

# ENROLLMENT ISSUES IN AGRICULTURAL EDUCATION PROGRAMS AND FFA MEMBERSHIP

Tracy S. Hoover, Assistant Professor  
Dennis C. Scanlon, Associate Professor  
The Pennsylvania State University

In 1976, enrollment in agricultural education secondary school programs nationally was at an all-time high of over 697,000 students, with an FFA membership of over 509,000. However, in the past 12 years, agricultural education enrollment has dropped 27% nationally to 506,000 with a proportional decrease in FFA membership (National FFA Organization, 1989). This drop in enrollment, about 1 to 3% annually, has led to teacher reductions in multiple teacher departments and, in some instances, complete elimination of agricultural education programs (Norris & Townsend, 1987). This decline in enrollment is considerably greater than the 20% decrease in secondary enrollment for the same time period (US Bureau of the Census, 1989).

Knight (1987) identified several key factors that contributed to declining enrollment. First, is the strong emphasis on production agriculture within programs. Although less than 3% of the workforce is directly involved in production agriculture, the majority of agricultural education curricula have not changed to meet employment needs in agricultural related sectors of the economy. Second, increased academic requirements often compete with the scheduling of vocational courses. Third, is the perception that success in life is associated with the acquisition of a college degree, and vocational courses are for the "less able" or "less academically talented" students. This bias against vocational education devalues a sound vocational orientation and may deter students from enrolling. Finally, many agriculture programs are stereotyped as being comprised of primarily white male students from farms.

Beyond the overall declining enrollment in agricultural education and the FFA, another problem is evident. A nationwide pattern in existence since 1959 suggested that only 75-79% of agricultural education students join the FFA. Lass (1989) cited the most frequent response of Louisiana agricultural education students for not joining the FFA as not having the time; and the most frequently cited reason for joining the FFA as the opportunity to learn leadership skills. Before the decision to join the FFA can be further investigated it is critical to first assess the factors that motivate a student to enroll in agricultural education. Attitudes toward groups are often formed on the basis of information and evaluation which are transmitted by secondary or even further removed sources. The reputation of a group plays an important role in determining the support it gets from other groups or individuals. The prestige of a group may be viewed as that part of a group's reputation which reflects its social visibility and ability to influence others. An organization's image and reputation have direct influence upon an individual's interest in becoming a member of that group (Willerman & Swanson, 1953). Bradford (1985) found that image, defined as curriculum and female stereotype, was a significant factor in a student's decision to enroll in home economics.

Does agricultural education have an image problem, and/or are youth not identifying with the FFA? The Committee on Agricultural Education in Secondary Schools (1988) concluded that agricultural education and the FFA are viewed as a white male farm youth organizations. Nineteen years ago, Welton (1971) recommended that the FFA launch an intensive nationwide effort to change the image of the FFA from a youth organization primarily for farm youth to one with appeal for all students with career aspirations in agriculture. This recommendation was not officially implemented until the National FFA Convention of 1989.

## Purpose **and** Objectives

If students are to select agricultural education programs and join the FFA, there is a need to know what factors motivate enrollment. This study identified factors that influenced a student's decision to enroll in agricultural education and the FFA. To accomplish the purpose of this study, the following objectives were formulated:

1. Identify and describe the sociodemographic characteristics of 8th and 11th grade students currently enrolled, anticipating enrollment, or not enrolled in agricultural education.
2. Identify participation and enrollment factors that impact on a student's decision to enroll in agricultural education and join the FFA.

## Procedures

**Sample:** This study was conducted using a modified descriptive survey research design. Due to funding limitations, a purposive sampling technique was used to assure geographic and demographic representation of FFA population patterns within the continental United States. The following 12 states were chosen to participate in the study: California, Connecticut, Florida, Idaho, Indiana, Iowa, Louisiana, Nebraska, Oregon, Pennsylvania, Texas, and Virginia. A teacher educator in each state agreed to identify three programs geographically distributed across the state recognized as "good" agricultural education programs. This process was used to control any moderating variables that may otherwise influence a student's perception about agricultural education, e.g., less than average programs or programs that are not visible or active.

All three agriculture teachers from each of the schools selected in the 12 states were asked to identify students to participate in the study. In each state, 15 eleventh grade students enrolled in agricultural education, 15 eleventh grade students with an identified interest in agriculture but not currently enrolled in agricultural education, and 15 eighth grade students who would be good candidates for ninth grade agriculture completed self-administered questionnaires; 540 useable questionnaires were returned for a 100% response rate.

**Instrumentation/Analysis of Data:** Based on a review of literature, three instruments were developed by the researchers to collect data. The instruments collected sociodemographic data and occupational and educational goals for each student. In addition, students responded to a series of statements concerning their decision to enroll in agricultural education and their perception of agricultural education and the FFA. These key statements differed for each group participating. Pilot testing yielded Cronbach's alpha levels ranging from .71 to .99.

Teacher educators in the 12 states selected a graduate student who traveled to the participating schools and collected data. To establish a uniform data collection process, each graduate student was sent a packet of materials containing standard instructions and data collection instruments. The data were analyzed using descriptive and inferential statistics.

## Results

Sociodemographic data for the 540 students who participated in the study were summarized. The results are presented using grade level and enrollment decision (enroll or not enroll) as the primary grouping factors for the students. The data were analyzed using chi-square tests for independence. Data in Table 1 indicate that eighth grade students who plan to enroll in agricultural education in ninth grade are more likely to be white and male. One-fourth of these students currently live on farms. These potential enrollees have a lower academic average and are more interested in being employed in an agriculturally related career than their nonenrollee peers. Evidence suggests a slight relationship between students' enrollment decision and whether they were involved in a junior high agricultural education program/club.

Sociodemographic characteristics inherent to future enrollees are consistent with those of eleventh graders enrolled in agricultural education. These current enrollees are predominantly white and male. One-fourth of current enrollees live on farms with parents more likely to be employed in an agriculturally related occupation. These current enrollees are more interested in being employed in an agricultural career than their nonenrollee peers.

Perceptions concerning agricultural education and the FFA as they relate to enrollment decisions for the 540 students participating in the study were also summarized. The results are presented using grade level and enrollment decision (enroll or not enroll) as the primary grouping factors for the students. The data were analyzed using **exploratory** factor analysis (Kim, 1975, p. 469). Three factors were identified that influenced **a student's** perception about agricultural education and the FFA: (1) future value of agricultural education, (2) image of agricultural education, (3) role of significant others and school standards.

Table 2 contains factor analysis results for eighth grade students planning to enroll and eleventh grade students currently enrolled in agricultural education. Evidence suggests that eighth graders

Table 1

Relationships Between Enrollment Decision by Students' Grade Level and Selected Sociodemographic Variables

Characteristic	Will Enroll	Eighth Grade		X <sup>2</sup>	V	Enrolled	Eleventh Grade		X <sup>2</sup>	V
		Will Not Enroll	Enroll				Not Enrolled	Enrolled		
Gender	(n = 127)	(n = 52)				(n = 180)	(n = 171)			
Male	70.9	48.1		7.38**	.22	71.4	57.3		7.07**	.15
Female	29.1	51.9				28.6	42.7			
Race	(n = 125)	(n = 51)				(n = 177)	(n = 170)			
White	83.2	84.3		.04ns		94.9	88.2		4.22'	.12
Nonwhite	16.8	15.7				5.1	11.8			
Academic Average	(n = 121)	(n = 50)				(n = 180)	(n = 170)			
B or higher	56.2	78.0		1.56'	.21	55.6	65.9		3.48ns	
C+ or lower	43.8	22.0				44.4	34.1			
Father's Occupation	(n = 113)	(n = 45)				(n = 158)	(n = 149)			
Non-ag	67.3	82.2		2.84ns		69.0	83.9		8.59**	.17
Ag	32.7	17.8				31.0	16.1			
Mother's Occupation	(n = 115)	(n = 48)				(n = 167)	(n = 166)			
Non-ag	63.5	72.9		a		61.7	77.0		11.23**	.19
Ag	6.1	0.0				10.2	3.1			
Homemaker	30.4	27.1				28.1	19.9			
Desired Occupation	(n = 94)	(n = 42)				(n = 150)	(n = 155)			
Non-ag	56.4	81.0		6.57'	.24	45.3	89.7		66.72***	.47
Ag	43.6	19.0				54.7	10.3			
Student's Place of Residence	(n = 130)	(n = 58)				(n = 180)	(n = 167)			
City	25.6	25.5		14.71**	.28	30.6	26.3		13.80**	.20
Town/suburb	21.6	47.1				25.0	34.7			
Country/non-farm	28.0	15.7				20.0	27.5			
Farm/ranch	24.8	11.8				24.4	11.4			
Junior High Ag	(n = 125)	(n = 52)								
Yes	33.6	17.3		3.99'	.16					
No	66.4	82.7								

**Note:** a not valid X<sup>2</sup> due to small fe; p < .05; p < .01; p < .0001.

Table 2

Items that Define Factors that Influence Future/Current Enrollment Decisions in Agricultural Education in Hierarchical Order for Students Planning to Enroll and Eleventh Grade Students Currently Enrolled

Eighth Grade ( $n = 108$ )	Loading	Eleventh Grade ( $n = 165$ )	Loading
<b>Factor 1, Influence of Future Value</b>			
Ag Ed will help me prepare for the future	.82	Ag Ed will benefit me later in life	.84
Ag Ed will benefit me later in life	.81	Ag Ed will help me in the future	.82
Ag Ed will help prepare me for a career in agriculture	.79	Ag Ed will help me improve my relations with others	.72
		Ag Ed will prepare me for a career	.72
		Ag Ed will help me become a better citizen	.71
		I like the classes	.58
		I can still meet college preparatory requirements and still enroll in Ag Ed	.56
<b>Factor 2, Role of Significant Others</b>			
Counselor suggested I take Ag Ed	.82	Parent(s)/guardian suggested I take Ag Ed	.75
Parent(s) guardian suggested I take Ag Ed	.75	Friends suggested I take Ag Ed	.71
Friends suggested I take Ag Ed	.69	Counselor suggested I take Ag Ed	.53
I like the teachers	.46		
<b>Factor 3, Perceived Image of Ag Ed</b>			
I would like the class	.75		
Ag Ed is for farm and nonfarm kids	.60		
Ag Ed classes can help both males and females	.43		

who will enroll feel it will help them prepare for the future and a career in agriculture. They indicated that counselors, parents/guardians, agriculture instructors, and friends played an important role in their decision to enroll in agricultural education. In addition, those who will enroll have an objective and positive image about agricultural education. These students like the class content, and feel agricultural education is for both farm and non-farm students and can be helpful to both males and females.

A similar finding was evident for eleventh graders currently enrolled in agricultural education. Eleventh graders who are enrolled feel it will help them prepare for the future and a career in agriculture and that enrolling in agricultural education would make them better citizens, improve their relations with others, and still allow them to meet college entrance requirements. In addition, these students felt that parents/guardians, friends, and guidance counselors played an important role in their enrollment decision. Table 3 contains factor analysis results for eighth grade students not planning to enroll and eleventh grade students not currently enrolled in agricultural education. A different perception is evident from those students not planning on enrolling or not enrolled in agricultural education.

Eighth graders who will not enroll feel that agricultural education would not be of any future value to them and that classes are too production oriented. They felt agricultural education was for young males and people from farms and they did not want to be a part of the FFA. Those eighth graders who will not enroll feel scheduling agricultural education would interfere with high school graduation requirements and conflict with scheduling college preparatory classes. They also indicated that counselors did not suggest agricultural education as a possible course option and friends suggested they not enroll in agricultural education. This perception of future nonenrollees is consistent with perceptions of the eleventh grade nonenrollees.

Eleventh graders not enrolled in agricultural education feel it would not be helpful for them, that agricultural education classes are too production oriented, and they do not want to be in the FFA. These students also indicated that agricultural education classes were for young males and for people

Table 3

Items that Define Factors that Influence Future/Current Non-Enrollment Decisions in Agricultural Education in Hierarchical Order for Students Not Planning to Enroll and Eleventh Grade Students Currently Not Enrolled

Eighth Grade ( $n = 53$ )	Loading	Eleventh Grade ( $n = 166$ )	Loading
<b>Factor 1, Influence of Future. Value</b>			
I don't see how it would be helpful to me	.84	It wouldn't be helpful to me	.86
The classes are too production oriented	.69	I don't see how it would be helpful to me	.85
It wouldn't be helpful to me	.63	The classes are too production oriented	.61
I didn't want to join the FFA	.58	I didn't want to be in the FFA	.45
<b>Factor 2, Perceive-d Image of Ag Ed</b>			
Ag Ed is for farm boys	.82	I didn't want to be the only minority in class	.79
I didn't want to be the only minority in class	.70	Ag Ed is for farm boys	.67
Ag Ed is for farm kids	.61	Ag Ed is for young males	.59
Ag Ed is for young males	.59	Ag Ed is for farm kids	.49
<b>Factor 3, Role of Sit Others and School Standards</b>			
Ag Ed conflicts with high school graduation requirements	.80	There is not enough emphasis on emerging <b>technology/research</b> in Ag Ed	.75
I have to take college prep courses	.65	I was not encouraged by counselor to take Ag Ed	.74
My friends said not to take Ag Ed	.57	My friends suggested not to take Ag Ed	.56
The counselor didn't suggest I take Ag Ed	.47		

from farms. Finally, eleventh grade nonenrollees were not encouraged by their counselor or friends to take agricultural education and felt there was not enough emphasis on emerging technology or agricultural research.

Additional analysis provides a more definitive interpretation of the data. Chi-square tests for independence were used to determine the relationship between selected enrollment factors and enrollment decision. The results are presented using enrollment decision and grade level for the students. Table 4 contains significant chi-square analyses for eighth grade students planning to enroll and eleventh grade students currently enrolled in agricultural education. Evidence suggests that there are several significant relationships among selected enrollment variables for eighth and eleventh grade students who plan to enroll/enrolled in agricultural education programs. Counselors and agricultural teachers were much more influential in determining the enrollment decision of eleventh graders compared to eighth graders.

A significantly higher percentage of eleventh graders felt that enrollment into agricultural education helps improve their relationship with others and that the FFA influenced their enrollment decision. Additionally, significantly more eleventh graders indicated they could meet college entrance requirements and still enroll in agricultural education.

Table 5 contains significant chi-square analyses for eighth grade students not planning to enroll and eleventh grade students not currently enrolled in agricultural education. Evidence suggests that a significantly higher percentage of eleventh graders not enrolled felt that there were conflicts in scheduling of classes to meet high school graduation requirements, indicated they had to take other college preparatory classes and felt the FFA was a significant nonenrollment variable. However, a significantly higher percentage of eighth graders noted that counselors did not suggest agricultural education as a course option.

Table 4

A Comparison of the Chi-Square Values for Selected Enrollment Statements and Enrollment Decision by Grade Level

	8th Grade ( $n = 126$ ) <sup>a</sup>			11th Grade ( $n = 180$ ) <sup>a</sup>			$\chi^2$	V
	A	U	D	A	U	D		
My counselor suggested I take agricultural education	15.3	31.5	53.2	28.0	17.6	54.4	11.33**	.19
I like the teacher(s)	59.1	33.9	7.1	84.4	11.1	4.4	23.21***	.29
It will help me improve my relationships with others	64.8	28.9	6.3	71.7	17.9	10.3	6.02*	.14
It includes the FFA organization	76.6	21.1	2.3	84.6	11.0	4.4	6.55**	.15
I know I can meet the college entrance requirements and still enroll in agricultural education	59.4	38.3	2.3	82.4	13.2	4.4	26.46***	.29

**Note:** <sup>a</sup> Numbers vary due to missing cases; . p < .05; \* p < .01; \*\* p < .001.

Table 5

A Comparison of the Chi-Square Values for Selected Enrollment Statements and Non-Enrollment Decision by Grade Level

	8th Grade ( $n = 57$ ) <sup>a</sup>			11th Grade ( $n = 171$ ) <sup>a</sup>			$\chi^2$	V
	A	U	D	A	U	D		
There are conflicts in scheduling of classes to meet high school graduation requirements that keep me from enrolling in agricultural education	49.0	33.3	17.6	53.3	11.8	34.9	14.68**	.26
My counselor did not suggest I take ag ed classes	51.9	30.8	17.3	29.4	17.6	52.9	20.46**	.30
I do not want to join the FFA	19.6	29.4	51.0	38.1	27.4	34.5	6.68*	.18
I have to take other classes to prepare me for college	17.3	17.3	65.4	28.2	27.4	44.1	7.21*	.18

**Note:** <sup>a</sup> Numbers vary due to missing cases; \*  $p < .05$ ; ● \*E < .01; ● \*\*p < .001.

## **Conclusions**

This study confirms factors about enrollment trends in secondary agricultural education and the characteristics of the students currently enrolled in our programs. It not only provides the empirical evidence to verify these factors, it clarifies specific barriers to enrollment as perceived by junior and high school students who are not enrolled in agricultural education programs. While the findings cannot be generalized to the entire population, they do highlight some important results.

The typical agricultural education enrollee is more likely to be white and male, with approximately one-fourth of these enrollees currently living on a farm. Enrollees are more interested in agricultural related careers and the parents of those currently enrolled are more likely to be employed in an agriculturally related occupation than those students not enrolled in agricultural education. Students who plan to enroll are more likely to be academically less talented than their respective nonenrolling counterparts and more interested in an agricultural related occupation.

There appears to be a dichotomous but consistent perception about agricultural education and the FFA. Students who are future or current enrollees and future or current nonenrollees tend to be influenced by similar factors. A student's perceptions about agricultural education are formed prior to ninth grade and subsequently influence enrollment decisions when made at the junior high school level.

## **Implications**

Evidence from this study highlights three major concerns. First, the overriding barrier to enrollment is image, not only of agricultural education and the FFA but of the agricultural profession in general. In the past enrollment in agricultural education may have been driven by the agrarian nature of the surrounding community. However, demographics are changing; the public is losing awareness about the food and fiber system and is rapidly becoming agriculturally illiterate. "Perception is reality"--if nonenrollees perceive agricultural education and the FFA for males from farms, see no future value in taking agricultural education, and are influenced by significant others not to enroll, that is what influences their enrollment decision.

Second, the perceived future value of agricultural education strongly influences a student's enrollment decision. Agricultural educators need to educate youth about agriculture utilizing a strong organized public relations program before they make this critical enrollment decision.

Finally, this study suggests that perceptions about agricultural education and the FFA remain constant once they are formed. Collectively, these concerns suggest a critical need for creative recruitment efforts and programs that address the needs of all students at different levels. Recruitment efforts need to be directed to a wider audience. Females and minorities need to be recruited into the agricultural programs and efforts made to ensure their success once enrolled.

The study results provide additional support for concerns previously expressed relative to secondary school agricultural education enrollments. We are not reaching a cross-section of the high school population. Approximately one-tenth of the eleventh graders not enrolled expressed an interest in an agricultural career and one-sixth of future nonenrollees expressed an agricultural career interest. There should be some concern that one of every five eighth graders interested in agricultural careers do not plan to enroll in agricultural education. Similar findings by Sutphin and Berkey (1990) reported that 15% of tenth grade students not enrolled in agricultural education plan to pursue a postsecondary education in agriculture. On a more positive note the data indicate that students who enroll have a career objective congruent with the program, a positive image relative to agricultural education and are influenced by peers and adults. Students not enrolling see little, if any, congruence between their goals and that of agricultural education. In fact, they view agricultural education as being for a select few--males from farms.

If agricultural education is to reach a cross-section of all students, images and perceptions will need to be changed. Agriculture represents a diverse food and fiber production, processing and distribution system of a global nature. Yet, very few people perceive agriculture in this larger context. Too many people perceive agriculture to be synonymous with farming. Our mission in agricultural education should include helping people to develop more comprehensive perceptions relative to agriculture. Simultaneously we need to change perceptions of what agricultural education involves. That requires more than cosmetic program changes; a cosmetic change in name alone is simply inadequate. If students, parents, school administrators and the general public are to view

agriculture in the more comprehensive arena of a total food and fiber system, local agricultural education programs must make substantive changes in program content and the way we package and deliver agricultural education.

#### Referenced

American College Testing Program. (1989). High school student perceptions of agricultural college majors and careers. American College Testing Program Survey Services Department: Research Division. Presented to the Farm Foundation, April 1989, 1211 W. 22nd Street, Oak Brook, Illinois.

Bradford, C. (1985). Influences affecting urban, secondary student enrollment in nonvocational home economics. Unpublished Ph.D dissertation. Oklahoma State University.

Committee on Agricultural Education in Secondary Schools. (1988). Understanding agriculture: New directions for education. Washington, DC: National Academy Press Board on Agriculture, National Research Council.

Rim, J. (1985) Factor Analysis. Statistical Package for the Social Sciences. Nie, N, Hull,C., Jenkins, J., Steinbrenner, K., Bent, D. (eds.) McGraw Hill Book Co., New York.

Knight, J. (1987). Recruiting and retaining students: A challenge for vocational agriculture. The Agricultural Education Magazine, **60(1)**, 9-10.

Lass, C. (1989). Factors that influence second year vocational agriculture students' membership status in the FFA. Proceedings of the 16th National Agricultural Education Research Meeting (pp. 343-350). Orlando, Florida.

National FFA Organization. (1989). Participation in selected FFA activities. 1979-1989. Alexandria, VA.

Norris, R. J. & Townsend, J. (1987). Coping with declining enrollment. The Agricultural Education Magazine, **60(1)**, 7-8.

Sutphin, D. & Berkey, A. (1990). Career and educational aspirations of tenth grade and agriculture students in New York State: A comparative analysis. Proceedings of the 44th Eastern Region Agricultural Education Research Conference (pp. 1-8). New Brunswick, New Jersey.

**Welton**, R F. (1971). Relationship of student characteristics and program policies to participation in FFA. Doctoral dissertation. The Ohio State University.

Willerman, B. & Swanson, L. (1953). Group prestige in voluntary organizations: A study of college sororities. Human Relations, **6**, pp. 57-77.