A FOLLOW-UP STUDY OF FORMER STUDENTS ENROLLED IN AGRICULTURE IN FLATHEAD COUNTY HIGH SCHOOL KALISPELL, MONTANA DURING THE PERIOD 1913 to 1949

Thesis for the Degree of M. A.

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This is to certify that the

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A FOLLOW-UP STUDY OF FORMER STUDENTS ENROLLED IN AGRICULTURE IN FLATHEAD COUNTY HIGH SCHOOL, KALISPELL, MONTANA DURING THE PERIOD 1913 to 1949

By

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A THESIS

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CHAPTER I

THE PROBLEM AND DEFINITION OF TERMS USED

The study of agriculture has been a part of the curriculum at Flathead County High School at Kalispell, Montana since the school year of 1913-14. It seems logical to assume that certain truths have evolved concerning the activities and characteristics of these former students and the factors affecting them. In order to secure these facts, a survey was made of the former students who had received credit for one or more years of study in agriculture.

I. THE PROBLEM

Importance of the study. Educators as a whole, and men in the field of agricultural education, feel that it is worth while from time to time to evaluate what has been accomplished and to re-plan the program for more effective work in the future. Flathead County High School has one of the oldest agriculture departments in the United States. Agriculture was first taught there in 1913. Vocational agriculture, under the Federal aid program, was first presented to the students in the school year of 1917-18. Since that time there have been more than eight hundred young men who have taken one or more years of agriculture at this school.

The length of time the work has been under way and the relatively large number of students who have participated in the program made it a

desirable situation for a study of this type.

Purpose of the study. It was the purpose of this study to determine the number, occupational status, further education, characteristics, and the factors associated with establishment in farming of the former students enrolled in agriculture at Flathead County High School during the period of thirty-seven years extending from the school year of 1913-14 to, and including, the year of 1949-50.

As a preliminary study of the problem was made, certain definite questions stood out as being in need of an answer, namely: (1) How many students have completed one or more years of agricultural study, from what kind of farms did they come, and what were they doing? (2) Were their fathers tenants or owners, what was the size of the home farms, and how many brothers were there in the families? (3) In what ways could the agricultural department of the high school or the agriculture instructor have been of greater help to each individual in becoming established in farming? (4) What were the steps each student went through to reach the farm ownership level? (5) What were the farm problems facing these former students? (6) Did the percentage of establishment in farming increase as the program grew?

II. DEFINITION OF TERMS USED

Occupations related to agriculture. In this study, occupations considered as being related to agriculture are: vocational agriculture instructor, county agent, professor or instructor in a college of agriculture, dairy inspector, creamery manager, seed house manager, feed

dealer, poultry plant operator, chicken hatchery manager, soil conservation employee, veterinarian, student now studying agriculture at college, and other occupations closely related to agriculture. Former students of agriculture at Flathead County High School who were occupied as Christmas tree buyers and as managers of tree farms were also considered as being in an occupation related to agriculture.

Farming. Former students who were working as unpaid family laborers, or as hired farm laborers, or as tenants, or as encumbered owners, or as full owners, were considered to be in the occupation of farming.

Establishment in farming. Former students of agriculture were considered to be established in farming when they were: full owners, encumbered owners, tenants, partners in a farm operation, small farm operators who own a farm, or farms, and have them operated by sharecroppers or managers.

III. A PREVIEW OF THE ORGANIZATION OF THE REMAINDER OF THE THESIS

A review of the literature on problems closely related to this work is given in the next chapter. Limitations of some of these previous studies are presented.

The locale and history of the agricultural department at Flathead County High School is given in Chapter III.

The chapter on outline of procedures includes: limitations of the study, sample selection, representativeness of the sample, the

validity of response, and the general characteristics of the group. The next two pages of this work are devoted to the general characteristics of the group studied.

Chapter V gives the presentation of the findings. The last pages of this thesis are devoted to the following subjects in this order: summary of important findings, major implications, and the recommendation for future study.

CHAPTER II

I. REVIEW OF THE LITERATURE

Although the National Vocational Education Act was passed by Congress in 1917, it was not until 1929 that much research was completed in agricultural education.[1] The earliest related study the writer was able to find was made by Smith[2] in 1917. A master of science study was made by Gabriel[3] at Cornell University in 1920, and a dissertation by Myers[4] was completed at Columbia University in 1923. In the following five years four studies were completed. Three studies were finished in 1929, and from that date until 1941, twenty-one others were reported. Despite reduced staffs and depleted graduate student ranks during the World War II years, about the usual number of studies in research were carried to completion.

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[1] R. M. Stewart, Summaries of Studies in Agricultural Education. Vocational Education Bulletin No. 180, 1935, Washington, D. C.: Government Printing Office. p. 3.

[2] William Arthur Smith, "Discovery of a Method of Determining Results of Vocational Training in Agriculture" (Unpublished Master's thesis, Cornell University, Ithaca, N. Y., 1917.), cited by R. M. Stewart, op. cit., p. 69.

[3] Harry S. Gabriel, "A Study of the Extent to Which the Knowledge and Skill Acquired in Secondary Vocational Agriculture Function" (Unpublished Master's thesis, Cornell University, 1920), cited by R. M. Stewart, op. cit., p. 69.

[4] Charles Everett Myers, Effectiveness of Vocational Education in Agriculture. (Vocational Education Bulletin No. 82, Agricultural Series No. 13, 1923, Washington, D. C.), cited by R. M. Stewart, op. cit., p. 130.

In the field of actual establishment in farming, most early studies show results that compare favorably with ones completed in the last few years. The more recent researches do show an increase in effectiveness of vocational agriculture as measured by the larger percentage of trainees that are remaining in the occupation of their high school choice. New studies have brought out sociological and personal factors. New problems are being continually brought into focus. New techniques are being secured. All of these should be useful in the further development of the entire field of education.

Much has been written in regard to follow-up studies of students of vocational agriculture, but only a brief summary of the work of experimenters on problems very closely related to the one at hand will be given.

A comprehensive follow-up study of a local department has been completed by Bartley[5] of Michigan. This research covered 208 individuals who had enrolled in at least one all-day class in vocational agriculture during the twenty-year period covered from 1920 to 1939. Of the vocationally trained farm boys, 41.3 percent became established in farming, while only 5.5 percent of the non-farm group reached a vocational goal in farming. Bartley also points out that if a boy is going to become established in farming he will probably locate his new farm business within twenty-five miles of his parents' home farm. Only 5.6 percent of the young men moved more than twenty-five miles away from their parents. In this work

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[5] Hugh Jerome Bartley, "A Follow-Up Study of Pupils Enrolled in Vocational Agriculture in the High School at Mason, Mishigan" (unpublished Master's thesis, Michigan State College, East Lansing, Michigan, 1942), p. 61.

it was pointed out that there was an "apparent negative correlation " between the size of the agriculture class and the number of students becoming established in farming. It was definitely shown that the first year or two that a student was out of school is the critical period in getting that individual launched upon his career.

Byram[6] discovered that a very high percentage of students who had become successfully established in farming did not have older brothers at home. This was also pointed out by Deyoe.[7] A higher percentage of vocationally trained students become established in farming than was the case when farm boys attended high schools in which no vocational agriculture training was offered.[8] In a follow-up study of 941 former vocational agriculture students in certain Michigan high schools, Deyoe discovered that: 60.5 percent are farming, 6.6 percent are in occupations related to farming, and 32.9 percent are in non-agricultural occupations.[9] It was interesting to find in this work that boys coming from average, or better than average farms, were more apt to reach their occupational goal. Also, boys who had a higher percentage of farm work to do while studying agriculture in high school were more apt to become established in farming.[10]

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[6] H. M. Byram, Survey of out-of-school Young Men on Farms in Certain Michigan Communities (Bulletin No. 274, 1941, Michigan State Board of Control for Vocational Education, Lansing, Michigan) p. 32.

[7] G. P. Deyoe, A Study of Farm-Reared Men Who Attended Certain Michigan High Schools Which Maintain Departments of Vocational Agriculture (Bulletin No. 256, 1939, Michigan State Board of Control for Vocational Education, Lansing, Michigan) p. 10.

[8] Byram, op. cit., p. 33.

[9] Deyoe, op. cit., p.12.

[10] Ibid., p. 41.

The problems facing recent students of agriculture in their efforts to become established in farming were found by Kenestrick[11] to be similar to those of their mates who had started out in life some years previously. In this study it was found that the 1918-24, 1924-29, and the 1929-34 groups were established in farming at the time of the survey in the following percentages: 25.0, 41.0, and 59.3.

Formal schooling beyond high school, as found by Clough,[12] tends to decrease the percentage of former students entering farming as an occupation. He also found that sons leaving home and becoming established in farming after completing their training in vocational agriculture in high school, are farther advanced financially than those that remain on the home farms. A total of thirty-one factors similar to the ones mentioned above were found to promote, to retard, or to prevent the dissociation of sons from the farm family.

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[11] Harold George Kenestrick, "Some Economic Factors Affecting the Establishment of All-Day Students of Vocational Agriculture in Ohio in Farming" (Ph.D., Thesis, 1936, Ohio State University), cited by R. M. Stewart, Summaries of Studies in Agricultural Education (Supplement No. 1, to Vocational Education Bulletin No. 180, 1943, Danville, Illinois,: The Interstate Printers and Publishers), p. 86.

[12] Ellis Brady Clough, "Some personal, Family, and Home Farm Factors Related to the Dissociation of Sons from Parental Farm Families" (Ph. D., Thesis, 1946, Cornell University), cited by W. Howard Martin, Summaries of Studies in Agricultural Education (Vocational Division Bulletin No. 237, 1948, Washington, D. C.: Government Printing Office), p. 19.

Sweany[13] points out that programs for vocational agriculture should be planned in the light of the number now engaged or likely to become engaged in farming. If a local agricultural department is training more boys than there are possible chances of placing, the percentage becoming established in farming will, of necessity, be quite small.

The fact that the percentage of young men becoming established in farming increases with the number of years of study is pointed out by Gregory[14] as one of the various factors influencing students to choose farming as a vocation. In this study, 636 former students from seventy-six different departments were followed through an eleven-year period of training and establishment.

Harris[15] feels that we definitely have a new agricultural ladder. Most people have thought of this ladder as consisting of five rungs, named as follows: Unpaid family laborer, hired worker, tenant, encumbered owner, and full owner. The new ladder is one designed to keep the farm in the family. It also has five rungs -- namely: project agreements, apprenticeship, partnership, transfer arrangements, and full ownership.

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[13] H. Paul Sweany, "Estimating Opportunities in Farming," The Agricultural Education Magazine, 22:4, July, 1949.

[14] Raymond William Gregory, "Factors Influencing Establishment in Farming of Former Students of Vocational Agriculture:" (Ph.D., Thesis, 1937, Cornell University), cited by R. M. Stewart, Summaries of Studies in Agricultural Education (Supplement No. 1. to Vocational Education Bulletin No. 180, 1943, Danville, Illinois,: The Interstate Printers and Publishers), p. 71.

[15] Marshall Harris, "The New Agricultural Ladder." The Agricultural Situation, 35:7, May, 1951, Washington, D. C., Government Printing Office.

A comprehensive review of studies in the area of guidance and placement in agricultural education has been made by Byram and Nelson.[16] In their study, the authors interpreted recent research and suggested phases of guidance and placement that should be studied.

In studying the "trends of recommendations" of many research workers in this area, the authors state that:

> This review reveals that certain areas of guidance have received a great deal of attention, such as opportunities in farming, follow-up of students and problems of establishment. These areas may not need as much attention in the future unless research workers are willing to make and can find new approaches. Approaches which are here suggested include the longitudinal or long-time studies.
>
> Study areas which have had much less attention in the past, and which should be considered by researchers of the future include: (1) Analysis of guidance responsibilities of the teacher of agriculture, particularly from the point of view of students and parents; (2) Further study to develop measures of interests and aptitudes essential for success in farming and related occupations; (3) Finding and organizing information about occupations for which farm experience and/or training in agriculture are essential; (4) Identifying effective techniques of counseling, making successful on-farm visits and conducting conferences; (5) Study of the problems involved in placement in related farming occupations.[17]

The routes taken by present day farmers in achieving the farm operator status is well summarized by Sweany.[18] In this article the author pictorially points out the more likely routes which persons would follow in becoming established as farm operators.

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[16] Harold M. Byram and Kenneth G. Nelson, "Guidance and Placement in Agricultural Education," The Agricultural Education Magazine, 24:2, August, 1951.

[17] Ibid., p. 43.

[18] H. P. Sweany, "Paths to Farm Operatorship," The Agricultural Education Magazine, 24:7, January, 1952.

Many studies of a similar nature were found which showed some variation of results in follow-up studies. For the most part the results of other related studies revealed that from forty to seventy percent of the farm-reared young men were being established in farming. It is believed that this research problem is the first in Montana to be based upon the study of one department of vocational agriculture.

II. LIMITATIONS OF PREVIOUS STUDIES

Very few of the previous studies of a similar nature covered a period of more than twenty years. Of course, this was impossible in the earlier studies and in the new departments of vocational agriculture. However, short-time studies were unable to compare factors affecting establishment in farming of twenty or thirty years ago with more recent results and conditions.

Some similar studies were completed within one year from the time they were planned. In some cases opinion data were not treated as such and these weaknesses were not recognized. In some studies, percentages were based on total cases instead of known cases, even though a large proportion of the group sought was not found.

CHAPTER III

LOCALE AND HISTORY OF THE DEPARTMENT

I. LOCALE

Flathead County High School has had, in recent years, an annual enrollment of from 875 to 1023 students. About 415 of these students have been rural people and were brought to school on nine regular school busses. Kalispell is a city of about 12,000 population and is located thirty-two miles southwest of Glacier National Park.

Other high schools in the county were located at Whitefish, Columbia Falls, and Bigfork. The total enrollment of these three schools was about 600 students. None of the above three schools had a vocational agriculture department in operation at the time of this survey. Bigfork had a department for six years before it was discontinued in 1946. The closest department was in operation at Polson, which lies fifty-four miles south of Kalispell, and is located at the south end of Flathead Lake.

Mountains and one large lake separate the farming area of Flathead County from the rest of the state. There were about 75,000 acres of tillable land under cultivation in the Flathead County High School area. The average size farm in the valley had about seventy tillable acres. However, most farmers lived on smaller acreages than is shown by the group average. The high tillable-acre average for the valley was probably explained by the fact that about twenty percent of the

farms had over 300 acres under cultivation. Most farms were either on small or large units and there were very few that were near the arithmetic average.

The total land area of Flathead County was 3,313,280 acres, or about 5,177 square miles. About 9.9 percent of this was in farm land. Land owned by farm operators amounted to 253,194 acres, or about 402 square miles.

Grain, hay, livestock, and combinations of these, have been the general farming practice for the thirty-seven year period covered in the survey. However, in the last few years, specialized seed production in potatoes, grasses, legumes, and grains, has started in the valley. Some farmers were developing purebred herds of beef, dairy, sheep, and swine. Truck crops and fruit production have been carried mainly on a farm-use-enterprise basis.

II. HISTORY OF THE DEPARTMENT

Agriculture was first taught at Flathead County High School in the year of 1913-14, with an enrollment of eighteen young men. C. A. Bush was the first instructor and was employed from 1913 to 1917. Harry N. Kauffman served the school from 1917 to 1920 and again from 1924 to 1937. During the school years of 1919 to 1924, Mr. Kauffman served as county agent in Madison County and his place was filled by Robert H. Gorsline, as vocational agriculture instructor. Since 1936, the writer has served in the above capacity and has been assisted for the last six of these years by Robert A. Olson.

During the school year of 1949-50, the average enrollment in the vocational agriculture classes was about one hundred all-day students, which was more than double the number enrolled during or before the school year of 1937-38.

As was the case in most early-day agriculture departments, the classroom was in the basement and shop facilities were non-existant. In 1935 the entire school plant was remodeled and the floor space was more than doubled. At that time a sixty-by-sixty foot shop was provided for the use of both manual training and vocational agriculture students.

In the fall of 1940, a vacant building, fifty feet by sixty feet, located four blocks from school, was rented by the school board for the exclusive use of the agricultural students. This structure was used for shop work until it was purchased for private business in 1947. The FFA advisory committee and the school board immediately started a movement for a new vocational building. At the time of the campaign and planning for the new building, four of the FFA advisory members were former Flathead County High School agricultural students. A bond issue amounting to $200,000 for the new building was placed before the electorate in 1948, and was defeated. The next year another bond election calling for $229,000 passed.

The new Vocational Building was accepted from the contractor in the fall of 1950. This building is 160 feet long by 96 feet wide. The south two-fifths was occupied by auto mechanics, mechanical drawing, and printing. The north three-fifths was used for agricultural work.

The main part of the agricultural shop is 96 feet long. Two agricultural class rooms are each 24 by 36 feet and are equipped with a folding door between them to provide space for large meetings. The entire building is of brick and glass brick construction and is equipped with the latest facilities in lighting, heating, ventilation, and sanitation. Fenced cold storage space, 50 feet by 140 feet, is located north of and adjacent to the agricultural shop.

CHAPTER IV

OUTLINE OF PROCEDURES

I. LIMITATIONS OF THE STUDY

When this study was first planned, it was decided that tillable acres on the farm upon which the former student was reared, and tillable acres that were in the farm the former student of agriculture was then farming, was the best term to use in securing information as to the relative size of the farm units. At that time it was felt that the term "acres cultivated" would be misleading.

It was found that some former students interpreted the word "tillable" to mean land that was in farm crops or land that could be placed in regular farm crop production. Therefore, in some cases, a further check had to be made and in several instances an adjustment was necessary. In future studies it would probably be better to use the term "acres-under-the-plow."

Factors that were individually significant, relative to determining the likelihood of farming, and factors that were significant only when the accumulative effect of two or more were considered, were not determined in this study.

The average age at which former students advanced to a different status could not be determined because of improper designing of the questionnaire.

II. SAMPLE SELECTION

Preliminary work revealed that 802 former students of agriculture had successfully completed one or more years of training in this field. Considering the mileage, mailing, and other contact work involved, it was decided to use a random sample consisting of fifty percent of the total population. This sample was made up of two random samples consisting of 200 and 201 individuals, respectively. The two random sample practice was followed in order to aid in the proving or disproving of the representativeness of the sample.

Sample group "A" was selected by taking every fourth student, starting with the first name on the alphabetized list of all former students who had received credit for one or more years of study of agriculture at Flathead County High School. Thus, numbers four, eight, twelve, et cetera, made up sample "A". Sample "B" was made up of the names of numbers two, six, ten, fourteen, et cetera.

School years were dated from the beginning of school for that particular year. In this way, a former student who was placed in the 1913 year group finished his study of agriculture during the school year of 1913-14.

Students who successfully completed one or more years of an agriculture short course at Flathead County High School were considered in this study to be equivalent to students regularly enrolled in high school and taking one or more years of agricultural training along with their other high school studies. The agriculture short course was offered

each year from 1914 to 1919.

In order to compare the differences of farm conditions, establishment in farming, years of study of agriculture, and other factors, four time-period groups were established. There are three groups of ten years each and the fourth, or last group, covers the seven year period of 1943-49. Four time-period groups were thus established, with the first group being made up of students who terminated their high school study of agriculture during the school years of 1913-1922.

The last year that a student successfully completed in the study of agriculture was used to determine the time-period group in which he was placed. Students who did not receive credit for at least one year's completed work were not included in the study.

II. REPRESENTATIVENESS OF SAMPLE

In order to illustrate the representativeness of the sample, four tables were constructed to help reveal some of the different factors involved in becoming established in farming, and are presented in this section of the study.

As shown in TABLE I, sample groups "A" and "B" consisted of 401 individuals. Addresses were secured for 276, or 68.8 percent of the total. Of that number 170, or 61.6 percent, responded or were contacted for replies to the questionnaire. Six individuals were found who had received credit in agriculture, but who had not enrolled in, nor studied in this course. One student in group "B" received his credit improperly during the 1923-32 period. The other five unearned credits in agricul-

ture were recorded during the 1933-42 time-period. Further contact with each of these six individuals revealed that the extra credits were entered by the high school office personnel.

As might be expected, of the thirty known deceased individuals of both sample groups, fifteen were recorded for the 1913-22 time-period group, seven for 1923-32, six for 1933-42, and two for 1943-49.

TABLE I

SAMPLE GROUPS OF FORMER STUDENTS OF AGRICULTURE AT FLATHEAD COUNTY HIGH SCHOOL WHO WERE OR WERE NOT LOCATED AND WHO DID OR DID NOT RESPOND

Items	Sample Groups A	B	Percent of total	Percent of known addresses
Responded to questionnaire or were interviewed	86	84	42.4	61.6
Known address, but did not respond	50	56	26.4	38.4
Unknown address	45	44	22.2	X
Known deceased	18	12	7.5	X
Not a former student	1	5	1.5	X
Totals	200	201	100.0	100.0

The intent to farm, as reported by former students and as shown in TABLE II, reveals that of the seventy-five individuals who were not farming, thirty-five, or 46.7 percent, definitely plan on farming at a later date. Eleven individuals, or 14.7 percent, will farm if finances

are available. Twelve former students, or 13.8 percent, did not reply to this part of the questionnaire. Approximately one-third of the group that was not farming, did not intend to enter this occupation.

TABLE II

INTENT TO FARM AS REPORTED BY SAMPLE GROUPS OF FORMER STUDENTS OF AGRICULTURE AT FLATHEAD COUNTY HIGH SCHOOL

Responses	Sample Groups A	Sample Groups B	Percent
Definitely plan on farming	17	18	46.7
Will farm if finances are available	5	6	14.7
Do not plan on farming	13	12	33.3
Other plans	3	1	5.3
Totals of those responding	38	37	100.0
No response to above questions	5	7	13.8
Totals	43	44	X

All but six of the thirty-five former students who definitely plan on farming at a later date, terminated their high school education since 1933. Sixteen of the twenty-five who do not plan to farm, finished their formal schooling before 1933.

A letter or note was included with the questionnaire by twenty-three, or 15.3 percent, of the 150 individuals who replied by mail.

TABLE III

OCCUPATIONAL STATUS OF SAMPLE GROUPS OF FORMER STUDENTS OF AGRICULTURE AT FLATHEAD COUNTY HIGH SCHOOL WHO RECEIVED CREDIT FOR ONE OR MORE YEARS OF STUDY

Occupation	Years of study of agriculture	Sample Groups A	Sample Groups B	Percent in occupation	Percent each year of study
Farming 48.8%	1 Yr. H.S.	7	7	16.9	40.0
	2 Yr. H.S.	4	9	15.7	37.1
	3 Yr. H.S.	4	3	8.4	43.8
	4 Yr. H.S.	25	16	49.4	57.7
	1 Yr. Col.	0	0	0.0	0.0
	2-3 Yr. Col.	3	3	7.2	85.7
	4 Yr. Col.	0	2	2.4	40.0
	Totals	43	40	100.0	X
Occupations related to agriculture 15.3%	1 Yr. H.S.	3	3	23.1	17.1
	2 Yr. H.S.	3	3	23.1	17.1
	3 Yr. H.S.	2	1	11.5	18.7
	4 Yr. H.S.	5	4	34.6	12.7
	1 Yr. Col.	0	1	3.8	100.0
	2-3 Yr. Col.	0	0	0.0	0.0
	4 Yr. Col.	1	0	3.8	20.0
	Totals	14	12	99.9	X
Non-agricultural occupations 35.9%	1 Yr. H.S.	5	10	24.6	42.9
	2 Yr. H.S.	7	9	26.2	45.7
	3 Yr. H.S.	3	3	9.8	37.5
	4 Yr. H.S.	12	9	34.4	29.6
	1 Yr. Col.	0	0	0.0	0.0
	2-3 Yr. Col.	0	1	1.6	14.3
	4 Yr. Col.	2	0	3.3	40.0
	Totals	29	32	99.9	X
Total		86	84	X	X

Similarities of groups A and B are probably best shown in TABLE III. Here some of the various characteristics and numbers are shown on an extended scale. The greatest difference, between the groups, shown for any occupation amounts to three or less individuals.

TABLE IV

OBSTACLES THAT PREVENTED ESTABLISHMENT IN FARMING AS REPORTED BY FORMER STUDENTS OF AGRICULTURE AT FLATHEAD COUNTY HIGH SCHOOL

Responses	Sample Groups A	Sample Groups B	Percent
Lack of financing	18	20	52.1
Health	1	1	2.7
Do not like farming	0	1	1.4
War	4	3	9.6
Never did intend to farm	3	3	8.2
Home farm too small	2	0	2.7
Miscellaneous	5	5	13.7
Low farm prices	4	3	9.6
Totals	37	36	100.0

Groups A and B are shown separately in TABLE IV to again show the similarities of the two samples. Differences of numbers in any one item do not exceed two individuals.

When the data for this study were being gathered, it was not realized that most factors of information were not suitable for proving the representativeness of a sample by elementary statistical methods. All items of information that grouped to form a central tendency and a near normal curve were not suitable for placing in an adequate number of class intervals in order to prove or disprove statistical significance. Certain factors of information that did possess characteristics necessary to provide a sufficient number of class intervals were all markedly skewed positive.

The tendency of the data to either skew positive or not to be divisible into sufficient class intervals, made the proof of representativeness rest upon comparisons of the two samples.

FIGURES 1 and 2 are frequency polygons drawn to graphically illustrate the markedly positive skew of acres-under-the-plow as one of the factors considered in this study. FIGURE 1 is derived from this study and was based on 151 responses stating the number of acres-under-the-plow in the parents' farms at the time the former students were in school.

The number of acres under the plow involving the farm population of Flathead County, as shown by the preliminary United States Census for 1950, is illustrated in FIGURE 2. This frequency polygon is based upon a population of 1,418 individual farms and is more markedly skewed positive than the total combined sample groups.

The greatest frequency of individuals occurs at the twenty-five acre interval in the 1950 census polygon, whereas this same condition

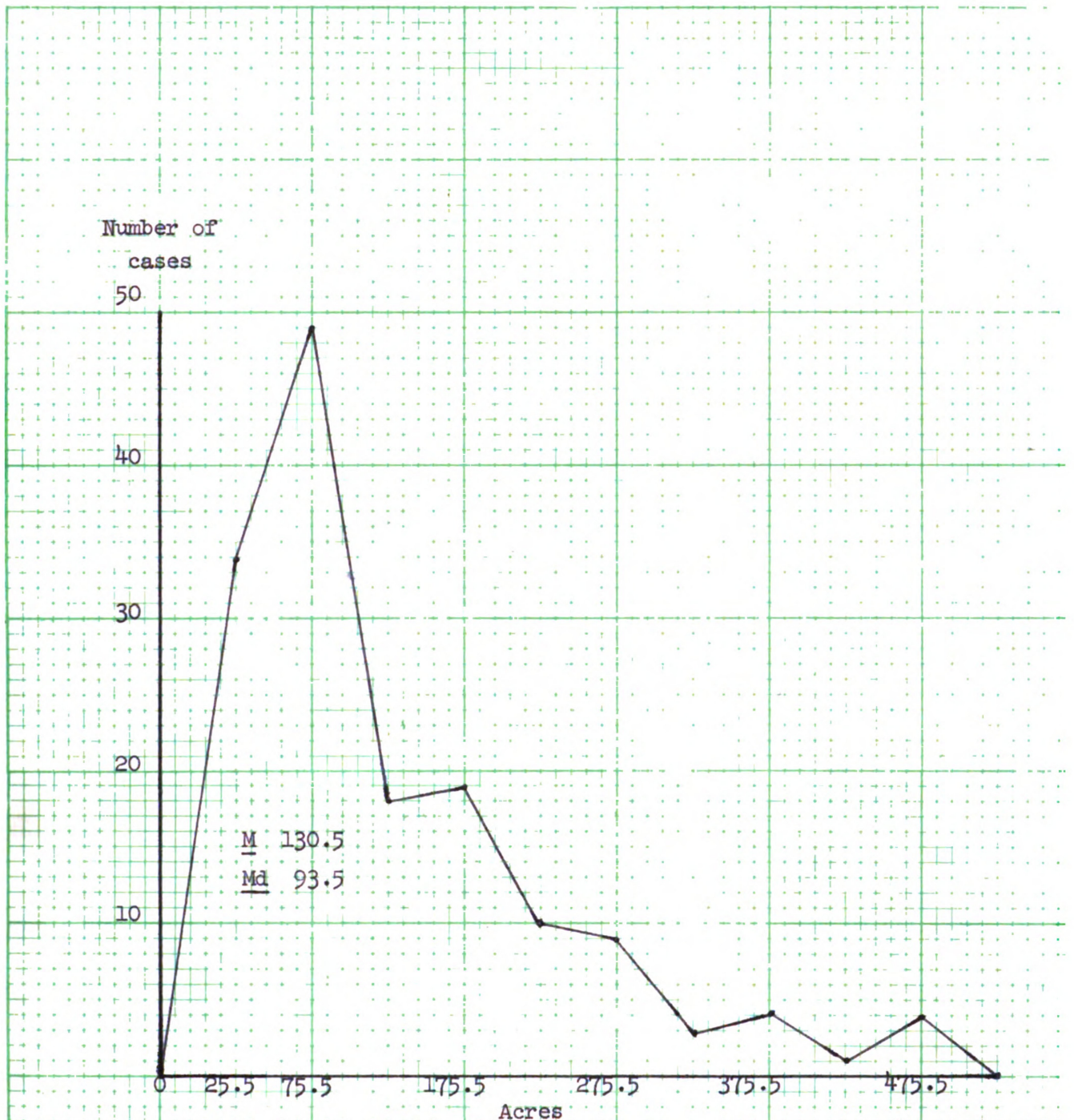

FIGURE 1

ACRES UNDER THE PLOW IN PARENTS' FARM WHEN STUDENT WAS IN SCHOOL

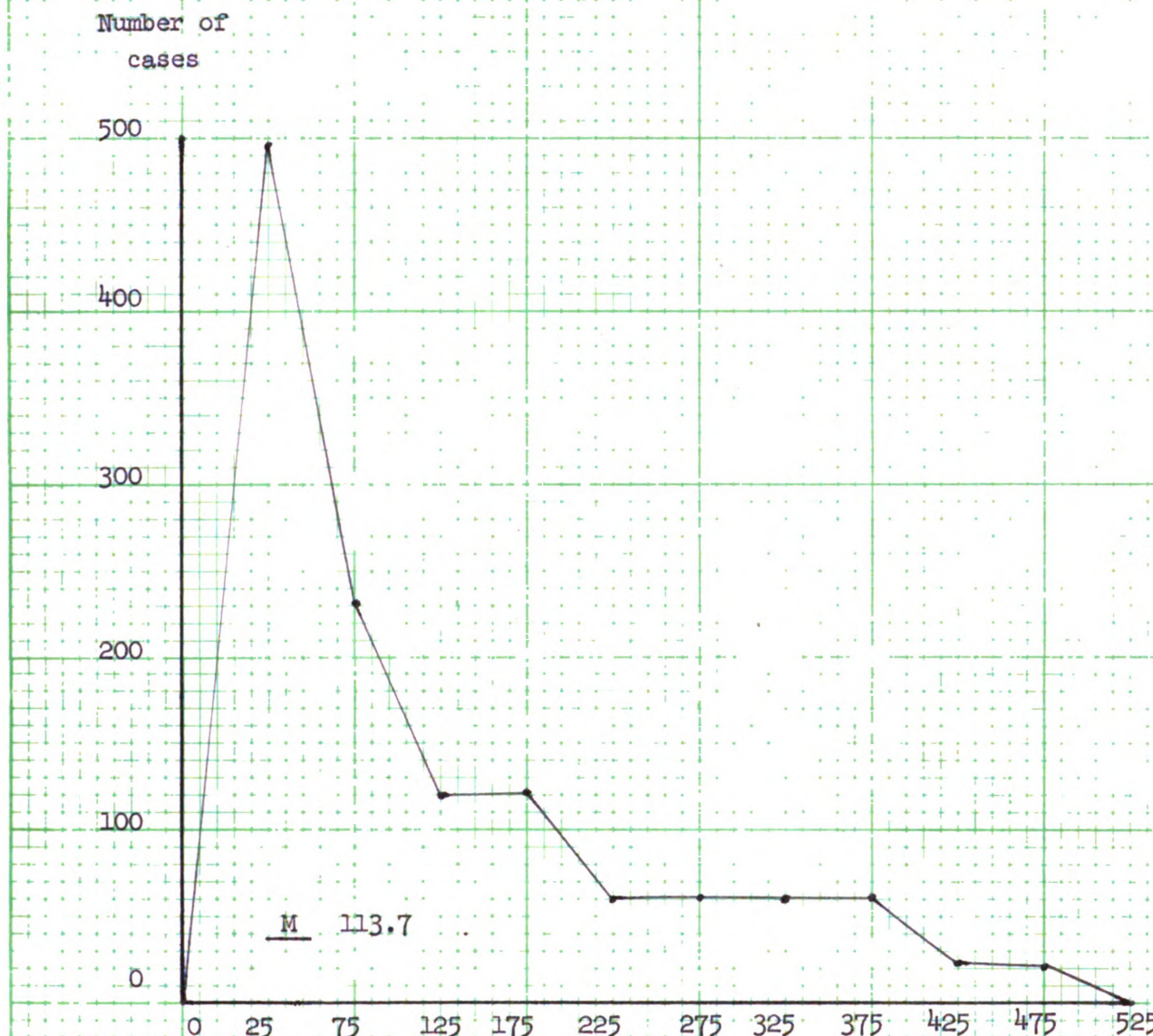

FIGURE 2

ACRES UNDER THE PLOW IN FLATHEAD COUNTY FARMS ACCORDING TO THE PRELIMINARY 1950 CENSUS OF AGRICULTURE

takes place at the seventy-five acre interval in the combined samples. It should be noted that due to differences in the original data, the two polygons can not be exactly compared, as there is a difference of plus one acre for each interval in the former student sample groups.

The skew of the data used in FIGURE 1, based on Pearson's formula $3\left(\frac{M-Md}{\sigma}\right)$, was 1.0. The skew of the same data, based on the formula suggested by Mills $\frac{(q_1 - q_2)}{(q_2 - q_1)}$ was o.4. Both formulas gave a markedly skewed positive value when compared with the degrees of skewness for each method.

Since the skewness of the composite sample has been proved, the proof of the representativeness of the data rests upon the comparison of the two samples used in the study. One of these comparisons is shown in TABLE V. The mean acres-under-the-plow in the parents' farms of sample A was 138.5 and that of sample B was 122.5. This gave a mean difference of sixteen acres. The difference of the median of the two samples was 5.4 acres. Sample A had a standard deviation of 109.0 and sample B was 106.0 for the same characteristic. Standard error of the mean and other measures of representativeness of sample data has been omitted since this data could not be fitted to a normal curve and would, therefore, not be applicable.

Contrary to what is happening in many other parts of Montana, the acres-under-the-plow per farm unit in Flathead County has shown only a slight increase in the twenty years preceeding the 1950 census. The small farms, under one hundred acres-under-the-plow, are becoming smaller. The large farms, with two hundred acres or more under culti-

vation, have shown the opposite tendency and are growing larger.

TABLE V

ACRES UNDER THE PLOW IN PARENTS' FARMS AT THE TIME FORMER STUDENTS WERE IN HIGH SCHOOL

Acres	Sample A f	Sample B f	Sample A + B f	Percent
1-50	16	18	34	22.5
51-100	25	24	49	32.4
101-150	6	12	18	11.9
151-200	11	8	19	12.6
201-250	5	5	10	6.6
251-300	8	1	9	6.0
301-350	2	1	3	2.0
351-400	2	2	4	2.6
401-450	0	1	1	.7
451-500	2	2	4	2.6
Totals	77	74	151	99.9
Mean	138.5	122.5	130.5	
Md	96.0	90.6	93.5	
σ	109.0	106.0	108.0	
V	78.7	86.8	82.7	
Sk	+ 1.1	+.9	+ 1.0	
Q_1	57.5	52.0	54.8	
Q_3	199.8	160.4	183.2	
QD	72.2	54.2	63.2	

There is about the same percentage of farms in the "200 acre-under-the-plow and up" classification, as shown in TABLE VI, today as there were in the composite sample group covering the 37 year period preceeding the taking of the 1950 census. However, the 1950 census does show that 40.4 percent of the farms in Flathead County have 49 acres or less under-the-plow. The composite sample of A and B shows that 22.5

percent of the parents' farms were in this small acreage class.

TABLE VI

SAMPLE GROUP ACRES-UNDER-THE-PLOW ON PARENTS' FARMS AT THE TIME FORMER STUDENTS WERE STUDYING AGRICULTURE IN HIGH SCHOOL COMPARED WITH THE PRELIMINARY 1950 CENSUS REPORT SHOWN IN PERCENTAGE OF INDIVIDUALS

Acres	Sample A + B 1913-1949	1950 Census
1-49	22.5	40.4
50-99	32.4	19.6
100-199	24.5	19.7
200-up	20.5	20.2
Total	99.9	99.9
Mean	130.5	113.7

In comparing the composite sample of A and B and the 1950 farm-census group in the interval of forty-nine acres or less under-the-plow, it must be pointed out that young men studying high school agriculture might tend to come from the larger farm units. This factor was not included in this survey in such a way that it could be studied.

The composite sample of A + B and the 1950 census percentages are not strictly comparable because of the difference of the time elements involved. There is also a difference of one acre in favor of the composite sample in each class interval when it is compared with the

census group.

A response was secured from 170, or 42.4 percent, of the 401 individuals who made up the two sample groups which represented 50 percent of the former students of agriculture at Flathead County High School. In studying TABLE I, it might be plausible to make the following hypotheses: (1) that the former students of agriculture who were farming or were in a related occupation would probably tend to respond more readily than those who were in non-agricultural employment; (2) that since eighty-nine, or 22.2 percent, were not available for study, that they were probably now located out of county or out of state. If one or both of these hypotheses were true, it would tend to increase the percentage of individuals now working in the non-agricultural occupations.

The hypothesis that former students of agriculture who were either farming or in related occupations would tend to reply in a higher percentage of cases than those in non-agricultural work was not borne out. The numbers and percentages are shown in TABLE VII. Individuals who did not respond were farming, were in related occupations, and were in non-agricultural work in about the same percentage of cases as those who did respond.

The second assumption pointed out that since eighty-nine former students could not be located, this group would probably tend to live out of county or out of state and tend, therefore, to be in the non-agricultural occupations to a greater degree than those who did respond or those who did live in Flathead County. Some forty-six individuals who were living out of county or out of state did respond, as is shown

in TABLE VIII. In this group there were 9.7 percent less individuals farming, 6.4 percent more in related occupations, and 3.2 percent more in non-agricultural work than there were in the sample of 170 individuals who did respond. (TABLE III) To this degree, the above hypothesis is tenable.

TABLE VII

KNOWN ADDRESS AND KNOWN OCCUPATION OF FORMER STUDENTS WHO DID NOT RESPOND

Items	Number	Percent
Known to be farming	34	49.3
Known related occupation	11	15.9
Known other occupation	24	34.8
Total	69	100.0

Sample groups A and B consisted of 401 individuals. The total number in the two sample groups equaled fifty percent of the former students who had taken and received a passing grade in agriculture at Flathead County High School. The individuals who made up the two sample groups were in the following categories: 170 responded to the questionnaire or were interviewed, sixty-nine had a known address and a known occupation, but did not respond, thirty-seven had a known address but did not respond, nor were their occupations known, eighty-nine had an unknown address, thirty were known deceased, and six were not former

students of agriculture.

TABLE VIII

OCCUPATION OF FORMER STUDENTS OF AGRICULTURE LIVING OUT OF COUNTY OR OUT OF STATE WHO RESPONDED TO QUESTIONNAIRE

Occupation	Number	Percent
Farming	18	39.1
Related to Agriculture	10	21.7
Non-agricultural	18	39.1
Total	46	99.9

It has been pointed out in the previous pages of this chapter that: the individuals who responded were in the three different occupational categories in practically the same percentages as individuals whose addresses and occupations were known, but who did not respond; the individuals who lived out of county or out of state and did respond to the questionnaire were employed in non-agricultural occupations in 3.2 percent more instances than was the case with the 170 who made up the total response group.

A compilation of the information, as to occupational status, secured from the two sample groups is shown in TABLE IX. The number of individuals in each occupation in sections (3) and (4) of this table were arrived at by using approximately the same percentages as was reported by those who lived out of state or out of county. The percent-

ages in each occupation for the total group of 365 former students, when compared with the 170 who responded, shows less than a four percent gain or loss for any one category. The occupations not related to agriculture had an increase (5) of 1.1 percent over the group of 170 who responded to the questionnaire.

In comparing the samples A, B, A + B, and the 1950 census, their means, medians, and other characteristics, it would appear reasonable to conclude that the composite sample of A + B represents a reliable sample of the 802 former students of agriculture at Flathead County High School.

Very little variation could be found when comparing the known occupation group with the response group or when comparing the total sample group with the response group.

In this chapter of the study it has been shown: (1) that there is a markedly positive skewness of some factors of the sample and census groups, (2) that a comparison of the two sample response groups with each other and with the 1950 census group do show reasonably similar factor characteristics, (3) that a comparison of the response group with the other divisions making up the totals of the two samples vary only slightly when considering percentages in the different occupation classifications.

The hypothesis, that the sample is representative, is reasonably tenable.

This section of the study has been presented to show the similarities of the two samples. Former students of agriculture included in

TABLE IX

PERCENTAGE AND NUMBER OF FORMER STUDENTS OF AGRICULTURE IN CERTAIN CATEGORIES IN RELATION TO OCCUPATION

Occupation	(1) Responded to survey (TABLE III)		(2) No response Known occupation Known address (TABLE VII)		(3) Known address Occupation not known Percentages based on (TABLE VIII)		(4) Unknown address (TABLE I) Percentages (TABLE VIII)		(5) Total number and percentage	
	N	%	N	%	N	%	N	%	N	%
Farming	83	48.8	34	49.3	14	38.0	34	38.0	165	45.2
Related	26	15.3	11	15.9	8	22.0	20	22.0	65	17.8
Non-agricultural	61	35.9	24	34.8	15	40.0	35	40.0	135	37.0
Totals	170	100.0	69	100.0	37	100.0	89	100.0	365	100.0

the samples were random members of the total population. As the two random samples do show similarities, statistical induction is a valid procedure.

The random samples differ very little in their characteristics and they do adequately represent the total population. Therefore, the addition of more names to the sample would not have been justified. The samples are placed together for the rest of the analysis.

IV. VALIDITY OF RESPONSE

In order to check the validity of response of those who stated that they were farmers when they were interviewed or replied to the questionnaire, the first ten names of former students who were farming, within checking distance, were selected from each of the two sample-group lists. The neighbors or the parents of these former students were then interviewed to determine the correctness of the original information.

Since about twelve months had elapsed between the securing of the original information and the check for validity, some minor changes were found, such as tillable acres of land in former students' farms. All of the former students who were checked were found in the same occupational category. Two of these former students had acquired more land and one had become an owner instead of a renter.

The names of the former students used in checking the validity of response were: Group A, Raymond Austen, Leroy Baker, Edwin Blasdel, Fred Broeder, Glen Brown, William Byrne, James Daley, Frank Foot, Harley

Fredenberg, and Earl Fritz; Group B, Gerald Baldwin, Boyd Blackmer, Allen Clark, Albert A. Dodge, Howard Glazier, Sam Graham, Gordon Grier, Carl Grosswiler, Peter J. Jensen, and Francis Keller.

The original responses of the twenty former students of agriculture that were checked were found to be valid. It would seem reasonable to assume that the information secured from the two sample groups of former students of agriculture at Flathead County High School was as valid as could be expected in this type of survey.

V. GENERAL CHARACTERISTICS OF THE GROUP

The grade curve for former students of agriculture at Flathead County High School approaches rectangularity. With the exception of the "one" grades, all grade frequencies had nearly the same values.

Of the 150 former students who made a written reply to the questionnaire for this survey, 15.3 percent added a note or a letter. Those who responded to the survey totaled 61.6 percent of the entire sample group for whom there were known addresses.

Most factors concerning this group of former students were skewed positive unless measures of personal traits, such as grades in school, were involved.

Only 2.7 percent of the former students felt that the home farm on which they were reared was too small. This study showed that a relatively small percentage of the former students who were raised on the smaller farm units became farm operators.

Lack of adequate finances was listed by 36.3 percent of the

former students who terminated their study of agriculture in high school during the 1913-1922 time-period, as the major reason they had been unable to become farm operators. In the last seven years covered in this survey (1943-1949) 71.4 percent of the former students listed the lack of finances as the major reason they were unable to become farm operators. Thus, according to the responses of former students, the securing of finances with which to start farming has become a major problem. Low farm prices was listed by 9.6 percent of those not farming as the reason they are not farm operators.

CHAPTER V

PRESENTATION OF FINDINGS

This follow-up study of former students revealed that during the school years of 1913 through 1949, there were 802 individuals who had taken and successfully completed one or more years of agriculture at Flathead County High School. Sample groups A and B were set up as a representative sample. Group A consisted of 200 and Group B of 201, making a total of 401 individuals in the two samples.

Of the 401 individuals, it was found that: six were not former agricultural students and that the office personnel in the high school had entered credits in agriculture for them; thirty were deceased; eighty-nine were unable to be contacted; 170 did respond and 106 did not respond to the questionnaire. Interviews were secured from twenty of the 170 individuals who gave information contributing to this study. Thus, 61.6 percent (TABLE I) of the individuals contacted responded and 77.8 percent of the group sought was found.

Death had claimed thirty, or 7.5 percent, of the two sample groups. As might be expected, fifteen of the deceased individuals, or 50 percent, terminated their high school education during the first ten years of the thirty-seven year period. Letters or notes were attached to the questionnaires returned by 15.3 percent of the individuals who responded by mail.

Former students reported that thirty-five of their numbers, or 46.7 percent, (TABLE II) who were not farming, definitely plan on farm-

ing at a later date. About the same percentages of individuals from each time-group reported this intention. Another eleven individuals, or 14.7 percent, reported that they would farm if finances were available. The remaining 38.6 percent did not plan on farming or had other plans.

Former students who successfully completed one or more years in the study of agriculture at Flathead County High School were in the following occupations: (TABLE III) farming, 48.8 percent; related to farming, 15.3 percent, and non-agricultural occupations, 35.9 percent. From the total group of former students who studied agriculture, 7.6 percent went to college. When this is figured on the basis of those who finished four years' study of agriculture in high school, it was found that 18.3 percent of this group took up one or more years of college work.

The average former student spent 2.8 years studying agriculture at Flathead County High School. The average number of years of study of agriculture for those who were in the three different occupation classifications were: farming, 3.0; related occupations, 2.6; and non-agricultural occupations, 2.6. The former students who were farming had a tendency to study agriculture for a longer period of time than did those who were in related work or in non-agricultural occupations.

Former students had a better chance of becoming established in farming when they studied three or more years of agriculture while they were in high school. Former students of agriculture at Flathead County High School were farming in the following percentages: one year of

study, 40.0 percent; two years of study, 37.1 percent; three years of study, 43.8 percent; and four years of study, 57.7 percent. The average establishment in farming for all levels of high school study (FIGURE 3) was 48.8 percent. A slight decrease in the percentage established in farming was reported for the two-year group, as compared with the group that studied one year of agriculture when they were in high school.

Former students of agriculture who were employed in related occupations composed 15.3 percent of the total group. Foresters and forestry employment had the highest number of individuals (4) of the fourteen divisions shown in TABLE X. There were four times as many former students employed in the most popular classification as compared with ones in which the smallest numbers were located.

A larger percentage of former students of agriculture became established in farming and were in related occupations as the program developed and grew older. During the first ten years that agriculture was taught at Flathead County High School (1913-1922, FIGURE 4), 31.6 percent of the students became established in farming. With the exception of 1933-1942, the percentage established in farming increased in each time-period group. The 1943-1949 group was farming in 63.3 percent of the cases. The slight drop in the percentage farming in the 1933-1942 group might be accounted for by any or all of the following factors: (1) low farm prices, (2) lack of drive on the part of the instructor, (3) lack of adequate and proper guidance, (4) drift out of farming.

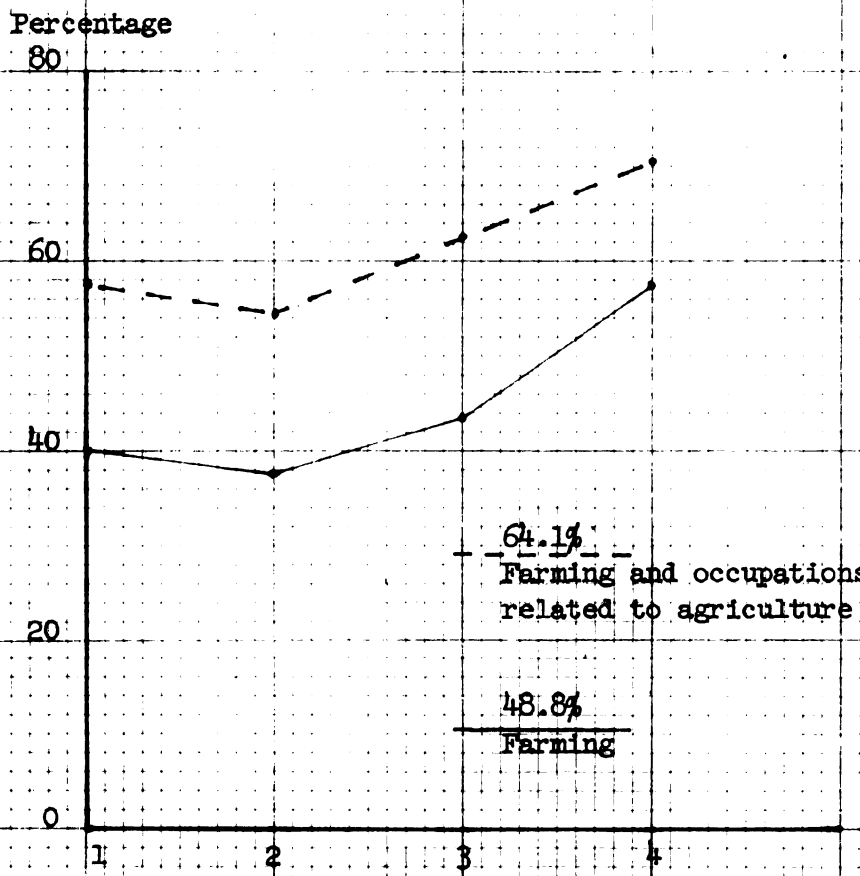

FIGURE 3

THE PERCENTAGE OF FORMER STUDENTS WHO HAD STUDIED ONE OR MORE YEARS OF AGRICULTURE AT FLATHEAD COUNTY HIGH SCHOOL IN RELATION TO THEIR OCCUPATION OF FARMING OR OCCUPATIONS RELATED TO FARMING

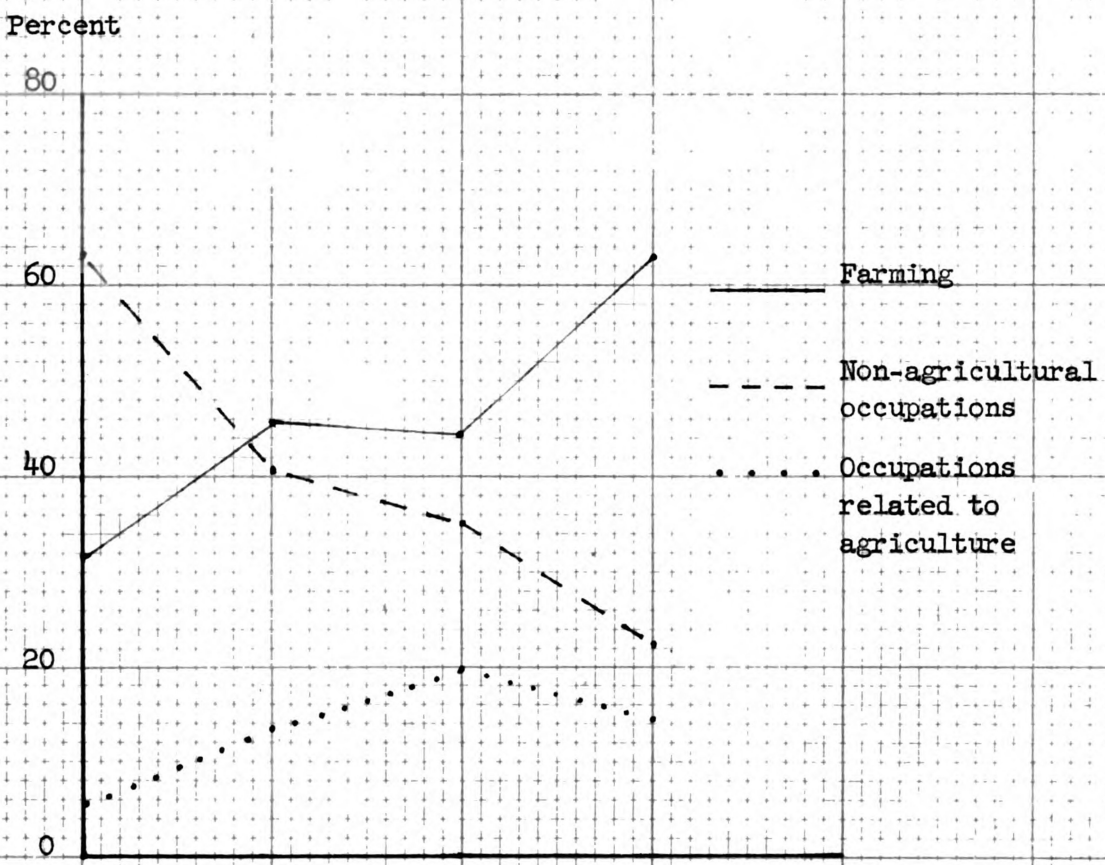

FIGURE 4

OCCUPATIONAL STATUS OF FORMER STUDENTS IN RELATION TO THE TIME PERIOD IN WHICH THEY TERMINATED THEIR STUDY OF AGRICULTURE IN HIGH SCHOOL

TABLE X

FORMER STUDENTS OF AGRICULTURE AT FLATHEAD COUNTY HIGH SCHOOL WORKING IN OCCUPATIONS RELATED TO AGRICULTURE

Related occupation	Number
Forester and forestry employment	4
Small farm plus woods work	3
Attending agricultural college	3
Rural salesman	2
Creamery worker	2
Farm laborer and woods worker	2
Farm machinery parts man	2
Christmas tree farmer or dealer	2
Creamery manager	1
Vocational agriculture teacher	1
Nursery operator	1
U. S. D. A. employee	1
State I. O. F. T. supervisor or teacher	1
Milk sanitation engineer	1
Total	26

The percentage of former students of agriculture entering non-agricultural occupations showed a decline for each of the four time-period groups studied. Non-agricultural occupations claimed the fol-

lowing percentages of farmer students for each of the time-period groups: 1913-1922, 63.1 percent; 1923-1932, 40.5 percent; 1933-1942, 35.4 percent; and 1943-1949, 22.4 percent.

Former students of high school agriculture who had also completed four years of college training, reported that 40.0 percent of their numbers were in non-agricultural work. The former students who had completed four years of college training were in non-agricultural occupations in a higher percentage of cases than those who terminated their formal education at the high school level or those who did not complete four years of college work.

TABLE XI

OCCUPATIONS OF FORMER STUDENTS OF AGRICULTURE AT FLATHEAD COUNTY HIGH SCHOOL WHO HAD TAKEN ONE OR MORE YEARS OF COLLEGE WORK

Occupation	One to three years of college study	Four years of college study	One to four years of college study
Farming	75.0	40.0	61.5
Related	12.5	20.0	15.4
Non-agricultural	12.5	40.0	23.1
Total	100.0	100.0	100.0

Former students of agriculture who continued their education for

four years in college had a tendency: to go into related occupations, and to go into non-agricultural work in greater numbers than did those who had one or more years of college training, but who did not graduate from college, or those who had no college training. Former students who studied for three years or less in college became established in farming in greater numbers (TABLE XI) than did the group that discontinued its training at the high school level.

TABLE XII

HOME LOCATION AT THE TIME FORMER STUDENTS ATTENDED HIGH SCHOOL IN RELATION TO OCCUPATION

	Location of parents' home	Percent by home location	Percent combined locations
Farming	Farm	53.6	48.8
	Town	6.7	
Related	Farm	14.4	15.3
	Town	20.0	
Non-Agricultural	Farm	32.0	35.9
	Town	73.3	

Only 6.7 percent of the former students of agriculture who lived in town at the time they were going to Flathead County High School became occupied in the vocation of farming. This same group had 20.0 percent of its number (TABLE XII) in occupations related to agriculture. The town reared students had established 73.3 percent of their number in non-agricultural occupations. About one town reared student in four

became occupied in farming or in a related occupation. About one town reared student in fifteen reported that he was established in farming.

Former students of agriculture who were farming or in related occupations came from larger farms than did their classmates who were in non-agricultural occupations. Skewness is shown in FIGURE 5 by the difference of the mean and the median. The median in this case is a more desirable criterion to follow. The median in acres-under-the-plow for each of the following are: farming, 109.9; related occupations, 98.5; and non-agricultural occupations, 79.4. There was a difference in the median of the non-agricultural-occupations group, as compared to those who were farming, of 30.5 less acres-under-the-plow in their parents' farms at the time they were studying agriculture in high school.

More than one-half of the former students of agriculture were reared on farms of less than 100 acres-under-the-plow. Fifty-five percent, or eighty-three individuals, of the 151 (TABLE V) who responded to this part of the questionnaire were living on farms of 100 acres-under-the-plow, or less, at the time they were studying agriculture in high school.

Former students of agriculture who reported they were reared on farms of 101 to 200 acres-under-the-plow (TABLE XII) showed the highest percentage of their numbers farming. Of this group, 67.6 percent were farming and 10.8 percent were in related occupations. Former students who were reared on farms of 201 or more acres-under-the-plow were not farming in as high a percentage of cases as the 101 to 200 acre-group,

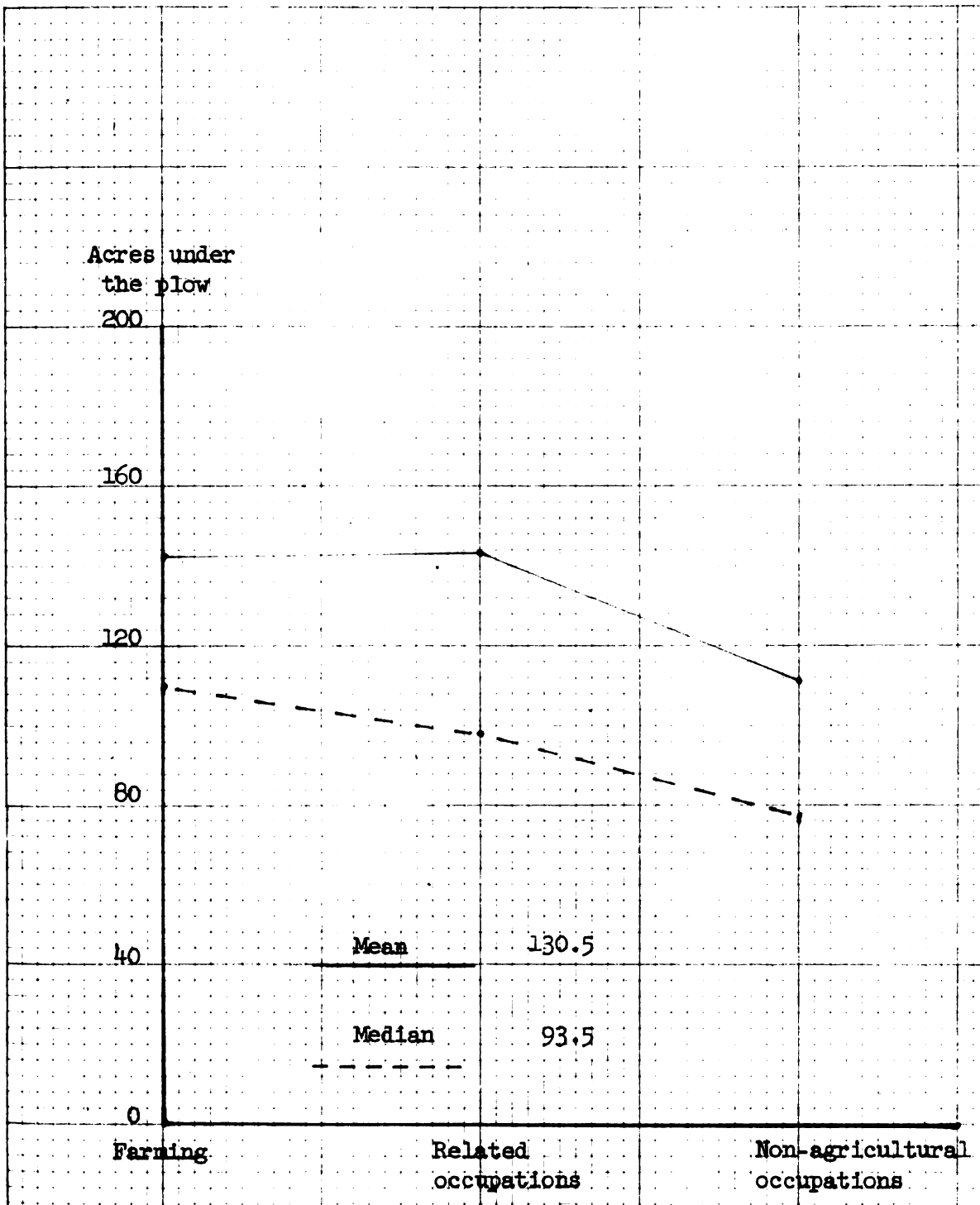

FIGURE 5

AVERAGE ACRES UNDER THE PLOW IN PARENTS' FARM WHEN STUDENT WAS IN HIGH SCHOOL IN RELATION TO HIS OCCUPATION

but were in related occupations in greater numbers.

Former students of agriculture who were reared on farms of 101 or more acres-under-the-plow were occupied in farming and in related occupations in a much higher percentage of cases than were those who were reared on the smaller units.

TABLE XIII

ACRES UNDER THE PLOW IN PARENTS' FARM WHEN FORMER STUDENT WAS IN SCHOOL IN RELATION TO OCCUPATIONAL STATUS

Acres-under-the-plow	Farming	%	Related	%	Non-agricultural	%	Total
1-100	36	43.4	12	14.4	35	42.2	83
101-200	25	67.6	4	10.8	8	21.6	37
201-500	16	51.6	7	22.6	8	25.8	31
Total	77		23		51		151

Ownership of the parents' farms seemed to be one of the important factors in determining the former agricultural students' chances of becoming occupied in the vocation of farming. Former students who were reared on farms owned by their parents (TABLE XIV) were in farming in 55.8 percent of the cases. Occupations related to agriculture claimed 15.9 percent of this same group. The remaining 28.3 percent were in non-agricultural occupations. Former students who were reared on farms

their parents both owned and rented were working at non-agricultural occupations in 41.2 percent of the cases. Non-agricultural occupations claimed 48.0 percent of the former students of agriculture who were living on farms their parents were renting at the time these students were attending high school.

TABLE XIV

DEGREE OF OWNERSHIP OF PARENTS' FARM AT THE TIME THE FORMER STUDENT WAS IN SCHOOL IN RELATION TO HIS OCCUPATIONAL STATUS

Ownership of parents' farm	Farming	%	Related	%	Non-agricultural	%	Total
Owned	63	55.8	18	15.9	32	28.3	113
Owned and rented	6	35.3	4	23.5	7	41.2	17
Rented	9	36.0	4	16.0	12	48.0	25
Total	78		26		51		155

Former students of agriculture who had no brothers living at home at the time they were studying agriculture in high school, or had three or more older brothers at home, or had two or more younger brothers at home, reported that a smaller percentage of their numbers became established in farming or in related occupations than did the former students who had had one or two older brothers or one younger brother at home during this time.

TABLE XV

NUMBER OF BROTHERS AT HOME WHEN FORMER STUDENTS OF AGRICULTURE WERE IN HIGH SCHOOL IN RELATION TO THEIR OCCUPATIONAL STATUS

Brothers at home	Farming		Related		Non-agriculture	
	N	%	N	%	N	%
No brothers	25	54.3	4	8.7	17	36.9
One older brother	18	47.4	9	23.7	11	28.9
Two older brothers	12	66.6	0	0.0	6	33.3
Three or more older brothers	1	25.0	1	25.0	2	50.0
One younger brother	27	50.0	9	16.6	18	33.3
Two younger brothers	6	31.6	4	21.0	9	47.4
Three or more younger brothers	8	40.0	1	5.0	11	55.0
One younger or older brother	27	50.0	9	16.6	18	33.3
Two younger or older brothers	14	43.7	8	25.0	10	31.2
Three younger or older brothers	6	50.0	1	8.3	5	41.7
Four or more younger or older brothers	8	40.0	1	5.0	11	55.0

In this study, as is shown in TABLE XV, former students of agriculture who had three or more younger brothers or four or more older brothers at home during the time they were in high school had a relatively small percentage of their number becoming established in farming and in occupations related to agriculture. Former students of agriculture who had one older brother at home during the time they were in

high school reported a slightly higher percentage of their numbers established in farming and in related occupations than did any other brother or non-brother combination.

Former students of agriculture who reported that they were reared on farms of below average fertility had a relatively poor chance of becoming established in the vocation of farming. The soil fertility of the parents' farm compared with the former student's occupation is shown in TABLE XVI. The three different ratings of soil fertility, as reported by former students, showed the following: below average, 46.4; average, 51.8; and above average, 56.1 percent of the total number of former students from each class of soil fertility established in farming.

TABLE XVI

FERTILITY OF PARENTS' FARM AT THE TIME THE FORMER STUDENT OF AGRICULTURE WAS IN HIGH SCHOOL COMPARED WITH THE FORMER STUDENT'S OCCUPATIONAL STATUS

Fertility of parents farm	Farming		Related		Non-agricultural		Total
	N	%	N	%	N	%	
Below average	13	46.4	3	10.7	12	42.9	28
Average	44	51.8	13	15.3	28	32.9	85
Above average	23	56.1	7	17.1	11	26.8	41
Total	80		23		51		154

The response of former students indicated that too much leisure time on the home farm at the time they were attending high school probably was not conducive to establishment in the vocation of farming. The amount of leisure time each week of these former students of agriculture while they were attending high school is shown in TABLE XVII. Former students who had nine hours or less of free time each week and thus were kept relatively busy on their parents' farms while they were attending high school were established in the vocation of farming and in occupations related to agriculture in 69.3 percent of the cases. Former students who had ten or more hours of leisure time each week, in comparison, had an establishment in the above classifications of 56.9 percent.

TABLE XVII

LEISURE HOURS SPENT EACH WEEK ON THE PARENTS' FARM AT THE TIME THEY WERE ATTENDING FLATHEAD COUNTY HIGH SCHOOL AS REPORTED BY FORMER STUDENTS OF AGRICULTURE IN RELATION TO THEIR OCCUPATIONAL STATUS

Leisure hours each week	Occupation	Total	Percent
Little (nine hours or less)	Farming	59	58.4
	Related	11	10.9
	Non-agric.	31	30.7
Much (ten or more hours)	Farming	22	37.9
	Related	11	19.0
	Non-agric.	25	43.1
Total		159	

According to the data presented in TABLE XVIII, between two-thirds and three-fourths of the former students of agriculture who are in the occupation of farming are farming in Flathead County. Thus, former students of agriculture at Flathead County High School tend to stay in the area in which they secured their high school education.

TABLE XVIII

OCCUPATIONAL DISTRIBUTION AS REPORTED BY FORMER STUDENTS OF AGRICULTURE AT FLATHEAD COUNTY HIGH SCHOOL

Occupation	Number	Percent
Farming in Flathead County	59	71.1
Farming in other areas of Montana	21	25.3
Farming out of state	3	3.6
Totals	83	100.0

Of the former students of Flathead County High School who are now farming, 71.1 percent are farming in Flathead County; 25.3 percent are farming in other areas of Montana; and 3.6 percent are farming out of the state.

Lack of adequate financing was reported by 52.1 percent of the former students of agriculture as the major obstacle that prevented their establishment as farmers. Other reasons reported by these former students, as shown in TABLE IV, were: health, war, low farm prices, home farm too small, did not like farming, did not intend to farm when

studying agriculture in high school, and miscellaneous reasons. It was shown in TABLE XII that 43.4 percent of the former students reared on farms of less than one hundred acres-under-the-plow became established in farming. This was a much lower percentage of establishment than the former students from the larger farms reported. Former students who studied agriculture, even though they did not intend to farm, amounted to 8.2 percent of the group who were not farming.

Over fifty percent of the former students of agriculture who were not farming, expressed intentions of farming at a later date. Thirty-five, or 46.7 percent, of the seventy-five former students who responded to this part of the survey stated that they definitely plan on farming at a later date. Another 14.7 percent reported that they would farm at a later date if finances were available. As shown in TABLE II, twenty-five, or 33.3 percent, of the former students who were not farming did not plan on farming in the future. Sixteen of these thirty-five former students who did not plan on farming, terminated their formal schooling before 1934. Less than 40.0 percent of those who were not in the occupation of farming had plans other than farming or did not plan on farming as a future occupation.

The responses of former students of agriculture showed that they owned larger farms than those upon which they were being reared at the time they were studying agriculture in high school. Four former students, or 7.8 percent (TABLE XIX), owned farms of fifty acres or less. The sample group of 170 former students reported that on their parents' farms, at the time they were in high school, thirty-four, or 22.5 per-

cent, had fifty or less acres-under-the-plow. Former students also reported that 21.6 percent of their group who were farming owned farms with 301 or more acres-under-the-plow. At the time these former students were in high school, their parents' farms were reported to have 7.9 percent of the farms with 301 or more acres-under-the-plow. The average acreage of the students' farms at the time of this survey was about fifty percent larger than was the average acreage of the parents' farms at the time the former students were studying agriculture in high school.

Of the 170 former students of agriculture who were interviewed or who replied to the questionnaire, eighty-three, or 48.8 percent, were in the occupation of farming. Of the eighty-three who were farming, fifty-one, or 61.4 percent, were partners in a farm unit, farm renters, or farm owners. The remaining thirty-two individuals were managers, farm laborers, or otherwise directly working on a farm or farms. The sample group of 170 former students of agriculture reported that fifty-one of their number, or 30.0 percent, were farm operators.

The statements of former students did not seem to indicate that there was a definite pattern for becoming established as a farm operator. However, as shown in TABLE XX, there were certain types of work and management that were followed more often than others. After the termination of their formal education, 47.1 percent of the former students now established as farm operators reported that they had spent one or more years at home either on a definite or indefinite allowance. Being partners with the parents on the home farm for one or more years was reported by

43.1 percent of the former students who were farm operators. Working at occupations other than farming before becoming established in agriculture was reported by 41.2 percent of this group.

TABLE XIX

ACRES UNDER THE PLOW REPORTED IN FORMER STUDENTS' FARMS AND THE PERCENTAGE IN EACH ACRES-UNDER-THE-PLOW CLASSIFICATION REPORTED FOR THEIR PARENTS' FARMS AT THE TIME THE STUDENTS WERE IN HIGH SCHOOL

Acres under the plow	Students' farms		Parents' farms	
	Number	Percent	Number	Percent
3-50	4	7.8	34	22.5
51-100	16	31.4	49	32.4
101-150	7	13.7	18	11.9
151-200	7	13.7	19	12.6
201-300	6	11.8	19	12.6
301 and over	11	21.6	12	7.9
Totals	51	100.0	151	99.9
Median acres	140.3		93.5	

Former students of agriculture reported that relatively few of their numbers (21.6 percent) had been or were in the stage of farm renter and operator. Very few had worked at home for wages or had acted as a farm manager and then gone on to become a farm operator. When former students of agriculture did not receive an allowance for

working at home or did not become a partner on the home farm, a smaller percentage became established as farm operators. Former students reported that more of their numbers became established as farmers than those who did not receive an allowance for working at home, or those who did not become a partner on the home farm, when (1) they worked as a farm laborer away from home, (2) they worked at home with an enterprise income, or (3) they worked at an occupation unrelated to agriculture.

TABLE XX

TYPES OF WORK AND MANAGEMENT ENGAGED IN AT ANY TIME AFTER TERMINATION OF HIGH SCHOOL EDUCATION AS REPORTED BY FORMER STUDENTS IN BECOMING ESTABLISHED AS FARM OPERATORS

Responses		Percent
A	Home with a definite or indefinite allowance	47.1
B	At home with wages	7.8
C	Farm laborer away from home	21.6
D	At home with an enterprise income	21.6
E	Partner on other than the home farm	7.8
F	Partner on the home farm	43.1
G	Manager of farm other than parents'	2.0
H	Occupation other than farming	41.2
I	Renter and operator	21.6
J	Owner and operator	58.8

NOTE: The total percent exceeds 100 because many students, at different times, were engaged in more than one type of work.

Since the percentage of former students who were hired as farm managers was very small, this probably indicates a lack of opportunity in that status. This was also true of the status of farm partner away from home.

Relatively few former students of agriculture entered into partnerships in farming on farms other than those of their parents. As shown in TABLES XXI and XXII, most former students enter the partnership on the home farm status comparatively soon after leaving school and without entering into many of the categories participated in by those who were owner-operators. Most former students who were in the renter-operator status spent one or more years on the home farm with an allowance. Fifty percent of those who were renter-operators spent one or more years as partners on their parents' farms.

Former students reported that 46.7 percent of their number spent one or more years being paid an allowance on the home farm, after termination of their formal education, before they became established as owner-operators. Fifty percent of the owner-operator group reported that they spent one or more years working at unrelated occupations before they became established as farmers. Not one of the former students that reported they were farm owner-operators spent any time as a manager of a farm other than their parents', nor did they enter into a partnership with any other than their parents.

All former students reported that once they were partners on the home farm they were still in this status or were renter or owner-operators.

TABLE XXI

ROUTES TAKEN BY FORMER STUDENTS IN REACHING FOUR TYPES OF FARM OWNERSHIP AND OPERATION

Routes taken	Farm Status Reached			
	Away from home partnership	Home farm partnership	Renter and operator	Owner and operator
	Percent	Percent	Percent	Percent
A At home with an allowance	100.0	16.7	83.3	46.7
B At home with wages	0.0	0.0	0.0	13.4
C Farm laborer away from home	66.7	8.3	33.4	20.0
D At home with an enterprise income	33.4	16.7	0.0	26.7
H Occupation other than farming	66.7	16.7	33.4	50.0
E Partnership not on home farm	100.0	0.0	16.7	0.0
F Partner on the home farm		100.0	50.0	23.4
G Manager of farm other than parents			16.7	0.0
I Renter and operator			100.0	16.7
J Owner and operator				100.0

TABLE XXII

AVERAGE AGE OF FORMER STUDENTS OF AGRICULTURE AT FLATHEAD COUNTY HIGH SCHOOL IN THE FOUR FARM OWNERSHIP GROUPS

Farming status	Average Age
Partnership not on the home farm	23.0
Partnership on the home farm	21.8
Renter and operator	32.3
Owner and operator	36.1
Average age	31.5

Former students of agriculture reported that many different routes were taken in order to become established as a partner or as an operator in farming. TABLE XXIII shows that some routes took longer than others for the former students who were following them in order to reach the farm ownership and farm operator stage. Route number seventeen, in which the former students were at home on an allowance, had an enterprise income on the home farm, and worked at an occupation not related to agriculture, before they became owner-operators, showed that their group's average age was 46.3 years. The average age for the above group was 10.2 years older than the average age of those reporting that they were owner-operators.

The reports of former students revealed that the partnership status on the home farm was reached at an earlier average age than any

TABLE XXIII

AGE AT TIME OF SURVEY AND ROUTES TAKEN BY FORMER STUDENTS OF AGRICULTURE IN ORDER TO REACH THE FARM PARTNER OR OPERATOR STATUS

Routes taken	Number	Age range	Average age
1. A & C & H & E	2	19-24	21.5
2. A & D & E	1	26	26.0
3. A & C & H & F	1	30	30.0
4. A & F	4	20-22	21.0
5. D & F	2	17-22	19.5
6. H & F	1	28	28.0
7. F	4	17-27	20.3
8. A & C & H & I	1	25	25.0
9. A & F & I	2	26-33	29.5
10. A & I	1	46	46.0
11. C & E & G & H & I	1	33	33.0
12. I	1	31	31.0
13. A & B & C & D & J	1	42	42.0
14. A & B & H & J	1	30	30.0
15. A & C & F & H & J	1	32	32.0
16. A & C & F & I & J	1	38	38.0
17. A & D & H & J	3	44-48	46.3
18. A & D & I & J	2	27-55	41.0
19. A & F & J	3	24-50	33.7
20. A & H & J	2	36-42	39.0
21. A & J	2	31-42	36.5
22. B & I & J	2	30-36	33.0
23. C & H & J	3	23-41	33.3
24. D & H & J	1	29	29.0
25. D & J	2	28-36	32.0
26. F & H & J	3	32-43	39.0
27. H & J	1	35	35.0
28. J	2	24-29	26.5
Total number	51		
Total age		1607	
Average age			31.5

NOTE: Routes referred to by above letters are shown in TABLE XXI.

of the four types of partnership and management.

Former students reported in 50.9 percent of the cases that one or both parents were the person or persons who proved to be the most helpful in their becoming established in farming as a partner or as an operator. Another 25.5 percent reported, as shown in TABLE XXIV, that the agriculture instructor and the parents proved to be the most helpful. In 9.8 percent of the cases the agriculture teacher was the one who was chosen for this honor. The remaining 13.7 percent reported that others than the ones mentioned here were the most helpful to them in becoming established as a farm partner or operator.

TABLE XXIV

THE PERSON OR PERSONS REPORTED BY FORMER STUDENTS AS MOST HELPFUL IN ESTABLISHING FORMER STUDENTS OF AGRICULTURE AS FARM PARTNERS OR OPERATORS

Response	Number	Percent
Father	4	7.8
Mother	4	7.8
Father and Mother	18	35.3
Agriculture instructor	5	9.8
Agriculture instructor and parents	13	25.5
Other people	7	13.7
Totals	51	99.9

In checking the ways in which the agriculture department might have been of greater help to former students of agriculture while they were in high school, as listed in the questionnaire, forty-nine, or 39.5 percent, suggested more instructors' visits to the farm. More time spent on field trips was suggested by thirty-seven, or 29.8 percent, of the 124 former students who replied to this part of the survey. The idea that more time be spent in the study of farm management instead of enterprise production studies was suggested by sixty-four, or 51.6 percent (TABLE XXV), of the former students who replied to this

TABLE XXV

WAYS THE AGRICULTURE DEPARTMENT AT FLATHEAD COUNTY HIGH SCHOOL MIGHT HAVE BEEN OF GREATER HELP AS SHOWN BY THE RESPONSE OF FORMER STUDENTS

Response	Number	Percent
Instructor to have made more farm visitations	49	39.5
More time spent on field trips	37	29.8
More time spent on farm management instead of enterprise production studies	64	51.6
More time spent in farm shop work	48	38.7
No suggestions for improvement	6	4.8
More extensive study of farm financing	3	2.4
More complete study of soils	3	2.4
Miscellaneous items	9	7.3
More help after graduation	1	0.8

section of the survey. It is worth taking note of this last point.

As shown in TABLE XXVI, former students of agriculture at Flathead County High School reported that 44.3 percent of their numbers would like to receive further help from the high school in the study of farm management. Thirty-one, or 32.0 percent, would like to continue their study of farm marketing. Control of livestock dis-

TABLE XXVI

FARM PROBLEMS THAT FORMER STUDENTS OF AGRICULTURE FELT THE VOCATIONAL AGRICULTURE DEPARTMENT OF THE HIGH SCHOOL COULD HELP THEM SOLVE

Farm problems	Number	Percent
Farm management	43	44.3
Marketing	31	32.0
Disease control	39	40.2
Farm bookkeeping	34	35.1
Tax reports	25	25.8
Farm machinery maintenance and care	27	27.8
Soil fertility and management	62	63.9
Livestock feeding	1	1.0
Irrigation	2	2.1
Financing	3	3.1
Revolving loan fund	1	1.0

eases was asked to be studied further by 40.2 percent. The largest

number wishing to continue their studies consisted of sixty-two individuals, composing 63.9 percent of those who replied to this part of the survey, wanted further study in soil fertility and management. Other items in which twenty or more individuals were interested were: farm bookkeeping, machinery maintenance and care, and tax reports.

The responses of the former students of agriculture point out their desire to receive further help and instruction in certain subjects pertinent to their vocation.

Former students at Flathead County High School who received a "one" or a "two" as an average grade in their study of agriculture, had a tendency to go into farming or into occupations related to agriculture, in a higher percentage of cases than did the former students who received either a "three" or a "four" as their average grade. As shown in TABLE XXVII, forty-three former students with an average grade of "one" or "two" were farming, while forty former students with an average grade of "three" or "four" were in this same category. Of the former students who received an average grade of "two" in their study of agriculture, 69.0 percent were occupied in farming, 12.1 percent were in occupations related to agriculture, and 18.9 percent were in non-agricultural occupations.

Former students who averaged a grade of "one" in their study of agriculture at Flathead County High School went into occupations related to agriculture in 37.5 percent of the cases. This percentage was more than twice as large as that of any other grade-group for this category. The former students with an average grade of "one" in the

TABLE XXVII

THE AVERAGE GRADE RECEIVED BY FORMER STUDENTS OF AGRICULTURE AT FLATHEAD COUNTY HIGH SCHOOL IN RELATION TO THEIR OCCUPATION

Average grade in agriculture	Farming		Related		Non-agricultural	
	N	%	N	%	N	%
1	3	37.5	3	37.5	2	25.0
2	40	69.0	7	12.1	11	18.9
3	25	39.0	9	14.1	30	46.9
4	15	37.5	7	17.5	18	45.0
Total	83		26		61	

study of agriculture went into farming in about the same percentages as did the "three" and "four" grade students.

The former students with an average grade of "one" in agriculture showed the highest percentage established in occupations related to agriculture. Former students with an average grade of "two" were definitely the group with the highest percentage in the vocation of farming. The groups with an average grade of "three" or "four" in the study of agriculture, showed very little variation and had the highest percentage in the non-agricultural occupations.

CHAPTER VI

SUMMARY, MAJOR IMPLICATIONS AND RECOMMENDATIONS FOR FUTURE STUDIES

I. SUMMARY OF IMPORTANT FINDINGS

In the thirty-seven year period from 1913 to 1949, 802 former students were found to have studied and successfully completed one or more years of agriculture at Flathead County High School at Kalispell, Montana. This group was found to be in the following occupational groupings: farming, 48.8 percent; related to farming, 15.3 percent; and non-agricultural work, 35.9 percent.

A larger percentage of former students of agriculture became established in farming and in occupations related to agriculture as the program developed and grew older. Data collected for the first ten years of the study (1913-1922) showed 31.6 percent in farming, 5.3 percent in occupations related to agriculture, and 63.1 percent in non-agricultural work. The corresponding percentages for those who left high school during the second ten-year period (1923-1932) were: 45.9, 13.5, and 40.5; for the third ten-year period (1933-1942) the percentages were: 44.6, 20.0, and 35.4; and for the last seven years of this study (1943-1949) the percentages were: 63.3, 14.3, and 22.4.

The responses of former students of agriculture at Flathead County High School showed that a smaller percentage of these young men

went into non-agricultural occupations as the agricultural program at the high school developed and grew older. Non-agricultural occupations claimed the following percentages for each of the time-period groups studied: 1913-1922, 63.1; 1923-1932, 40.5; 1933-1942, 35.4; and 1943-1949, 22.4.

Former students of agriculture at Flathead County High School who were farming, tended to have the following factors associated with their occupation: (1) they studied three or more years of agriculture in high school, (2) they attended college, but did not become a graduate, (3) they finished their high school work recently, (4) they were reared on a farm, (5) the farm on which they were reared was above average in size and fertility, (6) their parents' farms were owned at the time the students were in high school, (8) they performed considerable home work on their parents' farms at the time they were attending high school, (9) they entered into a partnership on the home farm soon after leaving high school, or worked at home with a definite or indefinite income, (10) their parents took a definite interest in their establishment in farming, (11) they received higher than average grades in the study of high school agriculture.

The group of former students of agriculture who were in occupations related to agriculture had the following factors associated with their occupations: (1) they were reared in town or on a small farm, (2) if they were reared on a farm, it was probably rented, (3) they received higher grades in the study of agriculture in high school.

As compared with the other two groups, those in the non-agricultural occupations tended to have the following factors associated with their occupations: (1) they studied agriculture for less than three years in high school, (2) they were reared in town or on a small farm, (3) their parents' farms were rented, (4) their parents' farms were below average in fertility, (5) they had four or more brothers at home while they were in high school, (6) they performed relatively little work at home while they were in high school, (7) their grades in the study of agriculture were below average.

Of the group of former students who were farming as farm operators: (1) 71.1 percent of their numbers were farming in Flathead Valley, (2) 25.3 percent were farming in other areas of Montana, (3) they operated farms that averaged 50 percent larger than the farms on which they were reared, (4) 43.1 percent had at one time farmed as partners with their parents, (5) 47.1 percent had worked at home on a definite or indefinite income, (6) 41.2 percent had worked for one or more years at an occupation other than farming. Of those who were occupied in the vocation of farming, 61.4 percent were farming as partners, renters, managers, and owners.

The responses of former students definitely indicate the need of parental help in becoming established in farming. Since the percentage of former students who were hired as farm managers was very small, this probably indicates a lack of opportunity in that status.

Of the obstacles that prevented establishment in farming, former students reported that the following items were determining factors:

(1) the lack of adequate financing was reported by 52.1 percent, (2) 71.4 percent of the group who finished their high school education during the last seven years of this study reported the lack of adequate financing, (3) war was reported by 9.6 percent, (4) 9.6 percent reported low farm prices, (5) poor health accounted for 2.6 percent, (6) 1.4 percent did not like farming, and (7) 8.2 percent never did intend to farm.

Of the former students who were not farming, 46.7 percent reported that they definitely plan on farming, another 14.7 percent will farm if finances are available, and the remaining 38.6 percent do not plan on farming, or have other plans.

Suggestions as to ways in which the agriculture department at Flathead County High School could have been of greater help to the former students, as listed in the questionnaire, were checked as follows: (1) 51.6 percent reported that more time should be spent on farm management problems instead of enterprise production studies, (2) 39.5 percent reported that the instructor should have made more farm visitations, (3) 38.7 percent were for more farm shop work, (4) 29.8 percent reported that more time should be spent on field trips, (5) only 0.8 percent reported that the school should give more help after graduation from high school, (6) 16.9 percent either had no additional suggestions, or their suggestions were very scattered.

Former students of agriculture felt that the high school could help them in the future by working with them to solve the following problems: (1) soil fertility and management was asked for by 63.9

percent, (2) 44.3 percent wanted help with farm management problems, (3) 40.2 percent -- disease control, (4) 35.1 percent wanted farm bookkeeping, (5) 32.0 percent, marketing problems, (6) 27.8 percent, machinery maintenance and care. Five other types of study and help were asked for in decreasing percentages by these former students.

Former students of agriculture reported that 50.9 percent of their numbers felt that one or both parents were the person, or persons, who proved to be the most helpful in their becoming established in farming. Another 25.5 percent reported that the agriculture instructor and the parents were of the most help. In 9.8 percent of the cases, the agriculture teacher was the one chosen for this honor. The remaining 13.7 percent reported that others than the ones mentioned above proved to be the most helpful.

To become established as a farm-owner-operator or renter-operator, former students' responses indicated that after termination of their formal education, the following factors were important: (1) that they remain at home with a definite or indefinite allowance for one or more years, (2) that they remain at home with an enterprise income, (3) that they become a partner on the home farm, (4) or that they work at an occupation other than farming (although this was found to lengthen the time required to reach the farm-owner status).

II. MAJOR IMPLICATIONS

In making a review of this study, it becomes apparent that the

likelihood of becoming engaged in farming is associated with many factors. The data presented demonstrate in some measure the relationship of certain of these factors to the probability of farming. In most cases it is difficult to isolate the influence of each factor or to trace each factor through its complicated branches or close relationships with other factors that seem to have the same influence on results. Generally, more than one factor is indicative of opportunities, interest, and initiative. Each factor or combination of factors is likely to play a part in determining the direction of travel of the former student.

Former students of agriculture at Flathead County High School who are farming probably had more opportunity to farm as shown by: (1) their being reared on the larger farms, (2) their being reared on the farms with average or above average fertility, (3) they had two or less younger and older brothers at home at the time they were in high school, (4) their parents owned the farm units which they operated. In addition to opportunities, the factors of interest and initiative play a part as shown by the data, indicating that the boys who were farming were more apt to have: (1) studied three or more years of agriculture, (2) to have performed considerable work on the home farm while studying agriculture, (3) to have received better than average grades in the study of agriculture in high school.

The lack of opportunity probably is a major factor that helps to explain why only a small percentage of the town-reared young men actually engage in farming. This also probably applies to the young men who were

reared on small farms or were on farms that did not consist of an average economic unit. Since 52.1 percent of those who were not farming listed lack of finances as the major obstacle in their not being farmers, this also indicates to a degree their lack of opportunity.

The information presented in this study should have considerable value for the guidance of farm-reared boys in Flathead County. Knowing certain items of information for certain students, it is possible to predict with a better degree of accuracy the chances of their establishment in farming or in an occupation related to agriculture. Cause and effect relations have not been demonstrated in this study. The relations between factors are complex and many factors are probably closely associated with several others. For example, the former students of Flathead County High School who were reared on farms of one hundred or more acres-under-the-plow had a much better chance of becoming established in farming than did the farm-reared boys from the smaller farm units. However, the boys from the smaller units probably had less opportunity to: (1) develop a project program, (2) develop farming interest by having access to modern equipment and opportunities to practice improved farming methods, (3) acquire adequate working capital, machinery, or livestock.

Guidance may be made increasingly effective through the use of information of the type presented in this study. Knowing that certain individuals with an interest in farming are handicapped by various conditions and circumstances, the agriculture teacher and others should be in a better position to render valuable assistance. Present and pro-

spective students may be aided in exploring opportunities for placement on their home farms or in the county. For those who are farming as laborers or those who might be in this status at a later date, ways may be found for them to reach a better status at an earlier date. It is quite apparent from the evidence presented in this study that parent-son relationships are important in order for these young men to become established in farming. The teacher of agriculture should endeavor in all ways possible to be conscious of, and give assistance to improving, relationships between parents and sons.

III. RECOMMENDATIONS FOR FUTURE STUDIES

For the young men of Flathead County who have studied agriculture at Flathead County High School, much needs to be done in studying their careers and their advancement in life. Replacement trends among farmers of the valley need to be studied. Other problems for investigation include the isolation of additional factors associated with their occupation and their advancement, methods by which they become established, parent-son relationships which are effective in the students' establishment in farming, opportunities in related and non-farming occupations, and in placement and advancement.

The investigator would like to make another follow-up study of this group and the new former students at the completion of the next ten-year period.

Since this survey revealed that former students believe the agriculture department of the high school would be more effective if more

time were spent on farm management problems in place of enterprise production studies, this particular suggestion should be carefully analyzed and studied. Farm financing is rapidly becoming a major factor in the establishment of young farmers and needs much careful thought and study.

Acres-under-the-plow is apparently the most nearly accurate term to use when studying the amount of land farmed in the students' and their parents' farm units.

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Bartley, Hugh Jerome, "A Follow-Up Study of Pupils Enrolled in Vocational Agriculture in the High School at Mason, Michigan." Unpublished Master's thesis, Michigan State College, East Lansing, Michigan, 1942. 61 pp.

APPENDIX

FLATHEAD COUNTY HIGH SCHOOL

KALISPELL, MONTANA

VOCATIONAL AGRICULTURE DEPARTMENT

January 25, 1950

Mr. Carson Gray
Government Airport
Great Falls, Montana

Dear Mr. Gray:

We of the administration and of the vocational agriculture faculty feel that you, as a former student of agriculture at Flathead County High School, can be of assistance in improving this part of our curriculum. Information about yourself and suggestions that you might have to offer are necessary in order to bring about this achievement.

It is sincerely hoped that you, as one of the more than eight hundred former agriculture students of this high school, will help with this survey by sending in your answers and suggestions as soon as possible. Regardless of your present occupation, this information and your suggestions are important.

We hope that the enclosed questionnaire is self-explanatory. It is our sincere desire that you will take a few minutes to fill out completely the survey sheets. All information will be kept in strict confidence. For your convenience a self-addressed and stamped envelope is enclosed.

Yours truly,

Enc. 2

Kenneth A. Rawson, Principal

R. A. Olson, Vo. Ag. Instructor

H. E. Robinson, Vo. Ag. Instructor

FLATHEAD COUNTY HIGH SCHOOL

KALISPELL, MONTANA

VOCATIONAL AGRICULTURE DEPARTMENT

April 5, 1950

Mr. Clarke Wilson
Route #3
Kalispell, Montana

Dear Mr. Wilson:

Most of the survey sheets of former students of agriculture at Flathead County High School have been returned. We are wondering if your questionnaire was misplaced or lost in the mail? We are sending you a copy along with a self-addressed and stamped envelope.

If your suggestions and answers are now on the way, we wish to thank you for your time and effort. In case you have not yet placed your answers in the mail, there are still several weeks for you to do so. Your comments and suggestions are necessary in order to make this study as complete and accurate as possible.

We sincerely hope that you will be able to take a few minutes from your busy schedule to complete this survey. Remember that regardless of your present occupation the information and suggestions you have can be of help in improving the effectiveness of vocational agriculture.

We wish to thank you for your consideration and time spent in helping to make the agriculture course at Flathead County High School more useful.

Yours very truly,

H. E. Robinson
Vo-Ag Instructor

her/d
Enc. 4

SURVEY OF FORMER STUDENTS OF AGRICULTURE AT FLATHEAD COUNTY HIGH SCHOOL

_____ _____

Name _____ Town or City _____

Route or Street _____ State _____ Age ___ Date__

SECTION I. EDUCATION

1. Number of years completed in study of high school agriculture? ____ 1.

2. Number of years completed in college or university? ____ 2.

2A. Major _____ 2A.

2B. Name of college or university? _____ 2B.

3. Non-collegiate work at other institutions

3A. Length in weeks of short courses attended ____ 3A.

3B. Length in weeks of evening school attended ____ 3B.

SECTION II. PARENTS' FARM SITUATION AT THE TIME YOU ATTENDED HIGH SCHOOL

4. Did you live on a farm at the time you attended high school? ____ 4.

5. Number of acres in parents' farm ____ 5.

6. Number of tillable acres in parents' farm ____ 6.

7. Was parents' farm owned _____, rented _____, or both? ____ 7.

8. Number of brothers at home at the time you attended high school:

older brothers _____, younger brothers _____, Total: ____ 8.

9. Would you rate your parents' farm, as to size, as average, above average, or below average? ____ 9.

10. Would you rate your parents' farm as to fertility as average, above average, or below average? ____ 10.

11. Amount of free time you had on parents' farm while you were in high school. (Check one)

11A. Almost no free time each week for hobby, play, or recreation ____ 11A.

11B. Several hours each week for hobby, play, or recreation ____ 11B.

11C. Ten to nineteen hours each week for hobby, play, or recreation ____ 11C.

11D. Twenty to twenty-nine hours each week for hobby, play, or recreation ____ 11D.

11E. Thirty to thirty-nine hours each week for hobby, play, or recreation ____ 11E.

11F. Practically all time not spent in school your own ____ 11F.

SECTION III. YOUR OWN PRESENT FARMING STATUS

12. If you are not farming, what is your present occupation? ____ 12.

12A. If you are not farming, what one thing do you consider the main obstacle that stopped you in attaining your goal? _____ ____ 12A.

12B. If at all possible, do you plan on farming later? ____ 12B.

13. Is the major portion of your income from farming? Yes ____ No____ 13.

14. Number of acres in your farm ____ 14.

14A. Tillable acres in your farm ____ 14A.

15. After termination of your schooling, how many years (approx.) did you spend, if any, in each of the following stages which

led to your present farm status. (Note: In case there have been no years spent at a specific stage, enter 0 in the column.)

15A. At home with a definite or indefinite allowance ____ 15A.

15B. Farm laborer at home with specific wages ____ 15B.

15C. Farm laborer away from home ____ 15C.

15D. At home with income from one or more enterprises ____ 15D.

15E. Partner in farm business away from home ____ 15E.

15F. Partner in farm business at home ____ 15F.

15G. Manager of farm for someone else ____ 15G.

15H. At work at other occupation ____ 15H.

15I. Renter and operator of farm ____ 15I.

15J. Owner and operator of farm ____ 15J.

15K. Other _____ ____ 15K.

16. Check one of the following items as to the person or persons who were most helpful in getting you established in farming

16A. Father ____ 16A.

16B. Mother ____ 16B.

16C. Both father and mother ____ 16C.

16D. Agriculture teacher ____ 16D.

16E. Agriculture teacher and parents ____ 16E.

16F. Other people _____ ____ 16F.

17. Check any or all of the following items that apply to how the agriculture department of the high school or the

agriculture instructor might have been of greater help to you in becoming established in farming.

17A. Instructor to have made more farm visitations ____ 17A.

17B. More time spent on field trips ____ 17B.

17C. More time spent on farm management instead of enterprise production studies ____ 17C.

17D. More time spent in farm shop work ____ 17D.

17E. Any other suggestions you might have _____

_____ ____ 17E.

18. Of the present farm problems that are now facing you, check the ones you feel it would be possible for the agriculture department of the high school or the instructors to help you.

18A. Farm Management ____ 18A.

18B. Farm Marketing ____ 18B.

18C. Disease Control ____ 18C.

18D. Farm Bookkeeping ____ 18D.

18E. Income Tax Reports ____ 18E.

18F. Machinery Maintenance and Care ____ 18F.

18G. Soil Fertilization and Management ____ 18G.

18H. Others _____

_____ ____ 18H.