

COMPARISON OF CERTAIN FACTORS BETWEEN AGRICULTURAL COLLEGE GRADUATES WHO
TOOK VOCATIONAL AGRICULTURE IN HIGH SCHOOL AND THOSE WHO DID NOT

by

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INTRODUCTION

A comparison of certain factors between agricultural college graduates who took vocational agriculture in high school and those who did not was selected because the author was of the opinion there was a need for such a study in Kansas.

When vocational agriculture was introduced in the high school the primary objective was to assist students to make a beginning and to advance in agriculture. Since that time the agricultural picture has changed radically. Because of the larger financial investment involved and the fewer number of farms available, it has been much more difficult for a boy to become established in farming immediately following high school graduation. However, many more opportunities in fields directly related to agriculture that require agricultural experience and often specialized training in agriculture on the college level have become available. Agricultural technology has advanced so rapidly that it has become increasingly beneficial for students who plan to farm to obtain a college education before they start. This changing agricultural situation has been reflected in the changing high school vocational agricultural programs.

A major goal of the high school is to prepare the student for life. An increasing number of high school graduates go to college. Many high schools have designated a group of courses for students who plan to go to college. Vocational agriculture is not normally among those courses. Should the student who plans to go to college and study agriculture take the college preparatory course or can he include vocational agriculture in his college preparation without adversely affecting his college success?

PURPOSE

The purpose of this study was to determine whether taking vocational agriculture in high school affected the student's ability to do college level work in agriculture.

A study of this kind should be helpful for students who plan to go to college and study agriculture. It should also be helpful to persons who advise those students.

PROCEDURE

After selecting the topic for this report the author consulted several leaders in the field of education in Kansas. Those consulted were Professor A. P. Davidson, major instructor; Professor Howard Bradley, both of the Department of Agricultural Education; and Professor R. G. Drumright of the Department of Education, Kansas State College.

Information was obtained on 277 students in the School of Agriculture at Kansas State College who received bachelors degrees between January 1956 and May 1957. From this group 185 were selected for this study. These graduates had done their high school work in Kansas, and their college work at Kansas State. The others were not considered because of the possible differences in their training program. Those students graduating in feed technology and milling industry curriculums were not considered because of the greater difference between them and the other agricultural curriculums.

The following information used in this study was obtained from the registrar's office: date born, date entered college, college curriculum in which enrolled, curriculum changes, total college hours completed, total credit points earned upon graduation, mean grade point upon graduation, college

hours completed and credit points earned during the freshman year, college hours taken and credit points earned in agricultural subjects during the freshman year, and subjects taken while in high school. From the counseling bureau was obtained the American Counsel of Education General Intelligence Test, ACE, scores. From the office of the Dean of the School of Agriculture was obtained the background of each student concerning farm or city residence.

The 185 graduates were divided into three groups on the basis of the vocational agriculture completed in high school. The first group of 59 had from five to seven units of vocational agriculture; this would be the complete offering of vocational agriculture in the school. The second group of 42 took from one to four units of vocational agriculture, but did not take all of the agriculture offered. The third group of 84 had no vocational agriculture in high school. The total sample was divided into these three groups because it was thought that each of the three groups had experienced differences in their high school training in agriculture.

The mean grade point made by each of the three groups in college was the basis for comparison. In the college grading system an A grade gives three points an hour, a B grade two points an hour, a C grade one point an hour, a D grade no points, and an F grade minus one point an hour.

Information was obtained on the graduates' intelligence, based on the ACE test scores, to determine if any difference between the mean grade points could be attributed to differences in intelligence. These tests were given to each student upon entering college his freshman year. Those students who entered before 1953 had taken the 1945 edition of the test and those who entered during 1953 and later had taken the 1952 edition of the test. The raw scores between the two tests could not be directly compared, so by using

the percentile rank of the raw scores on a T table with a standard deviation of ten, the scores were reduced to a T score, thus making the results of the two tests comparable. Each edition of the test was taken by approximately half of the students.

REVIEW OF LITERATURE

In reviewing Summaries of Studies in Agricultural Education it was noticed that in recent years there have been studies made in several states concerning the vocational agriculture course in high school as a basis for college work. This problem has not been studied in Kansas.

Bell¹, in a study in Oklahoma of students taking and not taking vocational agriculture in high school, found that students who had a background of high school vocational agriculture had done consistently better work in those subjects which were directly related to agriculture in college than those students who had no background of high school vocational agriculture.

Brooks², in a study in Maryland comparing the scholastic achievement of college graduates who had and had not taken vocational agriculture in high school concluded that the vocational agriculture curriculum, as taught in Maryland high schools was as satisfactory as other curricula in preparing students to do the scholastic work required in agriculture at the University of Maryland. When the intelligence level of the students was considered there

¹Bell, Paul Albert. "Comparison of College Grades Received by Students Having and Not Having Vocational Agriculture in High School". U. S. Department of Health, Education and Welfare Vocational Bulletin No. 263, Agricultural Serial 67. Washington: Government Printing Office, 1955.

²Brooks, Theodore R. "Certain Aspects of Scholastic Achievement of High School Vocational Agriculture and Nonvocational Agriculture Students in the College of Agriculture Curricula at the University of Maryland." U. S. Department of Health, Education and Welfare Vocational Bulletin No. 263, Agricultural Serial 68. Washington: Government Printing Office, 1956.

seemed justification for saying the vocational agriculture curriculum was more satisfactory.

Bunten¹, in a study in Colorado using the first quarter grades as a comparison between students who took vocational agriculture in high school and those that did not found that students who had taken vocational agriculture in high school were prepared equally as well for college agriculture as those who took the more academic college preparatory course.

Wiggins², in a study in Pennsylvania comparing a total of 93 agriculture college graduates, some who had vocational agriculture in high school and some who had not, found that vocational agriculture as taught in the Pennsylvania schools was equal to any other high school curriculum as a preparation for an agricultural curriculum at Pennsylvania State College. Students who had four years of high school agriculture had a college honor point average of 1.782 while those with no high school agriculture had a college honor point average of 1.752.

Bicknell³, in a study in Iowa used statistical procedures in comparing the difference between 146 freshmen who had vocational agriculture in high school and 191 who did not have it. They were also classified according to veterans and non-veterans. He found that students who had vocational agriculture in high school earned grades significantly higher than those who had

¹Bunten, John W. "Effectiveness of Secondary Vocational Agriculture as Preparation for College Agriculture". U. S. Department of Health, Education and Welfare Vocational Bulletin No. 263, Agricultural Serial 66. Washington: Government Printing Office, 1954.

²Wiggins, Charles Simpson. The Effectiveness of Vocational Agriculture in High School as a Basis for the Four-Year Course in Agriculture at the Pennsylvania State College. Thesis, M. S. 1953, Pennsylvania State College.

³Bicknell, John E. "Effectiveness of Vocational Agriculture in High School as Preparation for Students of Agriculture at the Iowa State College". U. S. Department of Health, Education and Welfare Vocational Bulletin No. 263, Agricultural Serial 62. Washington: Government Printing Office, 1948.

no vocational agriculture in high school. He found no significant difference between the veterans and the non-veterans.

Singleton¹, studied this problem in Missouri, comparing the records made by 426 freshmen in the College of Agriculture. The vocational agricultural graduates earned a mean grade point of 2.25 as compared with a 2.11 mean for the non-vocational agricultural group. As the amount of high school vocational agriculture increased from one to six units there was an increase in scholarship in college.

Jackson², in a study in Ohio comparing two groups of 86 students, one had vocational agriculture in high school and the other one did not, found the vocational agricultural group to be slightly superior in their college subjects.

DATA

Table 1 indicated that upon graduation from college in the agricultural curriculum, the highest mean grade point was attained by those students with five to seven units of vocational agriculture in high school. Their mean was .155 grade points above the group with no vocational agriculture. Using a t-ratio this difference was significant at the five per cent level. The group with one to four units of vocational agriculture had a mean grade point that was between the other two groups. They were .056 points below the group with five to seven units of vocational agriculture. This would indicate those students who had the most vocational agriculture in high school had a

¹Singleton, Rollo E. "A Partial Study of the Scholastic Records of Students in the School of Agriculture". Agriculture Education Magazine, June 1931, 3:183-196.

²Jackson, L. E. "Vocational Agriculture and College Achievement in the Ohio State University". Agriculture Education Magazine, August 1934, 7:22-23.

Table 1. Comparison of mean grade points among students taking different amounts of vocational agriculture in high school.

	Units of vocational agriculture in high school		
	5 to 7	1 to 4	None
Mean grade point on graduation from college	1.657	1.601	1.502
Mean ACE T score	51.04	49.07	51.64
Mean grade point at end of freshman year	1.263	1.239	1.238
Mean grade point in agricultural subjects during freshman year	1.771	1.707	1.470

higher mean grade point upon graduation from college and as the amount of vocational agriculture in high school was reduced the mean grade point upon graduation was also reduced.

In comparing the ACE T scores for each group the means of the three groups corresponded closely enough not to influence greatly the resulting mean grade point.

At the end of the freshman year the mean grade point in all subjects for each of the three groups was almost exactly the same. However, when the agricultural subjects taken during the freshman year were considered separately the group that had from one to four units of vocational agriculture in high school was higher than the one with no vocational agriculture by .237 grade points and the group with five to seven units of vocational agriculture was .301 grade points above those with no vocational agriculture. This seemed to indicate that studying vocational agriculture in high school helped in the agricultural subjects in college. Those with the most agriculture in high school made the highest grades.

Since there was a significant difference between the groups at the five per cent level in mean grade points upon graduation from college in agriculture other factors which could have resulted in this difference were compared.

Upon entering college nearly all of the students were credited with two units of high school mathematics. Very few had as many as three units; therefore, it was not possible to divide the sample into different groups on this basis. However, considerable difference was noted in the number of science credits taken in high school. Biology, chemistry, and physics were the courses most frequently taken. Using these three courses as a basis for comparison, an inverse relationship between the number of vocational agricultural units taken and the units of science taken was noted. The mean number of science credits taken by each group was as follows:

Number of units of vocational agriculture	Mean number of science credits
5-7	1.12
1-4	1.38
None	1.57

The group with five to seven units of vocational agriculture had .45 fewer units of science and those with one to four units of vocational agriculture had .19 fewer units of science than the group with no vocational agriculture.

Table 2 indicated that in all groups the students with the higher ACE T scores tend to take more units of science. However, in the composite group those students with the higher ACE T scores and the larger number of science units did not make a higher mean grade point upon graduation from college than those students without any science or with only one unit of science in high school. In each comparison between the groups with an equal number of science units the group that had five to seven units of vocational agriculture

Table 2. Comparison between the amount of science and the amount of vocational agriculture taken during high school and the mean grade point upon graduation from college.

		Units of vocational agriculture in high school											
Composite group													
Number of		5 to 7				1 to 4				None			
Science:		ACE T :				ACE T :				ACE T :			
Units :		Grade :	Score :	No.	Grade :	Score :	No.	Grade :	Score :	No.	Grade :	Score :	No.
None		1.546	49.31	16	1.576	50.00	10	1.829	48.33	3	1.165	48.00	3
One		1.586	50.12	95	1.647	50.11	35	1.537	50.32	22	1.557	50.00	38
Two		1.577	51.23	61	1.766	52.91	11	1.672	46.87	15	1.476	52.57	35
Three		1.510	56.54	13	1.653	58.33	3	1.437	53.00	2	1.475	56.75	8

Table 3. Comparison between the place of residence, the amount of vocational agriculture taken in high school, and mean grade point on graduation from college.

	Composite		Units of vocational agriculture in high school							
			5 to 7				1 to 4			
	Farm	City	Farm	City	Farm	City	Farm	City	Farm	City
Mean grade point on graduation from college	1.563	1.641	1.627	1.849	1.581	1.751	1.506	1.483		
Mean ACE T score	50.54	52.74	51.35	49.00	48.62	52.40	50.99	54.93		
Mean grade point upon end of freshman year	1.219	1.406	1.099	1.678	1.215	1.413	1.236	1.248		
Mean grade point in agricultural subjects during freshman year	1.647	1.626	1.751	1.898	1.751	1.739	1.503	1.425		
Number in each group	158	27	51	8	37	5	70	14		

had a higher mean grade point than the group without vocational agriculture. The group that had no vocational agriculture and no science was composed of only three persons and was not large enough to be an accurate sample; however, their mean grade point was about one-third of a point below the other groups that did not have vocational agriculture but did have science. The group with five to seven units of vocational agriculture and no science had a higher mean grade point than those groups who had science but no vocational agriculture. These facts indicate that vocational agriculture and science taken in combination resulted in the highest mean grade point, but that vocational agriculture was more helpful than science for college agricultural students as measured by mean grade points upon graduation.

Another difference noted within the group was place of residence. Although most of the students lived on the farm and all of them had had agricultural work experience, there were certain differences observed between those who came from the city and those who came from the farm. Students were classified as being from the city when they did not indicate having regular farm work or farm residence during high school. In Table 3, the composite group indicated that agricultural college graduates whose residence was in a town had a slightly higher mean grade point than those who lived on a farm, but the difference in ACE T scores might account for this difference. The city residents also made higher grades during their freshman year but when the agricultural grades made the freshman year were considered separately, the farm students had slightly higher grades despite their lower ACE T score.

In considering the group with five to seven units of vocational agriculture, the city residents made higher grade averages in all three categories and at the end of the freshman year their mean grade point was .579 higher. However, there were only eight city boys in this group and this factor could

reduce the significance of this figure.

In the group with no vocational agriculture the relationship was just the opposite between the farm and city students. The students from the farm had a higher mean grade point upon graduation from college and in agricultural subjects during the freshman year despite having a lower ACE T score than the city students.

In comparing the city students who took vocational agriculture with those who did not, the first group had a higher mean grade point in the three areas of comparison by more than one-third of a grade point despite the fact their ACE T score was lower by nearly five points. This would indicate that students whose residence was in town would find it beneficial to take vocational agriculture in high school if they planned to major in agriculture in college.

In comparing the three different groups of city students, it appears the less competent city students, as measured by the ACE test, were the ones who took vocational agriculture.

The factors which have been considered have concerned differences in the background of the students before they came to college. As the college attendance of the three groups was studied, additional differences were noted. One of these was the number of times the students changed curriculums while attending college. The mean number of changes for the three groups was as follows:

Units of vocational agriculture	Mean number of curriculum changes
5-7	.49
1-4	.57
None	.85

The group with from five to seven units of vocational agriculture averaged thirty-six per cent fewer curriculum changes than the group with no vocational

agriculture, and the group with one to four units of vocational agriculture average twenty-eight per cent fewer curriculum changes than those with no vocational agriculture. Apparently the high school vocational agricultural course had enabled them to choose the curriculums they were best suited for and most interested in. This gave the students who did not change curriculums an advantage as Table 4 indicated. In the composite group those who did not change curriculums had a higher mean grade point upon graduation despite a lower ACE T score. In considering the two groups that had vocational agriculture in high school, those students who did not change curriculums had a higher mean by .23 grade points. Those who had no vocational agriculture seemed to do slightly better when they changed curriculums; however, the difference in ACE T scores could account for this difference.

Another difference noted was the length of time it took the students to graduate after they first enrolled in college. Some of them completed their work within three years while others delayed their work for one reason or another and were as long as ten years completing college. The mean number of years required to complete college was as follows:

Units of vocational agriculture	Mean number of years to complete college
5 - 7	4.79
1 - 4	5.31
None	4.96

The group with five to seven units of vocational agriculture finished on the average .17 years earlier than those without vocational agriculture and they averaged .52 years earlier than those with one to four units of vocational agriculture. Table 5 indicated that in all of the groups the students who finished college within four years after starting made a higher mean grade

Table 4. Comparison among students with different amounts of vocational agriculture in high school and between number of curriculum changes in college and mean grade point on graduation from college.

	: Composite : Group		: Units of vocational agriculture in high school					
	:		: 5 - 7		: 1 - 4		: None	
Number of Curriculum Changes	: None	: 1-3	: None	: 1-3	: None	: 1-3	: None	: 1-3
Mean grade point on graduation from college	1.611	1.531	1.746	1.518	1.696	1.462	1.432	1.562
Mean ACE T Score	50.65	51.11	50.94	51.17	51.00	46.17	50.15	52.94
Number in each group	100	85	36	23	25	17	39	45

Table 5. Comparison among students with different amounts of vocational agriculture in high school and between years taken to complete college after enrollment and mean grade point on graduation from college.

	: Composite : Group		: Units of vocational agriculture in high school					
	:		: 5 - 7		: 1 - 4		: None	
Years to complete college	: 3 - 4	: 5 - 10	: 3 - 4	: 5 - 10	: 3 - 4	: 5 - 10	: 3 - 4	: 5 - 10
Mean grade point on graduation from college	1.723	1.406	1.789	1.491	1.772	1.429	1.648	1.348
Mean ACE T score	52.66	48.88	52.27	49.46	51.95	46.19	53.30	49.90
Number in each group	97	88	33	26	21	21	43	41

point. In the composite group this difference was .317 points; however their ACE T score was higher.

One other difference between the groups was noted. Table 6 indicated that after five years only twelve per cent of the group with five to seven units of vocational agriculture had not completed their work, while twenty-six per cent of those with one to four units of vocational agriculture and twenty-five per cent of those with no vocational agriculture had not yet graduated from college. These facts indicated that those students who finished the complete vocational agricultural course in high school, five to seven units, tended to complete their studies sooner. This fact was further emphasized by comparing the mean ages of the three groups upon their graduation from college.

Units of vocational agriculture	Mean age at college graduation
5 - 7	23.05
1 - 4	23.86
None	23.92

Table 6. Comparison of length of time to complete college after enrollment among students with different amounts of vocational agriculture in high school

Years to complete	Units of vocational agriculture in high school					
	5 - 7		1 - 4		None	
	Number	Per cent	Number	Per cent	Number	Per cent
3	2		1		3	
4	31	56	20	50	40	51
5	18	32	10	24	20	24
6	3		4		7	
7	0		3		8	
8	2		2		4	
9	1	12	1	26	2	25
10	2		1		0	

Upon graduation from college those who had from five to seven units of vocational agriculture were .81 years younger than those with one to four units of vocational agriculture and they were .87 years younger than those with no vocational agriculture. As noted before, part of this difference can be attributed to the fact that those with five to seven units of vocational agriculture progressed more rapidly through college than the other two groups. Another difference would be because they enrolled in college sooner after graduation from high school. They were apparently a little more certain in what they wanted to do and, therefore, started college sooner.

The fact that those with five to seven units of vocational agriculture in high school completed college at a younger age than those with no vocational agriculture was further supported by Table 7 which indicated that by the time the students were twenty-three, fifty-one per cent of those who had from five to seven units of vocational agriculture had graduated from college. By the time they were twenty-five only thirteen per cent of those with five to seven units of vocational agriculture had not graduated while twenty-four per cent of those with one to four units and twenty-six per cent of those with no vocational agriculture had not yet graduated from college.

Table 8 indicated that in all three of the groups the students who finished before they were twenty-three had a higher mean grade point. In the composite group, those who were through before they were twenty-three had a mean grade point .221 higher than those who finished at an older age. However, those who finished younger had an ACE T score that was more than two points higher; this could account for the difference in the mean grade point between the two groups.

In studying the pattern of college attendance it was indicated, as measured by the composite group, that the students who had the highest mean

Table 7. Comparison of students' ages upon graduation from college among students with different amounts of vocational agriculture in high school.

Age	Units of vocational agriculture in high school					
	5 - 7		1 - 4		None	
	Number	Per cent	Number	Per cent	Number	Per cent
21	2		1		2	
22	28	51	15	38	30	38
23	17		11		20	
24	4	36	5	38	10	36
25	1		1		4	
26	3		3		7	
27	1		2		4	
28	2		2		2	
29	1	13	1	24	1	26
31	0		0		1	
32	0		0		2	
35	0		1		0	
37	0		0		1	

grade point on graduation were those who did not change curriculums, those who graduated within four years after enrolling in college, and those who had completed college before they were twenty-three years old. Table 9 indicated that for the students who followed this pattern the mean grade point of the two groups with vocational agriculture were almost exactly the same. The group with no vocational agriculture was .46 grade points lower than the group with five to seven units of vocational agriculture. This difference was very significant at the one per cent level.

Table 4 indicated that those students who had no vocational agriculture in high school had a higher mean grade point if they changed curriculums in college. Those with no vocational agriculture who graduated before they

Table 8. Comparison among students with different amounts of vocational agriculture in high school and between age at college graduation and mean grade point on graduation from college.

	: Composite :		Units of vocational agriculture in high school					
	: Group :		5 - 7		1 - 4		None	
Age upon graduation	: 21-22	: 23-37	: 21-22	: 23-27	: 21-22	: 23-37	: 21-22	: 23-37
Mean grade point on graduation from college	1.702	1.481	1.777	1.534	1.777	1.493	1.594	1.445
Mean ACE T score	51.64	49.37	50.97	51.10	53.00	46.65	54.72	49.75
Number in each group	78	107	30	29	16	26	32	52

Table 9. Comparison among students with different amounts of vocational agriculture in high school who completed college before they were twenty-three years old, completed college within four years after enrolling, and who did not change curriculums on the basis of mean grade point on graduation from college.

Units of vocational agri- : culture in high school : 5 - 7 : 1 - 4 : None			
Mean grade point on graduation from college	1.842	1.845	1.426
Mean ACE T score	50.59	54.17	53.44
Number of samples	22	12	16

were twenty-three and within four years after enrolling in college but who changed curriculums consisted of fourteen persons. They had a mean grade point of 1.679 upon graduation and an ACE T score of 56. This compares more favorably with the vocational agricultural group than the non-agricultural group in Table 8; however this group was still .163 mean grade points lower and 5.41 ACE T points higher than the group with five to seven units of vocational agriculture.

In looking further for a more successful pattern for those students with no vocational agriculture, the author observed that within this group were twelve students who did not start college immediately after high school graduation and, therefore, graduated after they were twenty-two years old but who did finish college within four years after they enrolled. Seven of these changed curriculums and five of them did not. This group of twelve students upon graduation had a mean grade point of 1.765 and an ACE T score of 49.40. In comparing them with the group that had five to seven units of vocational agriculture, Table 8, this group was slightly lower in mean grade

points but their ACE T score was also lower which could account for this difference.

It appears that of those students who graduated from college the students who had vocational agriculture in high school were better prepared to do college level work in agriculture upon graduation from high school than those with no vocational agriculture. Those students who did not have vocational agriculture in high school did the best work in college by waiting a few years after high school before enrolling in college.

SUMMARY

The difference in mean grade point upon graduation from college, with a degree in agriculture, between those students who had five to seven units of vocational agriculture and those who had no vocational agriculture was significant at the five per cent level, favoring those who took vocational agriculture in high school.

As the amount of vocational agriculture taken in high school was reduced the mean grade point upon graduation from college in agriculture was reduced.

Vocational agriculture and science taken in combination in high school resulted in the highest mean grade point, but vocational agriculture was more helpful than science for college preparation as measured by mean grade points upon graduation from college in agriculture.

Agricultural college graduates whose residence was in town during high school had a higher mean grade point on graduation and at the end of the freshman year than those who came from the farm. However, a higher mean ACE T score might account for the difference. The farm boys, however, made slightly higher grades in agricultural subjects their freshman year.

City students who plan to major in agriculture in college would probably find it beneficial to take vocational agriculture in high school.

Those students who had vocational agriculture in high school changed curriculums fewer times in college than those with no vocational agriculture. Apparently the high school agriculture helped these students to choose the curriculum they were most suited for.

Those students with five to seven units of vocational agriculture finished college slightly sooner after enrolling than the students with no vocational agriculture.

Those students with five to seven units of vocational agriculture graduated from college nearly a year younger than those without vocational agriculture.

Those students who had vocational agriculture in high school made the best college grades when they went directly to college, did not change curriculums, and finished within four years after enrolling.

Those students who did not have vocational agriculture in high school made the best college grades by waiting a few years after high school graduation and then completing college in four years.

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The purpose of this study was to determine whether taking vocational agriculture in high school affected the student's ability to do college level work in agriculture.

The necessary data on 185 graduates in the School of Agriculture at Kansas State College who graduated in 1956 and 1957 was secured from the registrar's office. Those students were divided into three groups on the basis of the number of units of vocational agriculture they had in high school. The first group had five to seven units, the second group had one to four units, and the third group had no vocational agriculture. Comparisons were made on the basis of grade points earned by each of the students.

The difference in mean grade point upon graduation from college, with a degree in agriculture, between those students with five to seven units of vocational agriculture and those with no vocational agriculture was significant at the five per cent level, favoring those who took vocational agriculture in high school. As the amount of vocational agriculture taken in high school was reduced the mean grade point upon graduation from college in agriculture was reduced. Vocational agriculture and science taken in combination in high school resulted in the highest mean grade point, but vocational agriculture was more helpful than science for college preparation as measured by mean grade points upon graduation from college in agriculture. Agricultural college graduates whose residence was in town during high school had a higher mean grade point on graduation and at the end of the freshman year than those who came from the farm. However, a higher ACE T score might account for the difference. The farm boys, however, made slightly higher grades in agricultural subjects their freshman year. Those students living in town who plan to major in agriculture in college would probably find it beneficial

to take vocational agriculture in high school. Those students who had vocational agriculture in high school changed curriculums fewer times in college than those with no vocational agriculture. Apparently the high school agriculture helped those students choose the curriculum they were most suited for. Those students with five to seven units of vocational agriculture finished college slightly sooner after enrolling than the students with no vocational agriculture. Those students with five to seven units of vocational agriculture graduated from college nearly a year younger than those without vocational agriculture. Those students who had vocational agriculture in high school made the best college grades when they went directly to college, did not change curriculums, and finished within four years after enrolling. When this group was compared to a like group of students with no vocational agriculture the difference was very significant at the one per cent level. Those students who did not have vocational agriculture in high school made the best college grades by waiting a few years after high school graduation before enrolling in college, and then completing college in four years.