THE ROLE OF VOCATIONAL AGRICULTURE IN THE OCCUPATIONAL SUCCESS OF GRADUATES - A SOUTHERN REGION STUDY

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Introduction

Since vocational agriculture was established in the public school system of the United States in 1917, there has been concern on the part of educators and community leaders as to the influence of the instruction on future activities of program completers.

Traditionally, teachers of vocational agriculture have kept records of the occupational status of former students. Periodic studies have been made by graduate students, supervisors, teacher educators and others to determine occupational status of graduates on district, regional or even statewide bases. However, no indepth regional or national studies have been conducted into the role of the vocational agriculture program in the success of graduates.

The Education Amendments of 1976, as well as previous legislation, stress program accountability in meeting the needs of people, regardless of the specialty area. If vocational agriculture/agribusiness is to remain a viable service area, evidence of accomplishments and impact is sorely needed. Participants at the Southern Research Conference in Agricultural Education meeting in Lexington, Kentucky, in July, 1977, decided that a region-wide study of the impact of the vocational agriculture program on students would help fill that need. This article relates the procedures and findings of that study.

Objectives

The primary purpose of the study was to determine the role of vocational agriculture/agribusiness programs in the occupational success of program graduates from the Southern Region. Specific objectives were to:

1. Determine the current status of graduates of vocational agriculture/agribusiness programs for a selected year with regard to occupation, further education, economic level, and other demographic factors.

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2. Ascertain the perceived value of the various components of the vocational agriculture/agribusiness programs as indicated by program completers.

3. Secure the reactions of program completers to recent changes in the vocational agriculture/agribusiness program.

Methods

A coordinating committee* was organized to develop procedures and to give guidance to the study. After several meetings with representatives from the various states** in the Region, a timetable, procedure and instruments were developed and approved.

The study was a descriptive survey with causal-comparative aspects. In order that the target population, graduates of vocational agriculture programs within the respective states of the Southern Region five years previously, would be accurately represented, a ten percent stratified random sample was drawn. After determining a random starting point, every tenth department was chosen from a alphabetical listing of schools by district. Names and addresses of graduates during the 1973-74 school year were secured from the local vocational agriculture instructors in the the departments selected or, in the cases of several states, from state-level data banks. A standardized, field-tested questionnaire was mailed to the sample, along with a cover letter and a stamped, return-addressed envelope. After ten working days,

*The original committee for designing the project consisted of Drs. J. D. Brown (Florida A & M University), Ron Brown (Mississippi State University), Glen Davis (Kentucky RCU), M. J. Iverson (Auburn University), Jim Johndrow (Oklahoma), and Douglas Patterson (Alabama RCU).

**Participating researchers who made up the Research Committee of the Southern Region, conducted the study in their respective states, and furnished the data for the regional report were: E. Lamar Love (University of Arkansas), Maynard J. Iverson (Auburn University), Clayton Spencer (Auburn University), Jimmy G. Cheek (University of Florida), Max B. McGhee (University of Florida), Ira Dickerson (University of Florida), Joe Kotrlik (Louisiana State University), Charles Smith, (Louisiana State University), Ronald A. Brown (Mississippi State University), Larry Jewell (North Carolina State University), James Key (Oklahoma State University), Don Herring (Texas A & M University), and John Hillison (Virginia Polytechnic Institute and State University).

a second questionnaire, a follow-up letter and a stamped, return-addressed envelope were sent to all non-respondents. At four weeks from the initial mailing, a follow-up telephone interview of a ten percent random sample of non-respondents was conducted to check representativeness of the sample.

In addition to various demographic data, the respondents were asked to rate statements about their experience in vocational agriculture/agribusiness--FFA, about their teacher(s), and about the scope and function of the program. Their ratings were recorded on a scale of one to five signifying opinions ranging from "strongly disagree" to "strongly agree."

Once the data were collected, individual states sent their returns to Mississippi State University where data were processed by computer. Descriptive statistics such as means, medians, frequencies and percentages were used to portray respondent characteristics and opinions. States had the option to conduct additional statistical treatments. Data printouts were returned to member states for development of individual research reports. Leaders of the coordinating committee assembled data from the states into a regional report (Iverson and Brown, 1979).

Findings

Response Rate

Data were received from 1252 respondents in ten states in the Southern Region, 92.1 percent by mailed questionnaire, the remainder by interview schedule via a telephone follow-up. This represented a 40.2% overall rate of response. These data may be seen in Table 1.

When mailed responses were compared with telephone responses on the independent (demographic) variables utilizing analysis of variance for the items involving continuous data and Chi Square for items representing categorical data, no significant differences were observed. Analysis of the 26 dependent variables utilizing the multivariate technique, Hotelling's T-Square (BiMed program BMDP3D), indicated a significant difference (Hotelling's T-Square value = 48.6, $F\ (26, 1166) = 1.83$, $P \leq 0.01$). However, further univariate analysis of the 26 response items revealed only two significantly different responses:

"My experiences in Vo-Ag/FFA helped me to learn how to get along with other people" ($P = .008$, $df = 1219$)

"My experiences in Vo-Ag/FFA helped me stay in school" ($P = .02$, $df = 1216$)

Table 1

NUMBER AND PERCENTAGE OF RESPONSES TO THE SOUTHERN REGIONAL STUDY OF VOCATIONAL AGRICULTURE GRADUATES BY STATES

States	Respondents		Total N	Percentage of Regional Total
	Mail	Telephone		
Alabama	90	18	108	8.6
Arkansas	37	0	37	3.0
Florida	61	0	61	4.9
Georgia	88	0	88	7.0
Louisiana	174	13	187	14.9
Mississippi	74	6	80	6.4
North Carolina	49	26	75	6.0
Oklahoma	121	11	132	10.5
Texas	382	20	402	32.1
Virginia	77	5	82	6.5
TOTAL	1153	99	1252	100.0

Thus, the researchers concluded that the mailed and telephone responses were drawn from the same population and could, therefore, be combined for further analysis.

The 1252 respondents were primarily male (97.3%), age 22 - 23 (82.6%), Caucasian (91.2%), and from rural homes (72.6%). About three-fourths of the respondents completed three or four years of vocational agriculture and FFA. Almost 58% held the Chapter Farmer or higher degree, and 64.3% had two or more years of supervised occupational experience programs. No further education beyond high school was reported by 58.9%. The income categories of respondents is presented in Table 2.

It can be seen in Table 3 that the current occupations of graduates from the Region in 1974 were varied; 47.7% were in non-agricultural occupations and a majority of the remainder were in agriculture; unemployment was less than five percent.

Experiences in vocational agriculture/agribusiness received high ratings from the graduates; they were in less agreement about

Table 2

ANNUAL GROSS INCOME OF RESPONDENTS FROM THE TEN STATES IN THE SOUTHERN REGION

Income Level*	Number	Percentage
Less than $5,000	151	12.5
$5,000 - $9,999	366	30.4
$10,000 - $14,999	375	31.1
$15,000 - $19,999	189	15.7
$20,000 - $24,999	67	5.6
$25,000 - $29,999	24	2.0
$30,000 - $34,999	7	0.6
Over $35,000	25	2.1
TOTAL	1204	100.0

*Md = $11,133.33

Table 3

CURRENT OCCUPATIONAL STATUS OF RESPONDENTS FROM TEN STATES IN THE SOUTHERN REGION

Occupational Categories	Number*	Percentage*
Full-time farmer or rancher	137	10.9
Part-time farmer or rancher	261	20.9
Agribusiness employee	106	8.5
Horticulture employee	29	2.3
Forestry/natural resources employee	39	3.1
Agricultural mechanics employee	98	7.8
Professional agriculture employee	32	2.6
Non-agricultural occupation	594	47.4
Attending college	146	11.7
Self-employed, agriculture	130	10.4
Self-employed, non-agriculture	121	9.7
Unemployed	57	4.6

*Numbers and percentages exceed the total sample since some respondents were represented in more than one occupational category.

teacher assistance, but highly supportive of specific program functions. A significant 92% said they would enroll again, if they had it to do over. These data may be reviewed in Tables 4, 5 and 6.

Table 4

RATINGS OF STATEMENTS ABOUT THE VOCATIONAL AGRICULTURE/AGRIBUSINESS PROGRAM BY RESPONDENTS FROM TEN STATES IN THE SOUTHERN REGION

Statements About Vocational Agriculture/Agribusiness Experiences	Frequencies and Percentages of Responses					Means*
	Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree	
Were such that if I had it to do over, I would enroll in Vocational Agriculture/Agribusiness--FFA again	15 (1.2%)	22 (1.8%)	57 (4.7%)	258 (21.3%)	857 (70.9%)	4.59
Were good for me	47 (3.9%)	27 (2.2%)	38 (3.1%)	485 (39.8%)	623 (51.1%)	4.32
Taught me skills useful in an agricultural career	17 (1.4%)	38 (3.1%)	107 (8.7%)	626 (51.1%)	438 (35.7%)	4.17
Helped me learn how to get along with other people	18 (1.5%)	55 (4.5%)	120 (9.8%)	624 (50.9%)	409 (33.4%)	4.10
Helped me learn how to participate in meetings	20 (1.6%)	73 (6.0%)	104 (8.5%)	610 (49.9%)	416 (34.0%)	4.09
Helped me develop leadership skills	19 (1.5%)	58 (4.7%)	160 (13.1%)	571 (46.6%)	418 (34.1%)	4.07
Helped me learn how to work	18 (1.5%)	67 (5.5%)	99 (8.1%)	683 (55.6%)	362 (29.5%)	4.06

Taught me skills useful in a non-agricultural career	37 (3.0%)	111 (9.1%)	193 (15.8%)	607 (49.7%)	274 (22.4%)	3.79
Helped me stay in school	120 (9.8%)	272 (22.2%)	191 (15.6%)	378 (30.9%)	262 (21.4%)	3.32
Helped me to choose an occupation	76 (6.2%)	320 (26.3%)	337 (27.7%)	291 (23.9%)	193 (15.9%)	3.17
Encouraged me to go to college	103 (8.5%)	363 (29.9%)	306 (25.2%)	270 (22.2%)	173 (14.2%)	3.04
Helped me to enter and advance in a non-agricultural career	99 (8.3%)	295 (24.7%)	379 (31.8%)	307 (25.8%)	112 (9.4%)	3.03
Helped me to enter and advance in an agricultural career	96 (8.1%)	380 (31.9%)	315 (26.4%)	276 (23.2%)	124 (10.4%)	2.96
Were of no benefit to me	773 (66.1%)	286 (24.5%)	43 (3.7%)	33 (2.8%)	34 (2.9%)	1.52

*Means were calculated on the basis of 1 = Strongly Disagree, 2 = Disagree, 3 = Undecided, 4 = Agree and 5 = Strongly Agree.

Table 5

RATINGS OF STATEMENTS ABOUT TEACHER ASSISTANCE IN THE VOCATIONAL AGRICULTURE/AGRIBUSINESS PROGRAM BY RESPONDENTS FROM TEN STATES IN THE SOUTHERN REGION

Statements About Teacher Assistance	Frequencies and Percentages of Responses					Means*
	Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree	
Encouraged me to enter an occupation in agriculture	42 (3.5%)	213 (19.1%)	239 (19.8%)	498 (41.3%)	197 (16.3%)	3.48
Provided me with information on careers outside agriculture	71 (5.9%)	214 (17.8%)	239 (19.8%)	515 (42.7%)	166 (13.8%)	3.41
Encouraged me to major in agriculture in college	83 (7.0%)	363 (30.4%)	330 (27.7%)	291 (24.4%)	126 (10.6%)	3.01

*Means were calculated on the basis of 1 = Strongly Disagree, 2 = Disagree, 3 = Undecided, 4 = Agree, and 5 = Strongly Agree.

Table 6

RATINGS OF STATEMENTS REGARDING FUNCTIONS OF VOCATIONAL AGRICULTURE/AGRIBUSINESS BY RESPONDENTS FROM TEN STATES FROM THE SOUTHERN REGION

Statements Regarding Functions	Frequencies and Percentages of Responses					Means*
	Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree	
Should include laboratory instruction	4 (0.3%)	10 (0.8%)	63 (5.1%)	534 (43.6%)	613 (50.1%)	4.42
Should include supervised occupational experience in agriculture	8 (0.7%)	4 (0.3%)	47 (3.9%)	588 (48.2%)	573 (47.0%)	4.41
Should have teachers available year-round	9 (0.7%)	20 (1.6%)	112 (9.1%)	452 (36.8%)	636 (51.7%)	4.37
Should include FFA activities	12 (1.0%)	13 (1.1%)	54 (4.4%)	618 (50.6%)	524 (42.9%)	4.33
Should include agriculture/agribusiness instruction for adults	6 (0.5%)	15 (1.2%)	113 (9.3%)	595 (48.9%)	489 (40.1%)	4.27
Is useful to farmers in the community	15 (1.2%)	14 (1.1%)	77 (6.3%)	672 (55.0%)	444 (32.3%)	4.24
Is useful to agribusiness persons in the community	10 (0.8%)	21 (1.7%)	96 (8.0%)	693 (57.7%)	380 (31.7%)	4.18
Should emphasize farming and agribusiness in its instruction	17 (1.4%)	43 (3.5%)	124 (10.2%)	646 (53.1%)	387 (31.8%)	4.10
Should emphasize only farm in its instruction	453 (37.1%)	569 (46.6%)	115 (9.4%)	56 (4.6%)	27 (2.2%)	1.88

*Means were calculated on the basis of 1 = Strongly Disagree, 2 = Disagree, 3 = Undecided, 4 = Agree, and 5 = Strongly Agree.

Conclusions and Recommendations

Females and racial minorities were inadequately represented among the vocational agriculture/agribusiness programs in the Southern Region in 1974. Even though the situation has improved, efforts should continue for an even greater share of enrollments for minorities and women in the region.

Most graduates terminated formal schooling with their high school diploma. Teachers and other leaders must design the vocational agriculture/agribusiness program to provide saleable skills (career preparation) to enrollees.

Most enrollees were committed to vocational agriculture and the FFA for several years, but not all progressed through the degree structure. Programs should be designed for sequential career development of students, including use of the FFA as an integral part of the program; instruction and leadership should be given to help each individual progress through the degree structure.

A substantial number (40%+) of the 1974 graduates in the Southern Region failed to carry out a supervised occupational experience program each year that they were enrolled. Strategies must be developed and utilized to help more students in the region initiate and thus benefit from SOE programs.

Involvement in adult education programs among the 1974 vocational agriculture graduates in the Southern Region was inadequate either due to lack of information or available classes. A high priority should be placed on providing adult education in agriculture which will be of interest and benefit to recent graduates of vocational agriculture/agribusiness education in the South!

Vocational agriculture departments in the South are located in and draw students primarily from rural areas. Efforts should be made to provide high quality programs of vocational agriculture/agribusiness education in urban as well as rural areas of the Southern Region.

Most graduates of vocational agriculture/agribusiness education in the Southern Region were moderately successful financially with a $11,000+ median income. Although nearly one-half of the graduates were employed in a non-agricultural occupation, a majority of the remainder were in full- or part-time farming or off-farm occupations; only 4.6 percent were unemployed--and some of these were students. Greater emphasis should, therefore, be placed on helping graduates enter and advance in agricultural occupations; continued education should be encouraged to improve earnings.

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Graduates indicated a high degree of support for their vocational agriculture programs, with the exception of items regarding guidance functions; this culminated in a 92+ percent majority who indicated that they would enroll again if they had it to do over! The respondents agreed that teachers of vocational agriculture encouraged entry into agriculture but also provided some information on other careers. Programs in the region should continue working for high quality instruction; additional emphasis should be given to the guidance functions of teachers.

Graduates in the Southern Region strongly supported the inclusion of FFA, SOEP, and adult instruction in the vocational agriculture program; they also supported twelve-month employment of teachers and the comprehensive focus of the program. The major components of the program should be continued and strengthened; program modifications to include off-farm occupations as well as production agriculture should be continued.

Summary

This study has provided valuable evidence of the impact on students of vocational agriculture/agribusiness education programs across the Southern Region. Analysis of these data continues so that we may learn of possible relationships between the variables studied. Meanwhile, it is suggested that other regions and/or states conduct studies of their graduates to determine program effectiveness and direction. Development of a national agricultural education data bank may be a logical extension of these activities.

Results of this and similar studies provide a firm basis for program planning, management and evaluation. In a time of austerity in government, such information may be our best guarantee for a fair share of the educational resources.

References

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