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The Rural Population Resources of Missouri

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COLUMBIA, MISSOURI

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C. E. LIVELY AND R. B. ALMACK

I. INTRODUCTION

The population of a state may be regarded as a precious resource, varying from time to time in size and quality because of the vicissitudes of nature and of man. Nature may provide a rich environment for the growth of population or she may set definite limits beyond which population may not grow without courting disaster. By means of invention, man increases his productive capacity and thereby provides for the support of a larger population. By effecting changes in the birth and death rates, he profoundly affects the rate of population growth. Furthermore, he creates social conditions which in the long run influence the quality of the population.

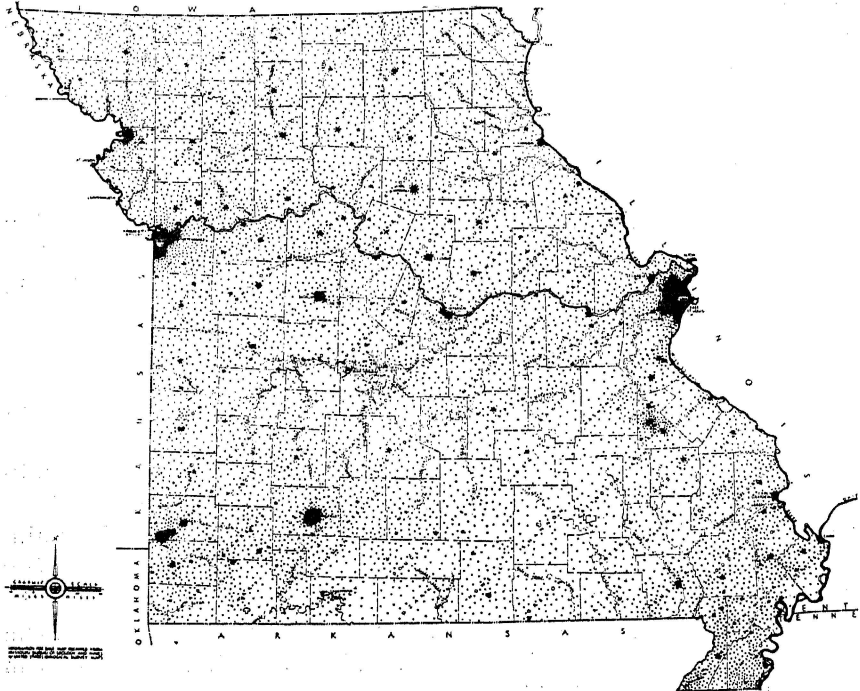
Much has been written concerning the physical and biological resources of the State of Missouri. Such writings deal with the nature and distribution of these resources and the problems associated with their development and conservation. In like manner, we may consider the population of Missouri from the point of view of the distribution and activities of present numbers, probably future changes in the number and distribution of the people, the conditions under which population is being produced and the problems associated with their development. The following pages represent a summarization of current knowledge regarding the rural population of Missouri, selected and presented with a view to describing the human resources of the State in so far as they are known. Considerable data recently prepared by Federal agencies are herein made available to the people of Missouri for the first time.

II. NUMBER AND DISTRIBUTION OF RURAL POPULATION

On April 1, 1930, the total population of Missouri consisted of 3,629,367 persons. Of these, 51.2 per cent lived in the 72 cities, i. e., in incorporated places having 2,500 or more inhabitants. An additional 10.5 per cent lived in the 701 incorporated villages of less than 2,500 population, and approximately 7.7 per cent dwelt in unincorporated villages and other unincorporated territory not including farms. Nearly one-third (30.6 per cent) of the population of the State lived on farms in rural territory. This was not all of the farm population, however, for a total of 5,515 persons lived on farms in urban territory. See Table 1.

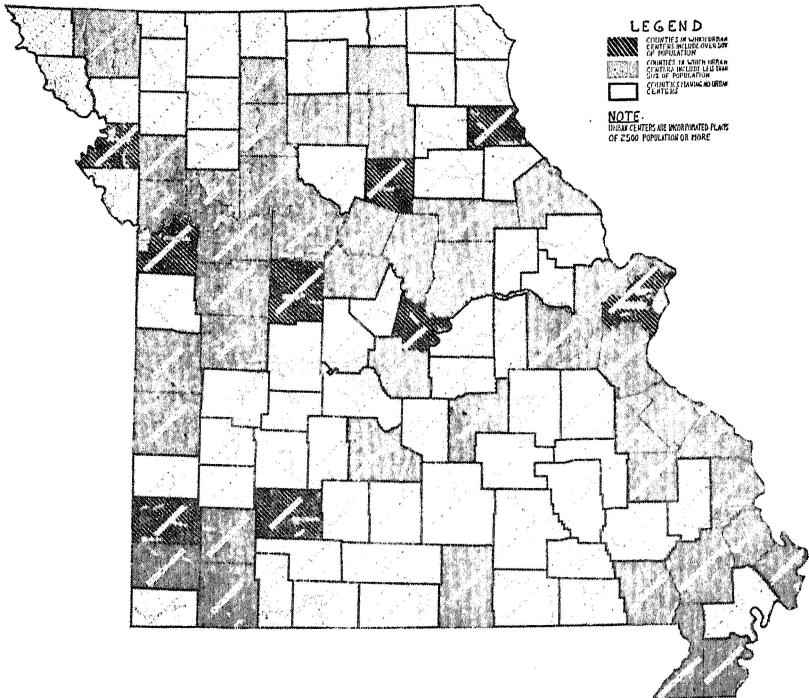
TABLE 1.—POPULATION OF MISSOURI, URBAN AND RURAL: 1890 TO 1930

Class	1930	1920	1910	1900	1890
TOTAL	3,629,367	3,404,055	3,293,355	3,106,665	2,679,185
Urban	1,859,119	1,586,903	1,398,817	1,128,104	856,966
Urban-farm	5,515	3,447			
Rural	1,770,248	1,817,152	1,894,518	1,978,561	1,822,219
Rural-farm	1,108,969	1,207,899			
Rural-nonfarm	661,279	609,253			
Per cent urban	51.2	46.6	42.5	36.3	32.0
Per cent rural	48.8	53.4	57.5	63.7	68.0
Per cent rural-farm	30.6	35.3			
Urban groups					
Cities of 100,000 or more.....	Number.... 2	2	2	3	2
Population ..	1,221,706	1,097,307	935,410	841,969	584,486
Cities of 25,000 to 100,000.....	Number.... 4	3	3	1	1
Population ..	197,725	147,472	144,677	26,023	52,324
Cities of 10,000 to 25,000.....	Number.... 10	8	5	3	3
Population ..	165,060	110,146	70,753	51,278	48,775
Cities of 5,000 to 10,000.....	Number.... 21	16	17	18	11
Population ..	151,136	109,337	120,938	120,291	73,573
Places of 2,500 to 5,000.....	Number.... 35	34	35	25	27
Population ..	123,492	122,641	127,039	88,543	97,808
Rural incorporated places:					
Places of 1,000 to 2,500.....	Number.... 116	116	104	99	78
Population ..	173,685	184,461	166,983	153,767	117,805
Places under 1,000.....	Number.... 585	528	501	406	287
Population ..	203,301	205,250	192,469	155,586	121,615
Unincorporated territory.....	Population .. 1,388,262	1,427,441	1,535,066	1,669,208	1,582,799



Map 1.—Geographic Distribution of the Population of Missouri, 1930.
(Courtesy of the Missouri State Planning Board.)

Although approximately half of the population of Missouri lives in cities, from a geographic viewpoint, the urban population is highly concentrated. Approximately a third of the total population lives in Kansas City and St. Louis. Most of the counties of the State may be termed rural. In 1930, a total of 62 counties had no incorporated place with a population as large as 2,500. In 43 additional counties more than half of the population was classified as rural. In only nine counties was more than half of the total population living in urban centers. See Map 2.



Map 2.—Distribution of Missouri Counties with Specified Proportions of Urban Population. (Courtesy of the Missouri State Planning Board.)

Reference to Map 1 shows that the rural population of Missouri is distributed over the State in a fairly even manner. There are notable concentrations in the neighborhood of cities and in the southeastern delta region. Less than average density of rural population occurs throughout the south-central and southeast-central Ozark area, but no other variations are worthy of mention. The average density of rural population in 1930 was 25.8 persons per square mile. Only eight counties had a density of 40 or more persons per square mile. Three of these—Dunklin, New Madrid, and Pemis-cot—are located in the Mississippi delta region; four more—

Buchanan, Clay, Jackson, and St. Louis—are located in the neighborhood of large cities; St. Francois has considerable mining population. At the other extreme, only eight counties had a rural population density of less than 15 persons per square mile. These are all located in the southern half of the State. Five—Carter, Dent, Madison, Reynolds, and Shannon—lie in the southeastern Ozark area; two—Taney and Ozark—border Arkansas; and Camden contains much of the Lake of the Ozarks.

The rural-farm population was also fairly well distributed over the State in 1930. Only two counties—Dunklin and Pemiscot—contained as much as 2 per cent or more of the total rural-farm population of the State. The 34 counties with 1 per cent or more were well scattered, but only 5 were located north of the Missouri River. Only 7 counties had fewer than 0.5 per cent of the rural-farm population. They were Carter, Hickory, Iron, Madison, Schuyler, Warren, and Worth. All were relatively small counties.

In general, the distribution of the rural-nonfarm population followed that of the rural-farm population. Except for heavy concentrations in the neighborhood of St. Louis and Kansas City, the rural-nonfarm population showed a definite tendency to distribute itself in a manner similar to that of the rural-farm population.

Trends in Number and Distribution.—From the beginning of the nineteenth century, the population of Missouri grew rapidly. By 1900 the rural population had reached a maximum of 1,978,561 persons, and thereafter declined steadily to 1930. Although the rural-nonfarm population increased steadily, the number of persons living on farms declined from an estimated 1,351,509 persons in 1910 to 1,108,969 persons in 1930. Following the onset of the economic depression, the trend was reversed, and on January 1, 1935, the Census of Agriculture enumerated 1,183,499 persons then living on farms. On January 1, 1939, the number was estimated to be 1,157,000. No count of the rural-nonfarm population has been made since 1930, but even with its presumed increase, it seems doubtful whether the present rural population is equal to that of 1900.

Although the total rural population of the State reached its maximum about 1900, there was considerable variation from this date among the respective counties. Franklin and Marion counties passed the maximum with respect to rural population about 30 years earlier, and, in the Census of 1880, 13 counties were credited with a larger rural population than at any census thereafter. The Census of 1890 added 15 additional counties to the list, making a total of 30 counties that attained their maximum rural population during 1890 or before. With the exception of Barry, none of these counties was

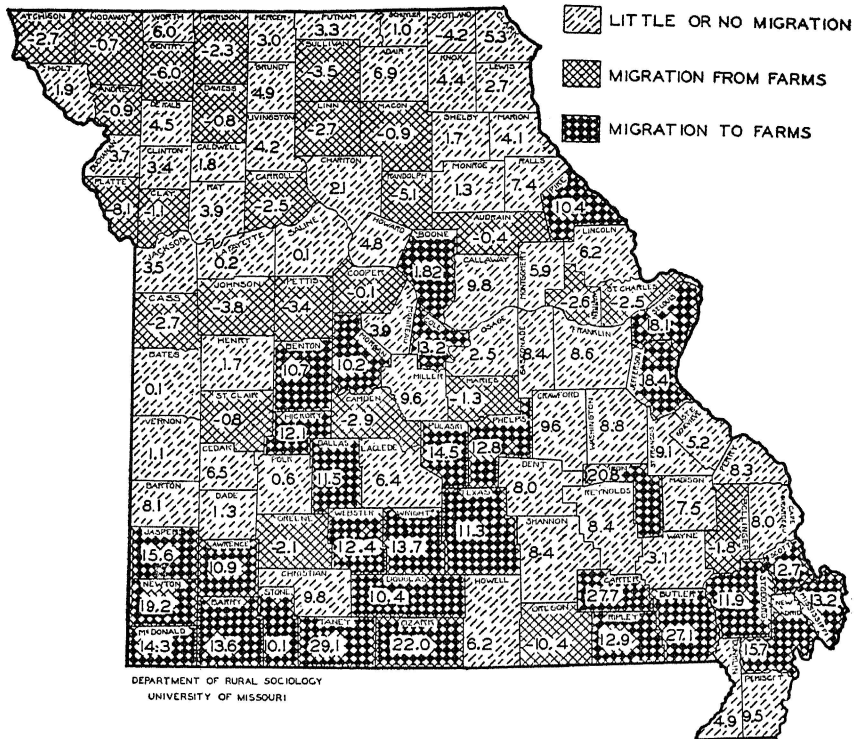
located in the Ozark area. Most of the counties were located in the Missouri River valley, the section of the State that was first settled.

Up to 1900, a total of 36 counties had not attained their maximum rural population as indicated by subsequent censuses. By 1910, 19 of these had reached their maximum, and 7 others passed that point in 1920. Only 10 counties returned a larger rural population in the Census of 1930 than in any previous census. These counties were Butler, Dunklin, Iron, Jackson, Mississippi, New Madrid, Pemiscot, St. Francois, St. Louis and Washington. It is possible that some of these counties have not yet attained their maximum rural population.

The decline of rural population in Missouri has been one aspect of change incident to the reorganization of agriculture and other rural industries in the State. In this process, the older counties changed first. The counties in which the rural population was greatest in 1920 or later are located mostly in the southeastern Ozark area and the southeastern Mississippi lowlands. This territory was settled at a relatively late date. The Mississippi lowlands include much excellent farm land, and the rural population of these counties may continue to increase for a time.

The increase in farm population which occurred between 1930 and 1935, reversing the previous trend, was not uniform throughout the State. Although the average increase for the State was 6.2 per cent, a total of 31 counties gained farm population to the extent of 10 per cent or more, while 27 counties actually lost farm population. Counties experiencing high rates of increase were located chiefly in the southern half of the State, while counties losing farm population during the five-year period were located chiefly in the northern and northwestern portions of the State. It is significant to note that, for the most part, the better agricultural counties experienced a loss or only slight gain. Exception is to be noted in certain counties of the southeast Mississippi lowlands. On the other hand, many of the poorer counties, agriculturally, showed heavy gains in farm population. See Map 3.

Whether the farm population of the immediate future will be larger or smaller than at present will depend upon a number of circumstances. Important among these are the rate of natural increase of the farm population, the prevailing situation with respect to land use, type of farming and mechanization of agricultural processes, and the occurrence of comparative economic opportunities in agriculture elsewhere and in the non-agricultural occupations. The outlook scarcely permits any prediction at this time.



Map 3.—Per cent Change in Farm Population and Estimated Extent of Migration to and from Farms, 1930-1935, by Counties.

III. THE NATURAL INCREASE OF THE RURAL POPULATION

Where no migration is involved, the change in the size of a population is measured by the difference between the number of births and the number of deaths. If there are more births than deaths, the difference is called natural increase. If there are more deaths than births, the difference becomes a natural decrease. For example, in Missouri during the year 1930, there were 67,498¹ births. With an estimated population of 3,648,000 persons, the crude birth rate amounted to 18.5. During the same year the number of registered deaths was 43,099, which gave a crude death rate of 11.8. The excess of births over deaths, therefore, was equal to 24,399, and the crude rate of natural increase was 6.7. This means that for every 1,000 persons in the population, nearly 7 persons were gained each year by virtue of having more births than deaths. If such a rate were maintained, it would mean that the population would double itself in about 104 years.

¹The 62,166 registered births are assumed to be 92.1 per cent accurate.

Such a rate of natural increase will, of course, not maintain. Even in 1937 the surplus of births over deaths in Missouri was only approximately two-thirds as great as in 1930. In order to understand more fully the changes that are taking place in this respect, it is necessary to consider the trends in birth and death rates separately.

The Rural Birth Rate.—The birth rate for the United States as a whole has apparently been decreasing for more than a century. Probably the State of Missouri has been no exception. Because of the steady increase in population, the total number of births in the State undoubtedly increased until a little less than 20 years ago. Official registration of births did not begin until 1927, and, hence, the actual number of births occurring before that time is uncertain.² Other lines of evidence, however, suggest that the all-time record for number of births in Missouri was achieved in 1922, and that this date applies to both the total and the rural population. Since that time the decline in number of children born has been so pronounced that by 1937 the number of survivors of the children born 15 years before was about 13 per cent greater than the number of children born that year.

In order to make a separate analysis of the rate of reproduction of the rural population of Missouri, it is necessary to resort to some device of measurement other than the annual number of registered births. In the birth statistics, "rural" is defined to include places up to 10,000 inhabitants. This does not correspond with the definition used by the Federal Census and introduces a confusing element. Furthermore, the degree of completeness of birth registration varies greatly by counties. In certain counties virtually all births are reported; in others, notably in certain counties where the birth rate is relatively high, scarcely more than half of the births appear to be reported. Fortunately, it is possible to obtain a fairly accurate concept of the rate at which children are being produced without recourse to the figures based upon registered births.

Table 2 presents the number of children, 0-4 years of age, per 1,000 women aged 20-44 years, by size of community for the years 1910 and 1930. This ratio of children to women is called the "fertility ratio." It is not a birth rate, but is, rather, a measure of effective fertility, i. e., fertility reduced by the average mortality of children under 5 years of age. The correlation of this ratio with the actual birth rate is so high that for ordinary purposes it may be used as a substitute when for any reason the true birth rate cannot be obtained. The table shows that in 1930 the fertility ratios were lowest

²During the period of registration, the number of registered births has decreased from 66,432 in 1927 to 56,951 in 1937.

in Kansas City and St. Louis; that they were next lowest in cities of less than 100,000 population; and that they were highest in the rural-farm population. Both the native white and Negro fertility ratios were more than twice as high in the rural-farm population as in the urban population. The fertility ratios of the rural-nonfarm population were intermediate.

TABLE 2.—NUMBER OF CHILDREN UNDER 5 YEARS OF AGE PER 1,000 WOMEN AGED 20-44 YEARS BY COLOR AND NATIVITY: MISSOURI, 1910 AND 1930

Size of Community	1930			1910		
	White		Negro	White		Negro
	Native	Foreign-born		Native	Foreign born	
Missouri	468	463	349	604	700	377
Cities of 100,000 and over	306	452	265	345	661	223
Kansas City	280	437	221	303	619	189
St. Louis	319	456	284	362	671	243
Cities of 25,000 to 100,000.....	352	403	322	435	588	291
Cities of 10,000 to 25,000.....	387	429	376	475	574	326
Cities of 2,500 to 10,000.....	424	409	374	499	691	415
Urban	334	447	283	388	658	267
Rural	641	586	669	787	933	719
Nonfarm	564	519	573	...	...	...
Farm	696	753	751	...	...	...

Source: National Resources Committee, Population Statistics, I. National Data. Washington, D. C., 1937. p. 45.

Between 1910 and 1930, the native white fertility ratio in Missouri declined from 604 to 468, a decrease of 22.5 per cent. During the same period, the Negro fertility ratio declined 7.4 per cent. In like manner, the urban native white fertility ratio declined 13.9 per cent, but the urban Negro fertility ratio increased slightly. The rural native white fertility ratio declined 18.5 per cent, and the rural Negro ratio declined nearly 7 per cent. It is not possible to state the decrease in the rural-farm fertility ratio during that time, since the farm population was not separately enumerated until 1920. Substantial decline has occurred since 1920, however.

By the use of life tables it is possible to obtain the number of children, aged 0-4, that is necessary at prevailing death rates to maintain a stationary population. By dividing the fertility ratio by this replacement figure, it is possible to obtain a replacement index. Table 3 shows the replacement indices for the State of Missouri according to the data of 1930. Since an index of 1.0 indicates a stationary population, it will be seen from the table that, under conditions of 1930, the population of Missouri was producing approximately the number of children required to maintain permanently a stationary population.³

³This statement should not be regarded as conflicting with the fact that a surplus of births over death still exists in the State. A surplus of births over deaths may be expected to occur until the current fertility rates have had time to modify the age distribution of the population.

Although the rural-nonfarm population was more than reproducing itself and the rural-farm population was producing 50 per cent more children than necessary to maintain a stationary farm population, the urban population had more than a 25 per cent deficit. Thus, if no migration into or out of the State occurred, in the course of some years it would require the entire surplus of rural youth above replacement needs to maintain the present population of the cities of the State. Actually, of course, many Missouri-born persons migrate to other states, while many persons born in other states move into Missouri. For some time, however, the tendency has been for

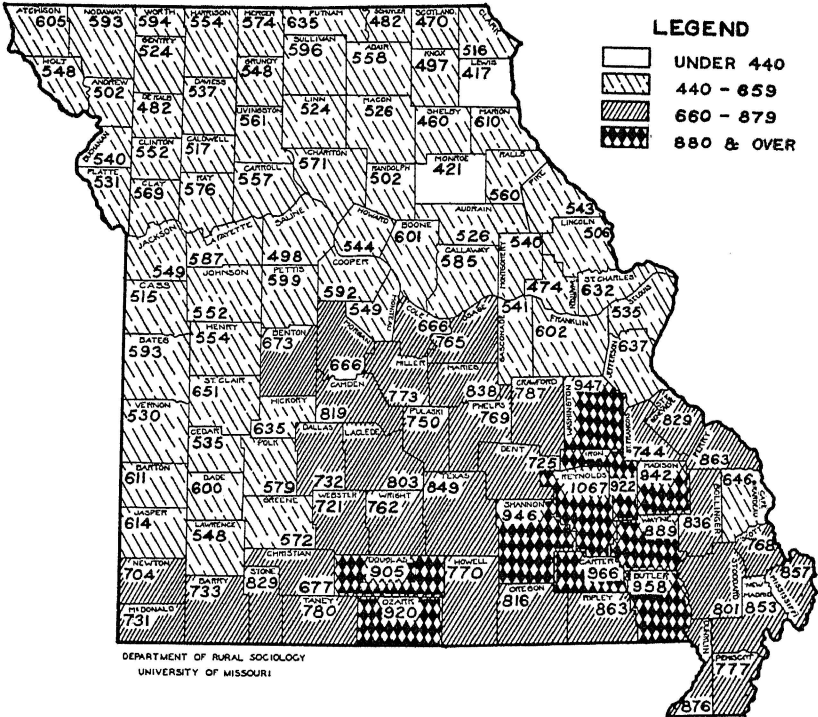
TABLE 3.—STANDARDIZED REPLACEMENT INDICES FOR THE NATIVE WHITE AND NEGRO POPULATIONS OF MISSOURI, 1920 AND 1930, BY TYPE OF COMMUNITY

Type of Community	1930		1920	
	Native White	Negro	Native White	Negro
Missouri	1.05	0.70	1.13	0.54
Kansas City	0.63	0.44	0.65	0.24
St. Louis	0.72	0.57	0.68	0.41
100,000 and over	0.69	0.53	0.67	0.33
25,000 - 100,000	0.79	0.65	0.84	0.52
10,000 - 25,000	0.87	0.76	0.93	0.60
2,500 - 10,000	0.95	0.75	1.00	0.61
Urban	0.75	0.57	0.75	0.42
Rural	1.44	1.34	1.52	1.11
Nonfarm	1.27	1.15	1.33	1.03
Farm	1.57	1.51	1.62	1.21

Source: Thompson, W. S., *Population Index*, 4 (4), October, 1933, p. 270.

the number of persons who leave the State to exceed the number who enter it. If the birth rate continues to decline, it will eventually be necessary either to retain a higher percentage of native-born persons within the State or to import a larger number from without if the size of the population is to be maintained. On the other hand, the birth rate of the rural population, and particularly of the rural-farm population, is still considerably higher than necessary to maintain a stationary population. If the farms, and rural districts generally, do not export population to the cities, or elsewhere, the rural areas may easily become overcrowded, thus reducing whatever economic opportunity now occurs in these areas.

Turning now to a consideration of the geographic aspects of rural reproduction in Missouri, it is evident at first glance that the birth rate is by no means uniform throughout the State. Map 4 shows the fertility ratio, by counties, for the rural population as of 1930. It is evident from this map that the highest rates of reproduction are to be found in the southern and southeastern portions, and the lowest rates in the northern half of the State. So great is the variation that the counties of Carter, Madison, Reynolds, Shannon, and Washington had fertility ratios in 1930 that were more than

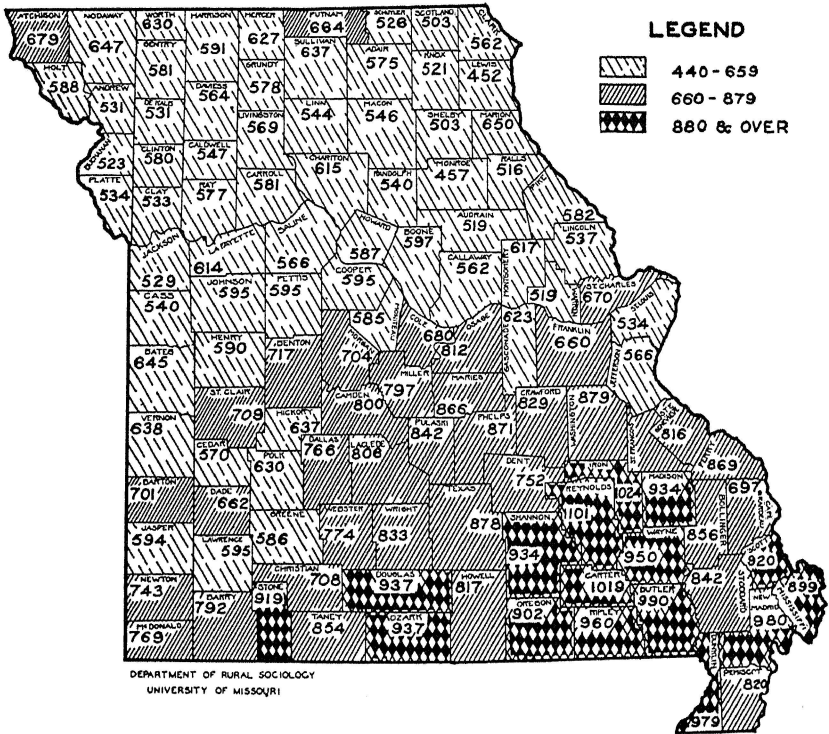


Map 4.—Number of Children 0-4 Years of Age per 1000 Women Aged 20-44 Years: Rural Population, 1930, by Counties.

twice as high as those prevailing in such counties as Lewis, Monroe, Scotland, and Shelby.

Since Map 4 is shaded so as to indicate the relation of the prevailing fertility ratio to that required to maintain a stationary population, it may be seen that, in 1930, only two counties (Lewis and Monroe) were not producing a sufficient number of children to maintain the population.⁴ A total of 67 counties were producing a surplus of something less than 50 per cent. These counties with few exceptions are located in the northern and western portions of the State. An additional 35 counties, in the southern and southeastern sections, were producing from 50 to 99 per cent more children than were needed to maintain a stationary population. Finally, there were 10 counties in the Ozark area which were producing twice as many children as were necessary to maintain the population. From an economic standpoint, this group contained some of the poorest counties in the State.

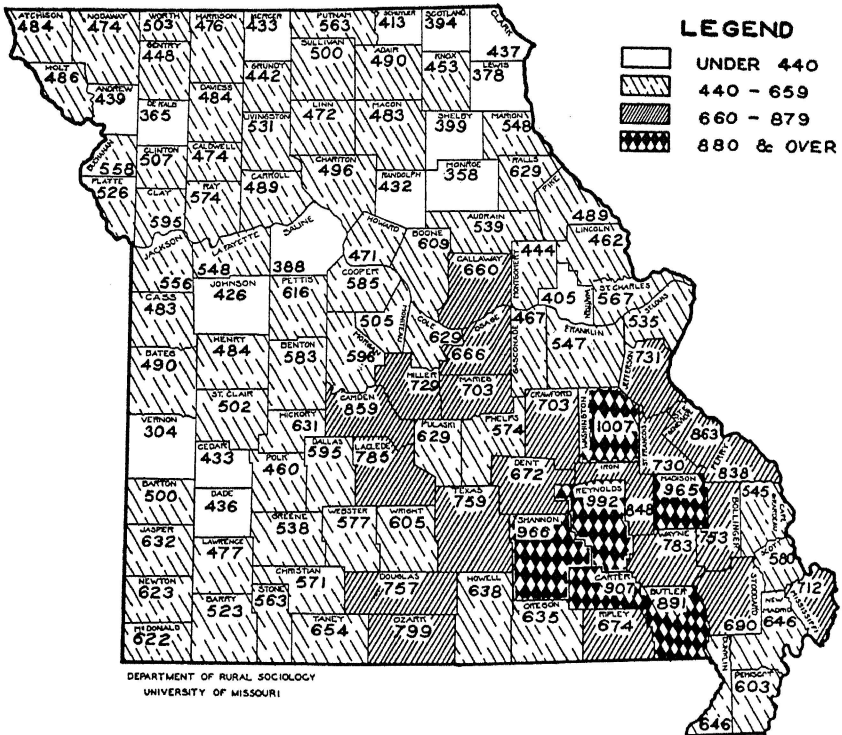
⁴In these calculations the number of children under 5 per 1,000 women aged 20-44 required to maintain a stationary population is taken to be 440.



Map 5.—Number of Children 0-4 Years of Age per 1000 Women Aged 20-44 Years: Rural-Farm Population, 1930, by Counties.

Upon breaking the rural population into its components, rural-farm and rural-nonfarm, it becomes evident that although the fertility ratios of these two classes of rural population are correlated, that of the former is consistently higher than that of the latter. In the rural-farm population, no county in 1930 was failing to produce a surplus of children above replacement needs. With two exceptions, all counties north of the Missouri River, together with a number of counties further south, were producing fewer than 50 per cent above replacement needs. However, there were 37 counties in which the surplus above replacement needs ranged from 50 to 99 per cent. Also, there were 16 counties, in the Ozark highlands and Mississippi delta areas, in which the rural-farm population was producing children at the rate of 100 to 150 per cent above the requirements for maintaining a stationary population. See Map 5.

The rural-nonfarm population was failing of permanent reproduction in 16 counties in 1930. Most of these counties lay north of the Missouri River. In 21 counties the surplus of children ranged from



Map 6.—Number of Children 0-4 Years of Age per 1000 Women Aged 20-44 Years: Rural-Nonfarm Population, 1930, by Counties.

50 to 99 per cent, but in only 6 counties was the surplus equal to 100 per cent or more. These were all Ozark counties. See Map 6.

Thus, it is evident that although a considerable surplus of births over deaths still occurs in Missouri, fertility ratios show clearly that the rate at which children were being produced in 1930 was barely sufficient to maintain the population permanently. It will require many years, however, for the birth rate of 1930 to be reflected throughout all age groups of the population.

It is also evident from the above analysis that the rural population contributes more than its proportionate share of the children of the State. In 1930, with more than half of the total population urban, the rural population apparently contributed about three-fifths of all the births. Of this number the farm population contributed more than its proportionate share. So, also, did the rural population of those counties located in the southern half of the State.

The Rural Death Rate.—The total number of deaths occurring annually in the State of Missouri is slowly increasing. Not since

1922 has there been fewer than 40,000 deaths in a single year. To date the high point has been 48,767, the number that occurred in 1936. Apparently this gradual increase in number of deaths has been the result of the increase in total population rather than the result of any increase in the general death rate.

Although the crude death rate has remained relatively constant for upwards of 20 years in Missouri, the average expectancy of life at birth has increased significantly during that time. Reference to Table 4 shows that between 1920 and 1930 the average expectancy of life of white males in Missouri increased from 56.80 years to 59.76 years. During the same period, the average expectancy of life of white females increased from 59.04 years to 63.38 years. This table also indicates that the gain in life expectancy during the decade accrued chiefly to those persons under the age of 20 years. In accomplishing these gains, the decline of infant and child mortality has been the most significant factor.

It is not possible to present separately the average expectancy of life at birth of the rural population of Missouri. It is known, however, that rural populations, generally, possess an expectancy of life that is significantly longer than that possessed by urban populations. For the United States as a whole the difference for white males in 1930 amounted to 5.36 years. For the State of Ohio the difference was 2.6 years. There is reason to believe that similar data for Missouri would yield results that would favor the rural population at least as much as the Ohio data.

That the average expectancy of life at birth of the rural population has increased over a period of years can scarcely be doubted. During the period, 1901 to 1930, the expectancy of life of rural white males in the United States increased from 54.03 years to 62.09 years.

TABLE 4.—COMPLETE EXPECTANCY OF LIFE IN YEARS AT DECENNIAL AGES: POPULATION OF MISSOURI

Age	White Males		White Females	
	1929-1931	1919-1920	1929-1931	1919-1920
0	59.76	56.80	63.38	59.04
10	55.60	54.58	58.31	55.53
20	46.72	46.16	49.21	46.96
30	38.25	38.43	40.72	39.55
40	29.91	30.77	32.26	32.05
50	22.17	23.06	24.09	24.23
60	15.22	16.00	16.63	16.86
70	9.59	10.06	10.33	10.64
80	5.56	5.33	5.33	6.19
90	2.92	2.50	3.14	3.39

Source: Dublin, L. I., and Lotka, A. J., *Length of Life*. New York, 1936, pp. 348, 356.

During the same period, the expectancy of life of rural white females increased from 55.41 years to 65.09 years.⁵ To what extent

⁵Dublin and Lotka, *op. cit.*, p. 91.

the average expectancy of life will continue to increase can scarcely be predicted. It has been pointed out above, however, that during the last 40 years the expectancy of life has been increased chiefly by means of reducing the death rate during infancy and childhood. With the decline in number of children born (and, hence, decline in the number of deaths occurring in infancy and childhood) and the steady increase in the percentage of the population above middle age, no extended decline in the general death rate is to be expected. Indeed, with continued decline of the birth rate, the general death rate is likely in the course of some years to show a tendency to rise.

It is clear, therefore, that the rate of natural increase of the population represents the difference between two variables—the general birth rate and the general death rate. Although the birth rate has been declining steadily for some time, the effects of this decline have been partly offset by a declining death rate. The prospects of a stabilized, or even increasing, death rate in the near future suggest that the time may not be far distant when the rate of natural increase will approach zero. There can be no doubt, however, but that the rural, and particularly the farm population, will continue to grow for some time after the total population has reached a stationary condition.

IV. MIGRATION

Both the size and quality of a population may be affected by migration. If more people leave the State than move into it, the size of the population is reduced to the extent of the excess. Conversely, if more people move into the State than move out of it, the size of the population is increased by the amount of the excess.

People are constantly moving to and from the rural districts. During periods of economic prosperity, the number of people so moving tends to increase, and during periods of economic depression the number tends to decrease. Still, the interchange does not stop altogether.

During a given period of time, the difference between the inflow and the outflow of migration may be called "net migration," or the net result of migration. In the past, the rural districts have customarily experienced a net loss of population as a result of migration. This means that during a given time period the number of people moving from farms and villages to towns and cities has exceeded the number moving from towns and cities to farms and villages.

The extent of net rural migration in Missouri before 1920 is not known. Because of inadequate data, it is not possible to offer estimates of such migration. It is possible only to indicate the changes in

number of persons living in rural territory, decade by decade. Although it is possible, in this manner, to infer something of the migratory trend, these data do not in any sense represent a measure of net migration. For example, counties having fewer people living in rural territory in 1920 than in 1910 undoubtedly experienced some net loss by migration during the decade. This net loss cannot be accurately measured, however. In like manner, counties returning rural population increases of 20 per cent or more between 1910 and 1920 may be regarded as having experienced more in-migration than out-migration. Beyond this little can be said.

Reference to the facts shows that, in terms of Census enumerations, 48 counties attained maximum rural population in 1900, and before 1910 the total rural population of the State began to decrease. During the decade, 1900-1910, a total of 86 counties decreased in rural population, giving proof of a net loss by migration. A total of 28 counties showed an increase in rural population, but only 3—Dunklin, New Madrid, and Pemiscot—increased as much as 20 per cent or more.

During the subsequent decade, 1910-1920, a total of 94 counties decreased in rural population and, therefore, may be said to have experienced a net loss of rural population as a result of migration. Of the 20 counties gaining rural population, only 4—Carter, Jackson, Pemiscot, and St. Louis—gained as much as 20 per cent or more.

The decade, 1920-1930, was one of profound changes in the rural population of Missouri. Although the rural population showed a decrease of 46,900⁶ persons, the estimated net loss as a result of migration amounted to 261,900 persons. Thus, while the rural population decreased by only 2.6 per cent during the decade, the net loss from migration amounted to 14.3 per cent of the rural population of 1920.⁷

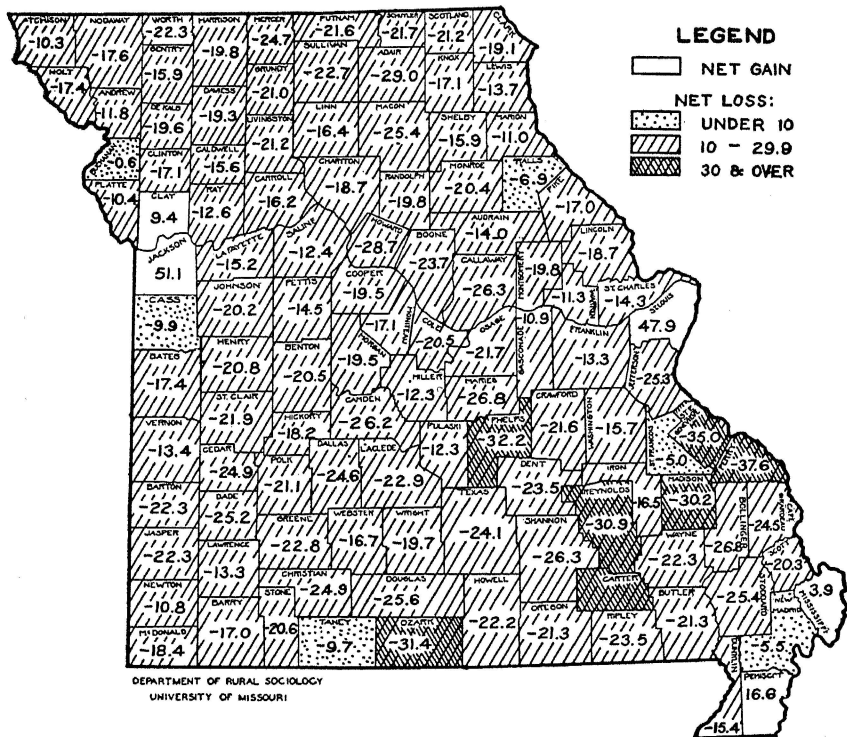
The net loss to the rural population resulting from migration came chiefly from the rural-farm population. A net total of 245,300 persons left the farms during the decade. This number was equal to 20.2 per cent of the rural-farm population of 1920. On the other hand, the estimated net loss to the rural-nonfarm population amounted to only 16,600 persons. This number was equal to 2.7 per cent of the rural-nonfarm population of 1920.

Estimates of net migration by counties indicate that only 5 counties gained rural population as a net result of migration between 1920 and 1930. They were Clay, Jackson, Mississippi, Pemiscot, and St. Louis. Jackson and St. Louis counties gained more than

⁶Decrease in hundreds after enumeration of 1910 and 1920 were corrected for under-enumeration of children under 5 years of age.

⁷Estimates take no account of children born between 1920 and 1930.

40 per cent each, but Clay and Mississippi gained less than 10 per cent. All other counties, 109 in number, experienced a net loss from migration. Of these, 49 lost from 10 to 19 per cent of the 1920 rural population, 47 lost 20-29 per cent, 7 lost 30 per cent or more, and 6 lost less than 10 per cent. Counties with losses of less than 10 per cent were Buchanan, Cass, New Madrid, Ralls, St. Francois, and Taney. Counties with losses of 30 per cent or more were Carter, Madison, Ozark, Perry, Phelps, Reynolds, and Ste. Genevieve. Counties with losses of more than 10 per cent were concentrated in the southern half of the State. See Map 7.



Map 7.—Per cent Net Gain or Loss Through Migration to the Rural Population of Missouri: 1920-1930, by Counties.

Following 1929, the amount of interchange of population between country and city decreased and, also, the number of persons leaving the country for towns and cities decreased relative to the number leaving towns and cities for the rural districts. As a result, the net loss to the rural population was not only greatly decreased as compared to the rate of loss during the previous decade, but in many counties a net gain to the rural population from migration was ob-

served. Reference to Map 3 shows that the counties gaining rural population as a result of net migration, 1930-1935, were located chiefly in the southern half of the State. Counties losing rural population as a result of net migration during this period were located chiefly in the northern half of the State.

No measures of net migration to or from the rural districts since 1935 are available. The farm population estimates⁸ of the United States Department of Agriculture indicate, however, that the interchange of population between country and city has remained at a relatively low ebb since 1935 and that the net loss of population from farms, 1935-1940, will be little more than half that experienced during the corresponding period 10 years earlier. With the relatively high rate of natural increase which characterizes the farm population throughout most of the State, this shrinkage in volume of rural-urban migration has the effect of increasing the number of adults living on farms, particularly in those areas where the birth rates are highest. Since the areas of high birth rates are likely to be areas where the ratio of population to available arable land is already too high, any decline of rural-urban migration is not without its social consequences.

V. FACTORS CONDITIONING THE DEVELOPMENT OF RURAL POPULATION RESOURCES

Elsewhere⁹ in this bulletin it has been pointed out that the total population of the United States and of Missouri is rapidly approaching a stationary condition. So long as the ratio of population to arable land and other physical and biological resources was low, labor was scarce, economic opportunity was widespread, and attitudes generally were favorable to an increase in population. But with the subsequent exploitation of physical resources and the development of labor-saving devices, interest in the growth of mere numbers has waned rapidly. Thus, numerous forces set in operation many years ago have been functioning to set the probable limits of the number of people in the State and nation. Henceforth, interest is likely to center primarily upon the problem of obtaining a closer relationship between population and opportunity and the problem of improving further, or at least maintaining, the quality of the population.

It is not the purpose of this bulletin to discuss the complex of factors that has tended to bring the population of Missouri to a near-stationary level. Although the present rural population is by no means stationary and probably will not become so for some years,

⁸U.S.D.A., Bureau of Agricultural Economics, Farm Population Estimates, January 1, 1939.

⁹Section III.

the authors are disposed to accept the fact of an approaching stationary condition and to draw attention to certain factors which are operating to affect the developmental opportunity and the quality of the present and future rural population of the State. It is now coming to be generally understood that the geographic pattern of agriculture which was established in pioneer days and which has been perpetuated with certain variations to the present, is in need of further modification in the interests of proper land use and soil conservation. That such adjustments in the agricultural pattern of the State as may be indicated will effect certain changes in the present pattern of rural population can scarcely be doubted. In the following pages, certain sociological considerations which may serve to suggest needed rural population adjustments are presented.

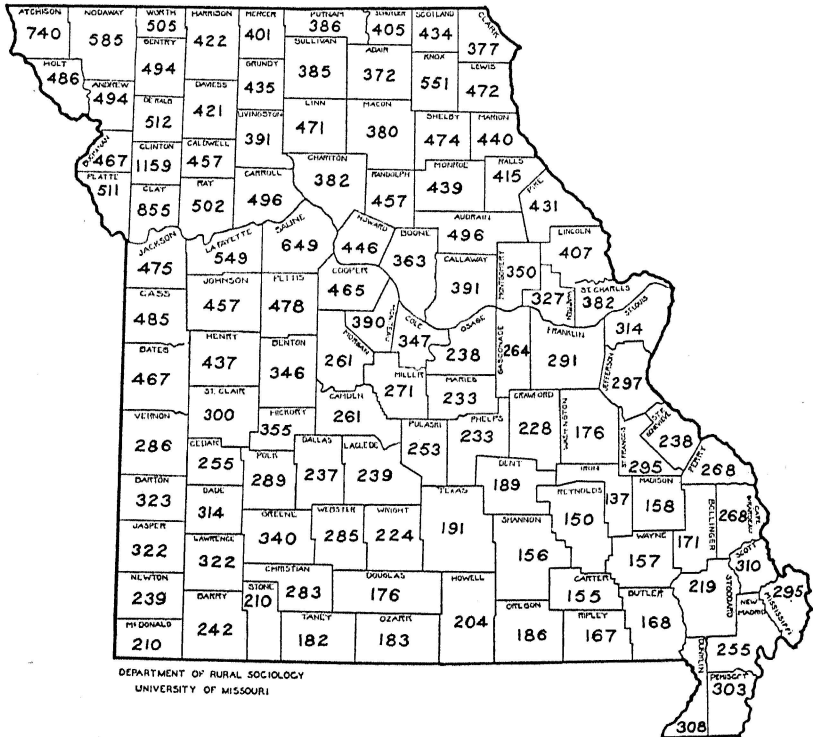
Rural Population and Land Area.—The distribution of rural population, and particularly the distribution of farm population in relation to farm land, is an important factor in population maintenance and population development since, other things equal, the land area per unit of population determines the amount of wealth and income available for the support of the people and their activities. Reference to Map 1 suggests that the population of rural Missouri is distributed rather evenly throughout the State. Computation shows, however, that in 1930 the amount of farm land per capita of the rural-farm population varied from 8 acres in Pemiscot county to 47.8 acres in Knox county. The state average was 32.9 acres. Nearly all counties in the Ozark highlands and in the Mississippi lowlands in the southern part of the State were below average with respect to the number of acres of farm land per capita of the rural-farm population. On the other hand, counties situated north of the Missouri River, with few exceptions, were above average in this respect.

Similar results are reflected in a recent study¹⁰ of intensity of land use in Missouri. This study shows that the number of male farm workers aged 10 years or over per unit of crop land and plowable pasture is smallest on the best grades of land and largest on the poorest land. In other words, the intensity of application of labor to farm land is greatest where the land is poorest. The authors conclude that Missouri was not settled by people who were keenly alert to the economic implications of different grades of farm land, and that institutional factors and traditional attitudes, such as the persistence of the idea that the 160-acre farm is the proper unit of operation, played powerful roles in establishing the prevailing pattern of farm population distribution. That pattern has tended to

¹⁰Hammar, C. H., and Muntzel, J. H., "Intensity of Land Use and the Resettlement Problem in Missouri," *Journal of Farm Economics*, 17 (3), pp. 409-422. August, 1935.

persist, and today gives rise to serious problems with respect to the best utilization of the land to the end that the population may be well supported and its potentialities and capacities developed.

Value of Farm Products.—The value of the farm products produced by a people serves as some indication of their gross income from agriculture. The value of farm products per capita of the rural-farm population in 1930 averaged \$351 for the State of Missouri. Map 8 shows the average values for the respective counties.



Map 8.—Per Capita Value of Farm Products Produced in 1929: Rural-Farm Population, 1930.

As might be supposed, the average value of farm products per capita tended to be highest in those areas of high farm acreage per farm worker and high land values, and lowest in those areas of relatively small farm acreage per farm worker and low land values. The relationship was not close,¹¹ however, because of variation in type of farming and because of the tendency to small farms and fair incomes in the neighborhood of large cities. Nevertheless, all counties north of the Missouri River except Montgomery and

¹¹The coefficient of simple correlation was $+0.33 \pm 0.08$.

Warren stood above the average in this respect. So, also, did 11 western counties situated south of the river. All others were below average. Highest values were found in Atchison, Clinton, Clay, Saline, and surrounding counties in the northwestern section of the State. Lowest values were found in Iron, Reynolds, Carter, Shannon, and surrounding counties in the Ozark highlands. Although good land prevails in the southeast Mississippi lowlands, the exceptionally low acreage of farm land per capita kept the per capita value of farm products low.

Rural-Farm Plane of Living.—The plane of living of a people represents the manner in which they translate the resources of their environment, including income, into a level or pattern of living. In short, the term connotes how the people live. In its entirety, the mode of living of a people virtually defies measurement; yet it is possible to construct some useful measures of variation. The indices of plane of living used herein are based upon factors of consumption¹² obtained by the Federal Census of 1930.

As of 1930, the median index of the plane of living of rural-farm families in Missouri was 103.8. The counties most nearly corresponding to this average were Barton and Mercer. The index ranged from 31.3 in Pemiscot county to 203.4 in St. Louis county. All counties north of the Missouri River except Adair, Sullivan, and Putnam had indices above the State average. So, also, did 17 central and southwestern counties located south of the Missouri River. The lowest indices were found in the Ozark and Mississippi lowland counties. Most counties in the northern half of the State had plane of living indices that were from two to three times as high as those of the lowest counties. See may 9.

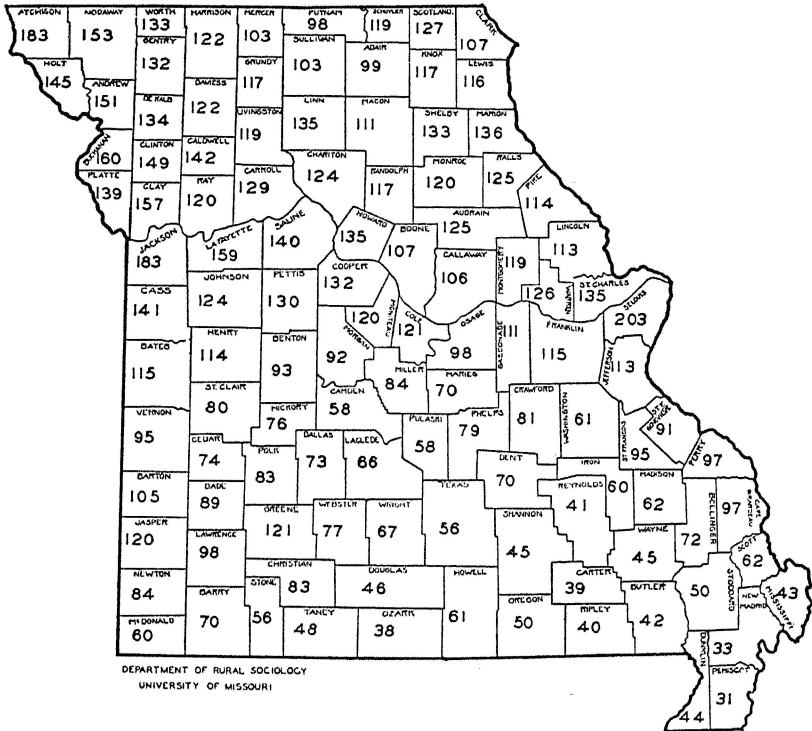
Measured in terms of the consumption index used above, the rural-farm plane of living index displays wide variation among counties. This variation is related to the variation in the acreage of farm land per capita.¹³ That is, there is some tendency for the higher planes of living to be found where the farm land area per capita is also high. The relationship is not close because economic welfare is not entirely a function of land area.

The rural-farm plane of living index shows a closer relation to the per capita value of farm products produced.¹⁴ Probably the most important single factor in the maintenance of a plane of living is income. But even here the relationship is far from perfect because

¹²For the rural-farm population, county averages for value of farm dwelling, and per cent of families having telephone, radio, automobile, electric lights, and water piped into the dwelling were used. For the rural-nonfarm population, the average value of the dwelling and the per cent of families having radios were used.

¹³The coefficient of simple correlation was 0.34 ± 0.08 .

¹⁴The coefficient of simple correlation was 0.73 ± 0.04 .



Map 9.—Index of Rural-Farm Plane of Living, 1930, by Counties.

the extent to which, and the manner in which, income is translated into a plane of living varies greatly from place to place.

Although the above measures of economic welfare are of necessity incomplete, they appear to be sufficient to warrant the conclusion that a considerable proportion of the rural-farm population of Missouri is seriously handicapped in the struggle to obtain the economic means for development of its capacities and abilities. Compared to other sections, it is clear that much of the rural-farm population of southern Missouri receives incomes and maintains levels of living that are but slightly above those to be found in the poorest areas of the United States.

Rural-Nonfarm Plane of Living.—The plane of living of the rural-nonfarm population as measured by the consumption index used was closely related to that of the rural-farm population.¹⁵ Since the economic prosperity of the rural-nonfarm population is dependent to a high degree upon the prosperity of the rural-farm population, what has been said above regarding the latter also applies with considerable force to the former.

¹⁵The coefficient of simple correlation when computed on a county basis was 0.81 ± 0.03 .

under 15 years of age amounted to 26.7 per cent of the total population. In the rural-farm population, however, the corresponding percentage was 32.5, and in the rural-nonfarm population it was 28.8. In the entire population, the number of persons aged 65 or over was equal to 6.7 per cent of the total, but in the rural-farm population the corresponding percentage was 7.0, and in the rural-nonfarm 8.8. These figures show clearly how the proportion of dependents varies from one section of the population to another within the same state.

The burden arising from the number of dependents that must be carried by the working population may be indicated by the ratio of the number of persons dependent by age to the number of persons of gainful working age. May 10 shows these ratios for the counties of Missouri by rural-farm and rural-nonfarm groups. In general, it may be said that the number of persons under 15 years of age is related to the number aged 65 or over. That is, there is a tendency for the largest numbers of aged persons to be found in the counties where the largest numbers of children under 15 are located, and vice versa. This is true in both the rural-farm and rural-nonfarm populations, according to the data of 1930, although there are many individual exceptions. This means that in those areas where the birth rate is low, the total number of dependents tends to be low, and in those areas where the birth rate is high, the total number of dependents tends to be high, also.

Reference to Map 10 shows that in the rural-farm population the number of dependents (persons aged 0-14 and 65 and over) per 1,000 persons aged 15-64 is greater than in the rural-nonfarm population. The state average for the former was 655, and for the latter 603. This suggests that the gainful workers in the rural-farm population may be carrying a greater load of nonproducers than the gainful workers in the rural-nonfarm population. Such figures also suggest that the rural population as a whole may be carrying a heavier load of nonproducers than the remainder of the population, for in the urban population in 1930 the number of dependents, as defined above, per 1,000 persons aged 15-64 amounted to only 396. In St. Louis the corresponding number was 371, and in Kansas City only 351. Thus, even though there may be more that children and aged people can do in the rural districts to assist in their support, there can be little doubt but that the rural population supports more than its proportionate share of those persons dependent by age.¹⁶

Within the rural districts wide differences in the occurrence of persons dependent by age are to be found. With respect to the

¹⁶In so far as the support of dependent groups is placed upon a State basis, these differentials are likely to be equalized.

rural-farm population, all counties north of the Missouri River, except Sullivan, had fewer dependents per 1,000 persons aged 15-64 than average for the State. On the other hand, nearly all counties in the Ozark area and all in the Mississippi lowlands had more than average. In the rural-nonfarm population, the same general situation prevailed, although there was slightly less uniformity of contrast.

School Attendance.—In modern society, the proportion of children of school age attending school may be regarded as a rough index of the extent to which the capacities and abilities of the population are being developed. In a democratic society, it may also be regarded as a rough measure of the extent to which the people are preparing themselves for democratic participation. Therefore, such data are important.

Although, in 1930, nearly 97 out of every 100 children aged 7-13 years were attending school, only 86 out of every 100 children aged 14-15 years and 52 out of every 100 aged 16-17 were in school. The average for all was 86.5 per cent. Among young people aged 18-20, only one in five was attending school. These averages suggest that those capacities and abilities which are developed in high school and college are not receiving adequate attention.

Even more suggestive than state averages are the data that show variation among the various sections of the State. The proportion of children aged 7-17 attending school in 1930 varied from 72.9 per cent in Ozark county to 92.2 in Caldwell county. Counties located north of the Missouri River and along the western border of the State had higher averages for school attendance than other counties, but this difference was less uniform than for factors measuring economic status. A number of counties in the Ozark area were obtaining school attendance that was above average for the State.

In like manner, school attendance for young people aged 18-20 years varied greatly from county to county. The range was from 7.8 per cent in Ste. Genevieve county to 46.1 per cent in Livingston. Counties in the northern and western portions of the State excelled in this respect, but certain counties in the southern and southeastern portions showed higher percentages of attendance than the state average.

It is clear from the above data that educational opportunity is not entirely a function of economic circumstances. Although the poorest areas may not obtain the best schools, there is no certainty that excellent schools will be maintained by all communities that can afford them. Further effort to equalize rural educational opportunities in Missouri appears to be indicated.

VI. RELATION OF THE FARM-REARED POPULATION TO THE MAN-POWER REQUIREMENTS OF AGRICULTURE

One of the basic elements in population support and development is occupation. Not only is it highly desirable that occupational outlets be available for all of the people, but the occupational variety should be sufficient to permit a wide range of choice according to ability and personal preference. In this manner, specialization becomes possible and both labor and special ability are utilized to good advantage.

It is a generally known fact that more persons are born and reared upon farms than are subsequently employed in agriculture as an occupation. Either from choice or from necessity, a certain percentage of these persons find their way into non-agricultural occupations. The exact proportion that actually does this during any given period of time is not known. Obviously the percentage varies depending upon such factors as the rate of natural increase of the farm population, the outlook for expansion of the agricultural industry, the availability of the land and other capital required to begin farming and the attractiveness of opportunities in non-agricultural occupations. For several decades the attractiveness of urban opportunity has drawn large numbers of farm youth away from the farms. At the same time, conditions have apparently made it increasingly difficult for farm youth to enter the farming occupation with promise of success. Good farm land has become increasingly difficult to obtain. In many areas, farms have become larger and the equipment necessary for farm operation has increased, making a larger investment necessary. Tenancy has increased and with it the proportion of farm-reared youth that is reared by tenant parents. With the increase in the productive capacity of the gainful worker in agriculture, the number of wage laborers has decreased. Thus, an increasing proportion of farm-reared youth has been deprived of either a gift of land and capital from their parents or the opportunity to start the climb up the "agricultural ladder" by turning wage laborer.

Many considerations, both economic and social, enter into the question of how many people should live upon the farms of the State and engage in the occupation of farming. It is not the purpose of this inquiry to offer any solution of that problem. Rather, the aim is to compare the number of farm-reared people, who may be regarded as potential farmers, with the current demands of agriculture for man power. Specifically, the aim is to present estimates of the number of persons required to replace those gainful workers who are lost to the agricultural industry through death or retire-

ment. In order to do this, the decade 1930-1940 is chosen, and it is assumed that the number of persons gainfully employed in agriculture during the decade will remain equal to the number so employed in 1930. Any actual increase or decrease in the total number of persons so employed would increase or decrease the estimated number required for replacement by the number of that increase or decrease.

Gainful Workers in Agriculture.—The number of persons gainfully employed in agriculture does not remain constant, but varies with comparative economic conditions in agriculture and in other occupations. On the whole, the number of such workers has declined during the last 30 years.¹⁷ In 1930, the number of males aged 10 years or over gainfully employed in agriculture in Missouri was 358,243. Of these, 237,685 were farm operators, 81,133 were wage workers, and 37,737 were unpaid family workers. Since that time, the total number of gainful workers has apparently declined slightly, although the slackened rural-urban migration since 1930 has tended to maintain, even increase, the number of unpaid family workers.¹⁸

The Age of Gainful Workers in Agriculture.—The Federal Census reports the number of gainful workers in agriculture aged 10 years and over. Children under 16 are usually in school and are employed chiefly as unpaid family workers. Because persons aged 16 to 19 are also, to a considerable extent, either in school or at work as unpaid family workers, and also because of the desirability of working with age groups of equal size, this study assumes 20 years as the age at which the replacement of gainful workers begins. Because of the relatively slight importance of female gainful workers in agriculture after the age of 20, the analysis is limited to the male population. Table 5 shows the age distribution of male gainful workers in agriculture in Missouri according to the Census of 1930. This table includes all persons so classified by the Bureau of the Census, regardless of their place of residence. The number is not synonymous with the number of persons living on farms and engaged in farm work. It is not possible to make this distinction for purposes of this investigation.

Of the gainful workers in agriculture in Missouri in 1930, nearly 68 per cent were aged 25 to 64 years. Only 10.9 per cent were under 20 years of age, and 2.1 per cent were aged 75 or over. Farm operators were oldest, having only 21.1 per cent under age 35 and 13.9 per cent aged 65 or over. Farm laborers were considerably

¹⁷Shaw, E. E., and Hopkins, J. A., Trends in Employment in Agriculture, 1909-36. W.P.A. National Research Project, Report No. A-8. Philadelphia, 1938.

¹⁸Ibid, p. 11.

younger. Wage workers were most likely to be 20-34 years of age, 45.2 per cent being in that group. More than 83 per cent of all unpaid family workers were under 25 years of age, and more than two-fifths were aged 10-17 years. More than 96 per cent of all gainful workers under age 20 were farm laborers. After age 25, however, the proportion of all workers that were laborers declined rapidly.

Replacement Requirements of Gainful Workers in Agriculture.—

It is evident that the total number of gainful workers in agriculture is affected by three factors: death, retirement, and net migration. The death rate, which is relatively low for gainful workers in the more youthful age groups, mounts steadily until it makes serious inroads upon the older age groups in the course of a decade. Thus, about 7 per cent of those aged 45-54 will be taken by death in the course of 10 years, and about 12 per cent of those aged 55-64 will be similarly taken. Retirement begins to reduce the number of workers after age 55 and sharply decimates the number after age 65. Unlike the death rate, however, the retirement rate cannot be

TABLE 5.—MALE GAINFUL WORKERS IN AGRICULTURE IN MISSOURI, 1930, CLASSIFIED BY TYPE OF WORKER AND BY AGE

Age	Type of Worker							
	Total		Farm Laborers					
			Farm Operators		Wage Workers		Unpaid Family Workers	
Number	Per Cent	Number	Per Cent	Number	Per Cent	Number	Per Cent	
TOTAL	358,243	100.0	237,685	100.0	81,133	100.0	37,737	100.0
10 - 17	21,711	6.1	.....	...	6,168	7.6	15,543	41.2
18 - 19	17,408	4.8	1,285	0.6	8,393	10.3	7,718	20.4
20 - 24	38,155	10.7	10,907	4.6	18,722	23.1	8,438	22.4
25 - 34	61,921	17.3	40,149	16.9	17,898	22.1	3,538	9.4
35 - 44	65,833	18.4	53,907	22.7	10,467	12.9	1,056	2.8
45 - 54	62,670	17.5	53,296	22.4	8,637	10.6	494	1.3
55 - 64	52,171	14.6	44,953	18.9	6,589	8.1	368	1.0
65 - 74	30,517	8.5	26,424	11.1	3,489	4.3	414	1.1
75 and over	7,605	2.1	6,678	2.8	702	0.9	161	0.4
Unknown	162	*	86	*	68	0.1	7	*

*Less than 0.1 per cent.

Source: U. S. Census of Population, 1930, Vol. IV, p. 897.

accurately predicted since it depends to some extent upon the fluctuations of agricultural prosperity. Net migration probably affects gainful workers of all ages to some extent, but its influence is most evident before age 30. Farm-reared children who are employed as unpaid family workers and other young persons who are employed as wage workers in agriculture tend to migrate in large numbers to non-agricultural occupations between the ages of 18 and 25, and to some extent before 18 and after 25. A few persons migrate to agriculture from non-agricultural occupations and some of those who

leave agriculture eventually return to it, but the net result is a heavy loss of actual and potential gainful workers before they reach the age of 30 years.

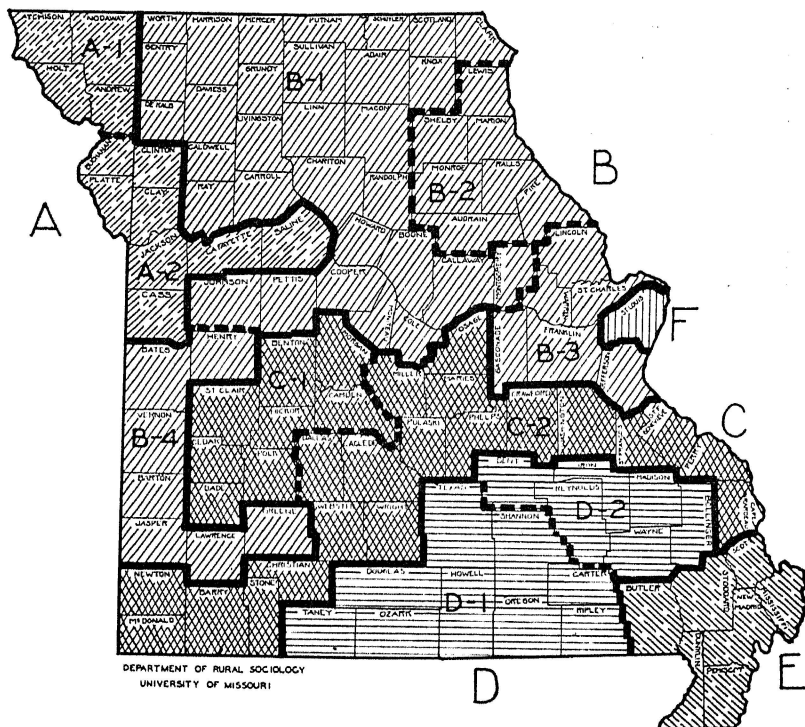
In order to estimate the replacement requirements of gainful workers in agriculture in Missouri for the decade, 1930-1940, it is assumed that the age distribution in 1940 is to be identical to that of 1930. With this assumption, the solution of the problem consists of two steps: (1) by the use of life tables, calculate the number of gainful workers of 1930 who will die before 1940; (2) compare the resulting age distribution of 1940 survivors with the age distribution of gainful workers in 1930 and attribute age group surpluses in the advanced age groups to retirement. By this means it is found that the loss from death during the decade will amount to 28,652 persons, or 9.0 per cent of all male gainful workers aged 20 years or over in 1930. When the survivors are distributed according to age in 1940, and the numbers in the various age groups compared with the numbers in the corresponding age groups in 1930, it is seen that deficits occur in all age groups except those above age 45. In the age groups above 45, a surplus of 41,284 persons occurs. This surplus above the number in these groups in 1930 may be regarded as the expected loss owing to retirement.¹⁹ It amounts to 12.9 per cent of all male gainful workers aged 20 years or over in 1930. Thus, to the loss from death of 28,652 persons must be added the loss from retirement of 41,284 persons, making a total loss during the decade through death and retirement of 69,936 persons. This amounts to 21.9 per cent of all male gainful workers in 1930, and is the number that must be replaced during the decade if the number of gainful workers is to be maintained equal to the number in 1930. See Table 6.

Replacement Requirements by Sub-Areas.—Although the preceding discussion presents the replacement requirements for the decade, 1930-1940, for all workers engaged in agriculture in Missouri, it does not show variation in these requirements within the State. Missouri is a variable state both from the standpoint of agricultural wealth and income and from the standpoint of the rate at which farm-reared youth are being produced. It is to be supposed, therefore, that the replacement requirements for gainful workers in agriculture during this decade will vary considerably from section to section. Fortunately, for purposes of this study, a recent attempt has been made to distinguish the relatively homogeneous rural-farm sub-areas of the State. These areas were determined by means of

¹⁹It is assumed that these workers will retire from the occupation of farming. If they do not retire, or if their places are filled by adults of similar age coming in from other occupations, the number of opportunities for farm-reared youth will be reduced by that much.

a large number of significant measures of social and economic variation.²⁰

These areas are made the basis of this analysis of replacement requirements of gainful workers in different sections of the State. See Map 11.



Map 11.—Rural-Farm Social Sub-Areas of Missouri.

Because the age distribution of gainful workers in agriculture is not available by counties, it is not possible to analyze the various sub-areas of the State with the same precision that is possible for the State as a whole. Estimates which represent the situation with fairness are possible, however.

Table 6 presents the number of male gainful workers aged 20 years or over engaged in agriculture in the various rural-farm sub-areas of Missouri in 1930. The approximate age distribution is also presented. Except for Area E in which the workers were somewhat younger than elsewhere, there appeared to be no great variation in age from area to area.

²⁰For the general methodology used in determining these sub-areas, see Lively, C. E., and Gregory, C. L., *Rural Social Areas in Missouri*. Missouri Agricultural Experiment Station, Research Bulletin 305, August, 1939. Although the factors used in determining the rural-farm areas differed slightly from those used in determining rural areas, the general methodology was the same.

TABLE 6.—AGE DISTRIBUTION* OF MALE GAINFUL WORKERS IN AGRICULTURE
IN MISSOURI, AGED 20 YEARS OR OVER IN 1930,
BY RURAL-FARM SUB-AREAS

Age 1930	The State	Rural-Farm Sub-Areas					
		A	B	C	D	E	F
		Number of Persons					
TOTAL	319,774	40,115	144,510	68,240	29,648	30,485	6,776
20 - 24	38,266	4,588	15,899	8,326	3,762	4,913	778
25 - 34	62,107	7,909	26,919	13,305	5,888	6,812	1,274
35 - 44	66,184	8,565	29,437	13,695	6,062	6,960	1,465
45 - 54	62,663	7,866	28,650	13,383	5,609	5,807	1,348
55 - 64	52,485	6,511	24,872	11,205	4,773	3,983	1,141
65 - 74	30,748	3,802	14,955	6,614	2,857	1,861	659
75 and over	7,321	874	3,778	1,712	697	149	111
		Per Cent					
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0
20 - 24	12.0	11.4	11.0	12.2	12.7	16.1	11.4
25 - 34	19.4	19.7	18.6	19.5	19.9	22.4	18.8
35 - 44	20.7	21.4	20.4	20.1	20.5	22.8	21.6
45 - 54	19.6	19.6	19.8	19.6	18.9	19.0	19.9
55 - 64	16.4	16.2	17.2	16.4	16.1	13.1	16.8
65 - 74	9.6	9.5	10.4	9.7	9.6	6.1	9.7
75 and over	2.3	2.2	2.6	2.5	2.3	0.5	1.8

*Estimated.

The estimated losses of gainful workers by death and retirement during the decade, 1930-1940, are presented in Table 7. The losses by death are roughly proportional to the number of gainful workers in 1930, although the proportion is definitely higher in Area B and lower in Area E than the number of gainful workers would suggest. The same rule applies to the losses through retirement, except that the number so lost is smaller in Area B and higher in Area E than the number of gainful workers would suggest. The estimated percentage of the gainful workers of 1930 lost by death during the subsequent decade are as follows: the State, 8.9; sub-area A, 8.9; sub-area B, 9.4; sub-area C, 9.1; sub-area D, 8.9; sub-area E, 6.9; and sub-area F, 8.7. The estimated percentage of the gainful workers of 1930 lost by retirement during the subsequent decade are: the State, 12.9; sub-area A, 13.4; sub-area B, 12.2; sub-area C, 12.3; sub-area D, 12.5; sub-area E, 17.0; and sub-area F, 13.8.

From these data it may be seen that the total losses from death and retirement are fairly consistent with the number of gainful workers in the sub-areas in 1930, except in the case of sub-area E where the losses are distinctly greater than the general average.

Number of Rural-Farm Males Available for Replacement, 1930-1940.—The number of male gainful workers aged 20 years or over that will be required in the State of Missouri and in its various rural-farm sub-areas to replace the number lost through death or retirement during the decade, 1930-1940, has been estimated above. The next step is to determine how many farm-reared males will be avail-

able for these replacements. That number will, of course, be the number of farm-reared males who were aged 10-19 years in 1930, minus the losses by death that will occur before these youth attain

TABLE 7.—LOSS* BY DEATH AND RETIREMENT, 1930-1940, OF MALES AGED 20 OR OVER AND GAINFULLY EMPLOYED IN AGRICULTURE IN MISSOURI, 1930, BY RURAL-FARM SUB-AREAS

Sub-Area	Male Gainful Workers Engaged in Agriculture, 1930		Estimated Loss of Male Gainful Workers, 1930-1940					
	Number	Per Cent	Total		By Death		By Retirement	
			Number	Per Cent	Number	Per Cent	Number	Per Cent
The State	319,774	100.0	69,936	100.0	28,652	100.0	41,284	100.0
A	40,115	12.5	8,935	12.8	3,559	12.4	5,376	13.0
B	144,510	45.2	31,210	44.6	13,552	47.3	17,658	42.8
C	68,240	21.4	14,621	20.9	6,195	21.6	8,426	20.4
D	29,648	9.3	6,345	9.1	2,648	9.2	3,697	9.0
E	30,485	9.5	7,300	10.4	2,107	7.4	5,193	12.6
F	6,776	2.1	1,525	2.2	591	2.1	934	2.2

*Estimated.

the age of 20 years. The number of such youth as enumerated by the Federal Census in 1930 was 127,624. Table 8 shows the age distribution of these persons by one-year age groups. These persons were enumerated by the Census as living on farms in 1930, but, since they were aged 10-19 years, for our purposes they may also be regarded as living at the parental home. That is to say, the number of farm-reared youth who were under 20 years of age and living on farms but not in the parental home is probably negligible.

The males aged 10-19 that were enumerated by the Census as living on farms were not all of the males of these ages so reared, however. Records show that farm-reared males begin to leave the parental home after age 14 and continue to leave at an increasing rate for some years thereafter. Of 1,000 such youth at home at age 14, it is estimated that only 755 will be at home at age 20.²¹ In order to estimate the number of farm-reared youth who will reach the age of 20 years during this decade, therefore, it is necessary to increase the number of males on farms as enumerated by the Census by the estimated number that has left the parental home. This correction is made in Table 8.

Finally, it is necessary to determine, by the use of life tables, the number of these males, aged 10-19 in 1930, that will die before they attain the age of 20 years. By this means we may obtain the estimated number of survivors who will reach the age of 20 during the decade, 1930-1940, and thus become potential gainful workers from which the losses resulting from death or retirement to gainful workers 20 years or over, may be replaced. Table 8 estimates this number to be 129,981 persons for the State of Missouri.

²¹These are Ohio rates based upon persons who had left the parental home prior to 1935. Their use here probably does no violence to the data.

The number of rural-farm males who will attain the age of 20 years during the decade, 1930-1940, in the various sub-areas of the State is shown by Table 9. This is the number of persons who are potential gainful workers in agriculture and who may be regarded as potential replacements for those gainful workers lost by death

TABLE 8.—NUMBER OF RURAL-FARM MALES IN MISSOURI, AGED 10-19 YEARS IN 1930, AND NUMBER OF SURVIVORS AT AGE 20, CLASSIFIED BY AGE

Age 1930	Number of Males, 1930		
	As Enumerated by 1930 Census	Corrected for Migration Ages 14 - 19	Survivors at Age 20
TOTAL	127,624	131,490	129,981
10	13,302	13,302	13,063
11	12,639	12,639	12,425
12	13,174	13,174	12,966
13	12,586	12,586	12,404
14	13,421	13,448	13,272
15	13,040	13,119	12,968
16	13,213	13,414	13,284
17	12,975	13,502	13,399
18	11,971	13,040	12,971
19	11,303	13,266	13,229

TABLE 9.—NUMBER OF RURAL-FARM MALES AGED 10-19 YEARS IN 1930, AND NUMBER OF SURVIVORS AT AGE 20, CLASSIFIED BY RURAL-FARM SUB-AREAS

Sub-Area	Number of Males, 1930		Survivors at Age 20	
	Enumerated by Fifteenth Census	Corrected for Migration Ages 14 - 19	Number	Per Cent
The State	127,624	131,490	129,981	100.0
A	13,273	13,664	13,507	10.4
B	50,190	51,804	51,213	39.4
C	31,097	31,998	31,629	24.3
D	15,447	15,889	15,706	12.1
E	15,911	16,378	16,189	12.5
F	1,706	1,757	1,737	1.3

or retirement. The number in any sub-area is a function of both the size of the area, in terms of rural-farm population, and the rural-farm birth rate. Hence, although the number of potential gainful workers is roughly proportional to the size of the area, the distribution of potential workers does not correspond entirely to the distribution of actual gainful workers.

Nearly two-fifths of the total number of farm-reared males attaining the age of 20 years during the decade, 1930-1940, are seen to be in sub-area B. Nearly one-fourth are in sub-area C, and nearly one-fourth in sub-areas D and E combined. Sub-area A accounts for little more than one-tenth of the total number.

In Table 10 these data are brought together to show the proportion of farm-reared males attaining the age of 20 years during the decade, 1930-1940, that will be needed to replace the losses to gainful workers resulting from death and retirement. It is estimated that 53.8 per cent of the 129,981 males arriving at age 20 will be required

TABLE 10.—NUMBER OF GAINFUL WORKERS ENGAGED IN AGRICULTURE IN MISSOURI, NUMBER* LOST BY DEATH AND RETIREMENT, AND NUMBER* OF RURAL-FARM MALES ARRIVING AT AGE 20, CLASSIFIED BY RURAL-FARM SUB-AREAS

Sub-Area	Number of Male Gainful Workers Engaged in Agriculture, 1930	Number* of Male Gainful Workers Lost by Death and Retirement, 1930-1940	Rural-Farm Males Arriving at Age 20 Between 1930 and 1940		
			Number*	Ratio to Gainful Workers	Per Cent Required for Replacement
The State	319,774	69,936	129,981	40.6	53.8
A	40,115	8,935	13,507	33.7	66.2
B	144,510	31,210	51,213	35.4	60.9
C	68,240	14,621	31,629	46.3	46.2
D	29,648	6,345	15,706	53.0	40.4
E	30,485	7,300	16,189	53.1	45.1
F	6,776	1,525	1,737	25.6	87.8

*Estimated.

to maintain the number of gainful workers at the level of 1930. In sub-area A, where the losses from retirement are relatively high and the birth rate relatively low, approximately two-thirds of the farm-reared males arriving at age 20 will be required for replacements if the number of gainful workers in agriculture is to remain stationary. In sub-area B, where birth rates are also relatively low but losses from retirement slightly lower, only 60.9 per cent of the potential workers are required for replacements. In sub-area C, where birth rates are higher, only 46.4 per cent of the potential workers are required for replacement; and in sub-area D, where birth rates are the highest in the State, only 40.4 per cent of the farm-reared males are required for replacement. In sub-area E, birth rates are high but losses through death and retirement during the decade are estimated to be high also. Consequently, 45.1 per cent of the potential workers will be required for replacement. Finally, in sub-area F, where the losses through retirement are relatively high and the number of available youth exceptionally low, 87.8 per cent of the farm-reared males arriving at age 20 will be required for replacement.

Implications for Agricultural Opportunity.—It appears to be clear from the data presented above that the rural-farm population is producing during this decade, 1930-1940, nearly twice as many potential male gainful workers aged 20 years as can be employed in agriculture without expanding the man-power of the industry. The same conclusion may, of course, be drawn for the female sex. Furthermore, these differentials are likely to maintain with only slight variation for the decade, 1940-1950. Therefore, the task of finding non-agricultural opportunity for these persons is an important one. Among other things, it involves assisting these young people to de-

velop their capacities and abilities for non-agricultural work. It also suggests the desirability of better means of informing farm-reared youth of the occurrence of non-agricultural opportunity outside their home communities.

The opportunity for farm-reared youth to enter the occupation of farming as replacements of gainful workers lost through death or retirement is unequally distributed throughout the State. Areas of high agricultural income can use a larger proportion of the locally reared males in the industry without expanding the manpower. Areas of low income and high birth rates can use fewer than half of the locally reared males. These differentials suggest that some variation in educational policy among the sub-areas is desirable. It seems plausible that training for non-agricultural vocations should receive greater emphasis in the areas of low agricultural income and high birth rates than in the areas of high income and low or moderate birth rates. In view of the heavy emigration of youth that has characterized the areas of high income in the past, perhaps these areas have placed emphasis too exclusively upon non-agricultural education. It seems plausible that the better agricultural areas should recruit their future farmers from the youth of their own families, while the poorer farming districts contribute heavily of their youth to the non-agricultural occupations.

The above discussion should not be interpreted to mean that farm-reared youth of exceptional ability and an interest in farming should not enter the occupation. There is opportunity in almost any occupation for persons of more than average ability. It is highly desirable that in all sections of the State, the persons who elect to farm possess at least average ability. Doubtless good returns and a satisfying life await those of superior ability who elect to enter the occupation of farming.

VII. SUMMARY

The population of Missouri is a resource that in the course of time may vary both in size and quality. Changes in birth and death rates affect the size while economic and social conditions affect the quality. This bulletin is concerned with those changes and trends which affect both size and quality of the rural population.

The rural population of Missouri reached its maximum size about 1900. Decline in number of persons since that time has been related to the reorganization of agriculture and other rural industries of the State. Although the birth rate has declined, the rural population, and particularly the rural-farm population shows a rate of increase considerably above that necessary to maintain a stationary

rural population. Intercounty variation is marked, the highest rates of increase being located in the southeastern portion of the State.

During the years of economic prosperity before 1930, emigration from the rural districts tended to relieve the threatened population pressure resulting from a high rate of natural increase. The decline of urban prosperity since 1930, has reduced these losses and as a result many of the less favored areas tend to become over-populated.

Because of its relatively high birth rate, the farm population produces more potential workers than can be absorbed by agriculture without expanding the man power of the industry. The proportion of farm-reared males aged 20 years that can be so absorbed during the decade, 1930-1940, varies from two-thirds in the best farming areas of the northwest to two-fifths in the poorest Ozark areas. Because of this situation, some differentiation in educational policies is suggested.

With the approach of a stationary population and the increased mechanization of productive processes, interest in mere numbers is likely to decline. In the future, interest may center about the problem of obtaining a better relationship between population and opportunity and the problem of improving the quality of the population. An examination of such factors as the ratio of rural population to land area, the per capita value of farm products produced, the plane of living of the rural population, the incidence of dependency in the rural population and the proportions of rural children attending school, leads to the conclusion that the opportunities for the development of the capacities and abilities of the rural population of Missouri are very unequally distributed. Although variation in opportunity for population development is obviously related to variation in economic status, it is apparent that improvement of such opportunity is not wholly dependent upon the improvement of economic conditions.

APPENDIX: COUNTY DATA

County	Population—1930			Per Cent Rural	Per Cent Increase in Farm Population, 1930-1935	Net Rural Migration, 1920-1930	
	Total	Rural- Farm	Rural- Nonfarm			Number	Per Cent
Adair	19,436	8,851	2,292	57.3	6.9	-4120	-29.0
Andrew	13,469	9,140	4,329	100	-0.9	-1657	-11.8
Atchison	13,421	8,439	4,982	100	-2.7	-1346	-10.3
Audrain	22,077	8,547	5,240	62.4	-0.4	-2043	-14.0
Barry	22,803	15,196	3,508	82.0	13.6	-3284	-17.0
Barton	14,560	8,516	6,044	100	8.1	-3765	-22.3
Bates	22,068	13,193	6,169	87.7	0.1	-8696	-17.4
Benton	11,708	8,280	3,428	100	10.7	-2658	-20.5
Bollinger	12,269	10,119	2,150	100	-1.3	-3732	-26.8
Boone	30,995	10,379	5,649	51.7	13.2	-4560	-23.7
Buchanan	98,633	9,811	7,887	17.9	3.7	- 101	- 0.6
Butler	23,697	11,477	4,669	68.1	27.1	-3424	-21.3
Caldwell	12,509	7,199	5,310	100	1.8	-2157	-15.6
Callaway	19,923	10,789	3,029	69.4	9.8	-4587	-26.3
Camden	9,142	6,476	2,666	100	- 2.9	-2746	-26.2
Cape Girardeau	33,203	11,938	5,038	51.1	8.0	-4805	-24.5
Carroll	19,940	11,779	4,103	79.6	- 2.5	-2790	-16.2
Carter	5,503	3,147	2,356	100	27.7	-3068	-41.0
Cass	20,962	12,018	8,944	100	- 2.7	-2127	- 9.9
Cedar	11,136	8,161	2,975	100	6.5	-3463	-24.9
Chariton	19,588	12,811	6,777	100	2.1	-4065	-18.7
Christian	13,169	10,532	2,637	100	9.8	-3802	-24.9
Clark	10,254	6,497	3,757	100	5.3	-2273	-19.1
Clay	26,811	7,279	8,877	60.3	- 1.1	1236	9.4
Clinton	13,505	6,272	3,830	74.8	- 3.4	-1922	-17.1
Cole	30,848	6,954	2,298	30.0	13.2	-2084	-20.5
Cooper	19,522	9,380	3,707	67.0	- 0.1	-2557	-19.5
Crawford	11,287	7,951	3,336	100	9.6	-2668	-21.6
Dade	11,764	8,767	2,997	100	1.3	-3567	-25.2
Dallas	10,541	8,852	1,689	100	11.5	-2955	-24.6
Davies	14,424	9,668	4,756	100	- 0.3	-3211	-19.3
De Kalb	10,270	7,211	2,955	99.0	4.5	-2289	-19.6
Dent	10,974	7,695	3,279	100	8.0	-2894	-23.5
Douglas	13,959	12,030	1,929	100	10.4	-3956	-25.6
Dunklin	35,799	22,757	8,914	88.5	4.9	-4478	-15.4
Franklin	30,519	13,762	10,839	80.6	8.6	-3352	-13.3
Gasconade	12,172	6,613	5,559	100	8.4	-1347	-10.9
Gentry	14,348	8,337	5,971	100	- 6.0	-2485	-15.9
Green	82,929	13,772	6,630	30.6	- 2.1	-6626	-22.8
Grundy	16,135	6,990	2,153	56.7	4.9	-2242	-21.0
Harrison	17,233	11,840	5,393	100	- 2.3	-3900	-19.8
Henry	22,931	11,356	5,831	75.0	1.7	-4162	-20.8
Hickory	6,430	5,102	1,328	100	12.1	-1278	-18.2
Holt	12,720	7,584	5,136	100	1.9	-2453	-17.4
Howard	13,490	7,132	3,728	80.5	4.8	-4015	-28.7
Howell	19,672	12,673	3,664	83.0	6.2	-3971	-22.2
Iron	9,642	4,661	4,981	100	20.8	-1561	-16.5
Jackson	470,464	15,761	39,651	11.8	3.5	16234	51.1
Jasper	73,810	12,418	12,050	33.1	15.6	-6290	-22.3
Jefferson	27,563	9,260	6,092	55.7	18.4	-4607	-25.3
Johnson	22,413	13,050	4,217	77.0	- 3.8	-4053	-20.2
Knox	9,658	6,376	3,282	100	4.4	-1846	-17.1
Laclede	16,320	11,039	1,719	78.2	6.4	-3204	-22.9
Lafayette	29,259	12,814	8,511	72.9	0.2	-3437	-15.2
Lawrence	23,774	12,651	7,248	83.7	10.9	-2741	-13.3
Lewis	12,093	6,395	5,698	100	2.7	-1847	-13.7
Lincoln	13,929	8,582	5,347	100	6.2	-2984	-18.7
Linn	23,339	9,388	3,968	57.2	- 2.7	-2418	-16.4
Livingston	18,615	8,164	2,274	56.1	4.2	-2568	-21.2
McDonald	13,936	10,635	3,301	100	14.3	-2708	-18.4
Macon	23,070	13,433	5,786	83.3	- 0.9	-6908	-25.4
Madison	9,413	4,875	1,589	68.6	7.5	-2297	-30.2
Maries	8,368	7,152	1,216	100	- 1.3	-2544	-26.8
Marion	33,493	6,710	4,022	82.0	4.1	-1201	-11.0
Mercer	9,350	6,363	2,487	100	3.0	-2783	-24.7
Miller	16,728	9,364	4,193	81.0	9.6	-1591	-12.3
Mississippi	15,762	9,854	2,551	78.7	13.2	364	3.9
Moniteau	12,173	7,135	5,088	100	3.9	-2317	-17.1
Monroe	13,466	8,635	4,831	100	1.3	-3349	-20.4
Montgomery	13,011	7,449	5,562	100	5.9	-3014	-19.8
Morgan	10,968	7,509	3,459	100	10.2	-2348	-19.5
New Madrid	30,262	19,890	10,372	100	15.7	-1385	- 5.5
Newton	26,959	15,336	6,414	80.7	19.2	-2251	-10.8
Nodaway	26,371	14,763	6,391	80.2	- 0.7	-4051	-17.6
Oregon	12,220	8,798	3,422	100	-10.4	-2749	-21.3
Osage	12,462	9,121	3,341	100	2.5	-2939	-21.7
Ozark	9,537	8,496	1,041	100	22.0	-3492	-31.4
Pemiscot	37,284	26,586	5,917	87.2	9.5	3632	16.6
Perry	13,707	8,515	2,228	78.4	8.3	-5421	-37.6

County	Population—1930				Per Cent Increase in Farm Population, 1930-1935	Net Rural Migration, 1920-1930	
	Total	Rural- Farm	Rural- Nonfarm	Per Cent Rural		Number	Per Cent
Pettis	34,664	11,546	2,312	40.0	— 3.4	—2133	—14.5
Phelps	15,308	8,197	3,441	76.0	12.8	—4805	—32.2
Pike	18,001	8,740	5,712	80.3	10.4	—2762	—17.0
Platte	13,819	8,218	5,601	100	— 8.1	—1452	—10.4
Polk	17,803	12,872	4,931	100	0.6	—4298	—21.1
Pulaski	10,755	6,650	4,105	100	14.5	—1286	—12.3
Putnam	11,503	8,250	3,253	100	3.3	—2335	—21.6
Ralls	10,704	6,605	4,099	100	7.4	— 722	— 6.9
Randolph	26,431	8,343	4,316	47.9	— 5.1	—2940	—19.3
Ray	19,846	10,516	5,201	79.2	3.9	—2028	—12.6
Reynolds	8,923	6,502	2,421	100	8.4	—3121	—30.9
Ripley	11,176	7,953	3,223	100	12.9	—2334	—23.5
St. Charles	24,354	9,254	4,609	56.9	— 2.5	—2052	—14.3
St. Clair	13,289	9,684	3,625	100	— 0.8	—3362	—21.9
St. Francois	35,832	6,286	22,524	80.4	9.1	—1244	— 5.0
St. Louis	211,593	15,626	106,465	57.7	13.1	33314	47.9
Ste. Genevieve	10,097	5,561	1,874	73.6	5.2	—3438	—35.0
Saline	30,598	12,384	6,633	62.2	0.1	—2462	—12.4
Schuyler	6,951	4,456	2,495	100	1.0	—1819	—21.7
Scotland	8,853	6,056	2,797	100	— 4.2	—2270	—21.2
Scott	24,913	9,681	6,654	65.6	12.7	—3410	—20.3
Shannon	10,894	7,217	3,677	100	8.4	—3124	—26.3
Shelby	11,983	7,050	4,933	100	1.7	—2170	—15.9
Stoddard	27,452	18,686	6,052	90.1	11.9	—6599	—25.4
Stone	11,614	9,155	2,459	100	10.1	—2454	—20.6
Sullivan	15,212	10,536	4,676	100	— 3.5	—4031	—22.7
Taney	8,867	5,930	2,937	100	29.1	— 797	— 9.7
Texas	18,530	14,690	3,890	100	11.3	—4953	—24.1
Vernon	25,031	12,587	4,996	70.2	1.1	—2539	—13.4
Warren	8,032	5,016	3,066	100	— 2.6	— 956	—11.3
Washington	14,450	7,267	7,183	100	8.8	—2168	—15.7
Wayne	12,243	8,359	3,884	100	3.1	—2899	—22.3
Webster	16,148	12,335	3,813	100	12.4	—2768	—16.7
Worth	6,535	4,616	1,919	100	6.0	—1701	—22.3
Wright	16,741	12,175	4,566	100	13.7	—3500	—19.7
St. Louis City	821,960	.....	.....	...	22.4	.....	.....

County	Number of Children Under 5 per 1000 Women, 20-44, 1930		Value in Dollars of Farm Products per Capita of Farm		Plane of Living Index, 1930	
	Rural- Farm	Rural- Nonfarm	Population, 1929.	Rural- Farm	Rural- Nonfarm	
Adair	574.65	489.86	372.00	98.60	75.7	
Andrew	531.31	439.16	494.00	151.10	147.9	
Athison	678.82	483.50	740.00	183.10	172.7	
Audrain	518.52	538.78	496.00	124.50	133.8	
Barry	791.80	523.05	242.00	70.20	76.8	
Barton	701.03	500.49	323.00	104.70	87.1	
Bates	644.78	490.20	467.00	115.20	79.3	
Benton	717.24	582.51	346.00	92.80	120.9	
Bollinger	856.27	752.84	171.00	72.20	70.9	
Boone	597.11	608.69	363.00	106.50	95.5	
Buchanan	523.06	557.88	467.00	159.60	164.8	
Butler	990.42	890.67	168.00	42.00	56.9	
Caldwell	547.22	474.44	457.00	141.50	119.6	
Callaway	562.02	659.84	391.00	105.70	86.6	
Camden	800.43	859.12	261.00	57.50	81.1	
Cape Girardeau	697.00	545.25	268.00	96.70	95.9	
Carroll	581.26	488.69	496.00	129.40	114.6	
Carter	1019.14	907.41	155.00	38.60	54.2	
Cass	539.75	483.17	485.00	141.40	141.2	
Cedar	570.41	433.49	255.00	74.00	80.2	
Chariton	614.88	496.08	382.00	124.00	111.8	
Christian	707.54	570.61	283.00	82.90	77.0	
Clark	561.58	436.97	377.00	106.60	108.9	
Clay	532.87	595.15	855.00	156.50	149.9	
Clinton	579.98	506.51	1159.00	148.70	120.2	
Cole	680.46	628.87	347.00	120.70	101.2	
Cooper	595.37	585.00	465.00	131.50	81.5	
Crawford	829.20	702.86	228.00	80.60	99.6	
Dade	662.20	436.40	314.00	89.10	77.5	
Dallas	765.50	595.39	237.00	72.70	94.2	
Daviess	564.36	483.57	421.00	121.50	112.3	
De Kalb	580.25	364.95	512.00	133.90	126.8	
Dent	751.54	672.01	189.00	70.10	96.9	
Douglas	936.97	757.06	176.00	45.80	82.6	
Dunklin	979.46	645.70	308.00	43.70	72.7	

County	Number of Children Under 5 per 1000 Women, 20-44, 1930		Value of Farm Products per Capita of Farm in Dollars Population, 1929.	Plane of Living Index, 1930	
	Rural- Farm	Rural- Nonfarm		Rural- Farm	Rural- Nonfarm
Franklin	659.95	547.34	291.00	114.50	139.6
Gasconade	623.00	466.73	264.00	111.20	144.5
Gentry	580.57	448.48	494.00	131.90	142.7
Green	586.34	537.98	340.00	121.20	97.8
Grundy	578.37	442.01	435.00	116.50	85.0
Harrison	590.72	475.92	422.00	121.90	120.0
Henry	589.94	434.83	437.00	114.20	86.2
Hickory	636.59	630.84	355.00	76.20	82.4
Holt	533.05	486.45	486.00	145.00	136.5
Howard	587.13	471.21	446.00	135.40	125.6
Howell	817.26	637.64	204.00	60.90	74.7
Iron	1024.35	848.13	137.00	59.70	71.8
Jackson	529.07	555.73	475.00	182.90	197.1
Jasper	594.48	631.85	322.00	120.10	69.4
Jefferson	565.65	731.16	297.00	113.30	121.1
Johnson	594.55	426.43	457.00	124.00	107.3
Knox	521.02	452.55	551.00	116.70	117.3
Laclede	806.14	735.45	239.00	66.30	63.9
Lafayette	614.06	547.60	549.00	159.30	120.4
Lawrence	595.26	477.04	322.00	97.60	87.3
Lewis	452.20	378.23	472.00	116.00	111.3
Lincoln	537.19	461.54	407.00	112.60	106.8
Linn	544.26	472.22	471.00	135.00	111.1
Livingston	569.41	531.43	391.00	118.50	84.6
McDonald	769.48	622.26	210.00	59.60	73.5
Macon	545.54	482.69	380.00	111.10	100.8
Madison	933.54	964.98	158.00	61.70	50.2
Maries	865.99	702.97	233.00	70.40	106.8
Marion	650.05	548.09	440.00	136.40	136.1
Mercer	626.81	432.69	401.00	103.20	106.0
Miller	797.46	729.48	271.00	84.10	75.0
Mississippi	898.54	711.98	295.00	42.80	64.3
Moniteau	584.78	505.21	390.00	119.80	117.4
Monroe	457.42	353.13	439.00	120.10	113.9
Montgomery	617.12	443.95	350.00	119.00	101.6
Morgan	704.23	595.67	261.00	92.30	96.1
New Madrid	980.06	645.57	255.00	32.60	63.8
Newton	743.49	622.32	239.00	84.10	64.1
Nodaway	647.48	473.68	585.00	153.30	126.2
Oregon	901.56	634.71	136.00	49.70	77.8
Osage	812.40	666.09	238.00	98.10	102.9
Ozark	937.06	798.85	153.00	37.80	54.2
Pemiscot	820.34	603.42	303.00	31.30	81.2
Perry	869.08	838.19	268.00	96.60	79.3
Pettis	595.16	616.40	478.00	130.30	102.0
Phelps	871.29	573.63	233.00	79.40	104.0
Pike	581.86	488.62	431.00	114.20	89.4
Platte	533.98	525.93	511.00	139.20	117.6
Polk	629.52	459.77	289.00	82.80	91.1
Pulaski	841.88	629.47	253.00	57.70	81.0
Putnam	663.33	562.74	336.00	97.80	100.3
Ralls	515.70	628.91	415.00	124.50	103.8
Randolph	539.73	432.08	457.00	117.10	84.9
Ray	577.41	573.66	502.00	120.10	113.0
Reynolds	1101.30	992.37	150.00	46.00	59.2
Ripley	960.00	674.12	167.00	40.20	71.1
St. Charles	669.54	566.87	382.00	135.00	122.7
St. Clair	709.36	501.79	300.00	80.20	90.0
St. Francois	812.58	729.70	295.00	94.60	107.1
St. Louis	533.69	535.27	314.00	203.40	253.1
Ste. Genevieve	815.68	863.16	238.00	91.40	92.8
Saline	565.91	388.29	649.00	140.10	104.0
Schuyler	525.71	413.09	405.00	118.80	120.4
Scotland	502.53	394.43	434.00	127.20	125.4
Scott	920.26	580.39	310.00	61.70	76.5
Shannon	934.16	966.25	156.00	45.40	51.4
Shelby	503.07	399.00	474.00	132.50	122.3
Stoddard	841.52	639.97	219.00	50.30	63.8
Stone	919.02	563.32	210.00	55.70	70.2
Sullivan	637.23	500.00	335.00	102.80	96.4
Taney	853.69	654.22	132.00	47.70	84.1
Texas	873.32	753.52	191.00	56.20	75.1
Vernon	637.51	304.11	236.00	95.10	77.8
Warren	518.34	404.62	327.00	125.70	151.4
Washington	873.50	1007.31	176.00	61.30	61.8
Wayne	949.54	732.96	157.00	45.00	64.2
Webster	774.14	576.53	235.00	76.70	89.0
Worth	629.33	503.33	505.00	133.30	113.0
Wright	833.33	605.20	224.00	66.50	90.2
St. Louis City	.....	.....	.....	.....	.....