DOCUMENT RESUME

ED 112 136 CE 004 922

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TITLE A Study of the Exploratory Agriculture Programs in Virginia.
INSTITUTION Virginia Polytechnic Inst. and State Univ., Blacksburg. Agricultural Education Program.
PUB DATE 30 Jun 73
NOTE 40p.

EDRS PRICE MF-$0.76 HC-$1.95 Plus Postage
DESCRIPTORS *Agricultural Education; *Curriculum Development; *Educational Research; Junior High Schools; *Program Evaluation; Questionnaires; *School Surveys; State Programs; Statewide Planning; Tables (Data)
IDENTIFIERS Exploratory Agriculture; *Virginia

ABSTRACT

Lack of a curriculum guide, resource guide, and overall guidance prompted the State Agricultural Science and Mechanics Committee to survey the instructors of exploratory agriculture programs in the State in order to develop objectives, goals, and resource materials for the program. Opinions were sought from all of the teachers and supervisors concerning the nature of exploratory agriculture programs in Virginia and the teaching modules such a program should include. (Of those surveyed, 96 percent of exploratory agriculture programs are being implemented at the 6-8 grade level; 4 percent at the 4-5 grade level). A questionnaire was developed and mailed to the invited sample, and the data received from 27 usable returns were compiled and analyzed. Findings led to the following conclusions: (1) curriculum development is needed for the program, with written objectives, guides, and teaching materials; (2) a career education focus with guidance, counseling, and adequate record keeping is recommended; (3) with growth of the program, additional funding will be required; and (4) inservice as well as preservice will be needed for teacher training in the area of exploratory agriculture. (Author/MU)

# A STUDY OF THE EXPLORATORY AGRICULTURE PROGRAMS IN VIRGINIA

by
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and
Dennis Hinkle

The above research project has been authorized through the College of Education, Virginia Polytechnic Institute and State University.

Program - Agricultural Education
Division - Vocational-Technical
College - Education

Grantor: College of Education - Small Research Grant

Amount of Award: $195.24

Period of Award: November 28, 1972 - June 30, 1973

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## ACKNOWLEDGEMENTS

Appreciation is expressed to those individuals and groups who have cooperated and provided valuable assistance during the conduct of this study:

College of Education, Small Research Grants;
Exploratory Agriculture Teachers in Virginia;
Mrs. Janice Bunn, secretary and typist;
Mr. Mickey Cunningham, assistant;
Dr. Dennis Hinkle, statistical consultant; and
State staff members participating.

## List of Tables

## Introduction

This study is an outgrowth of the "State Agricultural Science and Mechanics I and II Committee." This committee has heard voiced concern over the lack of a curriculum guide, resource guides, and overall guidance in the realm of exploratory agriculture programs. The committee believed it to be imperative that immediate attention be given to developing the objectives, goals, and resource materials for this facet of the agricultural education program. If objectives, goals, and resource materials are to be developed, then relevant input must be received from the teachers and state staff involved in exploratory programs in agriculture. The resulting information from this study can then be used to provide guidance to the developers of curriculum materials for exploratory agriculture programs.

It was believed by the researcher that it is necessary to know what opinions exist among the teacher and state staff in regard to exploratory programs in order to develop curriculum materials that would be used by the teachers.

The researcher further believed that the resulting knowledge would be helpful in advising undergraduate students in Agricultural Education who are specializing in the Junior High Option at VPI & SU.

## Statement of Problem

1. What is the nature of the instruction in exploratory agriculture in Virginia?

2. What agriculture modules should be included in the course of study for exploratory agriculture in Virginia?

3. What are the teachers' and state staffs' opinion of the exploratory agriculture program?

4. Objectives

   A. Identify the opinions of exploratory agriculture teachers about the course of study in exploratory agriculture.

   B. Compare and contrast the opinions of teachers and supervisory staff concerning exploratory agriculture.

   C. Identify the problem areas teachers believe should be included in the course of study for the program.

   D. Compare the opinions of the teachers in small schools (less than 500 in the intermediate school) with the large schools (more than 500).

## Procedures

1. Design: The data for the study was collected by a survey instrument.

2. Sample: The invited sample was all the exploratory agriculture teachers in the State of Virginia, and the supervisory staff.

3. Conduct of Study

   A. A questionnaire was developed and a panel of experts (Agricultural Education Staff at VPI & SU) established face validity for the instrument.

   B. The invited samples were determined.

   C. Letters and questionnaires were mailed to the invited samples.

   D. Follow-up questionnaires were mailed to tardy respondents.

   E. Data from the accepting samples were compiled and analyzed.

4. Resulting Product

   The resulting product will be in the form of a project report available for distribution. The report will be a summary of the data gained and recommendations that can be made to the State Department of Education Staff in Agricultural Education and to the Agricultural Education Staff at VPI & SU. The report will be made available to all teachers of exploratory agriculture and to head teachers in agriculture departments in the State.

# PART I.

## GENERAL DATA COLLECTED CONCERNING EXPLORATORY AGRICULTURE PROGRAMS IN VIRGINIA

TABLE 1

RESPONSE TO QUESTIONNAIRE

| | Teachers | State Staff | Total |
|---|---|---|---|
| Population | 24 | 7 | 31 |
| Returns | 23 | 7 | 30 |
| Usable Returns | 20 | 7 | 27 |
| By Supervisory Area: | | | |
| Appalachian | 8 | 1 | 9 |
| Blue Ridge | 0 | 1 | 1 |
| Central | 3 | 1 | 4 |
| Eastern | 1 | 1 | 2 |
| Northern | 6 | 1 | 7 |
| Southside | 2 | 1 | 3 |
| State Staff | 0 | 1 | 1 |

TABLE 2

AVERAGED EXPLORATORY AGRICULTURE PROGRAM INFORMATION

| Item No. | Question | Mean Data |
|---|---|---|
| 5. | Number of years exploratory agriculture program has been in operation | 3.6 years |
| 7. | Average hours of instructor participation per year | 285 per year |
| 8. | Average number of students in the program | 70 students |
| 11. | Average class size | 17 students |
| 12. | Percent of class time spent on direct observation of occupations | 10 percent |
| 13. | Percent of time spent with films, resource people, and discussion about careers | 20 percent |

TABLE 3

14. PROGRAM DESCRIPTION BY TEACHERS

| | Number | Percentage[1] |
|---|---|---|
| A. Career Orientation | 3 | 14 |
| B. Occupational Exploration | 4 | 20 |
| C. Equal emphasis on both of the above | 9 | 43 |
| D. Technical agriculture emphasis | 2 | 10 |
| E. Other (Combination) | 3 | 14 |

TABLE 4

15. GRADE LEVELS INVOLVED

| | Number | Percentage |
|---|---|---|
| A. Seventh Grade | 15 | 63 |
| B. Eighth Grade | 6 | 25 |
| C. Nineth Grade | 0 | 0 |
| D. Other: 6th grade | 2 | 8 |
| 4, 5, & 6th grade | 1 | 4 |

TABLE 5

16. SEX OF STUDENTS ENROLLED

| | Boys | Girls |
|---|---|---|
| No. with boys enrolled | 20 | |
| Percentage with boys enrolled | 100 | |
| No. with girls enrolled | | 11 |
| Percentage with girls enrolled | | 55 |
| School parameters: | | |
| Percentage Range | 40-100% | 5-60% |
| Mode | 100% | 10 & 40% |
| Median | 95 | 30 |

[1]Percentage columns may not total 100 percent due to rounding.

TABLE 6

17. SUPERVISION OF EXPLORATORY AGRICULTURE PROGRAM

| | Number (N=21) | Percentage |
|---|---|---|
| A. School administrator | 0 | 0 |
| B. Director of Vocational Educ. | 0 | 0 |
| C. Head, Ag. Ed. Department | 2 | 10 |
| D. Teacher of Agricultural Educ. | 19 | 90 |
| E. Guidance Personnel | 0 | 0 |

TABLE 7

18. Other Vocational Programs Reported in the 21 Schools

| | Number (N=21) | Percentage |
|---|---|---|
| A. Business Education | 16 | 76 |
| B. Home Economics Education | 20 | 95 |
| C. Distributive Education | 12 | 67 |
| D. Trade & Industrial Education | 10 | 48 |
| E. Agricultural Education | 21 | 100 |
| F. Industrial Arts Education | 13 | 62 |
| G. Other: Metals | 1 | 5 |
| Health Occupations | 2 | 10 |
| I.C.T. | 2 | 10 |

TABLE 8

19. Program Length for Each Student

| | Number | Percentage |
|---|---|---|
| A. All year | 7 | 35 |
| B. One Semester | 4 | 20 |
| C. Other: 6 weeks | 4 | 20 |
| 9 weeks | 4 | 20 |
| 12 weeks | 1 | 5 |

TABLE 9

20. Length of Class Period

| Minutes | Number | Percentage |
|---|---|---|
| 45 | 1 | 5 |
| 50 | 8 | 42 |
| 53 | 1 | 5 |
| 55 | 8 | 42 |
| 70 | 1 | 5 |

TABLE 10

21. Class Meetings Per Week

| | Number | Percentage |
|---|---|---|
| A. 1 | 0 | 0 |
| B. 2 | 1 | 5 |
| C. 3 | 1 | 5 |
| D. 4 | 1 | 5 |
| E. 5 | 18 | 85 |

TABLE 11

22. Responsibility for Course Planning

| | Number | Percentage |
|---|---|---|
| A. Local teacher | 11 | 55 |
| B. Local teacher plus local administrator | 5 | 25 |
| C. Local teacher plus other ag. teacher(s) | 4 | 20 |
| D. Local teacher plus state dept. staff | 0 | 0 |
| E. Local teacher plus college or university staff | 0 | 0 |

TABLE 12

23. Facilities Used

| | Number | Percentage |
|---|---|---|
| A. Agricultural Education facilities | 19 | 95 |
| B. Conventional School Classroom | 1 | 5 |
| C. Other | 0 | 0 |

TABLE 13

24. Other Exploratory Programs Reported in the 21 Schools

| | Number | Percentage |
|---|---|---|
| A. Business Education | 3 | 15 |
| B. Home Economics | 11 | 50 |
| C. Distributive Education | 0 | 0 |
| D. Trade & Industrial Education | 1 | 5 |
| E. Agricultural Education | 21 | 100 |
| F. Industrial Arts | 2 | 10 |
| G. Other: | 0 | 0 |

TABLE 14

25. Source of Funds

| | Number | Percentage |
|---|---|---|
| A. Vocational Education Assistance | 4 | 20 |
| B. Local Budget | 8 | 42 |
| C. Local and State Funds | 11 | 55 |
| D. Elementary & Secondary Educ. Act | 0 | 0 |
| E. Other: Donation | 1 | 5 |
| Vending Machine | 1 | 5 |

## TABLE 15

### 26. Special Equipment and Facilities Desired

| | | Number | Percentage |
|---|---|---|---|
| A. | Viewing and listening equipment & facilities | 4 | 20 |
| B. | Video tape equipment | 3 | 15 |
| C. | Tape players and tapes | 8 | 40 |
| D. | Film Projectors | 11 | 52 |
| E. | Other: Filmstrips | 3 | 15 |
| | Shop equipment | 1 | 5 |
| | Films | 2 | 10 |
| | Transparencies | 1 | 5 |

## TABLE 16

### Teacher Preparation of Respondents

| | Number | Percentage |
|---|---|---|
| **Teaching Certificate** | | |
| Collegiate | 0 | 0 |
| Collegiate Professional | 12 | 63 |
| Postgraduate Professional | 7 | 37 |
| **Professional Experience** | | |
| Average Years Teaching | | 8.5 |
| Average Years Teaching (Exploratory Ag.) | | 2.8 |
| Average Years Teaching (Ag. Ed.) | | 8.4 |
| **Professional Preparation** | | |
| B.S.A. | 1 | 5 |
| B.S. | 12 | 60 |
| M.S. | 7 | 35 |
| Majors: | | |
| Ag. Ed. | 14 | 78 |
| An. Sc. | 2 | 12 |
| Gen. Ag. | 1 | 6 |
| Ag. Econ. | 1 | 6 |

TABLE 17 CURRICULUM (N = 27 items)

| Item | Supervisors (N = 7) | | | | | Teachers (N = 20) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | SA | A | D | SD | NA | SA | A | D | SD | NA |
| 1 | 6 | 1 | | | | 10 | 7 | 1 | 1 | 1 |
| 2 | 2 | 4 | 1 | | | 4 | 10 | 6 | | |
| 7 | 1 | 2 | 2 | 2 | | 6 | 7 | 5 | 2 | |
| 10 | 5 | 2 | | | | 11 | 6 | 2 | 1 | |
| 12 | 5 | 2 | | | | 13 | 5 | 2 | | |
| 13 | 3 | 4 | | | | 11 | 7 | 1 | 1 | |
| 21 | 5 | 2 | | | | 5 | 11 | 2 | 1 | 1 |
| 31 | | 5 | | 2 | | 5 | 7 | 7 | 1 | |
| 46 | 1 | 3 | 3 | | | 3 | 8 | 8 | 1 | |
| 47 | 3 | 4 | | | | 3 | 13 | 4 | | |
| 48 | 3 | 3 | 1 | | | 4 | 16 | | | |
| 49 | 5 | 2 | | | | 5 | 14 | 1 | | |
| 65 | 3 | 3 | 1 | | | 4 | 11 | 3 | 2 | |
| 66 | 5 | | 2 | | | 4 | 11 | 5 | | |
| 68 | 2 | 2 | 3 | | | 5 | 13 | 2 | | |
| 69 | 2 | 3 | 2 | | | 9 | 10 | 1 | | |
| 70 | 2 | 4 | 1 | | | 3 | 10 | 7 | | |
| 71 | 3 | 2 | 2 | | | 2 | 10 | 8 | | |
| 73 | 2 | | 3 | 2 | | 2 | 5 | 11 | 2 | |
| 75 | | 1 | 3 | 3 | | | 5 | 10 | 4 | 1 |
| 76 | 3 | 4 | | | | 13 | 5 | 1 | 1 | |
| 77 | 2 | 4 | 1 | | | 5 | 12 | 2 | 1 | |
| 78 | 1 | 3 | 2 | 1 | | 3 | 10 | 5 | 2 | |
| 81 | 2 | 5 | | | | 8 | 9 | 2 | 1 | |
| 84 | 2 | 1 | 4 | | | 1 | 14 | 5 | | |
| 85 | 1 | 2 | 3 | 1 | | 2 | 8 | 9 | 1 | |
| 96 | 2 | 4 | 1 | | | 5 | 11 | 4 | | |

TABLE 18 ADMINISTRATION (N = 20 items)

| Item | Supervisors (N = 7) | | | | | Teachers (N = 20) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | SA | A | D | SD | NA | SA | A | D | SD | NA |
| 4 | | 4 | 3 | | | 2 | 7 | 10 | 1 | |
| 9 | 1 | 3 | 2 | 1 | | 4 | 5 | 8 | 3 | |
| 15 | 1 | 3 | 2 | 1 | | 7 | 10 | 2 | 1 | |
| 18 | 3 | 4 | | | | 8 | 11 | 1 | | |
| 22 | 2 | 5 | | | | 4 | 11 | 3 | | 2 |
| 24 | 2 | 3 | 1 | 1 | | 10 | 8 | 1 | 1 | |
| 30 | | 2 | 5 | | | 11 | 3 | 3 | 3 | |
| 32 | 3 | 4 | | | | 10 | 9 | 1 | | |
| 33 | 2 | 2 | 2 | 1 | | 3 | 7 | 8 | 2 | |
| 39 | 1 | 3 | 2 | 1 | | 5 | 5 | 5 | 5 | |
| 41 | 2 | 3 | 2 | | | 7 | 12 | 2 | | |
| 42 | 3 | 4 | | | | 9 | 9 | 1 | 1 | |
| 50 | | 1 | 6 | | | 2 | 4 | 10 | 4 | |
| 53 | 4 | 3 | | | | 3 | 8 | 7 | 1 | 1 |
| 57 | 2 | 5 | | | | 5 | 13 | 1 | 1 | |
| 58 | 1 | 6 | | | | 3 | 9 | 6 | | 2 |
| 79 | 5 | 2 | | | | 8 | 11 | 1 | | |
| 82 | 1 | 1 | 4 | 1 | | 2 | 4 | 10 | 3 | 1 |
| 83 | 1 | 2 | 3 | 1 | | 3 | 13 | 4 | | |
| 97 | 1 | 3 | 2 | 1 | | 4 | 4 | 6 | 6 | |

TABLE 19 SUPERVISION (N = 12 items)

| Item | Supervisors (N = 7) | | | | | Teachers (N = 20) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | SA | A | D | SD | NA | SA | A | D | SD | NA |
| 11 | 2 | 4 | 1 | | | 2 | 9 | 6 | 3 | |
| 43 | 5 | 2 | | | | 1 | 16 | 1 | 1 | 1 |
| 44 | 4 | 3 | | | | 4 | 11 | 4 | 1 | |
| 45 | 6 | 1 | | | | 10 | 7 | 2 | 1 | |
| 54 | 3 | 4 | | | | 8 | 10 | 2 | | |
| 59 | 3 | 4 | | | | 8 | 11 | 1 | | |
| 61 | 1 | 1 | 4 | 1 | | | 4 | 11 | 4 | 1 |
| 63 | 2 | 2 | 2 | 1 | | 3 | 5 | 6 | 5 | 1 |
| 64 | 3 | 3 | 1 | | | 4 | 5 | 8 | 3 | |
| 74 | 2 | 1 | 2 | 2 | | 1 | 3 | 7 | 8 | 1 |
| 92 | 2 | 2 | 2 | 1 | | 2 | 3 | 7 | 7 | 1 |
| 98 | 2 | 4 | 1 | | | 3 | 10 | 3 | 3 | 1 |

TABLE 20 GUIDANCE (N = 25 items)

| Item | Supervisors (N = 7) | | | | | Teachers (N = 20) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | SA | A | D | SD | NA | SA | A | D | SD | NA |
| 3 | 2 | 4 | 1 | | | 7 | 9 | 4 | | |
| 5 | 2 | 3 | 2 | | | 4 | 14 | 2 | | |
| 8 | 5 | 2 | | | | 10 | 10 | | | |
| 23 | 6 | | 1 | | | 10 | 9 | | 1 | |
| 25 | 5 | 2 | | | | 10 | 8 | 2 | | |
| 26 | 5 | 2 | | | | 10 | 9 | | | 1 |
| 27 | 2 | 4 | 1 | | | 7 | 11 | 2 | | |
| 28 | 3 | 4 | | | | 9 | 10 | 1 | | |
| 29 | 6 | 1 | | | | 12 | 8 | | | |
| 37 | 6 | 1 | | | | 9 | 7 | 4 | | |
| 38 | 4 | 3 | | | | 5 | 14 | 1 | | |
| 51 | 3 | 4 | | | | 10 | 9 | 1 | | |
| 52 | 3 | 4 | | | | 9 | 10 | 1 | | |
| 55 | 1 | 2 | 4 | | | 6 | 13 | | | 1 |
| 56 | 3 | 4 | | | | 6 | 13 | | | 1 |
| 62 | 3 | 3 | 1 | | | 11 | 9 | | | |
| 67 | | | 4 | 2 | 1 | | 3 | 11 | 5 | 1 |
| 72 | 5 | 2 | | | | 12 | 6 | 2 | | |
| 80 | 2 | 2 | 3 | | | 2 | 3 | 14 | 1 | |
| 86 | | 3 | 4 | | | 4 | 8 | 6 | 2 | |
| 87 | 1 | 4 | 2 | | | 6 | 7 | 7 | | |
| 88 | 3 | 4 | | | | 4 | 15 | | | 1 |
| 89 | 3 | 4 | | | | 6 | 12 | 1 | 1 | |
| 95 | 3 | 4 | | | | 11 | 9 | | | |
| 99 | 5 | 2 | | | | 6 | 11 | 2 | 1 | |

TABLE 21 PROFESSIONAL (N = 16 items)

| Item | Supervisors (N = 7) | | | | | Teachers (N = 20) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | SA | A | D | SD | NA | SA | A | D | SD | NA |
| 6 | 6 | 1 | | | | 12 | 6 | 2 | | |
| 14 | 5 | 2 | | | | 16 | 4 | | | |
| 16 | 2 | 4 | 1 | | | 7 | 10 | 2 | 1 | |
| 17 | 2 | 4 | 1 | | | 5 | 14 | 1 | | |
| 19 | 1 | 4 | 2 | | | 2 | 8 | 9 | 1 | |
| 20 | | 5 | 2 | | | 4 | 12 | 3 | | 1 |
| 34 | 2 | 4 | 1 | | | 6 | 11 | 3 | | |
| 35 | 1 | 5 | 1 | | | 1 | 14 | 5 | | |
| 36 | 1 | 4 | 2 | | | 2 | 11 | 5 | 1 | 1 |
| 40 | 2 | 5 | | | | 7 | 10 | 3 | | |
| 60 | 2 | 5 | | | | 7 | 9 | 3 | 1 | |
| 90 | 3 | 3 | 1 | | | 6 | 8 | 5 | 1 | |
| 91 | 3 | 4 | | | | 13 | 5 | 2 | | |
| 93 | 3 | 4 | | | | 7 | 10 | 3 | | |
| 94 | 1 | 6 | | | | 15 | 4 | 1 | | |
| 100 | 4 | 2 | 1 | | | 11 | 9 | | | |

# PART II

# INTERPRETATION OF THE DATA COLLECTED

## Interpretation of the Data Collected

Table 1: The twenty-four exploratory agriculture teachers in the State of Virginia comprised the selected population with the accepting sample being twenty-three responding. Twenty of whom returned the complete questionnaire portfolio to form the usable data sample. This table shows that the Appalachian Area, with eight, had the most exploratory agriculture programs in operation during the 1972-73 school year. All area supervisors, and the member of the state staff, requested to complete the questionnaire did so and supplied usable data.

Table 2: Mean data calculated shows that the average exploratory agriculture program has been in operation about 4 years, with about 285 instructor-man hours involved in the program per year, and with 70 students enrolled. A relatively small percentage of the class time was spent dealing with occupations, direct observation (10%) and resources (20%).

Table 3: A plurality of exploratory agriculture teachers describe their program as a combination of career orientation and occupational exploration. Twenty percent described their program as being occupational exploration. Fourteen percent entailed the categories of career orientation and other (a combination of the above). Only ten percent described their program as having an emphasis on technical agriculture.

Table 4: Sixty-three percent, 15 of the 24, of the programs are at the seventh grade level. Twenty-five percent are for the eighth grade; while eight percent reported being for the sixth grade and 4 percent, one program, reported being a combination of students from the fourth, fifth, and sixth grades.

Table 5: The majority of the students enrolled in exploratory agriculture programs are boys. One hundred percent of the programs had boys enrolled, while fifty-five percent of the programs had girls enrolled. The percentage of girls in the classes ranged from five to sixty percent, with the median being thirty percent.

Table 6: Ninety percent of the teachers reported that the exploratory agriculture program was their responsibility and they were responsible for its supervision. Ten percent reported being supervised by the Head of the Agricultural Education Department. No teachers believed the programs to be under the direct supervisory capacity of school administrators, director of vocational education, or guidance personnel.

Table 7: Teachers reported that Home Economics (95%) was the most frequently occurring vocational program in their schools, other than Agricultural Education. Business Education, Distributive Education, and Industrial Arts were next, in ranked order, in frequency of occurrance.

Table 8: Thirty-five percent of the teachers reported that they had the students for the entire school year. Twenty percent reports entailed programs that had students for one semester, six weeks and nine weeks. One school, five percent, reported having the students for a twelve-week period.

Table 9· Eighty-four percent of the teachers, equally divided, reported that their classes were fifty or fifty-five minutes in length. Single programs, five percent, reported having class periods of forty-five, fifty-three, and seventy minutes.

Table 10: Eight-five percent of the programs reported that they met five times per week, while one school, five percent, each reported meeting two, three, and four times per weeks.

Table 11: In regard to the matter of course planning, fifty-five percent of the teachers indicated that they were responsible for such planning. Twenty-five percent indicated that they had the assistance of a local administrator and twenty percent indicated that they received assistance from other agriculture teachers.

Table 12: Ninety-five percent of the teachers indicated that the agricultural education facilities were the facilities used in teaching the exploratory agriculture classes.

Table 13: Several other vocational exploratory programs were being offered in the schools that offered exploratory agriculture. The exploratory offerings in home economics were the most commonly occurring from the schools reporting with 50 percent of these schools having programs.

Table 14: Several teachers reported funding for the exploratory agriculture program from a variety of sources. The most predominant source was from local and state funds (55 percent), while local funding was attributed with providing funding for 42 percent of the programs.

Table 15: In regard to facilities and equipment desired for the exploratory agriculture program, film projectors were reported as the greatest need by teachers (52 percent), with tape players and tapes being reported as the second most needed items (40 percent).

Table 16: Sixty-three percent of the teachers responding reported that they held a collegiate professional certificate, with thirty-seven percent reporting that they held a postgraduate professional certificate.

The average exploratory agriculture teacher has been teaching 8.5 years, teaching agricultural education 8.4 years, and teaching exploratory agriculture for 2.8 years.

Sixty percent hold a minimum of a B.S. degree and thirty-five percent a M.S. degree, with one reporting a B.S.A. degree.

Seventy-eight percent have a degree in Agricultural Education, with two holding a degree in Animal Science and one each in General Agriculture and Agricultural Economics.

## DATA ANALYSIS

As previously mentioned, twenty-seven useable returns were used in the data analysis; seven from supervisors of agricultural education and twenty from teachers of agricultural education. The answer sheets returned by the respondents were optically scanned and the data were punched onto computer cards for the actual data analysis.

The data analysis was conducted in two stages. The first stage was primarily descriptive and consisted of summarizing the response frequencies for each item on the questionnaire by classification of respondent (i.e., supervisor or teacher). The second stage was a more technical stage in which the data from the questionnaire were factor analyzed to determine the relevant factors which underlie the responses to the various items on the questionnaire. While this latter analysis will not be discussed in this report, it will be used by the investigator in future studies.

The first step in the descriptive data analysis was to classify the items on the questionnaire in terms of the various elements of an exploratory agriculture program and the functions of an exploratory agricultural teacher. The five classifications determined were as follows: Curriculum, Administration, Supervision, Guidance and Professional. Table 17 through 21 contain the response frequencies for the questionnaire items in each of these five classifications. The following descriptions of these five classifications include what was considered to be the more important items (the number in parentheses correspond to the respective items).

With regard to the curriculum classification (See Table 17,) the majority of the supervisors and teachers indicated that each school should develop their own exploratory agriculture curriculum (31, 15); however, it was noted that one third of the teachers disagreed. Similarly, both groups tended to agree that a textbook for exploratory agriculture was not necessary (7) but the tendency was not as strong as above.

The respondents disagreed that skill training should be the major emphasis of the exploratory agriculture program (75) and that contests be established for the students (7). While they indicated that plant and animal science should not be included in an exploratory agriculture program (68), they did agree that such a program should encompass more than just the field of agriculture (78) but should include the basic principles of agriculture (84).

It was noted that both the supervisors and the teachers indicated that an exploratory agriculture program need not include instruction in parliamentary procedures (85), in how to conduct a meeting (70) or in how to speak before a group (71). While the teachers indicated that all three were unnecessary, only a majority of the supervisors indicated that the first was unnecessary.

With regard to the development of an exploratory agriculture program, the respondents agreed that:

1. The instructional objectives need to be defined and written (1, 21).

2. The technical agricultural subject matter should be kept at a minimum (2, 47).

3. Curriculum guidesand teaching materials need to be developed (10, 12, 13, 65).

4. Various segments of the population should serve as resource persons in the development of the programs (48, 59).

There were several key items of note in the Administration classification (See Table 18). First of all, the respondents indicated that while all teachers and administrators should be sufficiently informed regarding the existence of an exploratory agriculture program in the school (32, 84), it is not necessary for them all to participate in the program (33). Secondly, while they tended to agree that the existing facilities for an exploratory agriculture program were adequate for the present (53), they indicated that there was a need for additional funding for such programs (82). Under the Supervisor classification (See Table 19), the respondents indicated that student record forms need to be developed for (61, 92) and kept not only by the students (74) but also by the school officials (43), and that these records should be readily available to all school personnel (44).

There were twenty-five items in the Guidance classification (See Table 20). The respondents agree that an exploratory agriculture program should:

1. Allow students to become acquainted with many representative areas of work, not just those found in the local community (23).

2. Be interdisciplinary in nature, exposing students to a wide variety of occupational possibilities (24, 80).

3. Provide an opportunity for each student to evaluate his own interests and abilities (25, 27, 89).

4. Help the student develop a sound basis for selecting high school or post high school training (26) and should encourage students to continue their education (88).

However, it was noted that both the supervisors and teachers agreed that an exploratory agriculture program should not prepare a student to earn a living (67). It was noted that while there was general agreement that guidance personnel in the schools need more orientation about the purpose of exploratory agriculture programs (99), they are generally supportive of such programs (55) and can help students determine their abilities and aptitudes (56) regarding such a career.

In the Professional classification (See Table 21), the respondents felt qualified as exploratory agriculture teachers (16, 17) but indicated that in-service training programs as well as university training programs need to be developed to improve the existing program (35, 40, 60, 91, 93). In this way, teachers and supervisors who already have training in concepts relevant to exploratory agriculture programs (20), such in-service and pre-service training would insure that exploratory agriculture programs are taught by qualified people (19, 34, 36, 94).

## CONCLUSIONS

Based upon the preceding descriptive data analysis, it is concluded that:

1. There is a need for a substantial curriculum development effort for exploratory agriculture including the writing of objectives, the development of curriculum guides and the development of teaching materials.

2. Exploratory agriculture programs should maintain a career education focus and need the support of good counseling services and adequate record keeping.

3. As exploratory agriculture programs begin to grow, there will be a need for additional funding to provide the school personnel with adequate facilities and materials.

4. There is a need for in-service as well as pre-service teacher training in the area of exploratory agriculture in order that qualified teachers are assigned to teach in such programs.

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# APPENDIX A.

COLLEGE OF EDUCATION

VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY

*Blacksburg, Virginia* 24061

DIVISION OF VOCATIONAL-TECHNICAL EDUCATION

TO: Certain Virginia Teachers of
Agricultural Education

FROM: Larry Miller, Assistant Professor
Agricultural Education

RE: Enclosed Survey Forms

"Teachers need more curriculum guides and teaching materials for exploratory agriculture and junior high programs." This statement at the meeting of the State Agricultural Science and Mechanics Committee has promoted this survey to obtain some data and opinions on what is being taught, or should and would be taught. Additional discussion with the state staff supported the opinion of the committee.

We are soliciting your cooperation by completing the enclosed questionnaires.

Hopefully, we can then consolidate the teachers' opinions to give us some guidance on developing materials for you, and other teachers like you who are planning to initiate an exploratory agriculture course.

Please return these in the enclosed self-addressed, stamped envelope to me by March 9.

Thanks for your help!

P.S. - All information is confidential.

LEM/jsb

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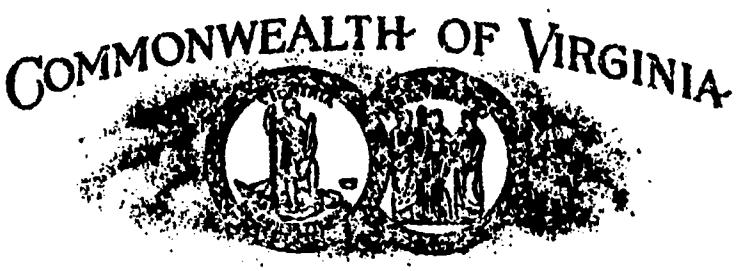


STATE DEPARTMENT OF EDUCATION
RICHMOND, 23216

TO: Certain Virginia Teachers of
Agricultural Education

FROM: Julian M. Campbell, State Supervisor,
Agricultural Education

Under the leadership of Dr. Larry Miller, Assistant Professor of Agricultural Education at VPI & SU, a Survey of Exploratory Agriculture Programs in Virginia is being conducted. We believe that the information obtained from this study will be valuable to us in developing curriculum guides and instructional materials for exploratory programs in agriculture.

We urge you to cooperate and supply the information requested in connection with this study. Your cooperation and participation will be greatly appreciated.

JMC/rs

## A Survey of Exploratory Agriculture Programs

Please complete the following general questions about your exploratory agriculture program.

1. Name _____

2. School _____

3. Supervisory Area _____

4. School size: (Number of students) _____ in high school; _____ in junior high school.

5. The exploratory agriculture program has been in operation _____ year(s).

6. Total number of schools in the system _____ school(s).

7. Clock hours of instructor participation in the classroom and shop portion of the exploratory agriculture program annually; _____ hours/instructor.

8. Total number of students participating in the exploratory agriculture program per year: _____ students.

9. Number of full-time exploratory agriculture teachers: _____ teacher(s).

10. Number of part-time exploratory agriculture teachers: _____ teacher(s).

11. Average class size: _____ students.

12. Estimate of the percentage of the time in the course that is spent on direct observation of occupations: _____%.

13. Estimate of the percentage of the time in the course that is spent with films, resource people, and discussion about careers: _____%.

14. Program description (check one):

    _____ A. Career orientation
    _____ B. Occupational exploration
    _____ C. Equal emphasis on both of the above
    _____ D. Technical agriculture emphasis
    _____ E. Other: _____

15. Grade levels involved (check appropriately):

    _____ A. Seventh grade
    _____ B. Eighth grade
    _____ C. Nineth grade
    _____ D. Other: _____

16. Percentage, by sex, of students in exploratory agriculture:

_____ % boys

_____ % girls

17. The exploratory agriculture program is under the daily administrative direction of (check one):

_____ A. School administrator

_____ B. Director of Vocational Education

_____ C. Head, Agriculture Education Department

_____ D. Teacher of Agricultural Education

_____ E. Guidance Personnel

18. Vocational education programs offered in the local high school: (Check appropriately)

_____ A. Business Education

_____ B. Home Economics

_____ C. Distributive Education

_____ D. Trade and Industrial Education

_____ E. Agricultural Education

_____ F. Industrial Arts

_____ G. Other: _____

19. Length of the program for each student:

_____ A. All year

_____ B. One semester

_____ C. Other: (describe) _____

20. Length of class period:

_____ minutes

21. Class meetings per week: (Check appropriately)

_____ A. 1

_____ B. 2

_____ C. 3

_____ D. 4

_____ E. 5

22. Course planning if being done by: (Check one)

_____ A. Local teacher

_____ B. Local teacher plus local administrator

_____ C. Local teacher plus other agriculture teacher(s)

_____ D. Local teacher plus state department staff

_____ E. Local teacher plus college or university staff

23. Facilities being used are:

_____ A. Agricultural Education facilities
_____ B. Conventional school classroom
_____ C. Other (describe): _____

24. Exploratory programs are offered at this school in these vocational areas:

_____ A. Business Education
_____ B. Home Economics
_____ C. Distributive Education
_____ D. Trade and Industrial Education
_____ E. Agricultural Education
_____ F. Industrial Arts
_____ G. Other: _____

25. Source(s) of funds for the exploratory agriculture program are: (Check appropriately)

_____ A. Vocational education assistance
_____ B. Local budget
_____ C. Local and state funds
_____ D. Elementary and Secondary Education Act
_____ E. Other: _____

26. Special equipment and facilities described, if funds were available:

_____ A. Viewing and listening equipment and facilities
_____ B. Video tape equipment
_____ C. Tape players and tapes
_____ D. Film projectors
_____ E. Other: _____

27. Teacher's preparation:

_____ A. Collegiate certificate
_____ B. Collegiate professional certificate
_____ C. Postgraduate professional certificate

28. Teacher (you) has _____ years of teaching experience.

29. Teacher (you) has _____ years of experience teaching exploratory agriculture.

30. Teacher (you) has _____ years of teaching vocational agriculture.

31. Teacher (you) holds a _____(highest) degree in _____ (major), and was specialized in the _____ agricultural education option in college.

## Opinions on Exploratory Agriculture Programs

This instrument is designed to provide you with the opportunity to express your opinions about an exploratory agriculture program. There are no right and wrong answers, so do not hesitate to mark the statements frankly.

An answer sheet is furnished for your responses. Please place your name at the top of the answer sheet and place your school name in the space marked "course." This information will be recorded only to secure as many responses as possible. All responses will be strictly confidential and the information will be reported by groups only.

Please notice that on the answer sheet the first 80 items have only 5 blanks, whereas, there are ten blanks for answers 81-110. For this questionnaire, only the first five blanks (1-5) will be needed.

### DIRECTIONS FOR RECORDING RESPONSES ON ANSWER SHEET

Read each statement carefully. Then indicate whether you strongly agree, agree, disagree, or strongly disagree with each statement. If for some reason you do not believe the statement is clear or not applicable, mark not applicable.

Mark your answers on the separate answer sheet in the following manner:

| | |
|---|---|
| If you strongly agree, blacken | 1 = 2 = 3 = 4 = 5 = |
| If you agree, blacken | 1 = 2 = 3 = 4 = 5 = |
| If you disagree, blacken | 1 = 2 = 3 = 4 = 5 = |
| If you strongly disagree, blacken | 1 = 2 = 3 = 4 = 5 = |
| If it is not applicable, blacken | 1 = 2 = 3 = 4 = 5 = |

All marks should be made heavily and according to the directions under direction #3 on the answer sheet.

1. Exploratory agriculture instructional objectives should be clearly defined.

2. Exploratory agriculture should be taught on a non-technical basis.

3. Exploring fields of agriculture should be the major purpose of exploratory agriculture.

4. Most exploratory agriculture programs are fundamentally the same.

5. Students at this age level have not matured enough to make a vocational career choice.

6. Exploratory agriculture programs should be taught by qualified agricultural education teachers.

7. A textbook is needed for exploratory agriculture courses.

8. Exploratory agriculture encourages students to enroll in agriculture education.

9. All students in the school should be required to take exploratory agriculture.

10. More adequate teaching materials are needed for exploratory agriculture programs.

11. Student home visitation should be an integral part of the exploratory agriculture program.

12. Curriculum guides should be developed for exploratory agriculture programs.

13. Resource units and teaching plans should be developed for exploratory agriculture programs.

14. Exploratory agriculture is a valuable experience for students.

15. Course content should be determined at the local level.

16. I have a good conceptualization of what should be taught in exploratory agriculture.

17. I feel qualified to teach exploratory agriculture.

18. Only agricultural education teachers should teach exploratory agriculture programs.

19. Exploratory agriculture teachers should be specially trained for the program.

20. My university coursework is of assistance in my exploratory agriculture teaching.

21. Objectives for exploratory agriculture programs should be prepared in writing.

22. Local advisory councils should help plan the exploratory agriculture program.

23. Exploratory agriculture should allow students to become acquainted with many representative areas of work, not just those found in the local community.

24. Exploratory agriculture should be interdisciplinary in nature, exposing students to a wide variety of occupational possibilities.

25. Exploratory agriculture should provide an opportunity for each student to evaluate his own interests and abilities.

26. Exploratory agriculture should help students develop a sound basis for selecting high school or post high school training.

27. Exploratory agriculture should help students develop a positive self-image, improve their social skills, and develop desirable attitudes toward work and fellow workers.

28. Students should develop an appreciation for a job well done.

29. Students should recognize that there is dignity in work.

30. The size of exploratory agriculture classes should be smaller than regular school classes.

31. Each school should develop their own curriculum for the exploratory agriculture program.

32. All teachers in the school should be familiar with the exploratory agriculture program.

33. All teachers in the school should be involved in exploratory types of programs.

34. New agriculture education teachers should have a clear understanding of exploratory agriculture before they are hired.

35. Teachers of exploratory agriculture programs should have special training.

36. Universities should provide special training for prospective exploratory agriculture teachers.

37. Occupational education should be a continuous process from kindergarten through grade twelve.

38. Career decisions of students in an exploratory program are generally tentative decisions.

39. Vocational preparation for specific jobs should be postponed until grades eleven and twelve.

40. In-service courses should be offered for exploratory agriculture teachers.

41. Vocational funds should be used to stimulate exploratory agriculture programs.

42. An annual budget should be provided for materials and equipment used in exploratory agriculture programs.

43. Records of students in exploratory agriculture programs should be kept on file.

44. Copies of all student records in exploratory agriculture should be given to high school teachers for students enrolling in agricultural education at the high school.

45. The exploratory agriculture program should be carefully coordinated with the high school agriculture program.

46. At least one-third of the available time for career orientation should be spent in direct observation of occupations.

47. Technical agriculture subject matter in the course should be kept to a minimum.

48. Representatives of various occupations in the community should serve as resource persons in the exploratory agriculture program.

49. Local businesses and industries should be encouraged to serve as hosts for field trips.

50. Exploratory agriculture programs should have required enrollment of all students.

51. Exploratory agriculture programs are valuable for both boys and girls.

52. Exploratory agriculture programs should be offered to college bound as well as non-college bound students.

53. Existing facilities are adequate for the exploratory agriculture program.

54. Students should be allowed to participate in manipulative experiences in exploratory agriculture programs.

55. Guidance personnel are supportive of the exploratory agriculture program.

56. Guidance personnel can help students determine their abilities and aptitudes.

57. More emphasis should be placed on exploratory programs in other vocational areas.

58. Teachers in non-vocational areas do not understand exploratory agriculture programs.

59. Exploratory agriculture programs should receive more leadership from state and university personnel.

60. All agricultural education teachers should receive some training in exploratory agriculture programs.

61. Sufficient information is available to properly evaluate the effectiveness of exploratory agriculture programs.

62. Students like and are enthusiastic about the exploratory agriculture program.

63. Students in exploratory agriculture programs should be required to have experience programs of some type.

64. Exploratory agriculture teachers should be required to conduct home visits with students in exploratory agriculture programs.

65. A definite course of study should be developed for the exploratory agriculture program.

66. Exploratory agriculture students should be provided an opportunity to participate in leadership training, such as the FFA.

67. Exploratory agriculture should prepare a student for earning a living.

68. Exploratory agriculture should include instruction about plant and animal science.

69. Exploratory agriculture should include instruction in agricultural mechanics.

70. Exploratory agriculture programs should include instruction in how to conduct a meeting.

71. Exploratory agriculture programs should include instruction in how to speak before a group.

72. Exploratory agriculture programs should be offered to any student who is interested in agriculture.

73. Contests should be established for students in exploratory agriculture programs.

74. Students in exploratory agriculture programs should keep project record books.

75. Skill training should be the major emphasis of exploratory agriculture programs.

76. Agricultural safety should be a part of any exploratory agriculture program.

77. Ecology and conservation should be a part of any exploratory agriculture program.

78. Exploratory programs should encompass more than just the field of agriculture.

79. Students should be exposed to career orientations and the world of work in elementary school.

80. At least two-thirds of the exploratory agriculture program should be spent on career exploration.

81. Students in exploratory agriculture programs are best taught by activity-oriented techniques.

82. Adequate funding is provided for the exploratory agriculture program.

83. School administrators understand the objectives of the exploratory agriculture program.

84. Basic principles of agriculture should be taught in exploratory agriculture programs.

85. Instruction in parliamentary procedure should be included in exploratory agriculture programs.

86. Students with agricultural backgrounds are more interested in exploratory agriculture programs than are non-agriculturally oriented students.

87. The primary goal of exploratory agriculture programs is to acquaint students with the largest possible number of job opportunity areas which may be available to them upon completion of their schooling.

88. Exploratory agriculture programs should be designed to encourage students to continue their education.

89. Exploratory programs should provide an opportunity for each student to evaluate his own abilities and interests.

90. An emphasis in college on teaching at the junior high school level would benefit a teacher of exploratory agriculture programs.

91. Teachers could be helped by being provided with additional teaching aids for exploratory agriculture programs.

92. A record book needs to be designed for exploratory agriculture students' use.

93. In-service workshops should be offered expressly for teachers of exploratory agriculture programs.

94. High school agriculture teachers understand what is being done in exploratory agriculture programs.

95. Students really seem to enjoy the exploratory agriculture course.

96. Exploratory agriculture programs should provide students with experiences in a youth organization or club.

97. The exploratory agriculture program should be offered for the entire school year to each student.

98. Summer visitation of exploratory agriculture students by the teacher would be worthwhile.

99. Guidance personnel need more orientation about the purpose of exploratory agriculture programs.

100. Teaching exploratory agriculture is an enjoyable and satisfying experience.