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Providing Practical Training For Non-Farm Agriculture Students

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Abstract

The most efficient, most highly productive agriculture in the world has been fueled by a highly sophisticated agricultural technology which has been developed and applied to real agriculture problems on farms and in agricultural business and industry. Historically, most professional agriculturists have had a background in practical agriculture, but an alarming majority of college agriculture students today come from non-farm or urban backgrounds. Although agricultural graduates are still getting jobs, colleges and universities are genuinely concerned about the implications of graduating students who may not be able to relate and apply agricultural technology to practical situations. Some institutions are developing a capability to provide practical training for agriculture students. The successful experience of these institutions suggest some guidelines for providing practical training.

The New Breed of Students

Enrollments in colleges of agriculture have been steadily increasing. Young people are becoming keenly aware of career opportunities in agriculture. Placement possibilities have been good for college agricultural graduates. Included in this increased enrollment are substantial numbers of women and urban students, many of whom are motivated by a strong interest in the environment and a desire to return to the soil. In some colleges of agriculture, women make up as much as one-third of the total enrollment in agriculture. If enrollments in home economics are included, women make up as much as 50 percent of total enrollments in some colleges of agriculture. Approximately two-thirds of total enrollment in agriculture now comes from non-farm or urban backgrounds.

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Employer Preferences

A practical farm background may not be a requirement for employment, or for success on the job, for some agricultural occupations, especially those occupations based upon the application of highly specialized agricultural science and technology; however, a substantial portion of employers of college graduates from production agriculture-oriented programs still prefer applicants with a practical farm background.

In most colleges, there aren't enough graduates with a practical agriculture background to satisfy fully this employer preference. Colleges and schools of agriculture are keenly aware of these deficiencies in the practical aspects of agriculture among their students from urban areas and those from highly specialized farming backgrounds. There is genuine concern among many of these institutions for developing means for coping with this deficiency.

Why do employers want their professional workers to have a practical farm background? Reasons may vary according to the nature of the establishment, the products-manufactured, the services provided, and the clientele served. A universal need of many agricultural establishments is to bring agricultural technology to bear upon the solution of practical agricultural problems. Capability to solve problems is contingent not only upon technical expertise, but also upon the ability of the professional agriculturalists to understand practical problems and to conceptualize possible solutions to these problems. Persons with a practical background in agriculture are usually preferred for agricultural teaching and extension work.

Providing Practical Training

Several alternative approaches could be considered as a means for providing practical training for agriculture students with an urban background:

1. Maximize use of existing university or college research farms, greenhouses, and orchards for field trips and other observational experiences, and utilize these farms to the extent possible for skill training without interfering with research activities.

2. In addition to research farms, or university farms which are dominated by research activities, designate and develop or adapt an area of university or college farms to be used exclusively as a university or college teaching farm. The teaching farm might include all or part of the following areas, facilities, or features:
 - a) A multi-purpose agricultural arena - to be used for crop and livestock judging, skill demonstrations, machinery adjustment and calibration, and exhibits.
 - b) A crop museum where crops are grown for exhibit and as a source of samples for plant science laboratory work.
 - c) A land laboratory where students might try out various crops, varieties, and practices.
 - d) A greenhouse to be used exclusively for laboratory work by students.
 - e) An area for trying out field adjustment of machinery and new innovations in machinery.
 - f) A garden area divided into small vegetable or ornamental plots which could be assigned individually to students.
 - g) A tractor driving course where tractor driving can be taught.
 - h) Small scale facilities for irrigation or for supplemental irrigation.
 - i) Facilities for housing and caring for small animals and poultry.
3. Maximize employment of students or university or college farms, and involve regular, non-academic farm staff in providing on-the-job instruction.
4. Develop an agricultural intern program, and offer university or college credit to students placed for both farm and non-farm experience in the program.
5. Present an award for students with outstanding performance in practical training, and recognize these students at an appropriate occasion where other awards are given for academic excellence.

Make Experience Programs Competency-Based

A curriculum committee or committees, with input from students and from prospective employers in typical agricultural occupations, should identify the competencies required for entry level job performance in those occupations. Students should be guided and involved in assessing their own competencies in relation to the job performance requirements of agricultural occupations to which they aspire. Ideally, the agriculture student should then be involved in helping to plan, with

an advisor, the practical training program or activities required to develop the skill competencies needed for job entry.

Some skill competencies may be required in common by all students or by groups of students in a certain curriculum. Group instruction, skill training, or other learning activities should be planned in response to this need. Since students will have individual differences in their practical agriculture background, level of skill competencies, and job aspirations, the practical training or skill development program would also have to be individualized for each student. Placement for part-time work or intern experience would probably be useful techniques to use here.

Agricultural Internship Programs

Although each of the approaches listed above has merit and should be considered as a means for providing practical training in agriculture for college students, the internship in agriculture may offer the best possibilities for rapidly expanding the capabilities of an educational institution to provide systematic practical training to large numbers of students. Community colleges have substantial success in placing students for supervised agricultural work experience as a required part of some of their technology programs. A few universities have developed successful agricultural internship programs, and others are becoming interested. Successful university internship programs appear to have the following features:

1. University credit in agriculture is allowed, on an elective basis, for intern experience with grading on a satisfactory-unsatisfactory basis.
2. Students submit a formal application for the internship and, in some cases, identify and propose a training site.
3. Students enter into an agreement with the university and the employer, specifying the training objectives and proposed experience activities.
4. Students typically are paid a reasonable wage by the cooperating employer for work performed during the intern experience.
5. The university may use a special liability statement to cover the training situation, since the students placed in the internship may not be protected for injury under Workman's Compensation.
6. The student submits periodic, perhaps weekly, written reports and completes a *final self-evaluation* report.
7. The cooperating employer provides on-the-job instruction and supervision, and submits a final written evaluation.
8. A university staff member is assigned to make supervisory visits to the internship site and to complete a final evaluation of the student's performance.