COMPARISON OF RENTERS' SONS AND FARM OWNERS' SONS AS POSSIBILITIES FOR SATISFACTORY FARMING PROGRAMS IN VOCATIONAL AGRICULTURE

by

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INTRODUCTION

As vocational agriculture has continued to grow in popularity, new problems have arisen to interest and challenge its teachers. The vocational agriculture instructor has tried to construct his program of teaching to fit the needs of the community in which he teaches.

Last year, 5,550 boys enrolled in vocational agriculture in the high schools of Kansas (1). A large majority of these boys lived on the farm. A few, of course, lived in town. Of those living on the farm, part were sons of renters and part were sons of farm owner operators. The percentage of either group varies from school to school; yet the difference might remain practically constant. In 1930 there were 267,115 farm owner families and 210,106 tenant families in the state of Kansas (2). In 1935 there were 55.5 per cent farm owners and 44 per cent tenants in Kansas (3).

For several years the writer noted a difference existing between boys in their farming programs. After discussing the same problem with other teachers, an interest arose in a comparison of renters' sons and farm owners' sons as possibilities for carrying a farming program in vocational agriculture. Thus the present study was made.

PROCEDURE

In the absence of published reports upon a comparison of the opportunities of sons of renters with sons of farm owner operators, the records of vocational agriculture teachers in Kansas have been used. The material, from these records, was secured by a data sheet, a copy of which is in the Appendix. The data sheet was formulated with the aid of Dr. C. V. Williams and Dr. J. C. Peterson, Kansas State College professors; and Harold Kugler and Paul Chilen, fellow vocational agriculture teachers.

The data covered four major phases of work under comparison as follows.

1. Scholarship and leadership.
2. Individual project selection and execution.
3. Supplementary home practice job selection and execution.
4. Home improvement project selection and execution.

Data sheets were sent to 158 vocational agriculture teachers in Kansas. They were sent after the 1939-40 school year was over so that the completed records could be used. All vocational agriculture teachers send an annual report of the local department to the State Office in Topeka. The vocational agriculture classroom record book

has sections provided for recording, not only recitation and examination grades, but also project activities, supplementary home practice jobs, home improvement projects, and Future Farmers of America[1] activities. From these records the teachers furnished the data.

Teachers from 115 schools filled out the data sheets and returned them. Only 112 reports were used in the study as the others had not been properly answered. This number represents 70 per cent of all the schools and includes 62 per cent of all students enrolled in vocational agriculture last fall. Since a few students withdrew during the year, the percentage was really higher than 62. The 112 reports used had all been properly filled out. In the few cases in which the information was not available, a zero was used in the tabulation.

These 112 schools are well distributed over the state. The K. V. A. A.[2] has divided the state into the following districts: Southwest, Northwest, North Central, Northeast, East Central, Southeast, and South Central. These districts were formulated to make it more convenient for F. F. A.[3] activities. In this study eight schools reported from the

1. Future Farmers of America is a national organization of farm boys studying vocational agriculture.
2. K. V. A. A. is the abbreviation for Kansas Vocational Agriculture Association.
3. F. F. A. is the abbreviation for Future Farmers of America.

Southwest district, 21 from the Northwest district, 17 from the North Central district, 12 from the Northeast district, 15 from the East Central district, 17 from the Southeast district, and 22 from the South Central district. The map on page 5 shows the districts of the state.

The data reported were the numbers of renters' sons and farm owners' sons engaged in the activities on which information was asked. These numbers were not satisfactory for making comparisons, since there were more farm owners' sons than renters' sons.

In order to make the material comparable the percentage of renters' sons that had accomplished each activity was calculated. Likewise, the percentage of farm owners' sons was figured. This made it possible to compare the percentage of renters' sons that had performed a particular job with the percentage of farm owners' sons that had done the same job. Both the numbers and percentages have been recorded for the reader's convenience.

FINDINGS

Scholarship and Leadership

On the phase of leadership and scholarship, data were asked on nine different factors. Three of these factors

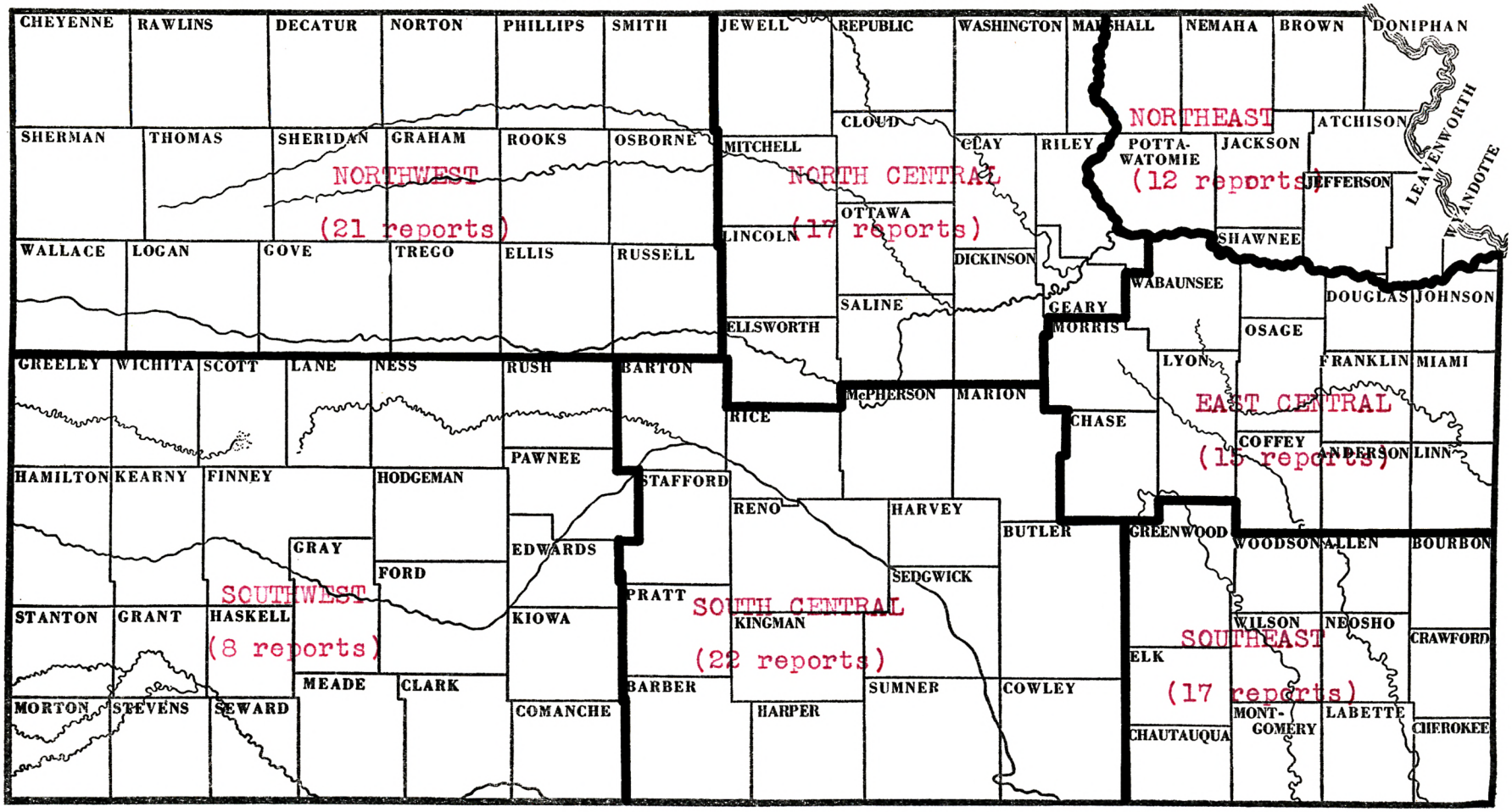

Fig. 1. Map of Kansas showing the K. V. A. A. districts, and the number of reports from each.

were related to the difficulties encountered in borrowing money, two dealt with Future Farmer activities, one asked information on judging teams, and three called for the number making certain grades.

Table 1 shows a comparison of the two groups of boys being studied in reference to scholarship and leadership. This table shows that 57.5 per cent of the total number of farm boys studying vocational agriculture in the 112 schools were farm owners' sons. Renters' sons represented 42.5 per cent of the total number. As stated, there were, in 1935, 55.5 per cent farm owners and 44 per cent tenants in Kansas (3).

Of the renters' sons, 25.5 per cent borrowed money from other sources than their fathers. This meant that every fourth boy of this group had to borrow money from the bank, P. C. A.[4], or other credit agency. Only 19.4 per cent of the farm owners' sons had to borrow money from outside sources. Then, approximately, every fifth boy of the farm owner group had to borrow from one of the above sources. At this rate, 255 of every thousand renters' sons had to borrow money away from home. The boys of the other group were more fortunate, as only 194 per thousand had to borrow from others than their fathers.

4. P. C. A. is the abbreviation for Production Credit Association.

Table 1. Comparison of scholarship and leadership possibilities of renters' sons and farm owners' sons.

	Number of renters' sons that had done activity	Number of farm owners' sons that had done activity	Percentage of renters' sons that had done activity	Percentage of farm owners' sons that had done activity
			Per cent of all boys	Per cent of all boys
Number of each type of boys enrolled in vocational agriculture during the 1939-40 school year	1,459	1,975	42.5	57.5
Number that had to borrow, other than from father	372	384	25.5	19.4
Number that had difficulty borrowing money	88	49	6.0	2.5
Number that had difficulty in getting fathers to sign notes	29	24	2.0	1.2
Number that had become State Farmers[5]	24	106	1.6	5.4
Number that had been F. F. A. officers	292	519	20.0	26.3
Number that had been on judging teams	340	519	23.3	26.3
Number that made an A grade in vocational agriculture, 1939-40	165	288	11.3	14.6
Number that made a grade of B in vocational agriculture, 1939-40	394	590	27.0	29.9
Number that failed in vocational agriculture, 1939-40	110	34	7.5	1.7

5. The highest honor awarded to F. F. A. members by the state organization.

Part of this difference might be attributed to the possibility that most farm owners had more capital than renters and were able to give more help to their sons. On the other hand, the question might be raised whether or not the renter's son needed more capital because his projects were larger. Information found later will answer this question.

A similar difference was found with reference to those who had difficulty in borrowing money. Only a small percentage of either group found it difficult to get loans. Yet, only 40 per cent as many farm owners' sons as renters' sons had trouble. One teacher reported that he had a boy who found it difficult to borrow money because he had not planned a satisfactory project program. Since the percentage of both groups is so small, reasons similar to the above might have been the cause of the other boys' trouble.

A high degree of cooperation was shown by the parents of both groups. Only 2 per cent of the renters' sons and 1.2 per cent of the farm owners' sons had trouble getting their fathers to sign notes with them. A total of 53 fathers hesitated to sign the notes of their sons. There were 29 renters and 24 farm owners who caused their sons trouble.

By dividing 1,459, the total number of renters' sons, by 29, the number that had difficulty, a quotient of 50 was obtained. This number meant that one renter's son of each 50 had trouble to get his father to cooperate. By the same procedure, it was found that one of each 80 farm owners' sons found it difficult to get his father to sign a note with him.

Only 1.6 per cent of the renter group became State Farmers as compared with 5.36 per cent of farm owner group. It is natural for these percentages to be small as only a limited number of F. F. A. members are permitted to become State Farmers. Over three times as many farm owners' sons became eligible for this high honor as did renters' sons.

To become a State Farmer, F. F. A. members must have met the following minimum qualifications (12).

1. Satisfactory completion of at least two years systematic instruction in vocational agriculture and membership in the F. F. A. with an outstanding supervised farming program in operation.

2. Pass some occupational test supplied by the state staff.

3. Earn and deposit in a bank, or productively invest at least $200. This may include the $25 saved while advancing to the grade of Future Farmer[6].

4. Be familiar with parliamentary procedure by having held office in a local chapter, or having passed a satisfactory test in parliamentary procedure.

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6. The "Second Degree" in the F. F. A.

5. Be able to lead a group discussion for 40 minutes.

6. Make the school judging team, debating team, or some other team representing the school.

7. Show marked attainment in scholarship in all school subjects.

8. Possess qualities of leadership as shown by having held responsible positions in connection with student and chapter activities.

9. The state association shall be entitled to elect ten qualified individuals, but where the state membership exceeds 500, not more than 2 per cent of the total state membership may be elected (fractions counted to the nearest whole number). Written records of achievement verified by the local adviser shall be submitted to the State Adviser by the local executive committee at least one month prior to the state convention. The adviser will then review the records and submit his findings to the State Executive Committee. This committee will nominate at the regular State Convention the candidates who have been found most worthy to receive the honor. Briefs of these records shall then be read by a member of the Executive Committee when the students are nominated. The delegates shall then proceed to elect to the "Third Degree"[7] the number of candidates to which the state is entitled.

It is in the above group that many potential farm leaders are found. Figuring on the basis of State Farmers per thousand boys, there would be 16 renters' sons and 53 farm owners' sons who reached the goal of State Farmer.

A comparison of the percentages of sons of farm owners and sons of renters that had been F. F. A. officers shows

7. The third or State Farmer Degree.

that more officers were selected from the farm owner group. There were 20 per cent of the renters' sons that had been officers as compared to 26.3 per cent of the farm owners' sons. Since a Future Farmer officer gets experience in leadership, farm owners' sons should have better opportunities to become leaders. Only 200 sons of renters out of each thousand had been officers as compared to 263 sons of farm owners. A recent study of 4-H club leadership by Shinn (4) showed that 41.2 per cent of the leaders came from farm-owner families and 16.7 per cent from tenant families. One of the greatest possibilities of vocational agriculture and the F. F. A. is that of giving opportunity for leadership training.

One of the interesting activities of vocational agriculture is judging. Most students desire to be among the best judges in the department. As in other comparisons, the percentage was in favor of the farm owners' sons (Table 1). The reader should notice, however, that the difference was small. The closeness of this comparison might be attributed to the fact that most judging work was done as a class activity, and so all boys had an equal chance.

The survey showed that 11.3 per cent of the renter group made A grades in vocational agriculture, while 14.6 per cent of the farm owner group made A grades. Likewise,

27 per cent of the former group made B grades as compared to 29.9 per cent of the latter group. Little more need be said about those who made B grades, as the comparisons are similar to those who made A's. However, it is interesting to note that the percentages of both groups making B grades were much greater. There were 15.7 per cent more renters' sons and 15.3 per cent more farm owners' sons that made B grades than A grades.

A greater difference between the two groups was shown by those making failing grades. The percentage of renters' sons that failed was approximately four and one-half times that of farm owners' sons.

Data were collected on the number that made A, B, and failing grades. If the sum of the percentages of each group that made these three grades is subtracted from 100, the remainder will be the percentage that made C and D grades. Thus, 100 minus the sum of 11.3, 27.0, and 7.5 equals 54.2 or the percentage of renters' sons that made C and D grades. By the same procedure, the percentage of farm owners' sons was calculated. One hundred minus the sum of 14.6, 29.9, and 1.7 equals 53.8 or the percentage of farm owners' sons that made grades of C and D.

From the foregoing comparisons, it can be seen that a larger percentage of the farm owners' sons than the renters'

sons made A and B grades. On the other hand, the percentage of renters' sons that made grades of C, D, and F was higher.

Table 2 shows the difference between the two groups in the nine factors discussed. In Columns 1 and 2 the percentages of the two groups that had done the activities are listed. In Column 3, where there was a higher percentage of renters' sons that had taken part in the activity, the difference is recorded. Similarly, in Column 4, when the percentage of farm owners' sons was larger, the difference was tabulated.

This table shows that a higher percentage of renters' sons had difficulties about money and grades. On the other hand, farm owners' sons were higher in F. F. A. and in grade level.

Individual Project Selection and Execution

The reader's attention is now directed to another comparison. Feed crops, cash crops, and livestock projects constitute the greater part of the vocational agriculture student's farming program. The data in Table 3 show the number and percentages of each group of boys that selected, planned, and conducted certain kinds of projects.

The growing season of 1939 was rather a poor one for some sections of the state. Several teachers indicated,

Table 2. Difference in percentages of renters' sons and farm owners' sons that had done activities found in Table 1.

	Percentage of renters' sons that had done activity	Percentage of farm owners' sons that had done activity	Per cent more renters' sons that had done activity	Per cent more farm owners' sons that had done activity
Had to borrow money from other source than father	25.5	19.4	6.1	0.0
Had difficulty in borrowing money	6.0	2.5	3.5	0.0
Had difficulty in getting fathers to sign notes	2.0	1.2	0.8	0.0
Had become State Farmers	1.6	5.4	0.0	3.8
Had been F. F. A. officers	20.0	26.3	0.0	6.3
Had been on judging teams	23.3	26.3	0.0	3.0
Had made an A grade in vocational agriculture, 1939-40	11.3	14.6	0.0	3.3
Had made a grade of B in vocational agriculture, 1939-40	27.0	29.9	0.0	2.9
Had failed in vocational agriculture, 1939-40	7.5	1.7	5.8	0.0

Table 3. Comparison of renters' sons and farm owners' sons as possibilities for project selection and execution.

	Number of renters' sons that had done activity	Number of farm owners' sons that had done activity	Percentage of renters' sons that had done activity	Percentage of farm owners' sons that had done activity
Number that had produced sufficient feed crops during the summer of 1939 to furnish enough feed for their livestock	704	1,014	48.3	51.3
Number that made plans to grow enough feed during the summer of 1940 for livestock	1,192	1,666	81.7	84.4
Number that had breeding projects	962	1,303	65.9	66.0
Number that had purebred livestock	331	628	22.7	31.8
Number that planted certified seed	310	549	21.2	27.8
Number that conducted swine projects	622	806	42.6	40.8
Number that conducted sheep projects	316	467	21.7	23.6
Number that conducted dairy projects	188	269	12.9	13.6
Number that conducted poultry projects	282	387	19.3	19.6
Number that conducted beef cattle projects	307	579	21.0	29.3
Number growing cash crops	334	614	23.6	31.1
Number growing feed crops	1,082	1,496	74.2	75.7

when they supplied the information on the number that had grown sufficient feed for their livestock during the summer of 1939, that the feed situation was very serious. An objective of the vocational agriculture program is that the boys produce as much of the feed as possible for their livestock projects. The percentages show that only approximately one-half of either group was able to produce sufficient feed. While the main purpose of this survey was to get material for comparison, the writer felt the above explanation was timely.

The next question on the number of boys that planned to produce enough feed during the 1940 season shows a much higher percentage of both types of boys. The advantage for growing feed crops seems to have been in favor of the farm owners' sons in 1939 as well as in 1940. In 1939 three per cent more farm owners' sons produced sufficient feed for their livestock and 2.7 per cent more of them planned to do so during the summer of 1940.

The difference in the percentages of the two groups shown in the rest of Table 3 appears to be small as compared with the first two. There are several kinds of feed crops just as there are several kinds of livestock. However, no attempt was made to get a comparison of different feed crops since they vary widely over the state, while

livestock projects do not show such variation.

There was only one-tenth per cent difference in the number of boys that had livestock breeding projects. This advantage was in favor of the sons of farm owners. The difference was so slight that it would not be fair to the renters' sons to say that a larger per cent of farm owners' sons had livestock breeding projects.

No reference was made in the above to quality of breeding projects. The next question, on the number that had purebred livestock, brought out an important comparison. Only 22.7 per cent of the renters' sons had purebred livestock, while the farm owners' sons had 31.8 per cent. Of the 65.9 per cent of renters' sons that had breeding projects, only 22.7 per cent had purebred livestock. This means that about one-third of those with breeding projects had purebred ones. Sixty-six per cent of the farm owners' sons had breeding projects while 31.8 per cent had purebred ones. Of the 66.0 per cent that had breeding projects, nearly one-half were purebred.

While only one-tenth per cent more farm owners' sons than renters' sons had breeding projects, 9.1 per cent more had purebred livestock. In other words, out of each thousand boys studying vocational agriculture, 91 more of the farm owner group had purebred projects. A larger percentage

of farm owners' sons than renters' sons planted certified seed. Table 3 shows that only 21.2 per cent of renters' sons planted certified seed as compared to 27.8 per cent of farm owners' sons. Since a higher percentage of sons of farm owners than sons of renters conducted purebred livestock projects and planted certified seed, it would indicate they were more interested in crop and livestock improvement.

The data collected on the kinds of projects conducted by each group of boys show the most popular livestock to be swine. If the reader will refer to Table 4, he will find that the percentage of renters' sons that had conducted swine projects was higher than for farm owners' sons. This is the only place where the renters' sons had a higher percentage.

There was very little difference found between the percentages of the two groups conducting swine, sheep, dairy, and poultry projects. However, the slight difference was in favor of the farm owners' sons in sheep, dairy, and poultry projects.

Only 21 per cent of the sons of renters conducted beef cattle projects as compared to 29.3 per cent of the sons of farm owners that did. It takes more capital and a longer time to get started in the beef cattle enterprise, which may account for part of the above difference.

Table 4. Difference in percentages of renters' sons and farm owners' sons that had conducted a particular kind of project or had plans for doing so.

	Percentage of renters' sons that had conducted or planned project	Difference in favor of renters' sons	Percentage of farm owners' sons that had conducted or planned project	Difference in favor of farm owners' sons
Produced sufficient feed crops during the summer of 1939 for their livestock	48.3	0.0	51.3	3.0
Made plans to grow enough feed during the summer of 1940 for livestock	81.7	0.0	84.4	2.7
Conducted breeding projects	65.9	0.0	66.0	0.1
Conducted purebred livestock projects	22.7	0.0	31.8	9.1
Planted certified seed	21.2	0.0	27.8	6.6
Conducted swine projects	42.6	1.8	40.8	0.0
Conducted sheep projects	21.7	0.0	23.6	1.9
Conducted dairy projects	12.9	0.0	13.6	0.7
Conducted poultry projects	19.3	0.0	19.6	0.3
Conducted beef cattle projects	21.0	0.0	29.3	7.7
Growing cash crops	23.6	0.0	31.1	7.5
Growing feed crops	74.2	0.0	75.7	1.5

A larger percentage of the farm owner group was growing cash crops. In fact, there was about the same percentage difference between the two groups as there was with the beef cattle projects. A majority of renters grow cash crops to meet the requirements of the landlord. This might explain, at least in part, why more renters' sons did not grow cash crops. The father kept all the cash crop land for himself.

However, when a comparison of the percentages of the two groups growing feed crops was made, little difference was found. The only explanation the writer can offer is that the renter could use the land not designated for cash crops by the landlord in any way he wished. Therefore, he allowed his son to use land for growing feed crops more often than for cash crops.

Supplementary Home Practice Job Selection and Execution

Although these jobs are elective, they have become an important part of the vocational agriculture student's activities. In fact, many vocational agriculture departments set up goals as to the number of home practice jobs each boy should do. He still has the initiative of selecting, planning, and executing the jobs.

It will be noted in Table 5 that 86.2 per cent of renters' sons had done home practice jobs. This was a larger percentage than had planned to grow sufficient feed crops during the summer of 1940 (Table 4).

A further study of Table 5 shows that a slightly higher percentage of renters' sons than farm owners' sons did home practice work. Yet, a higher percentage of sons of farm owners than sons of renters had done each job listed. This observation would indicate that the farm owners' sons had done a greater variety of jobs than the renters' sons. The reader can understand this apparent fact more easily after additional comparisons have been made.

The percentage of renters' sons that had done the various home practice jobs listed varied from 7.1 per cent to 38.5 per cent. Likewise, the variation in percentages of farm owners' sons was from 9.9 per cent to 43.6 per cent.

The supplementary home practice jobs listed in this table represent only a few of the many that may have been done. The writer picked these at random from a large number. It was believed that the ones selected would be sufficient to get a satisfactory comparison. They are representative of the entire state, with the exception of grape pruning. Several instructors from the southwest and northwest districts reported that there were no grapes to prune. This

Table 5. Comparison of supplementary home practice jobs done by renters' sons and farm owners' sons.

	Number of renters' sons that had done jobs	Number of farm owners' sons that had done jobs	Percentage of renters' sons that had done jobs	Percentage of farm owners' sons that had done jobs
Number that had done home practice work	1,257	1,685	86.2	85.4
Number that had castrated pigs	562	862	38.5	43.6
Number that had docked lambs	390	580	26.7	29.4
Number that had culled poultry	545	842	37.4	42.6
Number that had treated poultry for lice	265	449	18.2	22.7
Number that had treated hogs for lice	384	551	26.3	27.9
Number that had treated poultry for worms	150	252	10.3	12.6
Number that had treated seed for smut	536	848	36.7	42.9
Number that had sprayed plants to control insects	274	410	18.8	20.8
Number that had mixed mash	283	459	19.4	23.2
Number that had tested dairy herd	149	214	10.2	10.8
Number that had pruned grapes	103	196	7.1	9.9

fact helps to explain why such a small percentage of either group pruned grapes.

It is interesting to note the order of popularity of home practice jobs. Table 6 shows the percentage of each group that had done each job listed. It also shows the order in which each group selected and executed the jobs. The jobs are listed in the table in the approximate order in which the two groups selected them. The only jobs on which a difference in selection was found were culling poultry, treating seed for smut, treating poultry for lice, and spraying to control insects.

Renters' sons chose poultry culling second and treating seed for smut third. On the other hand, farm owners' sons chose treating seed for smut second and poultry culling third. Similarly, renters' sons chose the job of spraying to control insects seventh and treating poultry for lice eighth. The farm owners' sons chose these two jobs in reverse order. They did, however, make a more definite choice than the renters' sons, since 1.7 per cent more or 17 out of each thousand sprayed to control insects than treated poultry for lice.

The comparisons made were based on percentages that do not differ very much. For instance, the difference between the percentage of renters' sons that culled poultry and

Table 6. Order of selection of supplementary home practice jobs by renters' sons and farm owners' sons.

	Percentage of renters' sons that had done jobs	Order of selection by renters' sons	Percentage of farm owners' sons that had done jobs	Order of selection by farm owners' sons
Castrated pigs	38.5	1	43.6	1
Culled poultry	37.4	2	42.6	3
Treated seed for smut	36.7	3	42.9	2
Docked lambs	26.7	4	29.4	5
Treated hogs for lice	26.3	5	27.9	5
Mixed mash	19.4	6	23.2	6
Treated poultry for lice	18.2	8	22.7	7
Sprayed plants to control insects	18.8	7	20.8	8
Treated poultry for worms	10.3	9	12.6	9
Tested dairy herd	10.2	10	10.8	10
Pruned grapes	7.1	11	9.9	11

that treated seed for smut was only 0.7 per cent. With the farm owners' sons, the difference between these two jobs was only 0.3 per cent. Likewise, the difference between the percentages of those that treated chickens for lice and those that sprayed plants to control insects was small. Since the differences were slight, it could be safely said that the order of preference of home practice jobs was practically the same for both groups.

Since the order of selection of home practice jobs was similar, a better comparison between the two groups of boys can be made with the difference between the percentages of each group that had done each job.

Table 7 contains the percentage of renters' sons and farm owners' sons that had done each home practice job. The table also gives, in Column 3, the difference between the percentages of the two groups. This column was headed "Difference in favor of farm owners' sons", as a higher percentage of this group had done each job. The jobs were listed in the same order as in Table 6.

The jobs showing the greatest difference in favor of the farm owners' sons were castrating pigs, culling poultry, and treating seed for smut. Five and one-tenth per cent more farm owners' sons castrated pigs, 5.2 per cent more culled poultry, and 6.2 per cent more treated seed for smut.

Table 7. Difference in the percentages of farm owners' sons and renters' sons that had done supplementary home practice jobs.

	Percentage of renters' sons that had done jobs	Percentage of farm owners' sons that had done jobs	Difference in favor of farm owners' sons
Castrated pigs	38.5	43.6	5.1
Culled poultry	37.4	42.6	5.2
Treated seed for smut	36.7	42.9	6.2
Docked lambs	26.7	29.4	2.7
Treated hogs for lice	26.3	27.9	1.3
Mixed mash	19.4	23.2	3.8
Treated poultry for lice	18.2	22.7	4.5
Sprayed plants to control insects	18.8	20.8	2.0
Treated poultry for worms	10.3	12.6	2.3
Tested dairy herd	10.2	10.8	0.6
Pruned grapes	7.1	9.9	2.8

It was found that 6.6 per cent more farm owners' sons than renters' sons planted certified seed (Table 4), while Table 7 shows that 6.2 per cent more of the farm owner group treated seed for smut. Since there was a similar difference in favor of the farm owners' sons in both tables, it would seem that this group was more interested in crop improvement. Further evidence of this interest was found from the fact that two per cent more of the farm owners' sons sprayed plants to control insects.

Supplementary home practice jobs, when properly executed, help to improve yields, save money, or improve the market value of farm products to be sold.

Home Improvement Project Selection and Execution

Home improvement projects are those conducted to make the farm a better place on which to live. They are not required to be of economic benefit; however, they may be. For instance, if a boy terraced a field, he would undoubtedly have increased the economic efficiency of the field. On the other hand, the project would be an improvement to the farm. These projects are elective--the same as supplementary home practice jobs.

Data were received on nine home improvement projects. The reader should keep in mind that the projects listed in Table 8 are only a few of the many that could have been conducted. The ones used were considered by the writer and his helpers as typical projects. The number of each group of boys, as well as the percentages of each group that had conducted the projects, will be found in this table. It also shows the percentage of each group that had conducted home improvement projects.

A larger percentage of renters' sons than farm owners' sons had done home practice jobs (Table 5). Here a larger percentage of farm owners' sons had completed home improvement projects. Fifty-five and three-tenths per cent of renters' sons as compared to 64.6 per cent of the farm owners' sons had conducted home improvement projects. Out of every thousand boys of both groups, there were 93 more farm owners' sons improving the farmstead. It would be natural for this to happen, since the owners' son lives on the same farm longer than the son of the renter.

The most popular project of both groups was trimming shade trees or shrubbery. A total of 20.6 per cent of the renters' sons and 29.6 per cent of the farm owners' sons had executed this project. Two hundred ninety-six out of each thousand farm owners' sons trimmed shade trees, or

Table 8. Comparison of home improvement projects selected and conducted by renters' sons and farm owners' sons.

	Number of renters' sons that had conducted projects	Number of farm owners' sons that had conducted projects	Percentage of renters' sons that had conducted projects	Percentage of farm owners' sons that had conducted projects
Conducted home improvement projects	807	1,276	55.3	64.6
Planted windbreaks or shelterbelts	136	378	9.3	19.1
Painted buildings	101	360	6.9	18.2
Planned drives and lanes	52	120	3.6	6.1
Repaired screen doors or window screens	206	351	14.1	17.8
Ran contour lines	91	270	6.2	13.7
Graded yard	67	183	4.6	9.3
Built concrete walk	54	97	3.7	4.9
Built or constructed terraces	34	97	2.3	4.9
Trimmed shade trees or shrubbery	300	485	20.6	29.6

shrubbery, or both. One out of three farm owners' sons as compared to one out of five renters' sons trimmed the shrubbery and shade trees at home. No further comparison will be made from Table 8 at this time.

Table 9 has been prepared to show the order in which the home improvement projects were most often selected. Column 1 gives the percentage of sons of renters that had conducted the home improvement projects. The order of selection by the renters' sons is found in Column 2. Likewise, the percentage of farm owners' sons that had conducted projects and the order in which they were chosen are found in Columns 3 and 4, respectively.

Trimming trees and shrubs was the first choice of both groups of boys, as has already been stated. There was some variation, however, in most of the other choices. By using the same method of rating, the choice of projects were chosen by the renters' sons in the following order: repairing screen doors or window screens, second; planting windbreaks, third; painting buildings, fourth; running contour lines, fifth; grading the yard, sixth; building concrete walks, seventh; planning lanes and drives, eighth; and, building or constructing terraces, ninth.

In like manner the farm owners' sons chose planting windbreaks or shelterbelts, second; painting buildings,

Table 9. Order of selection of home improvement projects by renters' sons and farm owners' sons.

	Percentage of renters' sons that conducted projects	Order of selection of projects by renters' sons	Percentage of farm owners sons that conducted projects	Order of selection of projects by farm owners' sons
Trimmed shade trees or shrubbery	20.6	1	29.6	1
Planted windbreak or shelterbelt	9.5	3	19.1	2
Painted buildings	6.9	4	18.2	3
Repaired screen doors or window screens	14.1	2	17.8	4
Ran contour lines	6.2	5	13.7	5
Graded yard	4.6	6	9.3	6
Planned lanes and drives	3.6	8	6.1	7
Built concrete walk	3.7	7	4.9	8
Built or constructed terraces	2.3	9	4.9	8

third; repairing screen doors and window screens, fourth; running contour lines, fifth; grading yards, sixth; planning lanes and drives, seventh; and, building concrete walks and constructing terraces, eighth.

The second, third, and fourth choices of both groups include the same projects. However, there was quite a variation in the order of selection, as is shown in Table 9. Both the renters' sons and the farm owners' sons agreed on the fifth and sixth choices. The seventh and eighth selections of the two groups were reversed; however, there was only 0.1 per cent more of renters' sons that had built walks than had planned lanes and drives. The same percentage of farm owners' sons had built concrete walks as had constructed terraces, so both were recorded as eighth choice.

Little has been written about the comparison of the advantage one group had over the other. For that reason, Table 10 has been added. It shows the difference between the percentages of the two groups that had conducted the projects listed. All the differences were in favor of the farm owners' sons. This being true, only three columns were necessary. In Column 1 are the percentages of renters' sons that had conducted the projects. The percentages of the farm owners' sons were recorded in Column 2 and the

Table 10. Difference in the percentages of renters' sons and farm owners' sons that had conducted the home improvement projects.

	Percentage of renters' sons that had conducted projects	Percentage of farm owners' sons that had conducted projects	Difference in favor of farm owners' sons
Trimmed shade trees or shrubbery	20.6	29.6	9.0
Planted windbreaks or shelterbelts	9.3	19.1	9.8
Painted buildings	6.9	18.2	11.3
Repaired screen doors or window screens	14.1	17.8	3.7
Ran contour lines	6.2	13.7	7.5
Graded yard	4.6	9.3	4.7
Planned lanes and drives	3.6	6.1	2.5
Built concrete walk	3.7	4.9	1.2
Built or constructed terraces	2.3	4.9	2.6

differences between the two groups are in Column 3.

A larger percentage of both groups trimmed shade trees and shrubbery than had conducted any other home improvement projects. This comparison was made in the first part of our discussion on home improvement projects. Windbreaks or shelterbelts were planted by 9.8 per cent more farm owners' sons than renters' sons. Since only 9.3 per cent of the renter group planted windbreaks or shelterbelts, it means that over twice as large a percentage of farm owners' sons had conducted this project. One out of every five farm owners' sons had conducted this project. One out of every five farm owners' sons planted trees for windbreaks, while only one out of every ten renters' sons had done so.

Table 10 shows that 11.3 per cent more farm owners' sons than renters' sons painted buildings. Only 6.9 per cent of all the renters' sons painted buildings. Therefore, nearly three times as many of the farm owner group painted buildings. Since 113 more sons of farm owners out of every thousand of the two groups studying agriculture painted buildings, it would seem that farm owners' sons have a much greater chance to get experience in doing that type of work. Not only would they get more experience in painting, but also in appreciating the added beauty afterward.

The percentage difference of the groups was much less on the project of repairing screen doors and window screens. In fact, this project was second choice of the renters' sons and fourth of the farm owners' sons. It is a project that does not require a large amount of expense, and immediate benefit can be received. No doubt, this was partly the reason for a larger percentage of the renters' sons doing it. The same could be said of the first choice of the renters' sons--that of trimming trees. Here very little expense was involved. These two projects are usually conducted in the spring when the interest in improvement is at its peak. It was probably easier for instructors to encourage boys to do the above types of improvement. Also, cooperation from the parents could be obtained more easily on projects that involved little expense.

Over twice as high a percentage of farm owners' sons as renters' sons ran contour lines. It would seem that there should not have been as great a difference as this, since farming on the contour not only improves the farm but also has an economic benefit. A partial explanation of the difference might be that the farm owners were more interested in saving the soil. Only 4.6 per cent of renters' sons as compared to 9.3 per cent of farm owners' sons graded yards. Again, over twice as great a percentage of the farm

owner group conducted the project. Since this project required more tools and machinery and was strictly an improvement project, the reader can understand why such a small percentage of boys did it.

There were 3.6 per cent of the renters' sons and 6.1 per cent of the farm owners' sons that had planned lanes and drives. Again, the farm owner group had a decided advantage. Five farm owners' sons to every three renters' sons planned lanes and drives. It is interesting to note that on the project of building concrete walks, there was only a difference of 1.2 per cent between the two groups. Only 3.7 per cent of the renters' sons and 4.9 per cent of the farm owners' sons built concrete walks. By calculation it was found that eight farm owners' sons to every seven renters' sons conducted this project. This fact gives only a very small advantage in favor of the farm owners' sons.

The last project listed in the table was one that promised not only farm improvement but also economic benefit from larger yields of crops. The difference found between the percentages of each group that had constructed terraces was only 2.6 per cent. Although the difference is small, when it is considered that only 2.3 per cent of the renters' sons engaged in the project, it will be seen that over two sons of farm owners to one son of a renter constructed

terraces.

Therefore, Table 10 shows that a much larger percentage of farm owners' sons than renters' sons conducted home improvement projects. While Table 10 showed the difference between the percentages of the two groups for these projects, Fig. 2 will make the difference more clear to the reader.

Trimmed shade trees and shrubbery	XXXXXXXXXXXXXXXXXXX YYYYYYYYYYYYYYYYYYYYYYYYYYY
Planted windbreaks or shelterbelts	XXXXXXXX YYYYYYYYYYYYYYYYY
Painted buildings	XXXXXXX YYYYYYYYYYYYYYYYY
Repaired screen doors or window screens	XXXXXXXXXXXXX YYYYYYYYYYYYYYYYY
Run contour lines	XXXXXX YYYYYYYYYYYYY
Graded yard	XXXXX YYYYYYYY
Planned lanes and drives	XXXX YYYYYY
Built concrete walk	XXXX YYYYY
Built or constructed terraces	XX YYYYY

Fig. 2. Comparison of data from Tables 8, 9, and 10; X, renters' sons; Y, farm owners' sons. Each letter represents one per cent.

Fig. 2 shows graphically the difference between the percentages of renters' sons and farm owners' sons that had conducted the home improvement projects listed in Tables 8, 9, and 10.

SUMMARY AND CONCLUSIONS

From a study of the data collected from 112 vocational agriculture teachers in Kansas, the following conclusions have been drawn.

1. More farm owners' sons than renters' sons study vocational agriculture. This may be due to their having better opportunities for conducting satisfactory farming programs.

2. A slightly higher percentage of renters' sons than farm owners' sons have to borrow money for their farming programs. They have more difficulty in obtaining loans and in persuading their fathers to sign their notes.

3. A higher percentage of farm owners' sons become State Farmers and F. F. A. officers.

4. The farm owner's son makes somewhat higher grades on the average than the renter's son. He makes slightly more A and B grades and considerably fewer C, D, and F grades.

5. The farm owner's son chooses better quality livestock for his projects, selects more purebred animals, and plants more certified seed than the renter's son.

6. The son of the farm owner conducts projects that require more capital, and show greater chance of livestock and crop improvement.

7. There is little difference in the percentage of renters' sons and farm owners' sons that do supplementary home practice jobs. However, farm owners' sons conduct a larger variety of supplementary home practice jobs.

8. A higher percentage of farm owners' sons castrate pigs, cull poultry, treat seed for smut, dock lambs, treat hogs for lice, mix mash, treat poultry for lice, spray to control insects, treat poultry for worms, test dairy cattle, and prune grapes as home practice jobs.

9. Home improvement projects are conducted by a larger percentage of farm owners' sons than renters' sons.

10. The renter's son most often chooses home improvement projects that require the least capital and give only immediate benefit.

11. The son of the farm owner gets more experience in home improvement as he has more chances of getting to paint buildings, plant windbreaks, run contour lines, plan lanes and drives, and build terraces.

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APPENDIX

Data Sheet

The questions on this data sheet are asked to find a basis for comparison of renters' sons and farm owners' sons as possibilities for farming programs in vocational agriculture. It is hoped that you will be able to find the data requested from your classroom record books and your annual report to the State Office. If you cannot find the material from these sources and do not have it elsewhere, but can make a good estimate, do so, but indicate that the figure is an estimate. I have tried to ask for information that will furnish data that are comparable and yet be the easiest for you to furnish. If there are questions on which you cannot furnish factual data or a close estimate, just indicate that the information is not available. After you have found the number of renters' sons and farm owners' sons, just write the numbers in the columns headed renters' sons and farm owners' sons. For example, if you find you have had 15 renters' sons and 20 farm owners' sons in your classes during the year, write 15 in the column headed renters' sons and 20 in the column headed farm owners' sons. Place the numbers after the question asking for the number that have been in the department during the school year 1939 and 1940. Answer each question separately. Answer all questions on the basis of the 1939-40 school year's work, except where specified. Do not count town boys.

	Renters' sons	Farm owners' sons
Number of boys of each type you have had in your department during the 1939-40 school year		
Number that produced sufficient feed crops during the summer of 1939 to furnish enough feed for their livestock		
Number that plan to grow enough feed this summer for livestock		

	Renters' sons	Farm owners' sons
Number that have had breeding projects (livestock)		
Number that have had purebred livestock		
Number that have planted certified seed		
Number that have had to borrow money, other than from father		
Number that had difficulty in borrowing money		
Number that had difficulty in getting their fathers to sign notes with them		
Number that have become State Farmers. (Count all boys that are in the department even though they became State Farmers before 1939-40.)		
Number that have been F. F. A. officers (Count all boys who are still in the department even though they may not have been an officer during 1939-40.)		
Number that have been on judging teams, 1939-40		
Number of boys that made A grades in agriculture, 1939-40		
Number that made grades of B in agriculture, 1939-40		
Number that failed in agriculture during 1939-40		
Number that have conducted swine projects		
Number that have conducted sheep projects		
Number that have conducted dairy projects		
Number that have conducted poultry projects		
Number that have conducted beef cattle projects		
Number that are growing cash crops		
Number that are growing feed crops		
Number that have done home practice jobs		
Number that have conducted home improvement projects		

	Renters' sons	Farm owners' sons
Give the number of boys of each type, that have done the following home practice jobs:		
a. Castrated pigs		
b. Docked lambs		
c. Culled poultry		
d. Treated poultry for lice		
e. Treated hogs for lice		
f. Treated poultry for worms		
g. Treated seed for smut		
h. Sprayed plants to control insects		
i. Mixed mash		
j. Tested dairy herd		
k. Pruned grapes		

	Renters' sons	Farm owners' sons
Give the number of each type of boys that have done the following home improvement projects. Count each project separately:		
a. Planted windbreaks or shelterbelts		
b. Painted buildings		
c. Planned drives and lanes		
d. Repaired screen doors or window screens		
e. Run contour lines		
f. Graded yard		
g. Built concrete walk		
h. Built or constructed terraces		
i. Trimmed shade trees or shrubbery		

Do you wish a summary?

Sign your name _____