

The Influence of Selected Characteristics with
Average Net Income from Supervised
Project Programs in Texas

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Supervised project programs have been used by production agriculture teachers to provide realistic and practical education experiences for students. Research completed by Byler (1975) and Williams (1977) identified educational experiences and practical skills which students have derived from supervised project programs. Additionally, students have been expected to earn net income based on their investment to production enterprises. Supervised projects of students have varied greatly in size and scope. This variation has made it difficult to establish criteria by which these programs can be evaluated. An in-depth study by McMillion and Auville (1976) reflected various considerations which influenced rating scores of supervised experience programs of Virginia vocational agriculture students. One factor, net income, traditionally used to evaluate supervised project enterprises of students, has been important to students, their parents, vocational agriculture teachers, and other vocational education personnel. In Texas, net income has frequently been used for evaluation purposes in the following situations:

1. Success of individual student projects
2. Advancement in the Future Farmers of America
3. Progress grades of students
4. Quality of instructional programs and of teachers as expressed by vocational personnel.
5. Effectiveness of local as well as statewide vocational agriculture production programs

Since net incomes from supervised project programs have been a basis for determining the quantity and quality of the programs in Texas for many years, it was deemed desirable to determine what factors, if any, influenced the net incomes derived from supervised project programs of vocational agriculture students.

Objectives of the Study

The primary objectives of the study were as follows:

1. to determine whether differences in average net income were influenced by selected characteristics of production agriculture teachers.

2. to determine whether differences in average net income were influenced by selected characteristics of production agriculture programs.
3. to determine whether differences in average net income were influenced by selected characteristics of communities in which production agriculture programs are located.

Definition of Terms

Average net income. An expression of financial profit derived by dividing the total net farming profit of all production agriculture students in a vocational agriculture department by the total number of students completing supervised project programs.

Production agriculture program. A term used in Texas to identify the program for persons preparing for employment and/or becoming established in the agricultural producing industry. The areas of instruction are Agriculture I, II, III, and IV.

Supervised project program. A term used synonymously with supervised farming program, production project program, and with supervised experience program to identify enterprises conducted by students to meet the production agriculture program requirements.

Procedure

The sample for this research was randomly selected from a total of 900 vocational agriculture departments in Texas which offered instruction in production agriculture. A total of 300 departments was chosen at random and one vocational agriculture teacher was randomly selected from an alphabetized list to represent each department. Departments were deleted which had a completely new faculty of production agriculture teachers for the 1979-80 contract year.

Other pertinent data were procured by questionnaires which were mailed to vocational agriculture teachers in each of the 300 departments. Two subsequent mailings, at approximate three week intervals, were made to teachers who had not responded to prior correspondence. A total of 275 useable questionnaires, or 91.6% of the sample, were returned.

The average net incomes of students completing supervised projects for each department were obtained from financial summaries of supervised project programs which were furnished by each of the ten area consultants in Texas.

Data collected which pertained to selected characteristics of teachers, programs, and communities were analyzed by one-way analysis of variance. Specific differences in means of average net income were identified by Duncan's New Multiple Range Test. Data were tested for difference at the .05 level of probability.

Results

Teacher Characteristics

The influence of characteristics of production agriculture teachers within departments with income from supervised project programs of students in Texas High Schools was analyzed. Selected characteristics of teachers were the following:

1. Ages
2. Tenure in respective schools
3. Tenure in all schools
4. Percentage of teachers having master's degrees
5. Percentage of teachers who resided on farms or ranches during their childhoods
6. Percentage of teachers who were former vocational agriculture students
7. Percentage of teachers who operated any type of business outside of teaching
8. Percentage of teachers who resided within their school districts

Of eight selected teacher characteristics, tenure in all schools of vocational agriculture teachers and whether vocational agriculture teachers lived on farms or ranches during their childhoods influenced average net income from supervised project programs. As may be observed in Table 1, the 16-25 year group had students with the highest average net income of \$371.42, while the lowest average net income of \$228.28 came from the 6-10 year tenure group's students. The average net income of the other groups' students varied from \$254.56 from the 0-5 year group to \$238.48 for the 11-15 year group, and finally to \$240.24 for those with over 25 years of tenure.

Vocational agriculture departments were categorized by the percentage of teachers per department who resided on farms or ranches during their childhoods. It can be seen in Table 2 that the highest average net income \$446.11, came from 19 departments in which none of the teachers had resided on farms or ranches during their childhoods. The average net income from this group exceeded all other groups as follows: 33.3%, \$221.00; 50.0%, \$196.83; 66.7%, \$362.63; 75.0%, \$181.00; and 100.0%, \$264.29. When subjected to Duncan's New Multiple Range Test, the average net income of the 0.0% group differed significantly from the incomes of the 33.3%, 50.0%, 75.0%, and the 100.0% groups, but did not differ significantly from the income of the 66.7% group. However, it must be noted that in 215 of 275 departments, over 78%, all teachers had lived on a farm or ranch. Due to this distribution, the reliability of the analysis may be misleading.

Table 1

Comparison of Years of Tenure in All Schools with Average Net Income from Supervised Project Programs

Tenure intervals in all schools	Departments (n)	Average net income per department	F Ratio
0-5	63	254.56 ^b	1.92*
6-10	57	228.28 ^b	
11-15	54	238.48 ^b	
16-25	66	371.42 ^a	
Over-25	29	240.24 ^b	

ab - Average net incomes with different letters indicate significant differences

*p < .05

Table 2

Comparison of Percentages of Teachers Per Department Who Resided on a Farm or Ranch During Their Childhood With Average Net Income from Supervised Project Programs

Percent of teachers	Departments (n)	Average net income per department	F Ratio
0.0	19	446.11 ^a	1.54*
33.3	3	221.00 ^b	
50.0	29	196.83 ^b	
66.7	8	362.63 ^{ab}	
75.0	1	181.00 ^b	
100.0	215	264.29 ^b	

ab = Average net incomes with different letters indicate significant differences

*p < .05

Production Agriculture Program Characteristics

Characteristics of production agriculture programs which were analyzed for their influence with average net income included the following:

1. Total student enrollment in high schools
2. Total production agriculture student enrollment
3. Male student enrollment in production agriculture
4. Female student enrollment in production agriculture
5. Number of students having supervised projects
6. Number of visits made by teachers to students
7. Extent of visits made by teachers to all students
8. Nature of overall program
9. Number of days of classroom instruction
10. Number of days of agricultural mechanics laboratory instruction
11. Success of project programs as perceived by vocational agriculture teachers

Significance was found for two of the eleven selected program characteristics. From the summary of data presented in Table 3, it may be noted that departments having enrollments from 16 to 30 male students in production agriculture had significantly higher average net incomes from supervised project programs than did other enrollment categories. The average net income of \$415.88 of the 16-30 male student enrollment group exceeded the average net incomes of the other male student categories as follows: 0-15 students, \$152.43; 61-90 students, \$247.35; over 90 students, \$251.31; and 31-60 students \$261.50.

Table 3

Comparison of Male Student Enrollment with Average Net Income from Supervised Project Programs

Number of Male Students	Departments (n)	Average net income per department	F Ratio
0-15	7	152.43 ^b	1.98*
16-30	33	415.88 ^a	
31-60	119	261.50 ^b	
61-90	80	247.35 ^b	
Over-90	35	251.31 ^b	

ab = Average net incomes with different letters indicate significant differences

*p < .05

Significance was found for another selected program characteristic, overall nature of the departments supervised project programs. It may be seen in Table 4 that in departments having diversified livestock and crop project programs, with an average net income of \$365.55, higher average net incomes were produced than in departments which were basically livestock feeding with \$217.69 or crop production projects with \$69.99 average net income. Average net incomes from diversified livestock and crop programs were not significantly different from programs consisting of livestock, basically feeding and livestock, diversified breeding and feeding.

Community Characteristics

Also included for study was the influence on average net income of four selected characteristics of communities in which production agriculture programs were located. Community characteristics selected for analysis included the following:

1. Population of communities
2. Size in square miles of school districts
3. Economic bases of communities
4. Ethnic groups in communities

Significance was not found for any of the selected characteristics of communities.

Table 4

Comparison of the Overall Nature of Project Programs with Average Net Income from Supervised Project Programs

Type of Program	Departments (n)	Average net income per department	F Ratio
Diversified, livestock and crop	67	\$365.55 ^a	2.08*
Livestock, basically breeding	16	\$267.68 ^{ab}	
Livestock, diversified breeding and feeding	102	\$261.14 ^{ab}	
Livestock, basically feeding	88	\$217.69 ^b	
Crop production	1	\$ 68.99 ^b	

ab = Average net incomes with different letters indicate significant differences

*p < .05

Conclusions

In so far as the data obtained and analyzed in this study are representative of the whole, it is evident that little influence exists between average net income per student in production agriculture classes and the characteristics of (a) production agriculture teachers, (b) programs, and (c) communities. Only two of eight characteristics of teachers, two of 11 characteristics of programs, and none of four characteristics of communities displayed significant differences.

Recommendations

Based on the findings of this study, the following recommendations are made:

1. Criteria should be developed and validated by which supervised project programs can be evaluated to enable vocational agriculture teachers and other vocational personnel to improve supervised project programs.
2. Increased emphasis should be given by vocational agriculture teachers, teacher educators, and Texas Education Agency personnel on the educational values of supervised project programs and less importance should be placed on the attainment by students of higher net incomes from supervised project programs.
3. The location of childhood residences of vocational agriculture teachers should neither be used exclusively as criteria by which the employment of teachers is determined nor as exclusive criteria by which the success of teachers is measured.
4. Vocational agriculture teachers should promote diverse and comprehensive supervised project program development to provide sound economic bases for students' supervised project programs.

Additional research is needed to investigate the following areas of concern:

1. Criteria for supervised project program evaluation should be investigated, field tested, and implemented.
2. A comparison of the values of supervised project programs as perceived by vocational agriculture teachers, production agriculture students, and by employers of former production agriculture students should be conducted.

References

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