

## **Student Images of Agriculture: Survey Highlights and Recommendations**

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Agricultural colleges across the nation have seen an enrollment decline during the past decade. One study of agricultural colleges at 77 universities showed an 18% decline in undergraduate enrollment between 1981 and 1984 (Robbins, 1985). The University of California, Davis (UCD), which currently has the largest undergraduate enrollment of any agricultural college in the United States, has seen a similar enrollment drop, from 4,786 students in 1977 to 3,846 students in 1984. This trend has worried administrators as well as leaders in the agribusiness community who anticipate future shortages of trained personnel. The National Association of State Universities and Land-Grant Colleges Resident Instruction Committee on Organization and Policy (RICOP) issued a report in 1982 indicating that 13% of the jobs in the total food and fiber industry are unfilled or are filled by underqualified individuals (RICOP, 1982).

To determine the reasons for the enrollment drop, the College of Agriculture and Environmental Sciences (A&E) at UCD commissioned a survey of high school students in its major recruitment area. Briefly, the survey involved questionnaire replies collected from 540 high school juniors and seniors, equally distributed among urban, suburban and rural high schools. The sample was well balanced for gender and ethnicity. In addition, two focus group discussions were held with minority high school students with the specific objective of learning how to attract more minority students into agricultural colleges. An account of the methods and statistical findings of the survey is presented elsewhere (Mallory & Sommer, 1986). The report describes the highlights of the results and recommendations for action.

### **Highlights of Results**

The high school students studied were unaware of the range of opportunities in agricultural careers. They equate agriculture with farming alone, or in some cases do not even know the meaning of the word. (Some thought it was a kind of culture studies program.)

Students characterized a career in agriculture with the following terms in order of importance: outdoor, hard work, natural, healthful, male, independent, safe, blue-collar, boring, insecure.

The juniors and seniors identified a stable and secure future as their top priority in choosing a career. Second in importance was the ability to earn a large income. Their lowest priorities were being one's own boss and making a contribution to society.

When asked to describe agriculture using the same phrases provided for career priorities, the students rated a career in agriculture highest in making a contribution to society and being one's own boss; they rated it lowest on the qualities of providing a stable and secure future and earning a lot of money. These ratings are just opposite of what the students desire most in a career.

A plurality of the students in rural schools, those whose parents had worked in agriculture, and those who had lived on farms reported that they would like a career in agriculture; urban students and those with no farm experience were more likely to think that they would not like such a career.

Students reported very little encouragement toward studying in a college of agriculture. When asked who had ever suggested that they attend a college of agriculture, 78% replied that no one had done so. High school counselors had suggested agricultural college to only 2%, or 11 of the 540 respondents.

Although 42% of the students' parents have at one time held agriculture-related jobs (as students defined them), only 17% had considered a career in agriculture for themselves and only 12% believed they will actually work in agriculture.

When presented with 12 career areas related to majors in A&ES, the students rated in order of most exciting: environmental management (71% thought it exciting), genetic engineering, aquaculture, biotechnology, applied economics and applied biology. The least interesting fields were plant science, toxic waste specialist, food science, food safety, community nutrition and farming.

Eleven majors in A&ES were similarly evaluated for student interest, with the following ranking: human development (69% interested), design, animal science, environmental studies, nutrition, community studies, food science, agricultural economics, soil and water science, plant science and textiles. These ratings roughly parallel existing departmental enrollments at UCD.

Female high school students were more certain than males that they would attend college, but significantly fewer females thought they would like a career in agriculture, had considered such a career, or thought that they would really work in agriculture someday.

The rural students were more experienced with agriculture, liked it better for a career, and considered themselves more likely to go into agriculture than the other students. Urban students had the most negative attitudes toward agricultural careers, and the suburban students had less definite opinions.

Minority students were a particular focus of outreach for agricultural colleges. During the focus group discussions, some minority students mentioned that their parents had expressly told them not to go into agriculture because it offered no security or prestige, poor pay and little chance for advancement. Among those from urban areas, there was also mention that the student had never considered a career in agriculture because there was no exposure to that line of work.

In their written comments, many students admitted to a lack of knowledge about agriculture in general and a poor image of agricultural careers as involving primarily hard, boring and financially unstable work. While expressing disinterest in an agricultural college, several students said they intend to work in specific fields for which an agricultural college would provide an excellent education.

#### Recommendations

1. Initiate a public relations campaign, with television advertising, movies and/or public service announcements. Focus on exciting,

high-tech agricultural research and enterprise, and feature alumni of agricultural colleges in their current occupations. Specific outreach programs should be targeted to high schools with high minority enrollments and should include discussion of scholarships, fellowships and other financial assistance. Outreach measures should include field trips to food and fiber industries and outside speakers, particularly minority men and women working in agricultural fields who can publicize the range of career options available to young people.

2. Distribute a brochure to high school sophomores and juniors detailing the exciting, good paying and available jobs in agriculture. Use home mailings to contact the parents as well. Emphasize that there are jobs for well-educated graduates of an agricultural college, that agriculture graduates work in many exciting areas, and that they make good salaries.

3. Create a high school mini-course on agriculture and the environment.

4. Continue and expand summer apprenticeship programs in agricultural specialties.

5. Work with the Farm Bureau Federation Agricultural Education Programs "Urban Students and Agriculture," and "Farmer in the Classroom," field trips to the country, teacher workshops and tours, university programs and a rural/urban exchange program. Continue to offer the Farm Bureau's "Agriculture in the Urban Classroom" through the Cooperative Extension Service.

6. Provide workshops for high school counselors and science teachers, with an emphasis on the variety of careers available and the salaries earned by graduates of agricultural colleges. Encourage the addition of agricultural material to the curriculum. Publicize successful agricultural classes being taught at California high schools.

7. Some existing majors carry titles that do not interest students. In listing majors in Agronomy, Nematology and Pomology on circulars and recruitment posters, it is important to tell students what people in these fields do and how these activities fit into a larger picture of the economy. Our recommendation is to emphasize the activities and careers in modern agriculture. Plant Science is an exciting field once the student thinks about ways to increase the disease-resistance of existing varieties or developing new plant varieties suitable for arid areas.

8. Take promotional exhibits on agricultural careers to county fairs, with a narrated slide show focusing on new, high-tech aspects and the importance of agriculture to our economy. Have expert role models and recruiters there to give out the brochures and posters to counselors, 4-H clubs or others who would post them in appropriate locations.

#### Implementation

The UCD College of Agriculture and Environmental Sciences is now implementing these findings in its outreach programs. For example, the college emphasized majors in previous years in its brochures and posters publicizing Agricultural Sciences Field Day, an event which attracts thousands of high school students from northern California. This year's publicity has switched from majors to careers, informing students what

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