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The Effects Of Vocation Education In Agriculture On The Practice Performed By Farmers Of Limestone County , Texas, Based On Study Of One Hundred Farmers

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THE EFFECT OF VOCATIONAL EDUCATION IN AGRICULTURE ON THE PRACTICES PERFORMED BY FARMERS OF LIMESTONE COUNTY, TEXAS, BASED ON STUDY OF ONE HUNDRED FARMERS

RANSOM

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THE EFFECT OF VOCATIONAL EDUCATION IN AGRICULTURE ON THE PRACTICES PERFORMED BY FARMERS OF LIMESTONE COUNTY, TEXAS, BASED ON STUDY OF ONE HUNDRED FARMERS

By

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DEDICATED

To my wife

Mrs. Velma H. Ransom

ACKNOWLEDGMENT

The writer wishes to express his appreciation to those persons who kindly gave assistance in formulating this work.

The writer especially extends thanks to Dr. E. M. Norris for instruction in assembling the necessary information for his helpful suggestions and criticisms.

The writer, also, wishes to express his appreciation to Mr. J. W. Booker, County Agent of Limestone county, for his kind co-operation and assistance.

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CHAPTER I

INTRODUCTION

In the preparation of this study, the writer has endeavored to include all necessary materials that will be helpful to Teachers of Agriculture and Farmers of Limestone County, Texas.

The writer selected this problem because he felt that some type of evaluation of Vocational Education Programs in Agriculture should be made to determine to what extent Vocational Education in Agriculture has aided farmers of Limestone County, Texas, in their farming practices.

The significance of an educational program for adult farmers is derived mainly from three facts:

1. The large number of farmers.
2. The crucial influence of these farmers in family, community, state, national, and world affairs.
3. The interest and persistence they have shown in adult education activities whenever reasonably good opportunities have been offered them.[1]

No matter how small, any community with a four-year high school, is likely to keep a good teacher of Vocational Agriculture very busy. If he serves adequately the adults

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[1] H. M. Hamlin, Agriculture Education in Community School (Danville, Illinois: Interstate Printer and Publisher, 1950), p. 311.

as well as the high school boys and the young farmers, full-time services are needed.

Statement of Problem

The writer feels that some type of evaluation should be made to determine to what extent Vocational Education in Agriculture has aided farmers of Limestone County in their farming practices.

"There is danger in compartmentalizing our thinking regarding adult education in Vocational Agriculture into such categories as objectives, courses, farming programs, and evaluation."[1]

It goes without saying that the support of the school administration is essential to the successful teaching of adult farmer classes. Ordinarily, the superintendent or principal, under whom the teacher works, is in sympathy with these phases of the program in Vocational Agriculture. There are, however, some situations in which instruction for out-of-school groups are not encouraged, particularly courses in independent schools for adult farmers who come from outside the school district. The tactful teacher should be able to meet objections by demonstrating that the

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[1]G. F. Ekstrom and J. G. McClelland, Adult Education in Vocational Agriculture (Danville, Illinois: Interstate Printer and Publisher, 1950), p. 39.

school community should benefit indirectly from any endeavor which contributes to the advantage of the trade area in which the school is located. Furthermore, school officials appreciate teachers who are resourceful enough to plan a systematic program and will ordinarily approve plans for adult classes when they are included in a definite program of activities for the department.[1]

In organizing courses for adult farmers, the following things should be done:

1. Set up the objectives underlying the adult farmer program.
2. Determine the instructional needs in the light of these objectives.
3. List the outcome which should result from the instruction. The above conclusions should be reached with the aid of an advisory group.

Purposes of Study

The writer wishes to determine to what extent Vocational Education in Agriculture has aided farmers of Limestone County, Texas, in their farming practices.

Method of Investigation

According to the census of Agriculture for 1950, there were 481 non-white farmers in Limestone County. The writer felt that sampling of 100 of these farmers representing a

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[1] Ibid., p. 41.

27 per cent coverage would be quite adequate. The files of the Negro agent of Limestone County, Mr. J. W. Booker, contained the names of 371 Negro farmers in 1956.

Random sampling technique was employed to collect statistical data for this study. A list of names and addresses of Negro farmers of the county were secured from the Negro county agent. A number was assigned to each name. These numbers were then placed in a container, thoroughly agitated, and then 100 numbers were picked. The farmers represented by these numbers were then placed on sheets and the process of surveying them was begun. Since these farmers were of the same race, it was felt that this method of sampling would give a good representation of a cross-section of the group under study.

The third year Vocational Agriculture class of the Dunbar High School and the two other Vocational Agriculture Teachers of the county assisted in the collection and compilation of the data from the survey. A personal interview was made in connection with each survey form used. The information collected from the findings is presented in tabular form with a discussion to explain the significance. An effort is being made in this investigation to interpret these findings, and to give evidence to the authenticity of other information presented.

It is sincerely hoped that the results of these findings will enable the readers to evaluate the Vocational

Education Program in Agriculture of Limestone County, and to determine to what extent that these programs have assisted farmers in their farming practices.

Definition of Terms

The terms defined below are used throught the text in the discussion that follows:

Agriculture--Is a science of the cultivation of land; the conservation of soil and water; the caring for and the breeding of livestock; the breeding and development of plants and conservation of food.

Vocational Education--Is a course that develops one in skills necessary for occupational proficiency.[1]

Vocational Education in Agriculture--Is a nation-wide, federally aided program of systematic instruction in Agriculture and Farm Mechanics of less than college grade conducted in public schools or classes for those persons over 14 years of age; who have entered upon or who are preparing to enter upon the work of the farm.[2]

Economics--Is a science that deals with those human

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[1] J. A. McCarthy, Vocational Education America's Greatest Resources, (Chicago, Illinois: American Technical Society, 1957), p. 198.

[2] C. G. Cooks, Handbook on Teaching Vocational Agriculture, (Danville, Illinois: Interstate Printer and Publisher, 1946), p. 3.

activities and relations arising out of man's effort to make a living.

Farm--Is any unit of land operated by a farmer with his own labor, family labor, and hired labor.

Types of Farming--Refers to the kind of enterprises growing.

Method of Farming--Refers to approved practices used.

Scope

This study is limited to the study of how Vocational Education in Agriculture has aided farmers in their farming practices. It includes 100 Negro farmers located in Limestone County, Texas, who are engaged in general farming.

Basic Assumption

The writer believes Vocational Education in Agriculture has aided farmers of Limestone County, Texas, in their farming practices, by means of instruction and guidance given by Vocational Agriculture Teachers of Limestone County, Texas.

Review of Related Studies

Members of adult farmer classes may learn how to improve their farming practices by studying means of improving the situations on their home farms and by

investigating other opportunities that are available in their communities. Educational leaders and government-supported agencies are attempting to improve conditions of farm tenure. Changes in State and National Policies toward Agriculture, as well as changes in the general economic situation, have important bearings upon problems of beginning farmers. Well planned supervised farming programs provide an opportunity for adult classes to gain experience and to get established in farming on a satisfactory basis.[1]

The teacher of adult farmer classes finds it to his advantage to co-operate with neighboring instructors in planning his adult program. Frequently he and his associates are members of a county or a district planning board which has developed recommendations for the improvement of farming in the area. Some of the board's recommendations, such as those involved in control of pests, diseases, and in the marketing of products, cut across community lines and are more fully realized where adjacent communities follow similar practices.[2]

There are many direct ways in which teachers can be of mutual assistance in planning and conducting programs of

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[1] Ward P. Beard, Starting Farm, (Danville, Illinois: Interstate Printer and Publisher, 1948), p. 265.

[2] Ibid., p. 265.

instruction for adults; they are as follows:

1. Instructional materials may be exchanged.

2. Outside consultants may be used in several communities on successive days or nights.

3. Teachers may assist each other in conducting some of the lessons.

4. Certain group activities, such as artificial breeding associations, swine testing, co-operative livestock sales, crop pools and the buying of supplies co-operatively may be more practical when two or more classes work together.

In the study made by M. S. Murray on the evaluation of farmer classes, he states:

> Farming is not only a way of making a living; but, as instructors of Northwestern Wisconsin are learning, adults and young farmers are interested in making it a way of life.
>
> At least the survey of 15 or more departments in that section indicate that the additional income coming from more efficient practices has been used to remodel homes, farm buildings, to provide electricity and major electrical farm appliances including food freezers, milk coolers and refrigerators, to improve farm and home landscaping including windbreaks and woodlot plantings.
>
> So it is not only the teaching of crop production, soil, the selections of livestock, and the newer varieties of oats, barley, potatoes, strains of hybrid corn that are interesting those people who are attending more than 200 evening classes. They want to know the newer points of production to be sure, but they are keenly interested in the other phases.
>
> In the survey made to find some indication of just how many farm and home improvements have come about as a result of part-time or adult class work, many interesting figures have come to light.
>
> From the New Richmond department at Richmond, Wisconsin, T. J. Madden, instructor there for almost

30 years, states that 11 farm homes have been remodeled, 15 homes have added water systems and plumbing, 20 have major electrical appliances, and 12 have planted windbreaks.

From Dunn County, F. J. Haugh states that 47 farm buildings and homes have been remodeled, 12 water pressure systems have been added, and 14 places have added major electrical service appliances.

At Osceola, Wisconsin, Howard Askow states that 12 homes underwent major remodeling, six have added water systems, five or more have done major landscaping, and nine, windbreak jobs.

Farming is no longer a way of making a living; it is a way of life. A more pleasant way of living through association with their neighbors in adult and part-time classes in Vocational Agriculture.[1]

Historical Background

Population Factors. -- Limestone County is a prominent farming and livestock county located on the Blacklands--Post Oak Belt Line. The county has a large rural population, 26.2 per cent urban; 35.5 per cent non-farm rural; and 38.2 per cent farm rural. The population is represented according to race with 68.2 per cent, Anglo-American; 2.3 per cent, Latin American; and 29.5 per cent, Negro. The largest town in the county, Mexia, has a population of 7,000. The table following on the next page gives other pertinent facts concerning the population of the county.

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[1] M. S. Murray, Agriculture Education, (Danville, Illinois: Interstate Printer and Publisher, 1951), p. 232.

STATISTICAL INFORMATION CONCERNING LIMESTONE COUNTY[1]

	Amount
Area in square miles	932
Population (1950)	25.251
Population per square mile	27.1
Urban population	6.627
Rural population	18.624
Number of farms	2.660
Average farm acreage	191.5
Number of farm owners	1.025
Number of farm tenants	1.069
Income	$18,469,000
Value of manufactured items	$1,246,000
Tax Value	$15,097,750

Resources

Limestone County was created and organized in 1846 from Robertson County, named for limestone rock which is the foundation stone of the county. The altitude is 350-600 feet, with an annual rainfall of 37.61 inches. The average temperature for Limestone County in January is 47°F., with

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[1] Texas Almanac, (Dallas, Texas: The Dallas Morning News, 1956-1957), p. 671.

July having 84OF.

Principal enterprises are corn, hay, watermilons, grain, sorghum, oats, tomatoes, peanuts, sweet potatoes, grass, legume, cotton, beef cattle, swine, sheep, goats, oil, gas, and manufacturing.

The county seems to get a greater part of its income from farming, gas, and oil.

CHAPTER II

ANALYSES OF DATA

This study deals with the evaluation of the Vocational Education in Agriculture to determine to what extent farmers have been aided by the Vocational Agriculture Units in Limestone County, Texas

In the analyses of data secured from surveys and personal interviews, the writer attempts to determine what influence Vocational Education in Agriculture has had on the farming practices of farmers in Limestone County, Texas.

The writer deemed it necessary for the purpose of clarity to present pertinent statistical facts concerning the educational status, farm ownership, farming methods used before and after training was given in Vocational Education in Agriculture in Limestone County, Texas.

Practices used in the following enterprises and activities were considered: Beef Cattle Production, Dairy Production, Poultry Production, Swine Production, Farm Management, Corn Production, Grass and Pasture Improvement, Horticulture, Soil and Water Conservation, Cotton Production, Farm Equipment (Team Power), and Power Equipment.

Data presented in this chapter of the report were collected from surveys and personal interviews.

In order to make an accurate analysis of the data

collected, the writer proposed to present most of the information in tabular form.

Educational Status

Table I shows the educational status of the 100 Negro farmers surveyed. Seventy received 1 to 8 years of elementary school-training; 28 received 1 to 4 years of high school training; and 2 received 1 to 4 years of college training.

TABLE I

EDUCATION STATUS OF THE 100 NEGRO FARMERS SURVEYED

School Years	Years	Number
Elementary	1-8	70
High School	1-4	28
College	1-4	2

TABLE II

TENURE STATUS OF 100 FARMERS STUDIED

	Number
Owner	75
Part Owner	20
Renter	5
Total	100

Table II points out the ownership status of Negro

farmers in the county. Of the 100 farmers surveyed, 75 were full owners of the farms they operated; 20 of the farmers were part owners; and 5 were renters.

TABLE III

NUMBERS AND DISTRIBUTION OF PRACTICES PERFORMED IN BEEF CATTLE ENTERPRISE BY NEGRO FARMERS IN LIMESTONE COUNTY, TEXAS, BEFORE AND AFTER AGRICULTURAL INSTRUCTION CAME TO COUNTY

	Before			Now		
Practices	Number Practicing	Number not Practicing	Total	Number Practicing	Number not Practicing	Total
Castrate Calves -	10	90	100	35	65	100
Vaccinate for Blackleg - - - - -	5	95	100	68	42	100
Fit and show animals for fair and show - - - - - - -	3	97	100	83	17	100
Feed balance ration - - - - - -	7	93	100	35	65	100
Carry out fly control program - - -	0	100	100	25	75	100
Use caustic to prevent horn - - -	0	100	100	10	90	100
Register purebreed animals - - - - -	0	100	100	15	85	100
Provide mineral and salt box - - -	0	100	100	10	90	100

Data show that 10 of the farmers castrated calves, 5 vaccinated for blackleg, 3 showed animals, 7 feed balanced ration, none used caustic to prevent horn development, none registered purebred animal, none provided mineral and salt boxes, before Vocational Agriculture Teachers gave training

in the practices.

The data indicate that 35 castrated calves, 68 vaccinated for blackleg, 17 showed animals, 35 fed balance rations, 25 carried out fly control programs, 10 used caustic to prevent horns on young animals, 15 registered purebred animals, 10 provided minerals and salt boxes, after instruction was given to the farmers in evening school and/or conferences had been held with Vocational Agriculture Teachers.

TABLE IV

PRACTICES PERFORMED IN THE DAIRY ENTERPRISE BY THE 100 FARMERS STUDIED, BEFORE AND AFTER AGRICULTURAL INSTRUCTION CAME TO THE COUNTY

	Before			Now		
	Number Practicing	Number not Practicing	Total	Number Practicing	Number not Practicing	Total
Select purebreed for herd - - - -	35	65	100	65	35	100
Mastitis Control Program - - - -	10	90	100	90	10	100
Have herd tested for abortion - -	0	100	100	10	90	100
Have herd tested for Tuberculosis	2	98	100	75	25	100
Treat calves for scours - - - - -	30	70	100	70	30	100

Data indicate that 35 farmers selected purebreed bulls, 10 carried mastitis control programs, none had herd

tested for abortion, two tested herd for tuberculosis, 35 treated calves for scours, before Vocational Agriculture Teachers gave any training to farmers in the county.

TABLE V

PRACTICES PERFORMED IN POULTRY PRODUCTION BY THE 100 FARMERS STUDIED, BEFORE AND AFTER AGRICULTURAL INSTRUCTION CAME TO COUNTY

	Before			Now		
	Number Practicing	Number not Practicing	Total	Number Practicing	Number not Practicing	Total
Cull the laying flock - - - - - -	25	75	100	75	25	100
Select purebreed cockerels - - - -	0	0	0	0	0	0
Install dropping pits - - - - - -	35	65	100	65	35	100
Treat birds for scaly leg mites -	15	85	100	65	35	100
Treat poultry fixtures for mites, bluebugs, and fleas - - - - - -	15	85	100	65	35	100
Candle and grade eggs - - - - - -	0	0	0	25	75	100
Mix and feed a scratch feed using approved formula - - - - -	0	100	100	0	100	100
Caponize cockerels	0	100	100	0	100	100
Produce non-fertile eggs - - - -	0	0	0	30	70	100
Keep flock free from pullorun diseases - - - -	0	0	0	15	85	100
More breeding pens - - - - - -	0	100	100	0	100	100

Of the 100 farmers surveyed it was found that 65 selected purebreed bulls for their herd, 90 carried on mastitis control programs, 10 had herd tested for abortion, 75 had herd tested for tuberculosis, 70 treated calves for scours, after Vocational Agriculture Teachers gave training to these farmers.

Survey data show that 75 of the farmers are engaged in culling the laying flock, compared to 25 who engaged in this practice prior to the training given by Vocational Agriculture Teachers in the county. It is evident from the survey as shown in Table V that there were very few approved practices existing in the county; therefore, it appears that since being instructed by Vocational Agriculture Teachers, farmers have made some effort to adopt approved practices in poultry production.

In Table VI, data reveal that 15 farmers kept record on hogs; 25 built pig brooders for winter use; 40 registered purebred animals; 40 selected purebred boars for their herds; and 10 vaccinated for cholera. The survey shows these practices were used by the farmers before instruction was given by Vocational Agriculture Teachers.

After receiving instruction, 90 farmers vaccinated herds for cholera; 60 selected purebred boars for their hers; 40 registered purebred animals; 25 built pig brooders for winter use; 85 kept some kind of records on hogs;

TABLE VI

PRACTICES PERFORMED IN SWINE PRODUCTION BY THE 100 FARMERS SURVEYED, BEFORE AND AFTER AGRICULTURAL INSTRUCTION CAME TO COUNTY

	Before			Now		
	Number Practicing	Number not Practicing	Total	Number Practicing	Number not Practicing	Total
Vaccinate herd for cholera - - -	10	90	100	90	10	100
Select purebred boar for herd - -	40	60	100	60	40	100
Remove tusks from boar - - - - - -	0	100	100	0	100	100
Plan and mix a mineral mixture -	0	100	100	0	100	100
Register purebred animals - - - - -	40	60	100	60	40	100
Build pig brooder for winter use -	25	75	100	75	25	100
Keep records on hogs - - - - - -	15	85	100	85	15	100
Treat pigs for worms - - - - - -	10	90	100	55	45	100

and 55 treated pigs for worms. The showed some evidence of assistance was given by the units.

The data in Table VII reveal that 15 farmers used certified seeds; 60 gave the last cultivation to corn with middle buster; 10 prepared proper seed beds; none treated corn to prevent weevil damage; none irrigated corn; and none planned grasshopper control programs, before instruction was given by the Vocational Agriculture Teachers.

After being instructed, 60 used approved certified

TABLE VII

PRACTICES PERFORMED IN CORN PRODUCTION BY THE 100 FARMERS SURVEYED, BEFORE AND AFTER AGRICULTURAL INSTRUCTION CAME TO COUNTY

	Before			Now		
	Number Practicing	Number not Practicing	Total	Number Practicing	Number not Practicing	Total
Use approved certified seeds - - - -	15	85	100	60	40	100
Treat corn to prevent weevil damage	0	100	100	10	90	100
Irrigate corn - -	0	100	100	0	100	100
Plan grasshopper control program -	0	100	100	0	100	100
Lay by corn with middle buster - -	60	40	100	40	60	100
Prepare proper seed bed - - - - - - -	10	90	100	25	75	100

seeds; 10 treated corn to prevent weevil damage; 40 laid by corn with middle buster; 25 prepared proper seed beds; none irrigated corn; and none planned grasshopper control program.

Data, in Table VIII, show that 33 made out farm budget; five made farm inventory; 20 made out income tax reports; 60 determined the cost of production; and 37 planned production to market outlook before Vocational Agriculture Teachers gave instruction in farm management.

Since receiving instruction, 59 make farm budgets; 26 make farm inventories; 15 make out income tax returns;

TABLE VIII

PRACTICES PERFORMED IN FARM MANAGEMENT BY THE 100 FARMERS STUDIED, BEFORE AND AFTER AGRICULTURAL INSTRUCTION CAME TO COUNTY

	Before			Now		
	Number Practicing	Number not Practicing	Total	Number Practicing	Number not Practicing	Total
Make farm budget - -	33	67	100	59	41	100
Take farm inventory-	5	95	100	26	74	100
Make out income tax	20	80	100	15	85	100
Determine the cost of production - - -	60	40	100	40	60	100
Plan production to market outlook - - -	37	63	100	52	48	100

40 determine cost of production; and 52 plan production to market outlook.

TABLE IX

PRACTICES PERFORMED IN GRASS AND PASTURE IMPROVEMENT BY THE 100 FARMERS SURVEYED, BEFORE AND AFTER AGRICULTURAL INSTRUCTION CAME TO COUNTY

	Before			Now		
	Number Practicing	Number not Practicing	Total	Number Practicing	Number not Practicing	Total
Control weeds by mowing - - - - - -	39	61	100	56	44	100
Plant sudan grass for summer pasture	47	53	100	58	42	100
Reseed pasture - -	15	85	100	36	64	100
Use fertilize and manure on pasture-	9	91	100	48	52	100

Only 39 farmers controlled weeds by mowing; 47 planted sudan grass for summer pasture; 15 re-seeded pastures; and 9 used fertilizer and manure on pastures before training was given by Vocational Agriculture Teachers.

Since receiving instruction, 56 control weeds by mowing; 58 plant sudan grass for summer pasture; 64 re-seed pastures; and 48 use fertilizer and manure on pastures.

TABLE X

PRACTICES PERFORMED IN HORTICULTURE ENTERPRISE BY THE 100 FARMERS SURVEYED, BEFORE AND AFTER AGRICULTURAL INSTRUCTION CAME TO COUNTY

	Before			Now		
	Number Practicing	Number not Practicing	Total	Number Practicing	Number not Practicing	Total
Spray fruit trees -	0	0	0	56	44	100
Dehorn trees - - -	0	0	0	10	90	100
Prune trees - - - -	15	85	100	73	27	100
Prevent rodent injury in the orchard	0	100	100	0	100	100
Treat seed for smut	0	100	100	0	100	100
Certify seed on home farm - - - - - - -	0	100	100	0	100	100
Legumes - - - - - -	30	70	100	55	45	100
Use legume in crop rotation - - - - -	30	70	100	63	37	100
Inoculate seeds - -	0	0	0	33	67	100

Before receiving instruction none of the farmers sprayed fruit trees; none dehorned trees; five pruned trees; none prevented rodent injury in orchard; none treated seeds

for smut; none used certified seeds on home farm; 30 planted legumes; 30 used legumes in crop rotation; and none inoculated seeds.

After receiving instruction 56 sprayed fruit trees; 10 dehorned trees; 73 pruned trees; none prevented rodent injury in orchard; none treated seeds for smut; none used certified seeds on home farm; 55 used legumes; 63 used legumes in crop rotation; and 33 inoculated seeds.

TABLE XI

PRACTICES PERFORMED IN SOIL AND WATER CONSERVATION BY THE 100 FARMERS STUDIED, BEFORE AND AFTER AGRICULTURAL INSTRUCTION CAME TO COUNTY

	Before			Now		
	Number Practicing	Number not Practicing	Total	Number Practicing	Number not Practicing	Total
Soil tested - - - -	0	100	100	42	58	100
Plant covercrops -	0	100	100	22	78	100
Leave crop residue on soil where practical - - - - - - -	10	90	100	26	74	100
Protect stream bank	0	100	100	0	100	100
Use strip cropping	0	100	100	0	100	100
Determine field should be put back into crop - - - - -	15	85	100	64	36	100
Plans for crop rotation - - - - -	10	90	100	39	61	100
Secure fish for farm pond - - - - -	0	100	100	23	77	100
Plant on the contour	0	100	100	0	100	100
Use terraces - - -	10	90	100	17	83	100
Have soil tested to determine plant and fertilizers to use	0	100	100	35	65	100

Before receiving instruction none of the farmers tested soils; none planted cover crops; 10 left crop residue on soil where practical; none protected stream banks; none used strip cropping; 15 determined fields should be put back into crops; 10 planned for crop rotation; none secured fish for farm pond; none planted on the contour; 10 used terraces; and none had soil tested to determine plant and fertilizer needs.

After receiving instruction 42 had soils tested; 22 planted cover crops; 26 left crop residue on soil where practical; none protected stream banks; none used strip cropping; 64 determined fields to put back into crop; 39 planned on crop rotation; 23 secured fish for farm ponds; none planted on the contour; 17 used terraces; and 35 have soil tested to determine plants and fertilizes to use.

TABLE XII

PRACTICES PERFORMED IN COTTON PRODUCTION BY THE 100 FARMERS SURVEYED, BEFORE AND AFTER AGRICULTURAL INSTRUCTION CAME TO COUNTY

	Before			Now		
	Number Practicing	Number not Practicing	Total	Number Practicing	Number not Practicing	Total
Use approved certified seed - - - - -	23	77	100	51	49	100
Treat cotton seeds	5	95	100	15	85	100
Irrigate cotton - -	0	100	100	0	100	100
Carry on insect control program - -	16	84	100	35	65	100
Use cover crops - -	10	90	100	42	68	100
Use crop rotation -	8	92	100	47	63	100

Before receiving instruction only 23 farmers used approved certified seeds; five treated cotton seed; eight used crop rotation; none irrigated cotton; 16 carried on insect control programs; and 10 used cover crop rotations.

After receiving instruction, 51 farmers used certified seeds; 15 treated cotton seeds; 85 carried on insect control program; 68 used cover crops; and 63 used crop rotation.

TABLE XIII

TEAM-POWER EQUIPMENT USED BY THE 100 FARMERS SURVEYED, BEFORE AND AFTER AGRICULTURAL INSTRUCTION CAME TO COUNTY

	Before			Now		
	Number Practicing	Number not Practicing	Total	Number Practicing	Number not Practicing	Total
Middle breaker, one row walking - - - - -	56	44	100	6	94	100
Two row breaker - - -	20	80	100	10	90	100
Disk Plow - - - - - - -	0	100	100	1	99	100
Disk Harrow Plow - -	0	100	100	0	100	100
Spike harrow - - - -	0	100	100	0	100	100
Spring tooth harrows	25	75	100	25	75	100
Cultivate plow, one row - - - - - - - - - -	38	62	100	38	62	100
Two row - - - - - - - -	10	90	100	10	90	100
Grain drills, two horses - - - - - - - -	5	95	100	4	96	100
Planter one horse - -	10	90	100	10	90	100
Two horse riding - -	15	85	100	20	80	100
Fertilizer one row -	75	25	100	75	25	100
Fertilizer two row -	25	75	100	25	75	100
Potato planter - - -	0	100	100	0	100	100
Hay presser - - - - -	3	97	100	3	97	100
Combine harvest - - -	0	100	100	0	100	100

Before agricultural instruction was brought to the county, 56 had one-row middle breakers; 20 had two-row breakers; none had disk harrow plows; none had disk plows; none had spike harrows; 25 had spring-tooth harrows; 38 had one-row cultivators; 10 had two-row cultivators; five had two-horse grain drills; 10 had one-horse planters; 15 had two-horse riding planters; 75 had one-row fertilizer distributors; 25 had two-row fertilizer distributors; none had potato planters; three had hay pressers; and none had combine harvesters.

Now six farmers have one-row middle breakers; 10 have two-row breakers; one has disk plow; none has disk harrow; none has spike harrow; 25 have spring tooth harrows;

TABLE XIV

POWER EQUIPMENT USED BY THE 100 FARMERS SURVEYED, BEFORE AND AFTER AGRICULTURAL INSTRUCTION CAME TO COUNTY

	Before			Now		
	Number Practicing	Number not Practicing	Total	Number Practicing	Number not Practicing	Total
Middle breaker	5	95	100	15	85	100
Disk plow	5	95	100	15	85	100
Disk harrow plow	5	95	100	15	85	100
Spike harrow	5	95	100	15	85	100
Spring tooth harrow	0	100	100	3	97	100
Cultivation plow	5	95	100	15	85	100
Grain drills	0	100	100	1	99	100
Planter	5	95	100	10	90	100
Potato planter	0	100	100	0	100	100
Hay presser	1	99	100	3	97	100
Combine harvester	0	100	100	0	100	100

38 have one-row cultivators; 10 have two-row cultivators; four have two-horse grain drills; 10 had one-horse planters; 20 had two-horse riding planters; 75 had one-row fertilizer; 25 had two-row fertilizer; none had potato planter; three had hay pressers; and none had combine harvest, after Vocational Agriculture Teachers gave training to farmers of the county.

In Table XIV, before receiving instruction five farmers had middle breakers; five had disk plows; five had disk harrows; five had spike-tooth harrows; none had spring-tooth harrow; five had cultivation plows; none had grain drills; five had planters; none had potato planters; one had hay presser; and none had combine harvesters.

After receiving instruction 15 had middle breakers; 15 had disk plows; 15 had disk harrow plows; three had spring-tooth harrows; 15 had cultivation plows; one had grain drill; 10 had planters; none had potato planters; three had hay pressers; and none had combine harvester.

DAVIS L. RANSOM

1920	Born in Mexia, Texas
1938	Graduated from Dunbar High School, Mexia, Texas
1939	Worked for Dr. W. D. Pittman, Mexia, Texas
1940-41	Entered Prairie View A. & M. College, Prairie View, Texas
1942-45	Served in United States Army
1942	Married to Velma H. Connor
1946-48	Re-entered Prairie View A. & M. College
1948	Received B. S. Degree in Agriculture Education
1948	Began teaching Vocational Agriculture at Dunbar High School
1950	Began Graduate Work at Prairie View A. & M. College

DIVISION OF GRADUATE STUDY

PRAIRIE VIEW AGRICULTURAL AND MECHANICAL COLLEGE

FINAL EXAMINATION

of

Davis L. Ransom

for the degree of

MASTER OF SCIENCE

Tuesday, May 14, 1957
3:00 P.M. AI - 100

COMMITTEE IN CHARGE:

E. M. Norris	Chairman and Professor of Agricultural Education
E. M. Owens	Professor of Agriculture Economics
J. C. Williams	Acting Dean of School of School of Agriculture
J. R. Powell	Professor of Agricultural Education
J. J. Woods	Professor of Poultry Husbandry

LIST OF GRADUATE COURSES

MAJOR FIELD:	AGRICULTURE EDUCATION
Ag Ed 513	Methods of Conducting Part-Time Evening Schools
Ag Ed. 523	Supervised Farming Program Building
Ag.Ed 503	Agricultural Education Seminar
Ag Ed 713	Problems in Agriculture Education
Sup 723	Rural Supervision
AV 543	Laboratory in Audio Visual Aids
Ag Ed 573	Methods of Working with our of School Groups Aged
Adm 513	Vocational Guidance
MINOR FIELD:	AGRICULTURE ECONOMICS
Ag Ec 713	Economics Agricultural Production
Ag Ec 743	Land Tenure and Problems
Ag Ec. 763	Agricultural Land Use Planning
Ag Ec 733	Advanced Farm Management

BRIEF OF THESIS

THE EFFECT OF VOCATIONAL EDUCATION IN AGRICULTURE ON PRACTICES PERFORMED BY FARMERS IN LIMESTONE COUNTY, TEXAS, BASED ON A STUDY OF ONE HUNDRED FARMERS

Statement of Problem: The writer feels that some type of evaluation should be made to determine what extent Vocational Education in Agriculture has aided farmers of Limestone County in their farming practices.

In an attempt to solve this problem, background of the county was studied and many factors relative to practices used by farmers were analyzed. Surveys and personal interviews were used to collect information from farmers. The other two Vocational Agriculture Teachers and County Agent aided in securing data used in this study. From professional books, magazines, and periodicals, some basic principles were sought in an effort to find the solution to the problem.

Recommendations: (1) to encourage farmers to produce according to market outlook and to prevent overproduction. (2) To teach farmers the advantages of making farm budgets for organized spending. (3) Set up irrigation system to grow crop during drouth period, (4) That careful studies be made on practices that farmers are now using to determine whether these practices are meeting the needs of the farmers, and (5) to teach the importance of record keeping in order to determine what enterprises are more profitable.

CHAPTER III

SUMMARY AND RECOMMENDATIONS

Summary

The purpose of this study was to determine what extent Vocational Education in Agriculture had influence on the farming practices used by 100 Negro farmers in Limestone County, Texas.

Data were collected through surveys and interviews from 100 Negro farmers in Limestone County are as follows:

1. Data indicated that 70 farmers received from one to four years of elementary training. Twenty-eight of the farmers have one to four years of high school training. Seventy-five are owners of land, 20 are part owners, and five are renters.
2. Data indicated that 68 of the farmers are engaged in vaccination of animals for blackleg, as compared to non existing practices prior to training given by Vocational Agriculture Teachers in the County.
3. Out of 100 Negro farmers surveyed, it was pointed out that 65 selected purebred bulls for their herd to 35 practices prior to vocational units in the county.
4. Data indicated that 75 farmers are engaged in culling the laying flock, as compared to 25 practices

prior to the services of vocational units.

5. The vocational units were not able to change farmers from laying-by corn with turning plows, as pointed out in the survey.
6. The data indicated that 52 farmers planned production to market outlook, to 37 practices prior to instruction given by Vocational Agriculture Teachers.
7. Data pointed out that 66 farmers sprayed fruit trees, as compared to 25 practices prior to instruction given by Vocational Agriculture Teachers.
8. Data indicated that 64 farmers determined fields to be put back into crops, to 15 practices prior to the service of Vocational Agriculture Teachers.
9. Data indicated that there were no irrigation practices before and after instruction was given by Vocational Agriculture Teachers.
10. Data indicated that 75 farmers are now using some type of brooder house, as compared to 25 practices used prior to instruction given by Vocational Agriculture Teachers.
11. Data indicated that 10 farmers provided minerals and salt boxes, as compared to non existing practices prior to instruction given by Vocational Agriculture Teachers of the county.
12. Data indicated that 56 farmers are mowing pastures

to control weeds, as compared to 39 practices that existed prior to instruction given by Vocational Agriculture Teachers.

13. Data indicated that 60 farmers are now using approved certified corn seeds, as compared to 15 practices used prior to instruction given by Vocational Agriculture Teachers.

Recommendations

Recommendations of the writer are listed as follows:

1. Set up objectives of farm people based on their needs and desires which is to serve as a guide in improving practices. These objectives can be accomplished through other agencies such as the County Agricultural Agent, Soil Conservation Services, Adult evening classes, field trips and demonstrations on crops and equipment usages.
2. Use terminology which can be understood in order that farmers may clearly comprehend the information presented.
3. Teach farmers the advantages of using mechanical equipment which will enable them to increase their acreage and improve harvesting practices.
4. Make careful studies of practices that farmers are using to determine whether these practices are

meeting the needs of the farmers.

5. Encourage farmers to produce according to market outlook and to prevent overproduction.
6. Teach the importance of record keeping in order to determine what enterprises are more profitable.
7. Teach farmers the advantages of making farm budgets for organized spending.
8. Study the economic value of setting irrigation systems to grow crops during drouth periods.
9. Teach the advantages of registering purebred animals to insure a better price in marketing them and to improve the quality of livestock.
10. Encourage farmers to build swine brooder houses in order that the rate of mortality among litters may be decreased.

BIBLIOGRAPHY

Books

Beard, Ward P., Starting Farm, Danville, Illinois: Interstate Printer and Publisher, 1948.

Cooks, C. G., Handbook on Teaching Vocational Agriculture, Danville, Illinois: Interstate Printer and Publisher, 1946.

Ekstrom, G. F. and McClelland, J. G., Adult Education in Vocational Agriculture, Danville, Illinois: Interstate Printer and Publisher, 1956.

Hamlin, Herbert M., Agriculture Education in Community School, Danville, Illinois: Interstate Printer and Publisher, 1949.

Hardin, Charles M., Freedom in Agriculture Education, Chicago, Illinois: University of Chicago Press, 1955.

McCarthy, J. A., Vocational Education America's Greatest Resource, Chicago, Illinois: American Technical Society, 1952.

Murray, M. S., Agriculture Education, Danville, Illinois: Interstate Printer and Publisher, 1951.

Document Materials

County Superintendent Records, Groesbeck, Texas.

County Agent Records, Groesbeck, Texas.

APPENDIX

Prairie View Agricultural and Mechanical College
School of Agriculture
Prairie View, Texas

Department of Agriculture Education

The Effect of Vocational Education in Agriculture on the Practices Performed by Farmers of Limestone County, Texas, Based on Study of One Hundred Farmers.

I. Family

1. Total number in the family.

   Men___Women____Boy___Girls____

2. Circle the grade you (the family) completed in school: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12.

   (a) Other training _____

3. Total number in the family who work on the farm _____

II. The Home

Number of rooms?_____

Is the home painted? _____

Glass panel windows? _____

Number of chairs? _____

Running water? _____

Check which of the following are in the home:

Radio ____ Organ ____ Telephone _____ Ice box ____

Book case ____ Bath tub _____ Indoor toilets _____

Wood stove ____ Gas range _____ outdoor toilet ___

Running water _____ Gas _____ Electricity _____

Check the source of water supply:

Well (pump) _____ Open well _____ Cistern _____ Tank _____ Creek _____ Others _____

What is the distance of the sources water supply from the home? Check one: Yards 5 ___ 10 ___ 15 ___ 20 ___ 30 ___ 40 ___ 50 ___ 100 ___. Give over 100 yards _____

III. The Farm

1. Distance from county seat in miles _____
2. Type of road available: Check one:

   Graded ____ Gravel _____ Concrete _____Dirt_____

   Sand _____ Unimproved _____
3. What is your farming status?

   Part owner _____ Owner _____ Operator _____Renter

   _____ Has own farm _____ Buying _____
4. How many years have you farmed? _____

   On this farm? _____
5. What do you consider your major sources of income? _____

   Check one: Farming ___ Day labor ___ Farm work on other farms _____
6. How many days during the past year did you work on the jobs other than on the farm? _____

   Number of days you worked on the farm _____

7. Do you buy anything co-operatively with your neighbors? _____What? _____

8. Do you belong to a Farmers' Co-operative? _____

If so, what is the name of it? _____

Location _____

9. Acres owned _____Acres in crop _____

Acres in woodland not in pasture _____

Acres in permanent pasture tillable _____

Acres operated _____Acres rented out _____

10. What is your soil type?

Sandy _____Medium _____Clay _____ Others _____

11. Adult Class Work

Have you ever attended any meetings of farmers, called by the agriculture teacher? _____

What are some of the things you have discussed or stated in such meetings?

FARMING METHODS USED BEFORE AND AFTER VOCATIONAL EDUCATION IN AGRICULTURE CAME TO LIMESTONE COUNTY

Check Practices Used

		Before	After
I.	Beef Enterprise(s)		
1.	Castrate calves	____	____
2.	Vaccinate for blackleg	____	____
3.	Fit and show animal for fairs and shows	____	____
4.	Feed balance ration	____	____
5.	Carry out Fly Control Program	____	____
6.	Use caustic to prevent horns	____	____
7.	Register purebreed animals	____	____
8.	Provide mineral and salt box	____	____
II.	Dairy Enterprise(s)		
1.	Select purebreed bull for herd	____	____
2.	Mastitis Control Program	____	____
3.	Have herd tested for abortion	____	____
4.	Have herd tested for Tuberculosis	____	____
5.	Treat calves for scours	____	____
III.	Poultry Production		
1.	Cull the laying flock	____	____
2.	Select purebreed cockerels for flock	____	____
3.	Install dropping pits	____	____
4.	Treat birds for scaly leg mites	____	____
5.	Treat poultry fixtures for mites	____	____
6.	Treat poultry for bluebugs and fleas	____	____
7.	Candle and grade eggs	____	____
8.	Mix and feed a scratch feed using approved formula	____	____
9.	Caponize cockerels	____	____
10.	Produce non-fertile eggs	____	____
11.	Keep flock free from pullorun disease	____	____
12.	More breeding pen	____	____
IV.	Swine Production		
1.	Vaccinate herd for cholera	____	____
2.	Select purebreed boar for need	____	____
3.	Remove tusks from boar	____	____

	Before	After
4. Plan and mix a mineral mixture	_____	_____
5. Register purebreed animals	_____	_____
6. Build pig brooder for winter use	_____	_____
7. Keep records on hogs	_____	_____
8. Treat pigs for worms	_____	_____
V. Corn Production		
1. Used approved certified seeds	_____	_____
2. Treat corn to prevent weevil damage	_____	_____
3. Irrigate corn	_____	_____
4. Plan grasshopper Control Program	_____	_____
5. Lay by corn with middle buster	_____	_____
6. Prepare proper seed bed	_____	_____
VI. Farm Management		
1. Make farm budget	_____	_____
2. Take farm inventory	_____	_____
3. Make out income tax return	_____	_____
4. Determine the cost of production	_____	_____
5. Plan production to market outlook	_____	_____
6. Keep record of soil on principal farm enterprises	_____	_____
7. Plan a diversified farming program for home farm	_____	_____
VII. Gross and Pasture Improvement		
1. Control weed by mowing	_____	_____
2. Plant sudan grass for summer pasture	_____	_____
3. Re-seed pasture	_____	_____
4. Use fertilizers and manure on pasture	_____	_____
VIII. Horticulture		
A. 1. Spray fruit trees	_____	_____
2. Dehorn trees	_____	_____
3. Prune trees	_____	_____
4. Prevent rodent injury in the orchard	_____	_____
B. Smooth Grain		
1. Treat seed for smut	_____	_____
2. Send seed to state for analyst	_____	_____

	Before	After
3. Certify seed on home farm	_____	_____
C. Legumes		
1. Use legume in crop rotation	_____	_____
2. Inoculate seeds	_____	_____
IX. Soil and Water Conservation		
1. Soil tested	_____	_____
2. Plant corn crop	_____	_____
3. Leave crop residue on soil where practical	_____	_____
4. Protect stream bank	_____	_____
5. Use strip cropping	_____	_____
6. Determine field should be put back into crop	_____	_____
7. Plan for crop rotation	_____	_____
8. Secure fish on farm pond	_____	_____
9. Plant on the contour	_____	_____
10. Use terraces	_____	_____
11. Have soil tested to determine plant and fertilizers	_____	_____
X. Cotton Production		
1. Use approved certified seed	_____	_____
2. Treat cotton seeds	_____	_____
3. Irrigate cotton	_____	_____
4. Carry on insect Control Program	_____	_____
5. Use cover crops	_____	_____
6. Use crop rotation	_____	_____
XI. Farm Equipment Team Power. Check the ones you save:		
1. Middlebreak one walking ___ One row riding ___two row riding ___	_____	_____
2. Mule power disk plow _____	_____	_____
3. Disk harrow plow _____	_____	_____
4. Mule power spine harrow _____	_____	_____
5. Spring tooth harrow _____	_____	_____
6. Cultivate plow _____one row _____ two row _____ four row _____	_____	_____
7. Grain drills one-horse _____ two horses _____ four horses	_____	_____
8. Planter one horse _____ two horse riding _____ four horse riding __	_____	_____

	Before	After
9. Fertilize one row _____ two rows __ four rows _____	_____	_____
10. Potato planter _____	_____	_____
11. Hay presser _____	_____	_____
12. Combine harvest _____	_____	_____

XII. Power Equipment

1. Middlebreaker one row _____ two rows _____ three rows _____	_____	_____
2. Disk plow _____	_____	_____
3. Spike harrow _____	_____	_____
4. Disk harrow plow _____	_____	_____
5. Spring tooth harrow _____	_____	_____
6. Cultivation plow one _____ two _____ four _____	_____	_____
7. Grain drills _____ one row _____ four row _____	_____	_____
8. Planter one row _____ two row _____ four row _____	_____	_____
9. Fertilize one row _____ two row _____ four row _____	_____	_____
10. Potato planter _____	_____	_____
11. Hay presser _____	_____	_____
12. Combine harvester _____	_____	_____