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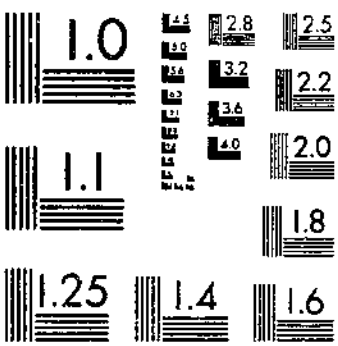

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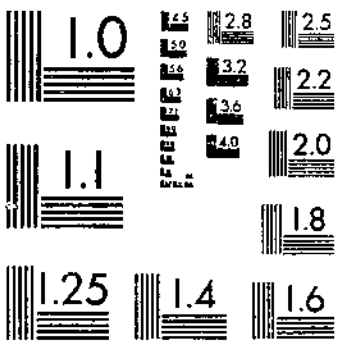

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TECHNICAL BULLETIN No. 172 FEBRUARY, 1930

UNITED STATES DEPARTMENT OF AGRICULTURE
WASHINGTON, D. C.

TAXATION OF FARM PROPERTY[1]

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CONTENTS

KINDS OF TAXES PAID BY AGRICULTURE

An understanding of the kinds of taxes paid by farm owners and operators must form the beginning of any attempt to analyze the present farm tax situation. The general property tax provides the basis for the support of the local units of government and is by far the most important factor in the tax burden of the farm owners. Although many factors of the tax systems vary among the 48 States, in each of them the general property tax stands as the primary source of revenue for the local units. It is a well-known fact that in most sections of the country, the general property tax has become almost wholly a tax on tangible property. For these reasons the major portion of the support of local governmental functions is in the first instance borne by those who possess tangible property. The effects of this on owners of such property will be shown by the figures which appear in a later portion of this bulletin.

Second in importance to the general property tax, so far as the farmer is concerned, are the taxes on automobiles. In general, these are three in number. The first is technically and actually a part of

[1] The material in this bulletin is a summary of the research work in farm taxation which has been carried on during the past eight years. Although the greater portion of this work has been done by the division of agricultural finance of the Bureau of Agricultural Economics, either independently or in cooperation with the State agricultural experiment stations and other State groups, no attempt has been made to restrict the material here used to the results of such investigations. An attempt has been made to acknowledge in the body of the bulletin the source of all material used. The author wishes here to acknowledge his indebtedness to those who by their investigations in various parts of the country have made possiblethis summarization of the work accomplished. Special acknowledgment should be made of the criticisms and suggestions of Eric Englund, who has read the manuscript and discussed many phases of it with the author. Mrs. Thelma M. Penn and Mrs. Martha M. Adams are responsible for much of the statistical material prepared for the bulletin by the Bureau of Agricultural Economics.

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the general property tax—the tax on the automobile as a part of the taxpayer's personal property. It is mentioned here to emphasize the importance of the automobile in the whole tax system.

In a few States, automobiles are not taxed as personal property. Such a tax is considered to be replaced by the second automobile tax, the so-called license tax or tag fee. This is collected in every State. It varies among the States, and within many States, on the basis of the size of the automobile and on various other considerations, such as weight, horsepower, and passenger capacity. All the States at present levy a tax of from 2 to 6 cents a gallon on sales of gasoline for automobile use. The excise tax on the sale of new cars was a fourth tax directly affecting the automobile owners. This was levied by the Federal Government until May 29, 1928. It amounted to 3 per cent of the factory price of new cars and was paid only at the original sale of the car. Although these automobile taxes do not affect all farmers, they are paid by what is probably a great majority of them and so are an important item in the farm-tax budget.

All farmers are subject to the Federal income tax if their incomes are above the exemption limits fixed by law. As the limit for a married man with no dependents is $3,500 of net income, plus $400 for each minor child or other dependent, it will be readily understood that few farmers pay Federal income taxes. This, however, does not mean that no revenue has been secured by the Federal Government from agriculture through the income tax. During the war years of agricultural prosperity, when the exemption limits were lower, many farmers paid income taxes to the Federal Government.

In 12 States an income tax is levied on individual incomes for the support of the State government, with occasional provisions for some distribution to the local units. Although the exemptions in the States are usually lower than those applied by the Federal Government, they are not sufficiently low and the rates are not sufficiently high to secure any important amounts from farmers.

Poll taxes at one time were of considerable importance to agricultural taxpayers. They are now completely absent in many States and form an insignificant portion of the total tax burden in most of the remaining ones.

The State inheritance tax perhaps should be mentioned since farm property, along with other property which changes hand by descent, is subject to this tax in all States but three. As it is by its nature irregular in operation and as the per capita amount collected is insignificant in all States, detailed consideration of it is unnecessary.

Agriculture, like other business, is in some jurisdictions subject to certain fees. The chief of these are the fertilizer and feed-inspection fees which are levied by many States. Such fees are everywhere small in amount and are designed to cover the costs of services that are intended to benefit farmers directly. Fees differ from taxes on this basis; that is, they are designed to cover only the costs of certain services which the governmental units perform.

From this brief summary, it is evident that the forms of taxes which directly affect the farmer are few in number. Two types, those affecting general property and those concerned with the automobile, account for most of the direct tax contributions of farmers. The section that follows will present an estimate of the importance of each of these and of the other minor taxes that are paid by farmers.

Before considering these figures it should be recalled that farmers make many tax contributions indirectly. Whenever they buy goods on which a tariff duty has been levied they are likely to contribute to the costs of the Federal Government. In a similar manner, they make a contribution when they purchase tobacco. To some extent, the merchants in village trading centers are able to pass a portion of the tax on their buildings and their stock of goods on to their customers. No attempt will be made to estimate the amounts of such contributions, but it must be realized that they form a considerable part of agriculture's tax contribution.

AMOUNTS PAID BY AGRICULTURE IN TAXES

An attempt to examine the amounts of taxes paid by agriculture and by agricultural property must be prefaced by the statement that the figures given are in no case more than estimates. They express the judgment of those who have studied the problem, but they do not pretend to be more than approximations of the actual totals. No attempt will be made in the body of this study to explain in detail the methods used in arriving at these estimates. Estimates for the country as a whole for 1927 are contained in Table 1. Certain of the estimates for individual States are included in Table 2.

TABLE 1.—*Taxes paid by farmers in the United States, 1927* [1]

Kind of tax	Amount	Percentage
	Dollars	
General property	755,000,000	83.8
Automobile license	50,000,000	5.5
Gasoline	65,000,000	7.2
Income, Federal and State	15,000,000	1.7
Inheritance, Federal and State	10,000,000	1.1
Poll	6,000,000	.7
Total	901,000,000	100.0

[1] Taxes paid by farmers on other than farm property are not included. Taxes on farm property paid by owners of farm property not themselves farmers are included. No attempt is made in this table to estimate the amount of taxes that are shifted to the farmer by other groups or the amount that the farmer is able to shift to others.

As every farmer realizes, the general property tax which he pays to his county or township treasurer is the most important direct contribution that he makes to defray the costs of government. Almost 84 per cent of agriculture's tax contribution (Table 1) takes this form. It is estimated that the automobile license tax and fees for drivers' permits account for something over 5 per cent of the farm tax total and that the farmer's contribution to the gasoline tax amounts to 7 per cent of his total tax expenditure. Other minor items amount to less than 4 per cent.

Official figures of total tax collections by all governmental units are difficult to obtain, and no attempt is made here to present such figures for the year 1927. Federal taxes for the year were about three and one-third billion dollars, and total State and local taxes were probably around five and one-half billion dollars. On this basis, it is possible to allocate over 10 per cent of all taxes collected as a direct contribution from agriculture. Seventeen per cent of the State and local taxes were derived from this source.

TABLE 2.—*Estimate of certain taxes paid by farmers, by States, 1927*

[In thousands of dollars, i. e., 000 omitted]

State	General property tax on all farm property [1]	License tax on farm-owned automobiles [2]	Tax on farm-used gasoline [3]	State	General property tax on all farm property [1]	License tax on farm-owned automobiles [2]	Tax on farm-used gasoline [3]
Maine	5,767	435	481	North Carolina	16,375	844	2,909
New Hampshire	2,755	345	254	South Carolina	6,588	547	1,575
Vermont	3,245	413	244	Georgia	12,011	1,077	2,544
Massachusetts	6,438	657		Florida	5,012	629	1,427
Rhode Island	483	63	37	Kentucky	12,602	1,135	1,951
Connecticut	3,115	544	275	Tennessee	10,939	791	1,104
New York	20,332	2,858		Alabama	5,619	938	2,186
New Jersey	6,765	648	245	Mississippi	10,728	767	1,810
Pennsylvania	23,446	3,122	2,594	Arkansas	8,495	806	1,215
Ohio	46,233	1,280	3,186	Louisiana	6,677	630	576
Indiana	40,550	1,195	2,533	Oklahoma	21,220	1,496	2,375
Illinois	46,986	1,929	992	Texas	32,835	3,438	4,382
Michigan	28,293	2,338	2,282	Montana	7,899	568	905
Wisconsin	32,912	2,541	1,929	Idaho	7,335	751	912
Minnesota	33,243	2,661	1,658	Wyoming	3,322	147	265
Iowa	50,131	2,800	2,464	Colorado	12,025	288	691
Missouri	20,063	1,981	1,809	New Mexico	3,081	121	410
North Dakota	19,916	686	689	Arizona	2,946	73	222
South Dakota	20,306	1,072	1,293	Utah	4,818	121	336
Nebraska	28,080	1,309	1,576	Nevada	1,200	39	99
Kansas	40,188	2,021	1,608	Washington	12,038	1,037	764
Delaware	548	186	166	Oregon	10,585	1,371	947
Maryland	4,865	538	917	California	39,308	880	2,247
Virginia	9,109	1,518	2,570				
West Virginia	6,639	801	949	United States	754,066	52,441	62,742

[1] Based on returns from farmers and on data published in the reports of the tax commissions of several States. Estimate was made of the tax per acre in farm land and buildings and on all farm property in 1924 in each State. Annual changes as reported on questionnaires received from farmers have been applied to this figure. The result has been multiplied by the total acreage in farms as reported in the 1925 census. This does not take into account changes in farm acreage. Data on which to base an estimate of taxes which would take such changes into account are not available.

[2] This estimate is based on a division of the total amount of receipts from registration as compiled by the Bureau of Public Roads into farm and nonfarm portions. The percentage to be classed as the farm portion is estimated by comparing the estimated number of farm automobiles in each State with total number of automobiles and by taking into account the basis on which the registration fee is levied. Because of a change in the fiscal year involved, North Carolina figures are reported for the second half of 1927 only.

[3] Farm gasoline tax figures are based on the assumption that farm automobiles use a pro rata proportion of the total gasoline taxed by the State. Estimated percentage that farm automobiles are of all automobiles, is applied to the total gasoline tax collected by the State as compiled by the Bureau of Public Roads.

It should once more be recalled that figures of agriculture's tax contribution which have been given represent only the amounts which can be readily computed. No one questions that a contribution in the form of tobacco taxes is made to the Federal Government and to certain State governments by farmers. The agricultural group undoubtedly pays a part of tariff duties levied by the Federal Government. Finally, in the shifting of taxes from one group or individual to another, the farmer usually finds himself as one to whom the tax is shifted. He is rarely able to pass his taxes on to others.

TRENDS IN AGRICULTURAL TAXATION

In any attempt to describe the trend of agricultural taxation, attention must be centered on the few major studies which have been made at various times and in scattered States. No comprehensive data covering the United States as a whole for any long period are available. A study made for the year 1921–22 indicated that taxes per acre of farm land had increased about 125 per cent in the eight years between 1913–14 and 1921–22. Beginning with

the year 1924, an annual estimate of taxes on farm real estate based on reports from farmers in all sections of the country has been prepared up to and including 1927. The results of these investigations, together with estimates prepared from such other data as are available for the years between 1914 and 1921 and the year 1923, appear in Table 3.[2] Indexes of farm taxation in three Eastern States also appear in this table.

TABLE 3.—*Index numbers of farm taxes in the United States and in selected States, 1880, 1890, 1900, and 1910–1927*

Year	Tax on farm land and buildings		Tax on all farm property	
	United States, 1914=100	New Jersey,[1] 1915=100	New York,[2] 1910–1919=100	Ohio,[3] 1913=100
1880			69	60
1890			64	69
1900			59	69
1910			82	95
1911			98	87
1912			101	92
1913			105	100
1914	100		113	101
1915	102	100	122	131
1916	104	106	123	129
1917	106	119	143	130
1918	118	122	146	142
1919	136	137	166	170
1920	163	183	196	197
1921	196	224	191	216
1922	232	240	197	210
1923	246	236	219	218
1924	249	254	220	220
1925	250	265	231	232
1926	253	278	234	232
1927	258	292		

[1] The New Jersey figures are preliminary and are based on data collected by the New Jersey Agricultural Experiment Station and the Bureau of Agricultural Economics, U. S. Department of Agriculture, in a cooperative study of farm taxes.
[2] The New York index is taken from (*10*). Italic numbers in parentheses refer to "Literature cited," p. 73.
[3] The Ohio index is from (*11*).

Each year since 1914 has brought an increase in the index for the country as a whole, although since 1923 the change has been relatively slight. The figures for the three individual States do not rise quite so consistently as do those for the country as a whole, but in each case they were at their peak in the last year for which data were secured.

Explanations of the rise in farm taxation over the period from 1914 to the present will be only briefly considered. Part of this increase is accounted for by the change in the purchasing power of money. It took about $1.50 in 1927 to purchase the articles and services that could be secured for $1 in 1914. Governmental units spend the money they collect as do private enterprises, and they are similarly affected by changes in the purchasing power of that money.

Then, too, the services that local governments are called upon to supply have changed during the period. School terms have been lengthened, high schools have been made available to a much larger proportion of the children of the country, and a far larger number

[1] Data for which no footnote credit appears either in the tables or in the text are derived from the investigations of farm taxation carried on by the Division of Agricultural Finance of the Bureau of Agricultural Economics.

of children is attending them. Teachers' qualifications and their salaries have increased. Roads cost far more to maintain now than in 1914 even if they are kept in no better condition. The demands on governmental units for more expensive roads have vastly increased during the period. The two factors, change in the price level and added governmental services, together with the war inflation in farm values, explain most of the increase of farm taxes.

The effect of the inflation in farm values deserves special attention. The peak of farm real-estate prices came in 1920. Increases in assessed values of farm properties necessarily lagged somewhat behind increases in their sales values, but the general tendency was to increase the assessments as quickly as the assessment practices of the State concerned would permit. A lag of the same nature, although longer, had its effect on the downward adjustment of assessments as land prices fell. It is always more difficult for tax officials to lower assessments than to raise them, and at this particular period, increased governmental expenditures made adjustment extremely difficult. These adjustments, however, have been made gradually in most of the States, and a part of the maladjustment of farm taxes has been eliminated. The assessment of farm property is considered in some detail on p. 44. Its effect on farm taxes should not be exaggerated since it directly increased only those taxes which were levied by jurisdictions including farm and other property; that is, by the States and in some cases by the counties.

An index of the changes in the tax per acre on farm land and buildings in various sections of the country for the years since 1924 is contained in Table 4. For the country as a whole there has been a slight increase amounting to about 3½ per cent during the four years 1924 to 1927. This should be contrasted with the material rise in farm taxation that occurred in the years 1919 to 1923, amounting in all to 80 per cent. There was no change of importance for the country as a whole between 1924 and 1925, almost all the increase for the years 1924 to 1927 being about evenly distributed between the two last years of the period.

Although each geographic division of the country experienced some increase in farm taxes from 1924 to 1928, the annual rates of the increase and the aggregate amounts of increase in each division were far from being the same. New England, the South Atlantic, and the Pacific States reported the greatest increases from 1924 to 1928. There has been relatively little change in the east North Central and the west North Central States.

TABLE 4.—*Taxes on farm real estate: Relative change, by geographic divisions, 1924–1928*

[1924=100 per cent]

Geographic division	1924	1925	1926	1927	1928
New England	100.0	100.9	105.4	108.8	111.1
Middle Atlantic	100.0	103.5	103.2	104.5	104.7
East North Central	100.0	99.5	100.3	103.0	102.3
West North Central	100.0	98.4	99.5	100.8	102.9
South Atlantic	100.0	103.5	111.1	112.9	113.7
East South Central	100.0	101.5	103.6	103.4	106.0
West South Central	100.0	100.1	98.6	103.5	107.0
Mountain	100.0	103.2	102.3	104.9	106.0
Pacific	100.0	100.9	102.9	105.6	110.0
United States	100.0	100.3	101.5	103.6	105.1

The assembled data seem to indicate that the period of rapid rise of farm taxes has been passed and that, although a material decline is not to be expected, such increases as may occur in the immediate future will, on the average, be slight. The expansion in governmental services that has characterized the past two decades, particularly in education and highway construction and maintenance, shows little sign of abating. The rate of increase of State and local taxes will be less than it has been, but no general reduction in farm taxes is likely to come from a decrease in total expenditures. It may come either through new methods of financing certain governmental expenditures, such as more State support for the schools, or through the introduction of new sources of local revenues to supplement the general property tax.

TAXES AND AGRICULTURAL INCOME

Two measures of the income from agriculture will be compared with farm taxes. The first of these, the income from rented farm land, is a property income, and little difficulty arises in an attempt to compare it with taxes on property. The second type of income, the return that a farmer receives from the operation of his own farm, combines income from property with income from the farmer's managerial efforts. Thus a mixed income figure is presented for comparison with a tax figure which, although mainly based on farm property, is also based on the farm as a residence and on a small amount of personal household property.

It should be added that the annual value of the farm as a residence does not appear in most of the farm-operation income figures. The qualifications that must accompany a comparison of these figures with taxes will be explained in detail when data relating to them are presented.

TAXES AND INCOME FROM CASH-RENTED FARMS IN 15 STATES

COMPARISON OF CONDITIONS IN 1924 WITH THOSE OF 1919

Data relating to cash rent and taxes of farms in 20 counties in 15 States are presented for the years 1919 and 1924. The figures for the earlier of these two years are taken from the preliminary report [3] of the Bureau of Agricultural Economics. The cash-rent figures for 1924 are those recorded by the Census of Agriculture, 1925. The tax figures for the farms reported upon have been secured from official records in the counties concerned. The methods of securing the data and of calculating the deductions from the gross rent in order to compute a net-rent figure are similar to those used in the 1919 study.[4]

The more recent figures give a good cross section of the income-yielding ability of cash-rented farms in 1924 in several sections of the country. They are of most value, however, in the comparison made in Table 5 with the 1919 results. In every case, except in the two Idaho counties, the two in Colorado, and Merced County, Calif. it will be seen that the tax figure, expressed on a per acre basis, had increased during the period that elapsed between the two studies. Net rent, however, has shown no such tendency. In only six cases was it higher in 1924 than in 1919. The net-rent figures for the various counties in 1919 and 1924 are compared in Figure 1.

[3] BRANNEN, C. O., and SANDERS, J. T. TAXATION OF RENTED FARMS—1919. U. S. Dept. Agr., Bur. Ag. Econ. Prelim. Rpt. 34 p. 1925. [Mimeographed.]

[4] The term "net rent" used without qualification refers in every case to net rent before deducting taxes.

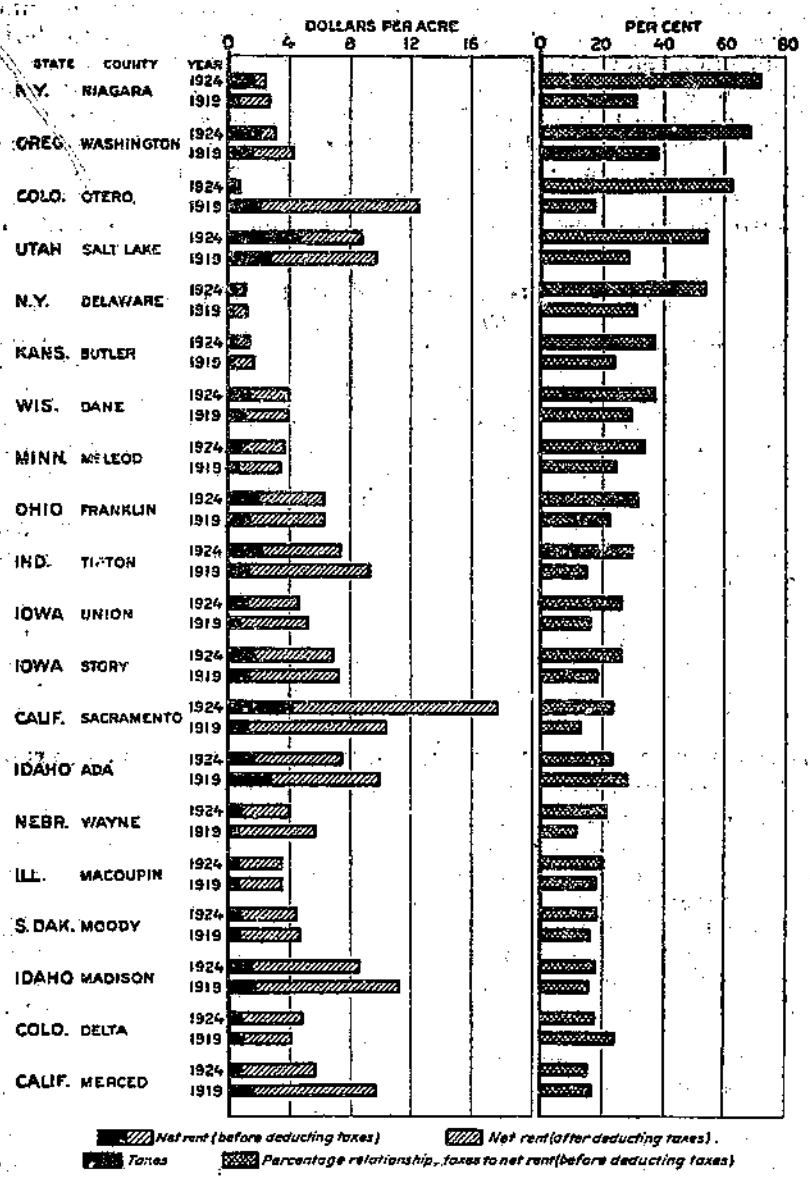

FIGURE 1.—NET RENT AND TAXES OF SELECTED FARMS IN 15 STATES, 1919 AND 1924

Taxes per acre increased from 1919 to 1924 in 15 of the 20 counties, whereas net rent per acre declined in 14 of them. In only 3 of the 20 counties was the percentage of net rent taken by taxes higher in 1919 than in 1924.

TABLE 5.—*Relation of taxes to cash rent of selected farms, 1919 and 1924*

State and County	1919				1924			
	Farms reporting	Net rent per acre	Tax per acre	Tax as a percentage of net rent	Farms reporting	Net rent per acre	Tax per acre	Tax as a percentage of net rent
	Number	*Dollars*	*Dollars*	*Per cent*	*Number*	*Dollars*	*Dollars*	*Per cent*
California:								
Merced	118	9.78	1.63	16.7	104	5.70	0.87	15.3
Sacramento	130	10.49	1.36	13.0	100	17.77	4.23	23.8
Colorado:								
Delta	57	4.04	.96	23.8	40	4.83	.84	17.4
Otero	52	12.63	2.19	17.3	34	.75	.47	62.7
Idaho:								
Ada	66	10.02	2.85	28.4	92	7.51	1.77	23.6
Madison	32	11.31	1.76	15.6	29	8.68	1.53	17.6
Illinois: Macoupin	79	3.52	.04	18.2	74	3.54	.72	20.3
Indiana: Tipton	77	9.38	1.41	15.0	47	7.42	2.22	29.9
Iowa:								
Union	113	5.29	.84	15.9	158	4.70	1.25	26.6
Story	100	7.28	1.37	18.8	113	6.90	1.83	26.5
Kansas: Butler	155	1.73	.41	23.7	133	1.43	.53	37.1
Minnesota: McLeod	87	3.49	.85	24.4	106	3.74	1.26	33.7
Missouri: Bates					88	2.36	.48	20.3
Nebraska: Wayne	88	5.74	.67	11.7	96	4.07	.87	21.4
New York:								
Delaware	137	1.23	.38	30.9	112	1.17	.63	53.8
Niagara	86	2.75	.85	30.9	72	2.47	1.78	72.1
Ohio: Franklin	90	6.30	1.41	22.4	155	6.34	1.99	31.4
Oregon: Washington	115	4.34	1.64	37.8	128	3.18	2.17	68.7
South Dakota: Moody	123	4.76	.77	16.2	87	4.49	.81	18.0
Utah: Salt Lake	28	9.81	2.82	28.7	23	8.88	4.82	54.4
Wisconsin: Dane	106	3.98	1.18	29.6	126	4.04	1.49	36.9

Of more significance, perhaps, than the rent or tax figures alone is a comparison between taxes and net rent. Figure 1 indicates the average percentage of net rent paid in taxes for each of the years in each of the counties from which data were obtained. In only 3 of the 20 counties was the percentage lower in 1924 than in 1919. This was to be expected from the analysis of the average net rent and taxes per acre which has already been made. It will be found by detailed examination of Table 5 that in those counties where a material increase ocurred in ratio of taxes to net rent,[5] this increase is due mainly to the rise in taxes rather than to a material decrease in rent.

RENT AND TAXES SINCE 1924

It has not been possible to secure rent figures for years subsequent to 1924 from the farms for which data were presented in that year. Tax figures were secured in every county for 1926 and in most of them for 1927. Table 6 contains the figures of taxes per acre for these years and lists the number of farms for which data were reported in each of the years concerned. This table shows that in 12 of the 21 counties there was an increase from 1924 to 1926 in the tax per acre of the farms for which data were secured. In the remaining 9 counties there was a decrease. Figures for 15 counties are available from 1924 to 1927. In 7 of these there was an increase during the period and in 8 a decrease. In other words, the data available indicate that during the years since 1924 there has been little difference between the number of counties studied in which taxes have increased and the number in which they have decreased.[6]

[5] Where the number of cents taken by taxes from each dollar of net rent has increased by over 25 per cent, the increase has been considered material.

[6] The index of farm taxes for the country as a whole, quoted on page 6, indicates a change of only 3.6 per cent, an increase, for the years in question.

TABLE 6.—*Taxes per acre, of rented farms in 16 States, 1924, 1926, and 1927*

State and county	Farms reporting	Tax per acre		
		1924	1926	1927
California:	*No.*	*Dollars.*	*Dollars.*	*Dollars.*
Merced	81	0.82	0.90	------
Sacramento	91	4.03	4.05	------
Colorado:				
Delta	35	.93	1.02	0.96
Otero	29	.81	.77	.66
Idaho:				
Ada	84	1.81	1.86	1.83
Madison	27	1.50	1.53	1.60
Illinois: Macoupin	71	.72	.81	.79
Indiana: Tipton	40	2.13	1.91	1.92
Iowa:				
Union	153	1.24	1.04	1.04
Story	106	1.73	1.69	1.63
Kansas: Butler	123	0.53	0.67	0.65
Minnesota: McLeod	102	1.26	1.13	1.11
Missouri: Bates	87	.48	.50	------
Nebraska: Wayne	96	.87	.86	.85
New York:				
Delaware	91	.64	.72	------
Niagara	64	1.76	1.66	1.67
Ohio: Franklin	154	1.99	1.88	1.80
Oregon: Washington	107	2.12	2.17	2.15
South Dakota: Moody	81	.80	.86	.91
Utah: Salt Lake	23	4.82	4.91	------
Wisconsin: Dane	115	1.46	1.37	------

The best basis on which an estimate of the rent of farms in these counties for the years since 1924 can rest is a consideration of general conditions in agriculture in these years, as compared with 1924. The gross value of farm production for the crop year 1924–25 was $17,086,000,000, a figure slightly above those of the three subsequent crop years. Gross income from farm production (found by deducting the value of products fed, those used for seed, and waste from the figures just given) was $12,003,000,000 in the crop year 1924–25. It was slightly greater than this in each of subsequent years, although in the first year, 1925–26, it was only 5½ per cent above the 1924–25 level and in the two latter years, it was 1 and 2 per cent, respectively, above that level. Cash income from sales showed almost the same variation except for the fact that in 1926-27 it was below the 1924–25 level.

A comparison of returns from individual farms may be considered before an estimate of changes in rent since 1924 is made. In this estimate only the reports for the northern sections of the country and for the West are considered, as the counties for which rent and tax figures have been gathered are located in these sections. Figure 2 compares the 1924 net returns with those of the subsequent years.[7] The 1925 income figures are consistently greater in each section than those of the previous year. In 1926 net returns fell below those of 1924 in two sections of the country and were above in the other two. The same situation occured in 1927.

Trends in land values are indicated in Table 7. In each area of the country except the West South Central States there has been a decline in land values since 1924. This of itself gives no indication of the trends of income from land, as such income is only one of several factors that determine land values. This may be illustrated by the condition which would arise when income from land is constant, but taxes are rising, both considerably and steadily. The result from these two factors alone would be a decrease in land values. Many other factors might be introduced to explain the lack of a definite correlation over a short period of time between income from land and the value of the land. It is certain, however, that a material and consistent rise in the income from land would, over a period of years, be reflected in value.

[7] The derivation of these figures and their significance from the point of view of this study are considered on page 11. In this particular connection, interest is confined to their year-by-year variation rather than to their absolute amounts.

TABLE 7.—*Farm real estate: Index numbers of estimated value per acre, by geographic divisions, 1924–1928* [1]

[1912, 1913, 1914=100 per cent]

Geographic division	1924	1925	1926	1927	1928
New England	128	127	128	127	127
Middle Atlantic	114	114	113	111	110
East North Central	121	116	111	104	101
West North Central	132	126	121	115	113
South Atlantic	151	148	149	137	134
East South Central	142	141	136	133	130
West South Central	136	144	144	139	137
Mountain	110	105	103	101	101
Pacific	147	146	144	143	142
United States	130	127	124	119	117

[1] U. S. Dept. Agr. Cir. No. 60 (*20, p. 9*).

[2] All farm land with improvements, as of March 1.

In considering the estimate that is to be made of the changes in the rent of land since 1924, one assumption must be kept in mind. This relates to the difference between the territory to which the rent figures

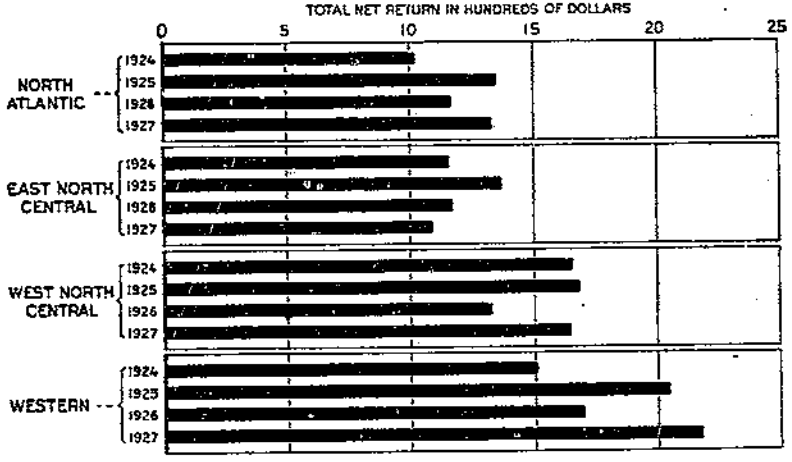

FIGURE 2.—AVERAGE NET RETURNS ON OWNER-OPERATED FARMS IN SELECTED REGIONS, 1924-1927

In each of the regions the 1925 net returns exceeded those of the previous year. In 1926 and 1927 the net returns in only two counties exceeded those of 1924.

that have been used for 1924 relate and the territory covered by the other data. The rent figures are confined to 16 States and at the most to 2 counties within each State. The counties were so chosen as to be as nearly typical of general conditions as possible. But it is realized that they comprise too small a part of the agriculture of the country to be considered as anything more than indications of general conditions. The gross value of production, the farm return, and the land value data relate to the whole country. Thus, any trends which they may indicate will refer only to the particular counties for which data have been presented if these counties are representative of conditions in the country as a whole.

There seems to be little reason for a belief that the net rent of agricultural land increased to any large extent from 1924 to 1927. Land values have declined. Gross income from agriculture was slightly higher in 1925 then in the previous year, but there was little difference between the totals for 1926 and 1927 and that for 1924. The average net return to individual farms was higher in 1925 and 1927 than in 1924, but the increase from 1924 to 1927 was less than 5 per cent. On the whole, it seems a reasonable estimate that net return from land may have increased somewhat, perhaps from 5 to 10 per cent, in 1925; that it dropped back to below its 1924 level in 1926, and may have risen in 1927 to possibly 5 per cent above the point at which it was in 1924.

How would such a change effect cash rent? It seems safe to assume that the fluctuations in cash rent were somewhat less and that they lagged at least a year behind changes in farm returns. From the data considered, it seems a reasonable assumption that cash rent in 1927 was close to the 1924 level.

It has already been shown that taxes changed little from 1924 to 1927. For the country as a whole, there was an increase of appproximately 3 per cent during this period. For the counties studied, the increase seems to be somewhat less. As a result of this examination of changing conditions, it seems a reasonable conclusion that, if it be assumed that the rented farms in 15 States followed the same course as farm land generally, the portion of net rent taken by taxes in 1927 differed little from that taken in 1924.

The number of farms (1,916) included in the 1924 study is obviously too small to justify any general conclusions concerning the relationship between rent and taxes for the country as a whole. All that may be said is that a continued and intensified pressure of taxes on net rent is revealed in many sections of the northern and western portions of the United States. The results obtained from this study of farms in scattered sections of the country add support to the data supplied by the intensive studies which have been made in several of the States.

INTENSIVE STATE STUDIES OF TAXES AND RENT OF FARM LAND

During the last six years, studies concerned with the income and taxation of rented farm land have been completed in 14 States. Although there have been variations in the methods and consequently in the results of these studies, the general purposes and types of information sought have been similar, and, on the whole, it is possible to compare and contrast the results obtained.

These studies have been concerned with the income received by owners of rented farms. For this reason, information has been secured from them rather than from the actual operators of the land. In some of the studies, questionnaires have been mailed to lists of farm owners in the State or section concerned and the results have been tabulated from the questionnaires that were returned. These returns have been subjected to editing, and doubtful ones have been clarified by correspondence or by personal visits.

In other cases the studies have been made by sending an agent to the farm owner from whom information was desired, and schedules containing the relevant facts were filled out by these agents. It is undoubtedly true that this latter method is the more desirable from the point of view of accurate and complete information. Its large cost,

as compared with the mail-questionnaire method, has restricted its use. The mail method, in those cases in which the list of owners has been satisfactory, has yielded results which have revealed the general trends and have, on the whole, been sufficient for the present purpose.

Items of information secured on questionnaire or schedule have varied from State to State. Various local interests in income, taxation, or in other subjects, have made this inevitable. The chief items, however, have been everywhere the same. Gross cash or share rent of the particular farm; deductions, such as insurance, repairs, and depreciation; and taxes on the land and buildings of the farm. These items, together with certain others descriptive of the farm, such as total acreage, crop acreage, value, location, etc., have been sufficient for the computation of the necessary figures.

Some emphasis should be placed on the significance of the income from rented farm land. This represents property income and a property income figure is the most significant figure to compare with property taxes. Where rented farm land is uncommon, it is often true that there is not enough competition, either among those who own the land or among those who wish to use the land, to make its rent a satisfactory indication of its income-yielding ability. In the sections of the country in which studies have been carried on, the amount of rented farm land is of significant proportions, and on the average over a period of years, the net rent gives a closer indication of the land's ability to produce income than does any other figure that can be obtained. Share rent often includes a small return to the landlord for his services in supervising the use of his land. In cases where this item is important an allowance has been made for it. No attempt has been made to separate either the rent or the taxes that might be assigned to the residential value of the farm from the total rent or total tax figures.

Studies of the relationship between net rent and taxes have been conducted for one or more years since 1919 in Arkansas, Colorado, Indiana, Iowa, Michigan, Missouri, New Jersey, North Carolina, North Dakota, Ohio, Pennsylvania, South Dakota, Virginia, and Washington.[8]

ARKANSAS

Rented farms in five representative sections of Arkansas were studied (*1*). Data were secured by the local survey method for the 5-year period 1921 to 1925. The number of share and cash rented farms from which data were obtained varied from 122 in 1921 to 178 in 1925. Although the sample is thus rather small, it seems probable that the figures indicate in a general way conditions in the sections of the State which were studied. It was found that over the 5-year period, taxes took, on the average, 18 per cent of the net rent of the farms studied. Table 8 indicates that no great average variation from this figure occured in any year during the period.

[8] In each of the studies except those in Arkansas, Indiana, and Pennsylvania, the work was carried on by the cooperation of the Bureau of Agricultural Economics and a State agency, usually the agricultural experiment station. In the case of the Indiana study, there was no State cooperation, and in the Arkansas and Pennsylvania studies, the Federal bureau did not cooperate.

TABLE 8.—*General property tax and net rent for selected farms in Arkansas, 1921–1925*

Year	Farms reporting	Acres in these farms	Net rent per acre before deducting taxes	Taxes	
				Per acre	Per centage of net rent before deducting taxes
	Number	*Number*	*Dollars*	*Dollar*	*Per cent*
1921	122	48,168	2.84	0.54	19.0
1922	129	49,512	3.39	.69	16.5
1923	145	55,302	2.85	.57	20.0
1924	162	58,542	3.06	.54	17.6
1925	178	66,218	3.54	.61	17.2
Average	147	55,554	3.14	.56	17.8

Arkansas Agr. Expt. Bul. 223 (*1, p. 8*).

If this report of the study could be extended to include an examination of the reports from each section of the State from which data were secured, it would be found that in the three sections where the most satisfactory number of returns was secured, the annual average percentage of net rent taken by taxes ranged from 30 per cent (in central Arkansas in 1923) to 13 per cent (in northeastern Arkansas in 1922, and in southwestern Arkansas in 1925). Large variations among the figures reported for the individual farms would also be found, taxes on some farms in a particular year taking less than 10 per cent of net rent and on other farms in the same year amounting to more than the total net rent collected.

COLORADO

Data relating to net rent and taxes of farms in Colorado were secured from questionnaires mailed to owners of rented farms (*4*). Reports were requested for the years 1919, 1923, 1925, and 1926. For the first of these years, 282 farms scattered over the State reported average net rent of $2.64 per acre and an average tax payment of 60 cents per acre. Thus taxes took slightly less than 23 per cent of net rent. Reports from 414 farms in 1923 showed net rent averaging $1.80 per acre and taxes 68 cents, with a percentage relationship of taxes to net rent of 38. The last two years for which data were assembled, 1925 and 1926, showed a slightly better situation. With 568 farms reporting in 1925, it was found that taxes took 33.2 per cent of net rent. In 1926, for 304 farms, the corresponding percentage was 32.6. (Table 9.)

An analysis of the reports by agricultural sections of the State indicates that in no section during all the years studied have taxes taken a percentage of net rent materially in excess of that taken in the other sections. Those sections which are subject to excessive variations in annual yields naturally evidenced a variation in net share-rent receipts. Since taxes remained relatively constant, there was a larger variation in the relation between taxes and rent than in those sections in which rent varied only slightly from year to year. Averages for the last three years studied seemed to indicate that there is little difference among the sections in the proportion of net rent used to pay taxes.

TABLE 9.—*General property tax and rent per acre on rented farms in Colorado, 1919, 1923, 1925, and 1926*

Year	Farms reporting	Acres in these farms	Net rent per acre before deducting taxes	Taxes	
				Per acre	Per centage of net rent before deducting taxes
	Number	*Number*	*Dollars*	*Dollar*	*Per cent*
1919	282	88,822	2.64	0.60	22.7
1923	414	127,529	1.80	.68	37.8
1925	568	182,185	1.84	.61	33.2
1926	304	98,199	1.78	.58	32.6

Colorado Agr. Expt. Sta. Bul. 348 (*4, p. 11*).

When the reports are considered individually, it is found that there is a great difference among farms in the percentage relationship of taxes to net rent. In 1926, one-fifth of the farms reported paid less than 20 per cent of their rent in taxes. About one-fourth of the farms paid from 20 to 40 per cent, and 15 per cent fell into the 40 to 60 per cent group. Thus, three-fifths of all the farms paid less than 60 per cent of their net rent in taxes. Contrasted with these, however, are 89 farms, or 30 per cent of the total number reported, which failed to yield in 1926 enough to enable their owners to pay taxes after the other necessary deductions from gross rent had been made.

INDIANA

The investigation of taxes and rents of farms in Indiana was one of the earliest studies in which this particular type of information was secured.[9] Data for the years 1919 to 1923 were collected by means of a field investigation in three counties of the State—Tipton, Miami, and Monroe. Over the entire period, taxes in these counties amounted to nearly 27 per cent of the net rent received from the farms surveyed.

Detailed figures relating to the survey appear in Table 10. So far as the different years were concerned, there was a large variation in the percentages of rent taken by taxes. In 1919 taxes took only 12 per cent while in 1922 they took over 43 per cent. The different counties studied also showed somewhat different results, taxes forming the largest percentage of net rent in Monroe and the smallest in Tipton.

TABLE 10.—*General property tax and net rent on farms in three counties of Indiana, 1919–1923*

Year	Farms reporting	Acres in these farms	Net rent per acre before deducting taxes	Taxes	
				Per acre	Percentage of net rent before deducting taxes
	Number	*Number*	*Dollars*	*Dollars*	*Per cent*
1919	62	10,508	7.49	0.90	12.0
1920	79	12,863	5.11	1.11	21.7
1921	90	14,970	3.98	1.54	38.7
1922	100	16,680	3.71	1.60	43.1
1923	105	17,120	4.25	1.41	33.2
Average	87	14,428	4.91	1.31	26.7

BRANNEN, C. O., and NEWTON, R. W. Op. cit., p. 4.

[9] BRANNEN, C. O., and NEWTON, R. W. TAXATION OF FARM REAL ESTATE IN INDIANA. U. S. Dept. Agr., Bur. Agr. Econ. Prelim. Rpt. 32 p. 1925. [Mimeographed.]

IOWA

Data relating to rent and taxes in Iowa were secured from a number of sources (*3*). Those for the years prior to 1926 came from farm-survey records which had been compiled by the agricultural economics staff of Iowa State College. For the year 1926, returns from 1,093 rented farms were supplied by the Iowa Farm Bureau Federation. These figures had been secured by representatives of the farm bureau in all sections of the State. Data for 1927 from 862 cash-rented farms were secured by means of a questionnaire circulated by county agents in 74 counties of the State.

Cash rent in 1913 to 1915 averaged $4.26 per acre on the farms surveyed and taxes 61 cents, taxes taking 14 per cent of net rent. The corresponding rent and tax figures in 1926–27 were $4.68 and $1.32, with taxes taking 28 per cent of rent. Share-rent figures are somewhat different, averaging $7.57 in 1913 to 1915 and $5.11 in 1926.[10]

Taxes on these share-rented farms were 58 cents and $1.38, respectively. The percentage of rent taken by taxes on share-rented farms in 1913 to 1915 was 8 per cent, and in 1926, 27 per cent. These figures, together with others for certain of the intervening years, are supplied in Table 11.

TABLE 11.—*General property tax and net rent, cash and share rented farms in Iowa, selected years since 1913*

Year	Farms reporting	Acres in these farms	Net rent per acre before deducting taxes	Taxes	
				Per acre	Percentage of net rent before deducting taxes
CASH-RENTED FARMS					
	Number	*Number*	*Dollars*	*Dollars*	*Per cent*
1913	346	71,942	4.18	0.57	13.7
1914	82	13,007	4.58	.66	14.4
1915	104	19,515	4.37	.70	15.9
Total or average	532	104,464	4.26	.61	14.2
1918	85	18,517	5.28	.85	16.0
1921	70	14,222	7.11	1.53	21.6
1922	33	5,496	5.15	1.70	32.9
1923	64	8,941	4.24	1.53	36.1
Total or average	167	28,659	5.84	1.56	26.7
1926	603	101,164	4.90	1.36	27.7
1927	862	166,731	4.54	1.30	28.7
Total or average	1,465	267,895	4.68	1.32	28.3
SHARE-RENTED FARMS					
1913	202	57,430	8.26	0.50	6.0
1914	77	13,186	7.57	.60	7.9
1915	128	26,425	6.07	.64	10.6
Total or average	407	97,041	7.57	.58	7.7
1918	67	12,537	9.90	.74	7.5
1921	42	8,836	5.69	1.52	26.7
1922	203	37,437	7.72	1.56	20.8
1923	73	13,722	4.55	1.58	34.3
Total or average	318	59,995	6.69	1.50	23.3
1926	490	91,905	5.11	1.38	27.0

Iowa State Col. Ext. Bul. 150 (*3, p. 55*).

[10] Reasons for this difference are discussed in THE TAX SYSTEM OF IOWA, (*3, p. 57–58*).

The percentages of net rent absorbed by taxes on individual farms in 1913 and in 1927 are indicated in Figure 3. A comparison is possible, not only of the average percentage, but also of the proportion of all farms that pay the various percentages. The horizontal scale of the figure indicates a percentage of the total number of farms and the vertical scale the percentage of net rent taken by taxes. If there had been no variation from the average percentage; that is, if each farm had paid the same percentage of net rent in taxes, then the solid line

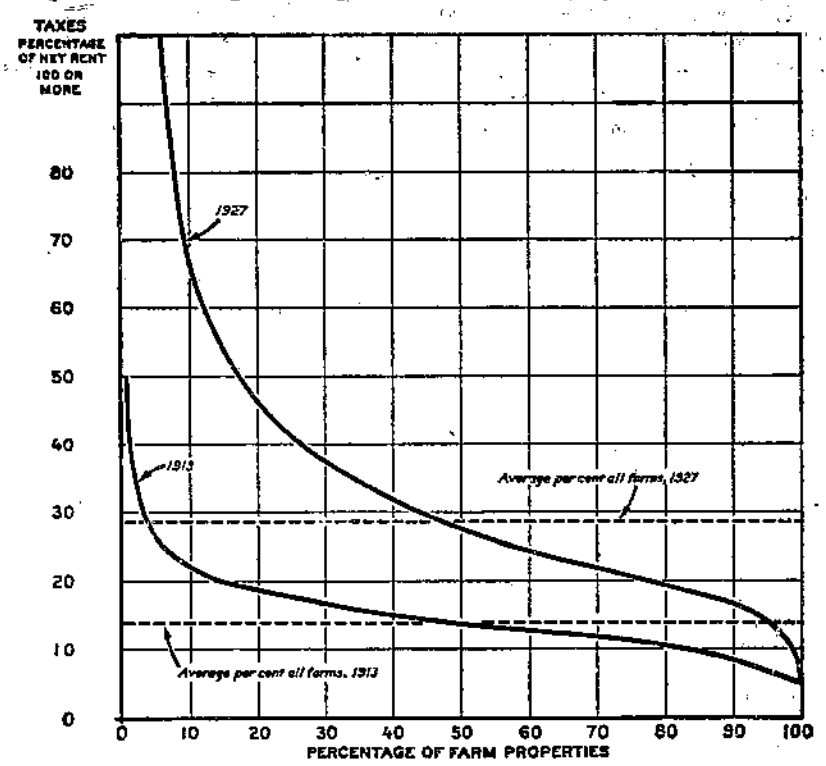

FIGURE 3.—NET CASH RENT AND TAXES ON INDIVIDUAL FARMS IN IOWA, 1913 AND 1927

The variation from the average of the percentage of net rent taken by taxes in individual cases was far greater in 1927 than in 1913.

for each year would have coincided with the dotted line for that year. The variation of each of the solid lines from the dotted line of each year indicates the extent to which the various individual farms failed to conform to the average. Although it is to be expected that the 1927 figures will appear to have a greater variation from the average than those of 1913, because of the larger amounts involved, no such variation as that which appears in the figure would be caused by this factor alone.[11]

[11] The coefficients of variation for the years 1913 and 1927 are 42 and 75 per cent, respectively.

MICHIGAN

An investigation of taxes and income from rented farms to include the years 1919 to 1926 has been made in Michigan (*12*). Both from the point of view of the representativeness of the data for any particular year and of the period covered, the results of the study rank with the best that have been secured. In all, data from over 1,500 farms of the lower peninsula were considered in the preparation of the final figures.

Average net rent for the 8-year period 1919 to 1926 amounted to $2.75 per acre, with taxes averaging $1.44 still to be deducted before the owner could figure his net return. Thus taxes averaged 52 per cent of net rent over the period. Table 12 indicates this relationship for each of the years covered.

TABLE 12.—*General property tax and rent per acre, Michigan, 1919–1926*

Year	Farms reporting	Acres in these farms	Net rent per acre before deducting taxes	Taxes	
				Per acre	Percentage of net rent before deducting taxes
	Number	*Number*	*Dollars*	*Dollars*	*Per cent*
1919	521	60,654	4.31	1.29	29.9
1920	392	43,956	2.99	1.49	49.8
1921	415	46,546	2.17	1.53	70.5
1922	656	75,483	2.66	1.49	56.0
1923	578	63,954	2.25	1.51	67.1
1924	677	73,579	2.44	1.41	57.8
1925	1,018	115,177	2.69	1.46	54.3
1926	[1] 614	62,396	2.50	1.37	54.8
Average	509	68,717	2.75	1.44	52.4

Michigan Agr. Expt. Sta. Tech. Bul. 91 (*12, p. 5*).

[1] These farms reported for each of the years, 1925 and 1926.

An analysis of the Michigan returns by sections of the State shows a considerable variation in the proportion of net rent taken by taxes. For the 7-year period, 1919 to 1925, the highest average percentage of rent consumed by taxes was reported from 7 northwestern counties of the lower peninsula. This percentage amounted to 92. During the 4-year period, 1920 to 1923, average taxes in these counties were actually greater than rents. In 1926 the rent and tax condition of the farms in these counties was materially better. Taxes averaged 58 per cent of net rents. At the other extreme was a group of eastern and central counties where taxes for the 7-year period, 1919 to 1925, were, on the average, 46 per cent of the net rents. Here the rent and tax situation became much worse in 1926, taxes taking 61 per cent of net rent. Figure 4 illustrates the annual variations from 1919 to 1926 in different sections of the State.

Although differences among the sections were important, those between individual farms were far more striking than the average quoted figures would indicate. In 13 counties of central and lower Michigan reports were received from 451 farms in 1925. Of these farms, all of which reported some gross income, 56 had a deficit before paying taxes; that is, expenses other than taxes were greater than gross rent. Of 75 others, taxes took more than the total net rent.

In 1919, reports on 233 farms in these same counties had been received. The reports indicated a deficit for 18 farms in this year before taxes were paid and in 23 others a deficit after taxes were paid.

In 1919 and 1925, respectively, 18 and 29 per cent of the rented farms reported, yielded no net income to their owners after taxes had

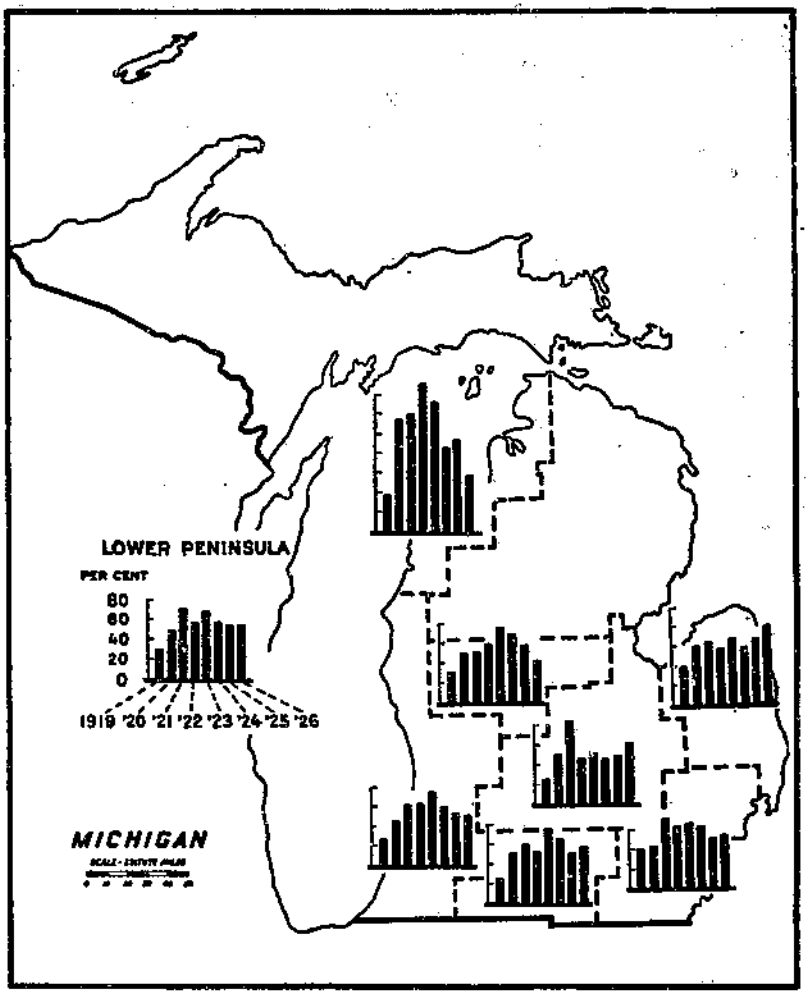

FIGURE 4.—PERCENTAGE RELATIONSHIP OF TAXES IN FARMS IN SEVEN DISTRICTS OF THE LOWER PENINSULA OF MICHIGAN, 1919-1926

The percentage of net rent taken by taxes from 1919 to 1926 averaged highest in the northwestern counties of the lower peninsula. For the lower peninsula as a whole the percentage was at its peak in 1921. It declined the following year, rose again in 1923, and then dropped in 1924 and 1925. It was practically the same in 1926 as it had been the previous year.

been paid. It will be observed that there was a pronounced increase during this period in the proportion of farms for which a failure to yield any return to their owners was reported.

Among the farms that yielded a return in the years in question, there was a great variation in each of the years in the proportion of the net

rent which was taken by taxes. Although the average percentage taken was lower in 1919 than in 1925, there was only a little difference in the two years in the way the individual farms varied above and below these averages.[12] In 1919 taxes took 25 per cent or less of the net income of half the income-yielding farms, whereas in 1925 only one-fourth of the income-yielding farms paid 25 per cent or less. Similarly, in 1919 three-fourths of the farms paid 50 per cent or less, and in 1925 two-fifths paid 50 per cent or less in taxes.

Some emphasis is placed on this analysis of the data in this State and elsewhere as the average figures that are most often quoted fail to reveal all of the real situation, as relatively few actual farms may be found to be paying in taxes a percentage of income which is reasonably close to the average percentage.

MISSOURI

Field agents secured data from rented farms for the years 1919 to 1923 in four counties of Missouri—Gentry, Boone, Audrian, and New Madrid (*2*). In 1923 it was found that taxes absorbed 20 per cent of the net rent of the 256 farms studied in these counties. In 1919 taxes had taken only 10 per cent of the net rent. Over the 5-year period, 1919 to 1923, the percentage taken by taxes was slightly above 16. The increase was due mainly to the rising level of taxation rather than to a drastic decline in net rent. The major portion of the tax increase in these counties occurred from 1920 to 1921. Table 13 contains the average annual tax and rent figures which were secured in this portion of the study.

TABLE 13.—*General property tax and net rent per acre on selected farms in Missouri, 1919–1923*

Year	Farms reporting	Acres in these farms	Net rent per acre before deducting taxes	Taxes	
				Per acre	Percentage of net rent before deducting taxes
	Number	*Number*	*Dollars*	*Dollar*	*Per cent*
1919	73	13,640	4.71	0.47	10.0
1920	82	15,338	4.32	.55	12.7
1921	103	18,716	3.69	.81	22.0
1922	145	26,789	4.02	.73	18.2
1923	256	49,265	3.73	.75	20.1
Average	132	24,750	4.09	.66	16.1

Missouri Agr. Expt. Sta. Research Bul. 93 (*2*, *p. 6*).

[12] The coefficients of variation for the nondeficit farms for 1919 and 1925 are 67 and 52 per cent, respectively. This difference would be largely eliminated if the larger number of deficit farms in 1925 were taken into account.

TABLE 14.—*General property tax and net rent per acre, northwestern counties of Missouri, 1913–1922*

Year	Farms reporting	Acres in these farms	Net rent per acre before deducting taxes	Taxes	
				Per acre	Percentage of net rent before deducting taxes
	Number	*Number*	*Dollars*	*Dollar*	*Per cent*
1913	21	4,328	3.09	0.35	11.3
1914	25	4,955	2.95	.33	11.1
1915	29	5,987	3.12	.32	10.2
1916	37	6,933	3.31	.32	9.7
1917	49	8,857	3.54	.35	9.9
1918	58	10,299	3.63	.38	9.3
1919	86	14,279	4.66	.48	10.4
1920	103	17,724	4.68	.53	11.4
1921	141	23,231	4.42	.71	16.0
1922	206	33,403	4.26	.73	17.1

Missouri Agr. Expt. Sta. Research Bul. 93 (*2, p. 7*). Percentages have been computed from totals and not from the derived per-acre figures.

The data contained in Table 14 are based on a survey of cash-rented farms in 23 counties in the northwestern part of the State and indicate that the recent increase in taxes did not begin until after 1918 and that, up to that year, taxes had taken a small and declining portion of net rent. A drastic increase of taxes from 1918 to 1919 was accompanied by an increase in net rent with the result that taxes took only a slightly greater percentage of net rent in 1919 than in the preceding year. Another sharp increase in taxes came from 1920 to 1921. This, however, was accompanied by a decline in net rent. The percentage of rent paid in taxes increased from 11.4 in 1920 to 16 in 1921.

NEW JERSEY

Data were secured by questionnaire from 98 rented farms in New Jersey for the year 1927.[13] This number is small, but it should be recalled that there are only 4,723 rented farms in the State, so that data for 1927 were recorded from more than 2 per cent of the rented farms. The farms reporting were well distributed throughout the State and probably indicate general conditions with fair accuracy. Net rent per acre in 1927 amounted to $4.41. Taxes were $2.12 per acre, thus amounting to 48 per cent of net rent. These figures are compared with those for 1925 and 1926 in Table 15. Taxes and rent increased in the years 1926 and 1927. The increase in net rent was greater proportionately than that of taxes, with the result that the ratio of taxes to net rent decreased in each of these years.

[13] The results of this study will be published in the near future by the New Jersey Agricultural Experiment Station in cooperation with the Bureau of Agricultural Economics.

TABLE 15.—*General property tax and net rent for selected farms in New Jersey, 1925–1927*

Year	Farms reporting	Acres in these farms	Net rent per acre before deducting taxes	Taxes	
				Per acre	Percentage of net rent before deducting taxes
	Number	*Number*	*Dollars*	*Dollars*	*Per cent*
1925	83	10,682	3.74	2.03	54.3
1926	91	11,650	4.09	2.07	50.6
1927	98	13,185	4.41	2.12	48.1
Average	91	11,839	4.08	2.07	50.7

Reports from 79 farms for each of the three years of the period 1925 to 1927 are available. Over the whole period net rent per acre on these farms averaged $4.48. Taxes averaged $2.13 per acre and the portion of net rent taken by taxes 47.5 per cent. The annual figures for these 79 farms indicate a progressively improving relationship in the tax and rent situation. The percentage relationship of taxes to net rent in 1925 was 51. The following year it had fallen to 48, and in 1927 it was 44. This occurred in spite of an increase in taxes from $2.04 per acre in 1925 to $2.24 in 1927. It is explained by the much greater increase in net rent, which rose from $3.98 per acre in 1925 to $5.09 in 1927.

NORTH CAROLINA

A study of 416 rented farms widely distributed over the State furnished rent and tax figures for North Carolina in 1927 (*16, p. 46–203*). Reports were secured for the years 1925 to 1927. In the latter year, net rent averaged $695 per farm and $3.04 per acre. Taxes the same year averaged $201 per farm and 88 cents per acre. Thus taxes amounted to 29 per cent of net rent.

Table 16 gives the figures for 1925–1927. Both taxes and net rents were lower in the earlier years, whereas the percentage of net rent taken by taxes was slightly higher, 35 in 1926 and 33 in 1925. Taxes took, in each of the years, a greater percentage of the net rent of cash-rented farms than of those rented on shares. This may partly account for the fact that the average percentage taken by taxes was higher in the two earlier years than in 1927, as cash-rented farms composed the majority of those reported in 1925 and 1926, but were in the minority in 1927.

TABLE 16.—*General property tax and net rent on selected farms in North Carolina, 1925–1927*

Year	Farms reporting	Acres in these farms	Net rent per acre before deducting taxes	Taxes	
				Per acre	Percentage of net rent before deducting taxes
	Number	*Number*	*Dollars*	*Dollar*	*Per cent*
1925	160	33,044	2.19	0.73	33.3
1926	182	35,501	2.21	.77	34.8
1927	416	95,205	3.04	.88	28.9
Average	253	54,583	2.48	.79	31.9

Report of the tax commission of North Carolina (*16, p. 161*). (Table corrected and 3-year average computed.)

Farms reporting from the coastal plain in 1927 yielded an average of $926 to their owners after paying all expenses except taxes. This latter item amounted to $252 per farm, or 27 per cent of net rent. The majority (66 per cent) of the farms reporting were in that section of the State. The mountain section was represented by only 18 farms These reported taxes amounting to over two and one-half times the net rent. On 33 farms in the tidewater section, taxes amounted to one-half of the net rent, and on 89 farms in the Piedmont, taxes took one-third of the owners' net rent.

NORTH DAKOTA

Rent and taxes for the years 1921 to 1924 were studied on farms in three counties of North Dakota—Traill in the eastern part of the State, Wells in the central part, and Hettinger in the western part; and data were secured in two of the counties, Traill and Wells, for two earlier years, 1919 and 1920 (*13*). Table 17 shows that taxes averaged about 40 per cent of the net rent for the years which the investigation covered. In the four years 1920 to 1923 they took practically 50 per cent of the net rent.

TABLE 17.—*General property tax and net rent per acre on selected farms in North Dakota, 1919–1924*

Year	Farms reporting	Acres in these farms	Net rent per acre before deducting taxes	Taxes	
				Per acre	Percentage of net rent before deducting taxes
	Number	*Number*	*Dollars*	*Dollar*	*Per cent*
1919	45	14,567	2.36	0.35	14.8
1920	62	22,317	1.30	.60	46.2
1921	91	29,377	1.05	.63	60.0
1922	117	36,211	1.32	.64	48.5
1923	155	46,769	1.03	.61	59.2
1924	158	48,694	3.18	.50	15.7

North Dakota Agr. Expt. Sta. Bul. 203, (*13, p. 16*). Figures from two counties in 1919 and 1920 and from three in the remaining years.

One finding of this study deserves particular notice. The tax condition of the farms was, so far as net rent is concerned, as favorable in 1924 as in 1919. This is accounted for by the high net rents received in 1924. In Wells County, the 1924 rent figure was almost twice that of 1919, and in Traill County it was nearly 65 per cent greater than in the earlier year. Taxes in Wells County increased 86 per cent during the period and those in Traill 56 per cent. The greater portion of the tax increase in these two counties came from 1919 to 1920. Since 1922 taxes in each of them have declined.

When changes in the average tax figure are studied, it is found that they do not correspond in their rise or fall to rent figures. Other instances of this maladjustment of incomes and taxes have been noted in the case of individual farms as well as in average results. It is experienced in any section in which there are large annual variations in the income-producing capacity of farm lands. As is illustrated by the North Dakota figures, taxes decline only slightly, if at all, from one year to the next, whereas incomes are frequently subject to drastic decreases.

OHIO

In Table 18 are tabulated the results of a study of cash rents and taxes in Ohio from the years 1913 to 1922. The particular value of these data arises from the fact that they cover a 10-year period during which farm taxes increased at a greater rate than they have at any other during the past 50 years. Cash rent on these Ohio farms increased with some irregularity from 1913 to 1920 and declined in the years 1921 and 1922. Taxes increased in every year of the period except 1916. Cash rents in 1922 were 33 per cent above those reported in 1913, whereas taxes were 128 per cent above the earlier year. In 1913 taxes took 24 per cent of net rent. This percentage declined slightly in 1914, increased somewhat the following year, and remained practically constant in 1916. Thereafter there was up to 1922, and with a minor exception in 1919, an almost steady increase in the percentage, which reached 41 in the last year of the period.

TABLE 18.—*General property tax and net rent per acre on selected cash rented farms in Ohio, 1913–1922*

Year	Farms reporting	Acres in these farms	Net rent per acre before deducting taxes	Taxes	
				Per acre	Percentage of net rent before deducting taxes
	Number	*Number*	*Dollars*	*Dollars*	*Per cent*
1913	31	4,578	3.00	0.72	23.8
1914	37	5,392	3.41	.73	21.4
1915	37	5,207	3.35	.90	26.9
1916	54	6,517	2.38	.89	23.3
1917	69	7,984	3.70	1.07	28.9
1918	91	10,941	3.79	1.22	32.2
1919	115	13,271	4.27	1.33	31.1
1920	147	16,232	4.37	1.48	34.0
1921	176	19,928	4.25	1.61	37.8
1922	277	31,850	3.99	1.64	41.0

BRANNEN, C. O., and NEWTON, R. W. Op. cit., p. 9.
Percentages have been computed from totals and not from the derived per-acre figures.

PENNSYLVANIA

Reports of taxes and rents on Pennsylvania farms that are summarized in Table 19 are rather meager in number and cover only one year (*19*). They do present a fairly large sample from Lebanon County and a few farms from Lancaster County, representing the better agriculture of the State. The sample from Warren and Westmoreland Counties, representing, from the agricultural point of view, some of the less productive counties of the State, is not sufficient to justify any conclusions.

The great differences between the two groups of counties in the percentage of net rent taken by taxes may indicate that conditions in Pennsylvania, as elsewhere, make necessary heavy demands on the poorer sections of the State for certain governmental services which are easily met by those portions of the State where incomes are higher. In other words, the cost of governmental services tends to remain fairly constant even if the wealth of various sections of the State or the incomes of those sections vary.

TABLE 19.—*General property tax and net rent per acre on selected farms in Pennsylvania, 1924–25*

County	Farms reporting	Acres in these farms	Net rent per acre before deducting taxes	Taxes	
				Per acre	Percentage of net rent before deducting taxes
	Number	*Number*	*Dollars*	*Dollars*	*Per cent*
Lancaster	7	490	16.41	1.96	11.9
Lebanon	55	5,655	7.40	1.82	24.6
Warren	5	1,042	.74	.54	73.0
Westmoreland	8	923	4.16	2.63	63.2

Computed from data sup[illegible] by F. P. Weaver (*19*).
The average for these coun[illegible] should not be assumed as representing the State as a whole because the farms in these counties may not be typical of all farms.

SOUTH DAKOTA

Rented farms in Brookings, Beadle, Day, Hamlin, and Pennington Counties of South Dakota were studied in order to secure income and tax figure[illegible] the years 1919 to 1926 (*5*). Data were secured over this 8-year period for, on an average, 151 farms. The counties in which these farms are located are well distributed over the State, and although the sample is small, the results of the study probably represent to a fair degree the general situation.

Rent and tax levels differ considerably among the counties. The average net rent per acre for the 8-year period was $3.34 in Brookings, $2.79 in Beadle, $1.82 in Day, $3.23 in Hamlin, and $0.96 in Pennington. Taxes per acre averaged 89, 82, 73, 83, and 21 cents respectively, in these counties. As this would indicate, there was great variation among the counties in the number of cents which were paid out in taxes from each dollar of net rent. For the whole period from 1919 to 1926, inclusive, the owner of a rented farm in Pennington County paid out in taxes on an average 22 cents of each dollar of net rent, whereas in Day County 40 cents, or nearly twice the amount in Pennington County, was paid out. The other counties fall between, the number of cents paid in taxes per dollar of net rent averaging 26 in Hamlin, 27 in Brookings, and 29 in Beadle.

The average figures for the whole period tell only part of the story. In Day County in 1921 taxes were $1.20 for every dollar of net rent. In Pennington, the same year, they were $1.13. This was due in each of the counties to drought and hail, which came along with low prices for agricultural products. At the other extreme, in Pennington County in 1924, farmers paid out in taxes less than 7½ cents of every dollar of net rent. In other words, although taxes in 1921 seemed confiscatory, if conditions were judged from that year only, three years later in the same county they were so small as to constitute a minor deduction from income.

Table 20 summarizes the 8-year figures of the farms reported from South Dakota. The qualifications placed upon the use of average figures should be observed here as elsewhere. The averages do, however, illustrate trends and so are worth consideration. Net rent per acre was highest and taxes were lowest in 1919, the percentage rela-

tionship of taxes to net rent being 16. Two years later rent had fallen to $1.30 per acre and taxes had risen to 71 cents, with the result that taxes took 55 per cent of net rent. From that year through 1924, there was an improvement each year in the rent figure with only a slight change in the taxes. In 1924 taxes took 21 per cent of net rent. A slight decline in rent occured in 1925 and a material decline in 1926. There was little change in taxes during these years, taxes amounting to 23 per cent of net rent in 1925 and to 30 per cent in 1926.

TABLE 20.—*General property tax and net rent per acre on selected farms in South Dakota, 1919–1926*

Year	Farms reporting	Acres in these farms	Net rent per acre before deducting taxes	Taxes	
				Per acre	Percentage of net rent before deducting taxes
	Number	*Number*	*Dollars*	*Dollar*	*Per cent*
1919	178	60,066	3.79	0.61	16.1
1920	127	47,817	1.76	.74	42.0
1921	132	49,203	1.30	.71	54.6
1922	132	48,974	1.68	.71	42.3
1923	133	49,850	2.01	.66	32.8
1924	192	64,249	3.33	.69	20.7
1925	164	44,976	3.16	.72	22.8
1926	142	38,054	2.38	.71	29.8
Average	150	50,399	2.43	.69	32.6

South Dakota Agr. Expt. Sta. Bul. 232 (*5, p. 30*).

VIRGINIA

Reports of taxes and rents for 1926 were secured from 1,094 farms located in 33 counties of Virginia.[14] This sample is large enough to represent the various portions of the State in which rented land is of importance. The average net rent of the farms from which reports were secured was $2.12 per acre, and out of this taxes amounting to 42 cents had to be paid. Thus, taxes took 20 per cent of the net rent of these farms.

The State was divided into several districts for the purpose of the survey. The farm data secured in each district appear in Table 21. Farm taxes in relation to income were highest in the eastern district, where taxes took 33 per cent of the net income of the 91 farms for which data were secured. In the locality designated as the Blue Ridge, owners of the 92 farms reporting paid 29 per cent of their net rent in taxes. At the other extreme, so far as rent and taxes are concerned, were 113 farms of the valley north district, where taxes took less than 16 per cent of net rent. The sections designated as northern, South I, and South II had results which were not greatly different from those of the valley north.

[14] A detailed report of this investigation will be published by the Virginia Agricultural Experiment Station in cooperation with the Bureau of Agricultural Economics.

TABLE 21.—*General property tax and net rent per acre on selected farms in 33 counties of Virginia, 1926.*

District	Farms reporting	Acres in these farms	Net rent per acre before deducting taxes	Taxes	
				Per acre	Percentage of net rent before deducting taxes
	Number	*Number*	*Dollars*	*Dollar*	*Per cent*
Southwest	111	34,610	2.00	0.46	23.0
Valley central	148	30,870	3.03	.55	18.1
Valley north	113	19,656	4.05	.64	15.9
Northern	96	27,745	2.95	.48	16.2
Eastern	91	20,781	1.10	.38	32.8
Eastern Shore	100	14,020	3.37	.77	22.8
Southeast	113	21,338	1.34	.34	25.2
South I	111	24,433	1.37	.27	19.6
South II	119	29,208	1.41	.23	16.6
Blue Ridge	92	22,791	.99	.29	29.4
Total or average	1,094	245,492	2.12	.42	20.0

Counties represented in the reports of each of the districts follow: Southwest—Washington, Smyth, Pulaski, Russell, Tazewell, Montgomery; valley central—Alleghany, Bath, Botetourt, Rockbridge, Augusta; valley north—Rockingham, Frederick; northern—Loudoun, Fauquier; eastern—Westmoreland, Essex, Hanover, Henrico; Eastern Shore—Accomac; southeast—Nansemond, Prince George, Sussex; South I—Brunswick, Lunenburg, Prince Edward, Cumberland; South II—Halifax, Pittsylvania; Blue Ridge—Carroll, Bedford, Amherst, Albermarle. Percentages have been computed from totals and not from the derived per-acre figures.

In Virginia, as elsewhere, the difference between the reports of individual farms and the average was striking. Figure 5 illustrates these variations for the State as a whole and for certain sections. About 12 per cent of the farms from which reports were received in 1926 yielded no net rent to their owners after taxes and other expenses had been paid. Taxes took 50 per cent or more of the net rent on 22 per cent of the farms. On the other hand, 3 per cent of the farms paid 5 per cent or less of their net rent in taxes and 12 per cent of the farms paid between 5 and 10 per cent.

WASHINGTON

Reports from 406 rented farms in Washington were secured for 1926. The owners of these farms had received net rent averaging $2.71 per acre from which it was necessary for them to pay 79 cents per acre in taxes. Table 22 indicates that the situation in 1926 was not greatly different from that in the two previous years. Net rent was 9 per cent higher in 1925 and 4 per cent lower in 1924 than in 1926. Taxes were the same in 1925 as in 1926 and were 4 per cent higher in 1924. The percentage of net rent taken by taxes for the 3-year period averaged 29, which was its 1926 level. A slightly larger proportion of net rent was taken by taxes in 1924 and a somewhat smaller proportion in 1925.

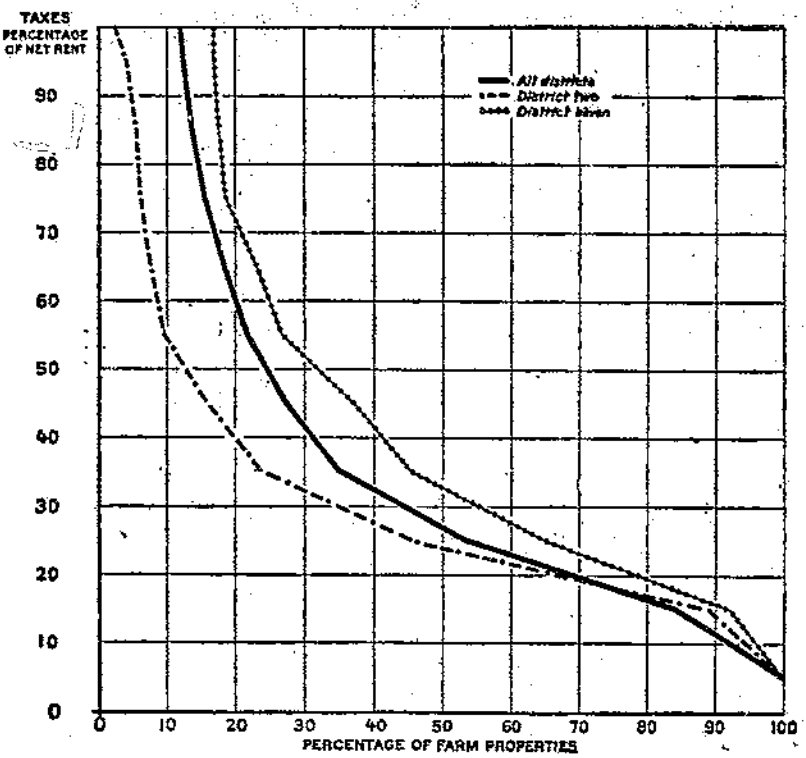

FIGURE 5.—PERCENTAGE DISTRIBUTION BASED ON RELATION OF TAXES TO NET RENT ON FARMS IN VIRGINIA—IN THE STATE AS A WHOLE AND IN SELECTED DISTRICTS—IN 1926

One hundred forty-eight reports in district 2 which were collected from Alleghany, Bath, Botetourt, Rockbridge, and Augusta counties show a greater concentration of farms paying from 10 to 20 per cent of their net rent in taxes than do the 1,093 reports from the whole State. Only a small number of farms in district 2 (the central valley) fail to yield enough net rent to pay taxes and all other expenses. District 7 (southeastern Virginia), comprising 113 reports from Nansemond, Prince George, and Sussex Counties, has a large per cent of its farms in the higher percentage groups than has district 2 or the State as a whole.

TABLE 22.—*General property tax and net rent per acre on selected farms in Washington, 1924–1926*

Year	Farms reporting	Acres in these farms	Net rent per acre before deducting taxes	Taxes	
				Per acre	Percentage of net rent before deducting taxes
	Number	*Number*	*Dollars*	*Dollar*	*Per cent*
1924	359	123,910	2.59	0.83	32.0
1925	382	134,744	2.96	.79	26.7
1926	406	143,787	2.71	.79	29.2
Average	382	134,140	2.75	.80	29.1

Owners of the farms reported on for the 3-year period 1924 to 1926 from the Palouse country of southeastern Washington paid on an average 23 per cent of their net rent in taxes. These farms yielded to their owners annually from 1924 to 1926 $3.19 per acre in net rent,

from which taxes of 73 cents had to be paid. Owners of farms in the irrigated sections of central Washington reported that they paid 27 per cent of their net rent in taxes. Their annual net rent averaged $9.61 per acre, and taxes $2.61. Tax figures given here and elsewhere do not include water charges or other special assessments. Farmers of the Columbia Plateau reported that taxes took 29 per cent of their net rent. Taxes in this section of the State averaged 42 cents per acre and net rent $1.44. The relationship between taxes and net rent in western Washington was less favorable than in the three sections just described. Although net rent at $4.79 per acre was well above the average for the State, taxes amounted to $2.09 per acre. Thus taxes in western Washington took 44 per cent of the net rent.

TAXATION OF RENTED FARMS SUMMARIZED

If the discussion of taxes and rent of farms in 14 States located in all sections of the country could be extended to the other 34 States, new evidence of the weight of taxation on farm real estate would be obtained, but it is doubtful whether any condition of this single aspect of the problem would be disclosed that has not been revealed by the studies already completed. It will be profitable, however, to attempt to bring together these results and to try to discover what they contain of importance to one who wishes to understand the farm-tax situation.

A diagrammatic summary of the studies is presented in Figure 6. The data that appear in the figure are largely self-explanatory, but their interpretation required considerable study. The data refer to different years, because the various investigations have not been concerned with any one year or series of years. Even if a single year common to all the investigations could be chosen, there would be grave objections to its use. Any one year might fail to reveal the situation within a State since there could be no guaranty that the figures for that year were not abnormal.

In order to secure as accurate a description as possible of the general situation in each of the States, data for two or more years have been combined wherever possible. In only one case have data for a year prior to 1922 been used. By using returns for the more recent years a picture of more stabilized agricultural conditions can be presented than would be indicated by using data from the years 1919 to 1921 along with those for the more recent years. In the single case of Ohio the years 1921 and 1922 are the most recent years for which data are available. It is considered that the use of the figures for these two years gives a more balanced picture than would be obtained by using 1922 alone.

Total net rent before taxes were deducted is highest for the few farms reported from Pennsylvania. Inadequacies of the data from that State have been mentioned. Figures of net rent that adequately represent the State would undoubtedly be lower, and the ratio between taxes and net rent would probably be higher. In Iowa, New Jersey, and Ohio per-acre net rent figures for over $4 were reported, and those in Indiana and Missouri lacked only a few cents of this amount. Arkansas figures indicate an average rent per acre amounting to over $3. Michigan, North Carolina, South Dakota, Virginia, and Washington fall into the class reporting net rent of between $2 and $3 per acre. Colorado and North Dakota each average slightly under $2 per acre.

The farms of four States—New Jersey, Pennsylvania, Ohio, and Indiana—reported an average tax per acre of $1.50 or over. Iowa and Michigan had per-acre tax figures of between $1 and $1.50. All the remaining States of the group studied, except Virginia, fall into the group reporting taxes of from 50 cents to $1 per acre. Virginia's tax per acre was 42 cents.

Pennsylvania figures show the largest average net rent per acre after taxes had been deducted, but these figures are almost wholly

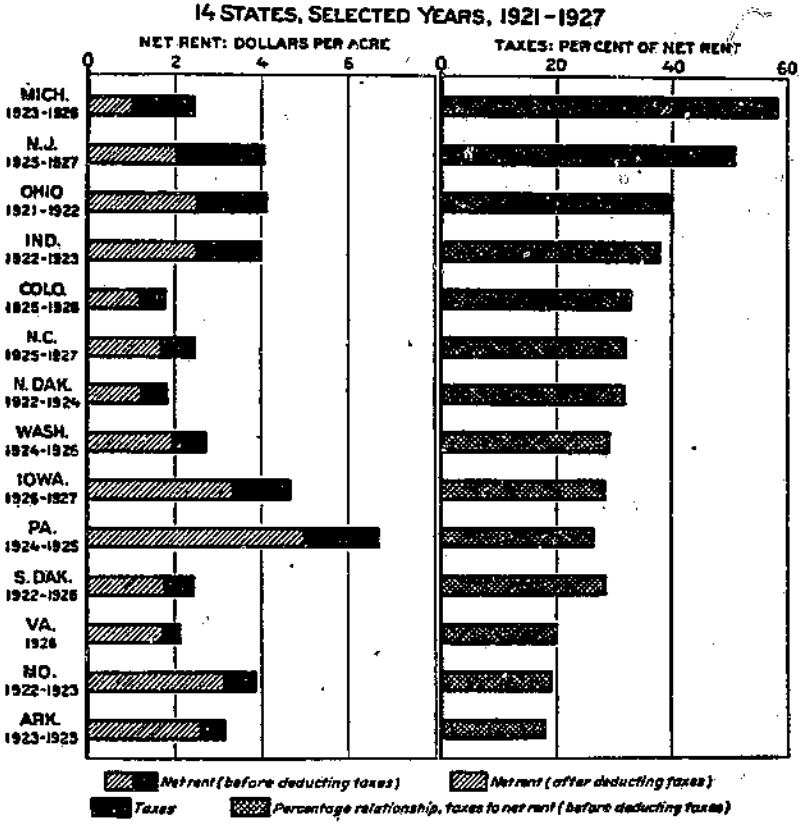

FIGURE 5.—GENERAL PROPERTY TAX AND NET RENT, SELECTED FARMS IN 14 STATES, SELECTED YEARS, 1921-1927

In Michigan and New Jersey taxes during the periods indicated amounted to over 50 per cent of the net rent before taxes were deducted. At the other extremes, in Virginia, Missouri, and Arkansas taxes amounted to 20 per cent or less of net rent.

derived from the better farms of the State. Iowa and Missouri report average net rent after taxes had been deducted amounting to between $3 and $4 per acre. Arkansas, Indiana, Ohio, and New Jersey are in the group reporting from $2 to $3. All the remaining States are in the $1 to $2 group.

The percentage that taxes take of net rent before taxes are deducted is of more significance for comparative purposes than are the per-acre figures which have been summarized. In Figure 6 the States are arranged in order of this percentage. In Michigan taxes averaged 58 per cent and in New Jersey 51 per cent of net rent. Five States

are in the group in which taxes average from 30 to 40 per cent of net rent. Four more are in the 25 to 30 per cent group. In one an average of 20 per cent is taken by taxes, and in the two remaining States taxes take between 18 and 20 per cent.

Is it possible from the assembled data to conclude that taxation in any single section of the country is taking a larger proportion of the net income of farm land than in other sections? The four States in which the proportion is highest are Michigan, New Jersey, Ohio, and Indiana. North Dakota and Iowa are not far behind. In other words, the pressure of taxes seems heavier in the North Central States than in the other sections which are represented in Figure 6. The situation in New Jersey is influenced by urban development which often causes high taxation long before a compensating increase in net rent appears.

The data on which the study is based do not supply conclusive evidence sufficient to trace the heavy burden in the North Central States to the single cause either of high taxation or of low income. In each of the States just mentioned, except North Dakota, taxes figured on a per-acre basis are high. It is also a well-known fact that in the North Central States the services that the local governmental units are called upon to supply are greater than in many other sections. In Colorado and North Carolina the percentage of net rent taken by taxes is as high as in some of the North Central States. In Colorado the standard of public services has been kept at a high level for many years, and North Carolina has made heavy expenditures in the last few years to improve its governmental services.

It is unquestionably true that net income from land has been low generally throughout the North Central States for the last eight years. The same statement could apply to agricultural income for the country as a whole, but this region has probably been as unfortunate in this respect as any other. Thus it seems a logical conclusion that both high taxes and low agricultural income have been factors in making the percentage of income taken by taxes high.

Additional confirmation of this conclusion is found in a consideration of the three States in which taxes have taken the smallest percentage of net rent. These States are Arkansas, Missouri, and Virginia. In each a condition exists which makes taxes low as compared with the average of the country. In other words, low taxes here, rather than high income, has kept the ratio between tax and income low.

No simple average of the data presented in Figure 6 is in any sense significant. It is possible to say that in half of these States taxes took from 25 to 35 per cent of the net income of rented farms. In the cases of three States the percentage was lower than this, and in four others it was higher. Hence, on the assumption, which seems on the whole justified, that the States examined are typical of general conditions, it may be estimated that during the period 1922 to 1927 taxes took about 30 per cent of the net income from rented farms.

INCOME AND TAXES OF URBAN PROPERTY

It has been asked whether the relation between income and taxes of farm property differs widely from that which prevails in the case of urban property. The available data permit no conclusive answer to this question, but studies of the subject have been made in nine

of the States from which the farm data were secured. A summary of the percentage relation between taxes and net rents on farm and urban properties in these States is contained in Figure 7. The studies have been made to supply the demand for information concerning the taxation of types of property that are not devoted to agriculture.

In five States it took a greater percentage of net rent to pay taxes on farms than to pay taxes on urban property. In the other four States the situation was reversed, taxes on the urban properties taking the greater percentage.

On the basis of these data, no conclusive answer to the question of whether city or farm taxes take the greater proportion of the net return from real estate seems possible. In both cases the percentage that goes to pay taxes is high throughout the country. During the years immediately following the post-war deflation, it seems unques-

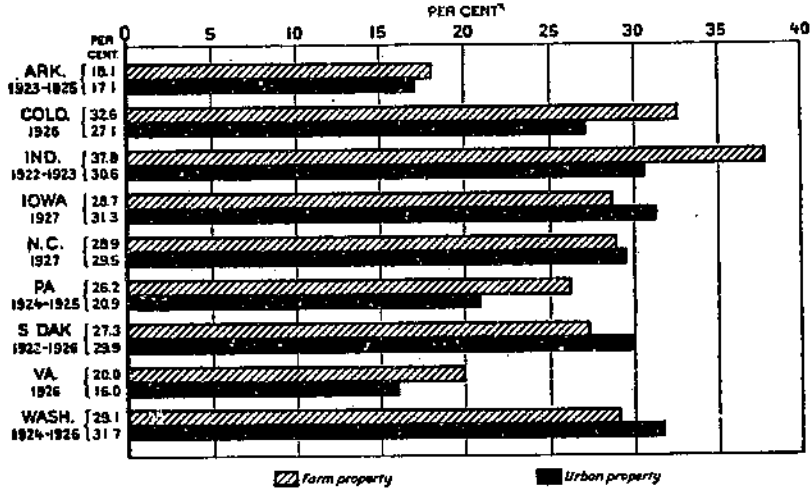

FIGURE 7.—GENERAL PROPERTY TAXES AND NET RENT ON FARM AND URBAN PROPERTY IN NINE STATES SELECTED YEARS, 1922-1927

In five of the nine States taxes take a greater part of the net rent of farm than of urban property. The maximum difference is in Indiana, where taxes on farms were 37.8 per cent of net farm rent and taxes on urban property 30.6 per cent of urban rent. In most of the States the difference is slight.

tioned that farm real estate contributed to public funds a greater proportion of its return than did urban real estate.

Two circumstances tend to explain this situation. Net income on farm property was low, and often nonexistant. Assessed valuations of farm property, on the other hand were at their peak. The fall in market values of farm land was not reflected in a decline in its assessed valuation for several years. The fact that there is in all cases a period of about a year between assessment and payment of taxes makes a lag of one year inevitable. Besides, only half of the States assess farm real estate every year and in many of these States the annual assessment is a formal requirement which results in copying the figures from the previous year's rolls. As a result in many cases farm properties were assessed for several years at a proportion of their actual value which was materially higher than the normal proportion. The effect of this was a high tax contribution at a time when income was exceedingly low.

Too much emphasis should not be placed upon the influence of high farm assessments in causing farms to be taxed at a high proportion of their net yield. Farm taxation is largely local taxation. So far as this local taxation is concerned, it makes no difference whether the average relationship between assessed valuation and true value is high or low. If it is high, the tax rate may be low. If, on the other hand, the relationship is kept low, the tax rate must be high. Low assessment ratios have usually been accompanied by the maximum inequalities of assessment. In other words, it is considered much easier to assess uniformly at a high ratio than at a low rate.

Outside of the local jurisdiction, a difference in the ratio of assessed to true value will tend to transfer part of the taxes from the low-assessed group to the higher groups. But these taxes in most agricultural sections of the country are relatively small in amount and could not account for a large inequality between urban and rural properties. As an examination of the effects of inequalities in assessment forms a later section of this bulletin, detailed attention is not given to the subject here, but it is mentioned as one of the several causes of relatively high taxes for agriculture during the years of the depression.

The comparison which has been made of the taxes and yields of urban and rural properties does not give a satisfactory indication of the relative burdens of taxation on these types of property. From the point of view of current income to the owner of rented land, the comparison is exceedingly important. Examination indicates that both types of property pay high proportions of their net yields in taxes and that on the basis of the few States for which figures are available, farm property seems to pay a slightly greater proportion.

Too much importance should not be attached to the meager conclusions that may be drawn from the comparative data that have been presented. Urban and rural taxes are, in part, different things. That is, the taxpayer in the city is purchasing, through his tax payments, types of services that are different from those paid for in rural tax payments. The city government provides fire and police protection. It maintains a school system which may be no better in its individual units than are the rural schools, but which enables pupils to carry their education further and provides a greater variety of training and more elaborate equipment. The streets maintained by city taxes are of a higher grade and are usually kept in better condition than are roads in rural sections. Street cleaning and lighting are city services that rarely have rural counterparts. Thus, it is apparent that the things for which city taxes are paid are much more extensive than the things which the rural property owner purchases through his tax payments.

In further qualifying the conclusions which might be drawn from a hasty consideration of the data from city and country, it should be recalled that although the services supplied by governmental units are much greater in the cities, the relatively inferior rural services may be provided at a greater unit cost to the taxpayers. No detailed consideration of this is possible at present. It is mentioned merely to suggest another direction in which it is necessary to look before finding the data that are essential to a complete consideration of the subject.

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Another problem relating to a comparison of the relative weight of taxation deserves attention. The payment of taxes into the public treasury by an individual or corporation is in itself no indication of the amount which that individual or corporation actually contributes. An enumeration of direct contributions alone necessarily overlooks the possibility that the one who pays the tax may be able to add it to the price of goods or services that he sells or leases, or to subtract it from payments that he makes to others. In other words, he may be able to shift the tax on to some one else. The possibility of such shifting as applied to various taxes and different types of property is considered later.

INCOME AND TAXES OF OWNER-OPERATED FARMS

In a consideration of the income and taxation of farms that are operated by their owners, it must be kept in mind that the income figures are of a different nature from those which have been used in the preceding part of this bulletin. The rent that a tenant pays to his landlord is on an average a close approximation of the ability of the land to produce income. It is income from property rather than from labor. No similar figure for the owner-operated farm can be computed except on the basis of certain assumptions. The description of the methods by which the income of farmers who own and operate their farms is computed will indicate what these assumptions are. Data are presented for the country as a whole and for certain States in which a large body of data has been secured.

THE UNITED STATES AS A WHOLE

Figures relating to the net returns from owner-operated farms have been gathered on a nation-wide basis since 1922. They are obtained through questionnaires sent out each year, and are subject to the limitations that govern complicated data assembled in this way. As their general nature and accuracy have been discussed in detail elsewhere,[15] it is necessary here only to describe the use made of the figures comparing them with taxes paid on each farm. There is added to the difference between receipts and cash outlay (except taxes) the increase in the value of the inventory of personal property. This gives a figure which may be termed the net returns before deducting taxes. Two noncash items are then considered. The value of food produced and used on the farm—a receipt item—is added to the net returns; then the value of family labor, including that of the owner, is subtracted from this sum. The remainder is termed net return before deducting taxes and is compared with the tax figure.

Taxes include small amounts paid on household goods and on a few other items that are not a part of the business property of the farm. These amounts are so small that their inclusion has no material effect on the data.

The net return is a current-income figure. It does not take into account the changes in the capital value of the farm real estate from year to year although inventory changes in personal property are included. There is the further fact that no account is taken of interest payments. In other words, the owner of the farm is assumed to be a full owner. Since the tax figure is based on the whole property

[15] Especially in Crops and Markets (17).

of the farm whether fully owned or merely purchased with borrowed money, it seems proper to leave interest payments out of consideration.

Table 23 contains figures of the net return on reporting farms for the country as a whole and for the different geographic divisions. This net return, is the return on the property of the farm, plus any return which may go to the farm operator as payment for his services as business manager. Taxes per farm are compared with the net returns per farm for each of the years from 1922 to 1927, and the percentage relationships of taxes to net returns are computed.

TABLE 23.—*Net returns*[1] *and taxes on owner-operated farms, 1922–1927*

Geographic division	1922				1923			
	Farms reporting	Net returns per farm before deducting taxes	Taxes per farm	Per centage relationship taxes to net returns	Farms reporting	Net returns per farm before deducting taxes	Taxes per farm	Per centage relationship taxes to net returns
	Number	*Dollars*	*Dollars*	*Per cent*	*Number*	*Dollars*	*Dollars*	*Per cent*
North Atlantic	648	427	146	34.2	1,800	520	160	30.8
South Atlantic	803	572	91	15.9	2,131	490	110	22.4
East North Central	1,274	655	210	32.1	3,395	620	220	35.5
West North Central	1,395	879	211	24.0	3,817	680	240	35.3
South Central	1,282	670	111	16.6	3,320	610	140	23.0
Western	692	606	270	44.6	1,720	810	270	33.3
United States	6,094	669	174	26.0	16,183	605	190	31.4
	1924				1925			
North Atlantic	1,761	516	167	32.4	1,789	857	164	19.1
South Atlantic	1,990	581	122	21.0	1,915	540	119	22.0
East North Central	2,808	830	230	27.7	3,067	1,056	223	21.2
West North Central	3,398	1,067	239	22.4	3,402	1,256	248	19.6
South Central	3,412	947	138	14.6	3,434	665	122	18.3
Western	1,734	1,038	254	24.5	1,725	1,573	271	17.2
United States	15,103	874	192	22.0	15,330	969	191	19.7
	1926				1927			
North Atlantic	1,436	685	171	25.0	1,477	847	169	20.0
South Atlantic	1,764	505	122	24.2	1,837	747	111	14.9
East North Central	2,591	789	208	26.4	2,560	725	213	29.4
West North Central	2,909	912	245	26.9	3,129	1,240	235	10.0
South Central	3,269	834	121	14.5	3,418	850	119	14.0
Western	1,446	1,207	240	19.9	1,438	1,647	245	14.9
United States	13,475	819	183	22.3	13,859	974	180	18.5

Computed from reports of farm returns (17).

[1] Average gross cash receipts from sales, plus the value of food produced and used on the farm, plus change in inventory of personal property, minus average current cash expenses, minus the estimate value of family labor including that of the owner. The following items are not included: Interest paid, expenditures for farm improvements, and estimated change in the value of real estate during the year.

For the United States as a whole, the greatest proportion of net returns paid as taxes during the 6-year period was collected in 1923, when the percentage amounted to 31. There was a large increase in net return the following year, and taxes amounted to 22 per cent of net return. Since 1924 the percentage has alternately fallen and risen. It was 20 in 1925, 22 in 1926, and 18.5 in 1927, when the average net return was the highest for any year of the period and taxes were lower

than in any year since 1922.[16] Figure 8 contains comparison of the average return and tax figures per farm reported for the United States and of the percentage of net return taken by taxes for each of the six years.

It is unnecessary to describe in detail the figures for each of the geographic divisions. Figure 9 indicates the amount taken by taxes in each of them each year. In relation to farm income this amount has been highest in the East North Central States. It has been lowest in the South Central States. The other regions, starting with those in which the percentage has been lowest, rank as follows: South Atlantic, Western, and West North Central and North Atlantic practically together. No attempt can be made here to examine in detail the reasons for the differences between regions. It will be noted in passing, however, that those sections where the percentage taken

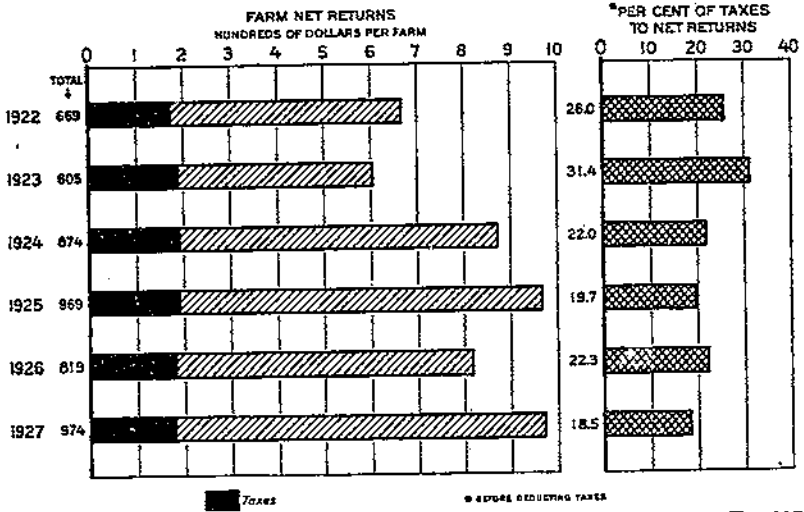

FIGURE 8.—FARM NET RETURNS AND TAXES ON OWNER-OPERATOR FARMS IN THE UNITED STATES, 1922-1927

The average net return per farm was highest in 1927 and lowest in 1923. Taxes averaged highest in 1924. The percentage relationship of taxes to net return was highest in 1923 and lowest in 1927. The change from 1923 to 1927 was largely due to the improvement in farm returns rather than to a drastic reduction in taxes.

by taxes has been consistently lowest are in general the ones where a lower quantity and quality of governmental services (that is, less improved roads and short school sessions with poorly trained teachers) have been supplied than in other parts of the country. This does not apply to every State in each of these groups, but on the whole it seems a fair description of the situation.

The net-return figures with which taxes have been compared is to a certain extent based on two noncash items, food produced and used on the farm and the value of family labor. The values given to these items are estimates and may be less accurate than are the values placed on the cash items and on the increase in the inventory of personal property. For this reason, Table 24 is given to compare by years and regions the percentage of the net returns (that is receipts

[16] The decline in the tax per farm is undoubtedly due to a decrease in the size of farms reported rather than to a decline in farm taxes.

plus increase in the inventory of personal property minus cash outlay) taken by taxes. This is a comparison of taxes with a composite cash income composed of the current labor income of the farm owner and his family, the return from the farmer's managerial ability, and the return from the property of the farm. The percentage relationship is lower than that which appears in the comparison of taxes and net return, but there is nothing in it which is markedly different from the results already described.

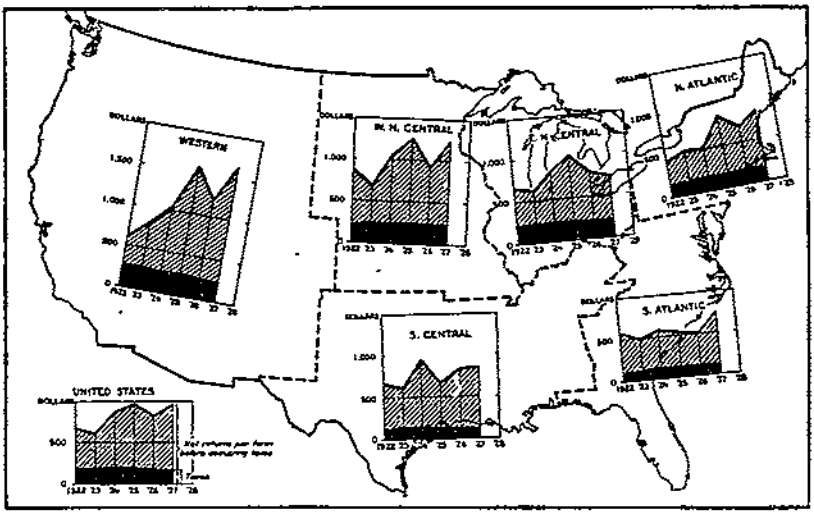

FIGURE 9.—FARM RETURN AND TAXES ON OWNER-OPERATED FARMS, BY REGIONS, 1922-1927

The average farm returns which include in their computation noncash items such as the increase in the value of the inventory of personal property, the value of food produced and used on the farm, and the value of the labor of the farm family including that of the operator, increased from 1922 to 1927 in every section of the country. Average taxes were reported higher in 1927 than in 1922 in every region except the Western States.

TABLE 24.—*Percentage relationship of taxes and net returns (receipts plus inventory increases of personal property minus cash outlays) on owner-operated farms, 1922–1927*

Geographic division	1922	1923	1924	1925	1926	1927
	Per cent	*Per cent*	*Per cent*	*Per cent*	*Per cent*	*Per cent*
North Atlantic	14.5	13.0	14.0	10.8	12.8	11.3
South Atlantic	12.7	12.9	15.7	16.2	17.7	11.9
East North Central	18.5	17.6	16.8	14.0	15.1	16.4
West North Central	14.6	17.8	12.6	12.8	15.6	12.5
South Central	13.1	13.6	11.5	12.9	11.1	10.8
Western	21.5	17.1	14.4	11.7	12.4	10.1
United States	15.9	15.7	13.7	12.8	13.9	12.2

Computed from reports of farm returns (*17*).

STUDIES IN INDIVIDUAL STATES

Investigations of the relationships between the net return and taxes on owner-operated farm land have been a part of the tax studies made in several States. A summary of the investigations made in Arkansas, Iowa, Massachusetts, North Carolina, and Pennsylvania will give an idea of conditions in several widely separated portions of the country.

The same qualifications that applied to the figures that were secured for the country as a whole must be kept in mind in considering this State material. A further caution in its use relates to the fact that the methods of securing the data and the exact nature of the income referred to were not uniform among the States.

ARKANSAS

Figures for the State of Arkansas have been gathered by the questionnaire method which is used in collecting the material for the country as a whole (*1, p. 10*). As the same deductions from gross income have been made, no further description of the method used is necessary. Table 25 summarizes these figures for the years 1922 to 1926. There is a wide variation in the number and size of farms as well as in the net return and tax figures. For this reason, the changes in the net returns from year to year may be as strongly influenced by the changes in the sample as by the changes in the economic conditions of the farmers. For the period as a whole, however, the sample is probably sufficient to indicate general conditions. Taxes are shown to take 14 per cent of the net return on farm property plus the return received for the managerial ability exercised by the farmer. Net returns averaged $577 per farm and taxes $82.

TABLE 25.—*Taxes and net returns on selected owner-operated farms in Arkansas, 1922–1926*

Year	Farms	Acres per farm	Net returns per farm before deducting taxes	Taxes per farm	Percentage relationship taxes to net returns
	Number	*Number*	*Dollars*	*Dollars*	*Per cent*
1922	188	141	445	55	12.4
1923	495	174	333	75	22.5
1924	447	196	754	119	15.7
1925	383	186	739	93	12.6
1926	618	156	613	67	10.9
Average	426	171	577	82	14.2

Arkansas Agr. Expt. Sta. Bul. 223 (*1, p. 10*).
Simple averages and percentages computed from totals and not from derived per-farm figures.

IOWA

The data presented for Iowa farms operated by their owners have been computed from farm management surveys. (*3, p. 56–58*). The method of computation makes it possible to present figures subject to the same interpretation as those presented for the country as a whole and for Arkansas, although the basic data were derived in different manner. The Iowa figures are of particular value in that they included data collected for the years 1913–1916 as well as for more recent years.

Table 26 indicates that for the period 1913 to 1916 taxes took less than 5 cents of every dollar of net return from farm property and from the business ability of the farm operator. In 1918 taxes took only a slightly greater amount, 5½ cents. In the post-war period, 1921 to 1923, the situation had so changed that taxes took nearly 22 cents of every dollar, and on 119 farms for which figures are available in 1927 taxes took 32 cents of every dollar of return. The

table shows that net returns from 1913–1916 to 1921–1923 per farm have decreased 50 per cent or more whereas taxes have increased 120 per cent.

TABLE 26.—*Taxes and net return on selected owner-operated farms in Iowa, 1913–1916, 1918, 1921–1923, and 1927*

Year	Farms	Acres per farm	Net returns per farm before deducting taxes	Taxes per farm	Percentage relationship taxes to net income
	Number	*Number*	*Dollars*	*Dollars*	*Per cent*
1913	303	185	3,047	123	4.0
1914	168	153	2,109	116	5.5
1915	248	192	2,424	148	6.1
1916	74	158	3,101	122	3.9
Weighted average	[1] 793	178	2,657	129	4.9
1918	188	197	3,086	170	5.5
1921	109	195	646	336	52.0
1922	94	179	1,897	266	14.0
1923	194	153	1,396	265	19.0
Weighted average	[1] 397	171	1,309	285	21.8
1927	119	200	957	307	32.1

Iowa Agr. Col., Ext. Bul. 150 (*8, p. 56*).
(Data recomputed.)

[1] Aggregate for period.

The figures quoted differ somewhat from those appearing in the Iowa bulletin. The difference is accounted for by the omission here of an allowance for house rent in the income received from the farm. Other data used in this section, except the Pennsylvania figures, do not take into account the return from the farm as a residence. In order to make the figures comparable, this has been omitted in the Iowa table. Although the original Iowa figures took into account income received from the farm as a residence, they did not consider taxes paid on the residential value of the farm, all taxes being charged against the farm as a business.

MASSACHUSETTS

Farm-income figures available from Massachusetts include returns to the operators for wages as well as management along with returns on the farm property (*21, p. 112–113*). To make these figures comparable with the others which are being considered, an arbitrary reduction has been made, based on the wages paid hired farm labor in the State in the years concerned. This deduction amounted to $765 in 1920, $603 in 1921, $612 in 1922, and $720 in 1923.[17]

The figures in Table 27 represent a farm-income computation which includes return to the operator for wages and management, and the return on his property, minus an operator labor figure estimated as has been indicated. Taxes show relatively little variation from year to year during the period 1920 to 1923. The change in the percentage of net return taken by taxes was caused by the excessive variation in the net return figure, which, in 1921 was not sufficient to pay taxes and which in 1923 had risen sufficiently high to make taxes amount to about one-sixth of the net return.

[17] The figures are based on the assumption that the average farmer is steadily employed by the work on his farm for the equivalvent of nine months of the year.

TABLE 27.—*Taxes and net returns on selected owner-operated farms in Massachusetts, 1920–1923*

Section of State and year	Farms	Net returns per farm before deducting taxes	Taxes per farm	Percentage relationship taxes to net return
Western Massachusetts:	*Number*	*Dollars*	*Dollars*	*Per cent*
1922	93	433	136	31.4
1923	72	670	131	19.6
Average	82	552	134	24.3
Middlesex and Berkshire Counties:				
1920	143	597	185	31.0
1921	145	125	172	137.6
1922	134	753	181	24.0
1923	135	1,128	183	16.2
Average	139	651	180	27.8

NORTH CAROLINA

Data from North Carolina have been provided by a farm-income survey which included an analysis of the 1927 farm business of 1,156 farmers (*16, p. 46-203*). For purposes of the survey, the State was divided into four districts and within each of these districts reports were secured from farmers in two or more typical localities. As a result there is available from 12 localities in the State of North Carolina a supply of material which gives for the single year 1927 a more adequate description of the financial condition of the farmer who owns and operates his farm than is available for any other State. The fact that the data are so extensive makes them worthy of more detailed treatment than has been given to those from the other States.

Income figures computed on a number of different bases were presented in the published North Carolina report. For purposes of this study, only the ones calculated on approximately the same basis as those used in the studies for the other States and for the United States as a whole are considered. The figures in Table 28 were computed by including among the gross receipts not only the proceeds from the sale of all products from the farm, inventory increases, and the value of the family living obtained from the farm but also receipts from work done off the farm, and the residential value of the farmhouse. The latter of these items was originally included in the Iowa study described on page 38. The comment made there also applies here. There seems little justification for including the value of work done off the farm as an item of receipts in a comparison of farm receipts and farm taxes. To avoid too great change of the material, they are presented in Table 28 in the form in which they were published in the North Carolina report; that is, including receipts for work done off the farm and an arbitrary allowance for the residential value of the farm and the farmhouse.

The figures have been recomputed for the State as a whole and, omitting these two items from receipts, the average net return becomes $307 per farm. Comparing this with taxes of $103 per farm, a revised figure of the percentage of net return taken by taxes amounting to 33.5 is obtained.

TABLE 28.—*Taxes and net returns on selected owner-operated farms in North Carolina, 1927* [1]

Region and area	Farms	Acres per farm	Net return per farm before deducting taxes	Taxes per farm	Percentage relationship taxes to net return
	Number	*Number*	*Dollars*	*Dollars*	*Per cent*
Mountain	261	123	−111	82	
Jackson	120	101	−90	67	
McDowell	64	141	−117	64	
Ashe	97	138	−133	112	
Piedmont	311	109	260	70	35.9
Catawba	99	103	27	75	277.8
Davidson	121	92	−36	57	
Person	91	139	703	83	11.8
Coastal plain	335	160	1,297	147	11.3
Moore Peach	41	335	5,099	258	5.1
Moore	51	129	420	83	19.8
Cumberland	108	141	415	115	27.7
Lenoir	135	135	1,179	163	13.8
Tidewater	220	150	451	108	23.9
Pender	134	166	191	84	44.0
Chowan	95	127	817	141	17.3
Total or average	1,156	135	492	103	20.9

Adapted from the report of the Tax Commission of North Carolina (*16*).

[1] Net returns in this case includes earnings for work off the farm and an allowance for the rental value of the farm house as a residence, as well as the returns on farm property and on the business enterprise of the operator.

Table 28 illustrates the extreme variations between one locality of the State and another. Four of the localities did not have gross receipts equal to the necessary deductions even before taxes were paid. A fifth area did not have a net return sufficiently high to pay taxes. Pender County, in the Tidewater, reported that taxes were taking 44 per cent of net returns and Cumberland in the coastal plain reported that 28 per cent was taken by taxes. At the other extreme was the Moore County peach territory where taxes were only 5 per cent of net returns. In the remaining localities taxes were between 10 and 20 per cent of net returns, including earnings for work off the farm and an allowance for house rent.

The great variations among individual farms of North Carolina in the percentage of net return taken by taxes is illustrated by Figure 10. For 12 per cent of the farms yielding a net return in 1927, taxes were equal to or greater than this return. One-quarter of the farms yielding a net return paid 50 per cent or more of their net return in taxes and 45 per cent of them paid 20 per cent or more.

Figure 10 and this description of the situation deal only with those farms that yielded some net return to their owners before taxes were paid. Such farms comprise only 678 of the total of 1,156 from which data were secured. In other words, only 59 per cent of the farms in 1927 yielded a net return before taxes were deducted and in the cases of only 51 per cent of them was there enough net return to pay taxes. Contrasted with farms on which taxes took all of the net return are the 28 per cent on which taxes took 10 per cent or less of the net return and 9.5 per cent on which taxes took 5 per cent or less.

Emphasis is placed on this variation from the average condition in North Carolina because it is a situation which had been found to exist in every State in which comprehensive data have been secured and which doubtless exists in all the States. The average percentage of net return paid in taxes is high enough, but it fails to call attention to the real difficulties of the situation. They are found in an examination of conditions affecting those who pay amounts far above the average.

There is no simple remedy for the situation. Deficient income rather than high taxes frequently is the cause, and the remedy for low

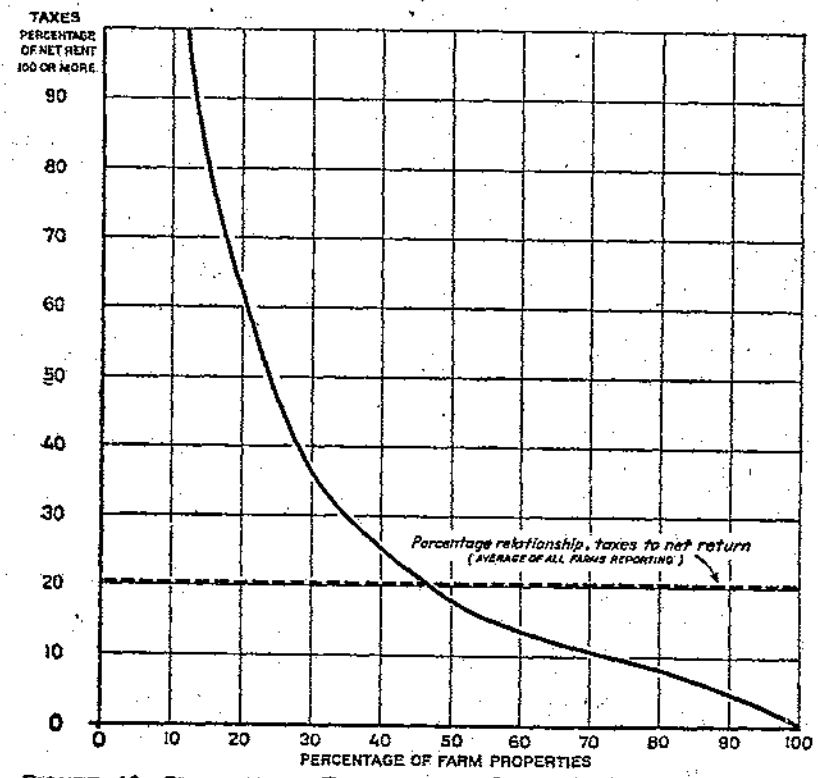

FIGURE 10.—PERCENTAGE RELATIONSHIP BETWEEN TAXES AND NET RETURN ON SELECTED OWNER-OPERATED FARMS IN NORTH CAROLINA, 1927

Farms that yielded no net return before taxes were deducted have been excluded from this comparison. Such farms comprised 50 per cent of the total number from which reports were received. Of the remaining farms, 12 per cent paid in taxes all of what would otherwise have been net return, and 24 per cent paid one-half or more of their net return in taxes. At the other extreme were 28 per cent of these farms, which paid in taxes 10 per cent or less of their net return.

incomes is far beyond the scope of this study. Suggestions of ways of remedying the tax factor in the situation appear in the concluding section of this bulletin.

PENNSYLVANIA

Data from Pennsylvania, which are presented in Table 29, require little detailed explanation (*19, p. 7–43*). They are derived from farm survey studies made for the years 1924 and 1925. Net return is figured on the same basis as in the other studies of owner-operator net return, with the single exception that the receipts figures include an

allowance for the estimated value of the house rent. No attempt is made to allocate a portion of the tax payment to apply to this house-rent factor, all of the taxes being charged to the farm business.

TABLE 29.—*Taxes and net returns on selected owner-operated farms, Pennsylvania, 1924–25*

County	Farms	Net returns per farm before deducting taxes	Taxes per farm	Percentage relationship taxes to net return
	Number	*Dollars*	*Dollars*	*Per cent*
Crawford	40	—33	117	
Lancaster	69	1,006	168	16.7
Lebanon	105	454	154	33.9
Warren	43	90	92	102.2
Westmoreland	48	234	147	62.8
Wyoming	27	633	152	24.0
Total or average	332	446	143	32.1

The percentage of net return taken by taxes varied from 17 in Lancaster County, where the farms for which data were secured were above the average for the county, to 102 in Warren County. No percentage figure for Crawford County can be quoted as the average return for that county indicated a loss before taxes were paid. The average percentage relation of taxes to net return for the State was 32. This is probably a conservative figure, for, although different types of the agriculture of the State influence it, the farms representing several of the sections are above the average.

SUMMARY OF THE STATE STUDIES

No attempt will be made to combine the results of the State studies into an average figure. The number of them is so small that such a figure would be representative of nothing more than an average of conditions in five widely separated States. The fact that an analysis of figures gathered for the country as a whole has already been made renders any further averaging unnecessary.

It should be pointed out, however, that to a certain extent these State figures are consistent with those which were secured from rented farms and which are summarized on pages 29–31. The figures for rented farms indicated that taxes were low as compared with rent in certain Southern States, among which was Arkansas. This State is the lowest of the five considered in the study of the relationship between taxes and net returns on owner-operated land. Iowa, which stood close to the average in the rented-land study, occupies about the same place in the owner-operator study. North Carolina and Pennsylvania each show a somewhat higher percentage of net return than of net rent taken by taxes.

It seems probable that, if data for owner-operated farms in other States were available, these States would be found in approximately the same place in each of the studies. In other words, there is no indication from the available data that the results of the two portions of the study are inconsistent. They concern different types of income, but the conditions which make one type high should influence the

other in the same direction. There is no indication that taxes are greatly different on land utilized by the two tenure groups. Hence, differences in the percentage relation of taxes to net rent on land will tend to vary in the same general direction as differences in the relationship of taxes to net return on owner-operated land.

ASSESSED VALUATION AND SALES VALUE OF FARM REAL ESTATE

It has frequently been remarked that one of the chief difficulties connected with the general property tax relates to the assessment of property. In the first place, there are large amounts of property with tax-paying ability that do not appear on the assessment rolls. Intangible property, to a large extent, escapes all taxes, particularly in those States in which the legal attempt is made to tax it at the same rate that applies to other property. Even in the case of tangible property much escapes the assessor's attention. Household goods are commonly assessed only on the most arbitrary basis. Valuable jewelry almost always escapes assessment.

But in the well-conducted assessment district, real estate has little chance of not being noticed by the assessor. The placing of a value on such property is far from an easy matter, and many inequalities arise from this source. Special investigations to determine the relation between assessed valuation and sales values of farm property have been made in Delaware (*6*), Kansas, and Oregon. Data have been accumulated as a part of other investigations in Arkansas, Colorado, Iowa, Massachusetts, New Jersey, New York, Ohio, Pennsylvania, and Virginia. No attempt is made to examine in detail the results of these studies, but data drawn from certain of them will be used to illustrate the various points considered.

It is necessary in the first place to understand what assessed valuation means. Little attention need to be paid to its legal description. Although certain variations occur from State to State, the general import of such definitions is the same—sales value at a sale which is not forced on either side. In a few States consideration is to be paid to the earning capacity of land, but this is only one feature among several which are to determine the valuation. In some cases the law further requires that all property or certain classes of property be assessed at some percentage other than 100 of sales value. All farm real estate, however, in any single State is to be assessed on a single basis.

Every 10 years the Bureau of the Census attempts to estimate the percentage of actual value at which the real property in each State is assessed. The estimate is subject to a wide margin of error, but the variations in percentage among the various States are significant. No State in 1922 was reported as being successful in assessing on a 100 per cent basis. The District of Columbia, where assessments were estimated at 91 per cent of true value, came closest to this. States in which the percentage was from 80 to 90 per cent were Arizona, Indiana, Michigan, New York, Rhode Island, South Dakota, and Wisconsin. At the other extreme were Florida and South Carolina, with 20 per cent assessment records.

Such variations would be of only slight importance if there were uniformity of assessment within each of the States. It makes little difference to the taxpayer whether his assessment is high and his tax

rate low or his assessment low and his tax rate high so long as he is called upon to pay a certain definite amount for the services supplied by the governmental units. Difficulties arise when one taxpayer has his land assessed at a high proportion of its value and finds his neighbor's land in the same tax district to be assessed at a low percentage. Similarly inequalities between taxing districts are produced by variations in their ratios of assessment to value.

A brief description of certain aspects of the results of several of the investigations indicates the importance of these and other inequalities.

In an investigation in Kansas (*8*), which contained data for the years 1913 to 1922, inclusive, the following types of inequalities arising from a lack of uniform assessment were examined: (1) Inequalities among individual parcels of farm real estate; (2) inequalities among individual parcels of city real estate; (3) inequalities between large and small farm properties; (4) inequalities among townships; and (5) inequalities among counties.

Inequalities among individual parcels of farm real estate were more important than any of the other types, both because the inequalities in themselves were greater and because they affected a larger proportion of the tax levy than did the others. The other two major sources of inequality were the variation among individual parcels of city real estate and that between large and small parcels of farm real estate.

Figure 11 illustrates the variation of 1,141 parcels of Kansas farm real estate in 1921–22 from the average percentage of their assessed valuation to their sales value. The vertical axis of this figure represents the percentage of assessed valuations in terms of sales values and the horizontal axis the precentage of the total number of properties assessed at or below the indicated levels. If the properties had all been assessed uniformly at any one percentage of their sales value, they would have been represented by a horizontal line. The deviation from the horizontal of the line representing the actual situation is an indication of the extent to which there is inequality in individual assessments.

The situation in Kansas in 1921–22 may be compared with that in Iowa in 1927 (*3, p. 11–24*). The Iowa situation is illustrated by Figure 12, which is constructed in a manner similar to that used in Figure 11. The average percentage of assessed valuation in terms of sales value was lower in Iowa than in Kansas. This in itself is of little significance, the important factor being the variation of the individual assessments from the average. The Kansas figure shows a greater variation from the average than does the Iowa figure. The fact that the average assessment in Kansas is higher makes the variation seem greater than it would if the averages were the same, but even taking this into consideration it is evident that the variation from the average was greater in Kansas than in Iowa.[18]

These cases are taken as examples of the general situation. No comparison of the efficiency of assessment in the States concerned can be made from data drawn from years when conditions were so entirely different. No attempt will be made to illustrate this type of inequality from data secured in other States. Wherever studies of the subject have been made much the same situation has been found.

[18] The coefficient of variation of the Iowa cases is 26 per cent, whereas that of those in Kansas is 31 per cent.

The effect of these inequalities in assessment among individual pieces of real estate deserves close attention. Real-estate taxation is primarily local in character. In 1922, for the country as a whole, the share of the general property tax going to county and local units amounted to 90 per cent of the total tax levy. It is within these minor civil divisions that inequality is of the greatest importance. If it were possible to have equality of assessment within the counties, the

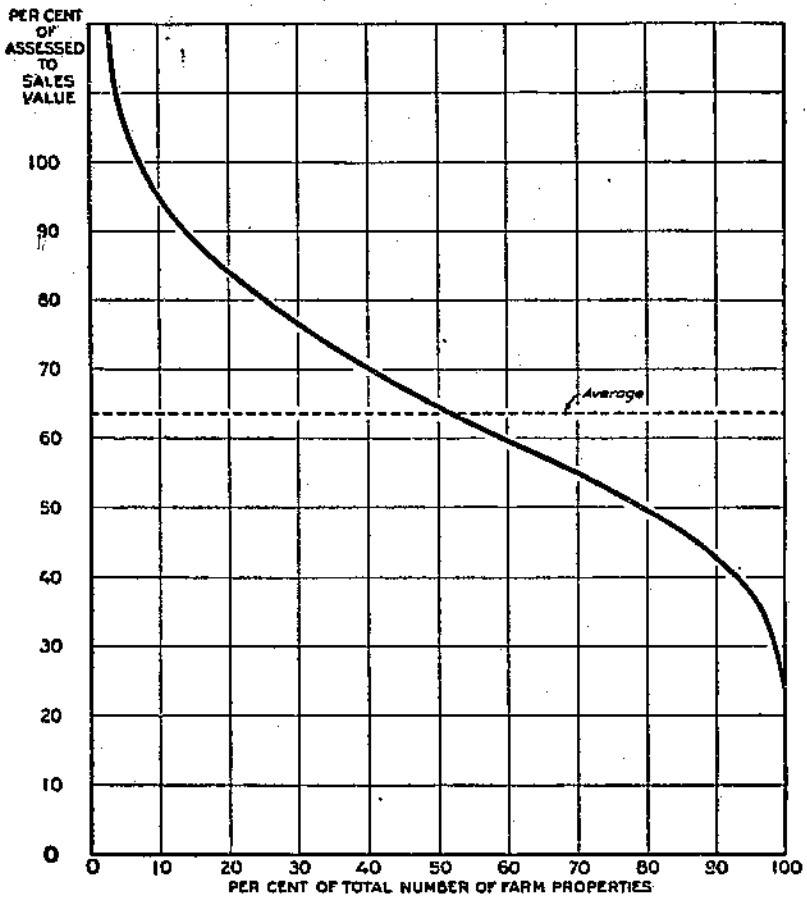

FIGURE 11.—DISTRIBUTION ON THE BASIS OF THE PERCENTAGE RELATIONSHIP OF ASSESSED VALUATION TO SALES VALUE, 1921-22, OF 1,141 PIECES OF FARM REAL ESTATE IN KANSAS

Ten per cent of the properties were assessed at 95 per cent or more of their sales value. Another 10 per cent were assessed at less than 45 per cent of their sales value. The upper 30 per cent of the properties were assessed at 75 per cent or more of the sales value and the lower 30 per cent at 55 per cent or less.

intercounty inequalities, to which reference will be made later, would make the assessment of real estate only slightly inequitable.

An illustration of the situation may be taken from a study made in Oregon (7). As a result of the inequalities among individual assessments it was found that the half of the real estate of Oregon, which was assessed the highest relative to its sales value, paid two-thirds of the total taxes on real estate, whereas the half of the real estate which was assessed the lowest relative to its sales value paid only one-third

of the taxes. In other words, the owner of a piece of property falling at the average of the upper assessment group might have to pay $400 in taxes, whereas the owner of another piece which had the same sales value but which was assessed at the average of the lower group would have to pay only $200. The situation in some of the counties in Oregon was better than this, but in others it was considerably worse.

If it could be assumed that the inequalities within the county were eliminated but that the intercounty lack of uniformity would remain, the following situation would exist. Using the farms that have just been mentioned as examples, it will be assumed that they are in dif-

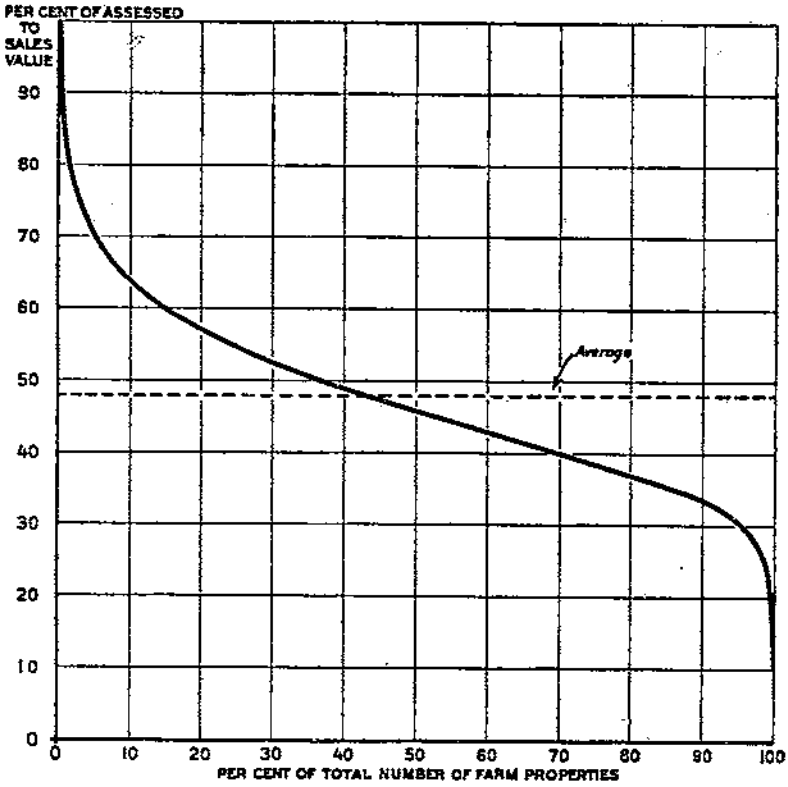

FIGURE 12.—DISTRIBUTION ON THE BASIS OF THE PERCENTAGE RELATIONSHIP OF ASSESSED VALUATION TO SALES VALUE OF 2,150 PIECES OF FARM REAL ESTATE IN IOWA, 1927

The upper 10 per cent of the total number of properties examined were assessed at 64 per cent or more of their sales value, and the lower 10 per cent were assessed at 33 per cent or less. The upper 30 per cent were assessed at 53 per cent or more and the lower 30 per cent at 40 per cent or less. The curve describing the distribution is closer to the horizontal line indicating the average than in the case of Figure 11.

ferent counties, one of which is assessed at the average of the upper assessment group and the other at the average of the lower group. The tax rates within the counties are assumed to be the same. What inequality is involved in the State taxes levied on the two properties? Their combined taxes amount to $600. Ninety per cent of this, using the average for the country as a whole,[19] is collected within the coun-

[19] In Oregon the situation is somewhat different, about 80 per cent being collected by the county and local units. Applying this percentage to the example, the two properties described would pay $320 and $280 respectively.

ties, where assessments are assumed to be equitable. This takes care of $540, or $270 each. The other $60 is subject to the intercounty inequality, two-thirds, or $40, being paid by one piece of property, and one-third, or $20, being paid by the other. The first property would have a total tax of $310 and the second a tax of $290.

Emphasis is placed on these examples of the relative importance of inequalities within the local units and among the counties since many of the State boards of equalization that attempt to remove inequalities function only among the larger units. Their work is necessary and does relieve to a small extent certain of the inequalities. But they are able to consider factors that cause only a minor part of the maladjustment of real estate taxes. The major portion of the inequalities lies within the local units and can be remedied only by improvement in the initial assessment.

One further type of inequality, which was described by the Kansas report and which almost every study before or since that particular

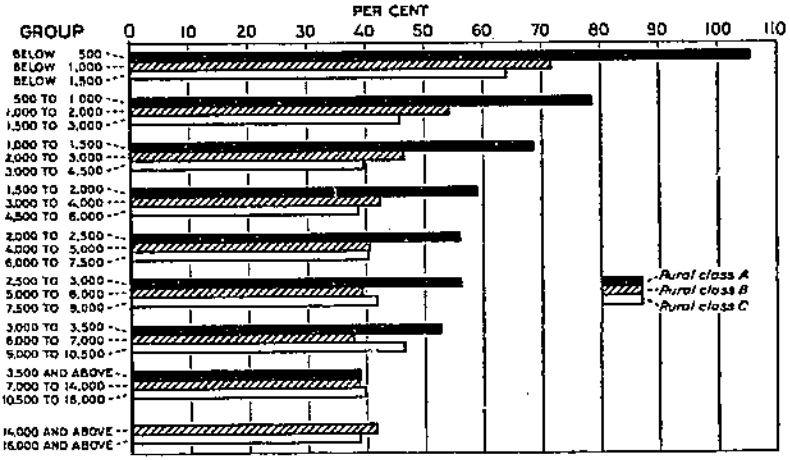

FIGURE 13.—RATIOS OF ASSESSED VALUATIONS TO SALES VALUES OF RURAL REAL PROPERTY IN OREGON, CLASSIFIED ACCORDING TO VALUE GROUPS, 1921-1926

The tendency is for the ratios between assessed valuation and sales value to decline as the value of the properties becomes greater. This tendency is particularly evident in the group of properties that appear in class A, and to a lesser degree it appears in the other groups. [Reproduced from Oreg. Agr. Expt. Sta. Bul. 223, (7, p. 15).]

one has brought to light, is a discrimination in relative assessment between properties of low sales value and those of high value namely, between small and large properties. All farms for which data were secured in Kansas were divided into eight value groups based on sales value. The average ratio of assessed valuation to sales value, expressed on a percentage basis, for each of these groups, begininng with the group having the lowest value, was 85.7, 76.7, 72.9, 70, 66.4, 65.3, 62.3, and 58.7. In other words, as the sales value of property increased, the percentage of assessed valuation to sales value decreased.

In Oregon the same situation was found to exist. The counties of that State were divided into three classes on the basis of variations in the average values of farm property. Figure 13 shows the relation between assessed valuation and sales value in the various value groups in each of these classes. Group 1 represents the properties with the

lowest sales value in each of the classes. Group 8 in the case of class A and Group 9 in each of the other classes represent the highest sales values. In each of the classes there is a pronounced difference between the ratios of assessment of the four low-value groups and those of the remaining groups.

The tax commission of New York (*15*) has published data relating to sales value and assessed valuations outside of cities and incorporated villages. Table 30 summarizes these figures and points to the same high relative assessment of the lower value groups that has been found in the other States. The New York figures do not relate entirely to farm property. They do, however, describe the conditions prevailing in rural sections of the State. The further fact that the same tendency toward high relative assessments in the lower value groups in incorporated villages in New York State tends to emphasize the importance of this factor in determining the distribution of taxation.

TABLE 30.—*Sales value and assessed valuation of property outside of cities and incorporated villages, New York State, 1915–1925*

Value groups (sales value)	Number of sales	Average sales value	Averaged assessed value	Percentage relationship sales value to assessment
0–$5,000	44,739	$2,431	$1,289	53.0
$5,001–$10,000	11,833	7,006	3,392	48.4
$10,001–$15,000	2,530	12,270	5,812	47.4
$15,001–$20,000	940	17,505	7,364	45.6
$20,001–$25,000	334	22,656	9,596	42.4
$25,001–$30,000	195	27,781	10,563	38.0
$30,001–$40,000	155	35,065	14,749	42.0
$40,001–$50,000	72	45,809	18,053	39.4
$50,001–$100,000	76	70,429	29,796	42.3
Over $100,000	22	161,159	67,219	41.7
0–$10,000	56,572	3,388	1,729	51.0
Over $10,000	4,624	17,690	7,903	44.7
Total or average	61,196	4,469	2,195	49.1

Annual report of the State tax commission, (*15, p. 450*). In this table certain groups are consolidated and the averages and percentages recalculated.

A Delaware study, completed at the end of 1928, revealed a similar tendency for the ratio of assessment to sales value to decrease as the value of the property increases (*16*). This tendency was marked in town property in each county of the State and in the farm property of two of the three counties.

Several reasons may be cited for this tendency to assess low-valued property at a higher proportion of its sales value than higher-valued property is assessed. The taxing officials are more familiar with the low-valued property. They are called upon to deal with a greater amount of it, and so it becomes less difficult for them to approximate the sales value. It is necessarily easier to assess a small piece of property. The assessor can inspect it all and he can keep the results of such inspection in his mind. The improvements bulk large on many small properties, and these tend to make the property seem more valuable even though they do not appear as a major influence in the actual values that the assessor places on the tax books in those districts in which improvements and land are assessed separately.

Large properties, on the other hand, are the exception rather than the rule. The inspection of them is more difficult, and the attempt to hold their extent in mind is beyond the ability of many assessors. The large figures that accurate assessment would involve are sufficiently beyond the experience of many assessors to make a low valuation almost inevitable. Then, too, the owner of a large piece of property is more likely to complain of an assessment than is the owner of a small piece. His political influence is frequently great enough to make the assessor hesitate to incur his enmity. A combination of any or all of these factors, together with the underlying lack of a development of scientific methods to apply to the assessment of farm properties, accounts for most of the inconsistencies that arise from relatively high assessment of low-valued properties.

The difference in the average level of assessment among taxing units, although less important than other inequalities of assessment, has attracted much attention. Its effects have been compared with the effects of inequalities among individual properties. It is caused partly by the general lack of equality among individual assessments. Reasons for this have already been considered. Competition among taxing units to escape State or other taxes explains most of the remaining inequalities among units. Each assessor has in mind that other assessors are keeping their valuations down in order to lessen the contribution to the State by the property of their districts. The result that naturally follows is the competitive lowering of the ratio between assessed valuation and sales value.

In concluding the consideration of the effects of the present assessment system on farm property, one particular point needs emphasis. Improvement in methods of assessing individual properties will probably do more toward equalizing the burdens of the general property tax on farm property than will any other change that may reasonably be expected. The general property tax, inequitable as it is in many of its features, will constitute the chief means of raising money to support the agencies of local government for many years to come. It should gradually become of diminished importance, but experience indicates that for many years no new source of revenue will supplant a large part of it. For this reason it will be advantageous to owners of farm real estate to use all possible means to secure more uniform methods of assessment.

In the case of urban property there has been much progress in introducing efficient and scientific methods in the assessors' offices.[20] Although many rural assessors are making use of the best means that they can secure, they find themselves handicapped by the fact that little attention has been given to the scientific determination of what should constitute value for purpose of taxation. More attention needs to be given not only to the basic elements of rural assessment, but it should also be given to the simpler matters of methodology. Maps, current reports of sales, and improved indexes of reports will all furnish means by which improvements can be made. Methods of choosing assessors and their supervision, training, salary, and tenure of office all provide possibilities which should be considered in any attempt to improve assessments.

[20] The studies of Herbert D. Simpson on the assessment of real estate for taxation in Chicago indicate that city conditions may be as unsatisfactory as those in rural communities. The Chicago difficulties were largely political, however, rather than scientific.

It is impossible here to indicate the assessment method that should prevail in each State. Local methods of organization, State history and traditions, and differing basic conditions make generalizations unsatisfactory. No single program of assessment reform could fit the needs of every State. But in every State in which investigations of the subject have been made there is an underlying need for improvement in the assessing process, and it may safely be assumed to exist to a greater or less degree in the other States. Methods of meeting this need will differ. There is a field for experimentation, but the basic fact that assessment of rural real estate is in an unsatisfactory condition needs constant reiteration.

Although it is true that the assessment of other property, particularly of personalty, is in a worse condition, it must be kept in mind that real estate now forms the basis for the support of the functions of local government, and that even if the general property tax does become a less important feature of American taxation, there is no immediate chance that the taxation of real estate will be greatly reduced. Real estate's heavy burden, judged from the point of view of income, supplies further emphasis of the need for an equitable adjustment of assessments. If rural property in a State is paying in taxes, on an average, 30 cents per dollar of income, studies indicate that two adjacent properties, because of inequalities in assessment, may be paying 40 cents and 20 cents, respectively. Under conditions where taxes averaged 8 or 10 cents per dollar of income and where assessment inequalities caused adjacent farms to pay 6 and 12 cents, respectively, an inequitable situation existed, but its effects were of far less consequence than are the present effects of unequal assessment. The remedying of the situation created by inequalities in assessment may well form a major part of every attempt to improve rural tax conditions.

TAXES AND THE VALUE OF FARM LAND

In presenting certain data regarding the relationship between taxes and farm values, emphasis will be placed on two sorts of material, each of which is in part derived from the 1925 Census of Agriculture. The first of this material to be examined was secured in connection with the analysis of taxes and cash rents in one or two counties in each of 16 States. The relation between rent and taxes on selected farms in these counties was analyzed in pages 7 to 12. It will be recalled that the size, the value, and certain other data relating to the farms were taken from the census returns, whereas the tax figures were secured from the official records in the counties.

The second type of material to be presented here is computed from the 1925 census and relates exclusively to farms operated by their owners. It consists of a simple comparison of taxes reported on certain of the farms with the value of these farms. Additional data could be secured from certain of the intensive State studies that have been analyzed in earlier portions of this bulletin. But the material from which they are derived is neither as extensive nor in most cases as well adapted to the particular purpose as that here used.

TAXES AND VALUES OF CASH-RENTED FARMS IN 16 STATES

Sixteen States of the North and West are included in the comparison of taxes and farm values which is summarized in Table 31. The figures representing the years 1919 and 1924 were secured in the same manner, and if they are subject to a bias because of the method by which they were compiled, the effects of the bias should be somewhat the same in each case. The value per acre figures that appear in Table 31 were computed by taking from the census schedules the acreage and the value of land and buildings for each rented farm for which tax figures were secured from the official county records. The aggregate tax and value figures for each county were divided by the acreages involved.

TABLE 31.—*General property tax and estimated value of selected rented farms in 16 States, 1919 and 1924*

State and county	Value per acre		Taxes per acre		Percentage relationship taxes to value	
	1919	1924	1919	1924	1919	1924
					Per-centage	*Per-centage*
California:						
Merced [1]	$221.49	$89.64	$1.63	$0.87	0.74	1.25
Sacramento	184.85	225.67	1.36	4.23	.74	1.87
Colorado:						
Delta [2]	79.02	40.44	.96	.84	1.21	2.05
Otero [1]	187.40	17.47	2.19	.47	1.17	2.69
Idaho:						
Ada [1]	237.84	136.49	2.85	1.77	1.20	1.30
Madison [2]	252.12	126.85	1.76	1.53	.70	1.21
Illinois: Macoupin	127.58	72.19	.64	.72	.50	1.00
Indiana: Tipton	238.63	135.18	1.41	2.22	.59	1.64
Iowa:						
Union	165.53	103.08	.84	1.25	.51	1.21
Story	296.07	162.71	1.37	1.83	.46	1.12
Kansas: Butler	57.01	33.15	.41	.53	.72	1.00
Minnesota: McLeod	136.61	108.36	.85	1.26	.62	1.16
Missouri: Bates		56.71		.48		.85
Nebraska: Wayne	243.31	138.22	.67	.87	.28	.63
New York:						
Delaware	128.57	122.27	.38	.63	1.33	2.15
Niagara	110.31	110.51	.85	1.78	.77	1.61
Ohio: Franklin	194.67	166.03	1.41	1.99	.72	1.20
Oregon: Washington	136.51	105.19	1.64	2.17	1.20	2.06
South Dakota: Moody	206.39	104.95	.77	.81	.37	.77
Utah: Salt Lake	278.13	310.52	2.82	4.82	1.01	1.55
Wisconsin: Dane	154.95	101.36	1.18	1.49	.76	1.47

[1] The types of farm land covered by the 1924 and the 1919 figures for these three counties are sufficiently different to make direct comparison of the value and tax figures misleading.
[2] The number of farms for which reports are available in these counties makes it possible that the changes in the tax figures from 1919 to 1924 are due to changes in the sample rather than changes in actual conditions.

The average value per acre ranged from $17 in Otero County, Colo., to $311 in Salt Lake County, Utah. Particular significance is attached to the comparison of the 1924 average figures with those of 1919. In three counties—Merced in California, Otero in Colorado, and Ada in Idaho—the type of farm covered by the 1924 tax study is sufficiently different from that included in the 1919 study to make a comparison of the figures for the two years misleading. Figures from the other 17 counties in 15 States may properly be compared to determine the change that occurred over the 5-year period. In 13 counties there was a decrease in the average value per acre ranging from 6.8 to 49.7 per cent. In 4 counties there were increases in the values amounting to 0.2, 2, 12, and 22 per cent.

The predominating decrease is exactly what was to be expected. It is mentioned only to assist in explaining the changes that occurred

in the percentage relationship of taxes to value. The average tax per acre increased from 1919 to 1924 in 15 of the 17 counties. This increase ranged from 5 to 211 per cent.

The percentage relationships of taxes to value for each of the years in each of the counties are compared in Figure 14. In every case, the 1924 percentage is higher than that of 1919. There was an increase in the number of dollars taken in taxes per $100 of value, ranging from 8 per cent in Ada County in Idaho to 178 per cent in Tipton County in Indiana. The median number of dollars of taxes per $100 of value for the 17 counties amounted in 1919 to 0.73 and in 1924 to 1.25.

In this consideration of the changing relationship of taxes to value one fact needs to be kept firmly in mind. The increase in the number of dollars of taxes per $100 of value is due to two factors, the decline in land values and the increase in taxes. No attempt will be made here to assign to each of these a relative importance. Average figures of decline in value and increase in taxes would tell only part of the story, and their accurate computation is rendered difficult by the problem of weighting. Then it is probable that an interrelationship exists between taxes and value. An increased level of taxation that is expected to be permanent will be reflected in the price that a buyer will offer for land since his return on the land will be reduced by the taxes that he has to pay. It is impossible at present, however, to segregate definitely the effects of the capitalization of taxes from the other factors that have caused land to decline in value since 1919. For these reasons no attempt will be made to attribute a portion of the change in relationship of taxes to value to alterations in either factor of the problem. Both have changed, and the change in their relationship can be explained only by taking into account the many causes that have made taxes rise and land values fall.

TAXES AND VALUES OF OWNER-OPERATED FARMS OF THE UNITED STATES

The data to be presented in the pages that follow have been derived from reports secured from owner-operated farms for the 1925 census of agriculture. All owner operators have not reported this item, but a sufficient number have reported it to give a wide sample of conditions in every State.

In each case in which a tax figure is reported, the farm owner was asked to state the taxes paid on the land and buildings of his farm in the year 1924. As tax payments are definite in their nature and as they tend to be of importance in the consciousness of the average farmer, there seems to be little reason for believing that the tax figures are in general less accurate than the other data secured by the census of agriculture.

Two qualifications should be attached to this statement. In some cases it undoubtedly has been difficult for the farmer to state accurately the amount paid on the land and buildings of his farm as distinct from that paid on his farm as a whole, including personal property with his real estate. To this extent, certain of the figures are estimates, but they are estimates on a far sounder basis than exists for many of the other figures which the census enumerators secure from the farmers.

The second qualification relates to the difficulty that a farmer who owns a large tract and operates only a small part of it may have

had in allocating a tax figure to the part operated. In some cases it is probable that the tax figure recorded related to all the land owned

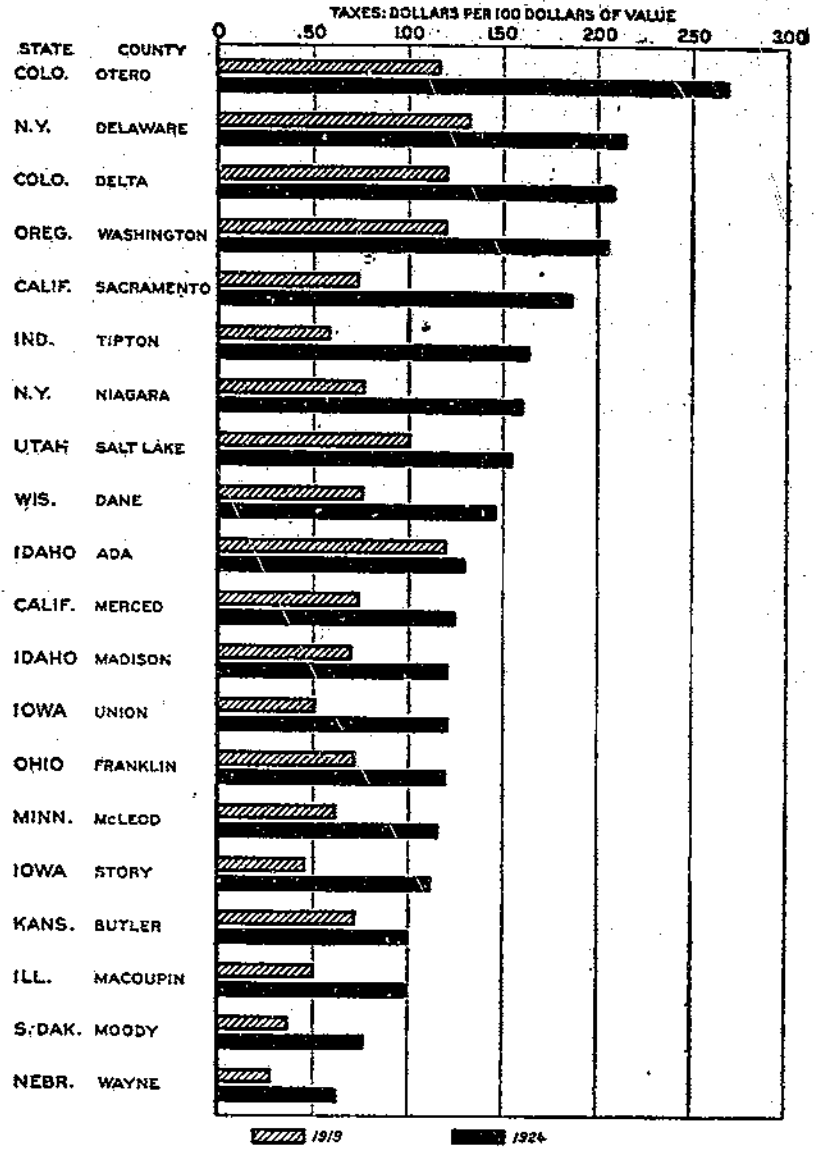

FIGURE 14.—RELATION OF THE GENERAL PROPERTY TAX TO THE ESTIMATED VALUE OF SELECTED CASH-RENTED FARMS IN 15 STATES, 1919 AND 1924

In 1919 taxes per $100 of value were highest among the counties studied on farms in Delaware County, N. Y., where they amounted to $1.33. They were lowest in Wayne County, Nebr., at 28 cents. By 1924, Otero County, Colo., had taxes of $2.69 per $100 of value with Delaware County, N. Y., next to the highest with taxes of $2.15. Wayne County, Nebr., was still lowest with taxes of 62 cents.

and the other data only to the land operated. Although such cases may have been numerous enough in certain of the counties to affect the accuracy of figures which might be computed for these counties,

it is highly improbable that their effect in the State aggregates would be sufficient to affect seriously the averages and ratios that will be presented. To guard against serious inaccuracies, the results computed from census returns have been compared with other independently collected data.

A comparison was made with an independently estimated tax per acre figure for each of the States. This figure has been based on reports from a small sample of the farmers of the country and has been used chiefly as an indication of the trend of farm taxes. It is significant that in the case of only seven States—Ohio, Illinois, Kansas, South Carolina, Arkansas, Montana, and Utah—did the per-acre tax figures based on the census returns exceed the per-acre figures of this estimate. In other words, the census figures seem more conservative than the others. For these seven States the taxes computed from census returns were $1.42, $1.20, $0.60, $0.42, $0.41, $0.18, and $0.53 per acre, respectively, and the independently estimated figures were $1.33, $1.17, $0.54, $0.37, $0.32, $0.17, and $0.39. In five of these seven cases, the difference amounted to less than 14 per cent. In the two remaining cases the differences amounted to 28 and 36 per cent, respectively.

In Arkansas, in which the difference is 28 per cent, of two studies made since the original independent estimate, each indicates a tax per acre figure for 1924 amounting to well above the 41 cents computed from census returns. In Utah, in which the difference was 36 per cent, the evidence on which the independent estimate was based was so slight that little reliance can be placed in it. An earlier estimate for the years 1921 and 1922 had placed the per-acre tax figure for that State at 42 cents. It is certainly not impossible that it had increased to 53 cents two or three years later. This would involve an annual increase of from 8 to 10 per cent, which was not unusual during that period.

In the comparison of census and estimated tax figures there was no attempt to do more than show that the census figures for individual States were low as compared with other estimates. It was recognized that the chief criticism which might be made was that the farmers reported too high a tax figure, or rather a tax figure which included payments on something more than the value of the land and buildings which was to be compared with taxes. An analysis of the data indicates that although this defect in the data may apply in scattered individual cases, it probably does not materially increase the average tax figures of the States.

With the understanding that the individual reports are, on an average, accurate enough to deserve consideration, it will be profitable to consider whether they are sufficiently numerous to merit attention. Table 32 compares for each State the number of owner-operated farms for which taxes were reported with the total number of owner-operated farms and with the total number of farms of all tenure groups. For the country as a whole, taxes were reported for 89 per cent of the owner-operated farms and 46 per cent of all farms. The land in these farms for which taxes were reported amounted to 88 per cent of the total land in owner-operated farms and to 40 per cent of all land in farms. For the country as a whole, then, there are reports from nearly 9 out of every 10 owner-operated farms and from 46 of every 100 farms of all tenure classes. It should be emphasized, however, that only the owner-operated farms are included in those reporting tax figures.

TABLE 32.—*Owner-operator farms for which reported taxes for 1924 were compared with total number of owner-operator farms and with all farms*

Geographic division and State	All farms		All full owner-operator farms		Full owner-operator farms for which taxes were reported	
	Number	Land in farms	Number	Land in farms	Number	Land in farms
		Acres		*Acres*		*Acres*
New England	159,489	15,857,927	143,563	13,728,893	135,831	13,006,622
Maine	60,033	5,161,428	47,249	4,815,580	45,804	4,678,285
New Hampshire	21,065	2,262,064	19,520	2,033,519	19,078	1,963,940
Vermont	27,786	3,925,683	24,047	3,236,192	22,678	3,030,014
Massachusetts	33,454	2,367,629	29,594	1,942,118	29,080	1,911,388
Rhode Island	3,911	309,013	3,033	229,983	2,937	218,056
Connecticut	23,240	1,832,110	20,120	1,471,821	16,204	1,186,939
Middle Atlantic	418,868	37,490,939	332,080	27,315,149	298,220	24,698,181
New York	188,754	19,269,926	149,761	14,002,751	143,520	13,423,077
New Jersey	29,671	1,924,545	23,875	1,349,249	19,345	1,025,376
Pennsylvania	200,443	16,296,468	158,444	11,963,149	135,355	10,249,728
East North Central	1,051,572	112,752,458	667,737	60,997,134	617,980	56,766,960
Ohio	244,703	22,219,248	163,421	12,898,522	153,126	12,143,664
Indiana	195,788	19,915,120	114,378	9,725,210	101,470	8,679,667
Illinois	225,501	30,731,947	96,200	10,478,248	86,412	9,586,123
Michigan	192,327	18,035,290	143,161	12,030,278	135,021	11,309,719
Wisconsin	193,155	21,850,853	150,577	15,864,876	141,951	15,047,787
West North Central	1,111,314	248,081,143	505,712	87,122,918	451,123	78,437,000
Minnesota	188,231	30,059,137	112,906	14,963,215	106,254	14,193,163
Iowa	213,490	33,280,813	92,705	12,476,671	86,970	11,861,378
Missouri	260,473	32,641,893	141,794	17,697,759	118,663	14,866,659
North Dakota	75,970	34,327,410	26,348	9,659,852	22,526	8,363,847
South Dakota	79,537	32,017,986	24,768	7,454,767	21,252	6,390,641
Nebraska	127,734	42,024,775	45,493	12,428,369	42,252	11,732,425
Kansas	165,879	43,729,129	61,698	12,441,985	53,206	11,028,887
South Atlantic	1,108,061	88,569,458	549,981	53,870,604	493,093	48,466,196
Delaware	10,257	899,641	6,319	451,705	5,752	408,407
Maryland	49,001	4,433,393	33,771	2,563,394	28,958	2,191,561
District of Columbia	139	3,813	74	1,141	48	719
Virginia	193,723	17,219,174	130,117	12,262,427	120,186	11,354,497
West Virginia	90,390	8,979,847	70,203	6,960,333	59,231	5,943,616
North Carolina	283,482	18,593,670	132,610	11,254,022	126,944	10,816,955
South Carolina	172,767	10,638,900	52,401	5,487,499	42,116	4,381,538
Georgia	249,065	21,945,498	81,108	11,121,240	73,123	10,047,341
Florida	59,217	5,864,519	43,378	3,768,843	36,735	3,260,562
East South Central	1,006,052	70,606,625	437,141	44,273,446	375,868	37,910,932
Kentucky	258,524	19,913,104	155,013	14,323,641	126,517	11,744,108
Tennessee	252,669	17,901,139	128,305	11,518,843	121,774	10,958,825
Alabama	237,631	16,739,139	79,282	8,918 679	66,503	7,498,513
Mississippi	257,228	16,053,243	74,541	9,512,283	61,069	7,709,486
West South Central	1,017,305	165,013,316	346,307	68,784,534	291,600	58,922,780
Arkansas	221,991	15,832,439	81,540	8,701,647	70,722	7,652,398
Louisiana	132,450	8,837,502	47,913	5,128,019	39,009	4,163,802
Oklahoma	197,218	30,868,965	60,764	9,289,422	48,174	7,704,416
Texas	465,646	109,674,410	156,090	45,665,446	133,695	39,402,146
Mountain	233,392	131,689,374	136,803	40,888,381	111,785	32,831,110
Montana	46,904	32,735,723	23,861	10,165,432	18,638	8,231,156
Idaho	40,592	8,116,147	24,957	3,792,526	22,629	3,527,268
Wyoming	15,512	18,663,308	8,342	4,149,798	8,160	3,047,632
Colorado	56,020	24,167,270	29,292	8,789,276	26,857	7,785,710
New Mexico	31,687	27,850,325	21,415	6,938,511	11,842	4,438,911
Arizona	10,802	11,065,291	6,968	1,986,062	5,574	1,294,887
Utah	25,992	5,000,724	18,777	3,417,517	17,444	3,037,300
Nevada	3,883	4,090,586	3,251	1,649,259	2,641	1,418,252
Pacific	265,587	54,258,112	194,166	22,464,768	164,460	19,703,614
Washington	73,267	12,610,310	53,440	4,729,186	46,706	4,318,805
Oregon	65,911	14,130,847	39,465	6,590,290	22,194	4,897,784
California	136,409	27,516,955	101,261	11,145,322	95,570	10,487,025
United States	6,371,640	924,319,352	3,313,490	419,445,827	2,939,960	370,682,381

Bureau of the Census, U. S. Department of Commerce.

For certain individual States, the size of the sample is not as satisfactory as for the country as a whole. But even there the data are sufficiently numerous to make them of far more significance than any other sample of such tax data known to have been obtained. Tax figures for the smallest percentage of owner-operated farms were reported from New Mexico, in which the percentage amounted to 55. Oregon was next, with reports from 56 per cent of the owner-operators.

It is to be expected that in those States in which the proportion of owner-operated farms is relatively low, the percentage of all farms included in these for which tax figures were reported to the census enumerators would be smaller than in the remainder of the country. In Mississippi, South Carolina, and Oklahoma for 24 per cent, or approximately one farm in four, tax figures were reported. From these States in which the percentages reached a minimum, they ranged up to their maximum in Maine and New Hampshire, where 91 per cent of all farmers reported taxes.

The description of the quantity of data gathered has been sufficient to indicate that it amounts in all States to a very extensive sample and that in some of them it is an almost complete enumeration. The remaining discussion of these data will consist of an analysis and comparison of the value and tax figures that have been assembled in the method and quantity that have been described.

The aggregate amounts of taxes and values of farm lands and buildings for each of the State and geographic divisions are reported in Table 33. The relationship of tax to value appears in the last column of this table.

TABLE 33.—*Taxes and value of owner-operated farms reporting taxes by States, 1924*

Geographic division and State	Taxes reported on farm land and buildings	Value of land and buildings of farms for which taxes were reported	Taxes per $100 of value
	1,000 dollars	*1,000 dollars*	*Dollars*
New England	11,772	694,414	1.70
Maine	3,175	177,314	1.79
New Hampshire	1,559	75,185	2.07
Vermont	1,757	103,444	1.70
Massachusetts	3,496	195,656	1.79
Rhode Island	214	17,373	1.23
Connecticut	1,571	125,442	1.25
Middle Atlantic	28,003	1,794,203	1.50
New York	13,515	917,847	1.47
New Jersey	2,673	156,709	1.71
Pennsylvania	11,815	719,647	1.64
East North Central	73,971	5,078,174	1.46
Ohio	16,602	1,021,434	1.63
Indiana	13,858	698,354	1.98
Illinois	10,916	1,241,066	.88
Michigan	14,939	813,278	1.84
Wisconsin	17,656	1,304,042	1.35
West North Central	61,133	5,947,602	1.03
Minnesota	13,943	1,149,322	1.21
Iowa	17,487	1,833,025	.95
Missouri	6,915	883,890	.78
North Dakota	4,720	291,348	1.62
South Dakota	4,131	359,323	1.15
Nebraska	6,491	803,389	.81
Kansas	7,446	627,305	1.19

TABLE 33.—*Taxes and value of owner-operated farms reporting taxes by States, 1924*—Continued

Geographic division and State	Taxes reported on farm land and buildings	Value of land and buildings of farms for which taxes were reported	Taxes per $100 of value
	1,000 dollars	*1,000 dollars*	*Dollars*
South Atlantic	21,311	2,230,891	0.96
Delaware	273	27,028	1.01
Maryland	2,143	178,803	1.20
District of Columbia	16	1,177	1.36
Virginia	4,213	587,064	.72
West Virginia	2,792	230,452	1.21
North Carolina	5,635	496,061	1.14
South Carolina	1,767	179,666	.98
Georgia	3,000	250,882	1.20
Florida	1,982	279,758	.71
East South Central	14,883	1,227,206	1.21
Kentucky	4,930	452,870	1.09
Tennessee	5,033	449,228	1.12
Alabama	1,749	168,286	1.04
Mississippi	3,131	157,122	1.99
West South Central	17,623	1,607,607	1.06
Arkansas	2,550	213,348	1.20
Louisiana	2,065	133,572	1.55
Oklahoma	4,465	289,426	1.54
Texas	8,543	1,031,261	.83
Mountain	11,872	877,040	1.35
Montana	1,882	149,117	1.26
Idaho	2,680	184,093	1.46
Wyoming	497	50,354	.99
Colorado	3,296	225,879	1.46
New Mexico	903	51,071	1.17
Arizona	744	52,296	1.42
Utah	1,745	125,527	1.39
Nevada	428	38,703	1.11
Pacific	25,363	2,303,108	1.10
Washington	4,905	351,722	1.39
Oregon	2,374	207,459	1.24
California	17,884	1,743,927	1.03
United States	266,411	21,820,245	1.22

One caution needs to be kept in mind in any use that is made of this relationship. It is in no direct way connected with the legal tax rate which applied to the property. The legal tax rate is the percentage or the number of mills per dollar of assessed valuation that must be paid in taxes. The relationship here described is that which exists between taxes and the estimated true value of farm real estate. The preceding section of this bulletin indicated that no constant relationship exists between assessed valuation and true value. Hence, there is no constant relationship between the percentage that taxes are of true value and the tax rate based on assessed valuation.

A comparison by States of the relationship between taxes and values of farm lands in 1924 is made in Figure 15. The average tax paid was $1.22 per $100 of value. The variation among the States was from $0.71 per $100 in Florida to $2.07 in New Hampshire. There were 2 States in which taxes were less than $0.75 per $100; 7 in which they were between $0.75 and $0.99; 17 in which they were between $1 and $1.24; 10 including the District of Columbia in which they were between $1.25 and $1.49; 7 in which they were between $1.50

and $1.74; 5 in which they were between $1.75 and $1.99; and one in which they were over $2.

Such a comparison becomes more significant when it is directed toward the various sections of the country. In New England, the average taxes on farm land amounted to $1.70 per $100. Rhode Island, with $1.23, was the lowest, and New Hampshire, as has already been stated, the highest. Maine, Massachusetts, and Vermont, as well as New Hampshire, are among the 13 States in which the taxes are over $1.50 per $100. The average in the Middle Atlantic States is $1.56, and 2 of the 3 States, New Jersey and Pennsylvania, fall into the class in which taxes are over $1.50.

In the South Atlantic States, the average, $0.98, is the lowest for any section of the country. Three of the States, Virginia, South Carolina, and Florida, have average farm taxes amounting to less than $1 per $100 of value, and in none of them does the average amount to as much as $1.25.[21] Three of the four States in the East

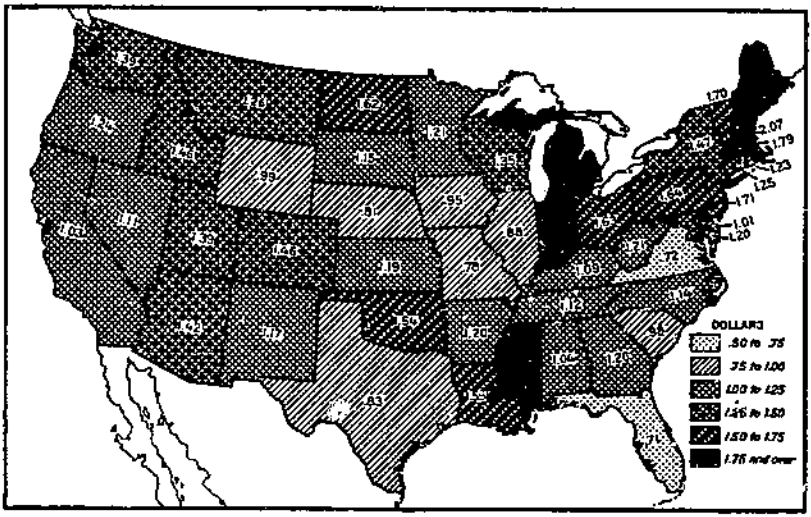

FIGURE 15.—FARM REAL ESTATE TAXES PER $100 OF VALUE OF OWNER-OPERATOR FARMS, 1924

Taxes in relation to value are highest in the Northeastern States and lowest in those of the Southeast. Farms in 6 States reported taxes amounting to over $1.75 per $100 of value whereas those in 2 reported taxes to be less than 75 cents per $100 of value.

South Central group report averages between $1 and $1.25. The fourth State, Mississippi, has an average of $1.99, which is the highest of any State in the South, and which brings the average for the group up to $1.21.

The figure for Mississippi is open to more question than any other that is quoted. On the basis of tax per acre it amounts to $0.41 and is higher than the per-acre figures for Alabama and Arkansas, which are $0.23 and $0.33, respectively, but not as high as that for Louisiana, which is $0.50.

The data have been examined for errors which might have arisen from two sources. In the case of those counties in which much land is rented, it was thought possible that owners had reported taxes on all their land, whereas value figures had been given for only the land

[21] The District of Columbia figure, applying to 48 farms, was $1.30.

they operated. There are 16 counties in the State in which the percentage of tenancy is over 80 per cent. The tax and value figures for these counties were computed, and taxes were found to amount to $1.99 on every $100 of value, just the State average. This result was compared with a similar computation for the 19 counties in which tenancy amounts to less than 40 per cent, and in these counties taxes amounted to $1.89 per $100 of value. The difference between these two results was not sufficient to indicate that the number of rented farms caused any large error in the results.

Special assessments were supposed to be excluded from the tax figures reported, but it was thought that the high rate of taxes in Mississippi might be explained by the reporting of levee and drainage district assessments as a part of the taxes on farm land. The plotting of the rate of taxation by counties on a map of Mississippi gives no indication that the high rate counties are concentrated in those sections of the State in which levee protection and drainage are needed.

The East North Central States show a wide variation in the rates of taxes based on values. They range from $0.88 per $100 in Illinois to $1.98 in Indiana and average $1.46. Michigan and Ohio, with rates of $1.84 and $1.63, respectively, are grouped with Indiana near the upper range of this section, and Wisconsin, with a rate of $1.35, is somewhat below its average. The seven States immediately west of this group have a lower average rate, $1.03. Three of them—Missouri, Nebraska, and Iowa—fall into the $0.75 to $0.99 group, three others are in the $1 to $1.25 group, and one, North Dakota, has a rate of above $1.50.

The West South Central States, with an average rate of $1.06, are heavily influenced by Texas, in which the rate is $0.83. The other three States of the group are well above this, Louisiana and Oklahoma having rates above $1.50.

The average in the Mountain States is $1.35, the rates of the individual States ranging from $0.99 in Wyoming to $1.46 in Idaho and Colorado. In the States on the Pacific coast, the average tax rate per $100 of estimated true value is $1.10. The California figure of $1.03 is of great weight in determining this average, the figures of the other two States being considerably higher.

These figures should be used with those which were discussed earlier in order to supply a fair idea of the weight of taxes on farm real estate. On the basis of income it was estimated that farm taxes took about 30 per cent of the net rent of farm real estate. Taxes in 1924 amounted to about 1⅓ per cent of the value of farm real estate; that is, for each $100 of taxes, there was produced by farm real estate $333 of net income on $8,333 of value. On the basis of these estimates farm land would yield a net income before taxes were deducted of 4 per cent. When taxes are subtracted, this becomes 2.8 per cent, which is only slightly lower than the 3.2 per cent estimated as the return to farm operators on their net capital investment in 1924–25.[22]

[22] This estimate includes return to the operator as a business manager as well as return on net capital investment.

INCIDENCE AND EFFECTS OF FARM TAXES

The amount of taxes paid by farmers has now been estimated. The trend of such taxes over a period of years has been indicated. The relationships between taxes and various sorts of agricultural income have been discussed and compared with the relationships between taxes and income from urban land. The value of farm land has been compared with its assessed valuation and with the taxes that have been paid on it. All of this material is of value in an attempt to determine the tax contribution of agriculture.

An additional subject, as important as any of these, relates to the final payment of taxes. There is little burden to one who gives his money directly to the tax collector, if there is a process by which it is possible for the initial payer to add to his prices the amount of the taxes and so compel his customers to pay taxes for him. It is well now to examine briefly the possibilities, so far as agriculture is concerned, of shifting taxes from one group to another within the industry and, more important, of the chance that farmers have of making their customers outside of the industry pay the taxes which are levied on the farm. An attempt will be made to compare the farm-tax situation with that governing urban property and its taxes, and the shifting of taxes to farmers from other groups will be considered. The material relating to this form of shifting is not sufficient to make a quantitative study of the problem possible at the present time, but a description of the process by which such taxes are shifted will give some indication of its importance to farmers.

So far as the tax on farm land is concerned, there are two problems that need consideration. The first of these relates to the question of whether the owner or the tenant pays the taxes on rented land. This is of minor importance, when compared with the second problem—the possibility of shifting taxes from the farmer or the farm owner to other groups. Before either of these subjects is treated it is necessary to make a few generalizations relating to the possibility of shifting taxes.

A tax can be shifted only when some economic transaction is involved. The man who is taxed on a piece of property or on goods which he neither buys, sells, rents, nor uses in any process of making other goods for sale or rent, has little chance to shift the tax. In other words, unless we are able to add our taxes to the prices of the things we sell to others or subtract them from the costs of the things we buy, there is little chance for us to shift taxes. The study of the subject must be concerned then with a discussion of whether the taxes so affect supply and demand conditions as to make price changes possible. It should be understood that no change in price can occur unless the underlying demand and supply factors are affected.

Does the owner of a rented farm shift the taxes on that farm to his tenant? Does the taxation of farm land affect in any important way the supply of land to be rented or the demand on the part of prospective tenants for farms? Taxation can have little effect on the supply of land which is available for rental purposes. It may be that in rare cases a decision as to whether it will be desirable to operate or lease the land will be affected by the taxes levied on the land. Where this is true, the local supply may be restricted or increased, and the renter may be forced to pay more or may be enabled to pay less. If the first of these conditions exists, it may

be possible for the landlord to shift for a short time a part of his taxes to the renter. It is extremely unlikely, however, that a situation will arise in which taxes will materially reduce the supply of land available for rental purposes. Other factors are far more important in determining whether land will be rented.

If taxes do enter into the determination, they are likely to force land onto the rental market rather than to keep it off. When a landowner's returns on land which he operates are reduced by taxes or other factors, the first tendency is for him to attempt to increase the yield of that land by operating it more intensively. If he is not successful in adding to the yield to the extent that he thinks necessary, he may try an alternative method of securing income from his land by renting it. Thus, taxes may be a factor in causing more land to be rented. The effect of taxes on the supply of land available for renting is probably insufficient to cause an important amount of tax shifting.

Will taxes increase the demand for rented land, and by this means make it possible for the landowner to shift a part or all of his taxes? Contract rent which the tenant is willing to pay will be determined in the first instance by competition among those who wish to rent land in a particular section and, over a short period, may have little relationship to the economic rent of the land. Over a period of several years (and this, rather than a single year, should be the chief concern of one who attempts to determine the effects of a policy of taxation), economic rent will form the maximum that can be paid for land. It is possible that the expenditure of money raised by taxation will increase the economic rent of a piece of land. If the proceeds of the taxes are used, for example, to build a road by which easy and rapid access to markets is secured, then the economic yield of the land will be increased just as much as if it had been possible to add increased fertility. Although the establishment of good schools is a less tangible feature than is the creation of better marketing facilities, it, too, will add to the desirability of the land and will in course of time influence the rents which tenants are willing to pay for land.

For these reasons it is believed that there is a possibility that a part of the taxes on land may be shifted to tenants. Whether this possible increase in the rent is sufficient to counteract the decreases in rent which may come through increased supply of land placed in the rental market by the pressure of taxation, by the development of transportation, or by other means, is perhaps doubtful. Both factors are at work, and both should be considered. The lack of any correlation between benefit and taxes in the case of individual farms should also be considered as a factor which is likely to prevent shifting from owner to tenant.

The shifting of taxes from owner to renter in the case of city property is more likely to occur than in the case of farm land. Improvements form a far more important part of the city property. The fact that taxes may influence the improvement of city property needs no explanation. When taxes on real estate are at such a rate that building is retarded, the available supply of buildings may prove inadequate, and the rent received for them will be increased, thus causing a part or all of the tax to be shifted to the tenant. On the other hand, a policy of partial or total tax exemption of improvements or other encouragement of overbuilding will have the effect of making the tax fall wholly on the landlord.

In the cities, the influence of the things for which taxes are spent in making property more productive are far more important than they are in the country. They may make certain properties more desirable from the tenant's point of view. Thus, the demand price for such properties will increase, and there will be a tendency toward shifting a part of the taxes to the tenant.

Under certain circumstances in both city and country, shifting from the landlord to the tenant takes place, but as it is far more likely to occur in the case of city property, so far as farm property is concerned, this aspect of the problem needs little attention. The more important question concerns the possibility of shifting the tax to the consumer who purchases the product of farm and city property.

The answer, so far as farm property is concerned, is fairly simple. Farm taxes may be passed on to the consumer only if they increase the price which the farmer receives for his products. Although taxes on farm products will influence the market demand for such products through their effect on prices, the immediate effect of taxes will come through increasing or restricting the supply of the products. When taxation causes land in general to be used more intensively, the result will be an increase in the supply and so will tend to decrease price. Thus, it is impossible for farmers in general to add to the unit price of their product a sufficient amount to enable them to pass the tax on to the consumer.

Whether the increased production caused by the taxation will result in a greater return to farmers is a problem which can not be solved without an extended investigation of the effect of increased supply on demand. The lowering of the price of some products is sufficient to bring many new buyers into the market with the result that the price decline is soon stopped. On other products a lowered price will stimulate few new purchasers, and an increased supply will cause a marked decline in price. Many agricultural products are in this latter class.

From this brief analysis, it seems safe to conclude that not only are farmers in general unable to add their taxes to the unit prices of their products, but the increased production which taxation may cause rarely results in an increase of the farmer's net return.

An additional point needs mention. The effect of an increase in taxation on an individual farmer may be different from that on farmers as a group. The increase may make an individual utilize his land more efficiently than previously. In other words, the heavier financial burden will force the individual to use new means of adding to his income from the farm. If he is successful in doing this, the tax may not prove a burden to him, even though he is not able to shift it. Such an effect of increased taxation is possible only where land has not been developed to its highest productive capacity, and it will benefit only occasional individuals.

One special set of conditions under which farm taxes can be shifted to the consumer needs brief mention. If the product of farms has a local market and if the product can not be brought in from other producing sections, an increase in taxes sufficient to cause the abandonment of some of the farms may cause the supply of the product to be so reduced as to increase its price. Thus it would be possible for the farmers who are able to remain in business in the section to shift a

part or the whole of their taxes to the consumer. The conditions under which this would be possible are such that with present-day competitive sections and methods of transportation the situation could hardly arise. The further fact that the taxes might cause an increase in production on the farms which remained in operation would tend to make the shifting less possible. In a case of this sort a part of the taxes are not shifted, since abandonment of the land will involve the drying up of the source of a part of the revenue, and thus the governmental unit will be deprived of the amount that had previously been collected from the abandoned land.

It has already been shown that the general property tax on town and city real estate is often shifted from the landlords to the tenants, and in the case of business property there is the possibility of passing the tax on to the consumer of the products of the business. Two cases will be considered, that which arises if the production and sale of the products is local, competing only with other enterprises subject to the same taxing jurisdiction, and that which exists if the products are sold in a wider market. These are important to the farmer since he spends a large proportion of his income in the purchasing of goods which pass through the hands of town and city manufacturers and dealers.

In neither case will taxation affect the immediate demand for the products. Its effects on the supply side will determine whether the tax can be shifted. In the first case, all businesses within the city will be compelled to pay the tax. Those enterprises which would be barely able to exist if they were not taxed will have to increase their prices or go out of existence. If they increase prices, other firms, better situated, will be able to undersell them and in the end the weaker ones will be driven out of business. The supply of goods available will be reduced, and those who remain in business will, through the increase in the price of that which is left on the market, be able to shift a part of their taxes to consumers.

It is possible that the increased production and sales of the surviving firms may lower their unit costs of production and that through competition the price to the consumer will be lowered. Differing supply and demand conditions may tend to overcome the normal tax-shifting process. In spite of these conditions which may bring about exceptions to any general rule, it seems correct to state that if production and market are local the tax generally is shifted to the consumer.

In the second case, the market is assumed to be more than local. Tax conditions will differ between one producing unit and another. If it be assumed that aside from taxes the units are subject to essentially equal conditions, it will be possible to shift to consumers only an amount of taxes equivalent to that paid by the unit which is taxed least, or, stated in another way, to shift the taxes that are common to all of the units. Hence, under some conditions only a small portion of the taxes may be shifted.

From this involved consideration of the most intricate problem connected with public finance, a few conclusions that may be drawn are the following:

(1) Taxes on rented farm property may be shifted from landlord to tenant only under certain unusual conditions.

(2) The shifting of farm taxes to the consumer will occur only under conditions that are so rare that few farmers at the present time are able to make consumers pay their tax bills.

(3) Taxes on rented city properties tend to be shifted by the owners to their tenants when the property is located in a section of a city in which the supply of buildings has dropped behind the demand.

(4) Taxes on business properties in towns and cities tend to be shifted to the consumers of the goods or services supplied by the business to the extent that (*a*) the production and market are local, or (*b*) that the market is general and taxes are generally applied to competing firms by a large taxing unit or by several units with similar types of taxes of substantially equal amounts.

(5) Such taxes on business properties tend to be shifted to farmers to the extent that farmers are consumers of these goods and services.

These conclusions, and the others which might be reached if it were possible to examine the incidence of the general property tax on various types of property which have not been considered, are stated in order to illustrate the extreme difficulty of measuring the tax burden. They do not depict all the difficulties involved in the process. Even if the incidence of taxes could be measured accurately and a definite expression in percentage of income paid in taxes secured, the problem would not be solved. Certain intangible benefits are received from taxes which have thus far defied numerical expression. Then, too, ability to pay taxes helps to determine tax burden, and ability to pay is in part a function of income. Ten per cent of an income of $1,000 is a far greater burden than 10 per cent of an income of $100,000. The type of income also helps to determine tax-paying ability. Income derived from investments should be able to bear higher taxes than income derived from personal earnings.

The difficulties in measuring the burden of taxation are not so great that no conclusions can be drawn from the data that have been presented. It has been estimated that taxation—Federal, State, and local—takes from 10 to 12 per cent of the current income of the country. It was found that the owners of rented farms were paying around 30 per cent of their income from this kind of property in State and local taxes. It is possible that other State taxes were paid out of this same income, and if it formed part of an income above the exemption limits, a tax on it was paid to the Federal Government. No shifting process took place which passed this tax on to the consumer, so it was paid either by landlord or by tenant—almost always by the former.

Farm real estate, then (and to a considerable extent city real estate could be included) is subject to a far higher relative tax payment than is the average type of income-producing property. An analysis of our methods of financing State and local governmental expenditures would suggest that this must be true. The figures that have been discussed earlier in this bulletin confirm the accuracy of the suggestion. This fact needs consideration in any attempt to readjust tax payments. There is probably only a small group of the country's population which believes that real estate should be subject to a tax burden much greater than that applied to other types of property. The majority feels that measures tending to reduce this inequality deserve consideration.

READJUSTMENT OF FARM TAXATION

SUMMARY OF INVESTIGATIONS OF FARM TAXATION

Students of American tax problems have long been familiar with the fact that tangible property, particularly real estate, has been made to pay most of the expenses of State and local government. As these expenses have increased, the pressure of taxation on real estate has gradually become greater until there has arisen from many sources the demand that the burden of taxation on this type of property be made less heavy. Summarizing briefly the major points of this bulletin, it is possible to indicate their relationships to the wider field of Government finance and to point out tentatively the direction that alleviation of the present difficult situation may take.

That farm taxes are high is no new discovery. The particular value of the quantitative analyses here given lies in the presentation in a single bulletin of scattered data, some of which are published here for the first time. These data tend to confirm the belief, which students of the subject have expressed in recent years, that farm real estate is bearing an extremely heavy weight of taxation. They also tend to corroborate each other in that they point toward the same general conclusions.

Farm taxes in 1927 were estimated to be over $900,000,000. Most of this amount was paid through the general property tax and through taxes levied on automobiles. Trends in farm taxation for the country as a whole and for certain individual States indicate that from 1914 through 1917 the rise in taxes was gradual, that from 1918 to 1923 there was a drastic increase, and that since 1923 there has been a small increase each year.

An attempt was made on the basis of intensive studies in 14 States to compare taxes with the earnings of agricultural property. This resulted in an estimate that taxes, at present, are taking about 30 per cent of the net rent of farm real estate. An examination of the results of studies of the return on farm property and on the owners' managerial abilities indicated that on farms operated by their owners taxes had, in the past six years, amounted to from 18½ to 31 per cent of such returns.

Average figures do little to indicate actual conditions. At many points throughout the study an effort has been made to indicate the importance of variations from the average. Inequalities in assessments do much to cause the variations between farms in the percentage of return taken by taxes. The conclusions and certain of the data of a few studies of the relationship of assessed valuation of farm lands to their true value illustrate some of the types of inequality and show their effect on the distribution of the tax levy. Improvement in the assessment process was shown to be one of the prime requisites of any program of tax reform.

In the relationship comparison between taxes and the estimated value of farm property, the data examined showed wide variations from section to section of the country and undoubtedly would have shown great difference between one and another farm if the study could have been carried down to the individual properties concerned. In 1924 taxes were reported to have taken on the average 1⅛ per cent of the value of the farm real estate of the country. The slight increase in

farm taxation since that year and the decline in the value of farm real estate had, by 1927, probably increased this to 1½ per cent of the value of farm property.

It has been made clear that farm property is heavily taxed and that, along with other real estate and certain other classes of tangible property, it is bearing more than its reasonable share of the cost of local government. The methods by which the local units are financed places on tangible property almost the whole weight of local expenditures.

This bulletin is not designed to present an ideal solution for the tax difficulties of the various States. No single program could be satisfactory to all of the 48 States. Local considerations and differences in economic and fiscal structures must play their parts in determining the directions that tax reform must take. A few suggestions will be made, but in each case they must be qualified by the understanding that local conditions may make them entirely unsuited to the tax situation of certain of the States.

The tax structure needs to be considered as a whole. It must be recognized that Federal taxes exist along with State and local taxes, and that it may be unfair for a State to attempt to increase materially the taxes of a type of business which is already bearing a heavy tax burden. An example of this situation is found in the case of certain corporations. Their State and local taxes are relatively low, but when the Federal corporation tax is added to the contribution to State and local governmental units, the proportion of net income taken by taxes becomes fairly high. In the case of manufacturing corporations for 1926, for example, State and local taxes took only 11.6 per cent of net income, whereas all taxes amounted to 23.8 per cent (*18, p. 315–316*).

This need for considering all aspects of the situation is emphasized as a means of calling attention to the limitations that must be placed upon conclusions based on the results of this and of other studies. The importance of the questions of the incidence and the effects of taxes on any type of property or of business must be given close consideration before any general program of tax reform can be adopted.

POSSIBILITIES OF FISCAL REFORM

The following suggestions of tax revision are made, then, subject to the qualifications that have been discussed. It is believed that they are worthy of consideration in the majority of the States in which farm taxes constitute a heavy burden. They concern four general types of change:

(1) Improvement of the administration of taxes in use at the present time.

(2) Addition of new types of taxes to the present tax system.

(3) Broadening of the base of support of the various governmental activities.

(4) Reduction of expenditures through administrative economy and the elimination of duplications of governmental functions.

IMPROVEMENT OF TAX ADMINISTRATION

Improvement in the administration of local farm taxes must be centered around the problem of assessment, because it has been found that faulty assessment is the cause of much of the inequality of taxes

among farmers. In no section of the country in which the subject has been investigated have the assessment methods been of a type that would bring satisfactory results. But varying degrees of inequality have been found under different conditions, and it seems possible to suggest certain general methods which will improve assessments in those jurisdictions where they can be used.

There are some who urge that the basis of assessment—sales value—is a faulty one and that no marked improvement can be expected until it is replaced by other criteria of value. The possibility of substituting income for capital value as a basis for assessment has been discussed.[23] A few States, by direct mention or by implication, include income as one of the factors to be used in computing the assessed valuation of real estate. In every case, present and prospective incomes are factors that influence sales values, although in some cases the incomes are far in the future and are expected to be derived from uses other than the ones to which the property is put at the present time. Over a short period speculation in land may become so chaotic that land will be bought and sold with only the slightest thought of possible returns after the speculative period is over. Entire reliance on current income as a method of determining assessed valuations would not be feasible at present because methods of measuring current income from real estate have not been developed to the point where they can be used by assessors. It must also be recognized that assessed valuation based on the actual—rather than the potential—income of farm land might tend to place a premium on the inefficient utilization of land. In any event, a tax system which used an assessed valuation based on current income would have to include a tax on increments in land value, as these would often not be reflected in income for a long time after the value had risen.

In view of the difficulties in connection with the use of income from real estate as the basis of its assessed valuation and in view of the fact that there is no immediate chance of many States changing their assessment basis from sales value to current income, discussion of improvements in the methods of assessment will be concerned with assessed valuations made on the basis in use at present. All of the improvements suggested, however, will be equally necessary in any revised system. Changes in administration, in personnel, and in methodology are given brief attention.

In many States the assessing districts are too small to provide full-time work for trained employees. So many different assessors are concerned that a single standard of work among them is practically impossible. Each assessor is to a considerable extent independent of others, and although his work is subject to review there is no administrative body that is in direct charge to outline methods and check results. Remedies that have been used in a number of States to meet this situation provide first for an assessing district large enough to employ the full time of a trained man. In most rural sections a county assessor will be more satisfactory than a township assessor,[24] and it is possible that in many places it might be desirable for two counties to agree to employ one assessor to do the work in both jurisdictions.

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[23] Compare the discussion of the subject in Mass. Agr. Expt. Sta. Bul. 235 (*21, p. 92–99*) and Ark. Agr. Expt. Sta. Bul. 223 (*1, p. 22–28*).

[24] The situation, so far as township assessors are concerned, is well described by R. Wayne Newton and W. G. Hedrick (*14, p. 57–58*).

Increased supervision of assessment methods and results by State authorities will aid in establishing uniformity. Many States at present provide valuable assistance to the local assessing officials. Certain of the means used will be referred to in the discussion of personnel and of methodology. Others relate to the direct power of checking the accuracy of a local assessor's work and of ordering and, if necessary, of carrying on a reassessment where the work is not satisfactory. At present 15 States give to State supervisory officials, usually to the State tax commission, the power to make reassessments on their own motion and with their own agents. Ten other States give their supervisory officials the power to order reassessments. Such powers, although necessary, are rarely used.

A State supervising body can do most to improve assessments by carrying on research activities that are impossible and would be uneconomical in the local assessment districts, by acting as a court of appeal for individual and group assessments, and by adjusting or equalizing assessments among the various taxing jurisdictions. Studies of the results of past assessments by comparing sales and assessed valuations, and of methods by which equality of assessment may be attained are among the useful activities to be carried on by the State commissions. The results of such research can be utilized by the local assessors to reduce the inequalities of farm taxation.

It is difficult to generalize on the subject of personnel connected with the present assessment systems. No one doubts the necessity of trained men. Assessment calls for highly specialized ability. The need of training and ability has been satisfied in different parts of the country by various methods. It seems to be generally agreed by students of the subject that the assessor's office should be appointive rather than elective. But it is necessary to do more than to fill the position by appointment, if the work is to be improved. Some assurance that men appointed have the necessary qualifications must be provided. A possible solution is to permit only the appointment of men certified by the State tax commission as eligible for the office. Certification would be dependent on satisfying rather stringent requirements to be made by the commission.

To attract trained men to the position, it will be necessary to make appointments for a period of at least five years. A man becomes more valuable in the position as his experience in it increases. The salary must be sufficient to make men with the required education and ability look forward to the assessor's position as affording a satisfactory living while giving public service.

Improvements in the method of carrying on the work of assessment relate partly to instruction and supervision which may be provided by State supervising bodies, such as tax commissions. They should be empowered to demand uniformity in the reports made of the various factors that enter into the determination of assessed valuation. Land classification, for example, should be uniformly handled in various sections of the State. The values given to each type of livestock should not vary between one assessor's jurisdiction and another's. Types of equipment, such as maps and rating cards, should be similar for all sections. Assessment rolls should be made up and indexed on a uniform basis. Reports of changes in the ownership of property should be secured on a systematic and uniform basis.

Several of these methods of improving assessments are in wide use among the States. Most of them are in use in at least a few sections of the country. Half of the States are on a county-assessment basis. Nearly one-third of them give to State supervising officials the power to order and to carry out a reassessment of property. Assessors are appointed in only six States and in these the appointments are usually on a political rather than a merit basis.

In no State except parts of Delaware and Rhode Island does the term of office of the assessors exceed four years. Office procedure, maps, card indexes, and other efficient instruments for carrying on effective assessment vary from county to county within all States. There is likely to be more uniformity in those States in which there is direct supervision of the assessors, or in which assessors' meetings are held under the auspices of the State.

Massachusetts is an example of a State which exercises direct supervision over the records and methods of its assessors. Colorado holds meetings of its assessors, and members of its tax commission are required to visit the several counties at stated intervals. Most State tax commissions or boards of equalization make attempts to compare assessed valuations with true or sales value. This involves collecting a certain amount of information concerning the sale of real estate in various sections of the States. Some of the commissions do a thorough and excellent piece of work. Wisconsin has been an outstanding example of efficiency in this respect.

In no State in which information is available from studies similar to those described in this bulletin has the limit of improvements that are possible (with the present system of supporting local government largely by taxing tangible property) been approached. There is no evidence that the condition is greatly different in the other States. Although it is believed that the system itself needs extensive alteration, since tangible property will occupy the most important place in the local tax systems for many years to come, it is essential that all possible means be used to bring greater equality into the assessment of farm and other property. So doing would give distinct relief to much property that is overburdened. It would not reduce the amount to be collected by taxation of general property, but it would distribute that amount on a fairer basis.

NEW TYPES OF TAXES

State and local taxation at present are based on the general property tax, but all States are using the taxation of automobiles and a tax on gasoline to supplement the tax on general property. A certain amount of revenue, large in a few States, is derived from the charters, fees, and other taxation of corporations. About one-quarter of the States tax the incomes of individuals. Inheritance taxes, poll taxes, excise taxes, and a few special varieties such as severance and franchise taxes, contribute a small proportion of the total taxes collected. In 1922, the general property tax accounted for 83 per cent of the total State and local tax collections of the country.[25] In 13 States the percentage ran above 90. At the present time, the percentages are somewhat smaller because of the increase in taxes on motor vehicles and on gasoline, but the contribution of general property is still estimated as well over 75 per cent of all taxes collected.

[25] Special assessments were not classed as taxes in computing these figures.

In 1922, three-quarters of the property reached by the general property tax was in the form of real estate. There has probably been little change since that date. If the general property tax supplies 75 per cent of the total State and local tax collections, then real estate is contributing between 55 and 60 per cent of such collections. Few would maintain that real estate's share of total earnings, or its relative ability to pay taxes, constitutes such a large percentage of total income or of aggregate tax-paying ability.

Aside from intangible property, much of which entirely escapes direct taxation, there are many sources of tax-paying ability which are neglected by the tax programs of the majority of the States. It is urged that each State reconsider its taxing system in order to determine whether it is distributing its taxes over as wide a base as possible. It is probable that every State is neglecting certain sources of revenue which should be tapped in order to make each of the various groups in the State pay its fair share of the cost of governmental services.

From the standpoint of the farmers, any equitable tax which diminishes the contribution of real estate will be of assistance. All States use certain taxes to supplement the tax on general property. By the use of classified property taxes owners of intangibles have been made to contribute more than they did in the past to the support of the Government. Increased use of the income tax and of certain excise taxes on nonessentials has been found advantageous in some States. In certain jurisdictations in which the exploitation of consumable natural resources makes a severance tax possible, such a tax has provided additional tax income.

BROADENING OF THE BASE OF SUPPORT OF CERTAIN GOVERNMENTAL ACTIVITIES

In some States the use of new taxes can provide only slight relief to agriculture. A county that is dependent on agriculture for its revenues will benefit only slightly if its contribution to the cost of State government is reduced or eliminated. So long as poor counties are dependent on their own citizens and property for the financing of most of the governmental services provided, there can be little reduction of farm taxes.

This fact is receiving wide recognition. Road systems supported by the States are expanding in most sections of the country. Most people will agree that a highway which is used mainly by through traffic should be constructed and maintained by the groups that are benefited by it rather than by the local communities through which the road may pass. Use of the gasoline tax and the automobile license tax is modifying the incidence of road costs. The tendency toward State and nation-wide support of through highways has probably not gone as far as it should, but the need of such support is being given attention in all sections of the country.

The interest of the farmer in the expansion of the State highway systems needs little explanation. Every expenditure that can be removed from the local governmental unit and distributed over the wider unit in the proportion that the wider unit enjoys benefits from the expenditure and has the ability to contribute toward such expenditure, should be so assigned. The result will be a more equitable tax situation. Much needs to be done to determine whether individual roads are local, district, State, or nation-wide in their use and benefits. Many roads now considered to be only the concern

of individual townships are doubtless of as much importance to the residents of the adjacent or even distant towns or cities as they are to the farmers whom they serve directly.

In the case of education, the responsibilities of wider units are being recognized. County-wide school taxes serve to distribute the cost of education more evenly among the districts. State aid, based on the needs of individual districts, tends to give the children in the poorer districts greater educational opportunities than they could have if the district or county were left to pay the expense without assistance. It is proper that such grants should be made by the larger units since the benefits of education are by no means confined to the district in which a child may happen to receive his training and since the ability to pay for education is unevenly divided among various sections of the State.

Payment of educational costs by means of funds collected from the larger units will assist agriculture since most of the poor districts are rural. Farm boys or girls are usually the ones who attend the school in a district that is unable to provide educational facilities equal to the standard now demanded by parents for their children. The majority of the districts that must tax themselves heavily in order to maintain schools to conform to the minimum standards set by the States, are rural districts. The use of the taxable property of the State as a whole, or even of a wider base, will make possible educational improvements and will relieve many farming sections of their high tax contributions to maintain schools.

Emphasis is placed on the need of financing roads and schools by means of tax contributions from the larger governmental units, but it is not implied that these are the only functions which should be financed on a wider basis than is common at the present time. They do, however, comprise so large a proportion of the total governmental costs of the rural sections of the country that relief here will do much to render farm taxation less burdensome.

REDUCTION OF EXPENDITURES

Reduction of governmental expenditures at a time when people are demanding additional services is difficult. No one questions the desirability of all possible economies, as long as essential services are not curtailed. Difficulty arises in attempts to agree on economies that are possible and on services that are not essential. Any attempt to point out specific lines of economy in a general study of this sort would be of little value. Each spending jurisdiction has its own problems which need intensive study before any conclusions concerning the curtailment of costs can be reached.

Attention is called to the tendency toward the reorganization and consolidation of governmental functions which will give more efficiency and will lessen essential expenditures. The reorganization of departments in several of the State governments has made possible better service without increasing costs. Consolidation of the work of assessment within counties and possibly among counties has already been mentioned. Tax collection could be carried on much more efficiently in many jurisdictions (*9*). School districts are often too small to be economical or to give their pupils the advantages that can be furnished in districts in which schools can be organized in grades.

Reconsideration is needed in all rural sections of the country of the functions of certain governmental units. In many cases two or more counties could be consolidated. In some cases two complete sets of county officials are doing the work which might as well be done by one group. In the days when travel was slow and communication difficult, counties of the size of those in most of the agricultural States were needed. This need has largely vanished. The governmental services of most of the States would be improved by the reduction of the number of counties by at least one-third.

The county is not the only governmental unit that needs reappraisal to establish its worth. It is mentioned as perhaps the most striking example of this need, but in many sections of the country much the same criticism might be made of the smaller units, such as townships or school districts.

Recognition must be given to the fact that the elimination of the vested interests of any group of governmental officials is difficult and that county officers in some sections of the country are most strongly intrenched in office. Communities will be reluctant to give up the prestige that comes through being the county seat. The attitude in this case should be the same as is assumed toward other luxuries. If the people concerned can afford them and want them, no one would maintain that they should be deprived of them. But where the maintenance of unnecessary county or other units creates an impossible tax burden or makes impossible the maintenance of adequate governmental services such as schools, public-health service, or roads, then every effort should be made to eliminate the unnecessary units.

It may be that in some sections of the country there are no units that could be eliminated. The data to support a statement that such elimination is possible or desirable in all sections of the country have not been assembled. On the basis of a limited experience with such consolidations, it is believed that they furnish one means of economy that will render governmental service more efficient. Direct plans for such action must be based on local conditions. A detailed investigation of the functions and the efficiency of the local units of government would be a necessary preliminary to such action.

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