

THE FIELD TRIP AS A TEACHING DEVICE
IN VOCATIONAL AGRICULTURE

by

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B. S., Kansas State Agricultural College, 1929

A THESIS

submitted in partial fulfillment of the
requirements for the degree of

MASTER OF SCIENCE

KANSAS STATE AGRICULTURAL COLLEGE

1930

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ACKNOWLEDGMENTS

Acknowledgments are hereby made for the valuable counsel and assistance rendered by the following: Dr. C. V. Williams, Professor of Vocational Education at the Kansas State Agricultural College, who acted as major instructor to the writer; to Professor A. P. Davidson, Associate Professor of Vocational Education; to Mr. L. F. Hall, itinerant teacher; to the supervisors of Vocational Agriculture in the various states; to the men on the firing line. Without their help we would have been unable to present this thesis.

REMINDER

Owing to the nature of the method used and the location of departments in widely separated areas, mistakes are no doubt present. Letters were exchanged with several where doubt existed as to the answers given. Scoring was checked carefully and rechecked by a different party. Interpretations where given, are those supported by the best thought in the field of Vocational Agriculture. The errors present are not intentional.

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AN ANALYSIS OF THE PROBLEM

General Objectives. The purpose of this study was to determine so far as possible, by means of field experience, correspondence, and readings, the place of the Field Trip as a teaching device in Vocational Agriculture; some of the problems that arise in its use; and to suggest possible solutions for them.

In a study of this kind, covering as much area as it does, and dealing with the vocational programs of twenty-one states which vary widely in content and quality, it would be only natural to expect many diversified answers. Notwithstanding this diversity, there is a basic current of underlying principles and tendencies which will be brought out as the discussion develops. Owing to the method of securing the answers, the survey treats of those practices as carried on by the most successful teachers in the area surveyed.

If by this study some inexperienced teachers are able to avoid some of the pitfalls incident to the use of the field trip in vocational agriculture; if some of the large body of more experienced teachers are able to profit by the results obtained and the summary sent back to them as a

partial payment for their time and trouble in answering the questionnaire, the writer will feel well paid for the time and effort.

Procedure: The data for this thesis was secured by sending out a detailed questionnaire of two hundred sixty-three questions. A copy was sent to each of the vocational departments in the Kansas high schools, most of whom answered them willingly and fully. (See Table I.) A letter was addressed to the supervisors of vocational agriculture in those states which have a vocational program similar to the one in Kansas. Permission was asked to send the questionnaire to the twelve teachers in their state who they thought were the best qualified along the line of the field trip. The content and purpose of the study was explained as well. Replies were received from twenty states. (See Table I.) A copy of the questionnaire was then sent to each of the designated teachers with the statement that he had been approved as one of the most successful teachers in his state from the viewpoint of the field trip. Nearly 72% of those outside of Kansas responded (see Table I). About 82% of the Kansas men answered. Some of them were written to again in order to get an interpretation of the answers made. As a return for the favor all were promised a copy of the findings. Many of them requested a copy of

the questionnaire for their own files. Table number I shows the states included in the study, the number of questionnaires sent out, and the number of replies received. On the whole, the response was indeed gratifying, making nearly a 75% return.

AN OUTLINE OF THE PHASES OF THE STUDY AS MADE

I. General Considerations

- A. Importance of the department
- B. Provisions concerning field trips
 - a. Number provided for the year
 - b. Number of actual field trips taken
 - c. Restrictions as to the number that can be taken
 - d. Quantity and quality of material available
 - e. Administrative requirements
 - f. Regulations concerning work missed
- C. Significant problems

II. Class Procedure

- A. Pre-arrangement
 - a. With the farmer
 - b. With the class
- B. During the actual trip
- C. After the trip is made

III. Transportation Problems

- A. Where the school authorities provide it
- B. Where the boys furnish it
- C. Where other agencies are used
- D. Charges made
 - a. By whom
 - b. Collected by whom
 - c. Trouble concerning collections
- E. Length of the trip
- F. Class are dismissed--where?

IV. Disciplinary Problems

- A. Personal problem or not
- B. Causes of disciplinary problems
- C. Precautions
 - a. What
 - b. When
 - c. Where

V. Possible Field Trips

- A. Dairy Enterprises
- B. Beef Enterprises
- C. Sheep Enterprises
- D. Swine Enterprises
- E. Poultry Enterprises
- F. Horse and Mule Enterprises
- G. Soil Enterprises

H. Grain Enterprises

I. Legume Enterprises

J. Forage Enterprises

K. Potato Enterprises

L. Garden Enterprises

M. Fruit Enterprises

N. Miscellaneous Enterprises

VI. Advantages of the Field Trip

VII. Pictures of Field Trips

VIII. Final Reminder

IX. Acknowledgments

X. Literature Cited

Table I
Questionnaire Data

State	Number sent out	Number returned	Per cent	
California	12	8	74.7	
Colorado	12	8		
Idaho	12	10		
Iowa	17	15		
Massachusetts	12	9		
Minnesota	12	12		
Missouri	12	8		
Montana	12	10		
Nevada	8	4		
Nebraska	12	11		71.6
New Mexico	12	8		
New York	10	8		
Oklahoma	12	6		
Ohio	12	5		
Pennsylvania	12	8		
North Dakota	12	9		
South Dakota	12	10		
Utah	6	5		
Virginia	12	8		
Wyoming	15	7		
Kansas	<u>109</u>	<u>89</u>	81.6	
Totals	345	258		

CHAPTER I
GENERAL CONSIDERATIONS

Foreword. Since the passage of the National Vocational Education Act in 1917--Smith-Hughes--the instruction in vocational agriculture by the secondary schools has been steadily increasing both in numbers of pupils enrolled and in the quality and interest of the instruction given.

Enrollment in All Day Federally Aided Agricultural Schools
in U. S. 1918-1929

1918	17,000	students
1923	58,000	"
1929	106,000	"

The last report of the Federal Board showed that vocational agriculture was being taught in nearly four thousand schools.

Some of the requirements of this act and a few of the rules and regulations of the Federal Board have a bearing upon this study. Each student enrolled in vocational agriculture must choose, own, and operate a project for at least six months of the year. The classroom instruction in technical agriculture may not be less than ninety minutes daily. The instructor, who must be a graduate of a college of

tion is given under natural setting. The field trip may thus include a number of the other methods at times. The individual projects may be visited on a project tour. The class may, and no doubt should often go to the feedlot and study the carload of baby beeves or hogs. The field of corn, kafir, or wheat likewise offers many valuable lessons. A trip to the butcher shop or abattoir will provide ideal demonstrations. Numerous illustrations will be drawn from the farm experience of the boys. Farm Studies are far-reaching and provide much basic material for instruction, especially if conducted by the boys.

Provisions concerning the field trip. One of the first considerations that arises when a field trip is being considered is whether the department is full time or not. If it is but half-time, class and instructor would be interested only indirectly in livestock during the Crops' year or vice versa. Furthermore, what provision can be made for the other classes if the instructor takes the agricultural class to the American Royal--time missed being more than the regular half day? According to the reports returned to Williams (10) seventeen of the twenty-one states surveyed had the half day or one hundred minutes available. Eight used the ninety-minute period either alone or in combination with the one hundred eighty-minute period.

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Nearly 69% of those replying had full-time departments. Approximately one-fourth had half-time departments. Colorado, Idaho, Missouri, Montana, Nebraska, Ohio, Oklahoma, Utah, Virginia, and Wyoming reported only full-time departments. Kansas had returns from departments which were as follows: full-time, 63%; half-time, 37%. (See Table II and Chart I.)

In outlining the year's work an instructor often has this dilemma--whether to provide field trips at certain places in the program or to leave them until later, possibly even upon the spur of the moment. Of those answering this questionnaire, 53% did not provide a definite number of field trips in their schedule; 42% did allow definitely for them. The returns from the Kansas men were slightly higher for not providing a definite number and lower for allowing it, being 57% and 40%, respectively. This becomes more interesting when one considers the answers to "What determines when you have them?" In Kansas 27% (24) answered: "When the conditions are suitable or as occasions arise." "When the weather permits" was given by 14% (13); "determined by the availability of material" was the deciding factor in 12% (11) of the cases. Other answers most often given were: "Seasonal jobs determine"; "Nature of the work being done"; "interest of the class." Only one

mentioned roads as being a determining factor. Only two mentioned "As time permits." Outside of the state, 18% (31) stated that they took them as the problems came up. The weather influenced 16% (28). "When the class needs them" was given by 15%. Others most frequently given were: "When facilities permit", "Determined by the job being taught", "Attitude of the class". Iowa and Missouri gave roads as a determining factor. A few said that they were taken "At the call of the farmer," or "As the needs of the community varied." Contests and extra-curricular activities came in for a censure because they interfered.

How many field trips are actually taken? Since the weather, class needs and the like are determining factors as to the number of field trips taken, how many trips do the boys get to take? In Table III is shown the number of field trips taken by the whole group during the Animal Husbandry and the Crops years. The range is certainly very wide for both. There were three teachers who took only four trips during the livestock year. On the other hand, two took over a hundred--one, one hundred eight, and the other, one hundred twenty. The average was about twenty-five. During the crops year there were twelve teachers who took only four trips a year; two who took

ninety; one who took one hundred eight. The average was about twenty. When the Kansas reports are removed from scores as shown by Table IV, there is very little change in either the Animal Husbandry year or the Crops' year. Table V shows but little change in the average number of trips taken by the Kansas teachers; but it does show that there is less range, for nearly all are forty or below. Eighteen teachers take less than fifteen trips during the livestock year; twenty-five teachers take less than fifteen trips during the crops year. It should be noted here that the state programs of California, Massachusetts, and Idaho are organized somewhat differently than indicated by Crops year or Livestock year. In Idaho the classroom instruction develops from a study of the individual projects, which usually include both livestock and crops. The second year they consider subject matter and problems which were left over from the first year. Shop is taught the third year; advanced shop is given the senior year. In the other states, certain enterprises are taught during each of the four years. When the individual states are considered, as shown by Table VI, the trips made vary widely within the same state as shown by Minnesota, where one teacher used less than ten while another used over sixty. They also vary widely with the different states as shown by Pennsyl-

vania and California. The former reports no teacher using more than twenty-five trips, while the latter reports six using more than forty with one as high as seventy-five. When one considers the seventy-seven reports of the Kansas teachers other than the twelve best, there are three teachers that use sixty or more trips during the livestock year--namely, Clay Center-60, Bazine-90, Lawrence-120. Twenty of them use about one a week.

When the Crops year is studied (Table VII), the number of trips in the same state and in the different states varies even more widely. California has one teacher who uses ninety or more trips and one who uses less than fifteen. Colorado has one who uses more than ninety and one who uses less than ten. Minnesota has one using more than sixty and one using less than ten. All of the North Dakota teachers use less than twenty-five trips. Pennsylvania uses less than twenty. Of the Kansas seventy-seven, only one used more than forty-five (Bazine-90). The average is distinctly less for the Crops than it is for the Livestock year.

Restrictions as to the number that can be taken. Is there any limit, local or otherwise, as to the number that may be taken? Table II shows that of those answering, 87% were allowed to take as many as they desired; less than 6% were limited in any way, excluding the 7% who did not answer

This certainly speaks well for the judgment exercised by most of the teachers as well as for the hearty co-operation of the community and the administrative officials. In the states outside of Kansas, the limits most often mentioned were the following: cost of the field trip to the district, inability to secure suitable material, difficulty of securing suitable transportation, not long enough time, seasonal development. In Kansas, the factors that limited the number were the following: finding suitable material, securing transportation, and available time to properly plan for them. In only two districts were the teachers asked to limit the number--one of them had one hundred trips averaging ten miles each, school furnishing the cars.

How many minutes long should the period be? Among the Kansas teachers, the time most common was about two hours (see Table VIII). None used, on the average, more than three hours. Only nine used trips averaging one hour or less in length. Among the other states, Iowa and Colorado were the only two ninety-minute states. Of the eight teachers reporting from Colorado, six of them used more than the ninety-minute period for their field trips. Iowa, with fifteen reporting, took the field trip within the ninety minutes allowed. The eight teachers from Massachu-

setts used one hundred twenty minutes or more on the average for their field trips. Nebraska, with eleven reporting, had ten using one hundred twenty minutes or more. On the other hand, Missouri, with eleven reporting, had ten using ninety minutes or less. All those in Ohio, Nevada, Idaho, and Virginia used ninety minutes or less. The Kansas seventy-seven vary widely. Three use fifty minutes or less while thirteen use the full one hundred eighty minutes. The average is about one hundred twenty minutes. When the scores of all the states outside of Kansas are considered as shown by Table X, there is seen to be considerable difference in the length of the period. Twenty-eight used less than the ninety minutes; twelve use one hundred eighty minutes or more, with four using an average of three hundred minutes. The average of the whole was one hundred to one hundred ten. When Kansas is included (Table XI), forty-three use less than the ninety minutes; twenty-four use one hundred minutes or more. The average is about the same.

Quantity and quality of material available. According to Table II nearly two-thirds of the teachers had difficulty in locating suitable material for field trips. By noting the next column, Crops was mentioned by 53% of the teachers as presenting the great difficulty. Livestock gave 35% of the teachers trouble in getting suitable

material. About 12% evidently had no difficulty in locating material for both. Forty-six of the teachers outside of Kansas, or about one-fourth, mentioned the inability of securing suitable material as one of the main factors as to why they did not take more trips. Seventeen of the teachers in Kansas mentioned that same reason for their not taking more trips. Sometimes this was due to the teacher's being new in the district; most of the time it was due to the fact that the community was not one in which general farming was practised, or else the crops and animals were not available during the school year. Possibly some teachers are trying to teach an agriculture that is not common to that community. If such be the case, then a revision is needed as the agriculture taught in any particular high school is to be built upon the enterprises and practices as carried on by the best farmers in that community. If some kinds of livestock are not found there, then make trips to the fairs or outside farms where the essential kinds may be studied with profit. Of the area surveyed, very few indeed did not have several kinds of livestock as well as several enterprises in the crops year.

Administrative requirements. In reply to the question as to whether they were requested to obtain permission or not before they left the school grounds, 55% said that they

were not (Table II-Chart I). Some 44% did ask permission or at least let the principal know where they were going.

Judging from the qualified replies, if the class was going on a minor trip and but little question was present that they would get back within the time of the regular period, no mention of the proposed trip was made to the principal other than the outline of the month's program as placed in his hands the first of each month or at the beginning of the school year. However, if the contemplated trip was such as to require more time than the regular period, then permission was always secured. Or if changes in the program were made, a note to that effect was left on his desk. Quite often it is advisable for him to have the names of the places to be visited so that, in case of urgent need, pupils may be reached.

Regulations concerning work missed. Suppose that the class does go to some fair or contest, what provisions are made beforehand? What ones are put off until the return? If only a few are taken, as when a team goes to a contest, what provisions are made for the rest of the class? By referring to Table II, some information is secured. Thirty teachers had the work made up beforehand; thirty-six had the class make up the work after they came back--this included both those who arranged for it with the separate teachers and those who arranged it with the principal. Seven said

that the students were excused, in most cases mentioning that the work in the other classes must be passing up to that time. Seventy-nine used a combination of "before they went" and "after they came back." One hundred forty-seven used all three methods. There is considerable doubling-up here due to a teacher or teachers' not always requiring the same method. Approximately 25% (65) of the teachers said that the remaining members of the class were sent to the study hall. These were in most cases given assignments such as completing note-books, outlining bulletins, solving problems concerning the work. Thirty-six mentioned that what was good for the team was good for the whole class, and so they took them all or none. If any training was given to teams as such, they were taken out after the regular school hours or on Saturdays and Sundays. Quite a few mentioned the fact that one cannot justify much time and expense for the training of three or four when ten to fifteen are back in the classroom or in the study hall. If the instructor was away with the team on a major trip, a substitute teacher was hired in fourteen cases. Regular classes were held with a senior student in charge in fourteen other cases. Apprentice teachers were accessible in seven cases. Eight schools allowed the boys to work on their individual

projects, the home being notified to that effect. Other possibilities were as follows: dismissed, do shop work, principal or superintendent teaches them, teams taken during the summer months or during the mid-year examinations, County Agent or farmer teaches. In Kansas 47% (42) of the classes were sent to the study hall when the team and the instructor were absent. 23% (20) were allowed to work on their home projects. Fifteen reported the boys' being allowed to work in the shop, some with supervision and some without. Fourteen were allowed to do home practice work. A substitute teacher was hired in a few cases. The other teachers or the administrative officials cared for the most of those left behind. An increasing number brought the whole class. Very few were allowed to work in the shop without supervision.

Significant problems. Besides those mentioned above, those most often mentioned were: the one or two members of the class who persistently caused disturbances; too many in the class; not time enough available to prepare for field trips; not able to get the objectives across; discipline; boys regard the field trip as a lark; inconvenience to the farmer; weakens the morale of the other teachers. In Kansas, besides the problems of finding suitable material, securing transportation, and time to properly plan for them,

the ones most frequently mentioned were: boys consider it a lark; improper conduct; especially in cars that the instructor is not riding in; large classes; handling the one or two disturbers; cuts into the periods of the other teachers too much; farmers fail to co-operate.

For the inexperienced teacher the field trip is a perplexing problem. So many have had an experience that was anything but pleasing. "Field studies," as given by Douglass,⁴ "miscarry, time and time again, due to poor advance preparation and unskilled management." Someone has said that there are four approaches to learning about a thing, namely: studying the thing itself, studying a picture of the thing, being told about it, and reading about it.

These methods are arranged in the order of their importance. The first is most important for these reasons: accuracy of the image, vividness of the image, economy of time, permanence of retention for most material.

Summary. In view of the above considerations and the remarks of the teachers as they answered the questionnaires, the following conclusions seem justifiable.

1. No definite time can be set at the beginning of the school year as to when field trips should be taken.
2. It seems best to provide a minimum number of

about one a week for each class and then add to or subtract as the occasions demand.

3. A very large majority of the teachers are allowed to take field trips as they wish.
4. Where the periods are one hundred eighty minutes long, or the vocational half-day, it would seem best to plan for work that would keep them busy for the entire time, allowing, of course, for the time needed in going and coming. This would be long enough to care for any ordinary trip.
5. If the period consists of but ninety minutes, then careful planning must be done in order to get enough work done to justify the trip.
6. One can be too choicy in the selection of materials. Under proper conditions, a poor type animal or someone's doing a thing in the wrong way may be of as much value as though it were nearly perfect.
7. Crops furnish more difficulty with reference to field trips than does livestock.
8. Much crop instruction must be done individually through the summer by the instructor.
9. Much more use might be made of the material found at fairs than is done at present.

10. It would seem desirable in most cases either to ask permission of the principal or to leave a note telling where the class was going on the trip and why.
11. So far as possible arrangements should be made beforehand with the other instructors in regard to the work missed while gone upon trips.
12. If feasible, the entire class should go to contests. If not, then some regular teacher, principal, superintendent, or substitute should conduct the class, following the carefully prepared outline of the regular instructor.
13. The significant problems were transportation, materials, and discipline.

Table 11.

General Considerations Concerning Field Trips in Various States

States	Ans.	Time		As many field trips as you wish		Definite number of field trips		Trouble to get material		Which presents greater difficulty		Get permission		Missed period made up		
		Full	Half	Yes	No	Yes	No	Yes	No	A.H.	Crops	Yes	No	Be-fore	After	Not a all
California No A.	8	4	3	7		5	3	4	4	4	4	3	5	1	2	1
		1		1											3	3
Colorado No A.	8	6		5	2	3	4	4	4	3	3	7	1	2	3	1
		2		1		1				2				1	3	
Idaho No A.	10	9		8	1	4	5	6	4	4	5	4	6	1	2	1
		1		1		1				1				2	3	
Iowa No A.	15	6	8	14		4	10	10	5	9	3	5	10	2	2	2
		1		1		1				3				5	6	
Kansas No A.	12	9	3	11	1	6	4	8	3	3	8	3	9	2	2	
						2		1		1				7	7	
Massachusetts No A.	9	6	3	9		4	4	4	4	2	4	6	3	2	2	1
						1		1		3				1	6	
Minnesota No A.	12	9	1	11		2	10	7	5	2	9	6	6	3	3	2
		2		1						1				1	5	
Missouri No A.	8	7		7		5	3	7	1	2	5	1	7	1	1	
		1		1						1				2	5	
Montana No A.	10	8	1	9		5	4	7	3	2	7	3	7	2	2	
		1		1		1				1				5	3	
Nebraska No A.	11	11		11		4	7	8	3	3	7	5	6	2	2	
										1				4	5	
Nevada No A.	4	2	2	4		2	2	4		2	2	1	3	1	1	
															2	
New Mexico No A.	8	3	5	8		6	2	6	1	3	3	3	5	1	1	1
						1		1		2					4	
New York No A.	8	8		7	1	1	5	5	3	2	4	1	7	2	2	
						2				2					5	
North Dakota No A.	9	2	7	8	1	4	5	5	3	3	4	4	5	1	1	
						1		1		2				1	7	
Ohio No A.	5	5		4	1	3	2	4	1	4	1	1	4		4	1
Oklahoma No A.	6	5		5		6		4	2	1	4	4	2	1	1	2
		1		1						1					5	
Pennsylvania No A.	8	6	2	7		4	4	4	3	3	3	2	6	1	5	1
						1		1		2						
South Dakota No A.	10	6	1	7		2	7	6	3	2	7	3	6	3	3	1
		3		3		1		1		1				3	3	
Utah No A.	5	3		4		5		3	2	2	3	3	2		1	1
		2		1											4	
Virginia No A.	8	7		7		3	4	6	2	6	2	4	4	1	1	1
		1		1		1								1	4	
Wyoming No A.	7	6		6		1	6	3	4	1	5	2	5	3	4	1
		1		1						1					3	
Kansas No A.	77	49	28	65	8	30	47	49	26	26	44	44	33	44	40	
				4				2		7						
Totals No Ans	258	177	64	224	15	109	138	164	86	89	137	115	142			
		17		19		11		8		32						
Percentage		68.6	24.8	86.8	5.8	42.2	53.4	63.5	33.3	34.5	53.1	44.5	55.			
		6.8		7.4		4.4		3.2		12.4		.5				

CHART 1

GENERAL CONSIDERATIONS

Our Vocational Agricultural department is full time.

////////////////////////////////////

68.6% of the 181 best teachers answered "Yes."

////////////////////////////////////

65.1% of the 89 Kansas teachers answered "Yes."

Our Vocational Agricultural department is half time.

////////////////////////////////////

24.8% (64) of teachers of other states answered in the affirmative.

////////////////////////////////////

34.8% (31) of Kansas teachers answered in the affirmative.

////

6.6% (17) of teachers of other states did not answer.

Are you permitted to use field trips as often as you think desirable?

////////////////////////////////////

86.8% (224) of teachers of other states answered in the affirmative.

////////////////////////////////////

85.3% (76) of Kansas teachers answered in the affirmative.

///

5.8% (15) of teachers of other states answered in the negative.

////////////////////////////////////

10.1% (9) of Kansas teachers answered in the negative.

//// 7.4% (19) of teachers of other states did not answer.

// 4.5% (4) of Kansas teachers did not answer.

Do you provide for a definite number of field trips in the year's outline?

////////////////////
42.2% (109) of teachers of other states answered in the affirmative.

////////////////////
40.4% (36) of Kansas teachers answered in the affirmative.

////////////////////
53.4% (138) of teachers of other states answered in the negative.

////////////////////
57.3% (51) of Kansas teachers answered in the negative.

// 4.4% (11) of teachers of other states did not answer.

/ 2.2% (2) of Kansas teachers did not answer.

Have you any trouble to secure material for field trips?

////////////////////
63.5% (164) of teachers of other states answered in the affirmative.

////////////////////
64.0% (57) of Kansas teachers answered in the affirmative.

////////////////////
33.3% (86) of teachers of other states answered in the negative.

////////////////////
32.5% (29) of Kansas teachers answered in the negative.

// 3.2% (8) of teachers of other states did not answer.

// 3.3% (3) of Kansas teachers did not answer.

Which is more trouble to locate material for field trips?

////////////////////
34.5% (89) of teachers of other states answered that animal husbandry was more difficult.

////////////////////
32.5% (29) of Kansas teachers answered that animal husbandry was more difficult.

////////////////////
53.1% (137) of teachers of other states answered that crops was more difficult.

////////////////////
58.4% (52) of Kansas teachers answered that crops was more difficult.

/////////
12.4% (32) of teachers of other states did not answer.

///
9.0% (8) of Kansas teachers did not answer.

Permission is secured from administrator before class leaves.

////////////////////
44.5% (115) of teachers of other states answered in the affirmative.

////////////////////
52.8% (47) of Kansas teachers answered in the affirmative.

////////////////////
55.0% (142) of teachers of other states answered in the negative.

////////////////////
47.1% (42) of Kansas teachers answered in the negative.

0.5% (1) of teachers of other states did not answer.

Table III- Number of Field Trips Taken on the Average in All the Area Surveyed

	f	d	fd																	
180	1	84	84																	

120	1	24	24																	
116																				
112																				
108	1	21	21																	
104																				
100																				
96																				
92																				
88	1	16	16																	
84																				
80	1	14	14																	
76																				
72	1	12	12	Mean= 25.26																
68																				
64				Median= 23.44																
60	7	9	63																	
56																				
52																				
48	6	6	36	Table III-a																
44	1	5	5	Number of																
40	14	4	56	Field Trips																
36	5	3	15	Taken During																
32	12	2	24	the Animal																
28	34	1	34	Husbandry																
24	36	0		Year																
20	36	-1	-36																	
16	10	-2	-20																	
12	57	-3	-171																	
8	24	-4	-96																	
4	3	-5	-15																	
0																				
Total	251																			
Not	7																			

ANSWERS 258 UNIVERSAL CROSS SECTION PAPER swered

Total 246
Not 12
An- 258
swered

	f	d	fd						
120	1	13	13						
115									
110									
105									
100									
95					f	d	fd		
90	1	12	12		90	1	14	14	
85					85				
80					80				
75					75				
70					70				
65					65				
60	1	6	6		60				
55					55				
50	1	4	4		50				
45				Mean = 25.94	45				Mean = 21.93
40					40	2	4	8	
35	6	1	6	Median = 24.69	35	2	3	6	Median = 23.66
30	18	0			30	12	2	24	
25	13	-1	-13		25	13	1	13	
20	12	-2	-24		20	15	0		
15	12	-3	-36		15	12	-1	-12	
10	16	-4	-64		10	17	-2	-34	
5	2	-5	-10		5	8	-3	-24	
0					0				
Totals	83				Totals	82			
Not answered	6				Not answered	7			
	89					89			
<p>Table V-a--Field Trips Taken During Animal Husbandry Year</p>					<p>Table V-b--Field Trips Taken During Crops' Year</p>				

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Table V- Showing the Number of Field Trips Taken on the Average by Kansas Teachers

	Calif.	Colo.	Idaho	Iowa	Kansas(12)	Mass.	Minn.
80							
75	1						
70							
65							
60	2						1
55							
50					1		
45			1				
40	3	2	2			2	
35		1			3		
30		3	1	3	1		1
25			1	2	2	3	2
20	1	1		5	3	1	1
15	1	1	2	2	2	2	5
10			2	3			1
5		1					1
0							
	Mo.	Mont.	Nebr.	Nev.	N.Mex.	N.York	N.Dak.
80		108-1	180-1				
75							
70							
65							
60	2				1		
55							
50	2	1					1
45		1					
40		1			1		
35		1		1			
30	1	1	2	1	3		1
25	1	2	1			2	
20	2	1	4	1	1	1	1
15			1	1	2	1	3
10		1	2			2	3
5							
0							

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Table VI- Number of Field Trips Taken During Animal Husbandry Year by States

	Calif.	Colo.	Idaho	Iowa	Kansas (12)	Mass.	Minn.
90	1	1					
85							
80							
75	1	1					
70							
65							
60			1				1
55							
50				1		1	
45							
40	2	2				2	
35			1	2	2		
30	1	1	3	3			
25		1	1		2	2	1
20	1		1	2	2	1	2
15	1	1	2	1	3	1	2
10	1	1	1	5	1	1	5
5		1		1	1		1
0					Not Ans. 1		
	Mo.	Mont. 108-1	Nebr. 180-1	Nev.	N.Mex.	N.York	N.Dak.
40						1	
35	1	1		1	1		
30	1	1	1		1	1	
25	2	1			1	1	
20	2		4		1	1	2
15		3	1	1	1		1
10	2	3	1	1	1		1
5			2			2	2
0							

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Table VII- Number of Field Trips Taken by Best Teachers by States During Crops' Year

Okla. Penn. S.Dak. Utah Va. Wyo. Kansas (77)

95									
90									1
85									
80									
75									
70									
65									
60									
55									
50									
45									
40									2
35			1						
30				1	1				12
25			1	1			1		11
20	1			1			1		13
15	2	5	1			4	3		9
10			4	2		3	2		16
5	3	2	2						7
0								Total	<u>71</u>
								Not Ans.	<u>7</u>
									<u>78</u>

Ohio

35
30
25
20
15
10
5
0

Okla. Penn. S.Dak. Utah Va. Wyo. Kansas

190								
180		2						13
170								
160		1						6
150			1					2
140								3
130			1			1		3
120		2	2	1		2		20
110								
100	1		1			1		1
90	3	1	2	2	6	3		13
80		2	2	1	1			5
70	2							1
60			1	1	1			6
50								
40								3
30								

76

Ohio

110	
100	
90	5
80	

Minutes	f	d	fd	Miles	f	d	fd
320							
310							
300		4					
290		19					
280		18					
270		17					
260		16		52			
250		15		50	1	19	19
240		14		48		18	
230		13		46		17	
220	1	12	12	44		16	
210		11		42		15	
200		10		40	1	14	14
190		9		38		13	
180	7	8	56	36		12	
170		7	Mean= 113.13	34		11	Mean= 16.4666
160	4	6	24	32		10	
150	3	5	15 Median= 97.43	30	1	9	Median= 8.852
140	6	4	24	28		8	
130	3	3	9	26	1	7	7
120	29	2	58	24		6	
110	7	1	7	22		5	
100		0		20	3	4	12
90	73	-1	-73	18		3	
80	16	-2	-32	16	3	2	6
70	6	-3	-18	14	12	0	
60	5	-4	-20	12	14	0	
50		-5		10	31	-1	-31
40		-6		8	21	-2	-42
30	1	-7	-7	6	17	-3	-51
20				4	28	-4	-112
10				2	22	-5	-110
0				0			
Total	166		+135		154		-267
Not Ans.	3				15		
	169				169		

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Table X- The Length of Field Trips in Minutes and Miles as Used by Best Teachers

	f	d	fd
200			
195			
190	1	20	20
185		19	
180	23	18	414
175		17	
170		16	
165		15	
160	9	14	126
155		13	
150	6	12	72
145		11	
140	3	10	30
135	7	9	63
130	3	8	24
125	2	7	14
120	52	6	312
115		5	
110	4	4	16
105		3	
100	5	2	10
95	1	1	1
90	94	0	
85		-1	
80	25	-2	-50
75		-3	
70	4	-4	-16
65		-5	
60	11	-6	-66
55		-7	
50		-8	
45		-9	
40	3	-10	-30
35			
Tot.	253		+940
Nota.	5		
	258		

Mean = 111.075

Median = 94.341

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Table XI- Length of Field Trip--in All Area Surveyed

CHAPTER II

TEACHING PROCEDURE

Introduction. In treating of the class procedure one should go back to the development of the course of study for that particular community. Stewart and Getman⁷ say that these six steps are fundamental to the development of any method:

1. Determining instructional purposes.
2. Evaluating the learner's experience.
3. Selecting what is to be taught.
4. Making an orderly arrangement of the content.
5. Teaching the lesson.
6. Checking the results.

A person needs to set up goals or objectives at the start in order to acquire "drive" of sufficient force to carry him through the difficulties that lie ahead. If the learner has had much experience in that particular field, then much use may be made of technical and related information. In order that there may be no gaps in the learning curve, each teacher needs to consider where each pupil is now as to age, abilities, attitudes, and skills. No doubt, most of the students will not be able to function nearly 100%; thus, an opportunity for the imparting of

instruction will be given. No teacher can teach all that is to be taught about most enterprises, nor can the high school pupil learn all that is to be learned. Not only must there be selection of subject matter, but also that which is selected must be so arranged that it has proper sequence. Under most conditions, the farm job, as it is done on the farm, or as it ought to be done, would be the lesson unit. Stewart and Getman⁷ say that the seven steps in the planning of a lesson are:

1. Stating the purpose and the chief problem.
2. Analyzing the problem.
3. Determining the unifying factors, or pivotal questions.
4. Determining the most effective approach.
5. Selecting the most appropriate forms of teaching.
6. Providing the "set-up" of the teaching situation.
7. Choosing a means of testing pupil achievement.

In the development of any lesson, its connection with those of the past should be made clear and an anchor thrown out so as to check wanderings. The problem, as set up, shows the pupil that he has some difficulties to overcome.

Purposeful teaching can only reach its goal after careful analysis of the problem at hand has been made. Certain elements may detract; others may focus the attention. Some objectives involve the making of decisions; others, the performing of manipulative processes and possibly the acquiring of some skill. "Effective mental systems are built up through the elaboration of a few main operations or decisions rather than through a large number of relatively unorganized problems."¹⁰ The making of the proper approach is vitally important under most conditions and more so under field trip conditions. As Schmidt⁶ reports: "There is much criticism of field work by superintendents. They say, 'Time is wasted; the boys do too much playing; boys regard field trips as joy rides on which to have a good time; teachers do not have the work organized; there seems to be no real serious purpose in the work.' This criticism has often gone so far that superintendents refuse to excuse classes for work." This will be touched upon more thoroughly under the heading of discipline. In the selection of the actual teaching form, the good teachers make the situations as comparable to farm conditions as possible. However, owing to the expenditure of much time and energy under certain conditions, one must pass up the ideal and do the teaching in the class room. In the outline,

at least two forms should be selected, and more are to be preferred. The weather, roads, class progress, and other factors do not work out as one expects. Guide-posts for the selection of the form of teaching as given by Stewart and Getman⁷ are:

1. Approximating the procedure of learning as it occurs in the natural settings.
2. Making a motivating approach.
3. Taking account of one's own preparation to teach.
4. Considering local facilities for teaching.
5. Noting allotment of time.
6. Taking account of non-vocational schedules.

In order that students may learn to caponize cockerels and to cull poultry, to buy calves for a baby beef project, to select seed corn for the next year's crop, to lay concrete walks, to make plantings in the home beautification contest, to spray for the control of bindweed, etc., it is quite necessary to simulate the conditions as they exist on the farm. However, dairying, to the boy who has to milk several cows night and morning by the hand method, would have but little appeal unless you brought in factors such as machine milkers, raising the herd average to four hundred pounds, selling the milk to a condensery or cream factory

at ten cents over local prices. Exact methods should be interspersed with those which are less exacting. The wise teacher uses many methods and many devices.

Pre-arrangements. Taking all the teachers in the area surveyed, slightly more than one-half used a brief observation guide which listed the points to be observed (Chart & Fig. II). The Kansas percentage was about the same. About 40% of all the group, and Kansas as well, used copy prepared by the boys in class. Only about one-fourth used a modified laboratory outline guide which listed the objectives, questions, and conclusions. Kansas had a slight advantage here, being about one-third, or 32.5%. When a study of the comments is made, the reasons for some of the above low per cents become apparent. In Kansas the teachers used a combination of methods including the above named ones. Among those most often mentioned were: score cards, placement cards, farm management blanks, spray calendars, outline blanks, laboratory outline prepared by the boys, problems set up with the boys' help, questions formulated beforehand and then asked the farmer--followed by a class room discussion, objective tests upon returning, problem suggested by the class room work. The field trip, as so aptly expressed by one teacher, "Should raise a problem, continue development of the problem, or settle a problem." Among those mentioned by the "best teachers"

were the following: boys and the instructor outline the work, giving the objectives, main points to be looked for; then, after returning to the class room, the questions are answered, facts clinched, and conclusions reached; often a story of the trip is required, the best ones being published in the agricultural paper, the high school paper, or the local paper; the purpose of that field trip is led up to through the work of the period before; teach the pupil and not the subject; enough work is outlined to more than keep them busy for the entire period and show them that you mean business; instructor demonstrates the work first, and then each pupil does it; upon rare occasions they are turned loose and told to report in a specified time with a report of what they have observed; make the trip fit the points previously discussed in the class room; get the farmer to help with the lesson by carrying on discussion with the boys--"He knows more about his business than anyone else;" many said that they made a rather complete study of the problem before they made the trip, and then let the field trip be the summary of the whole thing; others took a trip as an introduction to the subject.

One very valuable factor found was that 98% of both groups attempted to see the farmer personally concerning the proposed trip, in most cases at least getting some idea

of the quality of the animals, condition of the fields, or the practices to be studied. The telephone was used by 73% of the "best teacher" group just before starting on the trip. The Kansas men used it 75% of the time. The definite rings of animals, fields, and other objects for study were selected by 75% of the "best teacher" group in the preparatory visit. Only 63% of the Kansas teachers did this selecting during the first visit. It is certainly significant that 95% of the "best teacher" group tried to have the farmer present. Students were encouraged to ask relevant questions in 80% of the cases. The corresponding answers for the Kansas group were 92% and 77%. One would think, then, that the practices and quality of animals of the better than average farmers were used to a large extent by the teachers of vocational agriculture. A few mentioned the fact that the questions might be embarrassing, or the answers might go counter to the objectives of the field trip. The answer to the former might be that the questions should be asked of the instructor previously to determine whether or not they were all right. Even though the farmer might answer in the way not desired, the matter would be discussed later in the class room.

By far the greater number of the teachers recognized the importance of focusing the point of attention upon the thing at hand in that 86% of them attempted to give a clear

mental-set before settling to work. In response to the question, "When only a small group can work at one time, as in butchering, what do the others do?" Most of the answers fell into five groups, namely: observe; divide into squads and take turns; jot down the procedure with the idea of making constructive criticisms; do not butcher any more--not the community chore-boy; every boy has something to do either related work or else class does not go. These replies included about 75% of the teachers. It seemed to be the concensus of opinion by the older teachers who admit that they had numerous difficulties as beginning teachers that the crux of the matter was thorough organization. When the teacher knows the community well, has gained experience in handling high school boys, and the trip is well-organized in that each boy has plenty of work to do, has an interest in doing it, and knows how to go about it, there will be but few troubles. Some activities lend themselves better to group action with leaders, as pruning, butchering, seed selecting, etc.; others, as judging, should be individual work.

The "best teachers" collected the cards, reports, etc. as the class finished in 80% of the cases; the Kansas group was about the same, being 77%. That ample time was given in most cases is shown by the fact that only 15% of the

"best teacher" group collected the cards when the brightest were through; 25% of the Kansas group did collect them when the brightest were through. However, several supplemented their statement that there was a time limit as well. The cards were collected by 54% of the larger group before they left the farm; in Kansas, 47% did so. In the "best teacher" group, 19% collected the reports in the class room. In Kansas it was only slightly less. About 7% said that they never collected these reports. Possibly, they were used as working material and then oral reports were given afterwards. Both oral and written reports were popular with both groups, because 44% of the "best teacher" group and 39% of the Kansas group used them. About 25% of both groups used oral reports the majority of the time. That much use was made of the review or discussion after the trip was made is evidenced by the fact that 97% of the teachers used it. In fact, several said that the discussion was the most valuable part of the trip in that the various opinions were moulded into significant statements, the questions were cleared up, and the facts as found out were tied to the class work.

Conclusions. From the replies and remarks made, one would be justified in reaching these conclusions:

1. The guide sheet for use on the field trip

varied widely in form according to the object in view.

2. No one form should be used for all trips.
3. The outline should be developed in class before making the trip.
4. It should state the purpose of the trip, the main points to observe, include some pivotal questions, and, after discussion, arrive at some definite conclusions.
5. The instructor should see the farmer personally before the trip is made, and, so far as possible, select, with his help, the subjects for the study.
6. If at all possible, the farmer should be present and encouraged to participate in the discussion.
7. If not possible to keep boys busy upon one job, better not use that for a field trip.
8. The review or discussion of the trip in the class room is an important part of the work.

CHART 2
CLASS PROCEDURE

////////////////////////////////////
98% of all teachers visited the farmer beforehand.

////////////////////////////////////
97.7% of Kansas teachers visited the farmer beforehand.

////////////////////////////////////
72.8% of all teachers telephoned the farmer beforehand.

////////////////////////////////////
75.2% of Kansas teachers telephoned the farmer beforehand.

////////////////////////////////////
74.8% of all teachers selected animals or fields needed beforehand.

////////////////////////////////////
62.9% of Kansas teachers selected animals or fields needed beforehand.

////////////////////////////////////
94.9% of all teachers had farmer present.

////////////////////////////////////
92.1% of Kansas teachers had farmer present.

////////////////////////////////////
55.8% of all teachers used a brief observation guide.

////////////////////////////////////
53.9% of Kansas teachers used a brief observation guide.

////////////////////////////////////
38.7% of all teachers used copy prepared by boys during class.

Table XIII

States		Class Procedures on Field Trips in the Whole Group of States																															
		Teacher				Used				Cards Collected				Never		Oral Report		Reviews															
		Visits		Tele-phones		Selects		Farmer present		Brief		Copy								Modern Laboratory		Mental set		Ask Questions		All are used		Brightest		Before		Class room	
Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No						
California	No A.	8		5	2	5	1	8		4	4	1	7	1	7	7	1	5	3	4	3	1	5	2	4	3	4	2	3	3	4	8	
Colorado	" "	8		8		7	1	8		5	2	4	4	1	6	7		8		8		1	4	4	2	3	2	5	3	3	3	7	
Idaho	" "	10		7	2	9	1	10		6	3	8	2	3	6	7	1	9	1	10		3	4	6	4	1	4	5	5	2	5	10	
Iowa	" "	15		9	4	12	2	14	1	6	6	6	6	2	8	15		14	1	12	2		9	8	5	2	8	9	7	5	14	1	
Kansas	" "	12		10	1	11	1	10		7	4	2	6	3	6	10	1	11	1	10	1	1	6	7		2	2	5	6	1	6	11	
Massachusetts	" "	9		7	1	8	1	9		6	1	3	3	3	3	8	1	9		7			5	5	1	1	5	2	3	4	4	9	
Minnesota	" "	12		10	2	11	1	11	1	5	6	7	5	4	7	10		11		11	1		10	10	2	2	8	1	7	2	6	12	
Missouri	" "	8		5	2	8		8		7	1	3	5	2	5	7	1	7	1	8			5	6	1	3	4	4	4	2	6	7	
Montana	" "	10		7	1	9		10		6	3	3	5	3	4	7	2	8	2	8	1	1	6	4	2	1	4	1	4	4	3	10	
Nebraska	" "	10		9	1	11		11		7	4	4	6	5	5	11		7	3	10		1	6	8	1	2	5	5	5	5	1	11	
Nevada	" "	4		3	1	3		4		4		2	2		2	3		3		2		2	2	1	2	1	2	1		1	4		
New Mexico	" "	8		4	1	4	2	6		3	2	2	3	2	2	7		4	3	6		1	1	4	1	2	2	2	2	4	7		
New York	" "	8		4	3	7	1	7	1	5	3	3	5		8	8		8		3	2	1	4	6	1	2	3	1	4	1	5	8	
North Dakota	" "	9		6	2	8	1	9		3	4	5	4	2	7	8	1	4	5	8	1	1	8	7	1	2	5	4	3	6	9		
Ohio	" "	5		3	2	4	1	5		1	3		4		4	5		4	1	5		1	3	2	2	4	4	4	2	2	5		
Oklahoma	" "	6		6		4	2	6		4	2	2	4	1	5	5	1	3	3	6		2	4	4	1	4	1	3	3	4	6		
Pennsylvania	" "	8		6	1	6	2	8		6	1	1	7	1	6	5	2	7	1	8			8	4	4	5	1	4	2	4	8		
South Dakota	" "	9		6	2	5	3	9		5	3	2	7	1	8	8	1	6	2	6	3		7	7	2	1	6	2	5	5	5	10	
Utah	" "	5		5		3	1	5		4		3		4		3	2	4	1	3	1	1	2	1	1	2	3	1	1	2	5		
Virginia	" "	8		6	1	6	2	8		5	3	4	2	1	5	5	1	8		5	1	1	5	5	2	3	4	4	1	6	8		
Wyoming	" "	6		5	2	7		6	1	2	3	1	4	3	3	6		4	2	5	1	1	2	3	1	2	2	2	1	4	6		
Kansas	" "	75	2	57	17	45	27	72	4	41	28	34	31	26	40	67	4	58	15	59	4	21	27	35	14	14	30	4	32	21	29	75	2
Totals	No Ans.	253	2	188	48	193	50	245	8	144	86	100	124	68	149	221	16	205	45	206	21	38	135	140	48	50	112	18	115	74	115	250	3

////////////////////////////////////

40.4% of Kansas teachers used copy prepared by boys during class.

////////////////////////////////////

26.3% of all teachers used a modified laboratory outline guide.

////////////////////////////////////

32.5% of Kansas teachers used a modified laboratory outline guide.

////////////////////////////////////

85.6% of all teachers used a "mental set."

////////////////////////////////////

86.5% of Kansas teachers used a "mental set."

////////////////////////////////////

79.4% of all teachers encouraged questions.

////////////////////////////////////

77.5% of Kansas teachers encouraged questions.

////////////////////////////////////

79.9% of all teachers collected papers or cards when all finished.

////////////////////////////////////

77.5% of Kansas teachers collected papers or cards when all finished.

//////////

14.7% of all teachers collected papers or cards when brightest finished.

//////////

24.6% of Kansas teachers collected papers or cards when brightest finished.

////////////////////////////////////

54.2% of all teachers collected papers before leaving farm.

////////////////////////////////////

47.1% of Kansas teachers collected papers before leaving farm.

//////
19.3% of all teachers collected papers in classroom.

//////
17.9% of Kansas teachers collected papers in classroom.

///
6.9% of all teachers did not collect papers.

//
4.0% of Kansas teachers did not collect papers.

////////////////////
41.4% of all teachers used both oral and written reports.

////////////////////
39.3% of Kansas teachers used both oral and written reports.

////////////////////
26.1% of all teachers used oral reports only.

////////////////////
24.7% of Kansas teachers used oral reports only.

////////////////////
29.4% of all teachers did not answer.

////////////////////
35.9% of Kansas teachers did not answer.

/
2.7% of all teachers used half oral and half written reports.

////////////////////////////////////
96.9% of all teachers used reviews in the classroom.

////////////////////////////////////
96.6% of Kansas teachers used review in the classroom.

CHAPTER III
TRANSPORTATION PROBLEMS

Introduction. In the requirements and statement of policies of the Federal Board for Vocational Education, they say that there must be six months of supervised practice work. This, of course, implies that the instructor visit the student at his home from time to time. The expense for these is in addition to the instructor's salary and is paid from local funds. He can then take a few boys in his car when going upon field trips, and there need be no cost to those boys.

School pays transportation costs. As shown by Table XIII and Chart 3, the "best teacher" group has a school bus which they can use in 30% of the cases; 56% do not have one; in Kansas 25% have a school bus to use and 63% do not. In order to participate in Federal funds, a department must have sixteen students for a full time school. At least one or, possibly, more cars are required in addition to the instructor's car. Some of the schools of Kansas had as high as twenty-three in one class; other states as Massachusetts and California reported as high as thirty and forty in a class. In the majority of the

schools, a large bus or two cars besides the instructor's car would be sufficient. That the students furnish most of the cars is shown by Chart 3. They furnish them in three-fourths of the cases in the "best teacher" group and 81% of the cases in Kansas. Other agencies than the school or boys furnish them in 16% and 9% of the cases, respectively. Of those in the "best" group, 37% report that they have trouble in securing cars for field trips. About 35% of the Kansas teachers have the same trouble. One can visualize this difficulty by noting the length of the trips and the number taken during the year. Table X shows that the median length of trips of the "best teachers" was eight miles. The range was from two miles to fifty with great majority below ten miles. For Kansas the median is about the same, with a range from two to twenty-five miles. From Table IV, the total trips for the year were forty in the "best teacher" group. Where the mileage rate is six cents per mile, the cost per car for the year would be \$20. The median for the Kansas group was the same. However, when the extreme number in some cases are taken, things look much different. One in New York has one hundred sixty for the year averaging two miles, and, at six cents per mile, gives the \$20 as before. One in Nebraska reports one hundred eighty for

Table XIII.
Transportation- All States

States	School Bus		Instructor drives		Cars close		Trouble		Cars by		Students charged		Trouble to collect		Dismissed from school	
	Yes	No	Yes	No	Yes	No	Yes	No	Students	Others	Yes	No	Yes	No	Yes	No
California	5	3	7	1	7	1	3	5	4	3	1	6		1	1	6
Colorado	2	6	3	4	6	1	2	6	4	3	1	7		4	1	5
Idaho	7	3	5	4	8	1	1	9	6	2		9	1	1	2	8
Iowa	1	10	8	4	10	4	2	13	13	1	9	5	4	4	2	13
Kansas (12)	2	9	9	1	8	3	4	7	10	4	4	8	3	2	3	10
Massachusetts	6	2	6	2	7	1	3	6	9	5	4	6	2	4		6
Minnesota	3	7	11	1	11		3	9	8	4	4	9	1	2	2	7
Missouri		7	6		8		5	3	7		4	4	2	4	1	7
Montana	2	6	7		7	3	3	7	10		1	9		3	1	5
Nebraska	2	9	6	3	8	2	6	5	8	1	3	8	2	2		9
Nevada	1	1	3		2	1	1	3	3			4			1	3
New Mexico	4	4	4	3	3		4	2	3	1	1	6		2	1	6
New York		7	7	1	5	3	6	2	6	2	3	5		2	1	5
North Dakota	1	8	7	2	9		2	7	9	1	4	5		3	1	7
Ohio	3	2	4	1	3	1	4	1	3	1	3	2	1	2		3
Oklahoma	4	2	3	2	6		4	2	2	2	1	5	1	2	2	4
Pennsylvania		7	8		8		5	3	8	1	1	7	1	2		7
South Dakota	3	7	10		8	1	1	9	8	1	3	6	1	2	1	5
Utah	5		4		3		3	2		3	1	4				2
Virginia	4	4	3	5	6	2	4	4	6	1	3	4	2	1		5
Wyoming	4	3	5	2	5	2	3	4	6	2	2	5		3		5
Kansas (17)	20	38	47	12	45	20	27	47	62	4	32	36	17	26	1	
Totals	79	145	173	47	183	46	96	156	195	42	85	160	58	72	21	18
	34		38		29		6		39		15		150		57	
	25	8	258		25	8	25	8	27	6	26	0	2	60	2	66

CHART 3
TRANSPORTATION

Cars furnished by

Students

////////////////////
75.5% of best teacher group used this method.

////////////////////
80.9% of Kansas teachers used this method.

Others

//////////
16.2% of best teacher group used this method.

/////
9.0% of Kansas teachers used this method.

Cars kept close together.

Yes

////////////////////
70.9% of best teachers used this method.

////////////////////
59.5% of Kansas teachers used this method.

No

//////////
17.8% of best teacher group did not use this method.

//////////
25.8% of Kansas teachers did not use this method.

Instructor drives car.

Yes

////////////////////
67.0% of best teacher group used this method.

////////////////////////////////////
62.9% of Kansas teachers used this method.

No
/////////
18.2% of best teacher group did not use this method.

/////////
14.6% of Kansas teachers did not use this method.

Had trouble in securing transportation.

Yes
////////////////////////////////////
37.2% of best teacher group found this the case.

////////////////////////////////////
34.8% of Kansas teachers found this the case.

No
////////////////////////////////////
60.4% of best teacher group did not find this the case.

////////////////////////////////////
60.6% of Kansas teachers did not find this the case.

Students were charged.

Yes
/////////
32.9% of best teacher group used this method.

/////////
40.4% of Kansas teachers used this method.

No
////////////////////////////////////
62.0% of best teacher group did not use this method.

////////////////////////////////////
49.4% of Kansas teachers did not use this method.

Classes use the school bus.

Yes
////////////////////
30.6% of best teacher group used this method.

////////////////////
24.7% of Kansas teachers used this method.

No
////////////////////////////////////
56.2% of best teacher group did not use this method.

////////////////////////////////////
52.8% of Kansas teachers did not use this method.

There was trouble to collect when students were charged.

Yes
//////////
14.7% of best teacher group found this to be the case.

//////////
22.4% of Kansas teachers found this to be the case.

No
////////////////////////////////////
27.8% of best teacher group did not find this to be the case.

////////////////////////////////////
31.4% of Kansas teachers did not find this to be the case.

Class was dismissed

At the farm.
////
8.1% of best teacher group used this method.

//
4.5% of Kansas teachers used this method.

At the school.
////////////////////////////////////
72.8% of best teacher group used this method.

////////////////////////////////////
76.6% of Kansas teachers used this method.

the year averaging fifteen miles and at six cents per mile makes \$162 per car. One in Montana reports two hundred sixteen trips for the year, averaging fifteen miles, and, at six cents, that would make \$195 per car. One in Kansas reported one hundred trips for the year, averaging ten miles, and, at six cents per mile, that makes \$60 a car. In this instance they had a school car with a trailer which took them all; but even then the school board asked the instructor to cut the number of trips to the minimum. In the Nebraska case, each boy paid ten cents, but even then it totals \$18, which is a considerable sum of money for the average high school lad to spend for trips. One is led to ask the question, Is that amount justifiable? When one considers the total amount of time available for instruction in agriculture and then takes this in comparison with the amount spent on trips, one must say, "No."

Mileage and charges. Two-thirds of the "best teacher" group reported that the students were not charged and nearly one-third were charged. In the Kansas group, approximately 50% were not charged, and 40% were. Then 15% of the first group reported trouble in collecting the charge from the students. The Kansas group reported 22% as having the same trouble. How much are the charges?

These vary all the way from nothing to one cent per boy per mile. If the lad is poor and has no car, he rides with the instructor. The other boys alternate the cars, letting the "dads" foot the bill. Many mentioned that the school paid gas and oil bills for the trips. Others charged a set fee of \$2 to \$3 for the year. Outside of the state the most common way was for the school board to pay one cent per mile per pupil. This was followed by mileage of four to eight cents; students alternate taking cars; use a school truck, expense paid from class fund which was earned by working during school time, Ford Beach wagon (carrying ten); only on long trips are the students charged. Quite a few said that the school should have a truck or bus or else the agricultural department itself should. This would remedy transportation, and much of the disciplinary problems incident thereto.

Rates and collections. The rate was decided usually by a vote of the class, if the board had not done so. The instructor was the next one favored to decide the rate. Others mentioned were: driver, superintendent, instructor, and set rate. The driver of the car was the most favored person to collect the money; the class treasurer was next, including several who said that the F.F.A. took charge of securing cars, keeping track of the mileage, and turning

in the statement to the board. Two of the Kansas men mentioned that their boys wanted more field trips, but that they were costly. One instructor in California said that he did not go on trips unless he could get the school bus or use his own car. The class was dismissed at the school in 73% of the cases in the "best teacher" group. In Kansas about 80% dismissed at the school. Quite a percentage did not answer this question as the typing was somewhat blurred.

In the first part of the discussion it was mentioned that the condition of the roads was a limiting factor as to why more trips were not taken. This is certainly a good opportunity for the instructor and pupils to get back of the Good Roads Movement. Push and pull for every-day roads in that community.

Summary. Summarizing the above expressions, one would be nearly correct by making these statements:

1. Transportation offers some serious difficulties; only a few cannot be remedied, such as the weather.
2. It is most satisfactory for the school to own the bus or cars for going on field trips.
3. The school should pay transportation cost for a necessary number.

4. That number will vary according to the teacher and the community; but, on the average, it should be one a week for each class.
5. Charging the students or allowing the parents to foot the gas and oil bills is not desirable.
6. Having a bus, or one and a trailer, solves many troublesome problems of discipline and transportation.
7. It is the usual thing to dismiss the class at the school.

CHAPTER IV
DISCIPLINARY PROBLEMS

Introduction. Of all the problems that confront the inexperienced teacher, the one of most importance is how to secure good discipline. No other factor will so quickly build up a reputation. Likewise, no other cause will hinder the progress of a teacher so much as that of inability to control students. W. C. Bagley¹ says, "A well-disciplined school is one in which the fashion or mode of good order, courteous behavior, and aggressive industry has been firmly established." What are the characteristics of the typical high school lad whom the vocational teacher has to deal with? He is an adolescent passing through a period of great physical and mental changes, many of which are directly concerned with questions of hygiene and discipline. Many instinctive tendencies manifest themselves with great persistency. Among these are: sex, gregariousness, migration, social intercourse, property, curiosity, and inventiveness. Vocational interests loom large during the later stages. This is indeed fortunate for the vocational agriculture teacher. His boys take the course with the intention of becoming farmers.

Under proper conditions the course finds its big controlling motive right here. It is a period of idealism. Moral and religious interests either gain or lose their hold upon youth during this stage. Wise indeed is that teacher who gets the boy to act as he would have him act, because the boy likes to do the thing for its own sake.

Causes for Poor Discipline. Among the teachers surveyed, one-third of them admitted that discipline was a personal problem of theirs. This was true of the best teachers as well as of the whole group in Kansas. In the Kansas group 39% of them said that the class did not have sufficient materials to work upon. Other contributing factors were: class wastes time--33%; teacher did not forestall trouble--19%; teacher was inexperienced--10%; no definite procedure--9%. Among the comments made by them, the following were the most pertinent: "Town boys lack proper setting; boys think that the field trip is a picnic; junior high school boys require more disciplining; some boys are forced to school, so lack the necessary interest; several may lack interest in the particular subject or phase of the enterprise being studied because they are not directly concerned, as in the case of the boy who is carrying a poultry project and the job for the field trip is that of making a comparison of the practices of successful

dairy farmers; the problem of individual differences is the same as the case of the quick and the slow boy; it is difficult to have them realize that the field trip is a part of the regular class room work."

In the best teacher group, some of the causes for poor discipline were: lack of sufficient materials--37%; class wastes time--30%; teacher did not forestall trouble--20%; no definite procedure--14%; teacher inexperienced--14%. Among the comments made, the following were most appropriate: "lack of interest upon the part of the pupil who is dis-interested in agriculture or anything else in school; large number in the class, if over fifteen, hard to manage; the problem student is the one who is not interested in farming; farmers forget the dates made with them; discipline is always a problem when one is working with a class of live boys; it can be solved without great difficulty; difficulty of giving instruction to large groups--40%; adolescents respond more readily to other attractions; lazy boy loafers; careless with other peoples' property; difficulty of keeping large groups together; not room for them to work; persistent trouble-makers are not interested; some boys have already had the experience; discipline is a factor never to be overlooked in class procedure; the poorest discipline I ever observed was that of a Doctor-----,

who taught negative discipline--in fact, he said that he never thought of discipline; problem of discipline where there is a repetition as in vaccination, thinning of fruit, etc.; boys show a decided preference for some kinds of stock; actively using all members of a large class in some types of the work; some boys persistently lag behind; disrespectful of the teacher; if time was not wasted, discipline would not be a problem; I put the groups with leaders to work; occasionally they get through before the allotted time and start investigations of their own." In thinking over the various situations as they occur on the farm, one wonders if some of these factors were not contributors to the poor discipline, namely: unfavorable physical conditions as too cold, too windy, bad home training of the boy, or lack of training, poor organization, misunderstandings, too much advertising failures and misdeeds, the teacher himself--his tone of voice, his hesitation at crucial moments, lack of sympathy, display of temper, overindulgence and lack of fair treatment, uncivil and disrespectful in his own actions.

Remedies. How much discipline should a teacher have? Should one insist upon absolute quiet and military precision in the carrying out of instructions? Most modern teachers will agree that discipline is not necessarily stillness, nor is it an end in itself. Only as much

discipline should be insisted upon as will not disturb the work of the class and will develop self-control in the students--the sort approved by society. In a well-controlled class, discipline is not obvious; that is, it is an indirect control. Many high school boys lack a compelling motive. Quite often the home does not back up the school in trying to provide an incentive for accomplishing the best that is possible. Where there is a definite motive for doing a thing, all pupils are doing rigorous mental work. How do teachers bring this about? Chiefly, they do it in the following ways:

1. Begin each class exercise with plenty of snap and vigor; also, begin promptly.
2. See that each student has plenty of work to do during the entire class period.
3. Have a definite system whereby each student is definitely responsible for all that takes place during each class period.
4. The teacher must see and hear all that occurs in the class room.

Among those teachers who said that discipline was not a problem, what did they do to bring about that condition? Over 92% of the best teachers had a definite outline of the class procedure made out beforehand. The Kansas group made

this outline in 90% of the cases. Of the best teacher group, 89% attempted to provide enough work to keep every student busy the entire period. The Kansas men did so in 85% of the cases. About 60% of the teachers place the class upon their honor as the occasion offers. Others were very much opposed to the idea. Among the best teacher group, 84% of the teachers gave some precautions before the trip was made. The Kansas men did so in 90% of the cases. What do the teachers do with the persistent trouble-makers? In the best teacher group, 65% of them talk to them privately; 39% send them to the study hall; 22% suspend them, awaiting further action; 18% refer them to the superintendent of schools. In the Kansas group, 65% talk to them privately; 38% send them to the study hall; 15% suspend them; 16% refer them to the superintendent. The agricultural teachers believe in caring for the discipline themselves. Among the comments made, those most frequently made were: get the boys to believe in you; be one of them outside of the class room, but bear down in the class room; organize them properly and then discipline is the easiest problem; concentrate upon a particular problem; the boys are too busy and interested to bother with disciplinary problems.

Precautions given. Over half of the Kansas group give the precautions in the class room just before starting. A few reserve them until the group arrives at the point of

work. Others gave them during the preceding class period or at the beginning of the school term. There was considerable variation as to the content of the precautions. One-fourth said that they developed with the class the definite points to look for. The others most often mentioned were: purpose of the trip; gain and hold the respect of the farmer; folks measure the school by the conduct of the students while upon trips; take pride in behaving properly while around the farmer's stock; take care to avoid accidents; warn them that the same discipline as used in the class room holds upon the field trip; future trips depend upon the success of the preceding ones; hold up the respect of the school; select drivers and passengers; warn of the following test; give counsel as to conduct in general with the proviso that anyone who cannot act like a gentleman will not go on the next trip.

Among the best teachers more of them gave the instructions out upon the job or developed them the day before. Not so high a per cent outlined the purpose and the main points to be obtained. Other cautions emphasized were: avoid abusing either the crops or the animals; conduct themselves as gentlemen should; courtesy is due the farmer for putting himself out; respect the opinions of the farmer, whatever they are; reserve discussion of them until the

Table XIV
Discipline

States	A Problem		Wastes time		No Plan		Lack of Material		Inexper-Teacher		Teacher not troubled		Speed		Class on honor		Definite proced-ure		Enough work		Individ-ual		Study Hall		Suspend-ion		Refer-to Supt.		Precau-tions	
	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No		
California	4	5	3	3	2	3	2	3	1	4	2	3	2	3	5	1	8		8		5	3	2	6	2	6	1	7	7	1
Colorado	3	5	2	1	1	3	2	1	1	3	1	2	3	1	3	3	7		8		5	2	2	3	1	4		4	6	1
Idaho	3	6	1	2		5	2	3	2	2	2	1		3	7	3	10		9	1	7	3	4	4	4	5	2	6	9	
Iowa	6	7	8	2	5	5	6	4	5	4	5	4	9	3	12	2	13	2	12	3	10	2	8	7	3	9	3	9	13	
Kansas (12)	6	6	3	3	2	5	5	2	1	5	3	4	4	6	6	3	11	1	9	3	6	5	5	5	1	8	1	8	11	
Massachusetts	3	6	2	2	1	3	3	2	2	2	1	2	2	2	7	1	9		9		7		2	5	6	2	5	3	8	1
Minnesota	5	8	3	6	4	5	5	4	4	5	4	4	1	7	5	7	11	1	11	1	8	4	2	9	1	10	3	9	11	
Missouri	4	4	2	3	1	5	4	2	2	3	2	3	1	5	5	3	7	1	8		6	1	4	3	1	5	1	5	5	3
Montana	3	7	2	2	2	2	3	1		3	2	2	1	3	6	4	10		10		6	3	2	3	4	2	2	2	10	
Nebraska	5	5	5	1	2	4	6		1	4	3	3	6	2	9	2	10	1	11		6	5	2	3	2	6	1	6	8	
Nevada	1	3		1		1	1			1	1			1	4		4		3		2		1		1				4	
New Mexico	3	4	2	2	2	1	4		3		1	2	2	1	7		6	2	7	1	5	2	1	3	2	3	3	2	6	
New York		8	3	1	1	2	1	1		1		1	1	1	2	4	7	1	7	1	5	1	4	2	3	3	2	3	7	1
North Dakota		9	1	4	2	3	3	2		4	1	4		5	5	4	9		5	3	3	4	2	4	3	3	1	5	9	
Ohio		4	2			1	1		1		1		1		2	2	5		4		3	2	3	1	1	1	3		3	5
Oklahoma	3	3	2	2		3	3	2	1	2	1	2	3	2	4	1	6		6		3	2	2	3	1	4	1	5	6	
Pennsylvania	5	3	2	3		5	2	3	1	4	2	3	1	4	5	3	8		8		7	1	1	6	4	3		7	6	
South Dakota	2	8	2	4	3	2	5	1	1	4	3	2	1	5	3	5	10		9	1	6	2	5	4	1	7	1	6	8	1
Utah	3	2	2	1	1	1	4		1	2	2	1	1	2	4		5		5		4		3	1	1	1	1	2	4	1
Virginia	3	5	2			1	1			1	1		2	1	5	3	8		7		6	2	2	4	2	3	2	3	7	
Wyoming	2	5	2	2	2	2	3	2	1	4	1	3		5	3	2	6		6		5	2	4	2	2	3	4	1	7	
Kansas (77)	24	51	27	7	6	21	30	6	8	13	14	16	19	21	46	18	69	3	67	3	52	12	29	26	12	36	13	38	60	6
Totals	88	164	78	52	37	83	97	39	36	71	52	63	60	79	156	71	239	11	229	16	167	58	90	104	58	127	45	134	217	15

CHART 4
DISCIPLINE

Definite procedure was outlined beforehand.

Yes.
////////////////////////////////////
92.6% of best teacher group used this method.

////////////////////////////////////
89.8% of Kansas teachers used this method.

Enough work given so that entire period is used.

Yes.
////////////////////////////////////
88.7% of best teacher group used this method.

////////////////////////////////////
85.5% of Kansas teachers used this method.

No.
///
6.2% of best teacher group did not use this method.

///
6.7% of Kansas teachers did not use this method.

Precautions were given to the class beforehand.

Yes.
////////////////////////////////////
84.1% of best teacher group used this method.

////////////////////////////////////
79.7% of Kansas teachers used this method.

No
///
5.8% of best teacher group did not use this method.

//// 6.7% of Kansas teachers did not use this method.

Individuals that might cause trouble talked to privately.

Yes.
 //////////////////////////////////////
 64.7% of best teacher group used this method.

////////////////////////////////////
 65.1% of Kansas teachers used this method.

No.
 //////////////////////////////////////
 22.4% of best teacher group did not use this method.

//////////
 19.1% of Kansas teachers did not use this method.

Class members are put on honor.

Yes.
 //////////////////////////////////////
 60.4% of best teacher group used this method.

////////////////////////////////////
 58.4% of Kansas teachers used this method.

No.
 //////////////////////////////////////
 27.5% of best teacher group did not use this method.

//////////
 23.5% of Kansas teachers did not use this method.

Persistent trouble-makers are sent to study hall.

Yes.
 //////////////////////////////////////
 38.7% of best teacher group used this method.

////////////////////////////////////
 38.2% of Kansas teachers used this method.

No.
////////////////////
40.3% of best teacher group did not use this method.

////////////////////
34.8% of Kansas teachers did not use this method.

Discipline is a problem because of lack of proper material.

Yes.
////////////////////
37.6% of best teacher group found this to be the case.

////////////////////
39.3% of Kansas teachers found this to be the case.

No.
////////
15.1% of best teacher group did not find this to be the case.

////
9.0% of Kansas teachers did not find this the case.

Discipline is a personal problem.

Yes.
////////////////////
34.0% of best teacher group found this the case.

////////////////////
33.7% of Kansas teachers found this the case.

No.
////////////////////////////////////
63.6% of best teacher group did not find this the case.

////////////////////////////////////
64.0% of Kansas teachers did not find this the case.

Class often wastes time.

Yes.

////////////////////
 30.2% of best teacher group found this the case.

////////////////////
 33.6% of Kansas teachers found this the case.

No.
 //////////////////////
 20.1% of best teacher group did not find this the case.

//////////
 11.2% of Kansas teachers did not find this the case.

Speeding of cars while on trip was a discipline problem.

Yes
 //////////////////////
 23.6% of best teacher group had this trouble.

////////////////////
 25.8% of Kansas teachers had this trouble.

No
 //////////////////////
 30.6% of best teacher group did not have this trouble.

////////////////////
 25.8% of Kansas teachers did not have this trouble.

Persistent trouble-makers were suspended from class.

Yes
 //////////////////////
 22.4% of best teacher group used this method.

//////////
 14.6% of Kansas teachers used this method.

No
 //////////////////////
 45.3% of best teacher group did not use this method.

////////////////////
 49.4% of Kansas teachers did not use this method.

Teacher did not forestall trouble.

Yes

//////////

20.1% of best teacher group found this the case.

//////////

19.1% of Kansas teachers found this the case.

No

//////////

24.4% of best teacher group did not find this the case.

//////////

22.4% of Kansas teachers did not find this the case.

Persistent trouble-makers were referred to the superintendent.

Yes.

//////////

17.7% of best teacher group used this method.

//////////

15.7% of Kansas teachers used this method.

No.

////////////////////////////////////

51.9% of best teacher group did not use this method.

////////////////////////////////////

51.7% of Kansas teachers did not use this method.

There was no definite plan for class procedure.

Yes.

//

4.3% of best teacher group used this method.

////

9.0% of Kansas teachers used this method.

No

////////////////////////////////////

32.1% of best teacher group did not use this method.

/////////
 14.3% of Kansas teachers did not use this method.

Time is lost because of the inexperience of the teacher.

Yes

/////////
 13.9% of best teachers found this the case.

//////
 10.1% of Kansas teachers found this the case.

No

//////////
 27.3% of best teacher group did not find this the case.

//////////
 20.2% of Kansas teachers did not find this the case.

return to the class room; no smoking; the high school is judged by the actions of the students while before the public; dangers that might arise; follow the instructor's car going out and coming in; avoid attracting unnecessary attention; pay attention; take no fruit or any other property without the farmer's permission; and conduct self as though it were his own place. One party in Minnesota expressed the obligation the agricultural department owed the farmer in these words, "On the first trip I take time to explain to the boys the opportunity that we have--a farmer takes his time off to provide the material; if it is cows, he won't get as much milk that evening; if poultry, he will get less eggs. I also bring out the value of getting the benefit of years of experience. Then I get the boys to step up individually to the farmer and thank him for the benefit that they have received." Another expressed how discipline was secured in his class in these words: "They like field trips; hence, the party or parties are dealt with by the spirit of the class even so far as to use the "spat machine." An elderly man in Massachusetts, who has been in the same place thirteen years, and is familiarly called "Pop," expresses the idea this way: "My room is an open forum for the discussion of anything. Plan of trip is mapped out in the class room before we start.

Have had no disciplinary troubles for five years. Can keep my boys interested and working, also asking questions and collecting specimens for biology and botany. Either I get all good boys or they turn good--have had some who were on probation for the other teachers, yet they were O. K. for me."

As one studies the reports, visualizes the teaching situations, and reads between the lines, he realizes that, in addition to the above considerations, the following factors are very important in securing good discipline: be very much interested in your work and conduct it in an interesting manner; give the students responsibility, and then hold them to it; acquire confidence in self as a disciplinarian; be certain that each pupil understands your requirements; anticipate the difficulties; cultivate a friendly attitude towards the parents; be a master of your subject matter; deal personally with the offender; use substitution rather than repression; cultivate a congenial personality; laugh when there is something at which to laugh; tell a joke now and then; and throughout all class room work be persistent but fair and square.

Summary. Restating the important thoughts of the above discussion concerning the problems of discipline upon a field trip, one may make the following statements:

1. One out of every three teachers has trouble with discipline.
2. This holds true of the best teachers as well as of the average.
3. Chief reasons for poor discipline were lack of material, waste of time by class, and lack of definite procedure.
4. Minor causes stressed were inexperience of teacher, "picnic" idea of some boys, disinterest in that phase of the work, and large classes.
5. The most successful teachers use the following measures to insure good discipline: definite outline made out beforehand, plenty of work for the whole period, giving of necessary precautions before trip is made.
6. Agricultural teachers handle their own disciplinary cases.
7. Field trips arranged for beforehand and properly organized offer but little opportunity for poor discipline.
8. About one-half of the teachers give the instructions in the class room before the class starts upon the trip.

9. Chief cautions offered were: conduct themselves like gentlemen; be courteous to the farmer; avoid injuring the crops and animals.

CHAPTER V

POSSIBLE FIELD TRIPS

No one who knows methods concerning the teaching of agriculture would recommend that any certain one be used exclusively. Nor would it be wise to skip about using every new method that has been devised. This section treats of certain enterprises and some of the most common jobs under each of those enterprises which lend themselves readily to being used as a field trip. Figure 4 a shows the rank of the enterprises among the best teachers of the whole group and the rank among the teachers of Kansas. Of

Figure 4a

Rank of Enterprises as to Number Who Taught Them

Livestock Year			Crops' Year		
	Best Teachers	Kans. Teachers	Best Teachers	Kans. Teachers	
Dairy	100%	98%	Soils	87%	91%
Poultry	100%	97%	Fruit	72%	78%
Swine	96%	97%	Grains		
Sheep	91%	95%	Potatoes		
Horses	84%	85%	Legumes		Per Cents
Beef	80%	91%	Forage		Not Taken
			Garden Crops		
			Root Crops		

the six livestock enterprises, none of them rank less than 80%. Poultry is taught by every teacher in the "best teacher" group. This is closely followed by dairy, swine, and sheep. The enterprises of the crops* year are not so uniformly taught over the country. More than 95% of some of the grains listed were taught by the best teacher group. The other enterprises were of gradual decreasing importance down to the root crops, which was taught by only a third of the teachers. In Kansas the enterprises arranged themselves in somewhat different order. Dairy is first in importance, closely followed by swine and poultry. Horses is the least taught of the livestock enterprises mentioned. A few beginning teachers had taught no crops, which accounted for the three who said that they taught no grains, soils, etc. All of the others reported teaching some of the grains, legumes, potatoes, and forage plants. Root crops have a very minor place in Kansas agriculture.

Taking up the various jobs under each enterprise, one notices that the Kansas teachers are using about the same jobs for field trips as the best teachers are. In Kansas the ones most used under dairy were: study judging; visit farms that have desirable buildings and equipment; select breeding stock; and visit county fairs and

public sales. In the best teacher group, the second and third ones are reversed. Under the beef enterprise, the favored jobs for field trips in Kansas were: judging; comparative study of breeds common in the community; select breeding stock; and study methods, buildings, and equipment of best breeders. The order for the best teacher group was: judging; select breeding stock; select market stock; make a comparative study of the breeds common in the community. The percentage of teachers using a particular job as a field trip is much higher in Kansas than in the other group. The rank of the favored jobs (Kansas) in the sheep enterprise was as follows: judging, types and breeds common in the community, proper holding, docking, and castration. For the best teacher group, the rank was as follows: judging, types and breeds common in the community, selection of stock for breeding and for feeding, holding, docking, and castration. In the swine enterprise, the percentages were somewhat higher, showing either that the enterprise was more common or else that its development was more easily done by means of field trips. The jobs among the Kansas men ranked as follows: judging; select animals for breeding and for market, type and breed common in the community; visit breeders who have desirable equipment, building, stock and sanitation. The rank was

the same for the best teacher group. For the jobs in the poultry enterprise, the rank was: cull the laying flock; study the poultry houses in the community; sanitation; judging; prevention and control of certain diseases; the poultry common in the community. In Kansas the order is the same except that judging and prevention and control of diseases is reversed. In the horse enterprise for the best teacher group, the study of soundness and unsoundness was first; determine the age of a horse was second; select individuals for certain purposes was third. In Kansas the first and third ranked equally, followed by the second.

Under soils, the jobs most commonly used were: examine legumes for nodules; classes of soils and properties; tillage; tests for acidity and alkalinity. In Kansas the jobs ranked somewhat differently: classes of soils and properties; agencies that form soils; tests for acidity and alkalinity; examine legumes for nodules; tillage. Among the best teacher group the chief grains were: oats, corn, wheat, and barley. In Kansas the order was: sorghum, corn, wheat, oats. This reflects not only the popularity but also the adaptability of the various grains for the conditions of the widespread areas and for field trip purposes. Of the jobs under the grain enterprise, the following were the most important: treat seed for smut;

make a thorough study of common weeds; select the seed in the field. These were for the best teacher group. In Kansas the following were most often used: select seed in the field; treat seed for smut; follow the life history of an injurious insect; thorough study of common weeds. Only about 75% of the teachers used these jobs for field trips. Several said that many of the jobs were taught by work in the laboratory.

Of the legumes studied, among the best teacher group, those most commonly used were: alfalfa, sweet clover, alsike, and red clover. In Kansas the order was: alfalfa, sweet clover, soy beans. The jobs most preferred by the best teachers were: decide why alfalfa does well in certain fields; make a study of the clovers sown with the grains as a nurse crop; collect specimens of diseases and injurious insects. In Kansas the order of rank was: collect samples of diseases and injurious insects; decide why alfalfa does so well in certain fields; collect and mount as many samples of clovers as you can; test for the need of lime and the amount to apply. In the study of forage plants, there is considerable range. Among the best teachers those plants most often studied were: bluegrass, timothy, red top, and orchard grass. In Kansas those most often studied were: sweet sorghum, sudan, and

bluegrass. The best teachers report less than 50% using the suggested jobs here for field trips. The three most often used were: collect samples and mount them; study plants in a poor pasture and in a good one; study the conditions under which each does best. In Kansas the jobs used were: collect samples and mount them; study the various methods of harvesting; select seed from the field. Irish potatoes were taught by 83% of the best teachers and by 72% of the Kansas teachers. Sweet potatoes were nearly twice as important in Kansas as they were in the whole area surveyed due, perhaps, to the fact that none of the southern states where sweet potatoes do so well were in this study. The order of preferred jobs by the best teachers was: select and treat seed potatoes; judging; determine conditions for best growth; grade them according to market standards. In Kansas only two were near 50%, namely, select and treat seed potatoes--mostly the latter--and judging. According to the returns, root crops have very little place in the program of the teachers of vocational agriculture. Only one job was taught as a field trip in this enterprise, and this was mostly in the beet sections. Garden crops' jobs received about the same emphasis in Kansas as outside. Most used jobs were: study and make hotbeds and cold frames; determine the best

methods for the control of garden enemies; visit those who have successful gardens.

The kinds of fruit taught by the best teachers were: apples, cherries, plums, strawberries, and grapes. The order for Kansas was: grapes, cherries, pears, apples, peaches. Among the best teachers, the jobs preferred were: make a thorough study of pruning; assist with budding and grafting; mix sprays and dusts for the control of insects and diseases. In Kansas the field trip jobs were: make a thorough study of pruning; prune and train grapes; mix sprays and dusts for the control of insects and diseases.

JOBS UNDER THE VARIOUS ENTERPRISES IN ORDER OF RANK AS TO
WHETHER THEY WERE USED FOR FIELD TRIPS

CHART 5

DAIRY

Study judging, both by score card and by comparison.

////////////////////////////////////
95.8% (162) of teachers of other states used this as a
field trip.

////////////////////////////////////
94.3% (84) of Kansas teachers used this as a field trip.

Select breeding stock; use both type and production as a
basis.

////////////////////////////////////
89.9% (52) of teachers in other states used this as a
field trip.

////////////////////////////////////
83.1% (74) of Kansas teachers used this as a field trip.

Visit farms that have desirable buildings and equipment.

////////////////////////////////////
88.1% (149) of teachers of other states used this as a
field trip.

////////////////////////////////////
86.5% (77) of Kansas teachers used this as a field trip.

Visit public sales, county fairs, etc.

////////////////////////////////////
78.7% (133) of teachers of other states used this as a
field trip.

////////////////////////////////////
80.9% (72) of Kansas teachers used this as a field trip.

Make a comparative study of the breeds common in the communi-
ty.

////////////////////////////////////

76.9% (130) of teachers of other states used this as a field trip.

////////////////////////////////////

76.7% (68) of Kansas teachers used this as a field trip.

Make a study of common ailments as bloat, milk fever, T. B., abortion.

////////////////////////////////////

76.3% (129) of teachers of other states used this as a field trip.

////////////////////////////////////

68.5% (61) of Kansas teachers used this as a field trip.

Fit and show animals at sales, fairs, etc.

////////////////////////////////////

52.6% (89) of teachers of other states used this as a field trip.

////////////////////////////////////

37.0% (33) of Kansas teachers used this as a field trip.

Suggested others: Visit local creamery.

Castiate and dehorn calves.

Study production records and the cows.

Study feeding practices.

Study milk products.

To emphasize care and cleanliness in

handling milk, make a comparison of milking machines.

CHART 6

BEEF

Study judging--both fat cattle and breeding classes.

////////////////////////////////////
73.9% (125) of teachers of other states used this as a field trip.

////////////////////////////////////
93.2% (83) of Kansas teachers used this as a field trip.

Select breeding stock.

////////////////////////////////////
63.3% (107) of teachers of other states used this as a field trip.

////////////////////////////////////
75.2% (67) of Kansas teachers used this as a field trip.

Select market stock as feeder steers, calves, etc.

////////////////////////////////////
59.7% (101) of teachers of other states used this as a field trip.

////////////////////////////////////
59.5% (53) of Kansas teachers used this as a field trip.

Make a comparative study of the breeds common in the community.

////////////////////////////////////
58.5% (99) of teachers of other states used this as a field trip.

////////////////////////////////////
80.9% (72) of Kansas teachers used this as a field trip.

Study the buildings, equipment, and methods of best breeders.

////////////////////////////////////
53.8% (91) of teachers of other states used this as a field trip.

////////////////////////////////////
75.2% (67) of Kansas teachers used this as a field trip.

Fit and show animals at fairs.

////////////////////////////////////
48.5% (82) of teachers of other states used this as a field trip.

////////////////////////////////////
31.4% (28) of Kansas teachers used this as a field trip.

Detect abortion, T. B., black-leg, Texas fever, lice,
warbles.

////////////////////////////////////

43.1% (73) of teachers of other states used this as a
field trip.

////////////////////////////////////

41.5% (37) of Kansas teachers used this as a field trip.

Mark, castrate, and dehorn cattle.

////////////////////////////////////

42.0% (71) of teachers of other states used this as a
field trip.

////////////////////////////////////

50.5% (45) of Kansas teachers used this as a field trip.

Know how to do drenching.

////////////////////////////////////

39.6% (67) of teachers of other states used this as a
field trip.

////////////////////////////////////

43.8% (39) of Kansas teachers used this as a field trip.

Butcher a beef and cut up the carcass.

//////////

17.7% (30) of teachers of other states used this as a
field trip.

//////////

25.8% (23) of Kansas teachers used this as a field trip.

Suggested others: Visit packing house.

Study feeding practices.

Study marketing phases.

Study baby beef club work.

Build corrals.

Build dipping vat--dip them when scabby.

CHART 7

SHEEP

Study judging, largely from the mutton standpoint.

82.2% (139) of best teachers used this as a field trip.

84.2% (75) of Kansas teachers used this as a field trip.

Study the types and breeds common in the community.

76.3% (129) of teachers of other states used this as a field trip.

83.1% (74) of Kansas teachers used this as a field trip.

Select stock for breeding and for feeding purposes.

75.1% (127) of teachers of other states used this as a field trip.

67.4% (60) of Kansas teachers used this as a field trip.

Teach proper holding, docking, castrating.

71.5% (121) of teachers of other states used this as a field trip.

76.4% (68) of Kansas teachers used this as a field trip.

Visit shepherds who have good buildings, equipment.

53.8% (91) of teachers of other states used this as a field trip.

55.0% (49) of Kansas teachers used this as a field trip.

Detect and control worms, grubs, foot-rot.

52.0% (88) of teachers of other states used this as a field trip.

47.1% (42) of Kansas teachers used this as a field trip.

Visit a flock while being shorn; make a study of the wool and body.

////////////////////////////////////

48.5% (82) of teachers of other states used this as a field trip.

////////////////////////////////////

34.8% (31) of Kansas teachers used this as a field trip.

Butcher a lamb or sheep; cut up the carcass.

////////

13.6% (23) of teachers of other states used this as a field trip.

////

10.1% (9) of Kansas teachers used this as a field trip.

Suggested others: Creep feeding work.

Flushing and breeding jobs.

Study marketing phases.

Range management practices.

Dip sheep for ticks.

Drench sheep for stomach worms.

CHART 8

SWINE

Study judging, both fat and breeding classes.

////////////////////////////////////

94.0% (159) of best teachers used this as a field trip.

////////////////////////////////////

91.0% (81) of Kansas teachers used this as a field trip.

Select animals suitable for market and for breeding purposes.

////////////////////////////////////

92.3% (156) of teachers of other states used this as a field trip.

////////////////////////////////////
 92.1% (82) of Kansas teachers used this as a field trip.

Study the type and breeds common in the community.

////////////////////////////////////
 86.9% (147) of teachers of other states used this as a
 field trip.

////////////////////////////////////
 87.6% (78) of Kansas teachers used this as a field trip.

Visit breeders who have desirable buildings, equipment,
 stock.

////////////////////////////////////
 84.0% (142) of teachers of other states used this as a
 field trip.

////////////////////////////////////
 85.3% (76) of Kansas teachers used this as a field trip.

Study sanitation; clean out a hoghouse, making it ready for
 farrowing.

////////////////////////////////////
 81.6% (138) of teachers of other states used this as a
 field trip.

////////////////////////////////////
 82.0% (73) of Kansas teachers used this as a field trip.

Fit and show animals at the fairs.

////////////////////////////////////
 57.3% (94) of teachers of other states used this as a
 field trip.

////////////////////////////////////
 48.3% (43) of Kansas teachers used this as a field trip.

Suggested others: Study feeding practices.

Study marketing phases.

Make comparative study of suitable
 pastures.

Remove needle teeth of pigs.

Farrowing problems.

Visit stockyards, packing plants,
butcher shops.

CHART 9

POULTRY

Cull the laying flock.

////////////////////////////////////
95.8% of best teachers used this as a field trip.

////////////////////////////////////
92.1% (82) of Kansas teachers used this as a field trip.

Make a study of the best poultry houses in the community.

////////////////////////////////////
95.2% (161) of teachers of other states used this as a
field trip.

////////////////////////////////////
92.1% (82) of Kansas teachers used this as a field trip.

Make a thorough study of sanitation; visit one who follows
such a system.

////////////////////////////////////
84.6% (143) of teachers of other states used this as a
field trip.

////////////////////////////////////
84.2% (75) of Kansas teachers used this as a field trip.

Judge poultry, both upon production and standard basis.

////////////////////////////////////
82.8% (140) of teachers of other states used this as a
field trip.

////////////////////////////////////
76.4% (68) of Kansas teachers used this as a field trip.

Detect and prevent bac., white diarrhea, coccidiosis, lice,
worms, roup.

////////////////////////////////////

82.8% (140) of teachers of other states used this as a field trip.

////////////////////////////////////
80.9% (72) of Kansas teachers used this as a field trip.

Study the type, variety, and breeds found in the community.

////////////////////////////////////
82.2% (139) of teachers of other states used this as a field trip.

////////////////////////////////////
77.5% (69) of Kansas teachers used this as a field trip.

Prepare and exhibit birds, eggs, chicks at fairs, shows, etc.

////////////////////////////////////
62.0% (105) of teachers of other states used this as a field trip.

////////////////////////////////////
44.9% (40) of Kansas teachers used this as a field trip.

Caponize a number of cockerels.

////////////////////////////////////
56.8% (96) of teachers of other states used this as a field trip.

////////////////////////////////////
74.1% (66) of Kansas teachers used this as a field trip.

Visit a poultry-packing and egg-grading plant.

////////////////////////////////////
44.9% (76) of teachers of other states used this as a field trip.

////////////////////////////////////
52.8% (47) of Kansas teachers used this as a field trip.

Suggested others: ~~Make~~ concrete floors.

Shingle roofs.

Feeding practices.

Make blood tests for Pullorum.

Make poultry club tour.

Visit commercial hatchery.

Study methods of advertising.

Colony houses--build them for farmers.

CHART 10

HORSES AND MULES

Make a study of soundness and unsoundness.

////////////////////////////////////

74.5% (126) of best teachers used this as a field trip.

////////////////////////////////////

79.7% (71) of Kansas teachers used this as a field trip.

Know how to determine the age of a horse.

////////////////////////////////////

72.1% (122) of teachers of other states used this as a field trip.

////////////////////////////////////

60.6% (54) of Kansas teachers used this as a field trip.

Select desirable individuals for work, show, and breeding purposes.

////////////////////////////////////

71.0% (120) of teachers of other states used this as a field trip.

////////////////////////////////////

79.7% (71) of Kansas teachers used this as a field trip.

Make a comparative study of horse vs. tractor.

////////////////////////////////////

61.5% (104) of teachers of other states used this as a field trip.

////////////////////////////////////

52.8% (47) of Kansas teachers used this as a field trip.

Study the vices of horses--common troubles as colic, distemper, mange.

////////////////////////////////////

57.9% (98) of teachers of other states used this as a field trip.

////////////////////////////////////

48.3% (43) of Kansas teachers used this as a field trip.

Make a comparative study of the type and breeds common in the community.

////////////////////////////////////

54.7% of teachers of other states used this as a field trip.

////////////////////////////////////

55.0% (49) of Kansas teachers used this as a field trip.

CHART 11

SOILS

Examine leguminous plants for nodules.

////////////////////////////////////

78.1% (132) of teachers of other states used this as a field trip.

////////////////////////////////////

78.6% (70) of Kansas teachers used this as a field trip.

Examine the various classes of soils and their properties.

////////////////////////////////////

76.3% (129) of teachers of other states used this as a field trip.

////////////////////////////////////

80.9% (72) of Kansas teachers used this as a field trip.

Make a study of tilth, tillage and proper depth to plow.

////////////////////////////////////

73.3% (124) of teachers of other states used this as a field trip.

////////////////////////////////////

61.8% (55) of Kansas teachers used this as a field trip.

Test a field for acidity or alkalinity.

////////////////////////////////////

72.1% (122) of teachers of other states used this as a field trip.

////////////////////////////////////

79.7% (71) of Kansas teachers used this as a field trip.

Study how the different soils are formed, physical and chemical agencies.

////////////////////////////////////

69.2% (117) of teachers of other states used this as a field trip.

////////////////////////////////////

79.7% (71) of Kansas teachers used this as a field trip.

Determine from its action why the plow is a good pulverizing tool.

////////////////////////////////////

63.3% (107) of teachers of other states used this as a field trip.

////////////////////////////////////

49.4% (44) of Kansas teachers used this as a field trip.

Inoculate the soil or seed with the proper bacteria.

////////////////////////////////////

55.0% (93) of teachers of other states used this as a field trip.

////////////////////////////////////

41.5% (37) of Kansas teachers used this as a field trip.

Study the effects of soil erosion; construct a soil terrace.

////////////////////////////////////

49.7% (84) of teachers of other states used this as a field trip.

////////////////////////////////////

60.6% (54) of Kansas teachers used this as a field trip.

Make a study of tile drainage, before, during, and after installation.

////////////////////////////////////

43.1% (73) of teachers of other states used this as a field trip.

////////////////////////////////////

25.8% (23) of Kansas teachers used this as a field trip.

Others suggested: Effect of various plants upon soil moisture.
 Study crop rotations.
 Determine amount of organic matter in soil.
 Plowing vs. discing.
 Blasting and its effect on soils.
 Make trip to fertilizer plant to see how made.

CHART 12

GRAINS

Oats

////////////////////////////////////
 83.4% (141) best teachers teach this enterprise.

////////////////////////////////////
 91.0% (81) of Kansas teachers teach this enterprise.

Corn

////////////////////////////////////
 82.2% (139) of teachers of other states teach this enterprise.

////////////////////////////////////
 96.6% (86) of Kansas teachers teach this enterprise.

Wheat

////////////////////////////////////
 81.6% (138) of teachers of other states teach this enterprise.

////////////////////////////////////
 95.5% (85) of Kansas teachers teach this enterprise.

Barley

////////////////////////////////////

73.9% (125) of teachers of other states teach this enterprise.

////////////////////////////////////

57.3% (51) of Kansas teachers teach this enterprise.

Rye

////////////////////////////////////

55.0% (93) of teachers of other states teach this enterprise.

////////////////////////////////////

25.8% (23) of Kansas teachers teach this enterprise.

Sorghum

////////////////////////////////////

28.9% (49) of teachers of other states teach this enterprise.

////////////////////////////////////

96.6% (86) of Kansas teachers teach this enterprise.

Flax

////////////////////////////////////

27.8% (47) of teachers of other states teach this enterprise.

////////

11.2% (10) of Kansas teachers teach this enterprise.

Cotton

/

0.7% (2) of best teachers taught this enterprise.

None of Kansas teachers taught it.

CHART 13

Treat seed for smut.

////////////////////////////////////

76.9% (130) of best teachers used this as a field trip.

////////////////////////////////////

76.4% (68) of Kansas teachers used this as a field trip.

Make a thorough study of common weeds with control.

76.3% (129) of teachers of other states used this as a field trip.

68.5% (61) of teachers of Kansas used this as a field trip.

Select seed in the field as in the case of corn.

76.3% of teachers of other states used this as a field trip.

88.7% of Kansas teachers used this as a field trip.

Clean seed--make a study of the rejected part.

55.0% (93) of teachers of other states used this as a field trip.

52.8% (47) of Kansas teachers used this as a field trip.

Follow the life history of an insect through the season, as the Hessian Fly.

49.7% (84) of teachers of other states used this as a field trip.

68.5% (61) of Kansas teachers used this as a field trip.

Compare several seedbeds; follow through the season; note results.

41.4% (70) of teachers of other states used this as a field trip.

47.1% (42) of Kansas teachers used this as a field trip.

Make a comparative study of a field where the stubble was burned and one where it was turned under.

////////////////////
25.4% (43) of teachers of other states used this as a field trip.

////////////////////
20.2% (18) of Kansas teachers used this as a field trip.

Construct a chinch-bug barrier.

//////////
13.6% (23) of teachers of other states used this as a field trip.

////////////////////
31.4% (23) of Kansas teachers used this as a field trip.

- Suggested others:
- Study results of variety tests.
 - Study methods of tillage.
 - Make varietal tests.
 - Visit certified grain fields.
 - Large scale production.
 - Summer fallowing and summer tillage.

CHART 14

LEGUMES

Alfalfa

////////////////////////////////////
89.9% (152) of best teachers teach this enterprise.

////////////////////////////////////
95.5% (85) of Kansas teachers teach this enterprise.

Sweet clover

////////////////////////////////////
84.0% (142) of teachers of other states teach this enterprise.

////////////////////////////////////
91.0% (81) of Kansas teachers teach this enterprise.

Alsike

////////////////////////////////////
 71.0% (120) of teachers of other states teach this
 enterprise.

//////////
 19.1% (17) of Kansas teachers teach this enterprise.

Red clover

////////////////////////////////////
 67.4% (114) of teachers of other states teach this
 enterprise.

////////////////////////////////////
 40.4% (36) of Kansas teachers teach this enterprise.

White clover

////////////////////////////////////
 59.7% (101) of teachers of other states teach this
 enterprise.

////////////////////////////////////
 37.0% (33) of Kansas teachers teach this enterprise.

Soy beans

////////////////////////////////////
 59.1% (100) of teachers of other states teach this
 enterprise.

////////////////////////////////////
 68.5% (61) of Kansas teachers teach this enterprise.

Cowpeas

////////////////////////////////////
 38.4% (65) of teachers of other states teach this
 enterprise.

////////////////////////////////////
 58.4% (52) of Kansas teachers teach this enterprise.

Crim. Clover

////////////////////////////////////
 34.9% (59) of teachers of other states teach this
 enterprise.

//////////
 11.2% (10) of Kansas teachers teach this enterprise.

Examine fields where alfalfa does well. Decide why.

////////////////////////////////////

68.6% (116) of teachers of other states used this as a field trip.

////////////////////////////////////

61.8% (55) of Kansas teachers used this as a field trip.

Make a study of clovers sown with grains as a nurse crop.

////////////////////////////////////

59.7% (101) of teachers of other states used this as a field trip.

////////////////////////////////////

42.7% (38) of Kansas teachers used this as a field trip.

Collect specimens of diseases and injurious insects.

////////////////////////////////////

53.8% (91) of teachers of other states used this as a field trip.

////////////////////////////////////

69.6% (62) of Kansas teachers used this as a field trip.

Collect samples of as many clovers as you can. Mount them.

////////////////////////////////////

51.4% (87) of teachers of other states used this as a field trip.

////////////////////////////////////

57.3% (51) of Kansas teachers used this as a field trip.

Make a test for the need of lime and the amount to supply.

////////////////////////////////////

51.4% (87) of teachers of other states used this as a field trip.

////////////////////////////////////

50.5% (53) of Kansas teachers used this as a field trip.

Make a comparative study of methods of harvesting.

////////////////////////////////////

50.2% (85) of teachers of other states used this as a field trip.

////////////////////////////////////

43.8% (39) of Kansas teachers used this as a field trip.

Visit fields of legumes that were seeded by different methods.

////////////////////////////////////

44.3% (75) of teachers of other states used this as a field trip.

////////////////////////////////////

43.8% (39) of Kansas teachers used this as a field trip.

Mix and apply commercial fertilizers.

////////////////////////////////////

35.5% (60) of teachers of other states used this as a field trip.

//////////

15.7% (14) of Kansas teachers used this as a field trip.

Determine from the farmers visited reasons for sowing soy beans.

////////////////////////////////////

33.7% (57) of teachers of other states used this as a field trip.

////////////////////////////////////

32.5% (29) of Kansas teachers used this as a field trip.

Clean seed with fanning mill; determine per cent of good seed; weeds; kinds.

////////////////////////////////////

30.1% (51) of teachers of other states used this as a field trip.

////////////////////////////////////

32.5% (29) of Kansas teachers used this as a field trip.

Assist in the harvesting operations; time the various processes.

////////////////////////////////////

29.5% (50) of teachers of other states used this as a field trip.

//////////

21.3% (19) of Kansas teachers used this as a field trip.

Suggested others: Seed-bed preparation.

Effects of manures and cultivation.

Effect of time of cutting upon stand;
upon quality of hay.

Comparative study of time of sowing.

CHART 15

FORAGE

Bluegrass

////////////////////////////////////
68.0% (115) of best teachers teach this enterprise.

////////////////////////////////////
59.5% (53) of Kansas teachers teach this enterprise.

Timothy

////////////////////////////////////
64.5% (109) of teachers of other states teach this
enterprise.

////////////////////////////////////
26.9% (24) of Kansas teachers teach this enterprise.

Red Top

////////////////////////////////////
60.3% (102) of teachers of other states teach this
enterprise.

////////////////////////////////////
19.1% (17) of Kansas teachers teach this enterprise.

Orchard Grass

////////////////////////////////////
50.3% (85) of teachers of other states teach this
enterprise.

////////////////////////////////////
25.8% (23) of Kansas teachers teach this enterprise.

Sudan

////////////////////////////////////
48.5% (82) of teachers of other states teach this
enterprise.

////////////////////////////////////

87.6% (78) of Kansas teachers teach this enterprise.

Brome

////////////////////////////////////

42.0% (71) of teachers of other states teach this enterprise.

////////////////////////////////////

30.3% (27) of Kansas teachers teach this enterprise.

Rye grass

////////////////////////////////////

34.9% (59) of teachers of other states teach this enterprise.

//////////

16.8% (15) of Kansas teachers teach this enterprise.

Fescue

////////////////////////////////////

31.3% (53) of teachers of other states teach this enterprise.

//////////

17.9% (16) of Kansas teachers teach this enterprise.

Bermuda

////////////////////////////////////

26.6% (45) of teachers of other states teach this enterprise.

////////////////////////////////////

31.4% (28) of Kansas teachers teach this enterprise.

Sweet Sorghum

////////////////////////////////////

24.2% (41) of teachers of other states teach this enterprise.

////////////////////////////////////

89.8% (80) of Kansas teachers teach this enterprise.

Broom corn

//////////

11.2% (19) of teachers of other states teach this enterprise.

/////

11.2% (10) of Kansas teachers teach this enterprise.

Collect samples and mount them.

////////////////////////////////////

49.7% (84) of teachers of other states used this as a field trip.

////////////////////////////////////

59.5% (53) of Kansas teachers used this as a field trip.

Determine the kind of plants in a poor pasture; a good one

////////////////////////////////////

46.7% (79) of teachers of other states used this as a field trip.

////////////////////////////////////

42.7% (38) of Kansas teachers used this as a field trip.

Study the condition of soil, tilth, and climate under which each does best.

////////////////////////////////////

46.1% of teachers of other states used this as a field trip.

////////////////////////////////////

47.1% (42) of Kansas teachers used this as a field trip.

Make a comparative study of the various methods of harvesting.

////////////////////////////////////

44.3% (75) of teachers of other states used this as a field trip.

////////////////////////////////////

52.8% (47) of Kansas teachers used this as a field trip.

Overhaul hay-making machinery.

////////////////////////////////////

31.3% (53) of teachers of other states used this as a field trip.

////////////////////////////////////

44.9% (40) of Kansas teachers used this as a field trip.

Collect insect enemies of grass--also harmful ones that live in sod.

////////////////

26.6% (45) of teachers of other states used this as a field trip.

////////////////

26.9% (24) of Kansas teachers used this as a field trip.

Select seed from the field.

////////////////

26.0% (44) of teachers of other states used this as a field trip.

////////////////////////////////////

51.6% (46) of Kansas teachers used this as a field trip.

Treat seed for insects and for diseases.

////////////////

23.6% (40) of teachers of other states used this as a field trip.

////////////////////////////////////

42.7% (38) of Kansas teachers used this as a field trip.

Test the accuracy and the uniformity of the planter.

////////////////

19.5% (33) of teachers of other states used this as a field trip.

////////////////////////////////////

33.7% (30) of Kansas teachers used this as a field trip.

Visit a lime kiln or a limestone grinder.

////

9.4% (16) of teachers of other states used this as a field trip.

////////////////

26.9% (24) of Kansas teachers used this as a field trip.

Others suggested: Harvest variety test plots.

Time of cutting and palatability.

Collect samples for fair.

Study various methods of seedbed

preparation.

CHART 16

POTATOES

Irish

////////////////////////////////////
83.4% (141) of teachers of other states teach this enterprise.

////////////////////////////////////
71.9% (64) of Kansas teachers teach this enterprise.

Sweet

////////////////////////////////////
33.1% (56) of teachers of other states teach this enterprise.

////////////////////////////////////
58.4% (52) of Kansas teachers teach this enterprise.

Select and treat seed potatoes

////////////////////////////////////
75.1% (127) of teachers of other states used this as a field trip.

////////////////////////////////////
58.4% (52) of Kansas teachers used this as a field trip.

Secure samples of varieties and judge them.

////////////////////////////////////
69.2% (117) of teachers of other states used this as a field trip.

////////////////////////////////////
46.0% (41) of Kansas teachers used this as a field trip.

Determine from growers the soil they prefer, seed, rotation and fertilizer.

////////////////////////////////////
65.6% (111) of teachers of other states used this as a field trip.

////////////////////////////////////

38.2% (34) of Kansas teachers used this as a field trip.

Grade potatoes according to market standards.

////////////////////////////////////

53.2% (90) of teachers of other states used this as a field trip.

////////////////////////////////////

22.4% (20) of Kansas teachers used this as a field trip.

Collect insect enemies and diseases.

////////////////////////////////////

47.3% (80) of teachers of other states used this as a field trip.

////////////////////////////////////

38.2% (34) of Kansas teachers used this as a field trip.

Determine the effectiveness of dusting and spraying.

////////////////////////////////////

47.3% (80) of teachers of other states used this as a field trip.

////////////////////////////////////

39.3% (35) of Kansas teachers used this as a field trip.

Practice hill-selection.

////////////////////////////////////

46.1% (77) of teachers of other states used this as a field trip.

//////////

17.9% (16) of Kansas teachers used this as a field trip.

Visit storage houses; determine operation and cost.

////////////////////////////////////

36.0% (61) of teachers of other states used this as a field trip.

//////////

14.6% (13) of Kansas teachers used this as a field trip.

Rogue-out undesirable plants in the field.

////////////////////////////////////

30.7% (52) of teachers of other states used this as a field trip.

////

10.1% (9) of Kansas teachers used this as a field trip.

Visit a seedbed for sweet potatoes.

////////

14.8% (25) of teachers of other states used this as a field trip.

////////////////

38.2% (34) of Kansas teachers used this as a field trip.

Others suggested: Tablestock vs. certified seed.

Tuber unit method of planting.

CHART 17

ROOT CROPS

Determine the yields that the best growers get; those of the average.

////////

26.6% (45) of teachers of other states used this as a field trip.

//

3.3% (3) of Kansas teachers used this as a field trip.

Make a comparative study of the various varieties.

////////

21.8% (37) of teachers of other states used this as a field trip.

///

4.4% (4) of Kansas teachers used this as a field trip.

Make a cost study of blocking and thinning.

////////

18.9% (32) of teachers of other states used this as a field trip.

/

2.2% (2) of Kansas teachers used this as a field trip.

Treat seed with corrosive sublimate.

//////////

17.1% (29) of teachers of other states used this as a field trip.

/

3.3% (3) of Kansas teachers used this as a field trip.

Make a collection of the insect enemies of beets.

//////////

16.5% (28) of teachers of other states used this as a field trip.

/

1.1% (1) of Kansas teachers used this as a field trip.

Visit a sugar factory.

//////////

15.9% (27) of teachers of other states used this as a field trip.

/

2.2% (2) of Kansas teachers used this as a field trip.

With a soil auger make a thorough study of the soils suitable for them.

//////////

15.3% (26) of teachers of other states used this as a field trip.

/

2.2% (2) of Kansas teachers used this as a field trip.

Assist in planning irrigation systems.

//////////

14.2% (24) of teachers of other states used this as a field trip.

/

2.2% (2) of Kansas teachers used this as a field trip.

Other suggestions: Level land and lay out ditches.

CHART 18

GARDEN CROPS

Study and make hotbeds and cold frames.

////////////////////////////////////

56.8% (96) of teachers of other states used this as a field trip.

////////////////////////////////////

56.1% (50) of Kansas teachers used this as a field trip.

Determine the best methods for the control of garden enemies.

////////////////////////////////////

52.6% (89) of teachers of other states used this as a field trip.

////////////////////////////////////

51.6% (46) of Kansas teachers used this as a field trip.

Visit those who have successful gardens and determine why a success.

////////////////////////////////////

43.7% (74) of teachers of other states used this as a field trip.

////////////////////////////////////

31.4% (28) of Kansas teachers used this as a field trip.

Determine the necessity for commercial fertilizers; cover-crops.

////////////////////////////////////

39.0% (66) of teachers of other states used this as a field trip.

////////////////////////////////////

21.3% (19) of Kansas teachers used this as a field crop.

Visit other soils and locations and determine suitability.

////////////////////////////////////

37.8% (64) of teachers of other states used this as a field trip.

////////////////////////////////////

31.4% (28) of Kansas teachers used this as a field trip.

Make a comparative study of the various methods of harvesting and packing.

////////////////////////////////////

36.0% (61) of teachers of other states used this as a field trip.

////////////////////////////////////

23.6% (21) of Kansas teachers used this as a field trip.

Others suggested: Visit markets.

Assist in marketing products.

Study rotations.

Prepare an exhibit for fair.

CHART 19

FRUIT

Apples

////////////////////////////////////

69.3% of teachers of other states teach this enterprise.

////////////////////////////////////

77.5% (69) of Kansas teachers teach this enterprise.

Cherries

////////////////////////////////////

61.5% (104) of teachers of other states teach this enterprise.

////////////////////////////////////

78.6% (70) of Kansas teachers teach this enterprise.

Plums

////////////////////////////////////

57.9% (98) of teachers of other states teach this enterprise.

////////////////////////////////////

71.9% (64) of Kansas teachers teach this enterprise.

Strawberries

////////////////////////////////////

57.4% (97) of teachers of other states teach this enterprise.

////////////////////////////////////

66.2% (59) of Kansas teachers teach this enterprise.

Grapes

////////////////////////////////////

52.6% (89) of teachers of other states teach this enterprise.

////////////////////////////////////

87.6% (78) of Kansas teachers teach this enterprise.

Pears

////////////////////////////////////

52.0% (88) of teachers of other states teach this enterprise.

////////////////////////////////////

78.6% (70) of Kansas teachers teach this enterprise.

Raspberries

////////////////////////////////////

50.8% (86) of teachers of other states teach this enterprise.

////////////////////////////////////

44.9% (40) of Kansas teachers teach this enterprise.

Peaches

////////////////////////////////////

49.7% (84) of teachers of other states teach this enterprise.

////////////////////////////////////

77.5% (69) of Kansas teachers teach this enterprise.

Blackberries

////////////////////////////////////

47.3% (80) of teachers of other states teach this enterprise.

////////////////////////////////////

46.0% (41) of Kansas teachers teach this enterprise.

Currants

////////////////////

34.7% (59) of teachers of other states teach this enterprise.

////////

13.4% (12) of teachers of Kansas teach this enterprise.

Dewberries

////////

18.9% (32) of teachers of other states teach this enterprise.

////////

16.8% (15) of Kansas teachers teach this enterprise.

Citrous Fruits

2.3% (4) of teachers of other states teach this enterprise.

CHART 20

Make a thorough study of pruning.

////////////////////

71.6% (121) of teachers of other states used this as a field trip.

////////////////////

74.1% (66) of Kansas teachers used this as a field trip.

Assist with the budding and grafting.

////////////////////

53.2% (90) of teachers of other states used this as a field trip.

////////

30.3% (27) of Kansas teachers used this as a field trip.

Mix sprays or dusts for the control of insects and diseases.

////////////////////

52.6% (89) of teachers used this as a field trip.

////////////////////

61.8% (55) of Kansas teachers used this as a field study

Apply sprays or dusts; make a comparative study.

////////////////////////////////////

50.3% (85) of teachers of other states used this as a field trip.

////////////////////////////////////

43.8% (39) of Kansas teachers used this as a field trip.

Prune and train grapes.

////////////////////////////////////

49.7% (84) of teachers used this as a field trip.

////////////////////////////////////

66.2% (59) of Kansas teachers used this as a field trip.

Topwork an apple tree.

////////////////////////////////////

46.1% (78) of teachers of other states used this as a field trip.

////////////////////////////////////

38.2% (34) of Kansas teachers used this as a field trip.

Tabulate the best varieties of fruit that are grown in your community and be able to recognize them.

////////////////////////////////////

44.3% (75) of teachers of other states used this as a field trip.

////////////////////////////////////

29.2% (56) of Kansas teachers used this as a field trip.

Visit the best orchardists; study methods used.

////////////////////////////////////

43.8% (74) of teachers of other states used this as a field trip.

////////////////////////////////////

40.4% (36) of Kansas teachers used this as a field trip.

Collect specimens of insects and diseases.

////////////////////////////////////

30.6% (67) of teachers of other states used this as a field trip.

////////////////////
 32.5% (29) of Kansas teachers used this as a field trip.

Make grape cuttings.

////////////////////
 36.0% (61) of teachers of other states used this as a field trip.

////////////////////
 44.9% (40) of Kansas teachers used this as a field trip.

Renovate an orchard or strawberry bed.

////////////////////
 35.5% (60) of teachers of other states used this as a field trip.

////////////////////
 34.8% (31) of Kansas teachers used this as a field trip.

Plan and plant an orchard or vineyard.

////////////////////
 34.9% (59) of teachers of other states used this as a field trip.

////////////////////
 28.0% (25) of Kansas teachers used this as a field trip.

Determine the best rotations to use.

////////////////////
 32.5% (55) of teachers of other states used this as a field trip.

////////////////////
 28.0% (25) of Kansas teachers used this as a field trip.

Pick winter apples or any other fruit.

////////////////////
 31.3% (53) of teachers of other states used this as a field trip.

//////////
 15.7% (14) of Kansas teachers used this as a field trip.

Overhaul a spray outfit.

//////////

28.9% (49) of teachers of other states used this as a field trip.

//////////

29.2% (26) of Kansas teachers used this as a field trip.

Thinning of fruit.

//////////

24.8% (42) of teachers of other states used this as a field trip.

////////

15.7% (14) of Kansas teachers used this as a field trip.

Visit a seed store. Locate the origin of the seeds.

//////////

22.4% (38) of teachers of other states used this as a field trip.

////////

15.7% (14) of Kansas teachers used this as a field trip.

Conduct a fruit show.

//////////

20.7% (35) of teachers of other states used this as a field trip.

//////////

23.6% (21) of Kansas teachers used this as a field trip.

Visit a nursery; study varieties found; methods of propagation, packing.

//////////

19.5% (33) of teachers of other states used this as a field trip.

//////////

23.6% (21) of Kansas teachers used this as a field trip.

Other suggestions: Take over an orchard for one-half crop.

CHAPTER VI
ADVANTAGES OF THE FIELD TRIP

Since the aim of education is to better prepare for greater efficiency in doing that which our natural ability and inclinations are best suited to, then teachers should use those methods which will accomplish the desired end with the least expenditure of time and effort. The more of the reality there is in the teaching situations, the more likely are instructors to get good teaching done. The methods used must continue to keep the problems out on the farm and not attempt to confine them within the four walls of the school room. The farmers themselves use the field trip. They compare the growth of crops, the type of animals, the buildings of their neighbors with their own. In fact, when some farmer has done an outstanding piece of work, he likes to tell about it. It is simply human nature. Real demonstrations will always attract folks because of their bump of curiosity.

The teachers were asked to rank the various teaching devices from best to poorest. They recognize that this order will not always hold true for the same teacher in

different situations nor even in the same situation, but it certainly is worthy of some consideration. Table XV shows that the Kansas teachers use them in the following order, best to poorest: individual project, class project, farm practice, field trip, supervised study and recitation, laboratory exercise, illustration, lecture, assigned reading, demonstration. The last one probably would have ranked elsewhere, but, due to an error in typing, many teachers did not include it in their answers. The rank for the best teacher group is shown in Table XVI. The order is individual project, farm practice, field trip, supervised study and recitation, laboratory exercise, illustrations, assigned reading and recitation, class project, lecture, demonstration. One notices that the individual project is first in both cases, being followed closely by farm practice. This is, no doubt, as it should be, as the desired aim is that the facts learned and the skill acquired shall be applied as soon as possible. The field trip ranks high in both cases. The class project outside of Kansas is not used as a teaching device very much. The lecture and assigned readings rank very low as teaching devices for high school boys. Chart 21 shows what the teachers think of the suggested advantages of the field trip. The least favored one by the best teachers was "aids in the selection

of desirable projects." Several mentioned the fact that the projects were selected in the fall before the field trips really began. In Kansas the one least favored was "offers instruction for a specified purpose." Other advantages suggested were: appeals to and holds the interest of the boys; increases the enrollment; adds very much to the interest in the course--they can cram more information into the boy by remaining in the class room; boys get the ideas of the successful livestock men by mingling with them; teaches manual skill in the doing of the job; aids community interest; stimulates the boy to make his project successful; brings the department to the eyes of the public; stimulates the class work; gives the community an understanding of the course; develops self-confidence and community spirit; helps in the retention of the subject matter taught; carried ideas into other communities; often a direct benefit to the community, as pruning, culling, etc.; helps to work off the spring fever; inspires the pupil to do better farming; gives the pupil a chance to try his hand; acquaints the boy with the agricultural leaders in the community; shows the lad where he ranks in his projects with the others; teaches them by doing upon the job; gives added dignity to the department and to farming; provides the best illustrations possible; advertises the school; keeps the teacher awake to the needs

of the community; forms a basis upon which much teaching
may be done; opportunity to point out poor as well as good
farm practices.....

Table XVI - Kansas

UNIVERSAL CROSS SECTION PAPER

Rank	Individual Project	Class Project	Lecture	Illustration	Laboratory Exercise	Demonstration	Farm Practice	Assigned Reading & Rec.	Field Trip	Supervised Study & Rec.	Totals
1	58	7	2	2			2		9	8	88
2	23	18	1	3	7		14	5	9	10	90
3	5	8	3	10	8	1	27	3	16	9	90
4	1	5	1	7	14	4	18	6	29	6	91
5		2	4	9	15		11	11	11	25	88
6	1	8	5	15	17	3	8	7	9	14	87
7	2	6	11	23	14	3	5	10	2	9	85
8		3	26	10	9	3	2	22	2	6	83
9		10	20	6	3	1	1	18	1	1	61
10		6	15		9		2	5			<u>29</u>
Totals	90	73	88	85	88	15	90	87	88	88	792

Table XVI - Other States

UNIVERSAL CROSS SECTION PAPER

Rank	Individual Project	Class Project	Lecture	Illustration	Laboratory Exercise	Demonstration	Farm Practice	Assigned Reading & Rec.	Field Trip	Supervised Study & Rec.	Totals
1	92	10		6	7	2	16		15	27	175
2	23	24	6	8	7	1	40	4	34	15	162
3	14	11	5	13	23	2	27	7	46	15	163
4	5	11	3	20	22	5	28	7	33	23	157
5	9	23	8	21	32	5	17	12	20	13	160
6	7	15	8	33	25	2	16	13	2	20	146
7	5	16	10	35	22	3	4	22	5	28	150
8	4	19	40	12	9	6	7	38	3	12	150
9	1	15	52	6	7	2	5	40	1	5	134
10		8	26		2	1		13	1	2	<u>53</u>
Totals	160	152	158	159	156	29	160	156	160	160	1450

CHART 21

SHOWING THE ADVANTAGES OF THE FIELD TRIP

Provides for instruction in a natural setting.

////////////////////////////////////
167 of the best teachers said "yes."

////////////////////////////////////
89 of the Kansas teachers said "yes."

Gives opportunity for observation which is most valuable for retention.

////////////////////////////////////
165 of the best teachers said "yes."

////////////////////////////////////
89 of the Kansas teachers said "yes."

Offers encouragement to the practical-minded lad.

////////////////////////////////////
164 of the best teachers said "yes."

////////////////////////////////////
83 of the Kansas teachers said "yes."

Offers instruction for a specified purpose.

////////////////////////////////////
163 of the best teachers said "yes."

////////////////////////////////////
77 of the Kansas teachers said "yes."

Adds variety to the methods used in the class room.

////////////////////////////////////
161 of the best teachers said "yes."

////////////////////////////////////
83 of the Kansas teachers said "yes."

Allows comparisons to be made between ideals and actual results.

////////////////////////////////////
160 of the best teachers said "yes."

////////////////////////////////////
82 of the Kansas teachers said "yes."

Furnishes about the only method that can be used for instruction in judging livestock, selecting seed, culling flock, etc.

////////////////////////////////////
156 of the best teachers said "yes."

////////////////////////////////////
79 of the Kansas teachers said "yes."

Provides real problems which hold the interest of the pupil.

////////////////////////////////////
156 of the best teachers said "yes."

////////////////////////////////////
81 of the Kansas teachers said "yes."

Furnishes opportunity for the student to know the best practices.

////////////////////////////////////
152 of the best teachers said "yes."

////////////////////////////////////
81 of the Kansas teachers said "yes."

The theory given in the class room is put into practice.

////////////////////////////////////
152 of the best teachers said "yes."

////////////////////////////////////
78 of the Kansas teachers said "yes."

Aids in the selection of desirable projects.

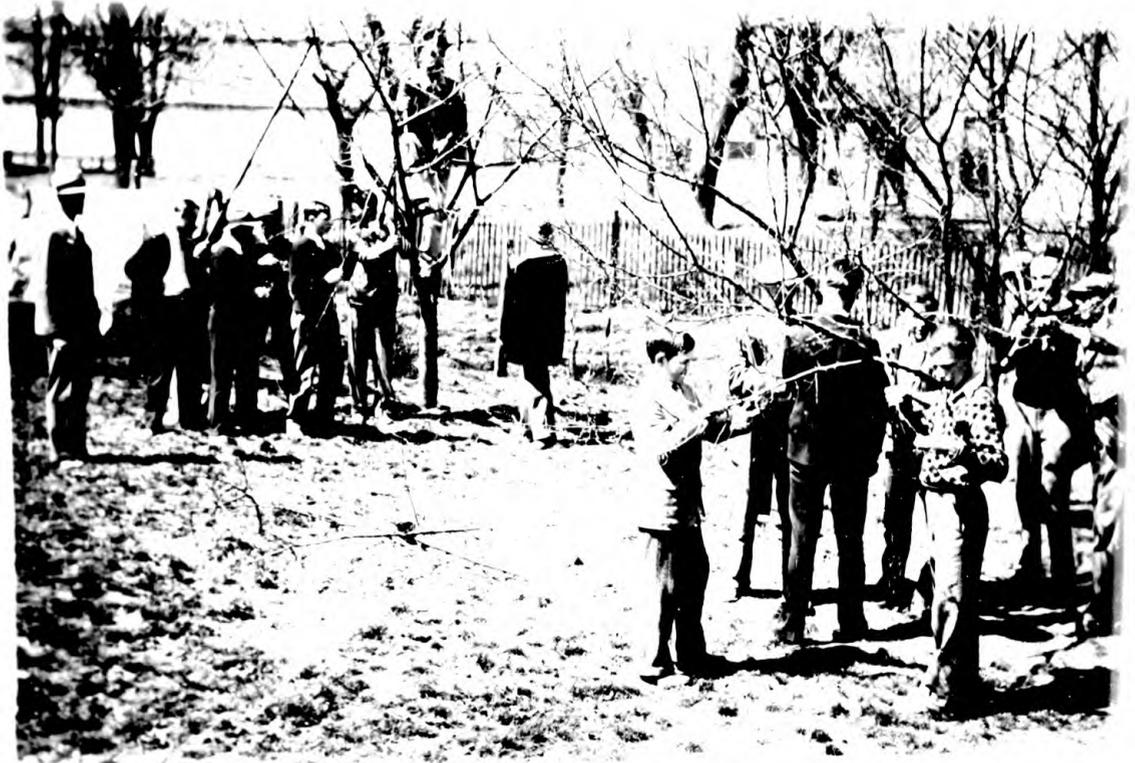
////////////////////////////////////
142 of the best teachers said "yes."

////////////////////////////////////
78 of the Kansas teachers said "yes."

CHAPTER VII
PICTURES OF FIELD TRIPS

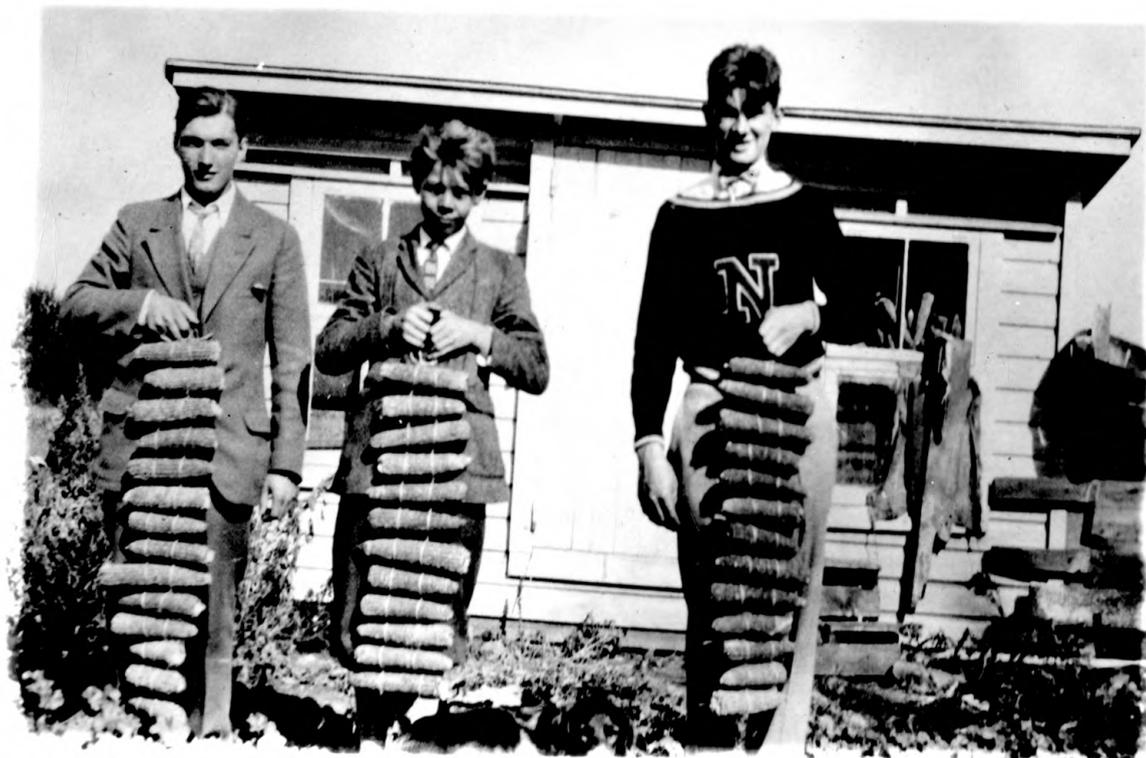
1. A Class in Missouri Pruning Fruit Trees Near the Edge of
Town. Notice Squad Organization.

2. Making an Inspection Before Cutting Out Pear Blight in
California. Small Class and Good Interest.



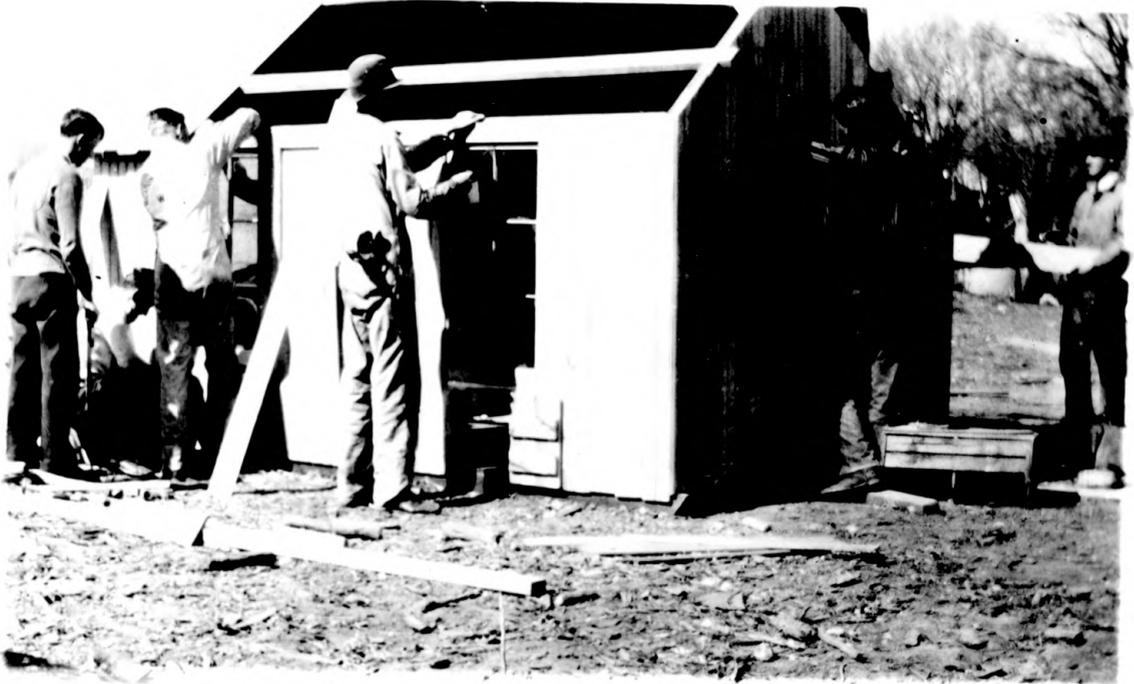
3. Field Selection of Corn and Stringing for Curing in New York. Purposeful Work and Correct Practice.

4. Harvesting a Class Project of Potatoes. Plenty of Work and Everyone Is Busy--Pennsylvania.



5. Constructing a Brooder House for a Farmer--Two Field Trips
in Farm Carpentry--Kansas.

6. Construction Work in Cement--Laying a Foundation. Not
Much Evidence of Dislike for the Job.



7. Learning how to Butcher Hogs in North Dakota. No One
Playing Here.

8. The Nucleus of a F. F. of A. Project in Registered Poland
China Hogs in New Mexico. Wonderful Possibilities.



9. Watching the Sale of the Class Project Calves at Kansas City.
Later They Saw Them in the Coolers. An Ideal Field Trip With
Many Objectives.

10. These Pennsylvania Lads Are Intensely Interested in Determining the Merits of the Farmer's Cows.



11. The Tractor Has Not Displaced Good Horses Yet Even in Kansas.

**12. Iowa Has Sheep as Well as Hogs. Some Problems When You
Have a Bunch of Boys Like These.**



13. Headpoints or Pigment? This Class Has Plenty of Material
and Know How to Go at the Job.

14. Along in the Spring or Fall, What Is of More Value Than a
Project Tour? These Lads Have Plenty of Company.



15. Make the Home a Brighter and More Pleasant Place in Which
to Live. One of the Lads Has the Help of His Mates.

16. Here We See the Result of One Home Beautification Project
after Two Years' Growth.

