

EDUCATION OF THE FARM POPULATION IN MINNESOTA

Only half of 16- and 17-year-olds on
Minnesota farms are in school

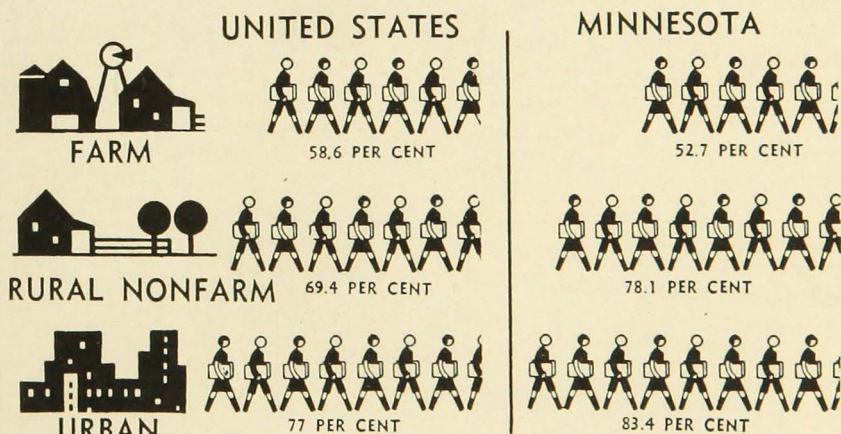


Chart includes native whites only 1940 U. S. Census data

Each symbol 10 per cent

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Education of the Farm Population in Minnesota

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Introduction

IT HAS LONG been an accepted goal of the American people to provide equal educational opportunities for all of their children. This has been true, at least for the primary grades, since the beginning of the public school system, which more recently has been expanded to include free public high schools.

With this general objective in mind, it is important to take stock periodically and determine the extent to which the goal is being achieved. This bulletin presents some of the pertinent data from the United States Census and the Department of Education of the State of Minnesota.

The Problem of Rural Education

THREE BASIC conditions affect profoundly the maintenance of educational institutions for farm people. The first is the larger number of children in the farm population in relation to the total population (table 1). While the farm population makes up only about one third of the state's population, it contains over 38 per cent of the state's children 5 to 14 years of age. The same relationship is indicated in table 2,

using the age group 5 to 19, which takes in those of high school age, and computing the ratio of this age group to that of the 20- to 64-year age group which may be taken to represent the working population. The ratios for the United States as a whole are shown for comparison. From this table it is seen that for every 1,000 adults in the farm population there are 559 young people of school ages, compared with 460 for the rural nonfarm population, chiefly the people in villages under 2,500 population, and only 366 for the urban. The figures for 1930 show a similar disparity between rural and urban, although the ratios are all higher than those for 1940, reflecting the general decline in the birth rate.

The second factor of fundamental importance is the small number of people per square mile of territory in the farm sections. No figures are necessary to demonstrate this proportion. The pattern of original settlement of the land by isolated farmstead instead of grouping the residences in a farm village—customary in Europe and to a degree

Table 1. Distribution, by Residence Areas, of the Total Population and of Children 5-14 Years of Age, in Minnesota, 1940

Popula- tion group	Population		Children 5-14 years	
	Number	Per cent	Number	Per cent
State	2,792,300	100.0	459,094	100.0
Urban	1,390,098	49.8	196,089	42.7
Rural non- farm	496,762	17.8	83,546	18.2
Rural farm	905,440	32.4	179,459	39.1

Source: 16th U. S. Census, *Population*, Vol. II, Part 4.

Table 2. Ratio of School-Age Children 5-19 Years to 1,000 Adult Population 20-64 Years, United States and Minnesota

	1940			1930		
	5-19 years	20-64 years	Ratio	5-19 years	20-64 years	Ratio
United States						
Total	34,764,080	77,344,357	449	36,164,601	68,438,228	528
Urban	17,431,946	46,911,990	371	18,176,245	41,562,647	437
Rural nonfarm	7,433,486	15,106,410	493	7,046,748	12,561,808	561
Rural farm	9,898,648	15,325,957	646	10,941,608	14,313,773	764
Minnesota						
Total	716,443	1,633,182	438	750,485	1,418,019	529
Urban	317,383	867,957	366	329,339	749,978	439
Rural nonfarm	126,454	277,465	456	118,461	221,616	534
Rural farm	272,606	487,760	559	302,685	446,425	678

Source: 16th U. S. Census, Population, Vol. II.

in early New England—places a heavy burden on farmers for maintaining schools, churches, and all other institutions.

This method of settlement has been chiefly responsible for the establishment of the one-room schools, the only type of school possible under pioneer conditions of "horse-and-buggy" transportation over poor roads. Also, in large measure, it was the determining factor in bringing about the multiplicity of small school districts. In Minnesota in 1940 there were 7,186 school districts maintaining elementary ungraded schools. This is an average of over 80 districts per county, while many counties contain considerably more than 100. The maintenance of high schools exclusively for farm people is almost out of the question. It can be done only in cooperation with villages.

This settlement on isolated farms and the multiplicity of local school districts give rise to a third basic condition affecting rural education, namely, the inequalities among districts in the amount of taxable wealth available for the support of schools. Moreover, since land or real property, rather than income and so-called intangible property, is the chief form of wealth in rural areas, it means that the farm areas in general have less wealth to tax than do the urban areas. In other words, the

farming sections have more children to educate and less taxable wealth with which to do it.

School Attendance of Farm Children

TAKING THE STATE'S population as a whole, Minnesota makes a good showing in the proportion of those of school age who attend school (table 3). When urban and rural nonfarm populations are compared, the percentages for Minnesota exceed those for the United States as a whole, but when the state's rural farm population is compared with the national percentages, a strikingly different trend appears. For each age group up to and including those 14 years old except the five-year age group, Minnesota exceeds the average for the country as a whole; but from 15 years on, it falls considerably below the average for the country. This reflects a failure on the part of Minnesota farm youth to attend high school in the same proportions as those in other states.

Because of this revelation in the census data, it was thought desirable to consider Minnesota's ranking among the states in the proportion of its farm youth 16 and 17 years of age who were

Table 3. Per Cent School Attendance by Age Groups for Minnesota and the United States, Rural and Urban, 1940

Age group	Total		Urban		Rural nonfarm		Rural farm	
	U. S.	Minn.	U. S.	Minn.	U. S.	Minn.	U. S.	Minn.
Years	Per cent							
5-24	57.7	60.0	58.8	62.2	57.7	61.7	55.7	56.6
5	18.0	26.1	28.7	50.5	11.0	13.8	6.8	6.3
6	69.1	80.1	79.7	90.9	64.5	73.7	56.5	71.9
7-9	94.3	97.5	96.7	97.8	94.7	97.2	90.1	93.4
10-13	95.5	97.7	97.4	98.0	95.8	97.5	91.8	97.5
14	92.5	93.3	96.0	97.0	92.9	95.3	86.1	88.0
15	87.6	87.5	93.4	96.1	87.3	91.9	77.4	75.2
16-17	68.7	70.8	75.6	83.4	67.6	77.5	56.8	52.7
18-19	28.9	32.1	31.7	38.7	27.5	36.0	23.9	20.6
20	12.5	14.6	14.5	19.5	10.7	15.0	9.2	6.9
21-24	5.1	6.2	6.1	8.5	3.8	5.6	3.3	2.6

Source: U. S. Census, *Population*, Vol. II, Table 11.

attending school in 1930 and 1940.¹ Since the state's farm population is almost entirely without Negroes it was decided to use only "native whites" in making these state comparisons. The results of the ranking are shown in table 4.

Minnesota ranked remarkably low in both 1940 and 1930. In fact, in 1930 only one of the 48 states (Wisconsin) was below it. In 1940 Minnesota had improved its ranking somewhat, but was still only ninth from the bottom. A considerable number of southern states made a better showing. It appears evident from these data that nearly half of Minnesota's farm youth do not get to high school.

Sex Differences in School Attendance

FARM BOYS show a lower attendance rate than do farm girls. A similar situation prevails for the country as a whole and for all segments of the population, rural and urban. However, in Minnesota the difference in this re-

gard is greater than in most other states. Only 43.9 per cent of the farm boys 16 and 17 years of age in Minnesota were attending school in 1940 compared with 62.7 per cent of the girls. In percentage of boys attending school, Minnesota ranks next to the bottom of the 48 states (table 5).

Differences in School Attendance by Counties

THE CENSUS does not give county figures on the percentage of different age groups in the farm population attending school. However, it does give such figures as applied to the total county population. From these data we can rank the counties according to the percentage of 16- and 17-year-olds who were attending school in 1940. This ranking is shown in table 6, and illustrated on the accompanying map (figure 1).

The median county (midway between highest and lowest) is Steele with per cent attendance of 64.9. It will

¹ School attendance statistics reported in the 1940 census are based on replies to the question asked by the census enumerator as to persons in the household who had attended or been enrolled in any regular school or college between March 1 and April 1, 1940. In 1930, the data applied to a longer period of seven months preceding April, 1930.

Table 4. Rank of States According to the Percentage of Native White Rural Farm Population 16-17 Years of Age Attending School, 1940 and 1930

State	Per cent attending school in 1940	Rank		Points gained or lost (-)	State	Per cent attending school in 1940	Rank		Points gained or lost (-)
		1940	1930				1940	1930	
Utah	87.5	1	1	0	Arizona	61.5	25	16	-9
Washington	81.0	2	3	1	Texas	59.9	26	20	-6
California	77.6	3	2	-1	Rhode Island	59.1	27	45	18
Oregon	76.4	4	6	2	Illinois	58.3	28	32	4
Idaho	76.3	5	5	0	Michigan	58.2	29	38	9
Nevada	75.4	6	4	-2	Pennsylvania	58.1	30	44	14
Kansas	72.9	7	10	3	Delaware	57.7	31	30	-1
Ohio	72.8	8	8	0	Florida	57.5	32	11	-21
Wyoming	72.0	9	12	3	South Carolina	57.1	33	24	-9
Montana	71.2	10	15	5	Alabama	56.8	34	23	-11
Indiana	70.8	11	9	-2	Missouri	55.7	35	43	8
Connecticut	70.1	12	41	29	Louisiana	55.4	36	34	-2
New York	67.9	13	27	14	North Carolina	55.0	37	29	-8
Mississippi	67.5	14	7	-7	Vermont	54.5	38	33	-5
Massachusetts	66.4	15	28	13	Virginia	53.2	39	36	-3
New Hampshire	65.9	16	14	-2	Minnesota	52.7	40	47	7
Colorado	64.9	17	17	0	North Dakota	52.6	41	40	-1
Oklahoma	64.2	18	18	0	Georgia	52.5	42	37	-5
Nebraska	63.8	19	25	6	Arkansas	51.7	43	19	-24
New Mexico	62.8	20	13	-7	Wisconsin	51.5	44	48	4
Iowa	62.6	21	22	1	Maryland	50.6	45	46	1
Maine	62.5	22	21	-1	Tennessee	48.8	46	25	-21
South Dakota	61.9	23	31	8	West Virginia	47.8	47	41	-6
New Jersey	61.8	24	34	10	Kentucky	32.2	48	39	-9

Source: 16th U. S. Census, Population, Vol. II.

Table 5. Rank of States According to Per Cent of Native White Males and Females in Farm Population 16 and 17 Years of Age Attending School, 1940

State	Males		Females		State	Males		Females	
	Per cent	Rank	Per cent	Rank		Per cent	Rank	Per cent	Rank
Utah	85.8	1	89.2	1	New Jersey	57.0	25	67.7	23
Washington	78.5	2	83.9	2	Illinois	55.8	26	61.4	34
California	77.0	3	78.3	6	Pennsylvania	55.6	27	61.0	35
Idaho	73.2	4	79.8	5	South Dakota	54.8	28	69.8	17
Oregon	72.8	5	80.7	4	Alabama	54.3	29	59.6	37
Kansas	70.6	6	75.5	11	Louisiana	53.4	30	57.6	44
Nevada	70.1	7	81.7	3	Michigan	53.1	31	64.3	27
Ohio	69.5	8	76.8	9	Florida	52.7	32	62.9	29
Indiana	67.9	9	74.2	13	Missouri	52.6	33	59.3	38
Wyoming	67.0	10	77.8	7	South Carolina	52.0	34	62.7	31
Montana	66.5	11	77.0	8	Rhode Island	51.9	35	67.8	21
Connecticut	64.5	12	76.7	10	Delaware	50.3	36	66.7	25
Mississippi	64.5	12	70.9	16	North Carolina	50.1	37	60.3	36
New Mexico	62.4	14	63.3	28	Virginia	48.5	38	58.3	41
New York	61.7	15	75.3	12	Arkansas	48.4	39	55.4	45
Oklahoma	61.6	16	67.2	24	Georgia	47.8	40	57.7	43
Colorado	61.3	17	68.9	18	Tennessee	46.8	41	51.0	46
Massachusetts	61.0	18	73.3	14	Vermont	46.8	41	64.9	26
Arizona	60.2	19	62.9	29	North Dakota	46.4	43	59.3	38
New Hampshire	60.0	20	72.9	15	West Virginia	46.4	43	49.3	47
Nebraska	59.9	21	68.3	19	Wisconsin	45.2	45	58.8	40
Maine	58.1	22	67.8	21	Maryland	44.1	46	57.9	42
Texas	58.1	22	62.0	33	Minnesota	43.9	47	62.7	31
Iowa	57.8	24	68.0	20	Kentucky	29.9	48	35.0	48

Source: 16th U. S. Census, Population, Vol. II.

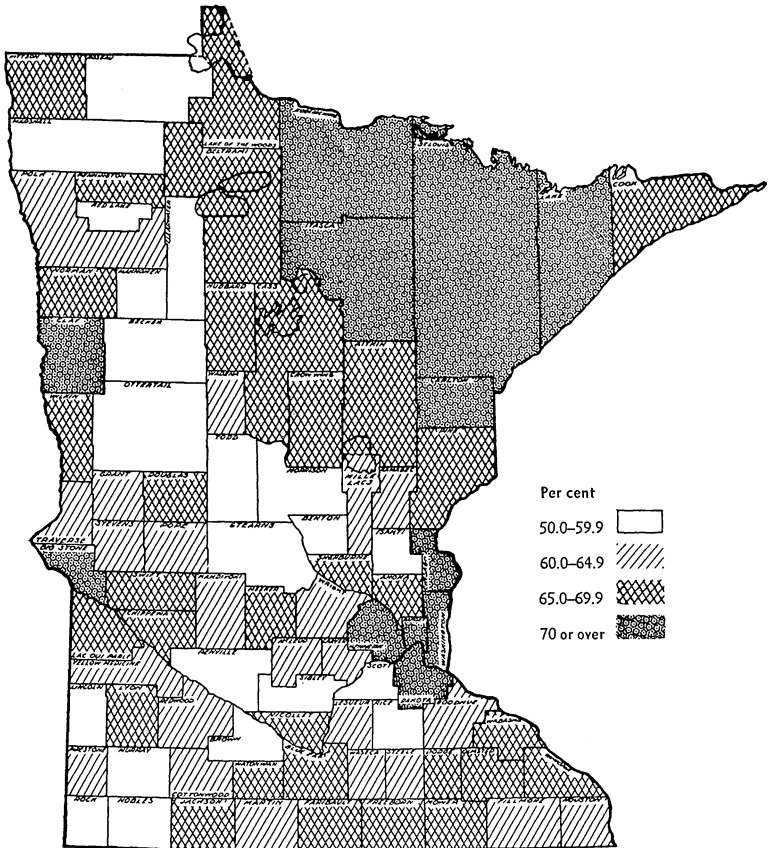


FIG. 1. Per cent of Minnesota population 16 and 17 years old attending school, 1940

be noted from the map that there is no consistent grouping of counties. Most of the high-attendance counties—with 70 per cent or higher—are in the iron range and Twin City areas. The two exceptions are Clay and Big Stone. The lowest-ranking counties, with under 60 per cent attendance, are scattered from the southern to the northern boundaries of the state. One would expect, ordinarily, that school attendance would be generally lower in the northern counties where population is sparser and winter weather most severe. However, if the counties are divided north and south into two groups, it will be found

that no such relation exists. Using the northern boundary of Hennepin, Ramsey, and other counties in the same east-west tier as the dividing line, there will be 43 counties north of this line and 44 south of it. Twenty-three of these “northern” counties are among the 43 counties in the state which report 65 per cent or more of the 16- to 17-year age group attending school. In other words, 54 per cent of the 43 northern counties are in the upper half of the rankings. On the other hand, only 45 per cent of the “southern” counties are represented in the upper rankings.

Table 6. Per Cent of Minnesota Population 16 and 17 Years Old Attending School in 1940, by Counties

County	Per cent	County	Per cent
St. Louis	85.1	Steele*	64.9
Hennepin	84.4	Grant	64.8
Lake	84.2	Polk	64.5
Ramsey	82.1	Martin	64.3
		Redwood	64.2
Chisago	76.4	Cottonwood	64.1
Itasca	76.0	Carver	63.9
Carlton	74.2	Houston	63.8
Koochiching	72.9	Wright	63.8
Big Stone	72.8	Yellow Medicine	63.3
Washington	72.8	Goodhue	63.2
Clay	72.2	Kandiyohi	63.2
Dakota	70.1	Fillmore	63.0
		Stevens	63.0
Anoka	69.9	Traverse	62.9
Chippewa	69.8	Le Sueur	62.4
Kittson	69.4	Wadena	62.4
Swift	69.0	Wadena	62.4
Olmsted	68.9	Pipestone	61.6
Mower	68.7	Pope	61.6
Dodge	68.5	McLeod	61.4
Blue Earth	68.4	Kanabec	61.2
Crow Wing	68.3	Waseca	61.2
Winona	67.7	Mille Lacs	60.0
Lake of the Woods	67.6	Rock	59.8
Hubbard	67.5	Lincoln	59.3
Wabasha	67.5	Stearns	59.3
Beltrami	37.3	Rice	57.9
Cook	67.0	Scott	57.4
Watsonwan	66.9	Brown	57.2
Wilkin	66.8	Murray	56.9
Aitkin	66.7	Otter Tail	56.5
Lyon	66.6	Isanti	56.4
Pennington	66.6	Red Lake	56.3
Nicollet	66.4	Todd	56.3
Freeborn	66.4	Becker	56.1
Faribault	66.0	Mahnomen	55.2
Pine	66.0	Nobles	55.0
Sherburne	66.0	Renville	54.7
Lac qui Parle	65.9	Benton	54.3
Jackson	65.9	Marshall	54.1
Douglas	65.3	Roseau	53.3
Meeker	65.2	Clearwater	52.2
Cass	65.0	Morrison	51.2
Norman	65.0	Sibley	50.4

* Median county.
Source: 16th U. S. Census.

If the attendance figures were available for the farm population alone by counties, the rankings might possibly differ from those based upon the total. Nevertheless, it is difficult to explain

why comparatively wealthy counties such as Rock, Nobles, Murray, Brown, Sibley, and Renville should have such low percentages, while less wealthy counties such as Cass, Crow Wing, Beltrami, Lake of the Woods, Hubbard, and others in the north should rank comparatively high. The differences are not to be accounted for on the basis of economic well-being alone. The explanation must apparently be sought in other less-tangible factors, including the attitudes of people toward education.

Are the Census Figures Reliable?

THERE IS always a certain amount of error in the census and it is possible that there was more than the usual amount in the case of Minnesota; hence there may be a tendency to question the reliability of the foregoing figures. It should be pointed out that the two neighboring states of Wisconsin and North Dakota are also low in the ranking, which suggests that nonattendance might be associated with geographic conditions, rather than that the census is erroneous. There appears no way in which this factor of error can be measured, but usually such errors are about equally common in the various states and should not affect the relative ranking.

One check available on the census figures is the enrollment data from the State Department of Education. These data are reported only for the age group 16 to 20 and apply to the state population as a whole without differentiation between rural and urban.² Moreover, they apply only to public school enrollment and do not include enrollment in the various private schools. The number enrolled in public schools in this age group in 1940 was 78,731, which is

² Statistical Report of the State Department of Education, 1938-1939 and 1939-1940, Bulletin No. 11, State of Minnesota, Department of Education, p. 258.

30.8 per cent of the total number of the same ages reported in the census. The census, however, which includes both public and private schools, reported 103,379 in this age group attending school in 1940, which is 40.4 per cent of the total. If separate figures on private school attendance were available to add to the state's report on public schools, it does not appear that the total thus obtained would exceed the census figures. The latter may therefore be considered reasonably accurate.

But the most adequate test of the reliability of the census data is based upon a new question asked for the first time in the 1940 census. The question asked for the highest grade completed in school for those 25 years old or over. Since the group which was 16 and 17 years of age in 1930 would in 1940 be

over 25 years of age they are, of course, included.

For each state, therefore, the percentage of the total farm population which had had any high school was computed and the states ranked accordingly. In this case the figures apply to all classes, not to the native white alone. The results of this tabulation are shown in table 7.

While Minnesota did not rank quite as low in 1940 on high school education of farm adults as it did in 1930 on school attendance, it is only seventh from the bottom among the states. Moreover, Wisconsin is next to Minnesota in the 1940 ranking on high school education just as it was in the school-attendance ranking for 1930. This appears to validate the 1930 figures on attendance.

Table 7. Rank of States According to Percentage of Population, Rural and Urban, 25 Years Old or Over Who Have Had Any High School Education, 1940, States Arranged According to Ranking for Rural Farm Population

State	Rank				State	Rank			
	Rural farm	Rural nonfarm	Urban	Total		Rural farm	Rural nonfarm	Urban	Total
Utah	1	1	1	1	Arizona	25	20	23	22
Maine	2	2	4	2	Illinois	25	30	32	25
Massachusetts	3	3	10	4	New Jersey	25	25	46	29
New Hampshire	4	10	29	15	South Dakota	28	27	19	32
Wyoming	5	4	5	6	Oklahoma	29	35	15	28
Vermont	6	6	3	8	Florida	30	29	23	22
Idaho	7	12	11	10	New Mexico	31	45	26	33
Oregon	8	9	9	9	North Carolina	32	38	39	38
Washington	9	8	6	6	South Carolina	33	39	36	40
Nevada	10	5	7	5	Missouri	34	33	36	33
Colorado	11	16	13	10	Maryland	35	30	48	36
California	12	6	1	3	Pennsylvania	36	46	41	31
Texas	13	11	14	13	Georgia	37	36	40	39
Iowa	14	19	12	16	Mississippi	38	28	31	46
Nebraska	15	14	8	14	North Dakota	39	39	28	44
Kansas	16	23	17	18	Virginia	40	41	30	37
New York	17	18	44	26	Wisconsin	40	32	38	35
Rhode Island	18	26	43	27	Minnesota	42	33	22	30
Connecticut	19	16	42	24	Tennessee	43	44	34	41
Indiana	20	24	25	20	Alabama	44	43	33	42
Ohio	20	21	21	17	Arkansas	45	37	20	44
Montana	22	20	18	21	Louisiana	46	42	47	42
Michigan	23	13	16	12	Kentucky	47	47	45	48
Delaware	24	15	27	19	West Virginia	48	48	35	47

Source: 16th U. S. Census, Population, Series P-6, Table 1.

Ranges in percentages as follows: Rural farm, 8.3 to 37.6; Rural nonfarm, 16.6 to 41.2; Urban, 25.8 to 41.7; Total population, 18.1 to 40.9.

Table 8. Persons 25 Years Old and Over in the Farm, Rural Nonfarm, and Urban Populations, by Years of Schooling Completed, United States and Minnesota Compared, 1940

School years completed	Urban		Rural nonfarm		Rural farm	
	U. S.	Minn.	U. S.	Minn.	U. S.	Minn.
None	3.6	1.4	3.4	1.6	4.7	1.5
Grade School						
1 to 4 years	7.7	4.6	10.2	7.1	15.7	7.9
5 to 6 years	9.9	7.2	11.9	9.4	15.5	11.7
7 to 8 years	33.3	37.6	34.7	44.0	38.7	59.5
High School						
1 to 3 years	15.9	15.4	15.2	12.4	11.8	8.1
4 years	16.6	18.9	12.9	12.4	7.6	6.2
College						
1 to 3 years	6.0	7.8	5.7	7.7	3.4	3.7
4 years or more	5.7	6.1	4.2	4.4	1.3	0.7
Not reported	1.3	0.9	1.7	1.1	1.3	0.9

Source: 16th U. S. Census, *Population*, Series P-10, No. 8, and Series P-6, No. 34.

That a positive relation does exist between the per cent attending school in 1930 and the per cent of adults in 1940 with any high school education is indicated by the correlation coefficient of the two factors. The coefficients were computed for the 48 states as well as for the 87 counties of Minnesota. The Pearsonian coefficient ($r=0.520$, $S.E.=0.105$) for the 48 states, while not particularly high, is significant. The counties showed a somewhat higher coefficient ($r=0.658$, $S.E.=0.061$) when the same variables were used.

In further reference to the table, it will be noted that Minnesota ranks thirtieth for the total population with any high school education, twenty-second in the urban, and thirty-third in the nonfarm rankings.

It should be emphasized that these quantitative indices of education are not to be considered as adequate measures of the educational systems of the various states. School attendance data for 1940, for instance, represent the replies to the enumerator's query as to whether the person had "attended or been enrolled in any regular school or college between March 1 and April 1, 1940." For 1930, the data apply to a seven-month period. See footnote 1.

The point to keep in mind in considering these data is that there are

other measures of education perhaps more important than that being used here. The length of the school term, which generally is considerably shorter in the southern than in the northern states; the quality of teaching personnel and teaching materials; these and many more factors are important in judging an educational system.

How Minnesota compares with national averages in percentages of its adult population completing various years of schooling can be seen by reference to table 8.

Education of Those Not Attending School

SINCE WE ARE considering those young people 16 and 17 years of age, it might reasonably be supposed that some of them would have completed high school or better. Fortunately, the census reports provide a special classification of those not attending, showing the amount of schooling received. Data for the state and for the rural and urban areas are shown in table 9.

Of the 29,821 not attending school, 18,105 or 60.7 per cent are in the farm population, although the farm population constitutes only 32.4 per cent of the state's total population. The pro-

Table 9. Rural-Urban Distribution by Sexes, of Minnesota 16- and 17-Year-Olds Not Attending School

Sex and school status	State		Urban		Rural nonfarm		Rural farm	
	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent
Total	29,821	100.0	7,805	26.2	3,911	13.1	18,105	60.7
Males	17,301	100.0	3,861	22.3	2,027	11.7	11,413	66.0
Females	12,520	100.0	3,944	31.5	1,884	15.1	6,692	53.4
Completed high school or better	1,621	100.0	771	47.5	248	15.4	602	37.1
Males	626	100.0	259	41.4	99	15.8	268	42.8
Females	995	100.0	512	51.5	149	15.0	334	33.5
Total population	2,792,300	100.0	1,390,098	49.8	496,762	17.8	905,440	32.4
Males	1,427,545	100.0	675,062	47.3	252,418	17.7	500,065	35.0
Females	1,364,755	100.0	715,036	52.4	244,344	17.9	405,375	29.7

Source: U. S. Census, 1940 Population, Vol. IV, Part III, Table 18.

portion of the 16- and 17-year-old boys not attending school who are in the farm population is even higher (66 per cent). The urban population contains proportionately fewer out-of-school youth than either the farm or the non-farm population.

Graduation from high school is a less important reason for being out of school in the farm population than in either the rural nonfarm or the urban. This can readily be seen from table 9 by comparing the number who have completed high school or better with the total not attending for each category, urban, rural nonfarm, and rural farm. Nearly 10 per cent of the urban group not attending school have graduated from high school compared with 6 per cent for the nonfarm and only three per cent for the rural farm.

The amount of schooling completed

by the rural farm boys and girls 16 and 17 years of age is shown in table 10. Approximately 14 per cent had failed to finish the eighth grade, the percentage for males being almost double that for females. There is not much difference between males and females in the percentages which completed the eighth grade (63.8 and 65.5 respectively). Proportionately more girls than boys have gone beyond the eighth grade, twice as many in proportion completing high school. It is interesting to note that a considerable number (one fifth of the total) had attended high school for at least a time.

These 18,000 farm boys and girls not attending school in 1940 exceed in number the total enrollment of the University of Minnesota at its highest peak. They are equal to about one eighth of the total enrollment in state public

Table 10. Educational Status by Sexes, of Minnesota Farm Youths 16 and 17 Years of Age Not Attending School, 1940

Years of school completed	Total		Males		Females	
	Number	Per cent	Number	Per cent	Number	Per cent
Total	18,105	100.0	11,413	100.0	6,692	100.0
Less than 8th grade	2,580	14.2	1,967	17.3	603	9.4
8th grade	11,666	64.4	7,281	63.8	4,385	65.5
1-3 years high school	3,183	17.6	1,841	16.1	1,342	20.0
4 years high school	579	3.2	255	2.2	324	4.5
1-5 years college	23	0.1	13	0.1	10	0.1
Not reported	84	0.5	56	0.5	28	0.5

Source: U. S. Census, 1940 Population, Vol. IV, Part III.

high schools in 1941-42 (145,000), and are more than 60 per cent as large as the number of 1940 high school graduates for the entire state (29,000).

High School Education of Farm Adults by Counties

THERE IS considerable variation among the counties of the state in the proportion of the farm population 25 years old or over who reported any high school education (1 to 4 years). The ranking of the counties in this

respect is shown in table 11 and figure 2. Comparison of the map on attendance in 1940 of 16- and 17-year-olds (figure 1) with the proportions of the adults having any high school education shows considerable correspondence. With few exceptions, the counties which ranked high on the one also ranked high on the other, and vice versa. The correspondence is really closer than might have been expected, in view of the fact that migration of people with high school training is always likely to modify the percentage of the adults within the county who had any high school training. The coefficient of correlation between the two factors is

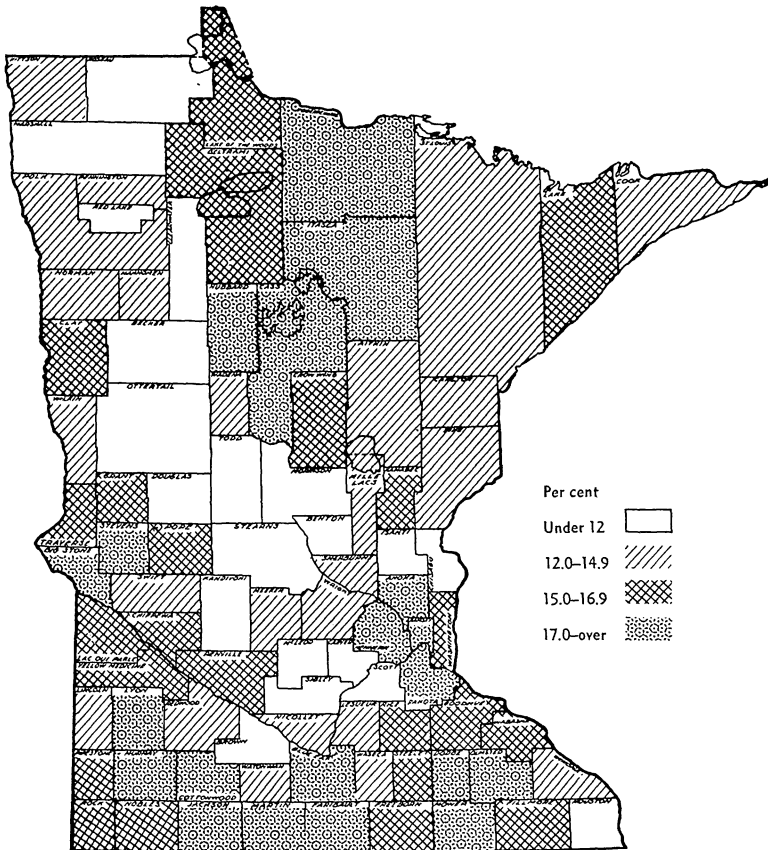


FIG. 2. Per cent of Minnesota farm population 25 years and older with any high school education, 1940

Table 11. Per Cent of Minnesota Farm Population 25 Years Old and Over with Any High School Education, by Counties, 1940

County	Per cent	County	Per cent
Mower	21.4	Aitkin	14.5
Dodge	20.8	Redwood	14.5
Hennepin	20.8	Watonwan	14.4
Faribault	20.6	Wilkin	14.4
Olmsted	20.6	Sherburne	14.3
Big Stone	20.4	Le Sueur	14.2
Blue Earth	19.8	Nicollet	14.2
Cass	19.4	Carlton	14.0
Ramsey	19.3	Waseca	14.0
Dakota	18.7	Mille Lacs	13.7
Hubbard	18.5	St. Louis	13.7
Murray	17.9	Wright	13.4
Anoka	17.8	Mahnomen	13.3
Stevens	17.8	Swift	13.3
Koochiching	17.7	Pine	13.2
Jackson	17.6	Cook	13.0
Lyon	17.6	Polk	12.9
Martin	17.5	Lincoln	12.8
Cottonwood	17.0	Kittson	12.7
Itasca	17.0	Wadena	12.4
Freeborn	16.7	Meeker	12.3
Lake of the Woods	16.7	Norman	12.3
Washington	16.7	Pennington	12.3
Rice	16.6	Winona	12.2
Crow Wing	16.3	Chisago	11.9
Fillmore	16.2	Todd	11.7
Lac qui Parle	16.2	Kandiyohi	11.5
Nobles	16.2	McLeod	11.5
Lake	16.1	Red Lake	11.3
Steele	16.1	Clearwater	11.2
Traverse	16.1	Marshall	11.1
Pope	16.0	Becker	11.0
Renville	16.0	Carver	11.0
Pipestone	15.9	Houston	11.0
Chippewa	15.8	Brown	10.9
Grant	15.8	Sibley	10.9
Wabasha	15.5	Douglas	10.8
Yellow Medi-		Otter Tail	10.3
cine	15.3	Scott	10.1
Beltrami	15.2	Roseau	9.8
Rock	15.2	Morrison	9.4
Clay	15.0	Isanti	8.4
Goodhue	15.0	Benton	7.9
Kanabec	15.0	Stearns	7.1

Source: 16th U. S. Census, *Population*, Vol. II, Part 4, Table 27.

³ It will be noted that when 1940 attendance data are used the coefficient is somewhat smaller than that reported earlier on the basis of 1930 data. This is to be expected, since the 1930 attendance bears a more direct relation to the proportion of adults with any high school education 10 years later. Those who were 16 and 17 years old in 1930 would be in the group over 25 years of age in 1940.

⁴ The writer is indebted to Mr. Donald Mitchell, former research assistant, for gathering and supervising the tabulation of most of the data upon which this discussion is based. Also to Superintendent E. T. Jacobson of Cokato, Minnesota, former research assistant, for doing the preliminary work on the study, gathering and analyzing data from Douglas County.

$r=0.517$, $S.E.=0.079$, which is statistically significant.³

It appears that there are rather constant differences among the counties in the degree to which high school education is encouraged, or in the degree to which it is considered important.

Distance from High School and Attendance⁴

THE ANSWER to the question as to why farm youth do not attend high school in Minnesota to the extent characteristic of other states is undoubtedly compounded of many factors. It seems reasonable to assume, however, that transportation facilities to get pupils to the high school is an important part of the answer. However, it is only a part. Back of the transportation problem lies the question of desire for high school education on the part of the pupils and their parents. If the latter desired strongly enough to send their children to high school, it is likely that a way would be found to get them there. Enabling legislation is already enacted by the state to facilitate the creation of transportation facilities. Moreover, if it is assumed that the parents lack the desire to send their sons and daughters to high school, the reason may lie in the lack of confidence in the kind of high school education which is offered, or a lack of understanding of the place which high school education, as now constituted, holds in the life of the individual and the community.

It is not the intention of this brief survey to try to allocate responsibility for the present situation. Rather, the

DOUGLAS COUNTY

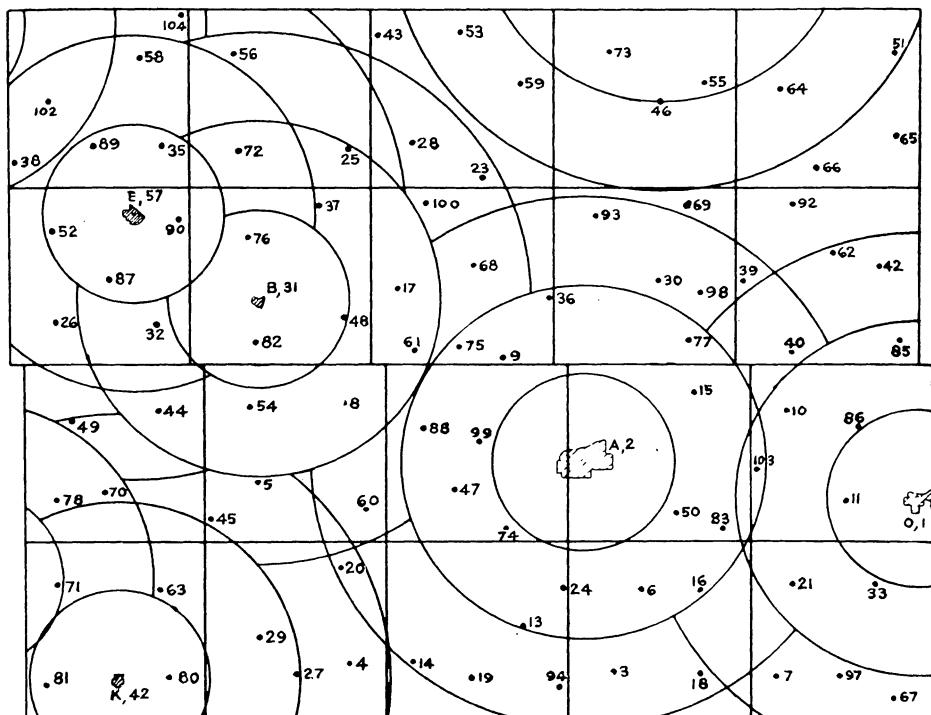


FIG. 3. Map of Douglas County illustrating method of determining zones by three-mile intervals

purpose is merely to present the facts and to report on one attempt to determine at least part of the answer to the question posed above. This attempt relates to the bearing which geographic isolation of farm people may have on school attendance.

The data were secured through the cooperation of county school superintendents in Douglas, Murray, Pope, Steele, and Wright counties, and cover chiefly the years from 1931 to 1939.

The county superintendents supplied the names of eighth-grade graduates of the rural schools for each year considered, together with the number of the school district from which they were graduated. Then, from applications for nonresident tuition, it was determined which of the graduates at-

tended high school. As a further check, the tuition certificates were also examined, as were the reports of certain examinations given in the high schools.

Maps of counties were prepared showing the location of high schools and the district schools by number. From these maps, the actual road distance between the high schools and district schools was approximated. These distances—not the actual distance from the child's home to the school—were used in allocating the eighth-grade graduates to various zones, based upon three-mile intervals from the high school. Percentages of eighth-grade graduates later entering high school were then computed for each zone. Figure 3 shows the concentric zones around each high school center.

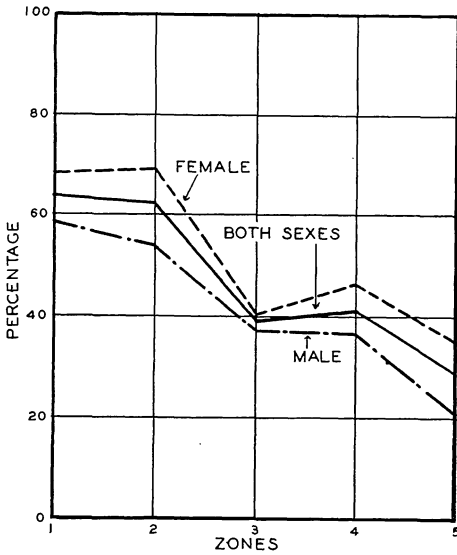


FIG. 4. Percentage of Douglas County rural eighth grade graduates attending high school 1922-1939, inclusive (omitting 1931), by sex

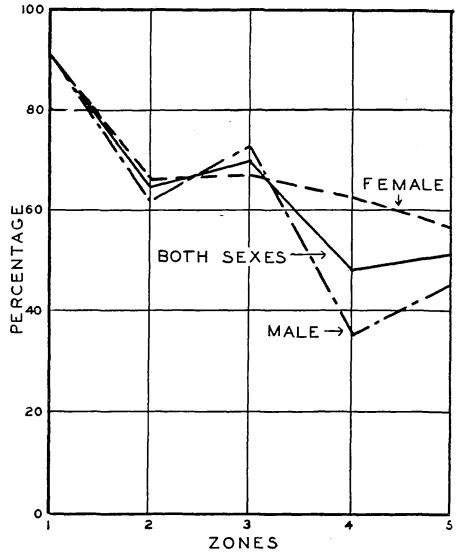


FIG. 6. Percentage of Pope County rural eighth grade graduates attending high school 1935-1938, inclusive, by sex

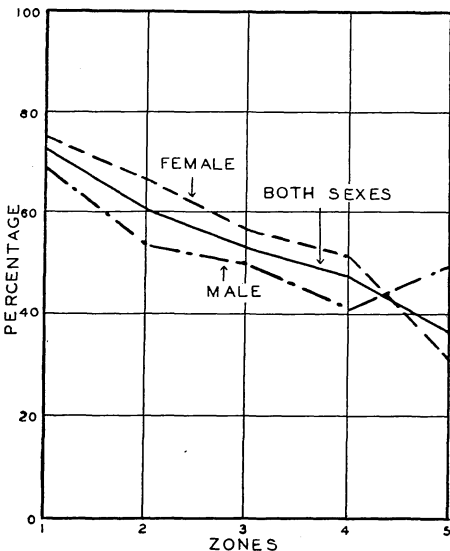


FIG. 5. Percentage of Murray County rural eighth grade graduates attending high school 1931-1939, inclusive, by sex

The percentage attendance for the entire period by zones is shown in table 12. Figures 4 to 8, inclusive, show the results for each county and for male and female. It is quite clear that the greater the distance from a high school the less chance there is that a graduate of the eighth grade will attend.

Table 12. Per Cent of Eighth-Grade Graduates Who Attended High School, by Year and Zone, for Five Counties Combined*

Year	Total	Zone			
		I	II	III	IV
1931	55.1	90.0	61.8	41.0	30.0
1932	51.8	71.8	64.7	41.4	34.1
1933	51.3	63.3	64.1	42.7	36.7
1934	51.7	55.3	60.1	49.8	40.0
1935	55.3	68.9	64.9	55.6	37.3
1936	61.6	76.9	66.4	62.2	50.0
1937	61.8	59.3	70.0	57.0	55.8
1938	65.7	77.8	75.3	61.7	38.6
1939	65.0	72.9	68.6	61.4	64.5
Average	58.0	69.1	66.6	53.9	43.7
Net gain for period	9.9	-17.1	6.8	20.4	34.5

* Data for Douglas County cover the period 1932-1939 and for Pope 1935-1938. Data for the other counties cover the entire period.

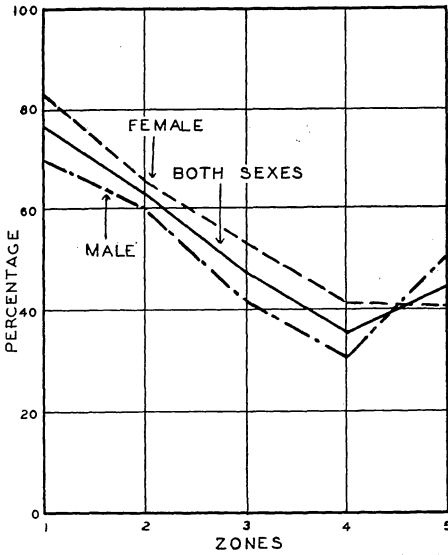


FIG. 7. Percentage of Steele County rural eighth grade graduates attending high school 1931-1939, inclusive, by sex

The figures are somewhat erratic from year to year, but comparison of the beginning and end of the period indicates a rise of 10 per cent. It will be noted that the greatest gain for the period was registered in zone IV, and the next in zone III. Zone II changed but little, but there was a slight gain, while zone I actually declined. There were comparatively few students in zone I, only 40 graduates in the lowest year and 94 in the highest.

It will be seen from table 13 that the

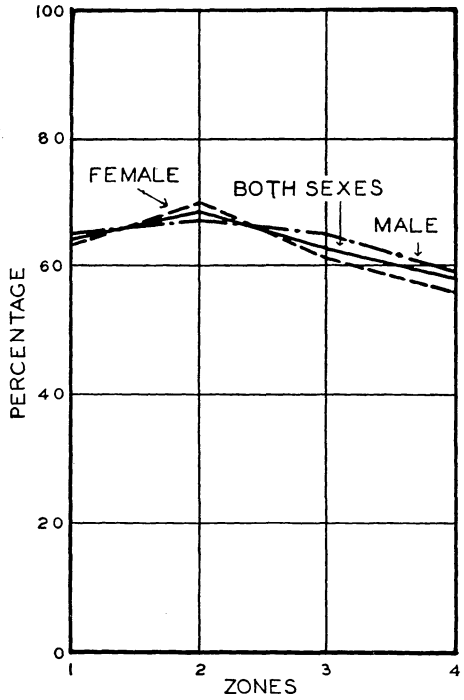


FIG. 8. Percentage of Wright County rural eighth grade graduates attending high school 1931-1939, inclusive, by sex

great majority of the rural pupils are within 10 miles (zones I, II, and III) of the high school. For the entire period involved, 78 per cent of the students who graduated were from these first three zones. These same zones, however, provided 83 per cent of those attending high school.

Table 13. Distribution of Eighth-Grade Graduates and Those Attending High Schools for Combined Years 1931-39, by Zones, Five Minnesota Counties*

Zone	Eighth-grade graduates		Attending high school		Not attending high school	
	Number	Per cent	Number	Per cent	Number	Per cent
Total	8,307	100.0	4,590	100.0	3,727	100.0
I	632	7.6	424	9.3	208	5.6
II	2,981	35.9	1,923	41.9	1,058	28.4
III	2,888	34.8	1,466	31.9	1,422	38.2
IV	1,412	17.0	624	13.6	788	21.1
V	394	4.7	153	3.3	251	6.7

* Douglas, Murray, Pope, Steele, Wright.

Summary

- Minnesota ranks above the national average in the proportions of school-age children attending school in all groups except farm youths over 15 years of age.

- In the proportions of 16- and 17-year-olds (native whites only) in the rural farm population attending school, Minnesota ranked second from the bottom among the 48 states in 1930 and seventh from the bottom in 1940.

- In the age group mentioned, the proportion of Minnesota farm boys attending school is lower than for the farm girls. The difference is greater than in any other state. Minnesota's rank among the states is next to the lowest for boys and thirty-first for girls.

- School attendance, including all children 16 and 17 years of age, varies widely among the counties of the state, percentages ranging from 50.4 per cent (Sibley) to 85.1 per cent (St. Louis). In general, counties north of the Twin City area make a better showing than those to the south.

- In the proportion of the adult farm population having any high school education, Minnesota ranks seventh from the bottom. Other states which had ranked low in school attendance of 16- and 17-year-olds in 1930 also ranked low in 1940 in the percentages of farm adults with any high school education.

- Minnesota counties differ considerably in the percentages of farm adults with any high school education, ranging from 7.1 per cent (Stearns) to 21.4 per cent (Mower). There was a significant correlation between school attendance of 16- and 17-year-olds in 1930 and high school education of farm adults in 1940.

- Distance appears to influence attendance at high school. A special study of eighth-grade graduates in five counties, 1931-1939, indicates that the greater the distance the lower the per cent of the graduates who attend. This difference decreased from 1931 to 1939, probably as a result of improved transportation.