

CAREER OPPORTUNITIES IN AGRICULTURE AS PERCEIVED BY INNER CITY HIGH SCHOOL STUDENTS

Curtis D. White, Assistant Professor
Clemson University
Bob R. Stewart, Professor
Richard E. Linhardt, Associate Professor
University of Missouri-Columbia

The Educational Research Service, Inc. (1980) has reported that the number of college age students is declining. The number of college students enrolling in agriculture across the nation has also declined. In order to maintain and/or increase enrollments, colleges of agriculture need to actively recruit good students from traditional as well as non-traditional groups (The Pennsylvania State University, 1980). Inner city students and minorities are viable populations for recruitment efforts by colleges of agriculture. Federal monies are being given to institutions that are broadening their efforts and commitment to recruit graduate students in under-represented groups. Ideally, agriculture student populations should more closely reflect societal norms.

The American College Testing Program (1989) stated, in a report to the Farm Foundation: As the United States strives to maintain competitiveness in the international market place, agriculture has an opportunity to help correct the imbalance of trade that plagues our nation. Agriculture's future competitiveness hinges on attracting bright and capable leaders from among our nation's youth (p. 1). To achieve this, the challenges and opportunities of careers in agriculture must be brought to the attention of minority students.

According to Super and Bohn (1970), generalizations about career patterns that are helpful in dealing with members of majority groups need to be re-examined in dealing with members of minority groups. The extent of the difficulties that minorities must overcome and the motivation of the individual to overcome these barriers have a direct effect on their career status. "When the barriers are widespread and impenetrable, as they have tended to be for Blacks, motivation is destroyed" (Super and Bohn, 1970, p. 143).

According to Super and Overstreet (1960), the objective of education for ninth graders should be to prepare students to be able to make a series of choices. These choices should be closely related to careers. Super and Bohn (1970) defined a career as a sequence of positions or a course of continued progress in the life of a person. They stated: Careers begin before employment and they are shaped by parental background through its determination of exposure to occupations and educational opportunities, by aptitudes and interests, and by educational attainments (p. 117).

Betts and Newcomb (1986, p. 15) studied high ability urban student perceptions about careers in agriculture. They concluded that students "were only partially accurate" in their perceptions of areas of study and "were generally uncertain as to what careers related to agriculture are like." In a more recent study, Thompson and Russell (1989) found that females had higher means for agriculture as a career, as did respondents from an urban community. They also found that students that had studied agriculture had more positive beliefs about agriculture.

Additional studies were not found which addressed the perceptions of minority populations as they related to careers in agriculture. In as much as the majority of inner city students are minorities, it was felt that program planners, counselors, and college contact persons would find additional information from this group to be helpful.

Statement of the Problem

Agriculture has been faced with declining enrollments at both the secondary and post secondary levels. Therefore, more emphasis has been placed on recruiting students. Accordingly, many colleges of agriculture are now striving to enroll a higher percentage of urban students. However, little information is available concerning the perceptions about agricultural careers held by inner city students. Therefore, this study sought to ascertain the perceptions of inner city students about agriculture and agricultural careers.

Purpose and Hypotheses

The purpose was to ascertain and compare the perceptions of inner city students by gender, race, and course work toward career opportunities and career areas in agriculture. The following null hypotheses were formulated and tested at the .05 alpha level.

Ho1: There are no significant differences between the perceptions of students enrolled in agricultural courses and those not enrolled in agricultural courses toward: (a) career opportunities in agriculture, and (b) career areas in agriculture.

Ho2: There are no significant differences between the perceptions of male and female urban students enrolled in agricultural courses and those not enrolled in agricultural courses toward: (a) career opportunities in agriculture, and (b) career areas in agriculture.

Ho3: There are no significant differences between the perceptions of Black and other urban students enrolled in agricultural courses and those not enrolled in agricultural courses toward: (a) career opportunities in agriculture, and (b) career areas in agriculture.

Methods

Population and Sample: The population included all eleventh and twelfth grade students plus the ninth and tenth graders in agriculture enrolled at East High School in the Kansas City, Missouri, Public School system. The population represented students enrolled in the past, the present, and future and therefore, did not have a technically defined boundary. The purposive sample consisted of 280 students. Teachers in six of the 10 English classes agreed for students to provide data for the non-agricultural group. The assumption was made that the enrollment of students had occurred on a random basis. All students enrolled in the agricultural curriculum constituted the second group. Of the 280 students, 203 were in the non-agricultural category and 77 were in the agricultural category. Data were collected from all agriculture students to ensure sufficient numbers for all analyses.

A purposive sampling technique was used to select the participants for the study. Kerlinger stated that purposive sampling "is characterized by the use of judgement and a deliberate effort to obtain representative samples by including presumable typical areas or groups in the sample" (Kerlinger, 1964, p. 129). Babbie (cited in Pasha, 1979) also indicated that the technique of purposive sampling is an appropriate method under conditions in which it is appropriate for the researcher to select a sample on the basis of their knowledge of the population, its elements, and the nature of the research aims.

Caution should be exercised in interpreting the findings of the study because of the nature and size of the sample. This potential for error reduces the generalizability of the study. The possibility exists that the conclusions may only express the perceptions of the population in a rather narrow sense.

Instrument and Data Collection: All students were asked to complete a questionnaire which asked them to respond to statements about career areas and related career opportunities in agriculture. The students were asked to respond using a four-point Likert-type scale to rate the items in each section of the questionnaire. The scale ranged from 1, disagree, to 4, agree.

The instrument was checked for validity by faculty members in the Agricultural Education program at the University of Missouri-Columbia and by a national panel of three experts. A pilot test was conducted three weeks prior to the study. The general characteristics of the pilot test group were thought to be similar to the population used in the study. Modifications were made in the procedures and instrument as a result of the pilot study.

The instrument's reliability was estimated using the Cronbach Alpha procedure which yielded the following reliability coefficients for the pilot test and the data from the study respectively:

1. career opportunities in agriculture (14 items), .96 and .66.
2. career areas in agriculture (13 items), .95 and .83.

The differences in reliability between the groups might be explained by the fact that the pilot study students were more homogeneous in background and were from a less urban area than those in the study.

Data were collected through an on-site visit, within two consecutive days. One follow-up visit was made two weeks later to secure data from students who had been absent. The data from the follow-up were compared to the original data using a one-way ANOVA to ascertain if there was a significant difference in the responses given by the early and late respondents. The ANOVA did not reveal any significant differences at the .05 alpha level.

Analysis of Data: Descriptive procedures were used to analyze the data. In addition, Multivariate Analysis of Variance and Analysis of Variance procedures were used to ascertain if significant differences existed between the responses of agricultural and non-agricultural students, male and female students, and Black and other students.

Findings

Of the 280 respondents, 164 (58.6%) were Black, 64 (22.9%) were white, 30 (10.7%) were Hispanic, and 22 (7.9%) were of another race or did not indicate race. There were 128 (45.7%) females, 143 (51.1%) males, and 9 (3.2%) that did not indicate gender.

When the data in Table 1 were examined for career opportunities, a majority of the respondents tended to agree that students study production in agricultural classes, 20% of the labor force works in agriculture, agricultural careers involve outdoor work, there is room for advancement, there are science oriented careers in agriculture, and most skills can be learned on the job.

Table 1
Percent Agreeing with Statements about Career Opportunities and Areas in Agriculture

	Black		White		Other	
	Nonag	Ag	Nonag	Ag	Nonag	Ag
N =	129	35	36	28	31	10
Career Opportunities						
Students study production in agriculture classes	81	70	88	68	86	54
20% of labor force works in agriculture	75	65	88	66	85	75
Agriculture careers involve outdoor work	84	70	85	63	82	69
Room for advancement	65	64	73	68	48	69
Science-oriented careers	70	53	81	79	71	83
Most skills can be learned	69	61	67	49	67	67
Career areas						
Journalism	51	55	61	56	50	40
Sociology	56	32	51	64	55	60
Entomology	53	63	37	54	45	40
Engineering	68	56	82	64	71	70
Education & Extension	67	71	66	61	65	50
Food Science	68	71	68	70	58	78
Horticulture	65	56	77	74	58	40
Food Service & Lodging Mgt.	67	65	80	56	74	50

When the data in Table 1 for career areas were examined, students responded that all of the areas have potential. However, somewhat less opportunity was perceived to be available in the areas of journalism, sociology, and entomology. Greatest opportunity was perceived to be available in the areas of engineering, education and extension, food science, horticulture, and food service and lodging management.

Hypotheses were formulated to check for significant differences between the groups for agricultural background, gender, and race. The results of the MANOVA test are shown in Table 2.

Ho1 of no significant difference in perceptions of students by course work was not rejected. As reported in Table 2, the test yielded an F value of .61 with a probability of .61. The total rating for the 14 career opportunities items (possible range of 14 to 56) for all agricultural students was 35.6 and for all non-agricultural students was 36.3. The ratings for the 13 career areas (possible range of 13 to 52) for all agricultural students was 34.4 and for all non-agricultural students was 35.4.

Ho2 of no significant difference in perceptions by gender was not rejected. As reported in Table 2, the test yielded an F value of .53 with a probability of .66. The average rating for career opportunities for male students was 34.9 and for female students was 35.4.

Table 2
MONOVA for Effect of Category, Category*Gender, and Category*Race

Effect	Hotelling-Lawley Trace	df	F	p
Category (Non-Ag, Ag)	0.0073	3,248	0.61	0.61
Gender	0.0057	3,248	0.47	0.70
Race	0.0463	9,740	1.27	0.25
Category*Gender	0.0064	3,248	0.53	0.66
Category*Race	0.0325	9,740	0.89	0.53
Gender*Race	0.0301	9,740	0.82	0.59
Category*Gender*Race	0.0327	6,494	1.35	0.23

Ho3 of no significant difference in perceptions between Black and other student groups was not rejected. As reported in Table 2, the test yielded an F value of .89 with a probability of .53. The means for career opportunities (possible range of 14 to 56) for Black students was 36.2, for white students was 35.0, and for Hispanic students 36.2. The rating for the 13 career areas (possible range of 13 to 52) for Black students was 35.4, for white students was 35.0, and for Hispanic students was 33.0.

Conclusions

Inner city students in this study believe that persons working in agriculture should have an agricultural background, will work outdoors, have opportunity for advancement, and can learn the skills needed for employment on the job. While inner city students believe that there are career opportunities available in many areas of agriculture, they believe the greatest opportunity for jobs exists in engineering, education and extension, food service and lodging management, and horticulture.

Educators preparing career information about agriculture for inner city students like those in this study, can plan common experiences, regardless of their race, gender, or agricultural background.

Implications

No significant differences were found in the responses between the agricultural and non-agricultural students. It was expected that some differences would be found between the responses for the agricultural career areas. However, the data showed that a majority of the urban students have positive perceptions about possible careers in agriculture, which is consistent with other research. However, many of the jobs in the areas rated highest require college degrees. Previous research suggested that high ability inner city students' perceptions about career areas in agriculture varied. Based on these differences, it was thought that perceptions about agriculture might differ between Black and other students as well as between males and females. However, no significant differences were found in the responses for the agricultural and non-agricultural student perceptions toward career opportunities or the career areas in agriculture.

Across the nation, the number of students enrolling in colleges of agriculture is decreasing. Consequently, colleges may spend more time and effort recruiting urban students. The availability of diverse opportunities could be an advantage for the agricultural industry. However, to recruit urban students, agriculturalists will need to educate the public and nontraditional groups about diverse career opportunities. This will require a variety of approaches which should be evaluated for effectiveness.

References

American College Testing Program. (1989). High school student perceptions of agricultural college majors and careers (Report presented to The Farm Foundation). Oak Brook, IL.

Betts, S.I. and Newcomb, L.H. (1986). High-ability urban high school senior's perceptions of agricultural study and selected recruitment strategies. NACTA Journal, 30 (4), 14-17.

Educational Research Service, Inc. (1980). Indicators of future school enrollments: A reference manual for planners. Arlington, VA: Educational Research Service, Inc.

Freeman, R.B. (1980). Why is there a youth labor market problem? In B.E. Anderson & I.V. Sawhill (Eds.) Youth employment and public policy (pp. 6-32). Englewood Cliffs, NJ: Prentice-Hall, Inc.

Kerlinger, F.N. (1964). Foundations of behavioral research (2nd ed.). New York, NY: Holt, Rhinehart, and Winston, Inc.

Pasha, E. (1979). Personal accommodation to educational organizations and the perception of the ideal leader's behavior. Unpublished doctoral dissertation, University of Missouri-Columbia.

Pennsylvania State University, The (1980). A perspective on the 80's: Agenda for action for the Pennsylvania State University. University Park: Board of Trustees. (ERIC Document Reproduction Service No. ED 185 957).

Super, D.E. and Bohn, M.J. (1970). Occupational psychology. Belmont, CA: Wadsworth Publishing Company, Inc.

Super, D.E. and Overstreet, P.L. (1960). The vocational maturity of ninth grade boys. New York, NY: Teachers College, Columbia University.

Thompson, J.C. and Russell, E.B. (1989). Beliefs and intentions of counselors, parents, and students regarding agriculture as a career choice, Proceedings of the 16th National Agricultural Education Research Meeting, Orlando, Florida, pp. 29-36.