FACTORS ASSOCIATED WITH THE SUCCESS
OF SUPERVISED FARMING PROGRAMS
OF VIRGINIA HIGH SCHOOL STUDENTS

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Occupational experience programs have long been an integral part of Vocational Agriculture. However; teachers, educators, area supervisors, and others believe that they are not used nor promoted as strongly as desired in Virginia. In addition, factors that contribute to the success or lack of success of occupational experience programs have been identified.

Purpose

The purposes of this study were to 1) determine which factors were related to the success of supervised farming programs of production agriculture students in Virginia, 2) identify those factors which contribute to significant variability in Farming Program Scores, and 3) determine which factors were related to the number of supervisory visits made by the teacher to the farms and homes of their students.

Procedure

A randomized stratification technique was used to obtain four school from each of the six supervisory areas. The twenty-four schools yielded twenty-four teachers and 184 student respondents for the study. Through personal interviews, data were collected regarding teacher information and information pertaining to students' farming programs. This information was then classified according to teacher variables, school situational variables, and student opportunity variables. A student opportunity index was calculated based on the variable indicating the student chance to have a supervised farming program. Productive Man Work Days (PMWD), labor income, and enterprise investments were used in calculating a Farming Program Score for each student. Frequency count, analysis of variance, analysis of covariance, and stepwise regression were the statistical treatments used in the study.

Findings

Findings concerning supervisory visits, due to space limitations, are not included. Correlates of the Farming Program Scores obtained by multiple correlations are not reported for the same reason. An analysis of variance test was used to determine whether significant difference existed between the Farming Program Scores of the schools in the study. Table 1 shows that schools did vary significantly according to their students' Farming Program Scores. An F-ratio of 3.2952 was observed which was significant at the .01 level.

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Table 1

Analysis of Variance of Farming Program Scores Among the Schools

	Sum of Squares	Degrees of Freedom	F-ratio
Between groups	13875.0313	23	3.2952**
Within groups	29291.2930	160	

**Significant at the .01 level

A significant difference also existed among the schools when student opportunity for supervised farming programs was controlled. Table 2 presents the results of an analysis of covariance test which served to control student opportunity.

Table 2

Analysis of Covariance of Farming Program Scores Among the Schools Using the Index of Opportunity as Covariant

Source Variation	Sum of Squares	Degrees of Freedom	Mean Square	F-ratio	Significance of F
Covariant	11026.930	1	11026.930	74.568	.001
Main Effects	8626.637	23	375.071	2.536	.001
Residual	23512.551	159	147.878		
Total	43166.177	183	235.880		

Although opportunity for supervised farming programs significantly contributed to students' Farming Program Scores, a significant influence was also noted for factors other than student opportunity.

Dixon's Biomedical Stepwise Regression analysis was used to determine which teacher and/or situational variables most accurately predict students' mean Farming Program Scores This computation procedure selects the single variable which makes the greatest reduction in error sum of squares. Consequently, the variable entered into the equation is the one with the greatest partial correlation with the dependent variable, and if added, would have the highest F value.

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As shown in Table 3 in step 1, the variable selected as the best single predictor of students' Farming Program Scores was "teacher who assisted with fairs and livestock shows " This variable produced a multiple R value of .4753 and an F-ratio of 6.419. An analysis of variance test indicated that students of teachers who assisted with fairs and livestock shows had an average Farming Program Score of 16.313 as compared to 9.032 for those whose teachers did not assist with such events. An F-ratio of 18.39 was observed which was significant at the .01 level

Table 3

Stepwise Regression Analysis of Independent Teacher and
Situational Variables to
Predict Supervised Farming Program Scores

Regression step	Predictor variable selected	Multiple R	F-ratio
1	Teacher who assisted with fairs and livestock shows	.4753	6.419
2	*Teacher having part-time job	.6635	8.258
3	Extent to which teacher informed school administration of FFA and departmental activities	.7484	8.489
4	Teacher's Vocational Agriculture training in high school	.8330	10.767
5	Nearness to original home location	.8666	10.859
6	Number of non-academic school duties performed by teacher	.8885	10.622

*Denotes negative influence

The second step of the regression analysis indicated that the variable noting teachers having part-time jobs as the best complementary variable in predicting students' Farming Program Scores. With the addition of this variable, the multiple R value increases to .6635 and the F-ratio increased to 8.258. However, an analysis of variance test revealed that no significant difference existed among the students' Farming Program Scores of teachers having part-time jobs. The presence of this variable in the regression is explained by the combined effects and relationships that exist between this variable and the first variable selected.

In step number 3, the variable indicating the extent to which tea-

chers informed school administration of departmental activities was selected as the next variable to predict students' Farming Program Scores. An increase in the multiple R value to .7484 was noted as well as a new F-ratio of 8.489.

Teachers having Vocational Agricultural training in high school was the variable selected in step 4. This variable produced a multiple R value of .8330 and an F-ratio of 10.767. This variable also was significant at the .01 level when submitted to an analysis of variance test.

In step 5, nearness to original home location was selected. The new multiple R produced was .8666 and the F-ratio increased from 10.767 to 10.859.

The variable denoting number of non-academic duties performed by the teacher was chosen in step 6. When added to the previously selected variable, a multiple R value of .8885 and an F-ratio of 10.622 was produced.

All but one variable in the regression analysis were positive predectors of students' Farming Program Scores. The variable indicating teachers having part-time job, which was selected in step 2, was a negative predictor.

Summary

There are significant differences in the quality of supervised farming programs among schools in Virginia. Even though student opportunity to have a supervised farming program significantly influences Farming Program Scores, teacher and school situational variables also signficantly influence students' Farming Program Scores. The stepwise regression analysis revealed the following factors in order of their value in predicting Farming Program Scores and increasing the prediction accuracy.

1. Teacher who assist with fairs and livestock shows

2. Teachers NOT having a part-time job

3. Extent to which teacher informed school administration of FFA and departmental activities

4. Teacher had Vocational Agriculture training in high school

5. Nearness of teacher's original home location to present teaching job

6. Number of non-academic school duties performed by teacher

Recommendations

To increase the Farming Program Scores of production agriculture students in Virginia, the following recommendations are given.

1. Teachers and students should become involved in those activi-
    ties which give recognition to good farming programs such as
    fairs and livestock shows.

2. Former Vocational Agriculture students should be recruited
    into teaching.

3. Teachers should not become involved in part-time employment
    which will reduce substantially their time and effort to promote
    good farming programs.

4. Students from farms where parents were also Vocational Agri-
    culture students and other students having high opportunity in-
    dexes as measured in this study should be attracted into the
    Production Agriculture Option.