included with owners.]

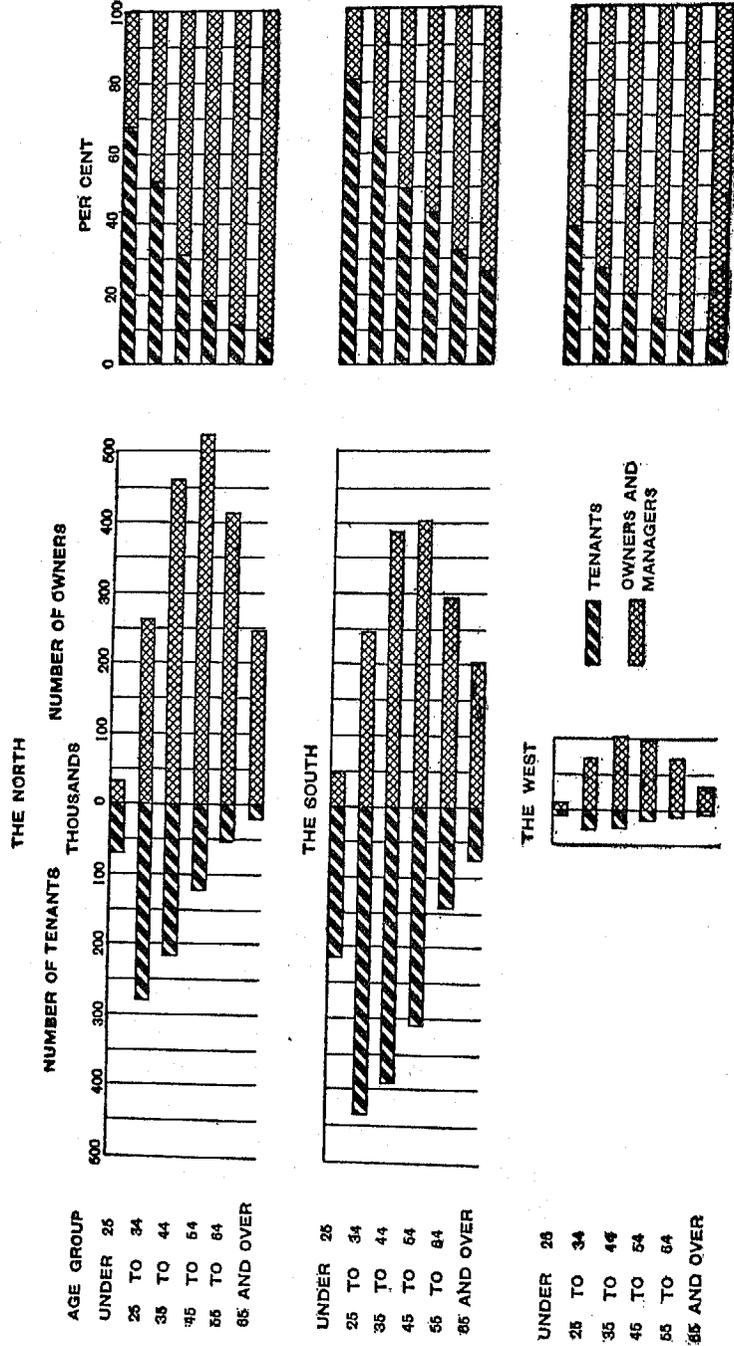
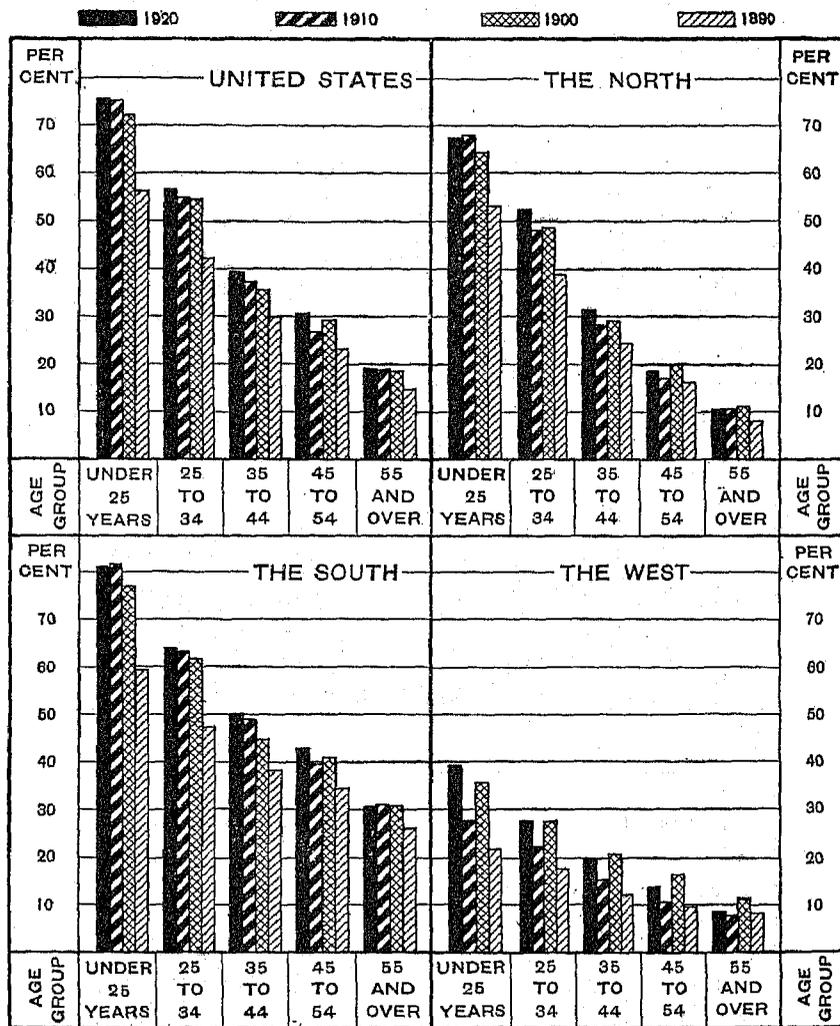


Figure 11 shows, in consolidated form, for the United States and for the North, South, and West, the percentage of tenancy for each age group and for the four census years from 1890 to 1920. The most significant feature of this diagram, perhaps, is the relation between the bars representing the percentage of tenancy in a given age group for the four censuses, a great majority of the cases showing a continuous, though small, increase from census to census, except between 1900 and 1910.

FIG. 11.—PERCENTAGE OF TENANCY IN EACH AGE GROUP, FOR THE NORTH, SOUTH, AND WEST: 1890 TO 1920.



For farmers of all ages the proportion of tenants in 1920, as shown in Table 31, was 38.1 per cent, but among the younger farmers the proportion was very much higher (75.8 per cent for those under 25 years of age), and among the older farmers it was very much lower (16.5 per cent for those 65 years old and over). Both for 1920 and for each of the earlier years the percentage of tenancy shows a continuous decrease from age group to age group as the age increases. These figures alone would tend to support in a general way the theory of the agricultural ladder, since they show that relatively few farmers remain tenants by the time they reach the age of 65. In actual numbers there were only 96,562 farm tenants 65 years of age and over in 1920, as compared with 483,994 farm owners in the same age group.

Again, we may take a group of farmers roughly identical from census to census, or more accurately a series of groups, each made up mainly of the survivors from the preceding group. Thus, the farmers in the group 25 to 34 years of age in 1890, with 42.1 per cent of tenancy, would most of them be in the group 35 to 44 years of age in 1900, which shows only 35.3 per cent of tenancy. The survivors of this group in 1910 would be from 45 to 54 years of age and the figures show 26.8 per cent of tenancy; and in 1920, at the age of 55 to 64 years, the tenancy percentage shows again a decrease to 20.7. This particular group of farmers (represented by the diagonal line of bold-faced figures running down through Table 31), most of them starting as farm operators between 1880 and 1890, appears to have been more aggressive than any of the other groups, for, considering the United States totals alone, it contains the only age groups showing in any census year a smaller percentage of tenancy than the corresponding age group of the preceding census year. Except where these farmers come in, every age group shows a uniformly increasing percentage of tenancy from 1890 to 1920.

The increase in the percentage of tenancy from year to year, as shown for the several age groups, indicates that the general increase in the proportion of tenants among farm operators is fairly well distributed among the age groups. At first glance it might appear that the increase was more marked in the younger ages. A careful study of this point shows, however, that this is not the case. In Table 32, the proportion of tenants is expressed in the form of the number of tenants per 1,000 farm operators, and the percentage of increase in this number is shown for each of the three decades covered by the available statistics.

TABLE 32.—NUMBER OF TENANTS PER 1,000 FARMERS IN EACH AGE GROUP, WITH PERCENTAGE OF INCREASE: 1890 TO 1920.

[Figures for 1900 and 1890 based on data for occupants of farm homes but adjusted to conform with total percentage of tenancy among farm operators. Maximum percentages of increase for each division in bold-faced type.]

DIVISION AND AGE.	NUMBER OF TENANTS PER 1,000 FARMERS.				PER CENT OF INCREASE. ¹		
	1920	1910	1900	1890	1910-1920	1900-1910	1890-1900
UNITED STATES.							
Total.....	381	370	353	284	3.0	4.8	24.3
Under 25 years.....	758	756	718	562	0.3	5.3	27.8
25 to 34 years.....	565	550	543	421	2.7	1.3	29.0
35 to 44 years.....	397	373	353	301	6.4	5.7	17.3
45 to 54 years.....	302	268	290	230	12.7	-7.6	26.1
55 to 64 years.....	207	211	207	147	-1.9	1.9	24.3
65 years and over.....	165	151	149		9.3	1.3	
NEW ENGLAND.							
Total.....	74	79	94	93	-6.3	-16.0	1.1
Under 25 years.....	223	239	311	271	-6.7	-23.2	14.8
25 to 34 years.....	170	174	212	206	-2.3	-17.9	2.9
35 to 44 years.....	103	110	132	137	-6.4	-16.7	-3.6
45 to 54 years.....	63	66	87	80	-4.5	-24.1	8.8
55 to 64 years.....	37	48	54	48	-22.9	-11.1	-8.3
65 years and over.....	29	30	34		-3.3	-11.8	
MIDDLE ATLANTIC.							
Total.....	207	223	253	221	-7.2	-11.9	14.5
Under 25 years.....	553	597	649	543	-7.4	-8.0	19.5
25 to 34 years.....	420	438	503	432	-4.1	-12.9	16.4
35 to 44 years.....	261	278	330	289	-6.1	-15.8	14.2
45 to 54 years.....	161	176	217	214	-8.5	-18.9	1.4
55 to 64 years.....	102	120	137	92	-15.0	-12.4	20.7
65 years and over.....	66	72	80		-8.3	-10.0	
EAST NORTH CENTRAL.							
Total.....	281	270	263	228	4.1	2.7	15.4
Under 25 years.....	668	708	657	550	-5.6	7.8	19.5
25 to 34 years.....	523	515	492	420	1.6	4.7	17.1
35 to 44 years.....	324	294	298	257	10.2	-1.3	16.0
45 to 54 years.....	191	174	196	156	9.8	-11.2	25.6
55 to 64 years.....	116	119	117	86	-2.5	1.7	14.0
65 years and over.....	73	67	71		9.0	-5.6	
WEST NORTH CENTRAL.							
Total.....	342	309	296	240	10.7	4.4	23.3
Under 25 years.....	730	696	659	539	4.9	5.6	22.3
25 to 34 years.....	574	498	507	370	15.3	-1.8	37.0
35 to 44 years.....	347	293	286	236	18.4	2.4	21.2
45 to 54 years.....	212	191	214	166	11.0	-10.7	28.9
55 to 64 years.....	141	142	142	113	-0.7	.....	12.4
65 years and over.....	98	87	100		12.6	-13.0	

¹ A minus sign (-) denotes decrease.

TABLE 32.—NUMBER OF TENANTS PER 1,000 FARMERS IN EACH AGE GROUP, WITH PERCENTAGE OF INCREASE: 1890 TO 1920—Continued.

DIVISION AND AGR.	NUMBER OF TENANTS PER 1,000 FARMERS.				PER CENT OF INCREASE. ¹		
	1920	1910	1900	1890	1910-1920	1900-1910	1890-1900
SOUTH ATLANTIC.							
Total.....	467	459	442	385	1.7	3.8	14.8
Under 25 years.....	805	800	752	607	0.6	6.4	23.9
25 to 34 years.....	622	607	604	483	2.5	0.5	25.1
35 to 44 years.....	478	458	414	393	4.4	10.6	5.3
45 to 54 years.....	410	365	384	342	12.3	-4.9	12.3
55 to 64 years.....	309	313	330	265	-1.3	-5.2	13.6
65 years and over.....	254	252	260		0.8	-3.1	
EAST SOUTH CENTRAL.							
Total.....	497	507	481	383	-2.0	5.4	25.6
Under 25 years.....	809	826	779	597	-2.1	6.0	30.5
25 to 34 years.....	629	637	617	470	-1.3	3.2	31.3
35 to 44 years.....	498	499	460	377	-0.2	8.5	22.0
45 to 54 years.....	437	405	415	343	7.9	-2.4	21.0
55 to 64 years.....	330	231	340	262	-0.3	-2.6	21.0
65 years and over.....	274	275	283		-0.4	-2.8	
WEST SOUTH CENTRAL.							
Total.....	529	527	491	386	0.4	7.3	27.2
Under 25 years.....	818	823	758	578	-0.6	8.6	31.1
25 to 34 years.....	667	652	611	469	2.3	6.7	30.3
35 to 44 years.....	531	511	469	371	3.9	9.0	26.4
45 to 54 years.....	452	422	415	337	7.1	1.7	23.1
55 to 64 years.....	343	347	346	253	-1.2	0.3	29.2
65 years and over.....	278	294	291		-5.4	1.0	
MOUNTAIN.							
Total.....	154	108	122	71	42.6	-11.5	71.8
Under 25 years.....	343	192	253	137	81.3	-24.1	84.7
25 to 34 years.....	211	147	175	98	43.5	-16.0	78.6
35 to 44 years.....	158	110	124	69	43.6	-11.3	79.7
45 to 54 years.....	121	86	101	55	40.7	-14.9	83.6
55 to 64 years.....	87	67	80	42	29.9	-16.3	73.8
65 years and over.....	69	47	60		46.8	-21.7	
PACIFIC.							
Total.....	200	172	197	147	16.3	-12.7	34.0
Under 25 years.....	471	434	396	272	8.5	9.6	45.6
25 to 34 years.....	364	312	323	224	16.7	-3.4	44.2
35 to 44 years.....	247	189	227	163	30.7	-16.7	39.3
45 to 54 years.....	146	119	169	119	22.7	-29.6	42.0
55 to 64 years.....	90	94	127	83	-4.3	-26.0	32.5
65 years and over.....	67	63	89		6.3	-29.2	

¹ A minus sign (-) denotes decrease.

For the United States as a whole the maximum increase from 1890 to 1900 was in the group from 25 to 34 years of age; for the decade 1900-1910, in the group 35 to 44 years of age; and for the decade 1910-1920, in the group 45 to 54 years old. The figures for the geographic divisions, and similar figures that might be worked out for individual States, confirm the general statement that tenancy is increasing among the older farmers as well as among the younger, and increasing recently more rapidly among the older than among the younger.

This means that the increase in tenancy can not be explained altogether as a result of larger and larger numbers of young farmers having recourse to tenancy as one of the stages on the agricultural ladder, by reason of the exhaustion of the supply of free land and the increase in farm-land prices; and the number of instances where there has been a marked increase in the number of tenants per 1,000 farmers in the groups from 55 to 64 years of age and 65 years and over indicates that the explanation is not to be found either in the assumption of a longer duration of the tenancy stage.

So far as concerns the changes between 1910 and 1920 some allowance must be made for the effect of war conditions prevailing in 1920, when large numbers of young men who under normal conditions would have been farming were still in the Army or in manufacturing industries. The call to military service and the attractiveness of the war industries must have reduced materially the number of men who started farming during the three or four years just preceding 1920; and granting that a high percentage of the men starting start as tenants, these factors would reduce somewhat the number of tenants per 1,000 farmers in the age group from 25 to 34 years, and incidentally reduce slightly the percentage of tenants among all farmers. They might also reduce the number of tenants per 1,000 farmers in the group under 25 years of age, though the principal effect here would be to reduce the size of the group as a whole. (There were 383,680 farmers in this group in 1920, as compared with 419,330 in 1910.) With fewer competitors for the agricultural opportunities, however, it might well be that a larger percentage of the young men, both in this group and in the group from 25 to 34 years of age, would be able to acquire farms immediately, and a smaller percentage would make their start as tenants, simply as a result of the reduced number of would-be farmers. In any case, however, the effect of the war conditions would not extend beyond the

second age group (25 to 34 years) and would hardly affect the tenancy percentages for either of these groups enough to modify any of the generalizations based on the figures in Table 32.

Since the evidence at hand does not give a very positive support to the claim that the increase in the percentage of farm tenancy in the United States is mainly the result of the more extensive use of tenancy as a step toward ownership, it must be assumed that there has been an appreciable increase in permanent tenancy, though as measured by the actual increase in number of tenants per 1,000 farmers the increase has not reached very large dimensions. Taking separately the figures for the different sections of the country the evidence does not lend itself readily to any uniform interpretation. Hence one may reasonably conclude that in this question, as in a number of other respects, it is not possible to formulate a single explanation which will fit all parts of the country, and that generalizations based on the figures for the country as a whole must partake somewhat of the nature of a compromise. In the Southern divisions, for example, there is no doubt that the increase in the tenancy percentages since 1890 represents mainly an increase in permanent tenancy. In the New England and Middle Atlantic divisions there is a tendency toward a lower percentage of tenancy. In the Mountain and Pacific divisions there have been enormous increases in the number of farms, largely acquired in the first instance under the homestead laws, thus leaving little room for tenancy as a stage in the process of acquiring ownership of a farm. In the East and West North Central divisions—the corn-belt States—there is the best evidence that the increasing number of farmers operating temporarily as tenants and the increasing period of tenancy preceding ownership have been important factors in the increase of the number of tenants per 1,000 farmers. And even here, in the last decade, the highest relative increase in the number of tenants per 1,000 farmers in any age group is shown in the group from 35 to 44 years of age, and the oldest group—65 years of age and over—shows a greater increase in tenancy than the average for all ages combined.

The theory of the agricultural ladder does not lose its interest or value, however, simply because this application of it fails to explain away, or to make of merely temporary significance, the indicated increase in tenancy in the United States. It is of particular interest when the tenure figures are taken in greater detail than that involved in merely separating the owners from the

tenants. This greater detail is given in Table 33, which shows for each age group the percentage in each of five tenure classes for 1920 and 1910. The most significant aspect of this table is brought out, perhaps, by considering the age group which shows the maximum percentage for each of the several kinds of tenure. For convenience these maximum figures are printed in bold-faced type.

TABLE 33.—PER CENT DISTRIBUTION OF FARMERS IN EACH AGE GROUP BY TENURE, ARRANGED TO SHOW PROGRESSION FROM ONE TENURE TO ANOTHER, BY GEOGRAPHIC DIVISIONS: 1920 AND 1910.

[Bold-faced figures indicate the age group in which the tenure reaches its maximum importance.]

DIVISION AND AGE.	PER CENT DISTRIBUTION BY TENURE, 1920. ¹					PER CENT DISTRIBUTION BY TENURE, 1910. ¹				
	Share and share- cash tenants.	Cash and unspeci- fied tenants.	Part owners.	Full owners, mort- gaged.	Full owners, free.	Share and share- cash tenants.	Cash and unspeci- fied tenants.	Part owners.	Full owners, mort- gaged.	Full own- ers, free.
UNITED STATES.										
Under 25 years.....	63.4	12.4	5.0	7.6	10.2	56.4	19.2	4.7	5.7	13.0
25 to 34 years.....	42.7	13.8	8.9	17.1	16.2	37.1	17.8	9.3	13.6	21.0
35 to 44 years.....	28.7	11.1	10.5	22.0	26.6	23.5	13.8	11.5	19.2	31.0
45 to 54 years.....	21.1	9.0	9.8	21.6	37.6	16.2	10.7	10.9	20.1	41.3
55 to 64 years.....	14.2	6.5	7.7	19.7	51.2	12.4	8.7	8.3	18.2	51.8
65 years and over....	10.8	5.7	4.7	14.1	64.1	8.1	7.0	4.7	14.4	65.4
NEW ENGLAND.										
Under 25 years.....	8.1	14.2	4.5	37.1	27.2	6.5	17.3	3.4	32.7	31.4
25 to 34 years.....	4.7	12.2	4.8	45.0	27.9	3.9	13.6	3.8	40.5	33.3
35 to 44 years.....	2.6	7.7	4.8	42.3	38.7	2.1	8.9	3.7	37.7	43.8
45 to 54 years.....	1.4	4.9	4.4	34.8	51.6	1.2	5.4	3.4	31.9	55.4
55 to 64 years.....	0.7	3.1	3.7	25.9	64.5	0.8	4.0	2.7	25.5	65.0
65 years and over....	0.4	2.4	2.5	17.4	75.9	0.4	2.7	2.1	17.2	76.4
MIDDLE ATLANTIC.										
Under 25 years.....	39.4	15.9	5.0	20.7	13.9	37.5	22.1	4.0	16.9	14.5
25 to 34 years.....	27.0	15.0	5.4	30.9	17.9	25.7	18.1	5.5	26.5	21.1
35 to 44 years.....	15.2	10.9	6.2	33.3	31.6	15.4	12.4	6.7	30.1	33.1
45 to 54 years.....	9.1	7.0	5.8	28.9	47.1	9.3	8.3	6.3	28.6	45.8
55 to 64 years.....	5.5	4.7	4.8	24.1	39.3	6.0	6.0	5.0	25.2	56.7
65 years and over....	2.9	3.7	3.5	17.6	71.4	2.8	4.4	3.0	20.4	68.8
EAST										
NORTE CENTRAL.										
Under 25 years.....	53.2	13.6	6.5	14.7	8.9	54.0	16.7	6.7	11.3	9.0
25 to 34 years.....	38.0	14.3	9.5	24.6	11.8	35.4	16.2	11.5	20.6	14.9
35 to 44 years.....	22.4	10.0	12.0	29.9	24.3	19.2	10.2	14.7	26.7	28.0
45 to 54 years.....	13.1	6.0	11.4	28.5	39.9	11.3	6.1	13.5	27.1	41.2
55 to 64 years.....	7.9	3.7	8.7	24.2	54.9	7.7	4.3	10.0	24.4	53.2
65 years and over....	4.6	2.8	5.1	17.8	69.4	3.8	2.9	5.2	18.3	69.5

¹ Percentages based on total number of farmers in age group, including managers, for which class no figures are presented in this table.

TABLE 33.—PER CENT DISTRIBUTION OF FARMERS IN EACH AGE GROUP BY TENURE, ARRANGED TO SHOW PROGRESSION FROM ONE TENURE TO ANOTHER, BY GEOGRAPHIC DIVISIONS: 1920 AND 1910—Continued.

[Bold-faced figures indicate the age group in which the tenure reaches its maximum importance.]

DIVISION AND AGE.	PER CENT DISTRIBUTION BY TENURE, 1920. ¹					PER CENT DISTRIBUTION BY TENURE, 1910. ¹				
	Share and share-cash tenants.	Cash and unspecified tenants.	Part owners.	Full owners, mortgaged.	Full owners, free.	Share and share-cash tenants.	Cash and unspecified tenants.	Part owners.	Full owners, mortgaged.	Full owners, free.
WEST										
NORTH CENTRAL.										
Under 25 years.....	55.5	17.5	8.1	10.0	6.4	49.9	19.6	7.7	7.1	14.1
25 to 34 years.....	39.4	18.0	14.3	18.5	8.4	32.0	17.8	15.9	16.6	16.7
35 to 44 years.....	22.9	11.8	18.8	27.9	17.6	17.9	11.4	19.6	25.7	24.5
45 to 54 years.....	14.1	7.1	17.7	29.8	30.6	11.7	7.5	18.6	27.0	34.7
55 to 64 years.....	9.3	4.9	13.2	27.5	44.7	8.6	5.6	14.1	25.1	46.3
65 years and over....	6.0	3.8	7.8	21.3	60.7	4.8	3.9	7.7	20.2	63.2
SOUTH ATLANTIC.										
<i>White farmers.</i>										
Under 25 years.....	58.5	13.4	4.0	5.9	17.2	52.2	20.8	4.0	4.3	17.7
25 to 34 years.....	38.3	12.7	5.7	12.1	29.8	33.3	16.6	7.0	9.8	32.1
35 to 44 years.....	25.6	9.7	6.3	13.9	43.2	21.3	11.7	8.3	12.0	45.6
45 to 54 years.....	18.4	7.4	5.8	13.1	54.1	15.5	8.8	7.5	11.6	55.6
55 to 64 years.....	13.1	5.5	4.3	10.7	65.5	12.6	7.5	5.7	9.8	63.7
65 years and over....	9.8	4.6	3.0	6.9	75.0	8.5	5.5	3.3	7.3	74.7
<i>Colored farmers.</i>										
Under 25 years.....	76.9	15.5	1.9	0.9	4.6	60.0	31.6	1.7	1.1	5.4
25 to 34 years.....	63.7	21.2	3.7	2.6	8.6	48.8	33.9	3.9	2.8	10.4
35 to 44 years.....	52.5	21.8	5.8	4.5	15.1	39.5	33.2	6.4	4.7	15.8
45 to 54 years.....	44.9	23.8	6.1	5.7	19.3	32.5	31.1	7.8	6.6	21.8
55 to 64 years.....	38.0	21.8	6.3	6.5	27.1	28.7	29.8	8.1	7.0	26.2
65 years and over....	32.9	20.1	5.4	5.9	35.6	23.4	27.3	6.3	7.0	35.9
EAST										
SOUTH CENTRAL.										
<i>White farmers.</i>										
Under 25 years.....	63.0	10.8	4.9	7.0	13.8	58.6	17.0	4.7	4.8	14.5
25 to 34 years.....	42.0	10.3	7.1	14.0	26.1	37.7	13.5	8.7	10.8	28.9
35 to 44 years.....	27.5	8.2	7.7	16.3	39.8	23.8	9.9	10.5	12.8	42.5
45 to 54 years.....	20.6	6.4	7.1	15.1	50.4	17.4	8.0	9.3	12.2	52.6
55 to 64 years.....	14.5	4.8	5.3	12.1	62.9	13.1	6.7	6.9	10.4	62.6
65 years and over....	10.1	4.1	3.4	8.0	74.2	8.4	4.9	3.8	7.1	75.4
<i>Colored farmers.</i>										
Under 25 years.....	79.8	15.7	1.4	0.8	2.1	62.5	33.3	0.9	1.2	2.0
25 to 34 years.....	66.9	23.9	2.2	2.3	4.6	49.0	41.1	2.2	3.3	4.3
35 to 44 years.....	58.3	26.7	3.0	3.8	8.0	39.3	44.6	3.9	5.0	7.1
45 to 54 years.....	47.2	30.9	4.1	5.3	12.4	30.4	44.3	6.0	7.6	11.6
55 to 64 years.....	41.3	28.8	4.2	6.3	19.3	28.2	40.8	5.9	8.8	16.2
65 years and over....	37.7	26.2	3.7	5.7	26.6	25.5	37.9	4.5	8.7	23.5

¹ Percentages based on total number of farmers in age group, including managers, for which class no figures are presented in this table.

TABLE 33.—PER CENT DISTRIBUTION OF FARMERS IN EACH AGE GROUP BY TENURE, ARRANGED TO SHOW PROGRESSION FROM ONE TENURE TO ANOTHER, BY GEOGRAPHIC DIVISIONS: 1920 AND 1910—Continued.

[Bold-faced figures indicate the age group in which the tenure reaches its maximum importance.]

DIVISION AND AGE.	PER CENT DISTRIBUTION BY TENURE, 1920. ¹					PER CENT DISTRIBUTION BY TENURE, 1910. ¹				
	Share and share-cash tenants.	Cash and un-specified tenants.	Part owners.	Full owners, mortgaged.	Full owners, free.	Share and share-cash tenants.	Cash and un-specified tenants.	Part owners.	Full owners, mortgaged.	Full owners, free.
WEST										
SOUTH CENTRAL.										
<i>White farmers.</i>										
Under 25 years.....	71.6	6.8	5.5	6.0	9.3	68.8	11.4	4.4	4.3	10.5
25 to 34 years.....	54.7	7.3	8.1	13.6	15.5	49.5	11.1	8.2	10.7	19.9
35 to 44 years.....	40.1	6.3	9.7	18.0	25.3	35.3	9.3	10.5	15.0	29.3
45 to 54 years.....	31.3	5.2	9.6	19.4	33.9	27.3	8.3	9.8	15.7	38.3
55 to 64 years.....	22.9	4.5	7.6	18.1	46.5	21.7	7.0	7.8	14.3	48.8
65 years and over....	16.4	4.2	5.1	13.7	60.2	15.5	5.9	4.9	11.3	62.1
<i>Colored farmers.</i>										
Under 25 years.....	85.4	5.5	2.3	1.6	5.1	76.2	13.7	1.9	1.9	6.1
25 to 34 years.....	75.8	8.4	3.6	3.6	8.3	64.0	17.9	3.5	3.9	10.5
35 to 44 years.....	66.3	10.4	4.4	5.6	13.0	54.6	19.2	5.3	5.8	14.9
45 to 54 years.....	58.5	11.0	5.1	7.5	17.8	44.9	19.9	6.3	7.9	20.9
55 to 64 years.....	49.7	10.0	4.6	8.3	27.3	40.7	17.1	5.5	8.5	28.1
65 years and over....	42.2	9.4	3.7	7.4	37.2	36.1	15.8	3.8	7.4	36.8
MOUNTAIN.										
Under 25 years.....	26.2	8.6	12.2	17.7	31.2	12.4	6.8	6.9	7.0	64.5
25 to 34 years.....	14.7	6.4	17.6	30.0	29.1	8.7	6.0	9.8	13.0	60.4
35 to 44 years.....	10.2	5.6	17.5	34.6	30.4	5.9	5.1	9.8	18.2	59.3
45 to 54 years.....	7.6	4.6	15.3	32.8	38.5	4.5	4.1	9.0	18.6	62.6
55 to 64 years.....	5.2	3.4	12.0	30.3	47.9	3.5	3.2	7.1	16.0	69.2
65 years and over....	3.8	3.1	8.3	23.7	60.2	2.1	2.6	4.5	11.5	78.5
PACIFIC.										
Under 25 years.....	28.5	18.5	10.7	22.1	14.0	24.8	18.7	9.5	14.2	26.6
25 to 34 years.....	18.4	18.0	13.1	29.3	17.0	14.1	17.1	12.4	22.1	30.2
35 to 44 years.....	10.1	14.6	12.7	33.8	25.2	7.6	11.3	12.7	27.0	38.3
45 to 54 years.....	6.0	8.7	11.8	33.5	37.5	4.5	7.5	11.4	26.9	47.6
55 to 64 years.....	3.5	5.5	9.3	30.1	49.8	3.4	5.9	8.9	23.9	56.1
65 years and over....	2.3	4.4	6.1	24.2	61.4	2.0	4.3	6.1	18.1	68.3

¹ Percentages based on total number of farmers in age group, including managers, for which class no figures are presented in this table.

In every case, both for the United States as a whole and for the several divisions, the highest percentage of share tenants appears in the first age group (under 25 years).

For cash tenants the maximum percentage based on the United States totals falls in the second age group (from 25 to 34 years), though for a number of divisions the maximum falls, with that for share tenants, in the first group; and for the colored farmers in the Southern divisions it is uniformly in the fourth group (from 45 to 54 years).

The third tenure class shown in the table comprises the part owners—those owners who rent additional land (the additional land hired being somewhat less, in the aggregate, than the amount of land owned). For the United States and for most of the divisions (again excluding the southern colored farmers) the maximum percentage for this class falls in the third age group (from 35 to 44 years), coming in the second age group (from 25 to 34 years) only for the New England, Mountain, and Pacific divisions.

The fourth tenure class comprises full owners mortgaged; for the United States and for several of the divisions the maximum for full owners mortgaged falls in the same age group as that for part owners. In other divisions, however, including the Middle Atlantic, West North Central, West South Central, Mountain, and Pacific it falls in the next older group. Hence it may be assumed that the mortgaged full owner represents a later stage in the progress toward full and unencumbered ownership than does the part owner.

The final tenure class in the series, that of full owners free from mortgage, uniformly shows the highest percentage in the oldest group (65 years of age and over).

FARMERS BY AGE AND SIZE OF FARM.

It has already been shown that as farmers advance in age an increasing percentage of them become owners of the farms which they operate. There appear to be definite relations also between the age of the farmer and the size of the farm which he operates, though these relations are by no means uniform in the different parts of the country. At the census of 1910 the farmers in the several age groups were classified according to the size of the farms which they operated. A summary of the results of this classification is presented in Tables 34 and 35, which show for the United States and for the North, South, and West the number of farms in each size group classified according to the age of the farm operator, and the per cent distribution by size.

TABLE 34.—FARMERS BY AGE AND BY SIZE OF FARM, FOR THE NORTH, SOUTH, AND WEST: 1910.

SECTION AND AGE.	NUMBER OF FARMS.							
	Total.	Under 19 acres.	20 to 49 acres.	50 to 99 acres.	100 to 174 acres.	175 to 499 acres.	500 to 999 acres.	1,000 acres and over.
UNITED STATES.								
Total	6,361,502	839,166	1,414,376	1,438,069	1,516,286	978,175	125,295	50,135
Reporting age	6,339,476	831,082	1,410,385	1,434,942	1,512,413	976,051	124,871	49,732
Under 25 years	419,330	95,870	135,158	75,508	71,907	35,112	4,258	1,517
25 to 34 years	1,413,876	185,901	365,847	310,330	329,683	190,347	23,117	8,651
35 to 44 years	1,571,469	168,962	332,878	371,192	399,183	255,138	31,439	12,677
45 to 54 years	1,432,707	156,064	268,616	332,907	366,705	264,624	35,141	14,650
55 to 64 years	947,524	123,531	188,364	221,091	228,461	156,625	21,134	8,318
65 years and over ..	554,570	106,754	119,522	123,914	116,474	74,205	9,782	3,919
Not reporting age	22,026	8,084	3,991	3,127	3,873	2,124	424	403
THE NORTH.								
Total	2,890,618	276,042	401,332	699,417	852,051	582,778	64,313	14,685
Reporting age	2,880,078	272,375	399,823	697,587	850,107	581,446	64,143	14,597
Under 25 years	194,882	7,425	17,745	32,519	42,039	22,257	2,475	422
25 to 34 years	573,866	34,633	66,678	138,670	194,212	123,913	13,183	2,517
35 to 44 years	717,348	54,399	87,026	175,016	225,674	155,377	16,243	3,622
45 to 54 years	697,814	61,122	91,489	105,769	201,839	154,773	18,109	4,713
55 to 64 years	469,315	57,335	77,075	115,085	121,946	85,426	10,043	2,495
65 years and over ..	296,973	57,470	59,810	70,528	64,397	39,700	4,090	918
Not reporting age	10,540	3,667	1,509	1,830	1,944	1,332	170	88
THE SOUTH.								
Total	3,097,547	500,614	955,907	694,737	561,544	322,612	41,183	20,950
Reporting age	3,089,909	498,270	953,585	693,557	560,659	322,038	41,020	20,780
Under 25 years	278,233	86,710	115,419	41,316	23,801	9,222	1,083	682
25 to 34 years	762,109	141,463	288,589	163,055	110,245	49,476	5,863	3,418
35 to 44 years	756,499	99,717	230,628	184,069	147,216	80,124	9,731	5,014
45 to 54 years	641,962	73,279	162,033	155,554	141,739	91,837	11,656	5,864
55 to 64 years	422,883	55,228	101,950	99,377	92,680	61,459	8,346	3,843
65 years and over ..	228,223	41,873	54,966	50,186	44,978	29,920	4,341	1,959
Not reporting age	7,638	2,344	2,322	1,180	885	574	163	170
THE WEST.								
Total	373,337	62,510	57,137	43,915	102,691	72,785	19,799	14,500
Reporting age	369,489	60,437	56,977	43,798	101,647	72,567	19,708	14,355
Under 25 years	16,215	1,735	1,994	1,673	6,067	3,633	700	413
25 to 34 years	77,961	9,805	10,880	8,605	25,226	16,958	4,071	2,716
35 to 44 years	97,622	14,855	15,224	12,107	26,293	19,637	5,465	4,041
45 to 54 years	92,931	15,663	15,094	11,584	23,127	18,014	5,376	4,073
55 to 64 years	55,326	10,968	9,339	6,629	13,835	9,740	2,745	2,070
65 years and over ..	29,434	7,411	4,746	1,200	7,099	4,585	1,351	1,042
Not reporting age	3,848	2,073	160	117	1,044	218	91	145

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TABLE 35.—PER CENT DISTRIBUTION OF FARMERS IN EACH AGE GROUP, BY SIZE OF FARM, FOR THE NORTH, SOUTH, AND WEST: 1910.

[Maximum percentages for each size group in bold-faced figures.]

SECTION AND AGE.	Total.	Under 20 acres.	20 to 49 acres.	50 to 99 acres.	100 to 174 acres.	175 to 499 acres.	500 to 999 acres.	1,000 acres and over.
UNITED STATES.								
Total	100.00	13.19	22.23	22.60	23.83	15.38	1.97	0.79
Under 25 years	100.00	22.86	32.23	18.01	17.15	8.37	1.02	0.36
25 to 34 years	100.00	13.15	25.88	21.95	23.32	13.46	1.64	0.61
35 to 44 years	100.00	10.75	21.18	23.62	25.40	16.24	2.00	0.81
45 to 54 years	100.00	10.47	18.75	23.24	25.60	18.47	2.45	1.02
55 to 64 years	100.00	13.04	19.88	23.33	24.11	16.53	2.23	0.88
65 years and over	100.00	19.25	21.55	22.34	21.00	13.38	1.76	0.71
THE NORTH.								
Total	100.00	9.55	13.88	24.20	29.48	20.16	2.22	0.51
Under 25 years	100.00	5.95	14.21	26.04	33.66	17.82	1.98	0.34
25 to 34 years	100.00	6.04	11.62	24.17	33.85	21.59	2.30	0.44
35 to 44 years	100.00	7.58	12.13	24.40	31.46	21.66	2.26	0.50
45 to 54 years	100.00	8.76	13.11	23.75	28.92	22.18	2.60	0.68
55 to 64 years	100.00	12.22	16.42	24.52	25.98	18.20	2.14	0.51
65 years and over	100.00	19.36	20.14	23.75	21.69	13.37	1.38	0.31
THE SOUTH.								
Total	100.00	16.16	30.86	22.43	18.13	10.42	1.33	0.68
Under 25 years	100.00	31.16	41.48	14.85	8.55	3.31	0.39	0.25
25 to 34 years	100.00	18.56	37.87	21.39	14.47	6.49	0.77	0.45
35 to 44 years	100.00	13.18	30.49	24.33	19.46	10.59	1.29	0.66
45 to 54 years	100.00	11.41	25.24	24.23	22.08	14.31	1.82	0.91
55 to 64 years	100.00	13.06	24.11	23.50	21.92	14.53	1.97	0.91
65 years and over	100.00	18.35	24.08	21.99	19.71	13.11	1.90	0.86
THE WEST.								
Total	100.00	16.74	15.30	11.76	27.51	19.50	5.30	3.88
Under 25 years	100.00	10.70	12.30	10.32	37.42	22.41	4.32	2.55
25 to 34 years	100.00	12.58	13.57	11.04	32.36	21.75	5.22	3.48
35 to 44 years	100.00	15.22	15.59	12.40	26.93	20.12	5.60	4.14
45 to 54 years	100.00	16.85	16.24	12.47	24.89	19.38	5.78	4.38
55 to 64 years	100.00	19.82	16.88	11.98	25.01	17.60	4.96	3.74
65 years and over	100.00	25.18	16.12	10.87	24.12	15.58	4.59	3.54

The most significant way of interpreting these figures, perhaps, is to consider the percentages in the several columns as representing the relative importance of the different ages in the proprietorship of the farms in that size group. To facilitate comparisons on this basis, the maximum figure in each column has been printed in bold-faced type. Roughly, these bold-faced figures indicate the age group which is most important in the operation of the farms

of the given size—not absolutely, but in proportion to the number of farmers in the age group. In this respect it is more significant as an index of the progress of farmers in the acquisition of larger farms than would be a simple distribution of the farms in each size group according to the age of the operator; for this latter figure would be governed largely by the proportion of all farmers in the age group, and there would be no maximums for either the youngest or the oldest of the age groups, since these are numerically much smaller than the groups in the middle of the series.

The relation between the age of the farm operator and the size of the farm operated is shown most satisfactorily by the figures for the Southern States.

For the South, as a whole, 16.2 per cent of the farms in 1910 were under 20 acres in size; but among the farms operated by farmers under 25 years of age 31.2 per cent were under 20 acres, the minimum percentage for any age group being 11.4 for farmers 45 to 54 years of age. Again, while 30.9 per cent of the southern farms were between 20 and 49 acres in size, this size group represented 41.5 per cent of the farms operated by farmers under 25 years of age, with a constantly decreasing percentage in each successive age group up to 65 years and over, for which group the percentage was only 24.1. Among the larger sized farms, on the other hand, the situation was reversed. Farms from 175 to 499 acres in size, for example, formed 3.3 per cent of those operated by farmers under 25 years of age; 6.5 per cent of those operated by farmers from 25 to 34 years old; 10.6, 14.3, and 14.5 per cent, respectively, of those operated by the next three age groups; and 13.1 per cent of those operated by farmers 65 years of age and over. In the figures for the South, therefore, there appears a clear-cut, consistent relation between the age of the farmer and the size of the farm, the latter increasing from group to group up to the age group 55 to 64 years and showing, in general, a slight recession for the maximum age group 65 years and over.

Conditions in the North with respect to the two size groups comprising farms under 50 acres in size are radically different from those in the South, the relative importance of these small farms increasing generally with the increase in age. This may be explained in part by the importance of market gardens and residential farms. Beginning with the size group from 50 to 99 acres, however, the figures for this section indicate an increase in the size of the farms running along with the increase in age

up to the age group, 45 to 54 years, which represents the maximum percentage in the columns for the three groups comprising the largest sized farms.

In the West, except for the farms of 500 acres and over, the relation between age and size which prevails in the South is almost reversed, the older farmers holding large percentages of the farms in the smaller size groups, while the younger farmers, even the group under 25 years of age, hold large percentages of the farms between 100 and 499 acres in size. This is partly the result of the fact that among the farms last taken up under the homestead laws were considerable numbers of dry-land farms of large acreage. Some of the most productive and otherwise most desirable farms in the West, too, are fruit farms of relatively small area and irrigated farms devoted to other crops. These doubtless make up a considerable fraction of the small farms operated by farmers 45 years of age and older.

In general, then, while the correlations are not exact or uniform as concerns the different parts of the country, there is a satisfactory indication that the larger farms are operated by those farmers who have had considerable experience. In the totals for the United States, for example, farmers in the age group from 45 to 54 years, representing, perhaps, the most efficient period of a farmer's active service, show a larger percentage than any other age group for all of the groups of farms over 100 acres in size, and the farmers in the age group from 55 to 64 show percentages nearly as large.

XI.

THE AGRICULTURAL LADDER—FARM EXPERIENCE.

The object of the farm experience inquiries which were carried on the 1920 agricultural census schedule was threefold: First, to show what proportion of all farmers climb the so-called agricultural ladder, from wage hand to tenant and from tenant to owner; second, to show the average length of time spent in each of the preliminary stages; and, third, to show the relation between the age of the farmers and their status with regard to farm experience. The special inquiries, introduced for the first time in 1920, were as follows:

- How many years, if any, did you work on a farm for wages?
- How many years have you been or were you a tenant?
- How many years have you farmed as an owner?

Table 36 shows, by geographic divisions, the results of the first classification of the farm experience data for farm owners (owner-operators) and indicates the extent to which these men reported previous experience as tenant or wage hand. Because of the importance of age for another part of the classification, those schedules on which the age of the farmer was not reported were omitted entirely from the farm-experience tabulation. The figures in this and subsequent farm-experience tables represent, therefore, those cases where at least the age of the farmer and the number of years in his present (1920) tenure were reported, comprising about 90 per cent of the total number of farmers.

The total number of owners for whom age and farm experience were reported was 3,529,743. Of this number 724,801, or 20.5 per cent, reported experience as owner, tenant, and wage hand, covering the three stages of the agricultural ladder. In addition, 837,746 farm owners reported previous experience as tenant alone, making altogether 1,562,547 farm owners, or 44.3 per cent of the total number, who reported previous experience as tenant. Both of these groups, so far as tenant experience is concerned, may safely be regarded as having made complete reports, though some of the second group may have failed to report their experience as wage hand.¹ In spite of this qualification, however, the classifica-

¹ It is apparent from a study of the complete tabulation that many of the 1,468,557 farm owners who reported experience as owner only, at any rate, had actually had experience as wage hand or tenant—perhaps both—but failed to report it to the enumerator. (See discussion of this point on pages 105-107.)

tion of farmers according to the variety of farm experience which they report is significant, since the number of farmers reporting earlier experience in any form of tenure other than the present one may be taken without hesitation as a minimum, and used as such. It is important to know, for example, that out of each 100 farm owners in the United States at least 44 have previously operated a farm as tenant and at least 35 have worked on a farm for wages.

TABLE 36.—FARM OWNERS CLASSIFIED ACCORDING TO VARIETY OF FARM EXPERIENCE, BY GEOGRAPHIC DIVISIONS: 1920.

[Owners who did not report both age and number of years as owner are omitted from this table.]

DIVISION	FARM OWNERS REPORTING EXPERIENCE.					PER CENT OF TOTAL REPORTING PREVIOUS EXPERIENCE AS—		Per-centage of tenancy among all farmers.
	Total number.	Number reporting experience as—				Tenant.	Wage hand.	
		Owner, tenant, and wage hand.	Owner and tenant.	Owner and wage hand.	Owner only.			
UNITED STATES...	3,529,743	724,801	837,746	498,639	1,468,557	44.3	34.7	38.1
New England.....	124,288	10,792	7,274	32,214	74,008	14.5	34.6	7.4
Middle Atlantic.....	293,494	61,074	42,039	58,321	132,060	35.1	40.7	20.7
East North Central....	697,072	162,338	141,879	122,269	270,586	43.6	40.8	28.1
West North Central...	650,933	182,050	158,148	104,756	205,979	52.3	44.1	34.2
South Atlantic.....	542,469	73,966	127,961	50,479	290,063	37.2	22.9	46.8
East South Central....	475,101	77,692	157,237	28,101	212,071	49.4	22.3	49.7
West South Central...	409,584	89,805	150,337	27,451	141,991	58.6	28.6	52.9
Mountain.....	181,408	35,634	30,530	40,370	74,874	36.5	41.9	15.4
Pacific.....	155,394	31,450	22,341	34,678	66,925	34.6	42.6	20.1

In the last column of Table 36 is shown the percentage of tenancy among all farmers. Between this column and the column showing the percentage of owners reporting previous experience as tenant significant comparisons may be made. In the Mountain division, for example, where only 15.4 per cent of the farmers in 1920 were tenants, 36.5 per cent of the owners (or more than twice the tenancy percentage) reported previous experience as tenant. These figures, representing, so to speak, a very rapid "turnover," might indicate that a large percentage of the tenancy in this division was of the transitional variety, and that the time spent in the tenant stage was relatively short, though in this case it is probable that many of the men had had this tenant experience elsewhere before coming into the Mountain division. In the New England division, also, the percentage

of farm owners reporting experience as tenant was practically twice the percentage of tenancy, and in none of the other divisions outside the South was it less than one and one-half times as great. In two divisions of the South, however, the percentage of tenancy was greater than the percentage of owners who had been tenants, and in the third (the West South Central division) the percentage of tenancy was only a little smaller. In the South, then, the turnover from tenancy to ownership is not so rapid; or, rather, by reason of the existence of a larger class of permanent tenants, it applies to only a part of the whole number of farm tenants.

Table 37 introduces an additional element, namely, the classification according to number of years under present (1920) tenure and shows also for both owners and tenants the average age and the average number of years under the present form of tenure.

TABLE 37.—AVERAGE AGE OF FARM OWNERS AND TENANTS IN THE UNITED STATES, AND AVERAGE TIME UNDER PRESENT TENURE: 1920.

[Farmers who did not report both age and number of years as owner or tenant are omitted from this table.]

NUMBER OF YEARS UNDER PRESENT FORM OF TENURE.	OWNERS.			TENANTS.			PER CENT DISTRIBUTION.	
	Number.	Average age (years).	Average time as owner (years).	Number.	Average age (years).	Average time as tenant (years).	Owners.	Tenants.
Total.....	3,529,743	48.8	16.2	2,203,769	39.1	11.1	100.0	100.0
1 to 4 years.....	655,525	38.4	2.4	666,215	31.6	2.5	18.6	30.2
5 to 9 years.....	617,520	42.0	6.8	520,008	34.9	6.7	17.5	23.6
10 to 14 years.....	578,668	45.9	11.6	376,634	39.6	11.4	16.4	17.1
15 to 19 years.....	437,821	49.2	16.6	226,507	43.7	16.3	12.4	10.3
20 to 24 years.....	382,099	52.7	21.1	178,138	48.6	20.9	10.8	8.1
25 to 29 years.....	259,096	55.9	26.2	91,765	52.1	26.0	7.3	4.2
30 to 34 years.....	230,354	59.7	31.0	71,853	56.7	30.6	6.5	3.3
35 to 39 years.....	141,022	62.8	36.2	27,738	60.0	36.0	4.0	1.3
40 to 44 years.....	126,954	66.3	40.8	29,993	64.5	40.5	3.6	1.4
45 years and over.....	100,664	72.4	49.7	14,918	70.6	49.1	2.9	0.7

The average age of farm owners in 1920 was 48.8 years, while the average age of tenants was 39.1 years. The owners, on the average, had been farming as owners 16.2 years, or since the age of 32.6 years, while the tenants had been renting 11.1 years, or since the age of 28 years. Less than one-half of the tenants (46.2 per cent) had been renting for 10 years or more, while nearly two-thirds of the owners (63.9 per cent) had operated farms of their own 10 years or more.

For both owners and tenants the number who had been farming less than 5 years under their present form of tenure was greater than the number in any other 5-year group. This is what one might expect. If a uniform number of men began farming each year, then the number who started in any given past year would at the present time be equal to the number who started minus those who had since died or changed to some other occupation. Hence, the present number of owners who started as owners in any given past year would be less than the present number of those who started in any subsequent year.

The rapid fall in the number of tenants above the first group of 5 years of experience as tenants, as compared with the slower fall in the number of owners in the corresponding groups, would indicate that while more men may enter the ranks of the tenants each year than become owners, they tend to leave that class in a few years, while the owners remain. The average age of owners with less than 5 years of experience as owner was 38.4 years, while the average for tenants in the corresponding class was 31.6 years, or 6.8 years lower.

Table 38 gives for farm owners, grouped according to variety of farm experience and according to number of years of ownership, the average age and the average number of years of each kind of experience. In this table may be noted the effect of the general tendency to report periods of years as well as ages in round numbers; that is, to report "20 years," for example, not only where the number of years was exactly 20, but also where it was 21, 22, or even 23. The effect of this tendency is to make most of the averages shown in this table somewhat smaller than the true average. Since the variation from this source is in the same direction throughout, however, and is fairly uniform, it may be disregarded in any general discussion of the data.

A large proportion of the owners were reported as becoming owners without previous farm experience or with previous farm experience of only one kind. If the average age at beginning farm experience, which is shown in the table for the first group only, were computed for the fourth group, by subtracting the average total farm experience from the average age, it would appear that the farmers who reported experience as owner only were 30.8 years old, on the average, when they began farm work, as compared with 22.2 years for those who reported experience as wage hand, tenant, and owner.

TABLE 38.—AVERAGE AGE AND FARM EXPERIENCE OF FARM OWNERS IN THE UNITED STATES, CLASSIFIED ACCORDING TO NUMBER OF YEARS AS OWNER: 1920.

[Owners who did not report both age and number of years as owner are omitted from this table.]

NUMBER OF YEARS AS OWNER.	OWNERS REPORTING TIME AS—								
	Owner, tenant, and wage hand.						Owner and tenant.		
	Number.	Average present age (yrs.).	Average farm experience (years).				Average age at beginning farm work (yrs.).	Number.	Average age (yrs.).
			Total.	As owner.	As tenant.	As wage hand.			
Total.....	724,801	49.3	27.1	13.3	8.0	5.8	22.2	837,746	47.6
1 to 4 years.....	167,102	40.3	17.0	2.3	8.9	5.8	23.3	193,471	37.7
5 to 9 years.....	143,086	44.6	21.5	6.8	8.7	6.0	23.1	156,933	42.0
10 to 14 years.....	131,805	48.7	26.1	11.6	8.5	6.0	22.6	143,401	46.3
15 to 19 years.....	96,905	52.1	30.4	16.6	7.9	5.9	21.7	105,578	49.9
20 to 24 years.....	72,993	55.7	34.4	21.2	7.3	5.9	21.3	83,443	53.9
25 to 29 years.....	43,596	58.7	38.2	26.3	6.3	5.6	20.5	51,474	57.1
30 to 34 years.....	33,297	62.3	42.5	31.0	6.1	5.4	19.8	43,151	61.1
35 to 39 years.....	18,090	65.3	46.5	36.2	5.3	5.0	18.8	25,965	64.0
40 to 44 years.....	11,715	68.9	50.8	40.9	5.0	4.9	18.1	20,817	67.6
45 years and over.....	6,212	74.1	57.0	48.8	4.0	4.2	17.1	13,513	72.9

NUMBER OF YEARS AS OWNER.	OWNERS REPORTING TIME AS—										
	Owner and tenant—Continued.			Owner and wage hand.					Owner only.		
	Average farm experience (years).			Number.	Average (yrs.).	Average farm experience (years).			Number.	Average age (yrs.).	Average farm experience (yrs.) ¹
	Total.	As owner.	As tenant.			Total.	As owner.	As wage hand.			
Total.....	22.5	14.1	8.4	498,639	48.6	23.8	17.0	6.8	1,468,557	49.2	18.4
1 to 4 years.....	11.3	2.3	9.0	77,482	36.7	9.3	2.5	6.8	217,470	38.1	2.5
5 to 9 years.....	15.7	6.8	8.9	84,595	40.5	13.7	6.8	6.9	232,906	41.1	6.8
10 to 14 years.....	20.5	11.5	9.0	80,960	44.8	18.7	11.6	7.1	222,502	44.3	11.6
15 to 19 years.....	25.0	16.5	8.5	63,556	48.5	23.7	16.6	7.1	171,782	47.4	16.5
20 to 24 years.....	29.3	21.1	8.2	58,586	52.4	28.3	21.2	7.1	167,077	50.9	21.1
25 to 29 years.....	33.4	26.2	7.2	42,735	55.8	33.0	26.3	6.7	121,291	54.3	26.2
30 to 34 years.....	38.0	31.0	7.0	37,947	59.9	37.7	31.1	6.6	115,959	58.3	30.9
35 to 39 years.....	42.3	36.3	6.0	23,069	63.1	42.3	36.3	6.0	73,898	61.7	36.2
40 to 44 years.....	46.6	40.8	5.8	17,454	67.0	46.6	40.8	5.8	76,968	65.4	40.7
45 years and over..	53.8	48.9	4.9	12,255	73.2	54.7	49.4	5.3	68,704	72.0	50.1

¹ Number of years as owner, no other farm experience being reported.

While those men who actually became farm owners directly, without previous experience in farm work, would doubtless show a higher average age at beginning than those who began as farm hands working for wages, the difference would hardly be so great (nor the number of cases so large) as the figures in the table would indicate. On the other hand, if a part of the owners who had actually had previous experience as wage hand or tenant, or both, failed to report such previous experience, the higher apparent age at beginning would be explained. It seems probable, as already stated, that this is what took place; and while the average ages at beginning work, as computed in the same way for farm owners reporting only one form of previous experience—25.1 for those reporting owner and tenant and 24.8 for those reporting owner and wage hand—are not by any means as high as for those reporting experience as owner only, it is probable that there was some failure to report experience of another kind, even here.

A word of caution must be added with regard to the use of this table and other tables presenting data classified according to number of years as owner or tenant as a basis for what might be termed "historical" conclusions. It might appear, for example, that significant deductions could be made from the figures in Table 38 with regard to changes from decade to decade in the average age at which men began to work on farms for wages. This average age, as shown in the table, for farmers reporting experience of all three kinds was 23.3 years for owners of less than 5 years' standing, as against 17.1 years for those who had been owners 45 years and over.

It seems probable that the average age at beginning farm work for wages is higher, as a matter of fact, than it was 40 years ago, especially in view of the greater length of time which boys spend in school; but the difference in the computed average ages referred to can not be assumed to represent this increase. In fact, a careful study of the situation makes it clear that no conclusions of such historical nature can be drawn from the results of a single investigation, however reasonable the conclusions may seem.

In this case the fallacy lies in failing to take account of the effects of mortality. An investigation of the individual returns for the "1 to 4 years" group reveals a number of cases where farmers were 25, 30, 35, and even 40 years old when they began their farm experience. These cases, of course, contribute ma-

terially to the relatively high average age at beginning farm experience for this group. The "45 years and over" group doubtless had about the same proportion of such cases in the early stages of its owner experience, but most of these men, by reason of their greater age, have died in the intervening 40 years or more, leaving only those who started out as very young men; hence the average age at beginning is low for the present group, largely by reason of the mortality among those members of the original group who were relatively old when they began their farm experience.

Again, the group reporting 45 years of ownership and over shows a much lower average time spent as tenant than the group reporting less than 5 years of ownership. It seems probable that there has been some increase in the average time a man must spend as a tenant before he can acquire the ownership of a farm, since the price of farm land, even if computed in equivalent labor or commodity units rather than in dollars, is decidedly higher than it was 40 years ago. But, so far as concerns the difference in the average time shown for the several groups in the tables, that is due in part to the same cause which affects the average age at beginning farm work and in part to the way the classification is made. Of all the men who started in ownership at the same time as the survivors who make up the present "45 years and over" group those who had had a long prior experience as tenant are for the most part dead, by reason of their greater age; and among men of similar age, or of approximately the same date of beginning farm work, those who spent a long time as tenant have not yet had time to complete 45 years as owner and appear in an earlier group in the classification on this basis. For these two reasons, then, the men who would bring up the average time as tenant for the "45 years and over" group are not in the group; either they were so old when they started that they have now passed away, or they have not yet had time (after their long tenant experience) to attain the required 45 years of owner experience. The "1 to 4 years" group, on the other hand, still retains practically its original make-up, including many men of extended tenant experience who will die long before the 5 years which now forms the maximum limit of ownership in this group has become 45 years; nor will any new recruits be added to take their places. It is the inclusion of these older men, then, which is largely responsible for the higher average

number of years of tenant experience among those who have been farm owners less than 5 years.

For a number of reasons the data relating to experience as farm tenant appear to be more significant than those relating to experience as wage hand. The figures for farm owners reporting previous experience as tenant are therefore summarized in Table 39.

TABLE 39.—FARM OWNERS REPORTING PREVIOUS EXPERIENCE AS TENANT, CLASSIFIED ACCORDING TO NUMBER OF YEARS AS OWNER: 1920.

NUMBER OF YEARS AS OWNER.	FARM OWNERS REPORTING FARM EXPERIENCE AND AGE.				
	Total.	Reporting previous experience as tenant.			
		Total.		Tenant and wage hand.	Tenant only.
		Number.	Per cent.		
Total.....	3,529,743	1,562,547	44.3	724,801	837,746
r to 4 years.....	655,525	360,573	55.0	167,102	193,471
5 to 9 years.....	617,520	300,019	48.6	143,086	156,933
10 to 14 years.....	578,668	275,206	47.6	131,805	143,401
15 to 19 years.....	437,821	202,483	46.2	96,905	105,578
20 to 24 years.....	382,099	156,436	40.9	72,993	83,443
25 to 29 years.....	259,096	95,070	36.7	43,596	51,474
30 to 34 years.....	230,354	76,448	33.2	33,297	43,151
35 to 39 years.....	141,022	44,055	31.2	18,090	25,965
40 to 44 years.....	126,954	32,532	25.6	11,715	20,817
45 years and over.....	100,684	19,725	19.6	6,212	13,513

The table shows that 44.3 per cent of all farm owners reporting farm experience had been tenants before becoming owners. Taking the groups into which farmers are divided on the basis of length of experience as owner and reading from the bottom of the column upward, the proportion shows a continuous increase, from 19.6 per cent for the group comprising those who had been owners 45 years or more to 55 per cent for those who had been owners less than 5 years.

No historical inferences from this table are possible, however, for reasons already discussed in connection with the subject of average age. A person who became an owner 45 years ago and is still an owner would not be likely to have been a tenant before that. Had he been a tenant over 45 years ago he would probably now be dead or he would have been an owner less than 45 years and would, therefore, appear in a higher group in the table.

The operation of mortality and the natural limitations of the classification on the basis of number of years as owner, therefore, account largely for the rise in percentage from group to group.

MORTALITY AMONG TENANTS AND GRADUATION INTO OWNERSHIP.

Conclusions of especial interest can be drawn from the figures representing farm owners who have been such less than 10 years. Data of this kind are shown, by geographic divisions, in Table 40.

TABLE 40.—NUMBER AND PERCENTAGE OF FARM OWNERS OF LESS THAN 10 YEARS' STANDING WHO REPORTED PREVIOUS EXPERIENCE AS TENANT, BY GEOGRAPHIC DIVISIONS: 1920.

DIVISION.	FARM OWNERS REPORTING FARM EXPERIENCE WHO HAVE BEEN OWNERS LESS THAN 10 YEARS (1 TO 9 YEARS).			DIVISION.	FARM OWNERS REPORTING FARM EXPERIENCE WHO HAVE BEEN OWNERS LESS THAN 10 YEARS (1 TO 9 YEARS).		
	Total.	Reporting previous experience as tenant.			Total.	Reporting previous experience as tenant.	
		Number.	Per cent.			Number.	Per cent.
UNITED STATES.	1, 273, 045	660, 592	51. 9	South Atlantic.....	178, 721	84, 000	47. 0
New England.....	41, 607	7, 126	17. 1	East South Central..	154, 352	92, 512	59. 9
Middle Atlantic.....	110, 812	43, 530	39. 3	West South Central.	149, 958	100, 716	67. 1
East North Central..	250, 791	127, 915	51. 0	Mountain.....	89, 844	35, 423	39. 4
West North Central.	230, 177	145, 368	63. 1	Pacific.....	66, 783	24, 002	35. 9

According to this table at least 660,000 tenants became owners between 1910 and 1920 and were still owners at the end of the decade. This represents about 28 per cent of the total number of tenants at the beginning of the decade (2,354,676). It may be estimated, however, that of the tenants at the beginning of the decade 305,000 died before 1920 and, therefore, that about 33 per cent, or one-third, of those who lived had become owners by 1920. Of those who did not become owners we do not know how many were still tenants at the close of the decade or how many gave up farming or went into other occupations or possibly became farm laborers.

If we exclude the South from this comparison the percentages become 47 and 53.6, respectively. That is to say, the owners who had been tenants at some time during the preceding 10 years represent 47 per cent of the total number of tenants at the begin-

ning of the decade and 53.6 per cent of the 1920 survivors of those farmers who were tenants in 1910.

These statements are based on the assumption that all the tenants who had become owners by 1920 were included among the tenants enumerated in 1910, but of course this was not the case, as some of the tenants who had acquired farms by 1920 became tenants later than 1910; but since the total number of tenant farms increased but little during the decade it is probable that the greater number of these simply leased farms which had previously been leased and therefore took the place of previous tenants.

These interesting comparisons may be supplemented by certain data based on the numbers of farm owners and tenants in 1920 and 1910 classified according to age, in combination with mortality rates from the 1910 rural life tables, which are presented in Tables 41, 42, and 43.

TABLE 41.—NUMBER OF FARM OWNERS AND TENANTS IN THE UNITED STATES IN 1910 AND 1920, WITH ESTIMATED MORTALITY DURING THE DECADE AND INCREASE OVER 1910 SURVIVORS.¹

AGE IN 1910.	Number in 1910.	MORTALITY (ESTIMATED).		Survivors in 1920.	AGE IN 1920.	Number, census of 1920.	Increase over 1910 survivors. ²
		Decennial rate per 1,000.	Number.				
FARM OWNERS.							
Total.....	3,948,722	.....	864,469	3,084,253	.....	3,925,090	840,837
Under 25 years.....	97,690	49.3	4,816	92,874	Under 25 years....	87,400	87,400
25 to 34 years.....	620,961	60.8	37,782	583,179	25 to 34 years.....	561,442	468,568
35 to 44 years.....	969,859	83.1	80,595	889,264	35 to 44 years.....	938,174	354,995
45 to 54 years.....	1,036,493	145.4	150,706	885,787	45 to 54 years.....	1,021,445	132,181
55 years and over...	1,209,965	485.6	587,559	622,406	55 to 64 years.....	780,579	-105,208
Unknown.....	13,754	218.9	3,011	10,743	65 years and over..	483,994	-138,412
					Unknown.....	52,056	41,313
FARM TENANTS.							
Total.....	2,354,676	.....	305,653	2,049,023	.....	2,454,804	405,781
Under 25 years.....	316,820	49.3	15,619	301,201	Under 25 years....	290,796	290,796
25 to 34 years.....	777,215	60.2	46,788	730,427	25 to 34 years.....	753,595	452,394
35 to 44 years.....	585,398	83.1	48,647	536,751	35 to 44 years.....	630,588	-99,839
45 to 54 years.....	384,490	145.4	55,905	328,585	45 to 54 years.....	446,986	-89,765
55 years and over...	283,739	485.6	137,784	145,955	55 to 64 years.....	205,966	-122,619
Unknown.....	7,014	129.8	910	6,104	65 years and over..	96,562	-49,393
					Unknown.....	30,311	24,207

¹ Based on 1910 rural life tables for males.

² A minus sign (-) denotes decrease.

TABLE 42.—NUMBER OF WHITE FARM OWNERS AND TENANTS IN THE UNITED STATES IN 1910 AND 1920, WITH ESTIMATED MORTALITY DURING THE DECADE AND INCREASE OVER 1910 SURVIVORS.¹

AGE IN 1910.	Number in 1910.	MORTALITY (ESTIMATED).		Survivors in 1920.	AGE IN 1920.	Number, census of 1920.	Increase over 1910 survivors. ²
		Decennial rate per 1,000.	Number.				
FARM OWNERS.							
Total.....	3,797,501	.....	809,325	2,988,176	.....	3,691,868	793,692
Under 25 years.....	91,010	49.3	4,487	86,523	Under 25 years....	80,961	80,961
25 to 34 years.....	585,562	60.2	35,250	550,312	25 to 34 years.....	534,868	448,345
35 to 44 years.....	914,979	83.1	76,035	838,944	35 to 44 years.....	888,497	338,185
45 to 54 years.....	972,941	145.4	141,466	831,475	45 to 54 years.....	953,784	114,840
55 years and over...	1,131,942	485.6	549,671	582,271	55 to 64 years.....	734,795	-96,680
Unknown.....	11,067	218.3	2,416	8,651	65 years and over..	449,624	-132,647
.....	.....	.....	.....	.....	Unknown.....	49,339	40,688
FARM TENANTS.							
Total.....	1,676,558	.....	205,877	1,470,681	.....	1,740,363	269,682
Under 25 years.....	234,866	49.3	11,579	223,287	Under 25 years....	207,535	207,535
25 to 34 years.....	586,575	60.2	35,311	551,264	25 to 34 years.....	589,841	366,554
35 to 44 years.....	413,472	83.1	34,360	379,112	35 to 44 years.....	456,382	-94,882
45 to 54 years.....	259,392	145.4	37,716	221,676	45 to 54 years.....	279,275	-99,837
55 years and over...	177,866	485.6	86,372	91,494	55 to 64 years.....	131,096	-90,580
Unknown.....	4,387	122.9	539	3,848	65 years and over .	54,535	-36,959
.....	.....	.....	.....	.....	Unknown.....	21,699	17,851

¹ Based on 1920 rural life tables for white males.² A minus sign (-) denotes decrease.

The first of these three tables (Table 41) presents data for all farmers in the United States. It shows that farmers who were under 25 years old and owned their farms in 1910 numbered 97,690; that, according to estimates based on the mortality tables, 4,816 of them died before 1920, leaving 92,874 survivors; but in 1920 there were 561,442 farm owners, 25 to 34 years of age, which is the group into which those who were under 25 years old 10 years earlier would fall, so that to the group of owners in this period of life 468,568 were added during the decade. It is fairly clear, therefore, that either from the ranks of farm laborers or tenants, or from other occupations, 468,568 farm owners were recruited during the decade. Additions to the numbers of owners are shown also for those who were 25 to 34 and 35 to 44 years old in 1910. Only in the older age groups has the number declined, chiefly, it is to be presumed, through retirement of farmers or their transfer to other occupations.

TABLE 43.—NUMBER OF FARM OWNERS AND TENANTS IN THE UNITED STATES, EXCLUDING THE SOUTH, IN 1910 AND 1920, WITH ESTIMATED MORTALITY DURING THE DECADE AND INCREASE OVER 1910 SURVIVORS.¹

AGE IN 1910.	Number in 1910.	MORTALITY (ESTIMATED).		Survivors in 1920.	AGE IN 1920.	Number, census of 1920.	Increase over 1910 survivors. ²
		Decennial rate per 1,000.	Number.				
FARM OWNERS.							
Total.....	2,404,211		538,991	1,865,220		2,327,865	462,645
Under 25 years.....	48,172	49.3	2,375	45,797	Under 25 years.....	38,846	38,846
25 to 34 years.....	344,856	60.2	20,760	324,096	25 to 34 years.....	319,863	274,066
35 to 44 years.....	587,040	83.1	48,783	538,257	35 to 44 years.....	552,201	228,105
45 to 54 years.....	651,471	145.4	94,724	556,747	45 to 54 years.....	616,776	78,519
55 years and over....	761,727	485.6	369,895	391,832	55 to 64 years.....	484,429	-72,318
Unknown.....	10,945	224.2	2,454	8,491	65 years and over..	281,518	-110,314
					Unknown.....	34,232	25,741
FARM TENANTS.							
Total.....	817,924		99,949	717,975		863,683	145,708
Under 25 years.....	89,473	49.3	4,411	85,062	Under 25 years.....	76,343	76,343
25 to 34 years.....	295,708	60.2	17,801	277,907	25 to 34 years.....	316,545	231,483
35 to 44 years.....	216,136	83.1	17,961	198,175	35 to 44 years.....	238,056	-39,851
45 to 54 years.....	130,754	145.4	19,012	111,742	45 to 54 years.....	136,248	-61,927
55 years and over....	83,305	485.6	40,453	42,852	55 to 64 years.....	61,951	-49,791
Unknown.....	2,548	122.1	311	2,237	65 years and over..	22,430	-20,420
					Unknown.....	12,108	9,871

¹ Based on 1920 rural life tables for males. ² A minus sign (-) denotes decrease.

For tenants the story is different. Only in the youngest age group is a recruiting of tenant farmers to be noted, mainly, it is to be supposed, from the wage-hand class. In the older groups the number of tenants leaving this status is substantial, indicating that these tenants have succeeded in acquiring farms and have become owners or have left agriculture for other pursuits. That most of them are still farmers and now operate their own farms is suggested by the substantial additions to the ranks of farm owners in the corresponding age groups.

Substantially similar conclusions may be drawn from the figures shown for white farmers alone in Table 42 and for all farmers outside the Southern States¹ in Table 43.

¹ Because of the lack of dependable mortality statistics for the colored race in the South, separate tables have not been presented either for the South as a whole or for colored farmers as a separate class.

These tables point to the conclusion that tenancy in the United States, especially in the North, is largely a transitional status; that farm owners are constantly being recruited from the ranks of tenants and laborers; and that an agricultural career in the United States is essentially an economic ladder rather than a life of continuous endeavor on the same economic plane, without opportunity to rise above the status in which one began.

The general conclusions from the consideration of the age and tenure figures are that a reasonable proportion of tenancy is a normal and healthy condition of agriculture in a country that has reached a state of development where land is not overabundant; that there is no evidence of an alarming increase in tenancy; that the American farmer in a great majority of cases still spends the latter part of his life as an independent owner; and that the proportion who so finish out their lives is not materially diminishing.

XII.

THE AGRICULTURAL LADDER—SPECIAL SURVEYS.

Studies made by the Office of Farm Management of the Department of Agriculture show that most American farms change ownership about once in a generation, and a large number do so several times during the average business life of the ordinary man.¹ The percentage of farms that are acquired through inheritance is surprisingly small. An additional percentage of farms are purchased with capital derived from other industries, but the great majority of farms must be more or less completely recapitalized at least once each generation; that is, they must pay for themselves, either wholly or in part.² An indication of the proportion of American farms which must be thus recapitalized, or, in other words, must be made to pay for themselves either partly or wholly, may be found in the following data.

Studies made in three townships in Sedgwick County, Kans., showed that 5.9 per cent of the present owners acquired their farms through inheritance, 13.7 per cent obtained their land under the Homestead Act, and the remaining 80.4 per cent bought the farms they now own, three-fourths of them on deferred payments averaging 44 per cent of the total purchase price, the other one-fourth paying cash in full. In most of these latter cases the purchase money was obtained from the sale of other farms, though in a few cases it represented capital taken from other industries. The conditions under which approximately 60 per

¹ See *Farm Tenancy in the United States*, by W. J. Spillman and E. A. Goldenweiser, Yearbook of the Department of Agriculture, 1916.

² The statement that the great majority of farms must pay for themselves during each generation is subject to certain qualifications: First, where the land-owning class is already established, a fairly large fraction of the value of farms passes by inheritance from one generation to another. This fraction will be larger as the average size of farm families grows smaller and as a larger fraction of the whole number of children remain in agricultural pursuits. In the past 50 years the farm families have been relatively large, and the movement of population from the farms to the cities has been very rapid. In the coming 50 years the movement to the cities will doubtless be less rapid and the farm families will without question be smaller. Second, the proposition assumes that all mortgages are eventually paid off, leaving the farm free from debt. This has not been by any means the case even in times past, and in the future it is likely to be even less frequently the case as farmers lose their inherited fear of debt and learn to look upon a mortgage debt as representing capital legitimately borrowed for productive uses. With this change of attitude farmers will be content to operate on borrowed capital, just as railroads and manufacturing concerns are content to operate on permanently borrowed capital. Third, even where the farm mortgage is paid off after a period of years, it is very frequently paid, not out of the surplus profits of the farm, but out of the legitimate living expenses of the farmer and his family. The rapidity with which the mortgage may be paid off depends in many cases not so much on the profitableness of the farm as it does on the willingness of the farmer to skimp and get along on less than a reasonable allowance for the necessities and comforts of life.

cent of these farms were purchased require that, in order that full ownership may be acquired during the life of the present occupant, each of the farms must provide not only a living for the family upon it and interest on indebtedness, but an additional income that will enable the average purchaser during his occupancy to put aside 44 per cent of the purchase price.

Similar studies of five townships in a large agricultural county in Illinois gave the following results: 15.5 per cent of the present farm owners obtained their farms by inheritance; 69 per cent of them bought on deferred payments, the average mortgage given at the time of purchase representing 63 per cent of the purchase price; and 15.5 per cent paid cash for their farms at the time of purchase. In this case 69 per cent of the farms, in order that their present owners may during their occupancy obtain full title free from debt, must produce a living for the farmer's family, interest on the mortgage, and sufficient surplus to permit a saving of 63 per cent of the total purchase price.

In these studies a complete history of each farm owner was obtained, so far as possible. In the great majority of cases these men either began as hired men or worked on the home farm for several years after attaining maturity. In this way they obtained sufficient capital to become tenants. In the case of young men who stay on the home farm, the usual course is for the father, when the son marries, to establish him in business as a tenant. In other cases, after accumulating some capital out of their earnings, the young men start as tenants and aim to save enough to make the first payment on a farm, giving a mortgage for the balance. In the majority of cases these mortgages are slowly canceled, and the farmer reaches at an advanced period of life the status of an owner free from debt.

While this process of acquiring ownership proceeds in a normal manner, it is evident that a considerable proportion of the farmers operating at any particular time must be tenants, and the presence of tenant farming under such conditions represents a normal and healthful condition of agriculture. Not only that, but there will be a considerable proportion of mortgaged farms, and in so far as mortgages represent progress from tenancy to ownership, they are a desirable economic phenomenon.

XIII.

TYPES OF TENANCY.

The commonly accepted idea of farm tenure is that it is chiefly concerned with the distinction between farm ownership and farm tenancy—the status of the farm owner, operating his own farm, and that of the farm tenant, operating land hired from a landlord. As a matter of fact, the distinctions are by no means as simple as this; and instead of two clear-cut and readily definable tenure classes, there are at least nine classes for which statistics are available in the form of census figures. And within each one of the nine classes there are considerable variations in actual conditions, especially within the several classes of tenants. And when the cash tenants and the croppers, with all the intermediate classes, are consolidated into one group under the general title of “tenants,” the variation is of course very much greater.

Theoretically, the operator of a farm is the man who directs or controls the work which is done on the farm. As a matter of fact, not all farm operators are free to control their own activities. Sometimes the holder of a mortgage on an owner-operated farm, and very frequently the landlord-owner of a tenant farm, will insist that certain crops be raised or certain methods be followed which the nominal farm operator might not choose if left to himself. Indeed, among share tenants in some localities the supervision of the landlord is a most important factor in the operation of the farm. In most cases, to be sure, the landlord knows more about farming than the tenant does and doubtless the tenant's work under the landlord's direction is more productive than it would be without such direction. The direction is therefore actually profitable for the tenant (though he may not appreciate the fact) as well as for the landlord.

In cases where the supervision of the landlord is very complete, the status of the tenant approaches more nearly that of a farm laborer than it does that of an owner-operator or even that of the more independent cash tenant. At this end of the scale, then, it is significant to compare the conditions of croppers and other much-supervised share tenants with that of laborers working for fixed

wages. In other words, while tenancy in theory represents merely a method of holding possession of land, in practice it sometimes works out into a method of obtaining laborers to work on the land. For while the cotton-belt cropper has possession of his little 30-acre tract, his possession is hedged about with so many restrictions and so much supervision that it does not amount to very much more than the mere possession of a job.

The decennial census returns provide by far the most valuable source of information with regard to farm tenure in the United States, though of course it is not practicable for the census to do more than distinguish between certain broadly generalized classes of tenancy. Hence, the infinite variety of terms under which farm land is operated in the United States¹ are only roughly reflected in the census statistics. The questions on the 1920 farm schedule referring to tenure were as follows:

1. Do you *own* all of this farm? (Answer Yes or No.).....
2. Do you *rent* from others *part but not all* of this farm? (Answer Yes or No.).....
3. Do you *rent* from others *all* of this farm? (Answer Yes or No.).....
 - (a) If you rent *all* of this farm, what do you pay as rent?
 - (b) Does the person from whom you rent furnish *all* the work animals? (Answer Yes or No.).....
4. Do you operate this farm for others as a hired manager? (Answer Yes or No.)....

These questions are materially different in form from those asked in previous censuses, the chief difference being that all the questions except 3-a are to be answered "Yes" or "No." The classification of tenants according to character of tenancy was made in the Census Office, on the basis of these replies, instead of being left to the enumerator in the field, as was done in previous enumerations. The principle on which this method of ascertaining the type of tenancy is based, is that it is easier to classify material in a central office under trained supervision than to have it classified in the field by 70,000 or 80,000 untrained enumerators. The Census Bureau feels that this method has proved quite satisfactory, the number of farms for which the kind of tenancy was not determined being only a little more than one-half as great as in 1910, when the enumerators were required to report the tenure classification directly.

¹ Good descriptions of the different kinds of tenancy practiced in various parts of the United States may be found in H. C. Taylor's *Agricultural Economics* (1921), pp. 285-304.

The tenure classes used in the 1920 census were as follows:

Farm owners, comprising—

Full owners—Farmers operating their own land only.

Part owners—Farmers operating, in addition to their own land, some land hired from others.

Farm managers—Farmers operating a farm for the owner for wages or a salary.

Farm tenants, comprising—

Share tenants—Those who pay a certain share of the products, as one-half, one-third, or one-quarter, for the use of the farm, but furnish their own work animals.

Croppers—Share tenants whose work animals are furnished by their landlords.

Share-cash tenants—Those who pay a share of the products for a part of the land and cash for a part.

Cash tenants—Those who pay a cash rental, as \$7 per acre of crop land or \$500 for the use of the whole farm.

Standing renters—Those who pay a stated amount of farm products for the use of the farm, as 3 bales of cotton or 500 bushels of corn.

Unspecified—Those tenants for whom the character of the tenancy was not indicated on the schedule.

Two of the six classes of tenants were distinguished in 1920 for the first time, namely, "croppers," who are defined as share tenants whose work animals are furnished by their landlords; and "standing renters," who pay a stated amount of farm products for the use of the farm. These classes of tenants are important only in the South; hence, they are shown separately only for the Southern States. And in very many of the census tables, especially those giving comparative figures for earlier censuses, a condensed form of tenure classification is used.

Table 44 shows, by tenure, the number of farms, the acreage of land in farms, and the improved land, for 1920 and 1910, together with the percentage of increase. This table shows only three specific classes of tenants, croppers being included with share tenants, and standing renters with cash tenants. Table 45, however, shows for the Southern States alone, the full classification, including croppers and standing renters. Figure 12 shows, in graphic form, for the United States and for the North, South, and West, the tenure distribution of the number and acreage of farms.

Of the total number of farm operators (6,488,343) in 1920, 3,925,090 were owners, 68,449 were managers, and 2,454,804 were tenants. Of the owners, 3,366,510 were full owners (including 1,217,234 mortgaged and 2,149,276 free from mortgage), and 558,580 were part owners, renting land in addition to that which they owned. Of the tenants, the largest class comprised the share tenants, and the next largest the cash tenants, the number of share-cash tenants being relatively small.

TABLE 44.—NUMBER AND ACREAGE OF FARMS IN THE UNITED STATES, BY TENURE: 1920 AND 1910.

[Figures for 1920, by divisions and States, in Table 56.]

TENURE.	NUMBER OF FARMS.			ALL LAND IN FARMS (ACRES).		
	1920	1910	Per cent of increase. ¹	1920	1910	Per cent of increase. ¹
Total.....	6,448,343	6,361,503	1.4	955,883,715	878,798,325	8.8
Owners.....	3,925,090	3,948,722	-0.6	636,775,015	598,554,617	6.4
Owning entire farm.....	3,366,510	3,354,897	0.3	461,259,133	464,923,315	-0.8
Hiring additional land.....	558,580	593,825	-5.9	175,524,882	133,631,302	31.4
Managers.....	68,449	58,104	17.8	54,129,157	53,730,865	0.7
Tenants.....	2,454,804	2,354,676	4.3	264,979,543	226,512,843	17.0
Share ²	1,678,812	1,399,923	19.9	160,722,551	123,053,718	30.6
Share-cash.....	127,822	128,466	-0.5	24,334,428	19,389,868	25.5
Cash ²	585,005	712,294	-17.9	71,481,655	67,846,851	5.4
Unspecified.....	63,165	113,993	-44.6	8,449,909	16,222,406	-48.0

TENURE.	IMPROVED LAND IN FARMS (ACRES).			AVERAGE ACREAGE PER FARM.			
	1920	1910	Per cent of increase. ¹	All land.		Improved land.	
				1920	1910	1920	1910
Total.....	503,073,007	478,451,750	5.1	148.2	138.1	78.0	75.2
Owners.....	314,107,483	309,850,421	1.4	162.2	151.6	80.0	78.5
Owning entire farm.....	235,177,464	233,808,597	0.6	137.0	138.6	69.9	69.7
Hiring additional land.....	78,930,019	76,041,824	3.8	314.2	225.0	141.3	128.1
Managers.....	13,210,999	12,314,015	7.3	790.8	924.7	193.0	211.9
Tenants.....	175,754,525	156,287,314	12.5	107.9	96.2	71.6	66.4
Share ²	112,879,950	89,737,744	25.8	95.7	87.9	67.2	64.1
Share-cash.....	19,933,107	15,923,917	25.2	190.4	150.9	155.9	124.0
Cash ²	38,386,494	41,566,162	-7.6	122.2	95.3	65.6	58.4
Unspecified.....	4,554,974	9,059,491	-49.7	133.6	142.3	72.1	79.5

¹ A minus sign (—) denotes decrease.² Share tenants include croppers reported in the Southern States in 1920, and cash tenants likewise include standing renters.

The whole number of farms increased only 1.4 per cent between 1910 and 1920, the number of owners actually declining by a small amount (0.6 per cent), while the number of managers increased 17.8 per cent, and the number of tenants 4.3 per cent. The increase in the number of tenants was confined to the share tenants, however, the other classes all showing a decrease. This seems to indicate that the trend in the United States is toward share tenancy, under which the risk of the farming business is

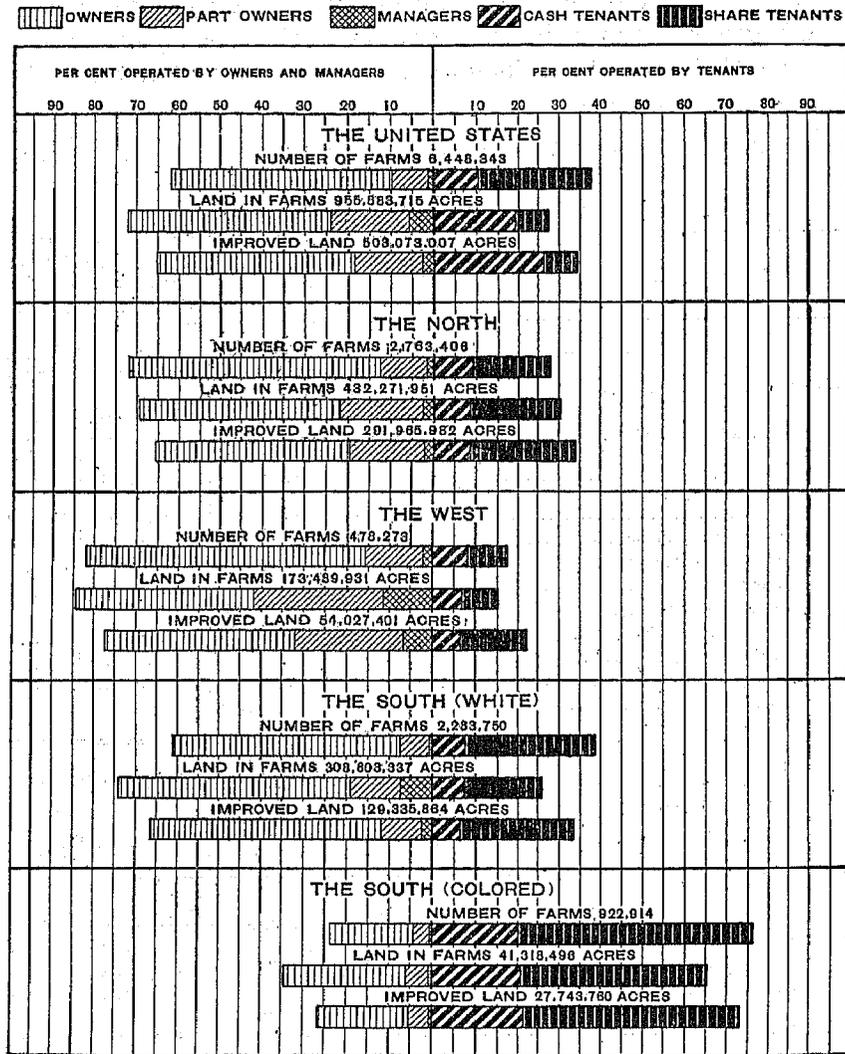
divided between the owner and the tenant. It should be noted, however, that while the share tenancy of the South is largely the tenancy of the cropper and "near cropper," the share tenancy of the North is of a more independent type—the tenancy of the man on the "ladder," who looks forward to becoming an owner in the course of a few years.

TABLE 45.—NUMBER AND ACREAGE OF FARMS IN THE SOUTH, WITH AVERAGES AND PERCENTAGES, BY TENURE: 1920.

[Figures for 1920, by divisions and States, in Table 56.]

TENURE.	Number of farms.	All land in farms (acres).	Improved land in farms (acres).	PER CENT DISTRIBUTION.	
				Number of farms.	Improved land.
THE SOUTH, total.....	3,206,664	350,121,833	157,079,624	100.0	100.0
Owners.....	1,597,225	220,601,656	89,545,302	49.8	57.0
Owning entire farm.....	1,450,762	181,653,185	76,490,551	51.9	48.7
Hiring additional land.....	191,463	38,948,471	13,054,751	6.0	8.3
Managers.....	18,318	22,441,164	3,494,283	0.6	2.2
Tenants.....	1,591,121	107,079,013	64,040,039	40.6	40.8
Share tenants, including croppers.....	1,212,315	73,428,165	48,565,911	37.8	30.9
Share tenants proper.....	651,224	50,897,112	31,907,797	20.3	20.3
Croppers.....	561,091	22,531,053	16,658,114	17.5	10.6
Share-cash tenants.....	22,672	2,116,471	1,416,438	0.7	0.9
Cash tenants, including standing renters.....	324,184	28,606,529	12,754,123	10.1	8.1
Cash tenants proper.....	219,188	22,219,722	8,765,026	6.8	5.6
Standing renters.....	104,996	6,386,807	3,989,097	3.3	2.5
Unspecified tenants.....	31,950	2,927,848	1,303,567	1.0	0.8

FIG. 12.—PER CENT DISTRIBUTION OF FARMS AND FARM ACREAGE, BY TENURE, FOR THE NORTH, SOUTH, AND WEST: 1920.



The total acreage of land in farms shows an increase of 8.8 per cent, and the acreage operated by share tenants, an increase of 30.6 per cent, which is exceeded, among the tenure classes, only by the increase of 31.4 per cent in the land operated by part owners (owners renting additional land).

Of the total number of white tenants in the South, 25.6 per cent were croppers and 53.5 per cent were share tenants other than croppers. Among the colored tenants, on the other hand, 47.4 per cent were croppers, as compared with 25.1 per cent other share tenants. The cropper system of tenancy thus appears to be of especial importance among the colored tenants. In absolute numbers there were 333,713 colored croppers as compared with 227,378 white croppers.

The average size of the farms operated by croppers was in each case much smaller than the average size of the farms operated by other share tenants. This is largely due to the fact that the croppers are chiefly cotton farmers. The limiting factor on the size of their farms is the amount of cotton a family can pick, and that is usually not more than 25 acres. In the case of the colored croppers the average size of farm was 30.4 acres, of which 25.5 acres were improved land; while among the white croppers the average size of farm was 54.5 acres, of which 35.9 were improved.

The standing renters, defined as "renters giving a certain specified amount of a crop for the use of their land," seem to be confined chiefly to the colored farmers, as there were 77,924 standing renters among the colored farmers, and only 27,072 among the white farmers. Among the colored tenants, the standing renters reported somewhat larger farms, the average being 55.6 acres, as compared with 40 acres for the tenants paying a cash rental; while among the white tenants the farms of the cash tenants were twice as large as those of the standing renters.

The croppers in the South numbered 561,091, or 35.3 per cent of all the tenants. They cultivated only 21 per cent of the total tenant-operated land, however, and only 26 per cent of the improved land. The croppers rent mainly ground devoted to the production of crops, largely cotton, and the percentage of their land that was improved was 73.9, the highest for any class. It is of interest to note that the average size of all the croppers' farms was 40.2 acres, so that the old idea of "40 acres and a mule" seems to be realized but not exceeded.

Tenure conditions in the South differ considerably as between the white farmers and the colored farmers. Table 46 gives the principal data relating to each class of tenants in the South, by color.

TABLE 46.—NUMBER AND ACREAGE OF TENANT FARMS IN THE SOUTH, WITH AVERAGES AND PERCENTAGES, BY COLOR AND FORM OF TENANCY: 1920.

COLOR AND TENURE.	Number of farms.	All land in farms (acres).	Improved land in farms (acres).	PER CENT DISTRIBUTION.	
				All land.	Improved land.
WHITE TENANTS	887,566	80,204,960	43,692,738	54.5	
Share tenants, including croppers.....	701,891	55,472,862	34,436,595	62.1	
Share tenants proper.....	474,513	43,082,592	26,275,314	61.0	
Croppers.....	227,378	12,390,270	8,161,281	65.9	
Share-cash tenants.....	14,465	1,844,801	1,179,861	64.0	
Cash tenants, including standing renters.....	145,985	20,264,957	6,969,701	34.4	
Cash tenants proper.....	118,913	18,209,123	5,852,029	32.1	
Standing renters.....	27,072	2,055,834	1,117,672	54.4	
Unspecified tenants.....	25,225	2,622,340	1,106,581	42.2	
COLORED TENANTS	703,555	26,874,053	20,347,301	75.7	
Share tenants, including croppers.....	510,424	17,955,303	14,129,316	78.7	
Share tenants proper.....	176,711	7,814,520	5,632,483	72.1	
Croppers.....	333,713	10,140,783	8,496,833	83.8	
Share-cash tenants.....	8,207	271,670	236,577	87.1	
Cash tenants, including standing renters.....	178,199	8,341,572	5,784,422	69.3	
Cash tenants proper.....	100,275	4,010,599	2,912,997	72.6	
Standing renters.....	77,924	4,330,973	2,871,425	66.3	
Unspecified tenants.....	6,725	305,508	196,986	64.5	

COLOR AND TENURE.	AVERAGE ACREAGE PER FARM.		PER CENT DISTRIBUTION.		
	All land.	Improved land.	Number of farms.	All land.	Improved land.
WHITE TENANTS	90.4	49.2	100.0	100.0	100.0
Share tenants, including croppers.....	79.0	49.1	79.1	69.2	78.8
Share tenants proper.....	90.8	55.4	53.5	53.7	60.1
Croppers.....	54.5	35.9	25.6	15.4	18.7
Share-cash tenants.....	127.5	81.6	1.6	2.3	2.7
Cash tenants, including standing renters.....	138.8	47.7	16.5	25.3	16.0
Cash tenants proper.....	153.1	49.2	13.4	22.7	13.4
Standing renters.....	75.9	41.3	3.1	2.6	2.6
Unspecified tenants.....	104.0	43.9	2.8	3.3	2.5
COLORED TENANTS	38.2	28.9	100.0	100.0	100.0
Share tenants, including croppers.....	35.2	27.7	72.5	66.8	69.4
Share tenants proper.....	44.2	31.9	25.1	29.1	27.7
Croppers.....	30.4	25.5	47.4	37.7	41.8
Share-cash tenants.....	33.1	28.8	1.2	1.0	1.2
Cash tenants, including standing renters.....	46.8	32.5	25.3	31.0	28.4
Cash tenants proper.....	40.0	29.1	14.3	14.9	14.3
Standing renters.....	55.6	36.8	11.1	16.1	14.1
Unspecified tenants.....	45.4	29.3	1.0	1.1	1.0

Table 47 shows the value of farm property in 1920, by tenure, in detail, for the North, South, and West, while Table 48 shows the value of land and buildings and the average value of each class of farm property per farm, also for the detailed tenure classification.

TABLE 47.—VALUE OF ALL FARM PROPERTY AND OF THE SEVERAL CLASSES, BY TENURE (DETAILED CLASSIFICATION), FOR THE NORTH, SOUTH, AND WEST: 1920.

SECTION AND TENURE.	All farm property.	Land alone.	Buildings.	Implements and machinery.	Live stock.
UNITED STATES.					
Total	\$77,924, 100, 338	\$54, 829, 563, 059	\$11,486,439,543	\$3, 594, 772, 928	\$8, 013, 324, 808
Owners	47, 611, 545, 944	31, 984, 781, 634	7, 879, 441, 273	2, 447, 792, 781	5, 299, 530, 256
Owning entire farm	36, 837, 394, 179	24, 058, 745, 303	6, 651, 975, 461	1, 958, 178, 820	4, 168, 494, 595
Hiring additional land	10, 774, 151, 765	7, 926, 036, 331	1, 227, 465, 812	489, 613, 961	1, 131, 035, 661
Managers	3, 132, 273, 005	2, 207, 651, 020	457, 565, 445	103, 773, 702	363, 282, 838
Tenants	27, 180, 281, 389	20, 637, 130, 405	3, 149, 432, 825	1, 043, 206, 445	2, 350, 511, 714
Share	15, 157, 085, 982	11, 360, 487, 099	1, 861, 186, 242	594, 777, 370	1, 340, 635, 271
Share-cash	4, 030, 760, 602	3, 346, 643, 058	322, 098, 724	132, 613, 385	229, 405, 435
Cash	7, 320, 236, 819	5, 442, 946, 372	875, 301, 124	289, 853, 058	712, 136, 265
Unspecified	672, 197, 986	487, 053, 876	90, 846, 735	25, 962, 632	68, 334, 743
THE NORTH.					
Total	50, 359, 500, 915	35, 536, 020, 183	7, 790, 722, 995	2, 400, 554, 930	4, 632, 202, 807
Owners	30, 512, 416, 412	20, 447, 789, 495	5, 367, 044, 320	1, 621, 195, 137	3, 076, 387, 460
Owning entire farm	23, 090, 105, 456	14, 948, 886, 849	4, 464, 628, 967	1, 279, 409, 779	2, 397, 179, 861
Hiring additional land	7, 422, 310, 956	5, 498, 902, 646	902, 415, 353	341, 785, 358	679, 207, 599
Managers	1, 429, 669, 832	936, 621, 596	301, 890, 462	53, 838, 598	137, 319, 176
Tenants	18, 417, 414, 671	14, 151, 609, 092	2, 121, 788, 213	725, 521, 195	1, 418, 496, 171
Share	8, 960, 688, 399	6, 718, 771, 314	1, 122, 115, 749	375, 088, 101	744, 713, 235
Share-cash	3, 780, 472, 019	3, 153, 027, 979	298, 626, 372	122, 577, 823	206, 239, 845
Cash	5, 210, 912, 732	3, 936, 820, 625	636, 672, 140	209, 548, 148	427, 871, 879
Unspecified	465, 341, 521	342, 989, 174	64, 373, 952	18, 307, 123	39, 671, 272
THE SOUTH.					
Total	18, 174, 450, 024	12, 324, 882, 751	2, 831, 772, 156	771, 144, 533	2, 246, 650, 584
Owners	10, 605, 235, 862	6, 852, 424, 081	1, 847, 456, 083	508, 825, 552	1, 396, 530, 146
Owning entire farm	9, 099, 251, 139	5, 815, 704, 511	1, 659, 672, 272	444, 294, 872	1, 179, 579, 484
Hiring additional land	1, 505, 984, 723	1, 036, 719, 570	187, 783, 811	64, 530, 680	216, 950, 662
Managers	796, 894, 078	574, 160, 283	95, 236, 202	25, 531, 088	101, 966, 505
Tenants	6, 772, 320, 084	4, 898, 298, 387	889, 079, 871	236, 787, 893	748, 153, 933
Share, including croppers	5, 054, 014, 420	3, 709, 004, 584	662, 693, 651	170, 813, 044	511, 503, 141
Share tenants proper	3, 392, 565, 740	2, 457, 932, 861	436, 172, 517	127, 395, 972	371, 064, 390
Croppers	1, 661, 448, 680	1, 251, 071, 723	226, 521, 134	43, 417, 072	140, 438, 751
Share-cash	181, 370, 964	136, 869, 249	19, 220, 682	6, 754, 459	18, 526, 574
Cash, including stand- ing renters	1, 396, 245, 905	956, 784, 441	185, 902, 327	54, 187, 659	199, 371, 478
Cash tenants proper	1, 027, 195, 230	705, 656, 622	131, 601, 478	38, 020, 019	151, 917, 111
Standing renters	369, 050, 675	251, 127, 819	54, 300, 849	16, 167, 640	47, 454, 367
Unspecified	140, 688, 795	95, 640, 113	21, 263, 211	5, 032, 731	18, 752, 740

TABLE 47.—VALUE OF ALL FARM PROPERTY AND OF THE SEVERAL CLASSES, BY TENURE (DETAILED CLASSIFICATION), FOR THE NORTH, SOUTH, AND WEST: 1920—Continued.

SECTION AND TENURE.	All farm property.	Land alone.	Buildings.	Implements and machinery.	Live stock.
THE WEST.					
Total.....	\$9,390,149,399	\$6,968,660,125	\$863,944,392	\$423,073,465	\$1,134,471,417
Owners.....	6,493,893,670	4,684,568,058	664,940,870	317,772,092	826,612,650
Owning entire farm.....	4,648,037,584	3,294,153,943	527,674,222	234,474,169	591,735,250
Hiring additional land.....	1,845,856,086	1,390,414,115	137,266,648	83,297,923	234,877,400
Managers.....	905,709,095	696,869,141	60,438,781	24,404,016	123,997,157
Tenants.....	1,990,546,634	1,587,222,926	138,564,741	80,897,357	183,861,610
Share.....	1,142,383,163	932,711,201	76,376,842	48,876,225	84,418,895
Share-cash.....	68,917,619	56,745,830	4,251,670	3,281,103	4,639,016
Cash.....	713,078,182	549,341,306	52,726,657	26,117,251	84,892,668
Unspecified.....	66,167,670	48,424,589	5,209,572	2,622,778	9,910,731

TABLE 48.—VALUE OF LAND AND BUILDINGS, AND AVERAGE VALUE OF ALL CLASSES OF PROPERTY PER FARM, BY TENURE (DETAILED CLASSIFICATION), FOR THE NORTH, SOUTH, AND WEST: 1920.

SECTION AND TENURE.	Value of land and buildings.	AVERAGE VALUE PER FARM.					
		All farm property.	Land and buildings.			Implements and machinery.	Live stock.
			Total.	Land alone.	Buildings.		
UNITED STATES.							
Total.....	\$66,316,002,602	\$12,084	\$10,284	\$8,503	\$1,781	\$557	\$1,243
Owners.....	39,864,222,907	12,130	10,156	8,149	2,007	624	1,350
Owning entire farm.....	30,710,720,764	10,942	9,122	7,146	1,976	582	1,238
Hiring additional land.....	9,153,502,143	19,288	16,387	14,190	2,197	877	2,025
Managers.....	2,665,216,465	45,761	38,937	32,252	6,685	1,516	5,307
Tenants.....	23,786,563,230	11,072	9,690	8,407	1,283	425	958
Share.....	13,221,673,341	9,028	7,876	6,767	1,109	354	799
Share-cash.....	3,668,741,782	31,534	28,702	26,182	2,520	1,037	1,795
Cash.....	6,318,247,496	12,513	10,800	9,304	1,496	495	1,217
Unspecified.....	577,900,611	10,642	9,149	7,711	1,438	411	1,082
THE NORTH.							
Total.....	43,326,743,178	18,224	15,679	12,860	2,819	869	1,676
Owners.....	25,814,833,815	15,686	13,271	10,512	2,759	833	1,582
Owning entire farm.....	19,413,515,816	14,065	11,826	9,106	2,720	779	1,460
Hiring additional land.....	6,401,317,999	24,450	21,087	18,114	2,973	1,126	2,237
Managers.....	1,238,512,058	36,675	31,771	24,027	7,744	1,381	3,523

TABLE 48.—VALUE OF LAND AND BUILDINGS, AND AVERAGE VALUE OF ALL CLASSES OF PROPERTY PER FARM, BY TENURE (DETAILED CLASSIFICATION), FOR THE NORTH, SOUTH, AND WEST: 1920—Continued.

SECTION AND TENURE.	Value of land and buildings.	AVERAGE VALUE PER FARM.					Live stock.
		All farm prop-erty.	Land and buildings.			Imple-ments and ma-chin-ery.	
			Total.	Land alone.	Build-ings.		
THE NORTH—continued.							
Tenants.....	\$16, 273, 397, 305	\$23, 636	\$20, 884	\$18, 161	\$2, 723	\$931	\$1, 820
Share.....	7, 840, 887, 063	21, 191	18, 543	15, 889	2, 654	887	1, 761
Share-cash.....	3, 451, 654, 351	36, 677	33, 487	30, 590	2, 897	1, 189	2, 001
Cash.....	4, 573, 492, 765	23, 112	20, 285	17, 461	2, 824	929	1, 898
Unspecified.....	407, 363 126	16, 726	14, 642	12, 328	2, 314	658	1, 426
THE SOUTH.							
Total.....	15, 156, 654, 907	5, 668	4, 727	3, 844	883	240	701
Owners.....	8, 699, 880, 164	6, 640	5, 447	4, 290	1, 157	319	874
Owning entire farm.....	7, 475, 376, 783	6, 473	5, 318	4, 137	1, 181	316	839
Hiring additional land.....	1, 224, 503, 381	7, 866	6, 396	5, 415	981	337	1, 133
Managers.....	669, 396, 485	43, 593	36, 543	31, 344	5, 199	1, 394	5, 566
Tenants.....	5, 787, 378, 258	4, 256	3, 637	3, 079	559	149	470
Share, including croppers.....	4, 371, 698, 235	4, 169	3, 606	3, 059	547	141	422
Share tenants proper.....	2, 894, 105, 378	5, 210	4, 444	3, 774	670	196	570
Croppers.....	1, 477, 592, 857	2, 961	2, 633	2, 230	404	77	250
Share-cash.....	156, 089, 931	8, 000	6, 885	6, 037	848	298	817
Cash, including stand. renters.....	1, 142, 686, 768	4, 307	3, 525	2, 951	573	167	614
Cash tenants proper.....	837, 258, 100	4, 686	3, 820	3, 219	600	173	693
Standing renters.....	305, 428, 668	3, 515	2, 909	2, 392	517	154	452
Unspecified.....	116, 903, 324	4, 403	3, 659	2, 993	666	158	587
THE WEST.							
Total.....	7, 832, 604, 517	19, 633	16, 377	14, 570	1, 806	885	2, 372
Owners.....	5, 349, 508, 928	16, 970	13, 980	12, 242	1, 738	830	2, 160
Owning entire farm.....	3, 821, 828, 165	14, 566	11, 977	10, 323	1, 654	735	1, 854
Hiring additional land.....	1, 527, 680, 763	29, 045	24, 039	21, 879	2, 100	1, 311	3, 696
Managers.....	757, 307, 922	81, 237	67, 926	62, 505	5, 421	2, 189	11, 122
Tenants.....	1, 725, 787, 667	23, 567	20, 432	18, 791	1, 640	958	2, 177
Share.....	1, 009, 088, 043	26, 179	23, 124	21, 374	1, 750	1, 120	1, 935
Share-cash.....	60, 997, 500	33, 213	29, 396	27, 347	2, 049	1, 581	2, 236
Cash.....	602, 067, 963	20, 167	17, 028	15, 537	1, 491	739	2, 401
Unspecified.....	53, 634, 161	19, 495	15, 803	14, 268	1, 535	773	2, 920

Table 48, in particular, which presents averages per farm, brings out in a striking manner both the significance of the more detailed tenure classification and the necessity of taking separately for analysis the three great sections of the country—the North,

the South, and the West. The average value of land and buildings per farm for all tenant farms in the United States was \$9,690, as compared with an average of \$10,156 for all farms operated by owners. The average for farms operated by full owners, however (omitting those which included some hired land in addition to that owned by the operator), was only \$9,122, or considerably less than the average value of the tenant farms, even for the United States as a whole.

For the North alone, the average value of farms operated by full owners was \$11,826, while the average value of tenant farms was \$20,884, or one and three-fourths times as much. The part-owner farms in this section showed an average value of \$21,087, or a little more than the tenant farms. In all of the four kinds of property for which separate figures are presented, namely, land, buildings, implements and machinery, and live stock, the average for the tenant farms was higher than the average for the farms of the full owners in this section.

In the South, however, the average value of land and buildings per farm for the tenant farms was only \$3,637, as compared with \$5,318 for farms operated by full owners; and even omitting the croppers, the average for the remaining tenants was only \$4,184, or decidedly less than the average for owner-operated farms.

In the West, the relations were similar to those shown for the North, the average value of tenant farms approaching a figure double the average for farms operated by full owners.

In all three sections, the highest averages by far are shown for farms operated by hired managers, and the next highest for the share-cash tenant farms. Both of these groups, however, are relatively small in number. As between the two most important classes of tenants, the share tenants and the cash tenants, the cash tenants showed the higher averages in the North for all classes of farm property, in the South for buildings, implements and machinery, and live stock, and in the West for live stock alone.

TERMS UNDER WHICH FARMS ARE LEASED.

A study of land contracts in typical counties of the wheat belt, made by E. A. Boeger, in 1917,¹ describes six different methods of renting land in the wheat area, comprising North and South Dakota, Nebraska, Kansas, Oklahoma, Minnesota, Idaho, and Missouri.

¹ See Department of Agriculture Bulletin 850, *Land Contracts in Typical Counties of the Wheat Belt*, by E. A. Boeger.

The first method is called the "one-third share" method, under which the landlord receives one-third of the grain and furnishes land, dwelling, barn and other farm structures, fences, material for repairs, skilled help for making repairs, and grass seed, and also pays the real estate and road taxes. The tenant furnishes labor, work stock, machinery and tools, and seed grain, and pays for the twine and the expense for threshing.

The second method is called the "one-half share" method, where the landlord receives one-half of the crop and, in addition to furnishing what he does under the one-third share system, supplies all the stock and the seed grain, pays one-half of the threshing-machine bill, and sometimes pays for half the twine.

The third method is called the "two-fifths share method," where the landlord receives two-fifths of the crop and both the landlord and the tenant contribute the same as under the system in which the landlord receives one-third; that is, the only difference between this method and the one-third share method is that the landlord receives a larger share of the products. The reason for this better bargain is probably that the land is more productive.

Another method is designated "one-half share of both crops and stock," when the crops and stock are divided equally between the landlord and tenant. The landlord, in addition to what he contributes under the system in which he receives one-third, owns one-half of the productive stock, except poultry, and bears one-half of the general farm expenses, except those for labor and repairs to machinery, while the tenant supplies all labor, owns all the work stock and farm machinery, keeps the machinery in repair, and owns one-half of the productive stock. Under this system each of the contracting parties gets one-half of all farm sales, except those from poultry or work stock, all of which go to the tenant. When farms are rented for a share of crops and stock, the lease provides whether the tenant's work stock may or may not be fed from the grain and hay owned in common and used to feed the other stock.

Another method is the "two-thirds share method," where the landlord receives two-thirds of the crop and supplies everything but man labor, that being the tenant's only contribution. Under this system the tenant receives one-third of the grain only, while the landlord receives two-thirds of the proceeds from the sale of grain and all the proceeds from the sale of stock.

A few of the farms in the wheat belt are rented for cash, the cash rent system thus forming a sixth class or method of renting. In addition to these six types of tenancy, there are many modifications and exceptions which increase the complexity of the system.

Another example may be quoted for dairy farms in Green County, Wis., and Kane County, Ill., based on a study made in 1915.¹ Two important types of tenure in this region are described. The most common system is the half-and-half system, under which the landlord furnishes land, buildings, a part of the seed and fertilizer, and one-half of the productive stock, while the tenant furnishes horses, machinery, one-half of the productive stock, one-half of the seed, and sometimes one-half of the fertilizer. All stock on these farms is fed usually from the grain and hay owned in common, and if feed of any kind is bought its cost is shared equally by landlord and tenant. In general, each party pays the taxes on all property owned by him, including the farm road tax, though in many cases in the North Central States all the farm road tax is worked out by the tenant. Under this system the poultry is frequently owned by the tenant, who gets all the proceeds therefrom; but with this exception each party receives one-half of the proceeds of farm sales of all products.

In the best dairy regions of Illinois, from which milk is shipped to the Chicago market, the landlord in most cases owns all the cows, the tenant bearing one-half of the loss by death and paying one-half of the net cost when cows are sold and others purchased to keep up the herd.

Less frequently dairy farms are share rented on the one-third and two-thirds system, under which the landlord supplies everything but the man labor, which is furnished by the tenant. The landlord, under this system, gets two-thirds of the sales of all products and the tenant one-third, and in case feed and concentrates are purchased the tenant pays one-third of the cost.

One could mention a vast variety of methods of renting land, but one more illustration will suffice. This refers to the Yazoo-Mississippi Delta.² In the investigation of this region, which included many large cotton plantations, there were three principal systems of renting land, namely, share cropping, share renting, and cash renting. The principal features of these three systems are shown in the following statement:

¹ See Department of Agriculture Bulletin No. 603, *A Study of Share-rented Dairy Farms in Green County, Wis., and Kane County, Ill.*, by E. A. Boeger.

² See Department of Agriculture Bulletin No. 337, *A Study of the Tenant Systems of Farming in the Yazoo-Mississippi Delta*, by E. A. Boeger and E. A. Goldenweiser.

	Share cropping.	Share renting.	Cash renting.
Landlord furnishes ...	Land. House or cabin. Fuel. Tools. Work stock. Feed for work stock. Seed. One-half of fertilizer.	Land. House or cabin. Fuel. One-fourth or one-third of fertilizer.	Land. House or cabin. Fuel.
Tenant furnishes.....	Labor. One-half of fertilizer.	Labor. Work stock. Feed for work stock. Tools. Seed. Three-fourths or two-thirds of fertilizer.	Labor. Work stock. Feed for work stock. Tools. Seed. Fertilizer.
Landlord receives.....	One-half of the crop.	One-fourth or one-third of the crop.	Fixed amount in cash or lint cotton.
Tenant receives.....	One-half of the crop.	Three-fourths or two-thirds of the crop.	Entire crop less fixed amount.

In connection with this study the interesting point brought out was that the proceeds of the landlords and the tenants were at least approximately in proportion to the risks they assumed. This fact is brought out by the data in Tables 49 and 50 and illustrated by Figures 13 and 14.

TABLE 49.—INCOME ON LANDLORD'S INVESTMENT, IN RELATION TO TENANT'S LABOR INCOME: YAZOO-MISSISSIPPI DELTA, 1913.

CLASS OF TENANTS.	All tenants.	LABOR INCOME.						
		Deficit.	Under \$100.	\$100 to \$299.	\$300 to \$499.	\$500 to \$699.	\$700 to \$999.	\$1,000 and over.
NUMBER OF TENANTS IN EACH LABOR-INCOME GROUP.								
All tenants.....	878	18	35	299	332	101	62	31
Share croppers.....	445	1	12	180	204	38	8	2
Share renters.....	136	4	7	41	48	18	14	4
Cash renters.....	297	13	16	78	80	45	40	25
AVERAGE RATE OF RETURN ON LANDLORD'S INVESTMENT ON HOLDINGS OF TENANTS IN EACH LABOR-INCOME GROUP.								
All tenants.....	10.6	7.0	5.5	8.2	12.7	13.2	9.6	10.2
Share croppers.....	13.6	1.1	3.1	8.7	15.5	19.8	18.2	25.7
Share renters.....	11.8	7.1	8.0	9.2	12.4	13.3	14.8	16.6
Cash renters.....	6.6	8.0	5.7	6.8	6.7	6.4	6.0	7.1

FIG. 13.—RETURN ON LANDLORD'S INVESTMENT, IN RELATION TO TENANT'S LABOR INCOME; YAZOO-MISSISSIPPI DELTA, 1913.

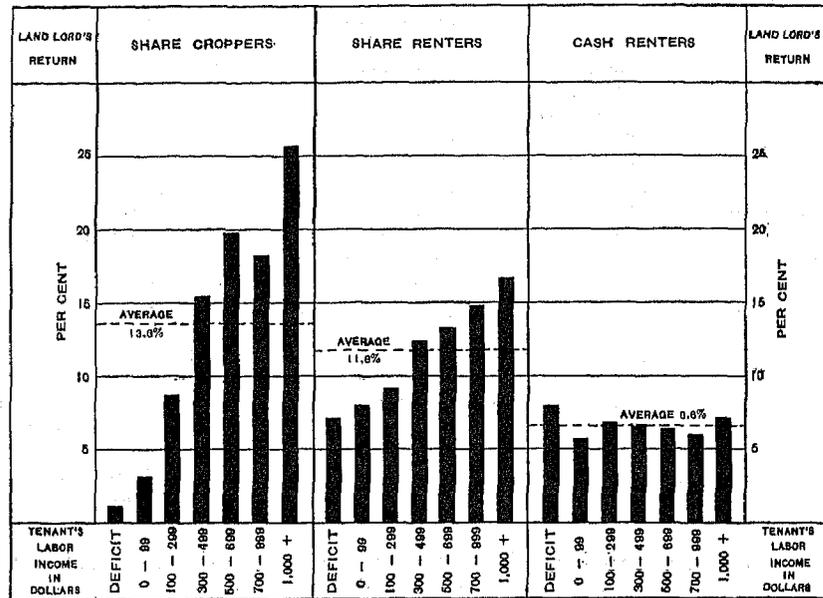


FIG. 14.—PERCENTAGE OF TENANTS IN EACH LABOR-INCOME GROUP; YAZOO-MISSISSIPPI DELTA, 1913.

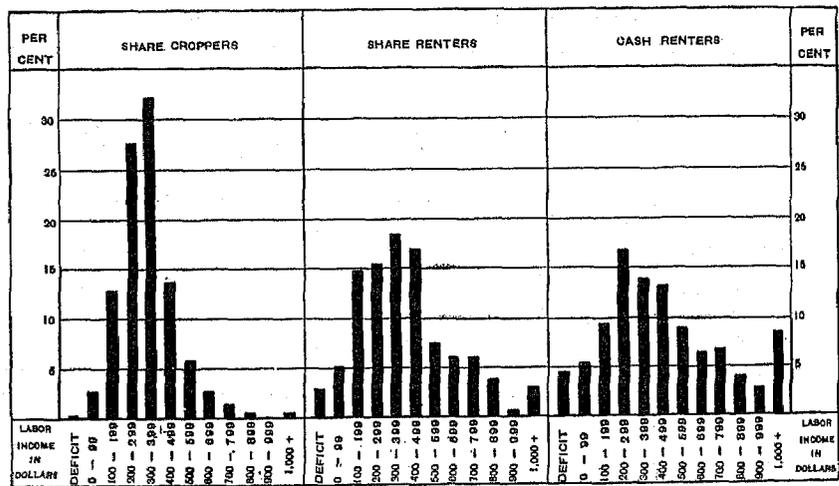


TABLE 50.—LABOR INCOME, IN RELATION TO METHOD OF RENTING: YAZOO-MISSISSIPPI DELTA, 1913.

CLASS OF TENANTS.	Total.	LABOR INCOME.											
		Defi- cit.	Un- der \$100.	\$100 to \$199.	\$200 to \$299.	\$300 to \$399.	\$400 to \$499.	\$500 to \$599.	\$600 to \$699.	\$700 to \$799.	\$800 to \$899.	\$900 to \$999.	\$1,000 and over.
NUMBER HAVING EACH INCOME.													
All tenants.....	878	18	35	105	194	209	123	62	39	34	19	9	31
Share croppers.....	445	1	12	57	123	143	61	26	12	6	2	.....	2
Share renters.....	136	4	7	20	21	25	23	10	8	8	5	1	4
Cash renters.....	297	13	16	28	50	41	39	26	19	20	12	8	25
PER CENT HAVING EACH INCOME.													
All tenants.....	100.0	2.0	4.0	12.0	22.1	23.8	14.0	7.1	4.4	3.9	2.2	1.0	3.5
Share croppers.....	100.0	0.2	2.7	12.8	27.6	32.1	13.7	5.8	2.7	1.4	0.5	.....	0.5
Share renters.....	100.0	2.9	5.1	14.7	15.4	18.4	16.9	7.4	5.9	5.9	3.7	0.7	2.9
Cash renters.....	100.0	4.4	5.4	9.4	16.8	13.8	13.1	8.8	6.4	6.7	4.0	2.7	8.4
AVERAGE INCOME FOR EACH INCOME GROUP.													
All tenants.....	\$392	\$64	\$63	\$156	\$249	\$345	\$447	\$542	\$649	\$746	\$857	\$950	\$1,344
Share croppers.....	333	126	68	162	250	342	447	536	648	752	887	.....	1,455
Share renters.....	398	77	62	154	256	348	447	542	626	750	847	910	1,220
Cash renters.....	478	56	59	146	245	354	448	547	656	743	856	956	1,355

The principal facts brought out by this study are summarized as follows: The share cropping system is the safest for the tenant. A share cropper is practically assured of average wages for his work, but he rarely makes a large income. The share renter fails more frequently to make even a bare living, but has a better chance for making a good income than has the share cropper. The cash renter runs still greater risk of failure, but also has the greatest opportunity of receiving a labor income of a thousand dollars or more. The average labor income for share croppers was \$333, for share renters \$398, and for cash renters \$478, the average for that particular year thus varying directly with the risk.

From the point of view of the landlord the matter is reversed. He is assured a return of between 6 and 7 per cent on his investment where the land is operated by cash renters, no matter what the yield or the tenant's labor income may be. Where the land is worked by share croppers or share renters, the landlord's rate of return often falls below 6 per cent, but when the yield is good and the tenant makes a good income, the landlord's rate sometimes rises to more than three times that amount. It appears that the landlord can make more money on the average when he rents his land on some system of shares. The average rate of return received by the landlord from share croppers was 13.6 per cent, from share renters 11.8 per cent, and from cash renters 6.6 per cent. Again the returns vary directly with the risk.

XIV.

STABILITY OF TENURE.

It has already been stated that the most undesirable feature of tenancy in the United States lies in the fact that tenants do not stay long enough on their farms. To work out that form of lease which will be conducive to the best results is one of the most important problems confronting American agriculture. Much work is being done along this line, and much more work will need to be done before the problem will be adequately solved. The desirability of having tenants stay longer on their farms is fully recognized by all students of the problem, and it is also understood that it does not necessarily mean that the leases should be for long periods of time. In some cases annual leases make for longer occupancy than do long-term leases. When the tenant and the owner know that they must please each other from year to year, they make an effort to act in a satisfactory manner, if the relationship is agreeable. On the other hand, a tenant who has a lease for two or three years may think that the best thing for him to do is to get the maximum returns out of the land during that period and look for another location at the expiration of his lease. While there is much information on the general subject, most of it is not of a statistical nature.

Tables 51 and 52 show, respectively, by geographic divisions, for white and colored tenants, the number and the percentage of tenants in each of four groups based on the number of years they had been on the farms which they were operating in 1920—namely, less than 2 years, 2 years but less than 5 years, 5 years but less than 10 years, and 10 years and over.

It will be noted that 44.8 per cent of the white tenants had been on the farm less than two years, while the number who had been on the farm five years or more was only about one-fourth of the total. The proportion of tenants who had been on the same farm two years or less was much larger in the South than in the other sections of the country, and the number who had been on the farm five years or more was somewhat smaller in that section. The figures for the Mountain and Pacific divisions are not so significant, in view of the fact that tenancy there has developed

largely within recent years. The figures do not indicate any very material difference between white and colored tenants in regard to stability of tenure, though in each of the Southern divisions the colored tenants show a smaller percentage reporting less than 2 years on the farm than do the white tenants, and a larger percentage reporting 10 years and over.

TABLE 51.—FARM TENANTS CLASSIFIED ACCORDING TO NUMBER OF YEARS ON FARM, BY GEOGRAPHIC DIVISIONS: 1920.

COLOR AND DIVISION.	REPORTING NUMBER OF YEARS ON FARM.					Not reporting number of years on farm.
	Total.	Less than 2 years.	2 to 4 years.	5 to 9 years.	10 years and over.	
ALL TENANTS.						
UNITED STATES.....	2,318,292	1,006,783	722,829	337,552	251,128	136,512
New England.....	11,092	3,938	3,211	1,980	1,963	510
Middle Atlantic.....	84,828	28,064	26,440	15,819	14,505	3,362
East North Central.....	295,562	92,888	94,063	59,557	49,054	8,845
West North Central.....	364,331	136,347	121,747	64,934	41,303	10,688
South Atlantic.....	501,748	222,828	155,381	68,327	55,212	40,340
East South Central.....	489,459	231,000	147,736	61,204	49,519	32,827
West South Central.....	490,432	253,288	147,867	55,256	34,021	36,315
Mountain.....	35,480	17,999	11,665	3,902	1,914	1,998
Pacific.....	45,360	20,431	14,719	6,573	3,637	1,627
WHITE TENANTS.						
UNITED STATES.....	1,648,936	738,785	495,850	242,055	172,246	91,427
New England.....	11,058	3,930	3,197	1,973	1,958	509
Middle Atlantic.....	84,378	27,926	26,273	15,729	14,450	3,341
East North Central.....	294,275	92,472	93,605	59,360	48,838	8,820
West North Central.....	362,458	135,668	121,109	64,645	41,036	10,602
South Atlantic.....	240,483	116,392	69,118	31,029	23,944	21,393
East South Central.....	253,594	121,044	67,627	26,352	18,571	17,407
West South Central.....	328,512	185,469	91,211	33,502	18,330	26,177
Mountain.....	34,649	17,686	11,346	3,780	1,837	1,771
Pacific.....	39,529	18,198	12,364	5,185	3,282	1,417
COLORED TENANTS.						
UNITED STATES.....	669,356	267,998	226,979	95,497	78,882	45,085
New England.....	34	8	14	7	5	1
Middle Atlantic.....	450	138	167	90	55	21
East North Central.....	1,287	416	458	197	216	35
West North Central.....	1,873	679	638	289	267	86
South Atlantic.....	261,265	106,436	86,263	37,298	31,268	18,947
East South Central.....	235,865	89,956	80,109	34,852	30,948	15,420
West South Central.....	161,920	67,819	56,656	21,754	15,691	10,138
Mountain.....	831	373	379	122	77	227
Pacific.....	5,831	2,233	2,355	888	355	210

TABLE 52.—PER CENT DISTRIBUTION OF WHITE AND COLORED TENANTS BY NUMBER OF YEARS ON FARM, BY GEOGRAPHIC DIVISIONS: 1920.

[Percentages based on number of farmers reporting number of years on farm.]

DIVISION.	ALL TENANTS.				WHITE TENANTS.				COLORED TENANTS.			
	Less than 2 years.	2 to 4 years.	5 to 9 years.	10 years and over.	Less than 2 years.	2 to 4 years.	5 to 9 years.	10 years and over.	Less than 2 years.	2 to 4 years.	5 to 9 years.	10 years and over.
UNITED STATES.....	43.4	31.2	14.6	10.8	44.8	30.1	14.7	10.4	40.0	33.9	14.3	11.8
New England.....	35.5	28.9	17.9	17.7	35.5	28.9	17.8	17.7	23.5	41.2	20.6	14.7
Middle Atlantic.....	33.1	31.2	18.6	17.1	33.1	31.1	18.6	17.1	30.7	37.1	20.0	12.2
East North Central.....	31.4	31.8	20.2	16.6	31.4	31.8	20.2	16.6	32.3	35.6	15.3	16.8
West North Central.....	37.4	33.4	17.8	11.3	37.4	33.4	17.8	11.3	36.3	34.1	15.4	14.3
South Atlantic.....	44.4	31.0	13.6	11.0	48.4	28.7	12.9	10.0	40.7	33.0	14.3	12.0
East South Central.....	47.2	30.2	12.5	10.1	55.6	26.7	10.4	7.3	38.1	34.0	14.8	13.1
West South Central.....	51.6	30.2	11.3	6.9	56.5	27.8	10.2	5.6	41.9	35.0	13.4	9.7
Mountain.....	50.7	32.9	11.0	5.4	51.0	32.7	10.9	5.3	37.7	38.4	14.7	9.3
Pacific.....	45.0	32.4	14.5	8.0	46.0	31.3	14.4	8.3	38.3	40.4	15.2	6.1

XV.

CONCLUSION.

The farm operator, under present American conditions, enters into production in several different ways, and it is difficult to make a clear-cut economic analysis of his activities. Primarily, he is manager of that unit of farm business which is represented by his farm; usually he also furnishes the major part of the labor required for carrying on that business; and in the case of the farm owner, he furnishes all or a large part of the capital employed, including that which is invested in the land. These are the usual or typical relations. The hired manager and the cropper, however, furnish none of the capital employed in their farming operations; and the cropper at least works under the close supervision of the landlord, so that only in a very limited sense can it be said that he contributes to the management of the farm. In fact, the cropper's main contribution—and in many cases his sole contribution—is his labor; and yet, because he has nominal control of the area of land which he works, he is counted as a farm operator. At the other extreme is the farmer who owns his farm, free from mortgage, and thus has absolute control of its operation. He may hire all of the labor required, and limit his own contribution to that of capitalist and manager, in which case he is only one step removed from the landlord renting his land to tenants who operate the farm under his supervision.

From the status of the full owner, free from mortgage, there are two frequent variations: First, that represented by the owner of a mortgaged farm, who borrows a part of the capital invested in his farming business; and second, that of the part owner, who finds it profitable to hire other land, in addition to that which he owns. In neither of these cases is there usually any sacrifice of freedom in managing the farming enterprise.

The hired manager, of course, is expected to provide the detailed management of the farm, and perhaps also his own labor. The only variation in his status will depend upon the extent to which the owner will direct the general plan of operations. The manager has no investment in the farm and often no direct interest in what the farm produces, though his compensation and his chances for advancement are dependent, in the final analysis, on his success in making the farm a paying enterprise.

Among those farmers who are classified as tenants, there is even greater variation in actual working conditions than among the owner-operators. The status of the cropper, who furnishes practically nothing except his own (and his family's) labor, and who is only nominally in charge of the farming operations, has already been noted. At the other extreme is the large scale tenant (found most frequently in the corn belt) who performs little manual labor himself, but devotes his whole energies to the management of the relatively large farm enterprise which he is able to control, through hiring the land and investing his whole available capital in stock and equipment. An American economist, recently investigating the conditions of farm labor in England, asked a prosperous tenant whose farm he was inspecting if he actually worked on the farm himself. The tenant, somewhat indignant, replied: "When my time is not worth more than five bob a day, I'll quit farming." This tenant, except that he found it more profitable (vastly more profitable under English conditions of stable tenure and low rent) to hire land than to buy it, was working under conditions almost identical with those pertaining to the American owner-operator. English tenancy, though, is generally cash tenancy, while in the United States, the present trend is decidedly away from cash tenancy and toward share tenancy, under which there is less—often decidedly less—freedom of action for the tenant.

It should not be understood that tenancy always carries with it the detailed supervision of the landlord. For while certain phases of the farm operation—the crops to be grown, for example—are usually specified in the lease contract, the farmer in many cases is left otherwise largely to his own resources. Yet, taking the whole number of share tenants, even in the corn belt, where they are probably the most independent of supervision, there is evidence that the supervision of the landlord—usually a more experienced and skillful farmer—is of considerable value to the tenant. Numerous experimental tabulations of data from the 1920 farm census indicate that the share tenant obtains slightly higher yields per acre than the cash tenant, in spite of the fact that, theoretically, the cash tenant should work his land more intensively, since he gets for himself the whole of the increase above that required to pay the fixed rent, while the share tenant gets only a part of any increased production.

The essential relation between the farm operator and the farm is that the farmer should be assured of the control of the land, at a reasonable cost, over a relatively long period of time. The fault with tenancy under present American conditions is that the farmer usually has no assurance of long-time tenure. The fault with ownership is that the cost is not reasonable, either with regard to absolute amount or with regard to initial demands at the time when the farmer's capital is limited.

It has been shown (see Chapter VII) that the desire for speculative profits is largely responsible for both of these faults. One of the main reasons why the landlord is not willing to give the tenant farmer a long-time lease lies in the fact that he wishes to be in a position to sell the farm at any time when a high price is offered. This he could not do, if the farm were tied up under a long-time lease. And so far as concerns the purchase price of land, the expectation of speculative profits has been capitalized in many localities to such an extent that the current market price is far beyond the amount on which the rental-income will pay a fair rate of interest. The values of farms in the United States rented for cash were so high in 1920, that the rent paid represented an income of only a little over $3\frac{1}{2}$ per cent on the valuation. Such a valuation makes it extremely difficult for a would-be farmer to acquire ownership; and without doubt, the high valuation is based mainly on the expectation of a further increase in price—on the speculative element in land ownership.

It seems only reasonable, then, to assume that the increase in the price of farm land has been one of the causes for the increase in tenancy; and the figures for the four decades from 1880, when the farm census data were first tabulated by tenure, to the present, show a fairly consistent relation between the percentage of tenancy and the rate of increase in the value of farm land per acre. It appears, then, that as the attainment of ownership becomes more difficult, men turn more and more frequently to tenancy as a means of obtaining a farm on which to work. Tenancy is recruited, then, not directly from the owner class, to any great extent, but rather from the class of farm laborers, who become tenants instead of becoming owners, or who spend a longer period in tenancy as an intermediate stage between the status of wage hand and that of farm owner.

For in all parts of the country, along with a more or less extensive class of what might be termed permanent tenants, are to be found considerable numbers of tenants who look forward confidently to the time when they will become owners. These are the men for whom tenancy represents one of the stages on the agricultural ladder—an intermediate stage between working as a farm hand for wages and the ownership of a farm. In the North and West, the tenants for whom tenancy is thus a stepping stone to ownership are especially important and numerous, while in the South, particularly among the colored farmers, permanent tenancy—under which the tenant expects always to remain a tenant—is more common.

It seems probable that even in the North the class of permanent tenants is gradually, though slowly, increasing. This fact, perhaps more than any other single result of the analysis of the census statistics relative to farm tenancy, emphasizes the necessity for improvement in the form of tenant contracts employed in connection with the rented farms of the United States.

If it is less expensive for the farmer to hire a farm than it is to buy one, as it certainly is in very many cases, with present prices and present rental charges, then those disadvantages placed by social attitude and customary practice upon the tenant farmer ought to be removed, in the interest of the farmers as a class.

Tenancy appears to be largely stabilized already in many of the older settled parts of the country, showing little increase or decrease. Any change that would improve the social status of the tenant and make his tenure less uncertain, would doubtless bring with it an increase in the percentage of tenancy; but an increase in tenancy brought about by any improvement in the conditions of tenancy could hardly be looked upon as an evil.

The idea of starting with nothing and making it into something was the typical idea of pioneer days. The original settlers in what is now the great agricultural section of the country took a piece of wilderness or prairie and made it into a farm; and for a generation or two the supply of new locations in the farther wilderness or the more distant prairie was such that the established farms did not attain a very great capital value, as compared with their annual production. But the pioneer days are now of the past; and the present-day idea is to take something of

value—costly materials or opportunities—and proceed to increase the value, or to make it productive of additional value.

In this change from the pioneer idea, the importance of capital (using the term in a broad sense, to include the land as well as the buildings, stock, and equipment) has grown from a position almost negligible to a position where it dominates the other productive elements. Hence we find that the problems of farm tenancy (and the related problems of farm credit), which are concerned with the methods by which a new farm operator may obtain the possession of those initial values which he needs, have become more and more important. And with this changing situation—for the change is still going on—comes the need, growing more and more urgent, for a new attitude toward farm tenancy, based less on inherited judgments and more on an exact analysis of the economic advantages or disadvantages of ownership and tenancy.