THE CURRENT UTILIZATION OF AGRICULTURAL EDUCATION LAND LABORATORIES IN THE NORTHWEST DISTRICT OF OKLAHOMA

By

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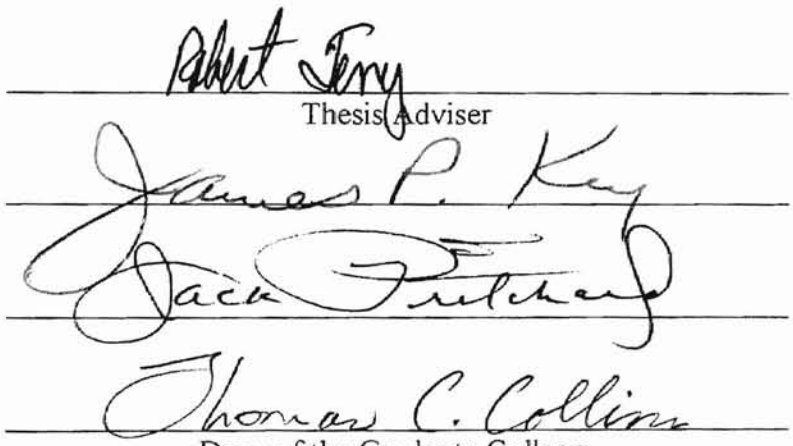

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CHAPTER I

INTRODUCTION

The words of the FFA Motto "Learning by Doing" have been an agricultural education teaching strategy since its history began. According to Doerfert, (1992, p.11) today's work place demands an employee that has a blending of practical and theoretical training. Hands-on experience, coupled with a sound educational base will enable students to be more employable. Much of the student population in agricultural education programs is from an urban background. Therefore agricultural education programs with land laboratories have a great opportunity to teach modern agricultural concepts through hands-on lab activities.

With an increased emphasis on improving secondary educational methods, a research effort in the area of agricultural education land laboratories has important implications for agricultural education to enhance student learning and job skills. In a similar study Dennis (1987, p.1) said that land laboratories are a worthwhile educational tool. Great benefits could be gained, especially for urban students, by maintaining a well rounded educational experience, in giving all students the opportunity for hands-on experience in agriculture, and in making available a facility to carry on Supervised Agricultural Experience (SAE) programs.

SAE programs are still required for all students enrolled in agricultural education. Land laboratories can indeed provide each student enrolled the opportunity to learn through supervised agricultural experience. Cheek and Arrington (1990, p.12) said, "SAE is the principle way students "learn by doing" in agricultural education."

Problem

Little research has been done concerning the use of Agricultural Education (Ag Ed) land laboratories in Oklahoma, especially in the Northwest Supervisory District of Oklahoma. However, many studies have been done in other areas of the country dealing with the use of land laboratories. Most of these studies have been concerned with the educational value and the development of supervised agricultural experience programs for urban students or for those students who lack the necessary facilities at home.

Land Laboratories should offer students an opportunity to learn through hands-on experience in addition to the classroom, as well as a way to develop an in-depth SAE program. These benefits result in an increased student awareness about agricultural production, products, management, and finance as well as the many career opportunities directly and indirectly related to the field of agriculture. It was felt that a study which primarily addressed how land laboratories are currently being utilized as an extension of the agricultural education classroom and with student SAE's would be of great benefit. In addition, there was a need to focus attention on some of the problems associated with usage of land laboratories and give, from an agricultural education teacher's perspective, some solutions to these problems.

Purpose

The purpose of this study was to investigate the utilization of agricultural education land laboratories in the Northwest Supervisory District of Oklahoma.

Objectives

The objectives of the study were as follows:

1. To identify the schools that provide agricultural education land laboratories in the Northwest Supervisory District of Oklahoma.
2. To obtain demographic information that typifies Agricultural Education (AgEd) teachers and agricultural education land laboratories.
3. To obtain demographic information that typifies students that utilize agricultural education land laboratories.
4. To determine the need for agricultural education land laboratories in the Northwest Supervisory District of Oklahoma as perceived by AgEd teachers.
5. To determine the extent to which the agricultural education land laboratories are utilized as perceived by AgEd teachers.
6. To identify the major problems of providing an agricultural education land laboratory as perceived by AgEd teachers.
7. To determine the extent the agricultural education land laboratories are being used to aid in teaching the newer secondary agricultural curriculum as perceived by AgEd teachers.

Rationale

Supervised experience has generally been recognized as a significant component of secondary agricultural programs since their inception. Watman and Raymond (1990) said that in the past it was rather easy to identify a supervised experience program for each secondary agricultural education student because most lived in rural areas where production agriculture was very common. However, in the agricultural education environment of today, the agricultural instructor must be creative and innovative to guarantee that students have a quality supervised experience.

Assumptions

For the purpose of this study the following assumptions were made:

1. Those responding to the survey were the ones most knowledgeable about and best qualified to provide information concerning land laboratories

2. The respondents understood the questions asked and honestly provided their perceptions.

Definitions

The following are defined as used in this study:

Supervised Agricultural Experience (SAE) - A program originally known as supervised occupational experience (SOE) and is defined as a program where the student works and maintains records on agricultural production and/or agricultural business

enterprises and is supervised by the parents, employer, and agricultural education instructor.

Land Laboratory - A land, livestock, greenhouse, or aquaculture facility that provides the students a location to have an agricultural production enterprise that is supervised by the agricultural education instructor. For the purpose of this study will be used synonymously with school farm.

Agricultural Education (AgEd) - Formerly known as vocational agriculture and is an elective course of study in and about agriculture for students in all day secondary public schools.

Northwest Supervisory District - That area of Northwest Oklahoma that consists of 16 counties generally bounded on the east by Interstate 35 and the south by Interstate 40.

Scope

This study was limited to teachers representing the 43 agricultural education departments within the Alva, Enid, Guymon, Kingfisher, and Woodward Professional Improvement groups in the Northwest District of Oklahoma which had working land laboratories.

CHAPTER II

REVIEW OF LITERATURE

This review is intended to present a general survey of literature that is directly and indirectly related to this study This chapter was separated into four areas to better organize the review. The areas were as follows: (1) Purpose of the SAE program, (2) Need for land laboratories, (3) Benefits for students and, (4) Problems associated with land laboratories.

Purpose of the SAE Program

Supervised agricultural experiences are a vital part of the total Agricultural Education program. The National Research Council's Committee on Agricultural Education in Secondary Schools (1988) recommended that all students participate in worthwhile SAE programs. The committee suggested that SAE programs should include experience in land laboratories, agricultural mechanics laboratories, greenhouses, nurseries and other facilities provided by the school. The committee further suggested that learning with an appreciation for earning should be the major emphasis of the SAE program.

The Oklahoma Agricultural Education programs have encouraged many of the same concepts that the National Research Council's Committee on Agricultural Education

in Secondary Schools has suggested. However, the Oklahoma State Board of Vocational and Technical Education has developed a list of policies and procedures that is used to help guide the SAE program in Oklahoma. Some of these policies and procedures, according to Yokum and Boggs (1991, p. 9) were,

1) All students must have an SAE,
2) Records will be kept,
3) Teacher will supervise and visit and,
4) Classroom instruction, FFA and SAE must all be equally combined and applied for a well balanced program.

Barrick (1991, p. 31) stated, "The supervised experience concept has expanded along with agriculture programs to embrace a more diverse clientele and a changing agricultural industry." He further acknowledged that contrary to the effects of the changes, SAE programs have continued to be an essential part of a student's agricultural education.

Many benefits can be realized through worthwhile SAE programs. Pals (1989, p. 20) said,

> The five greatest benefits received from SOE programs as perceived by the parents, administration, and vocational agriculture teachers were: (a) promoted acceptance of responsibility; (b) developed self-confidence; (c) provided opportunity to learn on own; (d) developed independence; and (e) learned to work with others.

A quality SAE program was found in the literature to be a common goal among most agricultural educators. Phipps (1972, p. 201) may have best stated a way that this goal can be realized when he said,

> The most satisfactory supervised occupational experience programs are developed as a result of proper instructor-parent-employer relationships. The securing and maintenance of desirable relationships and understandings are the duty of every instructor of agriculture.

According to Spiess (1992) the supervised agricultural experience program of each student made for a complete educational experience. Students must incorporate the application of learning skills to think creatively to solve a problem.

Need for Land Laboratories

Secondary agricultural education students have changed in recent years from primarily a rural to a more urban background. One way that was found that would meet these new agricultural learning needs was through providing agricultural experiences on a land laboratory. The land laboratory is an extension of the classroom where students can be given a real life problem and use critical thinking skills to arrive at a solution. Williams and McCarthy (1986) suggested that a land laboratory can potentially meet the needs of a diverse group of students.

Ferrell (1983) emphasized that students who live on farms may have had the opportunity to gain the hands-on experience necessary to harvest, store, and market agriculture products. However, students who live in an urban setting may not have had such an opportunity. According to Watman and Raymond (1990) many students, because of the non agricultural environment in which they are raised, have only limited opportunity to carry on an SAE program. These students could use the land laboratory as a tool to give the techniques studied in agricultural education classes a more realistic and applicable meaning.

The creative thought process brought about through experimental learning within the supervised agricultural experience program can help students to better prepare for their future in the work place. It was expressed by Spiess (1992, p 15) that,

"Experimental education as it applies to agricultural education provides students with a means of applied learning and creative thought within a controlled situation."

There has been an increased emphasis placed on higher technology in the work place. Agricultural education can meet the needs of industry and help train a more technologically advanced and competent workforce. Agricultural education in Oklahoma has increased the course offerings for secondary agricultural education. The addition of Biotechnology in Agriculture and the Principles of Ag Technology have helped pave the way for agricultural educators to place more emphasis on teaching advance agricultural science skills. The Ag classroom has a more diverse clientele than at any previous time. Agricultural education instructors realize the need to teach the traditionally strong production disciplines such as animal science, Ag mechanics, and agronomy, but must incorporate hands-on learning activities that develop the competency based job skills needed in today's society.

In an article by Herren (1976) employers suggested that the most important things involved with supervised experiences were to teach students how to work, develop a sense of responsibility and establish a sense of pride. Herren (1976, p. 222) emphasized that, "Through the school farm the student can learn a variety of skills under real conditions by solving real problems." He further suggested that the use of land laboratories can be one of the best tools available to give students an opportunity to have a quality production enterprise, learn competency-based job skills and develop the kinds of good work habits that are necessary for meaningful employment.

In a study designed by Foster (1986) to measure factors limiting student participation in supervised experience programs in Nebraska, two factors were considered

by agricultural teachers as being the most important. These factors were a lack of facilities available for the non-traditional kinds of supervised experience programs and the fact that many schools did not have a school land laboratory.

Benefits for Students

The agricultural education land laboratory has given each student enrolled in agricultural education an opportunity to maintain an SAE project even if he or she does not have the land or facilities at home. Also, agricultural education land laboratories have provided an excellent opportunity to demonstrate the new technology that has currently been offered in the new and more diverse agricultural education curriculum. Williams and McCarthy (1986, p. 20) revealed what they found to be,

> The five greatest benefits students receive from school farm activities as perceived by vocational agriculture instructors were: (a) increasing participation in the FFA, (b) promoting group activities which develop individual leadership abilities, (c) teaching students to respect the opinions, feelings, and concerns of others, (d) generating circumstances for students to market agricultural products and, (e) allowing students to understand the financial requirements of a farm business.

Pals' study (1989) further illustrated this point. It was found that many of the student benefits associated with a supervised program dealt with improved attitudes, values and interpersonal skills.

According to Ferrell (1983) the land laboratory is a part of the total program with students benefitting from the following areas. SAE, Cooperative Activities, Community Service, Earnings and Savings, Recreation, Public Relations, Alumni, Safety, and Building Our American Communities (BOAC).

Agnew and Bestal (1986) believed that the land laboratory can provide an unbiased setting for the teacher to demonstrate new agricultural technology. This teaching too can be useful in keeping students and adults up-to-date on the latest agricultural improvement practices.

Gless (1993) believed that there was a lack of general agriculture knowledge among urban students even in our rural communities. Many of our students are two and three generations or more removed from traditional production agriculture. Agricultural education student enrollment in Oklahoma, for example, has increased dramatically in recent years due in part to a broadened curriculum offering. Much of this increased enrollment had been with urban students. With this positive influx of non-traditional students into the agricultural education classroom it became an excellent time to inform the future generations represented by today's classroom in and about agriculture. Gless (1993, p. 13) stated, "Agriculture classes in the urban setting must teach agricultural literacy."

The instructor should be the person in charge and the driving force behind the success of the land laboratory. Ferrell (1983, p. 9) said, "With guidance from the instructor the school farm can aid and supplement the student's SOEP and also serve as a meaningful teaching aid."

Problems Associated With Land Laboratories

Proper funding has generally been considered to be a primary problem associated with building and maintaining an agricultural education land laboratory. In a study by Hamilton and Goecker (1973), done in part to determine the limitations of the land

laboratory, it was found that the reasons most often given by agricultural instructors were lack of equipment, supplies, detailed plans, size of laboratory, and knowledge and time required to teach new and different topics. Therefore, many of the limitations with land laboratories could be a direct result associated with insufficient funding.

According to Berry (1984) most funding problems fell into one of two categories. First, the school did not have the necessary cash to build a suitable land laboratory. Second, funding was available, but the school administration did not consider the program worthy of such funding and spent the money somewhere else. In addition, he suggested that funding problems must be solved. If school funds were deficient, then contributions from the public could be obtained. If the administration has not realized the importance, then the instructor must work to change the administration's negative perception of the program.

Another problem associated with funding dealt with a lack of sufficient financial capabilities for urban students. According to Gless (1993) unlike rural students, urban students and their families did not have the same opportunities to develop a stable, long-term relationship with a lending institution that understood production agriculture. This problem had made it very difficult for urban students to acquire the small amount of funding necessary to begin an ownership type of supervised agricultural experience program.

One method that has been helpful in solving the problems associated with insufficient funding for students was illustrated in an article by Mitchell (1982) It was noted that major banks in Southern California have played a significant role in the advancement of supervised experience by providing students with low interest loans to

acquire livestock and other agricultural enterprises. Farmers Home Administration has also provided lower interest loans to students to begin or expand an agricultural enterprise. These financial institutions have believed that supervised agricultural experiences develop citizenship, character, and good work habits.

A major problem could be a negative image displayed to the public by the local agricultural education program. One way that was found to improve the image of the local agricultural education program was through increased visibility to the community in a positive manner. According to Miller (1983, p. 3), "Quality projects serve as good public relations tools for the program."

Parents could be considered to be the single most important influence on an SAE program. In an article by Rawls (1981, p. 18), it was stated that, "It is generally recognized that parents will support educational programs if they can see the benefits provided to their sons and daughters."

Another substantial problem could be the instructor. Makin (1983, p. 10) said, "Some agriculture teachers initiate and supervise poor laboratory projects." In an article by Claycomb (1974) it was emphasized that the agricultural education instructor has a responsibility to supervise each student's supervised experience program. He further stated (1974, p. 153), "As an instructor we are not going to know what is taking place in a training station unless we visit the student on a regular basis and rather frequently."

An additional problem that was found dealt with inadequate laboratory evaluation by the instructor. Miller (1983) noted that laboratory evaluation was done more effectively if a good objective evaluation plan was used. He further said (1983, p 5),

"This objective approach would eliminate much of the frustration students experience on receiving strictly a letter grade based on a subjective evaluation plan."

Summary

The literature illustrated that one of the major positive aspects of ownership SAE's was the opportunity to learn job skills through hands-on experience. Many positive benefits could be realized as a direct result of the hands-on experience associated with the SAE program. In visiting with AgEd teachers it was noted that increased self esteem and good work ethic were among the major benefits realized by students with ownership SAE's in agricultural education.

For many non-traditional, urban students, the opportunity to benefit from these positive attributes was greatly enhanced with the use of land laboratories. Another benefit for students was illustrated by Pritchard (1982, p. 5)

> The laboratory is a place where realistic learning activities become lasting experiences and sometimes lead to eventual placement of the student in a life long agricultural career.

A major emphasis of the literature was that land laboratories are a must if each student enrolled in secondary agricultural education, especially urban students, are to carry out a required SAE program

Another major emphasis for the use of land laboratories was to provide a facility for demonstrating techniques taught in the classroom in a laboratory type of learning atmosphere. This situation can give all students an opportunity to actively participate. In

an article by Makin (1983) it was suggested that students who are not involved with laboratory projects would be severely limiting their opportunities to practice the knowledge and skills that they had learned in the classroom.

CHAPTER III

PROCEDURES

This chapter is intended to describe the methods and procedures used in gathering data for this study. Information relating to the objectives was collected after the population was selected and a survey questionnaire was developed. Methods were established to help in collection of data and procedures were formulated to help analyze the data. Data was collected in May of 1992. Specific objectives used to direct the research were as follows:

1. To identify the schools that provide agricultural education land laboratories in the Northwest Supervisory District of Oklahoma.

2. To obtain demographic information that typifies general characteristics of AgEd teachers and agricultural education land laboratories.

3. To obtain demographic information that typifies students that utilize agricultural education land laboratories.

4. To determine the need for agricultural education land laboratories in the Northwest Supervisory District of Oklahoma as perceived by AgEd teachers.

5. To determine the extent the agricultural education land laboratories are utilized as perceived by AgEd teachers.

6. To identify the major problems of providing an agricultural education land laboratory as perceived by AgEd teachers.

7. To determine the extent the agricultural education land laboratories are being used to aid in teaching the newer secondary agricultural curriculum.

The Population

The population for this study was selected from among the 59 agricultural education programs which were in operation in May, 1992 in the Northwest Supervisory District of Oklahoma. Of the 59 AgEd programs, 47 had working land laboratories. Therefore, the population consisted of 43 instructors who were involved with land laboratories. In multi-teacher programs, the teacher with the most teaching experience was selected to answer the questionnaire.

Instrument

It was determined that a self-administered questionnaire would be the best method to gather data. The survey was developed after meeting with the author's advisement committee and reviewing similar questionnaires. The survey was field tested using OSU AgEd graduate students that had teaching experience to determine how the questions could be interpreted. Changes were made accordingly and evaluated by the author's advisement committee. The survey consisted of 40 questions of which three were open-ended.

Collection of Data

The questionnaires were personally administered by the researcher during the May, 1992, Professional Improvement meeting of the Northwest Supervisory District teachers at Canton, Oklahoma to those in attendance who qualified as members of the population. Directions that pertained to completion of the survey were given by the author. Because all of the teachers were not in attendance at the meeting, the Northwest district supervisor hand delivered the survey to those who were not present. These completed questionnaires were sent to the author through the mail. These two procedures resulted in a 100 percent response rate from those teachers who utilized land laboratories in their programs.

Due to circumstances relative to time and a new job, the researcher was unable to completely summarize the data collected in May, 1992, in a timely fashion. After counsel with members of the author's advisement committee, it was concluded that it would be necessary to obtain an update of the data. This procedure was done to verify that the previous findings were indeed current.

After visiting with the state AgEd supervisory staff, the researcher was allocated an appropriate amount of time during the Northwest District AgEd teachers meeting at summer conference at Tulsa, Oklahoma in August, 1996. At such time a copy of the qualifying programs original questionnaire was re-administered by the researcher to the appropriate teachers for review and update. Necessary instructions were also given by the author. These procedures again resulted in a 100 percent response rate.

Analysis of Data

It was determined that the descriptive statistics to be used to treat the data would be frequency distributions, percentages, and rank order. All calculations and data derived from the questionnaire were computed using a hand calculator. For several items this involved determining item counts, frequencies and mean response. However, for others, this required determining mean perceptions of teachers. This was accomplished using a procedure whereby a numerical value was assigned to response categories. Then, each response was multiplied by the value assigned to that category. These products were summed and divided by the total number of responses. This process yielded a mean response which needed to be converted to a mean perception category. This was achieved by use of scales type of comparison. In cases where the intent was to measure the frequency with which something occurred, the scale of real limits utilized was: Very Often (2.50-3.00); Often (1.50-2.49); Seldom (.50-1.49); and Never (0.00- 49) Teacher ratings of the condition of land laboratory facilities were translated by using the following scale: Excellent (2.50-3.00); Good (1.50-2.49); Fair (.50-1.49); and Poor (0.00-.49) Finally, to determine the extent of the value of land laboratories as perceived by teachers, the following scale was developed: Very Great (2.50-3.00); Great (1.50-2.49); Some (.50-1.49); and None (0.00-.49)

CHAPTER IV

PRESENTATION AND FINDINGS

The purpose of this chapter was to present, describe, and analyze the major emphasis, utilization and problems associated with land laboratories in the Northwest Supervisory District of Oklahoma.

Data presented in this chapter consist of responses obtained from 43 agricultural education departments in the Northwest Supervisory District of Oklahoma. To qualify for this study these departments must have had a working land laboratory.

One of the 43 programs represented in this study was a three teacher department and four programs were two teacher departments. In such cases the teacher with the most teaching experience was administered the questionnaire. The statistical analysis was based upon the information gathered and frequency of responses given on each question of a 40 statement questionnaire that was administered to each instructor

According to data reported in Table 1, 38 (88.37 percent) of the programs involved were single teacher departments, four (9.30 percent) were two teacher departments, and one (2.33 percent) was a three teacher department

TABLE 1

DISTRIBUTION OF RESPONDENTS BY THE NUMBER OF TEACHERS IN THE DEPARTMENT

Number of Teachers	Distribution	
	Number	Percent
One Teacher	38	88.37
Two Teachers	4	9.30
Three Teachers	1	2.33
Total	43	100 .00

Table 2 is a summary of the teaching experience of the instructors who responded to the questionnaire in the Northwest Supervisory District. The mean response was 12.42 years with 21 (48.84 percent) teachers with less than and 22 (51.16 percent) teachers with more than the mean years of teaching experience. Equal proportions of teachers, 13 (30.23 percent) had from less than 1-5 and 16-20 years of experience.

Table 3 contains data regarding the number of years that the teachers in the Northwest Supervisory District had taught in the present school. The mean response was 9.39 years having from less than 1 to 5 years were 19 (44.19 percent) teachers, while another 12 (27.90 percent) had been in their present schools from 16-20 years. Five (11.63 percent), four (9.30 percent) and three (3.98 percent) of the teachers had 6-10, 11-15 and 21-25 years tenure in their present school.

Table 4 contains data indicating the number of years that the surveyed teachers had been teaching in the Northwest Supervisory District. The mean response was 10.79 years with 21 (48.84 percent) teachers with less than and 22 (51.16 percent) teachers with more than the mean years of teaching experience in the Northwest Supervisory District. Seventeen teachers (39.53 percent) had spent less than 1 to 5 years in the district, while 14 (32.56 percent) had taught in that area from 16-20 years.

TABLE 2

DISTRIBUTION OF RESPONDENTS BY THE YEARS OF TEACHING EXPERIENCE

Years of Teaching Experience	Distribution	
	Number	Percent
Less than 1 to 5	13	30.23
6 - 10	5	11.63
11 - 15	5	11.63
16 - 20	13	30.23
21 - 25	6	13.95
26 - 30	1	2.33
Total	43	100.00

Mean Years Teaching Experience = 12.42 Years

TABLE 3

DISTRIBUTION OF RESPONDENTS BY THE YEARS OF TEACHING EXPERIENCE IN THE PRESENT SCHOOL

Years of Teaching In Present School	Distribution	
	Number	Percent
Less than 1 to 5	19	44.19
6 - 10	5	11.63
11 - 15	4	9.30
16 - 20	12	27.90
21 - 25	3	6.98
Total	43	100.00

Mean Years Teaching Experience in Present School = 9.39 Years

TABLE 4

DISTRIBUTION OF RESPONDENTS BY THE YEARS OF TEACHING EXPERIENCE IN THE NORTHWEST SUPERVISORY DISTRICT

Years of Teaching in Northwest District	Distribution	
	Number	Percent
Less than 1 to 5	17	39.53
6 – 10	4	9.30
11 – 15	3	6.98
16 – 20	14	32.56
21 – 25	5	11.63
Total	43	100.00

Mean Years Teaching in Northwest District = 10.79 Years

Table 5 contains data reporting the number of years that the surveyed teachers had access to a land laboratory during their teaching experience. The mean response was 10.51 years. Fourteen teachers (32.56 percent) had five or less years experience with such facilities, eight (18.00 percent) had 6- 10 years, five (11.63 percent) had 11-15 years and 12 (27.91 percent) had 16-20 years with land laboratories. Four teachers (9.30 percent) had 21-25 years of access to land laboratories.

Table 6 contains data regarding the number of years that the surveyed teacher's AgEd programs had operated a land laboratory. The largest group, 14 (32.56 percent), had managed such facilities for less than five years, while the next largest group, 12 (27.91 percent), had operated land laboratories for 16-20 years.

Table 7 is a presentation of data as to the total number of students in AgEd programs as reported by the surveyed teachers. The mean number of students was 58.35 with 29 (67.44 percent) programs having less than and 14 (32.56 percent) programs with more than this number of students enrolled. The number of students per program ranged from 20-170. It was interesting to note that the distribution of departments across the various categories of student enrollments was rather similar.

Table 8 contains data regarding the total number of FFA members in the AgEd programs. The patterns of FFA membership were similar to numbers of students and

TABLE 5

DISTRIBUTION OF RESPONDENTS BY THE YEARS OF ACCESS TO A LAND LABORATORY

Years of Land Laboratory Access	Distribution	
	Number	Percent
Less than 1 to 5	14	32.56
6 – 10	8	18.60
11 – 15	5	11.63
16 – 20	12	27.91
21 – 25	4	9.30
Total	43	100.00

Mean Years of Access to Land Laboratory = 10.51 Years

TABLE 6

DISTRIBUTION OF RESPONSES BY THE YEARS OF OPERATING A LAND LABORATORY

Years of Operation	Distribution	
	Number	Percent
Less than 1 to 5	5	11.63
6 – 10	9	20.93
11 – 15	4	9.3
16 – 20	12	27 91
21 – 25	2	4.65
26 – 30	7	16.28
31 – 35	0	0.00
36 – 40	3	6.98
41 – 45	1	2.33
Total	43	100.00

Mean Years of Operating a Land Laboratory = 18.05 Years

TABLE 7

DISTRIBUTION OF THE NUMBER OF STUDENTS
IN THE SURVEYED AGED PROGRAMS

Number of Students	Distribution	
	Number	Percent
20 – 30	5	11.63
31 – 40	9	20.93
41 – 50	8	18.61
51 – 60	7	16.27
61 – 70	6	13.95
71 – 170	8	18.61
Total	43	100.00

TABLE 8

DISTRIBUTION OF AGED PROGRAM FFA MEMBERSHIP
IN THE SURVEYED AGED PROGRAMS

Number of FFA Members	Distribution	
	Number	Percent
20 – 30	6	13.95
31 – 40	6	13.95
41 – 50	8	18.61
51 – 60	8	18.61
61 – 70	6	13.95
71 – 170	9	20.93
Total	43	100.00

ranged from a low of 20 to a high of 170. The mean number of members was 58.58 with 26 (60.47 percent) teachers reporting program membership lower than that and 17 (39.53 percent) teachers noting levels of FFA membership higher than the mean.

Data in Table 9 were compiled to indicate where teachers placed the major emphasis in their agricultural education programs. Respondents were asked to rank order the extent to which they emphasized six areas, including SAE, Exhibition, Classroom Instruction, Leadership, Judging Contest, and A Total Program. For each of these items, the numbers of responses to each rank category were multiplied by the value of the category and their products were summed to provide a sum of ranks. This figure was divided by the number of responses to produce a mean rank figure. An overall rank was then established on the basis of the mean ranks in ascending order, with the lowest mean rank being first, etc. As a result of this process, it was found that by a wide margin, teachers indicated they placed major emphasis on A Total Program. Classroom Instruction was ranked second overall, slightly ahead of SAE, which was third. Leadership, Exhibition and Judging Contests were ranked fourth, fifth and sixth, respectively.

Table 10 was developed to summarize the areas of utilization of the land laboratory Livestock received the largest proportion of responses, 39 (90.70 percent). Second was

TABLE 9

MAJOR EMPHASIS OF NORTHWEST DISTRICT AGRICULTURAL EDUCATION PROGRAMS AS IDENTIFIED BY RANK ORDER

Areas	Distribution of Responses by Rank Category						Mean Rank	Overall Rank
	1	2	3	4	5	6		
SAE	4	16	11	7	1	4	2.93	3
Exhibition	1	1	10	10	12	9	4.35	5
Classroom Instruction	1	20	11	10	1	0	2.77	2
Leadership	2	4	7	10	17	3	4.05	4
Judging Contest	0	0	4	3	11	25	5.32	6
A Total Program	35	2	1	3	0	2	1.53	1

TABLE 10

A SUMMARY OF THE AREAS OF UTILIZATION OF LAND LABORATORIES IN THE NORTHWEST SUPERVISORY DISTRICT

Areas of Utilization	Distribution	
	Number	Percent
Livestock	39	90.70
Field Crops	7	16.28
Pasture	11	25.58
Horticulture	15	34.88
Demonstrations	21	48.84
Wildlife Habitat	15	34.88
Other	4	9.30

Demonstrations with 21 (48.84 percent) responses. Horticulture and Wildlife Habitat tied for third with 15 (34.88 percent) responses each. Pasture was indicated by 11(25.58 percent) programs and Field Crops were listed by seven (16.28 percent) teachers. Equipment storage, meeting places for Young Farmers, Sales, and classrooms were among the other areas for which land laboratories were utilized by AgEd programs in the Northwest Supervisory District of Oklahoma.

Table 11 contains a summary of the frequency with which teaching demonstrations were performed on land laboratory facilities in the Northwest Supervisory District. Very Often received ten (23.26 percent) responses. The area that received the most responses was Often with 23 (53.49 percent) responses. Seldom was cited by nine (20.93 percent) teachers, while Never received the fewest responses with one (2.32 percent). The mean response was Often as determined by the mean score of 1.98.

The data in Table 12 related to frequency with which land laboratories were being used to demonstrate the newer agricultural curriculum. Very Often was selected by six (13.95 percent) respondents. The frequency most often selected was Often with 18 (41.86 percent) respondents. Seldom was chosen by 17 (39.53 percent) participants. The frequency receiving the fewest responses was Never with two (4.65 percent). The mean response was Often as determined by the mean score of 1.65.

TABLE 11

FREQUENCY OF USE OF LAND LABORATORIES
FOR TEACHING DEMONSTRATIONS

Land Lab Use	Distribution of Responses by Category								Mean Extent of Use	
	Very Often		Often		Seldom		Never			
	N	%	N	%	N	%	N	%		
Teaching Demo.	10	23.26	23	53.49	9	20.93	1	1.32	1.81	Often

TABLE 12

THE FREQUENCY OF USE OF THE LAND LABORATORY TO
DEMONSTRATE NEWER CURRICULUM

Land Lab Use	Distribution of Responses by Category								Mean Extent of Use	
	Very Often		Often		Seldom		Never			
	N	%	N	%	N	%	N	%		
Demo. Newer Curriculum	6	13.95	18	41.86	17	39.53	2	4.65	1.65	Often

Reported in Table 13 are the courses that were being taught in agricultural education programs having land laboratories in the Northwest Supervisory District of Oklahoma, Ag I was taught in every program in the district, but in six instances (13.95 percent) the teachers other than those surveyed taught Ag I. Therefore, a total of 37 (86.05) respondents taught Ag I. Eighth Grade Ag Careers was the second most frequently taught with 30 (69.77 percent) teachers reporting this class. Ag Production and Management I and Ag Mechanics were each taught by 29 (67.44 percent) respondents, while Natural Resources and Ag II were taught by 24 (55.81 percent) respondents. It was found that 18 (41.86 percent) of those surveyed taught Ag Production and Management II, while 15 (34.88 percent) offered Horticulture I. Seven (16.28 percent) taught Ag Sales and Service and Ag Mechanics II, and five (11.63 percent) programs offered Horticulture II. Three (6.98 percent) respondents taught Ag Processing and Marketing, Employment in Agribusiness, and Aquaculture, while two (4.65 percent) offered Biotechnology and Animal Science I. Only one (2.32 percent) respondent offered Principles of Ag Technology and Wildlife Management. There were no schools surveyed that taught Forestry.

Specific uses of the land laboratory in teaching the newer agricultural curriculum are illustrated by data in Table 14. Thirty-four (79.07 percent) responding teachers

TABLE 13

DISTRIBUTION OF RESPONDENTS BY AGED COURSES TAUGHT IN THE NORTHWEST SUPERVISORY DISTRICT

Class Taught	Distribution	
	Number	Percent
Ag Prod & Mgmt I	29	67.44
Ag Prod & Mgmt II	18	41.86
Ag Processing & Mktg	3	6.98
Ag Sales & Service	7	16.28
Biotechnology in Ag	2	4.65
Equine	3	6.98
Employment in Agribusiness	3	6.98
Forestry	0	0.00
Natural Resources	25	58.14
Principles of Ag Technology	1	2.32
Aquaculture	3	6.98
8th Grade Ag Careers	30	69.77
Ag I	37	86.05
Ag II	24	55.81
Horticulture I	15	34.88
Horticulture II	5	11.63
Ag Mechanics I	29	67.44
Ag Mechanics II	8	18.60
Other	3	6.98

TABLE 14

USES OF THE LAND LABORATORY TO AID IN TEACHING THE NEWER AG CURRICULUM

Uses	Distribution	
	Number	Percent
Field Trips	34	79.07
Demonstrations	30	69.77
Test Plots	13	30.23
Observing Wildlife Habitat	11	25.58
Conservation Practices	7	16.28
Experiments	17	39.53
Other	1	2.32

indicated these facilities were used as Field Trip sites. Demonstrations were the use reported by 30 (69.77 percent) of those answering, while 17 (39.53 percent) used the facilities with Experiments. Thirteen (30.23 percent) respondents said land laboratories were utilized for Test Plots and 11 (25.58 percent) for observing Wildlife Habitat. Seven (16.28 percent) respondents indicated Conservation Practices as a use, while one (2.32 percent) indicated the land laboratory was used to teach grass identification in the area of plant science.

Table 15 was developed to summarize findings as to the extent the respondents perceived the land laboratories could be used to demonstrate the techniques taught in the newer Ag curriculum. Ten (23.26 percent) respondents believed that demonstrations could be performed Very Often. Often was selected by 28 (65 12 percent) of the respondents. Five (11.63 percent) teachers believed that Seldom could demonstrations be performed, while none (0.00 percent) of the respondents chose the Never category. The mean response was Often as indicated by the mean score of 2.12

Data in Table 16 are presented to illustrate the extent agricultural education instructors take field trips to the land laboratory. Five (11.63 percent) of the respondents said that they took field trips to the land laboratory Very Often. Twenty-five (58.14

TABLE 15

PERCEPTIONS OF EXTENT TO WHICH LAND LABORATORIES CAN BE USED TO DEMONSTRATE TECHNIQUES TAUGHT IN NEWER AG CURRICULUM

	Distribution of Responses by Category									
	Very Often		Often		Seldom		Never		Mean Extent of Use	
	N	%	N	%	N	%	N	%		
Extent of Use	10	23.26	28	65.12	5	11.63	0	0.00	2.12	Often

TABLE 16

FREQUENCY OF FIELD TRIPS TO THE LAND LABORATORY

	Distribution of Responses by Category									
	Very Often		Often		Seldom		Never		Mean Extent of Use	
Frequency of Use	N	%	N	%	N	%	N	%		
Field Trips	5	11.63	25	58.14	13	30.23	0	0.00	1.81	Often

percent) chose Often while 13 (30.23 percent) selected Seldom. Never was chosen by none of the respondents. The mean response was Often as revealed by the mean score of 1.81.

The size of the land laboratories in the Northwest District is presented in Table 17. The land laboratories ranged in size from 0.125 acres to 115 acres. The average size was 10.30 acres with 35 (81.40 percent) land laboratories being below and eight (18.60 percent) land laboratories being above 10.30 acres. Almost one-half (48.84 percent) of the facilities were in the 1-5 category. Those in combination with those having from 6-10 acres, accounted for 74 percent of the total.

Table 18 was developed to illustrate the number and size of greenhouses associated with land laboratories in the Northwest Supervisory District of Oklahoma. There were a total of 13 (30.23 percent) programs with a greenhouse. The greenhouses ranged in size from 168 to 1200 square feet, with the average being approximately 700 square feet. One program operated two 1000 square feet greenhouses.

Data in Table 19 addressed the question of how often parents visit the land laboratory Very Often and Seldom each received 12 (27 91 percent) of the responses. While Often received 19 (44 19 percent). The mean response was Often as indicated by a mean score of 2.00.

TABLE 17

SIZE OF LAND LABORATORY FACILITIES

Size of Land Laboratory (acres)	Distribution	
	Number	Percent
Less than 1	3	6.98
1 - 5	21	48.84
6 - 10	11	25.58
11 - 15	1	2.32
16 - 20	4	9.30
35 - 45	2	4.66
115	1	2.32
Total	43	100.00

TABLE 18

SIZE OF GREENHOUSE FACILITIES

Size of Greenhouse (Square Feet)	Distribution	
	Number	Percent
168	1	7.14
288	1	7.14
375	1	7.14
450	1	7.14
600	3	21.43
840	1	7.14
880	1	7.14
1,000	2	14.28
1,008	1	7.14
1,152	1	7.14
1,200	1	7.14
Total	14	100.00

TABLE 19

FREQUENCY OF PARENTAL VISITS
TO THE LAND LABORATORY

	Distribution by Frequency									
	Very Often		Often		Seldom		Never		Mean Frequency of Visits	
	N	%	N	%	N	%	N	%		
Frequency of Parental Visits	12	27.91	19	44.19	12	27.91	0	0.00	2.00	Often

Data in Table 20 were collected to indicate the current availability of selected facilities on the land laboratories. Water was most commonly available as reported by 40 (93.02 percent) respondents. It was found that 37 (86.05 percent) land laboratories had housing available; while 35 (81.40 percent) had electricity. Thirty (69.77 percent) had feeders. In addition, 16 (37.21 percent) had grounds keeping equipment available, while 11 (25.58 percent) respondents said that they operated a greenhouse at the land laboratory. Ten (23.26 percent) of those surveyed indicated the availability of a tractor. Five (11.63 percent) had tillage equipment. One (2.32 percent) program had livestock working equipment facilities. One (2.32 percent) noted that no facilities were available.

The data in Table 21 addressed the condition of the land laboratory facilities as perceived by teachers surveyed. Ten (23.26 percent) programs indicated that the facilities were in Excellent condition and 18 (41.86 percent) revealed Good facilities. Whereas, 13 (30.23 percent) cited Fair facilities and two (4.65 percent) perceived that their facilities were in Poor condition. Two (4.26 percent) of the programs noted that their land laboratories were in Bermuda grass and did not respond to the condition of the facilities. The average perceived condition of the land laboratory facilities were noted by the mean score of 1.84 as Good.

TABLE 20

A SUMMARY OF THE AVAILABILITY OF FACILITIES AND EQUIPMENT ON LAND LABORATORIES

Facilities Available	Distribution	
	Number	Percent
Electricity	35	81.41
Water	40	93.02
Housing	37	86.05
Grounds Keeping Equipment	16	37.21
Tillage Equipment	5	11.63
Tractor	10	23.26
Feeders	30	69.77
Greenhouse	11	25.58
Other	1	2.32
No Facilities	1	2.32

TABLE 21

A SUMMARY OF PERCEPTIONS OF THE CONDITION OF THE LAND LABORATORIES

	Distribution by Condition									
	Excellent		Good		Fair		Poor		Mean Condition	
	N	%	N	%	N	%	N	%		
Condition	10	23.26	18	41.86	13	30.23	2	4.05	1.84	Good

The data in Table 22 focused on how the land laboratories were financed. Twenty-two (51.16 percent) programs received 100 percent of the financing from one source. Thirteen (30.23 percent) cited that the school financed 100 percent of the cost. Seven (16.28 percent) indicated that the FFA chapter provided for 100 percent of the finance. One (2.32 percent) noted that the students provided all of the financing for the land laboratory, while one (2.32 percent) revealed that the town provided all of the funding needed to operate the land laboratory It was interesting to note that in the remaining 21 (48.84 percent) programs a combination of financial resources were utilized to make the land laboratory operations possible.

Data in Table 23 were collected to address the question as to whom may use the land laboratory. The largest group was Ag Students with 43 (100.00 percent) responses. The second largest group was 4-H Members with 38 (83.37 percent). Nine (20.93 percent) programs cited Adults, while Other Classes In School noted six (13.95 percent) and two (4.65 percent) programs had other groups using the land laboratory The Other Classes In School were noted as being Science whereas the Other category included SCS and City.

Data in Table 24 noted the amount of use derived from different community groups. The data were summarized according to group in a wide variety of responses.

TABLE 22

A SUMMARY OF RESPONSES AS TO HOW THE LAND LABORATORY IS FINANCED

Percent Financing	Number by Source by Funds				
	School	Students	Young Farmers	FFA	Other
100	13	1	0	7	1 (Town)
95	1	0	0	0	0
90	1	1	0	3	0
80	2	1	0	0	0
70	0	0	0	0	0
60	0	0	0	0	2 (Boosters)
50	7	1	0	5	1 (Alumni)
40	1	0	0	0	0
30	1	1	0	1	0
25	1	1	0	0	0
20	4	1	1	4	2 (Grants)
10	1	1	1	1	2 (Town)
5	0	0	0	1	0

TABLE 23

A SUMMARY OF RESPONSES AS TO LAND LABORATORY UTILIZATION BY GROUP

Group	Distribution	
	Number	Percent
AgEd Students	43	100.00
4-H Members	38	88.37
Adults	9	20.93
Other Classes in School	6	13.95
Other	2	4.65

TABLE 24

THE AMOUNT OF LAND LABORATORY USE
BY COMMUNITY GROUPS

Percent of Use	Distribution by Groups Using							
	Ag Students		4-H		Adult		Other	
	N	%	N	%	N	%	N	%
100	7	16.28						
90	7	16.28						
80	4	9.30						
75	4	9.30						
70	5	11.63						
60	6	13.95						
50	10	23.26	9	20.93				
40			5	11.63				
35			1	20.93				
30			3	6.98				
25			6	13.95				
20			4	9.30				
10			5	11.63	4	9.30	2	4.65
5			1	2.32	2	4.65		
Total	43	100.00	34	79.06	6	13.95	2	4.65

Concerning Ag Students seven (16.28 percent) programs stated that students enrolled in their program had 100 percent of the use. Another seven (16.28 percent) programs noted Ag Students had 90 percent of the use, while four (9.30 percent) programs revealed that Ag Students had 80 percent of the use. Another four (9.30 percent) teachers stated 75 percent of the use. All 43 (100 percent) of the surveyed programs indicated that Ag Students had 50 percent or more of the use of the land laboratory. It was noted that as far as 4-H was concerned all 43 (100 percent) of the programs had 50 percent or less use by 4-H members. Nine (20.93 percent) teachers indicated that 4-H members had 50 percent of the land laboratory usage. Thirty-seven (86.05 percent) teachers revealed that Adults did not use the land laboratory, while four (9.30 percent) and only two (4.65 percent) programs indicated a ten percent and five percent usage respectively. In the Other category two (4.65 percent) programs revealed a 10 percent usage by science classes.

Data in Table 25 were summarized to reveal the estimated annual budgets for the land laboratories in the Northwest Supervisory District. There was a wide range of responses. The range in annual budgets was from a high of $5,000.00 to a low of $250.00. The total estimated annual budget to operate the land laboratories in the Northwest Supervisory District was $50,000.00 with an average budget of $1163.00 per

TABLE 25

A SUMMARIZED ESTIMATE OF THE ANNUAL BUDGET FOR THE LAND LABORATORY

Estimated Budget	Distribution	
	Number	Percent
5,000	2	4.65
3,000	1	2.32
2,500	1	2.32
2,000	6	13.95
1,500	5	11.63
1,000	4	9.30
750	2	4.65
500	10	23.26
250	12	27.91
Total	43	100.00

program. Over one-half of the respondents indicated a $500.00 or less annual operating budget.

Data in Table 26 are a summary of the number of students that had an SAE project as a direct result of the land laboratory. These were students who had no other means in which to develop an SAE program. In the zero to five category there were nine (20.93 percent) programs. Thirteen (30.23 percent) respondents indicated that six to 10 students met this criteria. Another 10 (23.26 percent) had 11 to 15 students, while there were two (4.65 percent) programs in each category of 16 to 20, 21 to 25, 25 to 30, 31 to 40, and 41 to 50. Only one program was in the 51 to 90 category. In all there were 686 students in the Northwest Supervisory District with an SAE project as a direct result of a land laboratory being available. The mean response was 15.95 students per program.

Data in Table 27 dealt with the question, do students have traditional types of SAE programs on the land laboratory? The Northwest District of Oklahoma is a production agriculture oriented part of the state, hence it was not surprising that 40 (93.02 percent) programs answered Yes and only three (6.98 percent) programs answered No

Data in Table 28 noted the frequency of the types of traditional SAE projects produced on the land laboratories. Out of all traditional SAE programs listed, Swine was the most popular project with 38 (95.00 percent) of the 40 programs reporting such.

TABLE 26

NUMBER OF STUDENTS WITH SAE PROGRAMS
ON THE LAND LABORATORY

	Distribution	
Number of Students	Number	Percent
0 – 5	9	20.93
6 – 10	13	30.23
11 – 15	10	23.26
16 – 20	2	4.65
21 – 25	2	4.65
26 – 30	2	4.65
31 - 40	2	4.65
41 – 50	2	4.65
51 – 90	1	2.32
Totals	43	100.00

TABLE 27

UTILIZATION OF THE LAND LABORATORY WITH
TRADITIONAL TYPES OF SAE PROJECTS

	Distribution	
Use for Traditional SAE	Number	Percent
Yes	40	93.02
No	3	6.98
Total	43	100.00

TABLE 28

TYPES OF TRADITIONAL SAE PROJECTS ON THE LAND LABORATORY

	Distribution	
Kind of Project	Number	Percent
Swine	38	88.37
Sheep	34	79.07
Beef	33	76.74
Native Grass	2	4.65
Equine	1	2.32
Wheat	1	2.32
Plant & Soil Science	1	2.32
Poultry	1	2.32

Sheep were second with 34 (79.07 percent), while Beef was third with 33 (76.74 percent) responses. Other projects listed included two (5.00 percent) native grass, one (2.50 percent) equine, one (2.50 percent) wheat, one (2.50 percent) plant and soil science, and one (2.50 percent) poultry.

Student utilization of the land laboratory with non-traditional types of SAE projects was determined by data in Tables 29 and 30. The number of programs with non-traditional SAE projects on the land laboratory was considerably lower than traditional projects, with only eight (18.60 percent) positive responses as compared to 35 (81.40 percent) answering No.

There was a total of 12 non-traditional SAE projects on the land laboratories of the responding AgEd programs. The kind of project receiving the largest number of responses was Wildlife Management with five (41.67 percent) of the 12 responses. There were two (16.67 percent) programs with vegetable projects as indicated be the respondents. There was one (8.33 percent) response each in the areas of horticulture, bee keeping, hydroponics, aquaculture, and forestry.

Data in Table 31 were summarized to address the problem concerning the major limitations of the land laboratory. Eleven (25.58 percent) teachers noted that school perceptions were a limitation. Community, Student, Teacher, and Parental Perceptions

TABLE 29

UTILIZATION OF THE LAND LABORATORIES FOR NON-TRADITIONAL SAE PROJECTS

	Distribution	
Use for Non-Traditional SAE	Number	Percent
Yes	8	18.60
No	35	81.40
Total	43	100.00

TABLE 30

TYPES OF NON-TRADITIONAL SAE PROJECTS ON THE LAND LABORATORY

	Distribution	
Kind of Project	Number	Percent
Wildlife Management	5	41.67
Vegetables	2	16.67
Horticulture	1	8.33
Bees	1	8.33
Hydroponics	1	8.33
Aquaculture	1	8.33
Forestry	1	8.33
Total	12-	100.00

TABLE 31

MAJOR LIMITATIONS OF THE LAND LABORATORY

	Distribution	
Major Limitation	Number	Percent
School Perceptions	11	25.58
Community Perceptions	3	6.98
Parental Perceptions	1	2.32
Student Perceptions	3	6.98
Teacher Perceptions	2	4.65
Financial	36	83.72
Other	5	11.63

were of much less significance. Three (6.98 percent) respondents cited community and student perceptions as being limiting factors while two (4.65 percent) agreed that teacher perceptions were a problem. One (2.32 percent) teacher noted that parental perceptions were a limitation. These were overshadowed by the financial limitation with 36 (83.72 percent) responses. It was interesting to note that location was a major limitation as noted by only three (6.98 percent) of the teachers. Teacher time and space were considered to be major limitations of the land laboratory by only one (2.32 percent) teacher each.

Data in Table 32 revealed the major problems associated with the land laboratory. The most often noted problem was Upkeep and Maintenance costs with 29 (67.44 percent). Second was the Amount of Time Required by the teacher at the land laboratory with 21 (48.84 percent). Thirteen (30.23 percent) respondents cited Birds as a major problem, while 12 (27.91 percent) noted Predators. Only five (11.63 percent) respondents suggested that Waste Disposal was a problem. It was interesting to note that eight (18.60 percent) teachers marked vandalism, while four (9.30 percent) land laboratories had a problem with theft. Four (9.30 percent) teachers noted that there were other major problems associated with the land laboratory. Those problems listed in the other category included a need for electricity, student utilization, 4-H usage and equipment for upkeep.

TABLE 32

A SUMMARY OF THE MAJOR PROBLEMS ASSOCIATED WITH LAND LABORATORIES

	Distribution	
Problem	Number	Percent
Predators	12	27.91
Birds	13	30.23
Waste Disposal	5	11.63
Vandalism	8	18.60
Time Required	21	48.84
Theft	4	9.30
Upkeep & Maintenance Costs	29	67.44
Other	4	9.30

The identification of the personnel providing the majority of upkeep and maintenance was addressed in Table 33. AgEd instructors and students were the highest two categories with 39 (90.70 percent) and 32 (74 42 percent) respectively. Eight (18.60 percent) respondents indicated that land laboratories utilized parents for upkeep and maintenance, whereas seven (16.28 percent) programs had hired personnel. It was also noted by respondents in the Other category that two (4.65 percent) land laboratories used FFA Alumni.

In Table 34 the data reported the distance of the land laboratory from the school campus. Most, 30 (69.77 percent) of the land laboratories were one mile or less. There were six (13.95 percent) land laboratories on campus. Five (11.63 percent) were a distance of two miles, while one (2.32 percent) was twice that far from campus. Only one (2.32 percent) respondent cited a distance of over five miles.

The frequency for distance or location being a prohibitive factor to students who use the land laboratory was measured by the data in Table 35. Eighteen (41.86 percent) had cited Seldom as a response, while Never was noted 14 (32.56 percent) times. Often was chosen six (13.95 percent) times and Very Often was selected by five (11.63 percent) teachers. The mean response was Seldom as indicated by the mean score of 1.05

TABLE 33

A SUMMARY OF THE GROUPS PROVIDING THE MAJORITY OF THE UPKEEP AND MAINTENANCE OF THE LAND LABORATORY

	Distribution	
Group	Number	Percent
Students	32	74.42
Parents	8	18.60
Young Farmers	0	0.00
Hired Personnel	7	16.28
AgEd Instructor	39	90 70
Other	2	4.65

TABLE 34

THE DISTANCE OF THE LAND LABORATORY FROM SCHOOL CAMPUS

	Distribution	
Distance	Number	Percent
On Campus	6	13 95
1 Mile or Less	30	69.77
2 Miles	5	11.63
3 Miles	0	0.00
4 Miles	1	2.32
5 Miles	0	0.00
Over 5 Miles	1	2.32
Total	43	100.00

TABLE 35

FREQUENCY WITH WHICH DISTANCE OR LOCATION IS A PROHIBITIVE FACTOR FOR STUDENTS IN USE OF LAND LABORATORIES

	Distribution of Responses by Category									
	Very Often		Often		Seldom		Never		Mean Extent of Use	
Land Lab Problem	N	%	N	%	N	%	N	%		
Distance for Students	5	11.63	6	13.95	18	41.86	14	32.56	1.05	Seldom

The frequency for distance or location being a prohibitive factor to teachers was measured by data in Table 36. Never was most frequently cited with 21 (48.84 percent) responses. Second was Seldom with 16 (37.21 percent) responses, while Very Often was third with four (9.30 percent). Only Two (4.65 percent) teachers cited that distance or location was Often a prohibitive factor. The mean response was Never as revealed by the mean score of .71.

The data in Table 37 provide a summary of the extent that teachers believe that the land laboratory is a benefit to their students' SAEP. Nineteen (44.19 percent) out of the 43 teachers surveyed believe that a land laboratory is a Very Great asset. Twenty (46.51 percent) respondents were of the opinion that it is a Great benefit while four (9.30 percent) teachers said that a land laboratory is Some benefit. There were no (0.00 percent) teachers that declared that the land laboratory is not an asset to their students' SAEP. The mean response was Great as noted by the mean score of 2.35.

Data in Table 38 revealed the amount of time AgEd teachers allotted to the land laboratory each week. The data indicated that 15 (34.88 percent) teachers spent two hours per week of School Time at the land laboratory Three (6.98 percent) respondents indicated that they spent five hours per week, while one (2.32 percent) respondent stated that they spent seven hours per week of School Time. Another four (9.30 percent)

TABLE 36

FREQUENCY WITH WHICH DISTANCE OR LOCATION IS A PROHIBITIVE FACTOR FOR TEACHERS IN USE OF LAND LABORATORIES

Prohibitive Factor	Very Often		Often		Seldom		Never		Mean Frequency Distance is Prohibitive To Use	
	N	%	N	%	N	%	N	%		
Distance for Teachers	4	9.30	2	4.65	16	37.21	21	48.84	.71	Never

TABLE 37

THE EXTENT TO WHICH THE LAND LABORATORY IS AN ASSET TO STUDENT SAEP

	Distribution of Responses by Category									
	Very Great		Great		Some		None		Mean Extent of Benefit	
Benefit	N	%	N	%	N	%	N	%		
Asset to SAEP	19	44.19	20	46.51	4	9.30	0	0.00	2.35	Great

TABLE 38

THE AMOUNT OF TEACHER TIME ALLOTTED
TO THE LAND LABORATORY

Category		Hours Per Week	Frequency (N = 43)	Percent %	Mean Response (hours)
School Time		0	20	46.51	
		1-5	19	44.19	
		6-10	4	9.30	
	Total		43	100.00	2.14
Before/After School		1-5	26	60.47	
		6-10	10	23.26	
		11-15	6	13.95	
		16-20	1	2.32	
	Total		43	100.00	5.46
Summertime		0	12	27.90	
		1-5	9	20.93	
		6-10	5	11.63	
		6-11	4	9.30	
		16-20	10	23.26	
		20+	3	6.98	
	Total		43	100.00	11.04
Weekend		0	22	51.16	
		1-5	19	44.19	
		6-10	2	4.65	
	Total		43	100.00	2.67

teachers noted that they spent 10 hours. In addition, 19 (44.19 percent) instructors stated that zero hours of School Time was allocated to the land laboratory. The mean response was 2.14 hours of School Time per week.

In the category of Before/After School all 43 teachers indicated that at least some time was spent at the land laboratory each week. Twenty-six (60.47 percent) instructors noted that only two hours was spent before and after school each week. Five (11.63 percent) teachers indicated that six hours per week was required, while an additional five (11.63 percent) respondents cited that 10 hours was necessary. Three (6.98 percent) instructors revealed that they spent 12 hours at the land laboratory each week. Fifteen hours was the amount of time spent at the land laboratory by three (6.98 percent) teachers. The extreme case noted by only one (2.32 percent) teacher was 20 hours. The mean response was 5.46 hours spent Before/After School per week.

The Summer Time category offered a wide range of responses to the number of hours spent at the land laboratory. The mean response was 11.04 hours per week. Nine (20.93 percent) instructors revealed a minimal amount of time of five hours per week, whereas five (11.63 percent) teachers indicated 10 hours per week. Four (9.30 percent) noted fifteen hours per week, while 10 (23.26 percent) respondents stated 20 hours was required per week. Another three (6.98 percent) respondents indicated that 40 hours per

week was allotted to the land laboratory. Twelve (27.90 percent) instructors stated that zero hours were allotted to the land laboratory during the summer.

As far as the Weekend was concerned the data indicated a mean response of 2.67 hours spent at the land laboratory each weekend. Nineteen (44.19 percent) teachers indicated five hours per weekend. Two (4.65 percent) respondents spent 10 hours per weekend at the land laboratory. Twenty-two (51.16 percent) teachers noted that no time was spent on weekends at the land laboratory.

Data in Table 39 indicated how much labor the students who use the land laboratory should provide as perceived by their AgEd instructors. To provide All Labor was chosen by 20 (46.51 percent) teachers. For students to provide Some Labor was selected by respondents 23 (53.49 percent) times. It was not surprising that zero (0.00 percent) respondents indicated that students should provide None of the Labor

Data in Table 40 summarized the degree to which students who utilize the land laboratory for SAE projects should provide for the expense required to operate the land laboratory and project housing construction as perceived by AgEd instructors. Five (11.63 percent) respondents selected All Expense, whereas 31 (72.09 percent) chose Some Expense. Seven (16.28 percent) respondents indicated that None of the Expense should be the responsibility of the student

TABLE 39

THE AMOUNT OF LABOR THAT SHOULD BE PROVIDED BY STUDENTS USING THE LAND LABORATORY FOR THEIR SAE PROJECTS AS PERCEIVED BY AGED TEACHERS

	Distribution	
Amount of Labor	Number	Percent
All Labor	20	46.51
Some Labor	23	53.49
None of the Labor	0	0.00
Total	43	100.00

TABLE 40

THE LEVEL OF EXPENSE THAT SHOULD BE PROVIDED BY STUDENTS USING THE LAND LABORATORY FOR THEIR SAE PROJECTS AS PERCEIVED BY AGED TEACHERS

	Distribution	
Amount of Expense	Number	Percent
All Expense	5	11.63
Some Expense	31	72.09
None of the Expense	7	16.28
Total	43	100.00

Three open-ended questions were asked of respondents. One question asked teachers to list their personal dislikes of the land laboratory. By far the most common dislike was the upkeep of the land laboratory. This included summer mowing with 18 (41.86 percent). Another question dealt with what would be the ideal use of the land laboratory in their community. Housing for SAE projects was most often indicated as being an ideal use of the land laboratory in their community with 72.09 percent. Providing a place to perform educational demonstrations was said by 15 (34.88 percent) of the teachers to be of importance in their community. Also, of noticeable importance was being able to carry out crop experiments with eight (18.60 percent) of the respondents indicating this as an ideal use in their community.

Finally, teachers were asked to list what they would need to implement an ideal land laboratory. Financial assistance was the most notable response with 23 (53.49 percent) responses. Eleven (25.58 percent) respondents said that both labor and equipment would be needed. It was further revealed by seven (16.28 percent) of those surveyed that additional facilities would be needed to implement the ideal land laboratory.

CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

The purpose of this chapter is to summarize the following areas: Purpose of the study, Rationale, Design and Procedure, Major Findings of the Research and Conclusions. The recommendations were a result of the analysis of data and major findings.

Purpose of the Study

The purpose of this study was to investigate the current utilization of agricultural education land laboratories in the Northwest Supervisory District of Oklahoma.

Rationale for the Study

Supervised experience has generally been recognized as a significant component of secondary agricultural education programs since their inception. The students that make-up the agricultural education classrooms of today are becoming increasingly more diverse In most programs the majority of students are one to two generations or more removed

from production agriculture. This has presented a problem in that no longer do the majority of students enrolled in agricultural education have an opportunity to possess an ownership type of SAEP at their own home. Career opportunities with agricultural business and industry requiring a balance of employability skills including a working knowledge in production agriculture have risen over the past few years. There has generally been a shortage of qualified young adults to fill these positions. A land laboratory can be a valuable asset in the training of new workers. However, there is a need for information on the management and utilization of such facilities. It was felt that a study about various aspects of land laboratories in the Northwest Supervisory District of Oklahoma might provide some valuable insights.

Objectives

The objectives of the study were as follows:

1. To identify the schools that provide agricultural education land laboratories in the Northwest Supervisory District of Oklahoma.

2. To obtain demographic information that typifies AgEd teachers and agricultural education land laboratories.

3. To obtain demographic information that typifies students that utilize agricultural education land laboratories.

4. To determine the need for agricultural education land laboratories in the Northwest Supervisory District of Oklahoma as perceived by AgEd teachers.

5. To determine the extent to which the agricultural education land laboratories were utilized by AgEd teachers.

6. To identify the major problems of providing an agricultural education land laboratory as perceived by AgEd teachers.

7. To determine the extent the agricultural education land laboratories are being used to aid in teaching the newer secondary agricultural curriculum as perceived by AgEd teachers.

Design and Procedures

This study involved 43 AgEd programs with land laboratories in the Northwest Supervisory District of Oklahoma. Within these, one three teacher and four, two teacher programs. A 40 item survey was developed with the aid of the Oklahoma State University Agricultural Education staff and approved for data collection The survey instrument was used to collect the appropriate data. The data were collected during August 1996

Summer Conference at Tulsa Oklahoma. All teachers in the district with land laboratories were present. Therefore, it was possible to obtain a 100% response. The descriptive statistics used to analyze the data were frequency distributions, percentages and rank order.

Major Findings of the Study

The major findings of this study are summarized within four sections as follows:

1. General characteristics of Agricultural Education programs in the Northwest Supervisory District; 2. Characteristics and major emphasis of land laboratories; 3. Usage and support of land laboratories; 4. Major limitations and prohibitive factors concerning land laboratories.

General Characteristics of AgEd Programs

There are several general characteristics that typify the 43 AgEd programs in the Northwest Supervisory District of Oklahoma, which were included in this study. The overwhelming majority (38-88.37 percent) are single teacher programs. The mean years of teaching experience of teachers responding was 12.42 years. The surveyed teachers noted that they had had 10.51 mean years of access to a land laboratory. The average

tenure of the teachers at the present school was 9.39 years with a slightly higher average tenure of 10.79 years teaching experience in the Northwest District. Teachers indicated the number of years their respective programs had operated a land laboratory was 18.05 years. It was not surprising to note the similarities between the number of students enrolled in AgEd classes and the number of FFA members in each program with 58.35 and 58.58 respectively. These numbers were expected because Oklahoma has been and continues to be a 100% FFA member state. In addition, teachers overwhelmingly stated that their major emphasis with the land laboratory was maintaining A Total Program with 35 (81.40 percent) ranking this emphasis first. The common courses taught by most teachers in the Northwest District were traditional agricultural production classes. The newer Ag curriculum was much less frequently taught. Newer courses like Principles of Ag Technology, Biotechnology in Agriculture, and Aquaculture were taught by one, two and three programs respectively.

Characteristics and Conditions of Land Laboratories

The average land laboratory was found to be 10.30 acres in size. Thirty-five (81.40 percent) had from less than one, up to 10 acres, while one was reported to have 115 acres. The latter obviously inflated the mean size. Most laboratories were one mile

or less from campus, with only one being more than five miles distant. Electricity and/or water and/or housing and/or feeders were available on 30 or more of the facilities. Only one land laboratory was reported as having no such facilities. The condition of the land laboratories was estimated as Good or better in 28 (65.11 percent) of the cases.

Usage of and Support for Land Laboratories

Use as a site for traditional production-type SAE projects was reported for 40 (93.02 percent) of the land laboratories. Perhaps not surprisingly, the teachers expressed the opinion that this was the ideal use. The land laboratory was perceived to be at least a Great asset to students' SAEP by 39 (90.70 percent) of the teachers. Of the total of 43 land laboratories, it was found that swine enterprises were being conducted in 38 (88.37 percent) instances, sheep in 34 (79.07 percent) and beef in 33 (76.74 percent). It was found that land laboratories were used Often as an educational tool to assist with classroom instruction and AgEd student and 4-H members were the principal users, with the former accounting for from at least 50 percent up to 100 percent of the total use. The 4-H group accounted for from 5 to 50 percent of the use by community groups. An average of 15.95 AgEd students per program district-wide, a total of 686 students, were reported as benefitting directly from these facilities. More than 72 percent of parents

visited land laboratories at least Often. It was reported by 39 (90.70 percent) and 32 (74.42 percent) teachers that they and their students respectively were the groups providing the majority of upkeep and maintenance of the sites. On a related matter, 20 (46.51 percent) teachers expressed the view that students should provide all labor when using the land laboratory as the location for their SAE project, while another 23 (53.49 percent) felt students should be responsible for some of the labor required. Almost three-fourths of the teachers surveyed, 31 (72.09 percent), indicated they felt students should provide at least some of the expense associated with the land laboratory.

Limitations and Prohibitive Factors

As a result of investigating teachers' perceived limitations for the land laboratories, it was discovered that 36 (83.72 percent) felt financial concerns limited effectiveness. Another 11 (25.58 percent) indicated that perceptions by the school were a limitation Only 11 (25.58 percent) of the teachers felt that distance was a prohibitive factor in the use of land laboratories for themselves either Often or Very Often. On a similar note, only 6 (13.95 percent) indicated distance prohibited the use by students Often or Very Often. As perceived by teachers, the major problems associated with land laboratories, in order of magnitude were Upkeep and Maintenance Costs, Teacher Time Required, Birds,

Predators, Vandalism, Waste Disposal and Theft. Upkeep was also listed as the major dislike of land laboratories by teachers. The majority of teachers, 23 (53.49 percent) indicated that additional financial assistance would be needed to make current facilities into ideal land laboratories.

Conclusions

The following conclusions were derived by the researcher by interpretation of the findings of the study and are characterized as to the group of teachers which responded.

1. The majority of Northwest District land laboratories exist in single teacher programs whose teachers have considerable overall teaching experience and long tenure in their schools.

2. Land laboratories in the Northwest Supervisory District are utilized primarily by AgEd students with some usage by 4-H members but when compared to the average enrollment only a relatively small portion of the total FFA membership are currently utilizing the land laboratory with their SAE projects.

3. The typical land laboratory is well supplied with utilities and conveniences and is considered to be Good condition.

4. Land laboratories in the Northwest District are used almost exclusively for livestock oriented SAE projects of students with swine, sheep, and beef being the types of traditional livestock projects found on the land laboratory.

5. Typically teachers perceived financing to be a concern for a land laboratory but managed to operate the facility regardless of the annual budget.

6. Upkeep and maintenance costs for land laboratories are a major problem even when the AgEd teacher and the student provide the labor.

7. Most land laboratories are located conveniently to the school campus.

8. Demonstrations were often performed on the land laboratory to aid in teaching the newer curriculum.

9. For the most part land laboratories in the Northwest District are relatively small.

10. Most teachers perceived the land laboratory as an extension of the classroom.

11. In order to keep school farms operational relatively high amounts of teacher time is required.

Recommendations

The following recommendations for operating a land laboratory were made as a result of the major findings of this study. These recommendations are relevant to both programs that currently utilize land laboratories and those that may want to begin operating such an educational vehicle in the future.

1. AgEd teachers must constantly demonstrate that a land laboratory is an integral part of a balanced AgEd program.

2. AgEd teachers should explore the options to reduce the number of hours they spend performing upkeep and maintenance.

3. Because of the perceived great benefit to students, all AgEd programs without a land laboratory should explore avenues to initiate such a facility.

4. AgEd teachers should do a better job of diversifying the utilization of the land laboratory.

5. Since AgEd teachers overwhelming perceived funding as a limitation, they should do more to seek out additional funding for the land laboratory.

6. AgEd teachers should develop a plan or a set of procedures to enable them to better utilize their time spent at the land laboratory facility.

7. AgEd teachers should look beyond the traditional SAEP and encourage participation in non-traditional types of SAEPs.

8. AgEd teachers should make use of land laboratories to implement more of the newer curriculum to update the program.

9. AgEd teachers should encourage a greater utilization of the AgEd land laboratory by other groups to increase public relation opportunities and potentially increase funding.

10. Additional research should be conducted in regard to the utilization of agricultural education land laboratories. The following recommendations are judgments based upon having conducted and analyzed the study:

A. There should be a study conducted to examine parent and student perceptions pertaining to the land laboratory usage.

B. There should be a study conducted to determine methods used to secure funding for land laboratory operation.

C. There should be a study conducted to determine time management strategies that could benefit AgEd teachers operating land laboratories

D. There should be study conducted to determine how non-traditional types of SAEPs can be successfully implemented on the current land laboratory facility.

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APPENDIXES

APPENDIX A

QUESTIONNAIRE

This questionnaire is concerned with the utilization of agricultural education land laboratories. For the purpose of this study a land laboratory will be defined as a land, livestock, horticulture, or aquaculture facility. This study intends to help provide information to AgEd Instructors and others that may be interested in the utilization of land laboratories. This material will be used in my report for the Master's Degree.

Your cooperation in answering all the questions is greatly appreciated. It is my hope that the results of this study will benefit the secondary AgEd programs in Oklahoma.

Name of school, FFA Chapter or organization that sponsors and/or operates your land laboratory._____

The Current Utilization of Agricultural Education Land Laboratories in the Northwest District of Oklahoma

QUESTIONNAIRE

1. Number of teachers in this department? _____
2. How many years have you taught agricultural education? _____
3. How many years have you taught agricultural education in the present school _____
4. How many years have you taught in the Northwest district. _____
5. How many years have you had access to a land laboratory? _____
6. How many years has your Ag Ed program operated a land laboratory? _____
7. What is the total number of students in your program?_____
8. How many FFA members are in your program?_____
9. What is the major emphasis of your Ag Ed program?
   (Please rank 1 through 6)
   ____SAE (Supervised Agricultural Experience)
   ____Exhibition
   ____Classroom Instruction
   ____Leadership Activities
   ____Judging Contest
   ____A Total Program (Classroom/SAE/FFA)
10. Please check the areas that are utilized with your land laboratory.
    ____Livestock
    ____Field crops
    ____Pasture
    ____Horticulture
    ____Demonstrations
    ____Wildlife Habitat
    ____Other (specify) _____

11. How often are teaching demonstrations performed on the land laboratory facilities?
    ____very often
    ____often
    ____seldom
    ____never

12. To what extent are you currently using the FFA land laboratory to demonstrate the newer ag curriculum?
    ____very often
    ____often
    ____seldom
    ____never

13. What classes are you teaching this year?
    ____Ag Production and Management I
    ____Ag Production and Management II
    ____Ag Processing and Marketing
    ____Ag Sales and Service
    ____Biotechnology
    ____Equine
    ____Employment in Agribusiness
    ____Forestry
    ____Natural Resources
    ____Principles of Ag Technology
    ____Aquaculture
    ____8th Grade Ag Careers
    ____Ag I
    ____Ag II
    ____Horitculture I
    ____Horticulture II
    ____Ag Mech I
    ____Ag Mech II
    ____Other _____

14. How do you use the land laboratory to aid in teaching the newer ag curriculum?
    ____Field Trips
    ____Demonstrations
    ____Test Plots
    ____Observing Wildlife Habitat
    ____Conservation Practices
    ____Experiments
    ____Others (Please specify) _____

15. To what extent do you believe land laboratories can be used to demonstrate some of the techniques taught in the newer ag curriculum?
    ____very often
    ____often
    ____seldom
    ____never

16. How often do you take field trips to the land laboratory?
    ____very often
    ____often
    ____seldom
    ____never

17. What is the size of your land laboratory?
    Number of total acres _____
    Size of greenhouse(s) _____

18. How often do parents visit the land laboratory?
    ____very often
    ____often
    ____seldom
    ____never

19. What is the current availability of facilities on your land laboratory? (Check all that apply)
    ____Electricity
    ____Water
    ____Housing (Barns-pens-fencing, etc.)
    ____Grounds keeping equipment
    ____Tillage equipment
    ____Tractor
    ____Feeders
    ____Greenhouse
    ____Other (Please specify)_____

20. What is the current condition of the land laboratory facilities?
    ____Excellent
    ____Good
    ____Fair
    ____Poor

21. How is your land laboratory financed?
    ____% School
    ____% Students that use the facilities
    ____% Young Farmers
    ____% FFA
    ____% Other (Please specify)_____

22. Who may use the land laboratory?
    (Check all that apply)
    ____Ag Students
    ____4-H
    ____Adults
    ____Other classes in school (specify)_____
    ____Other (Please specify)_____

23. What percent of use is derived from the land laboratory by these community groups/ organizations?
    ____% Ag Students ____% Adults
    ____% 4-H ____% Other

24. What is the estimated annual budget for the land laboratory? (Maintenance, utilities, etc.)
    $_____

33. How often is distance or location of the land laboratory a prohibitive factor to you?
    ____very often
    ____often
    ____seldom
    ____never
34. In your opinion, to what extent is the land laboratory an asset to your students' SAEP?
    ____very great
    ____great
    ____some
    ____none

35. How much teacher time is allotted to your land laboratory (hours per week)?
    ____School time
    ____Before/After school
    ____Summertime
    ____Weekend

36. In your opinion, how much should students who use the land laboratory for SAE projects be responsible for the labor required for the use of land and project housing construction?
    ____all labor
    ____some labor
    ____none of the labor

37. In your opinion, how much should students who use the land laboratory for SAE projects be responsible for the expense required for the use of land and project housing construction?
    ____all expense
    ____some expense
    ____none of the expense

38. What are your personal dislikes of the land laboratory?
    _____
    _____
    _____

39. What do you feel would be the ideal use of the land laboratory in your community?
    _____
    _____
    _____
    _____
    _____

40. What would you need (financial assistance, labor, equipment, facilities, etc) to implement this ideal land laboratory?
    _____
    _____
    _____
    _____

25. How many students have an SAE program directly as a result of a land laboratory being available?_____

26 Are students currently utilizing the land laboratory with traditional types of SAE programs?_____ If yes, please specify type of SAEP.

_____

27. Are students currently utilizing the land laboratory with non-traditional types of SAE programs? _____ If yes, please specify type of SAEP.

_____

28. What are the major limitations of the land laboratory?
(Check all that apply)
____School perceptions
____Communtiy perceptions
____Parental perceptions
____Student perceptions
____Teacher perceptions
____Financial
____Other (Please specify) _____

29. What are the major problems associated with the land laboratory? (Check all that apply)
____Predators
____Birds
____Waste disposal
____Vandalism
____Time required
____Theft
____Upkeep and Maintenance Costs
____Other (specify) _____

30. Who provides the majority of the upkeep and maintenance at the land laboratory?
____Students
____Parents
____Young Farmers
____Hired personnel
____AgEd Instructor(s)
____Other _____

31. How far is the land laboratory from campus?
____On campus
____1 mile or less
____2 miles
____3 miles
____4 miles
____5 miles
____over 5 miles

32. How often is distance or location a prohibitive factor to students who use the land laboratory?
____very often
____often
____seldom
____never

APPENDIX B

INSTITUTIONAL REVIEW BOARD

APPROVAL FORM

OKLAHOMA STATE UNIVERSITY
INSTITUTIONAL REVIEW BOARD
FOR HUMAN SUBJECTS RESEARCH

Proposal Title: The Current Utilization of FFA Land Laboratories in the Northwest District of Oklahoma

Principal Investigator: Robert Terry / Paul F. Fuss

Date: 4-28-92 IRB # AG-92-019

This application has been reviewed by the IRB and

Processed as: Exempt [X] Expedite [ ] Full Board Review [ ]

Renewal or Continuation [ ]

Approval Status Recommended by Reviewer(s):

Approved [X] Deferred for Revision [ ]

Approved with Provision [ ] Disapproved [ ]

Approval status subject to review by full Institutional Review Board at next meeting, 2nd and 4th Thursday of each month.

Comments, Modifications/Conditions for Approval or Reason for Deferral or Disapproval:

Signature: Marcia K. Tilley Date: 5-2-92

Chair of Institutional Review Board

VITA

Paul F. Fuss

Candidate for the Degree of

Master of Science

Thesis: THE CURRENT UTILIZATION OF AGRICULTURAL EDUCATION LAND LABORATORIES IN THE NORTHWEST DISTRICT OF OKLAHOMA

Major Field: Agricultural Education

Biographical:

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