A Novel Way to Recruit Women Into the Applied Sciences

by Nancy S. Bragg

To maintain a healthy agriculture program in a period of declining student enrollment, colleges must recruit actively. In response, the College of Life Sciences and Agriculture at University of Maine enhanced its recruitment program with a booklet about female role models. The focus was placed on women in the applied sciences. From responses to a 1988 questionnaire, 23 profiles were written and organized into the booklet aimed at junior and senior high school female students, their parents, and teachers. After extensive distribution, several state groups "bought into" the project and used the publication in career programs and projects. Recruitment results may take several years to be recorded, but, now these young students have more information on which to base their plans for the future.

Introduction

Student enrollment in university agriculture programs has declined since the mid-1970s. Maine has not been spared. In 1978, for instance, enrollment at the University of Maine in agricultural undergraduate programs was 1,025. In 1988, the same programs had 424 students. The combination of fewer 17- and 18-year-olds in the United States, and other factors associated with farming, has cut student numbers in half. As a result, college administrators began to modify and/or eliminate some agricultural programs, and actively recruit students into surviving, modified programs. This approach needs to be examined to develop a workable enrollment management plan for the future.

Too Many Programs. . .or Too Few Students?

The recent, renewed efforts to recruit students into agricultural courses at several land grant universities appear to have been successful. A U.S. Department of Agriculture Cooperative State Research Service newsletter (Experiment Station Letter, 1988) listed several universities that experienced increased agricultural college enrollments in 1988. Overall, the picture looks encouraging. But, the fact remains that there is a limited number of motivated college-age students to sustain these increasing enrollments over the years ahead. A pro-active approach will be needed to match the number of students with the needs of the food and fiber industries for qualified employees.

A 1985 USDA national assessment of employment opportunities for college graduates in the food and agricultural sciences indicated that, during

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the ensuing five years, U.S. colleges and universities are expected to produce insufficient numbers of graduates with food and agricultural expertise to fill important scientific and professional positions (Coulter, Stanton, and Geocker, 1986). Interest in the nontraditional student over age 25 also has been increased. Up until now there have been too many separate programs for too few students. Often a program of study may be preserved only to have the program listed in the catalog with one or two students in the major. Developing interdisciplinary studies will help bring many interests together for a topic, such as sustainable agriculture, that looks at all parts of the agrisystem. Concentrating on strengthening programs will also focus the recruitment efforts (Hayes, 1988).

The academic programs available under the lable of agriculture must be relevant to the world's economic needs. New interdisciplinary programs with a general core curriculum and increased electives appears to be appealing to the next generation of agriculturalists who will be changing careers at a projected four times over their working years. Subject areas such as natural resources, landscape horticulture, sustainable agriculture, and food science (applied chemistry) are being designed with this in mind.

Recruitment of Women into Agriculture

One segment of the population with a potential for students in agriculture has not been recruited adequately. Women account for more than 50% of the work force. Research studies show that young women, traditionally, have not sought careers using math and science because of complex factors, such as stereotypes and phobias (Campbell, 1986). A temporary upward trend for increased numbers of women in science has leveled off and appears to be declining again. There are many reasons why women don't study math and science, including misinformation about the difficulty of the field and what the work actually involves (Ivey, 1987).

Because of this perceived lack of information about the applied sciences and agriculture, the College of Life Sciences and Agriculture at University of Maine saw the opportunity to reach young women and provide real career information for them. During the summer of 1988, a survey was sent to 23 selected women who were associated with the college. These faculty, student and graduate women were asked to respond to a questionnaire about their careers in the applied sciences because of success in their nontraditional career areas. They were asked to indicate who encouraged them into the field, what special abilities were needed for their job, what the advancement opportunities were, and what a typical workday was like.

The response to the questionnaire was overwhelming. Of those asked to respond, 100% did so. From these responses, 23 profiles were written and organized into a booklet entitled, "Careers for Women in the Applied Sciences: Profiles of Women Making A Difference" (Bragg, 1988).

Careers For Women in Applied Sciences

The booklet was written for junior and senior high school female students, their parents, and teachers. The career areas were divided into two categories of potential interest to young women. Such key words as environment, people, food, plants, applied economics, and animals were used. A preface spoke

directly to the students about careers in science: a. High school math and science would open the door to preparing for these careers in the applied sciences. b. The two-income family may well be as common in their generation as it is today. c. College preparation for an interesting and higher paying job in the applied sciences, rather than for traditional "women's careers" had the potential to increase the quality of their lives (Cobb, McIntire, Pratt, 1987).

An extensive distribution process was devised for the careers publication. A press release and copies of the booklet were sent to education and science leaders throughout Maine. Several state groups, such as high school science teachers, guidance counselors, and principals' associations announced the availability of the booklets in newsletters and regional meetings. State newspapers, and radio and TV stations also received the news releases. Extension 4-H Clubs, Girl Scouts of America councils, career consortiums, and women's groups, such as the American Association of University Women, showed interest in using large quantities of the booklet for their career projects. More than 9,000 copies were printed and distributed. Posters and a speakers bureau booklet were included with the mailings.

Aspirations to Reality

The profiles in the careers booklet gave many examples of interests turned into vocations. When people have a chance to reflect on how they chose a career area, they often give a simple reason. A good biology teacher in high school or a 4-H Club experience were two such reasons listed by women profiled.

The booklet was divided into several areas, as noted earlier: environment; people; food; applied economics; plants; animals.

Those profiled in the environment section listed such specific career interests as a need to: a. answer ecological questions by studying invertebrates; b. work in the business arena with an applied environmental and recycling focus; c. work on practical problems important to society, such as growing food; and d. see how insects adapt to the environment.

For young people to be able to turn aspirations into vocations it is important to have role models. This publication provided role models. By example, the role models open a whole world of ideas to young and old alike. This booklet on careers also has meaning for women over 25 years of age, as well.

Results

The aim of "The Careers for Women" booklet was to inform junior and senior high school female students about opportunities in the applied sciences using role models. The results of this recruitment effort could take up to five years before those of the intended audience reach college age. The key to a positive result will be the sustained interest by the college in encouraging women to enroll in the applied sciences (Report on the Status of Women, 1988). The subliminal effect on teachers and administrators may be difficult to measure. If men and women authority figures consider the applied sciences as an important career area, then the campaign for distributing information about college agriculture programs to the public will be successful.

The University of Maine's College of Life Sciences and Agriculture has many projects designed to recruit students. The combination of up-to-date curriculum and career information has a positive effect on enrollment—enrollment figures may start to climb again. Only time will tell if the agriculture programs have responded correctly to the needs of the next generation of university graduates.

We will continue to track the graduates of our programs and to produce more booklets, such as the one described, about women in the applied sciences. This novel approach—highlighting women role models—we feel has captured the attention of potential students, their parents and teachers. The results are to be recorded in future enrollment numbers and careers to which college women aspire in the next generation.

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