

FACTORS WHICH MAKE FOR SUCCESS
IN SCHOOL-OPERATED FARMS

by
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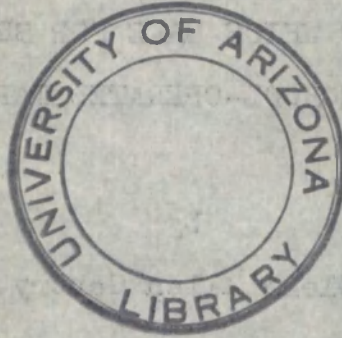
Report on a problem
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TABLE OF CONTENTS

Part	Page
I. INTRODUCTION	1
Justification for the Study	1
Objective of the Study	3
Statement of the Problem	3
Fundamental Assumptions	4
II. RELATED STUDIES AND INVESTIGATIONS	5
Studies of School Farms and School Land	5
Summary	12
III. ORGANIZATION AND INTERPRETATION OF DATA	14
Procedure	14
Presentation and Interpretation of Data	15
IV. SUMMARY	30
Findings	30
Conclusions	37
APPENDIX	40
A. Phoenix Technical School Agreement for Keeping Students and Projects at Phoenix Technical School Farms	41
B. Questionnaire to Determine the Factors that Make for Success in School Operated Farms	45
BIBLIOGRAPHY	46

LIST OF TABLES

Number		Page
I.	Distribution of 61 School Farms from which Data were Used	15
II.	Major Purposes of School Farms	16
III.	The Establishment of School Farms	17
IV.	Practices in Financing and Accounting on School Farms	19
V.	Policies on the Economic Use of School Farms	21
VI.	Buildings on School Farms	23
VII.	Equipment and Facilities on School Farms	23
VIII.	Management of School Farms	25
IX.	Administrative Policies on School Farms	26
X.	Use of School Farms for Class Instruction	27
XI.	Age, Size, and Location of School Farms	28
XII.	Investment, Operating and Management Costs of School Farms	28
XIII.	Teacher Evaluation of School Farms	29

PART I

INTRODUCTION

Justification for the Study

The use of farm land by departments of vocational agriculture is rapidly increasing, especially in the western states. Farms and plots are on the increase, indicating a need to provide additional teaching facilities.

School land has been used in Arizona by departments of vocational agriculture for several years. Much of this land was in plots that did not constitute a farm. Land has been used and abandoned, but land from other schools has taken its place. There are school farms in Arizona which are contributing to the educational benefits of the community.

From case studies and observations of school farms in Arizona, there is sufficient evidence that school farms are successful. However, under unfavorable circumstances, school farms cannot meet the needs of students in the educational program.

As indicated by Deyoe:

Land has always been needed in the teaching of agriculture. The earliest pioneers in agricultural education frequently insisted that schools teaching agriculture should own land. Later, agriculture departments learned how to use the farms of students and their parents. Many "school farms" proved unsatisfactory and

were abandoned. In recent years there has been an increase of interest in having land owned or rented by the schools.

There is sufficient school land in use and there are sufficient people talking about the acquisition of land for school use to warrant a publication which considers the possible uses of school land and the difficulties attending its possession.¹

A better understanding of the problems and values which school land presents will be of benefit to those now engaged in operating school land and to those contemplating its acquisition. Our educational system is always seeking to improve that which we have, so as to bring about better education for more people.

In the next twenty years we must produce one-fifth more food than we produce now on approximately the same amount of land. This need must be met in part by young men who are public school students today. The proper decisions regarding school land will help these future farmers meet the demands of tomorrow.

The use of school land as school farms needs much study in order that proper decisions may be made. "Quite possibly schools could use their land to better advantage if they were more aware of the uses other schools make of their land."² The use of school land by departments of

¹ George P. Deyoe, The Use of School Land by Departments of Vocational Agriculture in Illinois Schools, p. 1.

² Ibid.

vocational agriculture is not encouraged in many states. As expressed by Sasman, "The feeling seems to be that farm land takes too much of the instructor's time which could be used more profitably in other ways."¹

In many states the use of school land by departments of vocational agriculture is neither encouraged nor discouraged.

In the final analysis, whether or not a given department should operate school land should be a matter to be decided by the teacher and his students, with counsel from school officials and advisory groups.²

Objective of the Study

The objective of this study is to determine the factors which contribute to the success of school-operated farms in departments of vocational agriculture.

Statement of the Problem

The major problem is to determine the factors which make for success in school-operated farms. Minor problems are: (1) to determine the relative importance of the various factors in the success of farms; (2) to determine the values of school-operated farms in programs of vocational agriculture.

¹ L.M. Sasman, "School Land," The Agricultural Education Magazine; 22:243 (May, 1950).

² Deyoe, op. cit., p. 12.

Fundamental Assumptions

This study is based upon the following assumptions which are accepted as true: (1) school-operated farms have educational value when properly established and operated; (2) school-operated farms are a success under favorable conditions; (3) school-operated farms are not successful under unfavorable conditions; (4) teachers who have operated farms know what factors influence the success of those farms.

PART II

RELATED STUDIES AND INVESTIGATIONS

Studies of School Farms and School Land

In the review of literature pertaining to agricultural education, ten studies were found of school land but in most instances these studies are incomplete. Seven of the studies used are from The Agricultural Education Magazine.

Summaries of Studies in Agricultural Education, published by the Vocational Division, U.S. Office of Education, Federal Security Agency, were reviewed for related studies. Although no reports of studies pertaining directly to school land or school farms for vocational agriculture departments were found, several related studies were significant for this investigation.

A review of the studies on school land is presented.

Arthur M. Ahalt, "School Farms in the North Atlantic Region," The Agricultural Education Magazine; 24:14-15.

Twenty-five school farms were reported by supervisors in the region; sixteen schools supplied information on a questionnaire which was used in the study. The size of the farms varied from three to 750 acres. The enterprises on the farms varied to a wide extent. Most of the farms had

enough equipment to meet their needs. The profits were shared by the Future Farmers of America chapter and the school. The agricultural instructor acted as the manager and made most of the decisions about the farm.

The most important advantages, as reported by the agricultural teachers, were: "(1) serves as a laboratory for all departments of the school; (2) gives opportunity to acquire knowledge and develop skills in a 'doing' program; (3) a source of income."

The most important disadvantages as reported by the agricultural teachers were: "(1) makes the teacher and department vulnerable to financial liability and criticism; (2) requires so much capital that this may offset advantages; (3) takes too much of the teacher's time."

School farms do not seem very popular in the North Atlantic region; however, there are several new school farms being developed in the region at the present time.

George P. Deyoe, The Use of School Land by Departments of Vocational Agriculture in Illinois Schools, pp. 1-12.

Three Illinois teachers collected information from teachers of vocational agriculture in that state regarding the use of school land. This information was compiled and interpreted in the study.

Many departments have had land within the past 30 years. Most of these have discontinued its use after a few years.

There are several departments operating school land at present, but mostly as small plots. There are a few schools operating farms of various types.

There are many problems involved in using school land by departments of vocational agriculture. A detailed study should be undertaken before launching out on a school farm program, and the farm should be started then only if everyone concerned is very definitely in favor of the program.

L.F. Hutton, "West Virginia's School Farm," American Vocational Journal; 26:6, 20.

The first school-operated farm in West Virginia contains 35 acres and has been operated successfully for three years. It is used as a school laboratory.

E.J. Johnson, "School Farms and Plots in the Pacific Region," The Agricultural Education Magazine; 19:188.

A survey was made in 1944 and again in 1946. During this time a notable growth was made in school farms. Approximately 40 per cent of the agriculture departments in the Pacific region manage land of some kind. There were 108 school farms; 78 were owned and 30 leased. The average size of those owned was 32.9 acres and of the leased farms 57.8 acres. This increase indicates a need for additional instruction on the doing level.

The farm should not take too much of the instructor's time, and he must be occupationally competent.

J.J. Kayetan, "Phoenix Program for the 'Sixty Percent,'" American Vocational Journal; 23:3, 12.

"Presently we have projects of some scope. Our plans for expansion include 200 acres of farm land in the very near future."

C. Oscar Loreen, "Operation of a School Farm," The Agricultural Education Magazine; 24:116.

The school farm, under proper conditions, is a desirable undertaking. It should be used not only by the department of vocational agriculture, but also by other grades and classes in the school to enrich the experiences of boys and girls.

Some advantages of a school farm are:

1. The farm can serve as a place where new crops might be planted and observed by farmers of the community.
2. The farm might introduce and demonstrate improved feeding and livestock management practices which might be observed by students and farmers in the community.
3. The school farm could provide specific work experience for boys who might not otherwise get the desired kind of work experience. Working with livestock or farm equipment and machinery are examples.
4. It would provide the local Future Farmers of America Chapter with facilities for carrying on group enterprises such as feeding livestock or growing crops cooperatively.
5. The school farm may be a source of revenue for Future Farmers of America Chapter activities.

6. Some town boys will want to enroll in vocational agriculture, and the farm would provide them with facilities for carrying on a supervised farming program.
7. Improved methods of crop growing, such as producing and using certified seed, can be demonstrated to the boys and farmers in the community.
8. A specific farm for study of records and farm management practices will be available for study by the vocational agriculture classes.
9. The school farm will provide facilities not only for the use of boys studying vocational agriculture, but it also will provide facilities for the high school science teacher or the primary teacher to use. Such units as "How Plants Grow," "Soil Formation and Conservation," "Identification of Insects," "Sanitation and Health" are merely examples of the many that can be made more vivid and realistic by field trips to the school farm.
10. The school farm might supply some of the food for the school cafeteria.
11. Opportunity for rendering a service to the community and to the State College Experiment Station may be worked out. The local vocational agriculture instructor working with Experiment Station personnel might provide crops for experimenting with insect or disease control or provide fertilizer plots.
12. The farm, being identified with the school and rendering a service to the students and to the community, will have a tendency to tie school and community more closely together.

Some desirable characteristics of a school farm are:

1. It should be typical of the farms of the community from standpoint of soil type, topography and size.
2. It should be located outside of the city limits but as near the school as possible.
3. It should be large enough to be an economic unit. This means that the school farm should be

large enough to warrant the employment of a full-time farm operator, and be large enough to make reasonably efficient use of the operator's time and of the farm equipment provided.

4. Facilities should be provided so that most farming enterprises typical of the community could be carried out.
5. It should be located on a surfaced highway.
6. It should have a reasonably good dwelling and farm buildings.
7. The farm should be operated by a man who is skilled in farming and who could work well with students and school personnel. He should have the respect of the farmers in the community.
8. It would be desirable if the school farm would pay its own way. However, this should not be expected. The school should be willing to subsidize such financial losses as may occur.

The local board of education should consider all of the aspects of providing a school farm very carefully before taking final action. Perhaps every school cannot justify investment of funds in a farm. However, in many schools the right kind of a school farm, properly equipped and operated, can make a real contribution to the training of youngsters in the community. Even more important might be its part in keeping the farming in the community at a high level.

H.M. McDonald, "School Farms in Maryland," The Agricultural Education Magazine; 24:70, 71.

In Maryland there is a widespread interest in the school farm. In the 70 departments, approximately half have some kind of school land for instructional purposes. Land is used for farms, school gardens, hot beds, cold frames, greenhouses, feed lots, strawberry patches, shrubbery beds, and poultry houses.

It is worth noting that in the original vocational act, the thought was expressed that land could be provided by the school for carrying on agricultural practices and experiences. Maryland is well on its way to supply this need.

Nine values of school farms are given, and sixteen essentials of a school farm are listed.

The benefits and advantages claimed for school farms are primarily for vo-ag pupils and the F.F.A. School farms, however, have secondary benefits for the entire student body. In discussing such benefits, Douglas Bivens, Principal of Boonsboro High School, says--

"Our school farm is becoming a comprehensive laboratory for all departments from grades 1 to 12. At the present time we are fortunate in having a 50-acre farm adjacent to our school grounds. Practically any time during the day one may find groups of pupils visiting the farm for many purposes. Examples, first grade pupils learning about animals; upper grade pupils observing conservation projects; Junior High pupils studying the diet of animals; Senior High pupils butchering and learning ways to store food.

"Not only are our pupils receiving many benefits from our farm, but our graduates and many adults in the community have discovered that a real service may be obtained from the school.

"During the past three years the Agriculture Department has grown by nearly 250 per cent, and our holding power has been greatly strengthened throughout our school.

"A good high school located in a rural area can be made a better high school when it undertakes to evolve a comprehensive farm laboratory adapted to meet the needs of the community."

E. Kenneth Ramburg, "Bringing the Farm to the School,"

The Agricultural Education Magazine; 22:184.

A farm was started through the interest in the

community. It is a small farm located in a small-farm community and used to demonstrate improved practices. It has met with success in many ways since it was established three years ago.

L.M. Sasman, "School Land," The Agricultural Education Magazine; 22:243.

Departments of vocational agriculture should not attempt to use school land. Farm land takes too much of the instructor's time that could be used more profitably in other ways.

C.M. Spearin, "Cooperative School Farm," The Agricultural Education Magazine; 22:175.

Abandoned farm land four miles from the city was given to the school. It is used primarily by city boys who have no facilities for projects at home. The farm made \$2,000 in 1950, and future progress and expansion are planned.

Summary

There is no general agreement among educators about the operation of school farms by vocational agriculture departments. Some are very definitely against such departments operating school farms or school land, yet there are many who are favorable to such a program and who think the establishment and promotion of school farms are desirable. Others feel the school farm is a problem for the local

community to decide, after weighing carefully all the factors pertaining to operation of such a project. This latter group neither condones nor condemns school farms, but keeps an open mind in order that unbiased decisions may be reached.

PART III

ORGANIZATION AND INTERPRETATION OF DATA

Procedure

Schools from the eleven western states, Hawaii, and ten other states selected at random from scattered sections of the United States were used in this study. The distribution by states and the number of school farms used from each state are shown in Table I.

Names and addresses of agriculture teachers who operate school farms were secured from state supervisors of each state. Questionnaires¹ were prepared and sent to 110 instructors who operate farms, 72 of which were returned giving data about the farms. Eleven questionnaires were not used in this study because the farm did not have ten or more acres of land; thus data from 61 school farms are used as the basis of the results presented here.

The questionnaire was divided into three parts:

(1) characteristics, purpose, and teacher opinion regarding the school farm; (2) establishment, finances, equipment and management of the school farm; (3) the history and use of the school farm. The data from the questionnaires are

¹ See Appendix for copy of questionnaire.

assembled in tables for clarity of presentation.

Presentation and Interpretation of Data

The data presented in the following tables show the contributing factors for success of the 61 school farms.

TABLE I

Distribution of 61 School Farms
from which Data were Used

State	No. of farms	State	No. of farms
Arizona	4	Nevada	1
Arkansas	2	New Jersey	1
California	13	New Mexico	2
Colorado	2	New York	1
Idaho	1	Oklahoma	4
Illinois	2	Oregon	12
Iowa	1	Pennsylvania	2
Maine	1	Texas	3
Maryland	3	Utah	1
		Washington	5

TABLE II
Major Purposes of School Farms

Question	No. of farms
Farm was established for:	
Use as a laboratory	39
Demonstration of improved practices	36
Group projects	29
Individual projects	16
Farm is used for:	
A laboratory	37
Demonstration of improved practices	33
Group projects	30
Individual projects	21
Farm land will be used permanently as:	
A farm	53
School building site	8
Influence of farm upon agriculture course:	
Much	40
Some	16
Little	5

The school farms were established for use as a laboratory, demonstration of improved practices, group projects, and individual projects. They are used essentially for the purposes of their establishment. Individual projects are not a very important purpose for establishment or for use of the school farm.

In 53 of the schools, the land will remain permanently as a farm; eight schools will use the land eventually as a building site.

In 40 schools the enterprises on the farm influenced

TABLE III
The Establishment of School Farms

Question	Answers				
	Yes	No	Essen- tial	Desir- able	Non- essential
Is the farm adequately secured by ownership or lease?	58	3	47	8	1
Did the agricultural teacher have an active part in selecting the farm?	42	18	20	26	3
Was a specific objective for the farm determined before its purchase?	39	20	29	20	2
Were adequate provisions made for animals, buildings, machinery and equipment before the farm was purchased?	28	32	24	17	
Is the number of acres in the farm adequate?	53	8	27	16	1
Is the farm classed as good land?	49	10	19	28	1

the agriculture course much. In sixteen schools they influenced the agriculture course some, and in five schools had little influence.

Table III shows that 58 school farms are adequately secured by ownership or lease; three are not. Forty-seven teachers rate this as essential, and eight as desirable.

Forty-two agricultural teachers did have a part in

selecting the farm, while eighteen teachers did not. That the instructor in agriculture should be consulted in this matter of selecting a farm is considered desirable by 26 teachers and essential by 20.

A specific objective for the farm before its purchase was determined at 39 schools, whereas 20 failed to establish such an objective. Twenty-nine teachers considered it essential that an aim for the farm be set up before its purchase, and 20 felt such objective was desirable for the success of the farm.

Adequate provisions were not made for animals, buildings, machinery and other equipment before the farm was acquired by 32 schools, but 28 schools reported these provisions were adequate. Twenty-four teachers considered it essential and seventeen felt it desirable that plans for and means of securing animals and other equipment should be completed before the farm is purchased.

The number of acres in the farm is adequate on 53 farms, but not adequate on eight farms. Twenty-seven instructors believe it essential that the farm be adequate in size, while sixteen rated it as desirable.

Good land for use as a farm is considered essential by nineteen teachers and desirable by 28. On the large majority of the farms (49) the land is reported as good; only ten farms are on land that is considered not good.

TABLE IV
Practices in Financing and Accounting
on School Farms

Question	Answers				
	Yes	No	Essen- tial	Desir- able	Non- essential
Are adequate finances provided to operate the farm?	44	15	33	10	1
Are the finances for operation of the farm provided by the students of agriculture?	18	36	11	10	11
Do students get any income from the farm?	28	27	7	12	7
Are adequate records kept on the farm?	56	5	32	6	
Are accounts kept by the agriculture teacher?	35	24	14	14	6

Table IV shows that adequate finances are provided to operate 44 of the farms. This is in accord with the opinion of teachers, 33 of whom consider adequate finances essential for successful operation of a school farm and ten consider this desirable. For fifteen of the 61 school farms the finances were reported as not adequate.

The finances to operate the farm are provided by the students on eighteen farms; on 36 the finances are provided by the school. Apparently the teachers feel that it makes little difference where the finances come from to operate

the farm, since only eleven consider it essential that such money should come from the students of agriculture.

Approximately 50 per cent of the students get some income from the farm, which is considered desirable by about 20 per cent of the teachers.

Adequate records are kept on 56 farms, which is essential in the opinion of 32 teachers. On 35 farms the agriculture teacher keeps such records and on 24 farms this work is done by students, secretaries or other school employees. Fourteen teachers feel it is essential and an equal number believe it desirable that the agriculture teacher be responsible for the farm accounts.

According to Table V, eighteen schools receive the income from the farm while 42 do not. Teachers evidently are not too concerned about the disposition of farm profit, since only eight consider it essential that such money go to the school.

Twenty-one teachers believe it desirable that a school farm be self-supporting. Forty-six of the school farms used in this study expect the farm to be self-supporting.

Whether students using the farm for projects should pay rental apparently is not considered a vital problem since only four teachers feel such a practice is essential. This teacher attitude is reflected in the fact that on only nineteen farms do students pay regular rental for their

TABLE V
Policies on the Economic Use
of School Farms

Question	Answers				
	Yes	No	Essen- tial	Desir- able	Non- essential
Does the income from the farm go to the school?	18	42	8	8	15
Does the school expect the farm to be self-supporting?	46	14	9	21	8
Do students using the farm for projects pay regular rental?	19	27	4	8	8
Do students keeping projects on the farm sign written agreements?	24	25	16	4	4
Are students paid for routine (non-project) work on the farm?	32	28	5	20	8
Are students paid for specialized work on the farm?	45	15	12	23	3

projects, while on 27 farms they pay no rental.

Written agreements for keeping projects on a farm are required by 24 schools but not required by 25 schools, and only sixteen teachers feel such agreements are essential.¹

¹ See Appendix for copy of Phoenix (Arizona) Technical School's "Agreement for Keeping Student and Projects at Phoenix Technical School Farms."

At 32 schools, students are paid for routine (non-project) work on the farm, which is considered essential or desirable by more than a third of the teachers. Twenty-eight schools do not pay for this kind of work. Specialized work, however, is paid for by 45 school farms but not paid for by fifteen farms. In the opinion of 23 teachers it is desirable to reimburse students for such work, and twelve consider this practice essential.

From Table VI it will be noted that 37 farms reported the classrooms and shop are near the farm, which is a desirable or essential situation in the opinion of two-thirds of the teachers.

The farm buildings are adequate on less than half (27) of the school farms. In the opinion of teachers it is desirable to have adequate buildings but not essential.

Likewise less than half (23) of the farms have a foreman's house; 32 do not. Eighteen teachers consider it essential to have a foreman's house on the farm premises, eleven believe this desirable, and nine feel it is not essential.

By far the greater number of farms (53) do not have living quarters for students, which again may be a reflection of teacher attitudes since only six of them consider student living quarters essential on a school farm.

TABLE VI
Buildings on School Farms

Question	Answers				
	Yes	No	Essen- tial	Desir- able	Non- essential
Are the classrooms and shop on or nearby the farm?	37	27	20	22	1
Are the farm buildings adequate?	27	32	17	23	3
Does the farm have an adequate foreman's house?	23	32	18	11	9
Are there adequate living quarters for students on the farm?	7	53	6	15	19

As indicated in Table VII, 44 farms have sufficient equipment available, but sixteen do not. In the opinion of 24 teachers it is essential that there be sufficient farm equipment, and seventeen consider it desirable.

While 57 per cent of the teachers feel it is essential or desirable to have a sufficient variety and number of animals on the school farm, only 41 per cent of the farms actually meet this requirement.

Thirty-six of the schools have adequate transportation for students between school and farm, which service is considered essential by 24 teachers and desirable by seven.

TABLE VII
Equipment and Facilities on School Farms

Question	Answers				
	Yes	No	Essen- tial	Desir- able	Non- essential
Is sufficient farm equip- ment available?	44	16	24	17	2
Does the farm have a suf- ficient number and variety of animals?	25	32	10	25	4
Does the school provide adequate transportation for students from the school to the farm?	36	16	24	7	2

Table VIII indicates that 29 schools use an advisory committee for determining plans and policies of the farm, but 32 schools do not have such a committee. In the opinion of 21 teachers an advisory body is essential, and sixteen feel it is desirable.

At most of the schools (49) a student committee helps formulate policies for the farm; 29 teachers believe this practice is essential and sixteen report it desirable.

In the opinion of 42 teachers, it is essential or desirable that the agricultural instructor be experienced in the agriculture of the community when he assumes charge of the school farm, and at 50 of the schools the instructor has this experience.

TABLE VIII
Management of School Farms

Question	Answers				
	Yes	No	Essen- tial	Desir- able	Non- essential
Is an advisory committee used for determining plans and policies on the farm?	29	32	21	16	7
Is a student committee used that helps make policies?	49	12	29	16	
Was the agricultural instructor experienced in the agriculture of the community when he assumed charge of the farm?	50	7	20	22	
Does a manager live on the farm?	16	43	18	7	6
Is there more than one agricultural teacher who helps with the farm?	25	36	14	19	8

Only sixteen schools report that a manager lives on the farm. Eighteen teachers feel this is an essential practice, seven that it is desirable, and six that it is non-essential.

At 36 schools only one agriculture teacher helps with the farm, though 33 teachers believe it essential or desirable to have more than one teacher responsible for this project.

TABLE IX
Administrative Policies on School Farms

Question	Answers				
	Yes	No	Essen- tial	Desir- able	Non- essential
Do the school superintendent and school board give active support to the farm?	49	10	29	13	1
Does the school carry insurance on students working on the farm?	21	37	15	16	2
Are the school periods for agriculture adequate in length?	52	9	19	17	2

According to Table IX, in 49 school systems the board and superintendent give active support to the farm; only one teachers considers such support non-essential.

Thirty-seven schools carry no insurance on students working at the farm, though 31 teachers feel this is essential or desirable.

Nineteen teachers believe it essential and seventeen desirable that the class periods for agriculture be adequate in length. This situation is well in hand at the majority of the schools, since only nine report that class periods for agriculture are not long enough.

From Table X it is found that at schools having a farm, 25 per cent of the class periods is spent on the farm and

TABLE X
Use of School Farms for Class Instruction

Factor	Range	Average
Students using farm last year	4-150	56
Minutes in class period	60-180	108
Per cent of class periods on farm	0-100	25
Per cent of shop jobs done on farm	0-100	26

and 26 per cent of all shop jobs are done at the farm. The average class period is 108 minutes long, and an average of 56 students use the farm each year.

Table XI indicates that the school farm is a rather recent development in the field of agricultural education. Farms have been in operation an average of 6.1 years; no farm was reported to be in operation longer than seventeen years. The average school farm has 76 acres of land and is located 1.8 miles from the school.

Of the 61 farms, 44 received school funds for operating costs. As reported in Table XII, these amounts range from \$246 to \$13,000 with an average cost per farm of \$1,423.32. The annual average salary of a school farm foreman is \$2,780. The average initial investment for the farm is \$23,666.

TABLE XI
Age, Size, and Location of School Farms

Factor	Range	Average
Years farm has been in operation	1- 17	6.1
Acres in the farm	10-425	76.0
Miles between farm and school	0- 12	1.8

TABLE XII
Investment, Operating and Management
Costs of School Farms

Factor	Range	Average
Initial investment in farm	0-\$100,000	\$23,666.00
Operating cost (to school) last year	\$246-\$ 13,000	\$ 1,423.32
Annual salary of farm foreman	\$2,000-\$ 3,900	\$ 2,870.00

As reported in Table XIII, the school farm has a large amount of influence toward increasing enrollment of students in agriculture. It also improves the morale and attitude of the students.

Teachers feel that community farms will not give as good results as the school farm, and that the costs of school farms are justified by the educational results.

Ninety-seven per cent (59) of the schools will continue to use a farm in connection with their vocational agriculture department. Evidence that school farms are endorsed by teachers is found in the fact that 51 reported they would work to secure a farm if their school did not have one.

TABLE XIII

Teacher Evaluation of School Farms

Question	No. of replies
Influence upon student enrollment and morale:	
Much	57
Some	5
Little	3
Would community farms give as good results?	
Yes	8
No	53
Are costs justified by educational results?	
Yes	57
No	4
Will school continue to use a farm?	
Yes	59
No	2
If school did not have a farm, would the teachers work for one?	
Yes	51
No	9

PART IV

SUMMARY

Findings

Three levels of importance were indicated by teachers for individual factors which make for success on school-operated farms. The levels of importance are: essential, desirable, and non-essential.

School farms were established for several purposes. Many schools established the farm for more than one purpose. To be used as a laboratory was the first choice. Demonstration of improved practices and group projects closely followed the laboratory. Individual projects were not an important reason for establishing the farm.

The farms were being used essentially for the same purposes for which they were established. They are used as a laboratory, to demonstrate improved practices, for group and individual projects. The land of 92 per cent of the farms will remain permanently as a school farm; eight per cent of the farms are using land that ultimately will be used for school buildings.

Enterprises on the farm have much influence upon the course of study in agriculture.

It is essential to the operation of a school farm that it be adequately secured by ownership or lease. Most agricultural teachers had a part in selecting the school farm; this is a desirable practice, but not essential.

Specific objectives were determined for the farm before it was purchased. This was considered essential or desirable by a large majority of the teachers.

Not quite half of the schools made adequate provision for animals, buildings, machinery and other equipment before the farm was acquired, although most of the teachers considered such provision essential or desirable.

The number of acres in most school farms is adequate. This is essential to the success of a farm.

As might be anticipated, most of the teachers felt it essential or desirable that the school farm be on good land. Data in this study show that 49 of the 61 farms are on land classed as good.

Most schools have adequate finances to operate the farm, a situation held essential by more than half of the teachers. About one-third of the necessary finances is provided by students and two-thirds by the school. The source of the finances for operation of the farm is not important.

Students in slightly less than 50 per cent of the schools get some income from the farm. One-fifth of the teachers believed this to be desirable, but only seven felt

it essential.

The keeping of adequate records is considered essential or desirable for successful operation of a school farm, and this practice is followed at practically all the schools reporting. Accounts are kept by the agriculture teacher in the majority of instances, but a large number of schools use students, secretaries or other personnel for this work. It is essential and desirable that the agriculture teacher keep farm accounts.

In most cases the income from the farm does not go to the school. On many farms it goes to the Future Farmers of America chapter, or it may go into a revolving farm fund. Where the income goes is non-essential to the success of the school farm.

While most schools expect the farm to be self-supporting and the general feeling is that this should be true, several expressed the view that the farm should not be required to be self-supporting since it is actually a school laboratory.

About one-third of the schools require students keeping projects on the farm to pay regular rental fees. Evidently teachers do not feel this is a vital problem for only four indicate that such payment is essential, while eight each consider it desirable and non-essential.

Several teachers indicated that written agreements should be used for all business transactions between the student and the school, but less than half of the schools (24) require a signed agreement from students who keep

projects on the farm.

The majority of schools pay students for non-project work on the farm. Almost an equal number, however, do not pay for this type of work by students. Teachers indicate that whether or not students are paid for non-project work is non-essential to the operation of the school farm; the majority, however, consider it essential or desirable that students be paid for specialized work on the farm. Forty-five of the schools do pay students for specialized work.

The classrooms and shops are on or near the farm at most schools. Twenty-two of the teachers indicated this is desirable, and an almost equal number report it to be essential.

The buildings on more than half (32) of the farms are not adequate. Forty of the teachers believe adequate buildings are essential or desirable.

More than half (32) of the farms do not have a foreman's house on the premises, but 23 do have a foreman's house. Several teachers indicated that a foreman who lived on the farm was very important, and in many cases was what they needed in order to do a better job with the school farm.

Only seven of the 61 farms reported adequate living quarters for students on the farm. The teachers were about equally divided as to whether this was non-essential or essential and desirable. Several teachers who have crop

farms commented that living quarters for students were not needed, but most of the teachers who have livestock on the farm thought living quarters for students would be both desirable and essential.

Forty-one teachers considered it essential or desirable that there be sufficient equipment on the farm, and this is the situation on 44 of the 61 farms reporting. In contrast, on only 25 of the farms is there a sufficient number and variety of animals. This low percentage is due to the fact that some of those reported were crop farms.

Adequate transportation between the school and the farm is provided by more than half (36) of the schools. At sixteen schools adequate transportation is not provided. Teachers indicated that this lack of transportation was a heavy handicap; it added one more job for the instructor who was already a teacher, a farm manager, and F.F.A. adviser. Teachers indicated they were unwilling to take the responsibility of transporting students to and from the farm. It is essential to the operation of a farm that adequate transportation be provided by the school.

A small majority of farms do not use an advisory committee for determining farm plans and policies. Teachers indicate that such committees are essential or desirable. However, on 49 farms a student committee helps determine policies; three-fourths of the teachers consider this practice desirable or essential. Several commented that this

is one of the main reasons for having a farm. Individual thinking, student work, skills, government and management are to be encouraged.

As it is thought desirable and essential, at 50 of the 61 schools the agricultural teachers were skilled in the agriculture of the community before assuming charge of the farm. This is all the more important since at 43 of the farms there is no manager living on the premises.

The majority of farms (36) are supervised by only one agricultural teacher, though 33 of the teachers consider it essential or desirable that there be more than one person helping with the farm.

Since the school board and/or superintendent probably gave final sanction for the establishment of a school farm, their active support to the project would be expected and this is true for 49 of the farms.

Only about one-third of the schools carry insurance on students working on the farm. The opinion of teachers on this point is about equally divided; sixteen rated it as desirable and fifteen as essential.

The length of school periods for agriculture is adequate in 52 schools. Nineteen teachers reported this as essential and seventeen as desirable.

School farms are used for class instruction by 96 per cent of the schools. Twenty-six per cent of all class and shop time is spent on the farm. The instruction on the farm is on the "doing" level.

In most cases the farms are located away from the school, and the average size of the farm is 76 acres. Operation of a farm in connection with agricultural courses is a recent development in this field of education.

The amount invested in school farms is small compared with present farm prices. Very few school farms show a net profit; the average operating loss, or cost to the school board, was \$1,423.32 during 1951.

Teachers evaluate school farms very highly as an educational device. They report that these farms have a definite and desirable influence upon student enrollment and morale. They cannot get as good results from the use of farms in the community.

Teachers feel that the costs of operation are justified by the educational results. They will continue to use a school farm, and would work to establish one if they did not have such a unit.

Conclusions

There is evidence that school farms are serving a definite need in some departments of vocational agriculture. Like other departments of the public school, farms should be properly established and administered on sound educational principles. A very definite need must be present before a farm can make maximum contributions to the school program. The farm also should have the active support of the community and of the school administration.

The major role of the school farm is its use as a laboratory and for the demonstration of improved farm practices. The farm is used also for group and individual projects.

The farm must be adequately secured by ownership or long-term lease. The size of the farm and the kind of land must compare favorably with good farms in the community.

Buildings, equipment and facilities are necessary for a farm to function efficiently. A comfortable foreman's home should be provided on the farm, and living quarters for students who care for the livestock and crops on the farm are desirable.

Adequate finances must be provided, including sufficient funds to give extra support during the first years of establishment and operation. Many school farms have failed because of inadequate financing.

The farm need not necessarily show a net profit each year, since it is used by learners who do not have the abilities necessary for profitable operation of a farm. The school administration must be willing to spend a reasonable amount of money for the educational benefits that the farm provides.

The income from the farm should go into a revolving farm fund for use in replacing supplies and for reinvestment in enterprises conducted on the farm.

A complete set of records and accounts must be kept for the farm. The agriculture teacher should supervise these records and accounts as one of his farm management duties.

Proper transportation must be provided by the school if needed. Farms located adjacent to the school but out of the city limits are to be preferred.

The class periods should be adequate in length so that the farm may be used during class time. In general, periods of at least two hours are desirable.

The following is a summary of some important factors in the successful establishment and operation of school farms.

Factors related to the farming operations:

1. Financial control of the farm
2. Amount of the initial investment
3. Size of the farm
4. Productivity of the land
5. Buildings, equipment and facilities
6. Farm foreman service
7. Amount of operating capital available
8. Use made of income
9. Farm records and accounts

Factors related to the school program:

1. Established need for a farm
2. Attitude of school administration toward the farm
3. Student participation in operation and management
4. Length of class periods for agriculture
5. Transportation facilities for students
6. Management of the farm.

School farms may be established for many different purposes, but one main objective must be kept in mind: to provide better opportunities for the practical education of public school youth.

A P P E N D I X

APPENDIX A

PHOENIX TECHNICAL SCHOOL

Agreement for Keeping Students and Projects
at Phoenix Technical School Farms

The Phoenix Technical School provides a training farm of 22 acres at 20th Street and Southern Avenue, and a training farm of 42 acres at Roser Rd. and 7th Street, for students enrolled in agriculture. The farm has facilities for those students to keep an agricultural project who do not have an opportunity to keep a project at home. It provides practical experience in general farm life. Students have the satisfaction of working with plants and animals that their home place does not provide. Economical custom rates are charged students for pens and pasture. The Future Farmers of America Feed Co-op provides feed at wholesale prices. Students may have the privilege of using the school farm as a place to keep their project providing they abide by the rules and regulations of the school, the F.F.A. chapter and their advisors.

Rules and Regulations

1. No project will be brought to the farm until a written agreement is signed by the student, the parent, and is accepted by an advisor.
2. The student will provide his share of the labor and management on projects at the farm as determined by the

F.F.A. Farm Committee, the farm foreman and the F.F.A. advisors. Failure to provide necessary labor will cost the student \$1.75 per day to hire a substitute student for chore labor, and \$.75 an hour for labor on individual projects. The cost will be charged against the student's project.

3. Students will assume the responsibility of taking care of their projects, keeping them clean, neat and orderly.

4. Students visiting the farm must check with the farm foreman or instructor at the farm before visiting any part of the farm.

5. Student must keep a complete set of records on the progress of his project.

6. No project will be removed from the farm until all bills are paid and written permission is received from an agricultural instructor. After expenses are paid, all profits belong to the student.

7. F.F.A. members will receive feed from the co-op at prevailing wholesale prices. Non-F.F.A. members will pay retail price for feed.

8. The F.F.A. feed co-op will levy a carrying charge of 50¢ per cwt. in excess of \$10.00 per head for swine and \$25.00 for cattle, poultry \$25.00 per 100 birds, sheep \$5.00 per head. Other projects will have similar rates set by the F.F.A. Farm Committee.

9. While staying at the farm, students will be subject to the rules and regulations of the school. Students will

stay at the farm for a period of farm duty on a regular schedule beginning 9:00 A.M. on Saturday morning. No student will leave the farm except to attend school, unless excused for special occasions upon written permission from parents. Students will be responsible for keeping lodging neat and orderly at all times.

10. Students who violate these rules and regulations will be subject to forfeiting their interests in their projects to the F.F.A. Chapter and will lose the privilege of keeping a project on the school farm upon recommendation of such action from the F.F.A. Farm Committee and advisors.

The Phoenix Technical School, the administration or agricultural instructors or the farm foreman in charge will not be responsible for any accident or injury sustained by anyone, directly or indirectly, through use of the farm and/or equipment.

Rental Fees for Farm Facilities

Concentrates and roughages will be provided to members at wholesale cost.

DAIRY AND BEEF:

Pasture

- a. 10¢ per day - under 500#
- b. 15¢ per day - over 500#, under 750#
- c. 20¢ per day - over 750#

Pens

- a. 50¢ per head - under 500# - per month
- b. 75¢ per head - over 500# - per month
- c. \$2.50 maximum per pen per month

SWINE:

Pasture

- a. 2¢ per head - under 100# - per month
 b. 5¢ per head - over 100# - per month

Pens

- a. 25¢ per head - per month - under 200#
 b. 75¢ per head - per month - over 200#
 c. \$2.50 maximum per pen per month

POULTRY:

- Brooder house and brooder: for 300 chicks - \$3.00 per week
Broiler house: 50¢ per week
Laying house and pen: 50¢ per week

SHEEP:

Pasture: - 3¢ per day

Pen

- a. 50¢ per head per month
 b. \$2.50 maximum per month

I, _____, do hereby promise to fulfill the terms and conditions of this agreement.
 (agriculture student)

I/We agree that these terms and conditions are fair and appropriate and further agree to be bound by said rules and regulations.

I/We agree to do everything within my/our power to see that these conditions are carried out by me/our son.

(Father) _____

(Parent) _____

(Guardian) _____

Date _____, 19____

Approved by _____
 Instructor

QUESTIONNAIRE TO DETERMINE THE FACTORS THAT MAKE FOR SUCCESS

IN SCHOOL OPERATED FARMS

Name of School _____ Address _____

PART I

Characteristics, purpose and teacher opinion regarding the school farm.

Please circle (o) the most appropriate number in regard to your farm.

A. The farm was established to be used for:

1. Individual projects
2. Group projects
3. Demonstration of improved practices
4. A laboratory

B. The farm is being used chiefly at present for:

1. Individual projects
2. Group projects
3. Demonstration of improved practices
4. A laboratory

C. The farm is to be used permanently as a:

1. Farm
2. School building site
3. Other use (name) _____

D. What is the reaction of the school administration to the school farm?

1. Unfavorable
2. Favorable
3. Very favorable

E. To what extent is your course in agriculture based upon enterprises and jobs on the farm?

1. Much
2. Some
3. Little

F. Could you use home farms of students in the Community and get just as good results as you do from the school farm?

1. Yes
2. No

G. How much of your personal time does the farm demand?

1. None
2. Little
3. Much

H. Do you believe the money and time spent on the farm is justified by educational results?

I. If you did not have a farm would you work to get one?

1. Yes
2. No

J. Do you plan to continue your use of the farm?

1. Yes
2. No

PART II

Establishment, Finances, Equipment, and Management of the school farm. Please check (X) the appropriate answer in Column I and Column II. If, answer in Column I is NO please give explanation in Column III.*

FACTOR	Column I		Column II			Column III
	Answer in regard to your farm		Importance of factor to the success of a farm			
	YES	NO	Essential	Desirable	Non-Essential	
A. The establishment of the farm.						
1. Is the farm adequately secured by ownership or lease?						
2. Did the Agricultural Instructor have an active part in selecting the farm to be purchased?						
3. Was a specific objective for the farm determined before its purchase?						
4. Were adequate provisions made for animals, buildings, machinery and equipment, before the farm was purchased?						
5. Is the number of acres in the farm adequate for your purpose?						
6. Is your land classed as good land in your community?						
B. Finances and Records						
1. Are adequate finances provided to operate the farm?						
2. Does the income from the farm go to the school?						
3. Does the school expect the farm to be self-supporting?						
4. Do students using the farm for projects pay regular rental?						
5. Are students paid for routine (non-project) work on the farm?						
6. Are students paid for specialized work on the farm?						
7. Are adequate records kept on the farm?						
8. Do you keep the records?						
9. Do students get any income from the farm?						
10. Are the finances for operation of the farm provided by the students of agriculture?						
(Example) * Does the income from the farm go to the students?		X			X	The money by law must go back to the general County tax fund.

PART II (Continued)

Establishment, Finances, Equipment, and Management of the school farm. Please check (X) the appropriate answer in Column I and Column II. If, answer in Column I is NO please give explanation in Column III.*

FACTOR	Column I		Column II			Column III
	YES	NO	Essen- tial	Desir- able	Non-Es- sential	If answer in Column I is NO please give explanation.
	Answer in regard to your farm		Importance of factor to the success of a farm.			If answer in Column I is NO please give explanation.
C. Buildings and Equip- ment.						
1. Are the classrooms and shop on or near-by the farm?						
2. Are the farm buildings adequate for the farm?						
3. Does the farm have an adequate foreman's house?						
4. Are there adequate living quarters for students to stay on the farm?						
5. Is sufficient farm equipment available?						
6. Does the farm have sufficient number and variety of farm animals?						
7. Does the school provide adequate transportation for students from school to the farm?						
D. Management of the Farm.						
1. Do you use an Advisory committee for determining plans and policies on the farm?						
2. Do you have a student Committee that helps make policies?						
3. Does the school Supt. and School Board give active support to the farm?						
4. Is there more than one Agricultural Instructor in your department?						
5. Was the Agricultural Instructor experienced in the agriculture of the Community when he assumed charge of the farm?						
6. Do you have a manager who lives on the farm?						
7. Do students keeping projects on the farm sign written agreements?						
8. Does the school carry insurance on students staying and working on the farm?						
9. Are the school periods for agriculture adequate in length?						

PART III

The History and Use of the School Farm.

Please give the correct answers to each question in the space provided.

- A. How many years has the school farm been in operation?
- B. How was the farm acquired by the school?
- C. How many acres does the farm have?
- D. What is the distance between the farm and the school?
- E. How many students used the farm last year?
- F. What is the length of your agriculture class period?
- G. What percent of your class period do you spend on the farm?
- H. What percent of shop construction jobs are done on the farm?
- I. How does the school farm influence student morale and enrollment in agriculture?
- J. What is the annual salary paid to the farm manager?
- K. What was the initial investment in land, buildings, and equipment for the farm?
- L. What was the direct cost to the school board to operate the farm last year?
- M. Please give other important facts that have influenced the success of your farm.

APPENDIX B.

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