DEPARTMENT OF THE INTERIOR
BUREAU OF EDUCATION

BULLETIN 1925, No. 6

HIGH SCHOOL EDUCATION OF THE FARM POPULATION IN SELECTED STATES

By

E. E. WINDES

ASSOCIATE SPECIALIST IN RURAL EDUCATION

WASHINGTON
GOVERNMENT PRINTING OFFICE
1925

ADDITIONAL COPIES
OF THIS PUBLICATION MAY BE PROCURED FROM
THE SUPERINTENDENT OF DOCUMENTS
GOVERNMENT PRINTING OFFICE
WASHINGTON, D. C
AT
5 CENTS PER COPY

HIGH SCHOOL EDUCATION OF THE FARM POPULATION IN SELECTED STATES

INTRODUCTION

Interest in the extent to which the farm population is being educated in secondary schools is general. Approximately one-third of the total population is concerned and 35 per cent of the native white population. The farm group has been regarded as the most important factor making for stability of our institutions and the most important recruiting source for virile manhood and womanhood.

Industrialization of the Nation has introduced complexity of social and economic relations. Modern transportation has made the world a community. Relations of farmers to national and world groups are becoming more intimate and more varied. Keeping pace with development, refinement, and consequent complexity in the world of work and the world of social control is the world of education. Democracy demands that it be universal. Complexity makes it expensive.

How to provide fit secondary education for the farm group at bearable cost in the regions of sparse population is yet an unsolved problem. The condition therefore exists wherein the farm group is in danger of becoming a source of national weakness rather than a source of national strength. The condition as an accomplished fact does not yet exist in general. It does exist for large individual agricultural areas. A few more generations of growing inequality of educational opportunity and the condition will exist for the farm group as a whole. This is the opinion of responsible students of the tendency. Facts justify the opinion. The intelligent part of the general public is therefore genuinely interested in the present status and tendencies in the education of the farm population. This bulletin attempts to present: (1) The comparative extent to which farm and nonfarm groups are receiving public secondary education; (2) the relation of significant factors concerning high schools and the farm population to participation in secondary education by farm children.

The task of securing data is tremendous. The data here presented must be regarded as incomplete but significant. The fact that selected States rather than all States are used as a basis of study is justified because of the difficulty of the undertaking and because the study must be regarded as preliminary and serving to create a presumption. The States presented are representative of distinctive agricultural regions and of distinctive State secondary educational systems.

COMPARATIVE EXTENT TO WHICH FARM AND NONFARM GROUPS RECEIVE SECONDARY EDUCATION

TABLE 1.—*Total population and farm and nonfarm population by sex and secondary age group, based on 1920 census.*

Population	North Dakota	South Carolina [1]	Montana	Oregon	Maine	New Hampshire
Total population	646,872	818,538	548,889	783,389	768,014	443,083
Farm population	394,000	433,775	225,667	214,021	197,601	76,021
Nonfarm population	252,372	384,763	323,222	569,368	570,413	367,062
Male farm population	213,837	[2] 227,731	126,198	117,973	104,107	39,978
Female farm population	180,663	[2] 206,044	99,469	96,048	93,494	36,045
Male nonfarm population	127,836	172,953	1[illegible]743	298,361	284,645	182,136
Female nonfarm population	124,536	201,810	149,479	271,007	285,768	174,926
Farm population 15 to 19 years of age [2]	39,450	4[illegible]281	18,279	19,689	17,596	5,929
Nonfarm population 15 to 19 years of age [2]	22,004	35,76[illegible]	23,749	43,086	46,264	29,223

[1] White population only is considered in South Carolina.
[2] Estimated from census data.

Table 1 presents the facts relative to total, farm, and nonfarm population for the six States selected. For South Carolina only the white population has been considered. Population 15 to 19 years of age, inclusive, has been estimated from census data, as has the male and female white population for South Carolina.

TABLE 2.—*Total farm and nonfarm secondary enrollments*

Enrollments	North Dakota	South Carolina [1]	Montana	Oregon	Maine [1]	New Hampshire
Total secondary enrollment	14,376	22,525	[2] 14,653	32,750	23,532	17,079
Enrollment farm boys	1,706	4,468	2,653	4,873	3,912	1,449
Enrollment farm girls	3,231	6,068	3,136	5,280	4,450	1,585
Enrollment nonfarm boys	4,220	5,783	4,700	10,491	9,739	6,438
Enrollment nonfarm girls	5,219	6,266	4,733	12,228	11,278	7,607

[1] Estimated.
[2] Enrollment in schools reporting; total for State, as reported by State supervisor, 18,544.

Table 2 presents the total farm and nonfarm secondary enrollments in the selected States, as determined from questionnaire returns. The data are for 1922 for all States except South Carolina. Data for South Carolina are for the school year 1923–24. Returns were incomplete for Montana, Maine, and South Carolina. The figures for Maine and South Carolina are estimated: (1) On the basis of returns for 75 per cent of all schools; (2) on total school enrollments as determined by State reports not separated into farm and nonfarm groups for the schools not reporting on the questionnaire; and (3) on the ratio of farm to nonfarm enrollments in the schools reporting. The State secondary school officials of these States think the estimates are probably reliable as an index of the situation for either State as a whole. The State supervisor of Montana doubts that estimates for the State as a whole, on the basis of returns from the

175 schools reporting, would be valid. Therefore it should be kept in mind that all figures for Montana are based on 81.4 per cent of all schools in the State, enrolling 79.2 per cent of the total enrollment. In North Dakota the figures include only classified high schools. The unclassified high schools are largely consolidated schools offering high-school work under such conditions that it can not be regarded as standard high-school work. The schools are not recognized by the State as high schools. Similarly, South Carolina data apply only to recognized high schools. In addition to the recognized high schools there are, in South Carolina, 1,059 rural graded schools in the State, enrolling more than 10,000 pupils in grades 8, 9, 10, and 11. In North Dakota there are 448 consolidated and rural graded schools, enrolling 6,941 pupils in high-school grades. To include these schools would raise substantially the figures here given for these two States. Children enrolled in these schools, however, are not getting a training comparable to that given to children considered in other States.

TABLE 3.—*Number and kind of high schools, by States*

High schools	North Dakota	South Carolina	Montana	Oregon	Maine	New Hampshire
Total high schools	146	[1] 124	[2] 175	246	263	117
Rural high schools, total	51	72	118	140	80	17
1-year	0	0	4	0	0	2
2-year	0	0	25	0	11	1
3-year	0	20	20	0	0	0
4-year	51	52	69	138	69	13
5-year	0	0	0	1	0	0
6-year	0	----	0	1	----	1

[1] Number reporting; total for State, as reported by State supervisor, 179.
[2] Number reporting; total for State, as reported by State supervisor, 215.

Rural high schools here studied are defined as schools which enroll 50 per cent or more of their total enrollment from farm homes. Defined in such a way the schools are not only rural, but they serve agricultural communities. The problems are the problems that arise because of farming as a mode of life.

TABLE 4.—*Race or nativity of the population of the States concerned*

Population	North Dakota	South Carolina	Montana	Oregon	Maine	New Hampshire
Native white farm population	306,981	433,775	119,891	145,729	155,418	55,746
Native white farm population of foreign parentage	136,862	360	39,737	23,713	10,561	6,231
Native white farm population of mixed parentage	58,762	599	25,064	19,511	17,354	6,460
Foreign-born white population	82,859	356	33,642	21,117	14,131	7,498
Colored farm population	4,660	[1] 640,562	7,333	3,951	137	86

[1] Not included in this study.

TABLE 5.—*Percentages derived from Tables 1 to 4, inclusive*

	North Dakota	South Carolina	Montana	Oregon	Maine	New Hampshire
Per cent farm population is of total	61.0	53.4	41.1	27.3	25.7	17.2
Per cent of high schools classed as rural	35.0	58.0	68.5	56.9	30.4	14.5
Per cent 1 year schools are of total rural schools	0	0	3.3	0	0	11.7
Per cent 2-year schools are of total rural schools	0	0	20.8	0	13.7	6.0
Per cent 3-year schools are of total rural schools	0	28.0	16.6	0	0	0
Per cent 4-year schools are of total rural schools	100.0	72.0	58.5	98.5	86.3	76.4
Per cent 5-year schools are of total rural schools	0	0	0	.75	0	0
Per cent 6-year schools are of total rural schools	0	0	0	.75	0	5.9
Per cent of male farm population enrolled	.8	2.0	2.1	4.1	3.0	3.6
Per cent male nonfarm population enrolled	3.3	3.1	2.2	3.5	2.7	3.5
Per cent female farm population enrolled	1.8	2.7	3.1	5.4	3.8	4.3
Per cent female nonfarm population enrolled	4.1	3.2	3.1	4.5	3.1	4.1
Per cent farm population 15 to 19 years of age enrolled	12.0	22.1	31.9	50.6	49.3	51.1
Per cent nonfarm population 15 to 19 years of age enrolled	42.8	33.7	32.6	46.5	42.3	49.0
Per cent farm population native white	77.5	100.0	81.8	88.3	92.8	90.0
Per cent farm population foreign-born white	21.0	0	14.9	9.9	7.2	9.9
Per cent farm population colored	1.2	0	3.2	1.8	.1	.1

Per cent of farm population 15–19 enrolled, all States	28.8
Per cent of nonfarm population 15–19 enrolled, all States	44.3

From Table 5 it is apparent that the States concerned represent various degrees of industrialization. North Dakota represents an extreme of agricultural dominance, whereas New Hampshire represents a high degree of industrialization in nonagricultural fields. The States, moreover, represent distinct agricultural regions. North Dakota represents the Northwest Wheat Belt, with its smooth plains, its rigorous winter climate, its large farms and consequent sparse population. South Carolina is among the most densely populated agricultural States and is representative of the Cotton Belt. Montana represents the Mountain States, where irrigation is general, and agriculture other than grazing is largely confined to river valleys. Oregon represents within itself a variety of agricultural regions. Eastern Oregon is a great wheat and cattle belt. Farms are large, population sparse, and machinery, as in North Dakota, plays the dominant rôle in farming operations. In western Oregon farming is largely confined to the valleys. Irrigation is practiced, and truck and fruit crops predominate. Farms are small, and the farm population is grouped in compact communities. Maine also represents both intensive and extensive types of farming. The farm population is very compact in certain trucking areas and extremely sparse in large portions of the State yet included in unorganized territory. New Hampshire is typical of States where agriculture plays a relatively unimportant rôle and consists primarily of truck and dairying areas surrounding manufacturing centers.

In general, the percentage that rural high schools are of all high schools corresponds rather closely to the percentage that the farm population is of the total State population. In all States studied, except New Hampshire and North Dakota, the percentage that rural schools are of the total is larger than the percentage that the farm population is of the total. In North Dakota and South Carolina the percentage given would be materially raised by including the rural graded schools doing high-school work. The fact is evident that relatively more schools are maintained to serve the farm population than are maintained to serve the nonfarm population. The farmers are almost invariably served by numerous small schools.

In Montana numerous one and two year schools occur, many of which serve fewer than 10 high-school pupils. In North Dakota, South Carolina, and Oregon the one or two year high school does not occur among the recognized high schools. The four-year high school is largely characteristic of all States. A slight tendency to develop six-year secondary schools in typically rural areas in Oregon and New Hampshire exists.

The percentage of the total male farm population that is enrolled in high schools varies from 0.8 in North Dakota to 4.1 in Oregon. The percentage of the male nonfarm population enrolled varies from 2.2 in Montana to 3.5 in Oregon and New Hampshire. Oregon, Maine, and New Hampshire enroll higher percentages of the male farm population than of the male nonfarm population. In every State higher percentages of the female population of both farm and nonfarm groups are enrolled than of the male population. In only two States, North Dakota and South Carolina, are higher percentages of the female nonfarm population than of the female farm population enrolled.

Evidently there are wider differences between the extent to which boys and girls are educated in our high schools than there are between the extent to which farm and nonfarm boys and girls are educated.

Wider variations for comparative percentages of the high-school age group (15 to 19) exist than for the total population when farm and nonfarm groups are considered. Oregon, Maine, and New Hampshire enroll approximately one farm child out of each two of high-school age. Montana enrolls less than one in three. North Dakota and South Carolina enroll less than one in four.

Oregon, Maine, and New Hampshire enroll definitely higher percentages of the farm population of high-school age than of the nonfarm population. In North Dakota and South Carolina, however, the differences in the percentages of farm and nonfarm groups enrolled are so great that when all States studied are thrown together the percentage of the farm groups enrolled is 15.5 less than for the

nonfarm group. Were the enrollments in North Dakota and South Carolina rural graded schools considered, the difference would become 12.7 per cent in favor of the nonfarm group.

A general appraisal of the situation shown by Table 5 shows clearly that the farm children are served by numerous small high schools; that on the whole they are not participating in public high-school education to the extent that nonfarm children are; that farm boys particularly, are not reached by high schools to the extent that other children are; and that the differences between the extent to which the sexes are reached are greater than the differences between the extent to which the farm and nonfarm groups are reached. Apparently we have a serious problem in providing high-school education for farm children, but we have a more serious problem of reaching the boy and especially the farm boy.

PERSISTENCE IN HIGH SCHOOL

The data of the preceding chapter have indicated the comparative extent to which farm and nonfarm children are enrolled in high schools. Other factors significant in measuring the success of the States in disseminating high-school education are found in the extent to which children of the two groups persist in high schools and in their rate of progress through high school. Tables 6 to 9, inclusive, show age-grade distributions for farm-home pupils by sex, nonfarm home pupils by sex, girls for combined farm and nonfarm groups, and boys for the same groups combined. It will be noted that on entrance the percentages of acceleration for farm and nonfarm boys vary by only 0.3 per cent. The percentages are identical in grade 10. In grade 11 nonfarm boys increase the percentage of acceleration over farm boys by 2.8. In grade 12 farm boys show an acceleration of 0.2 per cent more than nonfarm boys. Farm boys apparently, therefore, make slightly better high-school progress than nonfarm boys, as measured by the percentages accelerated. As measured by percentages retarded, the situation favors slightly the nonfarm boys. There are no significant differences in the rate of progress of the two groups of boys as measured by acceleration and retardation. Measured by percentages accelerated, farm girls definitely make better progress than nonfarm girls. They enter with a percentage of acceleration 1.3 per cent lower than the nonfarm girls. They have overcome this handicap in grade 12 and show a percentage of acceleration 3.7 higher. As measured by retardation percentages, the situation also definitely favors farm girls.

Combining the sexes for the two groups, farm children as a whole overcome a handicap of 0.8 per cent on entrance and show an advantage of 0.9 per cent in grade 12, as measured by comparative percentages of acceleration.

As measured by comparative percentages of retardation, a handicap of 2.4 per cent is reduced to 0.6 per cent. Turning to survival percentages shown in Table 11 the situation favors farm children in grades 10 and 11, but a sharp fall from grade 11 to 12 gives the advantage to nonfarm children in grade 12.

TABLE 6.—*Age grade distribution of farm home pupils*

Age	Grade 9			Grade 10			Grade 11			Grade 12		
	Boys	Girls	Both	Boys	Girls	Both	Boys	Girls	Both	Boys	Girls	Both
Up to 12	7	16	23	5	5	10	4	5	9	------	------	------
12-13	66	66	132	8	9	17	------	------	------	------	------	------
13-14	336	410	746	65	112	177	5	12	17	------	------	------
14-15	512	613	1,125	249	318	567	40	91	131	5	5	10
15-16	427	449	876	370	527	897	181	250	431	30	54	84
16-17	243	240	483	320	312	632	302	360	662	135	228	363
17-18	56	100	156	156	169	325	176	278	454	173	272	445
18-19	48	23	71	65	56	121	102	134	236	124	209	333
19-20	12	11	23	40	23	63	43	43	86	73	58	131
Over 20	13	14	27	19	15	34	22	18	40	34	40	74
Total	1,720	1,942	3,662	1,297	1,546	2,843	875	1,191	2,066	574	866	1,440

[1] The data of Tables 6 to 9, and of derived tables, are from questionnaire returns from schools selected as representative rural schools and as representing all States of the Union.

TABLE 7.—*Age-grade distribution of nonfarm home pupils*

Age	Total pupils	Grade 9			Grade 10			Grade 11			Grade 12		
		Boys	Girls	Both	Boys	Girls	Both	Boys	Girls	Both	Boys	Girls	Both
Under 12	107	22	26	48	13	16	29	3	6	9	8	13	21
12-13	228	93	95	188	12	22	34	4	6	------	------	------	------
13-14	749	252	335	587	53	90	143	8	9	17	1	1	2
14-15	1,638	471	607	1,078	190	240	430	61	60	121	5	4	9
15-16	1,973	370	368	738	332	485	817	149	190	339	46	33	79
16-17	1,751	185	168	353	225	299	524	226	348	574	115	185	300
17-18	1,307	81	61	142	136	136	272	167	233	400	185	308	493
18-19	628	26	18	44	45	35	80	94	105	199	111	194	305
19-20	251	13	11	24	23	22	45	42	34	76	57	49	106
Over 20	160	12	17	29	31	16	47	19	6	25	35	24	59
Total	8,492	1,525	1,706	3,231	1,060	1,361	2,421	773	993	1,766	550	824	1,374

TABLE 8.—*Age-grade distribution of girls, all schools*

Age	Grade 9	Grade 10	Grade 11	Grade 12	Total
Up to 12	42	21	11	13	87
12-13	161	31	2	------	194
13-14	745	202	21	1	969
14-15	1,220	558	151	9	1,938
15-16	817	1,012	440	100	2,369
16-17	408	611	708	413	2,140
17-18	161	305	511	580	1,557
18-19	41	91	239	403	774
19-20	22	45	77	107	251
Over 20	31	31	24	64	150
Total	3,648	2,907	2,184	1,690	10,429

32028°—25——2

TABLE 9.—*Age-grade distribution all boys*

Age	Grade 9	Grade 10	Grade 11	Grade 12	Total
Up to 12	29	18	7	8	62
12-13	159	20	4	----------	183
13-14	588	118	13	1	720
14-15	983	439	101	10	1,533
15-16	797	702	330	63	1,892
16-17	428	545	528	250	1,751
17-18	137	292	343	358	1,130
18-19	74	110	196	235	1,613
19-20	25	63	85	130	303
Over 20	25	50	41	69	185
Total	3,215	2,357	1,648	1,124	8,374

TABLE 10.—*Acceleration and retardation percentages derived from Tables 6, 7, 8, and 9*

Pupils	Grades and percentages											
	Nine			Ten			Eleven			Twelve		
	Accelerated	Normal	Retarded	Accelerated	Normal	Retarded	Accelerated	Normal	Retarded	Accelerated	Normal	Retarded
Farm boys	23.7	54.6	21.7	21.2	53.2	21.6	26.3	54.6	19.1	29.6	51.7	18.7
Farm girls	25.3	54.6	20.1	28.7	54.2	17.1	30.0	53.6	16.4	33.5	55.1	11.4
Nonfarm boys	24.0	55.1	20.9	25.2	52.5	22.3	29.1	50.8	20.1	29.4	53.8	16.8
Nonfarm girls	26.6	57.1	16.3	27.0	57.6	15.4	26.8	58.5	15.7	29.0	60.9	10.1
Farm boys and girls, combined	24.6	54.6	20.8	27.1	53.7	19.2	33.3	54.0	12.7	31.8	55.5	12.7
Nonfarm boys and girls combined	25.4	56.2	18.4	26.2	55.3	18.5	27.8	55.1	17.1	29.9	58.0	12.1
All girls	25.9	55.8	18.3	27.9	55.8	16.3	28.6	55.8	15.6	31.1	58.4	10.8
All boys	23.6	54.7	21.7	25.2	52.9	21.9	27.6	52.8	19.6	29.5	52.7	17.8

TABLE 11.—*Survival percentages derived from Tables 6, 7, 8, and 9, inclusive*

Pupils	Grade 9		Grade 10		Grade 11		Grade 12	
	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls
Farm pupils	100	100	75.4	79.6	50.8	61.3	33.4	44.6
Nonfarm pupils	100	100	69.5	79.7	50.6	58.2	36.0	48.3
All boys	100	----------	74.9	----------	54.6	----------	42.5	----------
All girls	----------	100	----------	79.6	----------	59.5	----------	46.3

It is impossible to state with positiveness the factors involved in the situation shown. The data do, however, afford a basis for stating probable causes. First, there is clear indication that no inherent differences of ability to do high-school work exist between the farm and nonfarm group enrolled in high school. The farm group is rather more successful in high school than the nonfarm group. This success is not due to a higher degree of selection; for the advantage of the farm group is as pronounced through grades 10 and 11, where survival percentages are higher for the farm group, as when grade 12 is added.

Nor can the fact of a higher degree of selection from the population at large be offered as an explanation, unless we are willing to concede substantial sex differences of ability between farm girls and farm boys. Reference to Table 5 shows that farm girls are much less highly selected than farm boys. Table 11 shows that they are less highly selected in high school, for survival percentages are higher. Yet it is due to the age-grade progress of farm girls that the situation favors the farm group.

Whether we compare farm girls with farm boys, nonfarm girls with nonfarm boys, or all girls with all boys, the result is always markedly favorable to girls when high-school progress is studied. At the same time girls are uniformly less highly selected. Ability, therefore, can not be accepted as the factor determining high-school progress, without at the same time accepting superior ability for girls as compared with boys. Intelligence test data from many sources make such assumption impossible. We must discard then the theory that the farm population is mentally inferior, and that inability to do high-school work explains the fact that lower percentages of the secondary age group of farm children are enrolled and higher percentages eliminated in high schools because of inability to do the work. Because of the widespread opinion that intelligence tests have shown the farm group to be mentally inferior, representative data derived from such tests are here introduced.

COMPARATIVE INTELLIGENCE OF FARM AND NONFARM CHILDREN AS DETERMINED BY GROUP TESTS OF MENTAL ABILITY

The most comprehensive study of comparative intelligence of farm and nonfarm children enrolled in high schools is that made by William F. Book in his The Intelligence of High School Seniors. This study is based on a state-wide survey of the intelligence of high-school seniors. The study presents data as to 2,306 boys and 3,442 girls who were seniors in the high schools of Indiana. This group included 1,963 seniors from farm homes. The test used was the Indiana University Intelligence Scale, Schedule D. Pupils were grouped as children of fathers who were professional workers, clerical workers, skilled artisans, salesmen and clerks, business executives, day laborers, and farmers. The children of farmers ranked lowest of all groups when compared with the State median.

The distribution of scores of the various groups, however, seems more significant than the relative position of the median scores. This distribution (see Intelligence of High School Seniors, by Book, p. 199, fig. 54) shows for the farm group a curve closely approximating a normal distribution curve. The curve for the professional group is decidedly skewed. Apparently the professional group is a

selected group, while the farm group is an unselected group. Other distribution curves in the work cited show similar conditions. The real indication seems to be that certain occupational groups residing in cities are a selected group, while the farm group presents little evidence of selection. To what extent the fathers of children listed in the professional group were only one generation removed from the farm is not known. Undoubtedly a considerable number of fathers of children grouped as professional workers were farm-reared. It is true that all occupational groups contribute their quota to the professional group. Professional service is not a matter of heredity in the United States. Children with the type of ability demanded for success in the professions find their way into the professions, whatever the occupation of the father. This is as it should be. The social order needs superior individuals wherever they can be found to give their energies to public service. The professional group should be highly selected and apparently is, on the basis of the data presented by Book. While a considerable number of these professional workers undoubtedly are selected from the ranks of farmers, the distribution of scores referred to above indicates that this selection has not impaired the ability of farmers to continue to produce a normal percentage of superior children. Indeed, data presented by Book indicate that farmers are still able to produce more than their quota of decidedly superior children. Table 49, page 238, of Book's work shows that the percentage of seniors in agricultural communities scoring exceptionally high is higher than for manufacturing or mining communities, although the median score is below that for manufacturing communities. The curves (fig. 70, p. 239, Book) showing distribution of percentages of seniors from manufacturing, agricultural, and mining communities scoring at specified levels show beyond doubt that the agricultural community contains a comparatively high percentage of superior individuals and that there is a wider scattering of ability than for other communities. The indication is against a selective factor which has operated to produce an inferior group on the farms.

A second source of data on comparative intelligence of farm and nonfarm children in high schools is available through volume 6 of the Rural School Survey of New York State, Educational Achievement. Table 89, page 220, of this work gives median scores on the Miller Mental Ability Test and median ages by grades for small and large high schools. While this grouping does not definitely segregate the farm and nonfarm populations, the small high schools serve farm children almost exclusively, and the large high schools include a considerable number of pupils from villages and towns of less than 4,500. In this table pupils in large high schools in the ninth grade are two-tenths of a year younger and score two points

higher; tenth-grade pupils in large schools are three-tenths of a year older and score four points lower; eleventh-grade pupils in large schools are one-tenth year younger and earn the same score as pupils in small schools; twelfth-grade pupils in large schools are two-tenths year younger and score two points lower.

On the basis of these and other available data, W. E. Haggerty makes the comment concerning comparative intelligence of rural and urban groups:

> The evidences on this point, however, are not conclusive, since there is good reason to believe that superior school training will enable a child to increase his score by a mere increase of reading efficiency without any alteration of native capacity.[1]

More direct evidence on the comparative intelligence of farm and nonfarm children under comparable formal educational conditions is available from several sources. The State Department of Education of Connecticut has conducted an extensive testing program in the schools of that State. At the request of the Bureau of Education, results of this testing program for towns of the State selected as representative of the State by the State department have been made available. The tests used were: (1) The National Intelligence Scale; (2) Starch Arithmetic Tests; (3) Woody-McCall Mixed Fundamentals; (4) Thorndyke McCall Reading; (5) New York Survey Spelling Scale A.

Results of this testing program were furnished for schools, towns, and individual pupils. From the tests submitted, 311 farm children and 232 nonfarm children have been studied with reference to age-grade distribution and chronological, mental, and reading age distributions. One large school furnishing data on 65 nonfarm children and 82 farm children has been studied with reference to chronological, mental, and educational age as determined by the battery of achievement tests previously named. Table 12 shows age-grade distribution for 246 nonfarm children, comprising the total for all schools from which returns were available. Table 13 shows age-grade distribution for 313 farm children enrolled in the same schools. In the same schools it is worthy of note that materially higher percentages of farm children are accelerated and slightly higher percentages are retarded. While the showing is not conclusive, it bears out the general situation shown by Table 10 of the more general study in high-school grades exclusively. The farm children appear to make slightly better progress through the school under comparable educational conditions.

Table 14 shows the distribution of chronological, mental, and reading ages by sex for 311 farm pupils for which the facts could be determined from the records submitted. Table 15 shows the same

[1] See page 222, Vol. VI., Rural School Survey of New York State, Educational Achievement.

facts for nonfarm pupils. The totals for boys and girls combined in each table do not correspond to the sums of the boys and girls of each age interval because of the fact that sex could not be determined for a considerable number of pupils. If we take the ratio of median chronological age to median mental age as a measure of group mental ability, and the ratio of median mental age to median reading age as a measure of group accomplishment, we have the items of Table 16.

TABLE 12.—*Nonfarm children in Connecticut rural schools, distributed according to ages and grades*

Ages—Years and months	Grades						
	4	5	6	7	8	9	All
Under 8 years							0
8 to 8-11	2						2
9 to 9-11	19	10					29
10 to 10-11	24	18	3				45
11 to 11-11	5	16	13	5			39
12 to 12-11	1	12	11	20	5		49
13 to 13-11	2	5	10	8	10	2	37
14 to 14-11		2	3	9	13	3	30
15 to 15-11			1	2	6	3	12
16 to 16-11				0	2		2
17 and over				1			1
Total	53	63	41	45	36	8	246
Accelerated	2	10	3	5	5	2	27
Normal	43	34	24	28	23	6	158
Retarded	8	19	14	12	8	0	61
Per cent accelerated	3.8	15.9	7.3	11.1	13.9	25.0	10.9
Per cent normal	81.1	53.9	58.5	62.2	63.9	75.0	64.2
Per cent retarded	15.1	30.2	34.2	26.7	22.2	.0	24.9
Total per cent	100.0	100.0	100.0	100.0	100.0	100.0	100.0

TABLE 13.—*Farm children in Connecticut rural schools distributed according to ages and grades*

Ages—years and months	Grades						
	4	5	6	7	8	9	All
Under 8 years	1						1
8 to 8-11	5	1					6
9 to 9-11	31	5					36
10 to 10-11	17	26	9	1			53
11 to 11-11	8	28	17	1	2		56
12 to 12-11	6	15	14	13	20	1	69
13 to 13-11	2	1	13	14	10	2	42
14 to 14-11		2	5	14	11	2	34
15 to 15-11		3	2	3	3	2	13
16 to 16-11					2		2
17 and over					1		1
Total	70	81	60	46	49	7	313
Accelerated	6	6	9	2	22	3	48
Normal	48	54	31	27	21	4	185
Retarded	16	21	20	17	6	0	80
Per cent accelerated	8.5	7.4	15.0	4.3	44.9	43.0	15.3
Per cent normal	68.5	66.6	52.0	58.7	43.0	57.0	59.0
Per cent retarded	23.0	26.0	33.0	37.0	12.1	.0	25.7
Total per cent	100.0	100.0	100.0	100.0	100.0	100.0	100.0

TABLE 14.—*Distribution of farm pupils in Connecticut rural schools according to chronological, mental, and reading ages*

Ages—years and months	Specified ages								
	Chronological			Mental			Reading		
	Boys	Girls	Both	Boys	Girls	Both	Boys	Girls	Both
Under 8 years	1		1	4	6	10	10	3	13
8 to 8-11	1	4	5	14	9	23	19	11	34
9 to 9-11	17	18	35	14	11	25	21	16	38
10 to 10-11	29	22	51	29	19	48	26	22	51
11 to 11-11	25	29	54	26	22	49	10	21	34
12 to 12-11	32	32	70	17	21	48	23	25	49
13 to 13-11	22	15	42	19	18	44	16	18	38
14 to 14-11	19	10	34	5	8	16	9	6	18
15 to 15-11	5	5	14	6	13	19	2	5	7
16 to 16-11	2		4	9	6	16	7	4	12
17 and over		1	1	10	3	13	10	5	17
Total	153	136	311	153	136	311	153	136	341
Median	12-1	11-10	12-1	11-9	12-1	12-0	11-1	11-8	11-7

TABLE 15.—*Distribution of nonfarm pupils in Connecticut rural schools according to chronological, mental, and reading ages*

Ages—Years and months	Specified ages								
	Chronological			Mental			Reading		
	Boys	Girls	Both	Boys	Girls	Both	Boys	Girls	Both
Under 8 years					2	2	3	3	6
8 to 8-11		2	2	7	7	14	8	6	14
9 to 9-11	9	16	25	18	11	29	14	14	28
10 to 10-11	21	22	43	12	9	21	13	17	30
11 to 11-11	20	17	38	10	22	33	20	16	37
12 to 12-11	21	22	45	16	12	29	10	14	26
13 to 13-11	19	13	37	12	12	27	9	11	23
14 to 14-11	12	13	28	17	14	38	14	14	31
15 to 15-11	1	6	11	3	11	15	1	5	6
16 to 16-11	1	1	2	5	6	12	8	7	19
17 to 17-11	1		1	5	6	12	5	5	12
Total	105	112	232	105	112	232	105	112	232
Median	12-1	12-0	12-2	12-5	12-5	12-7	11-9	12-0	12-0

TABLE 16.—*Comparative mental ability and school accomplishment of farm and nonfarm pupils*

	Farm pupils			Nonfarm pupils		
	Boys	Girls	Both	Boys	Girls	Both
Median chronological age, in years and months	12-1	11-10	12-1	12-1	12-0	12-2
Median mental age	11-9	12-1	12-0	12-5	12-5	12-7
Median reading age	11-1	11-8	11-7	11-9	12-0	12-0
Intelligence quotient, ratio of medians	97	102	99	102	103	103
Accomplishment quotient, reading, ratio of median mental age to median reading age	94	96	96	94	99	95

The nonfarm group has an advantage of 4 I. Q. (intelligence quotient) points determined in this way. While this indicates slight differences between the groups in the factors measured, it is worthy of note that approximately the same differences exist between

farm boys and farm girls as between the farm and nonfarm groups. Whether the differences are hereditary differences between the groups is therefore open to question. There appears to be no significant differences between the educational accomplishment of the two groups as measured by the reading test.

Tables 17 and 18 present the situation in a single school where a considerable number of pupils belonging to each of the two groups are found. Since the ages are within the compulsory school period, approximately the same degree of selection should have operated in all cases.

TABLE 17.—*Distribution of nonfarm pupils in Madison, Conn., rural schools according to chronological, mental, and educational ages*

Ages—years and months	Specified ages								
	Chronological			Mental			Educational		
	Boys	Girls	Both	Boys	Girls	Both	Boys	Girls	Both
Under 8 years							1	2	3
8 to 8-11				1	3	4	1	3	4
9 to 9-11	3	9	13	4	6	10	3	5	8
10 to 10-11	4	7	11	6	6	12	6	4	10
11 to 11-11	4	6	10	3	7	10	4	10	15
12 to 12-11	4	7	12	6	2	10	2	3	5
13 to 13-11	2	1	7		3	6	4	1	9
14 to 14-11	3	1	8	1	1	6		3	8
15 to 15-11			3		3	5			3
16 to 16-11						1			
17 to 17-11	1		1			1			
Total	21	31	65	21	31	65	21	31	65
Median	12	11	12	11	11-2	11-8	11	11-2	11-6

TABLE 18.—*Distribution of farm pupils in Madison, Conn., rural schools according to chronological, mental, and educational ages*

Ages—years and months	Specified ages								
	Chronological			Mental			Educational		
	Boys	Girls	Both	Boys	Girls	Both	Boys	Girls	Both
Under 8 years				1		1	6	3	9
8 to 8-11	1	2	3	12	4	16	11	1	12
9 to 9-11	8	4	12	7	4	11	7	5	12
10 to 10-11	10	9	19	8	2	10	1	6	10
11 to 11-11	8	2	10	5	5	11	4	2	7
12 to 12-11	3	4	12	1	8	16	2	6	11
13 to 13-11	5	3	12	2	1	7	5	3	14
14 to 14-11	3	1	7	1	2	6	3		3
15 to 15-11		1	6	1		1			3
16 to 16-11	1		1	1		2			1
17 to 17-11						1			
Total	39	26	82	39	26	82	39	26	82
Median	11-1	10-10	11-9	10-0	11-8	11-2	9-5	10-9	10-10

Table 19, comparable to Table 16, is derived from Tables 17 and 18.

TABLE 19.—*Comparative mental ability and school accomplishment of farm and nonfarm pupils in one Connecticut school*

	Farm pupils			Nonfarm pupils		
	Boys	Girls	Both	Boys	Girls	Both
Median chronological age, in years and months	11-1	10-10	11- 9	12-0	11-0	12-0
Median mental age	10-0	11- 8	11- 2	11-0	11-2	11-8
Median educational age	9-5	10- 9	10-10	11-0	11-2	11-6
Intelligence quotient, ratio of medians	90	107	95	91	101	97
Accomplishment quotient, ratio of medians, mental age to median educational age	94	92	97	100	100	98

The sex differences shown in Table 19 are hardly reasonable. A possible explanation is that sex could not be determined for a considerable percentage of pupils in the upper grades. If the major portion of these in each group were older girls of low I. Q. (intelligence quotient), the situation would approach the normal more closely. This does not obviate the showing for the combined sexes which is comparable to that for the other Connecticut schools.

The number of pupils involved in these Connecticut data, and the fact that Connecticut is an old State where agriculture has declined and the native population has drifted to the cities for a number of generations, would appear to have considerable weight. If selection has produced anywhere in the United States an hereditarily inferior farm population, one would expect to find it in such a State. The evidence available seems to indicate that such a situation does not exist. The nonfarm group scores slightly higher, but the differences are approximately the same as sex differences. The farm group contained more boys than girls; the nonfarm group contained more girls than boys. Results are affected by the superior ability of girls to score on this particular test.

Results from Mount Vernon Union High School, Mount Vernon, Wash. (see U. S. Bur. of Educ. Bul., 1924, No. 4, pp. 11–12, Tables 4–5), show on the basis of the Otis Group Test of Mental Ability a median I. B. (index of brightness) of 107 for 232 farm pupils enrolled and a median of 117 for 171 nonfarm pupils enrolled. The median for all boys was 106 and for all girls 115. It is not known to what extent the relative percentages of boys and girls in each group affected the medians. However, the results show approximately the same sex differences as between farm and nonfarm groups.

A careful study of the intelligence of high-school seniors in Massachusetts was made by Stephen S. Colvin in connection with the higher education survey made in 1922–23. The test used in this study was the Brown University psychological examination. This study found that the median score was 41.9 in small rural high schools,

45.6 in towns above 5,000, and 45.7 in cities. The question is raised as to whether the low scores in small schools are due to relative inefficiency of schooling or to low intelligence of pupils. The question is not answered by the data (see p. 15, U. S. Bu. of Educ. Bul., 1924, No. 9).

It is relevant to the findings of this study that, contrary to the Otis and National Intelligence Tests in the cases cited here, the Brown test yields scores favorable to boys. The median score for boys for the State was 48.8, that for girls 43.1. In this study scores were obtained for 93 farm children; of this number 29 were boys and 64 were girls. The median score for the farm boys was 48, or eight-tenths below the State median, and the median score for farm girls was 39.5, or 3.6 below the State median. The median for the farm group is weighted in the ratio of more than 2 to 1 by farm girls on a test that yields higher scores for boys. While results for all groups were influenced by a larger number of girls than boys, the ratio of girls to boys used in computing medians from which the occupational groups were ranked was higher for the farm group than for any other. This factor, combined with the probability that the farm children are served by the less effective schools, which conceivably affect results, and the additional fact of a small number of farm pupils, make the showing unreliable as a comparative measure of native mental ability as between farm and nonfarm children.

In general, the results of intelligence tests are inconclusive as an answer to the question, Are farm children mentally inferior or superior as compared with nonfarm children? Testing children who are a product of large, efficient city schools, and comparing results with those secured by testing farm children in small and inefficient schools, usually results in higher scores for city children. Where the two groups are the product of similar schools these differences are not so pronounced. Greater differences between boys and girls are frequently shown than between farm and nonfarm groups. Some tests enable girls to earn higher scores, while others enable boys to earn higher scores. Until we know to what extent the results of group intelligence tests are influenced by formal schooling, and to what extent they are weighted in favor of particular mental traits as against other traits which are perhaps as important in general mental ability, we can not safely generalize about the comparative intelligence of the two groups. The most significant factor in the results of tests is that invariably farm children show a wide scattering of ability. Rural schools undoubtedly have to serve a pupil group exhibiting wide individual differences. A considerable percentage show marked superiority in the abilities measured by the tests. For educational policy there is a clear mandate to provide a broad rather than a narrow educational program and to provide efficient schools

that children may be well served as individuals and the Nation served by developing to the utmost the superior individuals found in high percentages in the farm group.

It is generally conceded that the intelligence test alone correlates none too highly with school success. Girls in Indiana, according to Book's study, made better high-school records than boys, although boys made better median scores on the intelligence test used. It is in line with expectation that the farm group studied in this bulletin having a higher percentage of girls should make better school progress. An interesting supplement to the data here considered is afforded by a local study of comparative progress of farm and nonfarm pupils through high school.

C. R. Murphy, in the School Board Journal for February, 1916, gives the results of a study of comparative progress of the two groups based upon 112 boys and 116 girls in each group, totaling 456 pupils. The average school grade earned by farm boys was 86.8, compared with 86.48 for town boys. The average school grade earned by farm girls was 87.46, compared with 86.59 for town girls. The average age of farm boys was 18.27 years, compared with 18.09 for town boys. The average age of farm girls was 17.93, compared with 17.87 for town girls. Farm boys required on an average 4.019 years to complete high schools, compared with 4.373 years for town boys. Farm girls required 3.255 years, compared with 4.059 years for town girls. Farm boys accumulated a total of 49 failures, compared with 63 for town boys. Farm girls accumulated 31 failures, compared with 86 for town girls. Murphy sums up the situation by pointing out that 91.23 per cent of farm pupils either hold their level or improve it, while 63.6 per cent of town pupils either hold their level or improve it.

These results agree with the age-grade data of the present study, which shows that the farm pupils enter high school slightly retarded as compared with the nonfarm pupils, but improve their position as they go through the high school. The pupils studied by Murphy were in schools judged as maintaining practically the same standards.

RELATION OF ENROLLMENT AND PERSISTENCE TO QUALITY OF EDUCATION PROVIDED FOR THE FARM POPULATION

The quality of high-school education provided the farm population is here studied through comparison of farm and nonfarm groups within individual States.

Direct data such as are afforded through the results of standard tests have not been sought because of the magnitude of the undertaking. In various State surveys, notably Virginia, Kentucky, Arkansas, Oklahoma, and New York, such data are available for rural and urban groups, primarily for elementary schools. For purposes of creating a presumption indirect data suffice here.

Teacher-training is regarded as one of the most significant indices of the quality of education provided. The percentages of high-school teachers employed who are college graduates are as follows: North Dakota, 88.9; South Carolina, 69.3; Montana, 76.1; Oregon, 71; Maine, 63.7; and New Hampshire, 71. The percentages for all States except South Carolina are accurate, as determined by a survey of all teaching positions in each State. The percentage for South Carolina represents the ratio of certificates issued in 1922 on college diplomas to those issued on lower qualifications. Since the situation in the State is improving, the figure is undoubtedly too high when all teaching positions are considered.

TABLE 20.—*Comparative percentages of teachers who are college graduates in rural and nonrural high schools or in city and rural school districts for States indicated*

Percentages of high-school teachers	North Dakota	Montana	Oregon
Percentages of high-school teachers who are college graduates—all high-school teachers considered	88.9	76.1	71.0
Percentages of high-school teachers who are college graduates—rural schools only	90.7	.....	76.3
Percentage of high-school teachers who are college graduates—village and third-class districts	.....	62.3	.....

For North Dakota, Montana, and Oregon, data are available through which training of teachers in rural and nonrural high schools may be compared. The data apply only to recognized high schools. It will be seen that in North Dakota and Oregon higher percentages of teachers in rural high schools are college graduates than in the States as a whole. In Montana, a substantially lower percentage of rural teachers are college graduates. In North Dakota, 348 rural graded and consolidated schools doing high-school work are excluded. In these schools general standards are lower, so that the work done is not considered in the State as worthy of high-school credit. These schools enrolled 4,441 farm pupils in 1923–24 out of a total farm enrollment of 9,378, so that approximately 50 per cent of farm children are served in these nonstandard high schools. In Montana, the lower teacher-training standards are manifest for rural high schools, and general standards are somewhat lower in rural high schools as well, although the situation is better than in North Dakota in that minimum standards are met and the work recognized as worthy of high-school credit.

TABLE 21.—*Survival percentages by States*

State	First year	Second year	Third year	Fourth year
North Dakota	100	63.9	44.5	36.9
South Carolina—high school only	100	70.9	50.1	31.9
South Carolina—high and rural graded schools combined	100	65.9	45.2	20.6
Montana	100	69.4	46.2	34.1
Oregon	100	73.5	49.7	39.7
Maine	100	81.7	63.7	50.0
New Hampshire	100	79.6	58.7	46.9

Table 21 shows survival percentages for the individual States as determined from 1922 State reports. In North Dakota it is not possible to segregate high schools from rural graded and consolidated schools for purposes of this computation. In South Carolina, separate percentages are given for high schools alone and for high and rural graded schools doing high-school work combined. In the other States no such division of high-school work ex[illegible]

North Dakota, however, furnishes more definite d[illegible] though not comparable in many respects. The obtainable facts for the State are:

(1) 12.6 per cent of farm boys enrolled in grade 8 complete high school.
(2) 24.7 per cent of farm girls so enrolled complete high school.
(3) 25.1 per cent of nonfarm boys so enrolled complete high school.
(4) 55.4 per cent of nonfarm girls so enrolled complete high school.
(5) 13 per cent of the total high and rural graded school enrollment are seniors.
(6) 16.9 per cent of the total high-school enrollment, excluding rural graded schools, are seniors.

Comparison of data on teacher training and survival percentages, and the additional facts for North Dakota, make possible an interpretation of the effect of quality of school work upon high-school enrollment and persistence.

It stands out that of three States—Oregon, Maine, and New Hampshire—which maintain comparable standards in rural and nonrural high schools, higher percentages of the farm population of high-school age are enrolled than of the nonfarm population, and that the percentages of the farm population enrolled in these States are substantially higher than in the other States. (See Table 5.) In Montana, rural high schools maintain in most instances inferior standards as compared with other high schools of the State. Rural high schools do, however, maintain minimum standards for accredited high-school work. In this State slightly lower percentages of the farm population as compared with the nonfarm population are enrolled, and this percentage is substantially lower than in the other three States. In South Carolina—where 10,021 children, largely farm children, are enrolled in schools having such inferior standards that the State does not recognize the work as worthy of high-school credit, as compared with 10,476 farm children enrolled in standard high schools—a decidedly lower percentage of the farm population is enrolled than for the nonfarm population, and the percentage of the farm population is decidedly lower than for the four States previously mentioned. In North Dakota, where the rural high-school situation is comparable to that in South Carolina, the same situation in an even more exaggerated form is evidenced. When we compare survival percentages as shown in Table 21 with the facts relating to quality of education provided, it is apparent that the same States maintaining comparable standards throughout the system show

decidedly higher survival percentages. In North Dakota, if we consider only standard high schools, survival is higher than in Montana. However, if we include the rural graded and consolidated schools in North Dakota, the survival rate is lowered beyond that for Montana.

It is even more significant that within the same system, in the States of South Carolina and North Dakota, survival percentages are materially lowered by including the nonstandard schools.

Apparently there is adequate justification for the conclusion that the quality of high-school education offered affects directly both the success of the schools in enrolling farm children and in keeping them in school once they are enrolled.

THE RELATION OF HIGH-SCHOOL ENROLLMENT TO PROFITABLE EMPLOYMENT OF FARM BOYS OF HIGH-SCHOOL AGE

The higher percentages of farm boys enrolled in high school as compared with farm girls suggests that an economic factor is concerned. Accordingly, the relation of percentages of farm boys profitably employed as laborers on the home farm to the percentages of farm boys of high-school age enrolled in high school is here studied. The census of occupations of 1920 reveals the facts presented in Table 22.

TABLE 22.—*Number of farm boys of ages 10 to 20, inclusive, profitably employed as laborers on the home farm*

State	Farm boys 10 to 20 years of age employed	Total male farm population [1] 10 to 20 years	Per cent employed	Per cent enrolled in high school
North Dakota	6,390	50,908	12	3
South Carolina [2]	20,798	60,603	34	7
Montana	2,118	24,221	8	11
Oregon	1,485	26,071	5	19
Maine	1,578	20,786	7	18
New Hampshire	380	7,121	5	20

[1] See Table 2 for number enrolled. [2] White population only considered.

TABLE 23.—*Comparison of States by rank of percentages of farm boys enrolled in high school and profitably employed as laborers on home farm*

Boys	State and rank					
	North Dakota	South Carolina	Montana	Oregon	Maine	New Hampshire
Per cent boys enrolled	6	5	4	2	3	1
Per cent boys employed	2	1	3	5.5	4	5.5

There is an almost perfect negative correlation between high-school enrollment and employment. Only South Carolina is out of place. The State enrolls higher percentages than North Dakota, and a higher percentage is employed than in North Dakota.

Beyond question there is a definite relationship existing between the ability, the need, or the will to use boys for farm labor and high-school attendance. The more prevalent the employment as farm laborers, the lower the percentage enrolled in high school.

A second relationship of economic status to high-school attendance may be considered through a study of the value of per capita production of the farm population in the several States as compared with high-school attendance. The gross per capita values of farm products in 1919 in the six States were as follows: North Dakota, $934; South Carolina, $596 (white population only); Montana, $632; Oregon, $978; Maine, $780; and New Hampshire, $628. It is evident that some factor other than gross per capita income of the farm population is a primary determinant of high-school enrollment.

A third relationship of economic status to high-school attendance may be studied through a consideration of the data on enrollment and farm ownership. The percentages of farmers who are farm owners in the six States are as follows: North Dakota, 73.2; South Carolina, 53.7; Montana, 87.2; Oregon, 79.4; Maine, 94.2; and New Hampshire, 90.7. The relationship is more evident here, as might be expected. The two States enrolling the lowest percentages of the farm population show a decidedly lower percentage of farmers who are owners. Stated differently, there is a decided relationship between tenancy and education of the farm population.

THE RELATION OF POPULATION DISTRIBUTION TO HIGH-SCHOOL ENROLLMENT

Accessibility of the school to the pupil is considered to affect vitally school attendance. All States have sought to make high schools accessible through provisions such as payment of tuition of pupils who reside in districts not maintaining a high school, transportation, dormitories, and location of schools at strategic centers. Since all States have such provisions, it is not possible to study the effect of such provisions upon attendance through State comparisons. Other measures of the effect of accessibility of the school exist, however, in the manner of distribution of the farm population. Distribution of farm population is presented in Table 24 from the point of view of size of farm. This is probably the most accurate index of distribution of the farm population.

TABLE 24.—*Size of farms as an index of distribution of farm population (percentage distribution by States)*

Size of farm in acres	State and per cent					
	North Dakota	South Carolina	Montana	Oregon	Maine	New Hampshire
Under 10	0.2	0.3	0.9	6.9	4.4	7.1
10-19	.2	11.2	.8	8.1	5.0	7.0
20-49	.7	31.6	2.2	17.4	14.0	16.4
50-99	1.2	25.0	3.7	16.5	29.6	23.8
100-174	14.8	15.0	15.1	19.4	29.9	24.3
175-259	7.2	5.2	5.9	8.0	10.8	11.3
260-499	47.0	3.7	40.9	12.5	5.1	7.3
500-999	23.7	1.4	20.8	6.7	1.0	2.1
1,000 and over	5.1	6.6	9.7	4.4	.2	.7
Under 100	22.0	20.2	21.0	27.4	40.7	35.6
260 and over	75.8	5.7	71.4	23.6	6.3	10.1

It is evident from Table 24 that size of farm has a direct influence upon enrollment in high school. If in North Dakota and South Carolina the enrollment in high-school grades in rural graded schools is considered as high-school enrollment, the States rank in the following order: New Hampshire, Oregon, Maine, South Carolina, Montana, and North Dakota. Measured by the percentage of all farms under 100 acres, the two low-ranking States, according to percentage of the farm population enrolled, are conspicuous for the small number of farms of less than 100 acres and the larger number of farms of over 260 acres. South Carolina is conspicuous for the great number of small farms. Undoubtedly the small general farm is an economic handicap which affects high-school attendance. The handicap is not as great, however, as the excessively large farm.

RACE OR NATIVITY OF FARMERS AND OTHER FACTORS IN RELATION TO PARTICIPATION IN SECONDARY EDUCATION BY THE FARM POPULATION

Comparison of the enrollment, survival, and racial data reveals no significant relationship of race to participation in high-school education. An attempt to analyze the situation in the States with reference to country of origin of the foreign-born stock was made, but either data are inadequate or race as a factor in high-school attendance is submerged in the complex of other factors which do affect the situation. In a similar way roads, per capita value of farm property, and per capita costs of secondary education were studied with reference to high-school enrollment and survival, but no trustworthy statement can be made as to the relationships existing.

SUMMARY

The data presented in this study, though not conclusive, do point out the directions study should take in seeking to bring about a more general participation in secondary education by farm children.

Chief among the statements that may be made with some degree of certainty are:

1. Farm children are not reached by secondary schools to the extent that urban children are reached. Certain States have succeeded in reaching farm children to as great an extent as city children, but the States which are primarily agricultural are far from realizing this aim. Apparently the more purely agricultural a State is, the greater the discrepancy in the spread of secondary education to farm and nonfarm groups.

2. There is a direct relation between comparative percentages of farm and nonfarm groups reached by high schools and comparative standards in schools which serve the two groups. Whether schools are poor because the farmers served are not interested in secondary education for their children, or whether farmers are not interested in education because schools are poor, is a question. There seems to be no doubt, however, that there is a positive relationship between participation in secondary education and quality of education provided.

3. A variety of economic factors are apparently the primary determinants in high-school attendance or nonattendance. Evidences brought out are:

(*a*) Farm boys are reached to a much less extent than farm girls. The relationship between profitable employment and high-school attendance indicates that this situation is rooted in economics. The farm boy is economically useful at home. His labor is worth something. Little relationship between high-school training and occupational success has been established in the minds of farmers or farm boys. On the other hand the labor of girls on the farm is not so valuable. Custom is also against the girls working at outdoor farm tasks. Nonfarm boys are not so useful as laborers and in many cases are barred from profitable employment by child labor laws. Occupations for nonfarm boys, moreover, demand high-school or collegiate training. Nonfarm girls are similarly situated. The situation sums itself up in that the farm boy is a breadwinner at the high-school age. Other children become breadwinners only through formal school training. Girls especially are planning to teach, or become stenographers, or clerks. They must get their training in school. Therefore, they are in school.

(*b*) Little relationship appears to exist between gross per capita farm income and high-school attendance.

(c) A decided positive relationship exists between farm ownership and high-school attendance. In view of the fact of continually rising tenancy percentages, this relationship is one to concern seriously those who are responsible for rural education. We should remember, however, that increases in secondary enrollments are outstripping population increases and tenancy increases as well. There is nothing in the present study to show whether tenant farmers are increasingly turning to secondary education, or whether the increases are primarily due to increasing participation on the part of farm owners.

4. A direct relationship exists between the manner of distribution of the farm population as indicated by size of farm and high-school attendance. Apparently either the very small or very large farm makes against high-school attendance. The very small farm is apt to mean hand labor and small income. Both of these factors make for child labor and against secondary education. The large farm introduces the physical factor of distance from high school.

In seeking to realize an accepted ideal of equality of educational opportunity for all children, and through equality of educational opportunity to maintain equality of occupational opportunity which alone will save us as a democratic social state, we are clearly forced in projecting a system of education that will serve farm children, to take into account the diverse factors of their physical, economic, and social environment, as well as their physical and mental characteristics.