IS ANIMAL SCIENCE TRAINING FUTURE TEACHERS?

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According to Simon and Grant (1966, 1968), 29% of the graduates receiving the Ph.D. degree in agriculture during 1960 to 1962 accepted positions as teachers in colleges or universities. The projected yearly demand for all instructional staff (new and replacement) during the period 1967 to 1977 has been estimated by Simon and Fullam (1967) to be approximately 45,000. During this period, a predicted 0.8% of the enrollment in higher education will be in agricultural curricula. This could be interpreted to imply that 360 additional agricultural faculty members will be needed annually in the next decade. It has also been estimated by Simon and Fullam (1967) that only 830 earned agricultural doctorates will be granted each year for the period 1966 to 1976. Assuming that the institutions of higher education continue to solicit teachers having the Ph.D., at least 40% of the doctoral candidates could be absorbed into higher education. Therefore, is animal science placing enough emphasis on teacher preparation in present doctoral programs?

Considerable discussion at the teaching symposium at the 60th annual meeting of the American Society of Animal Science was concerned with the adequacy of the present Ph.D. programs. Questions were voiced and opinions expressed regarding the ability of existing doctoral formats to sufficiently train future teachers of animal science curricula. A complete evaluation could not be made in the limited time available, but it was generally agreed that further evaluation of teacher preparation was warranted. It was suggested that one avenue of approach would be for more journal articles to be submitted for publication in the teaching section.

One segment of the symposium prompted this article in an attempt to generate some thought, discussion and, hopefully, some needed reforms in existing doctoral programs. A Ph.D. candidate in the process of completing the degree was scheduled on the program to discuss this general subject, but since one was not present, I will attempt to use the Journal of Animal Science as a platform from which to express my views. Most of the points offered here have been discussed with fellow graduate students, and, since having recently received the Ph.D., I will attempt to initiate discussion.

Animal Science departments granting the doctorate should evaluate themselves in at least six areas: (1) selection of graduate students, (2) assistantships and compensation, (3) designation of advisors, (4) language requirements, (5) teacher supervision and (6) employment assistance.

Selection of Graduate Students

In discussing this topic with graduate students at other land grant institutions, I found that perhaps this area deserved first priority for reform. My suggestion would be to include on all assistantship applications an opportunity for a student to express his desire to become a college teacher. Even though the vast majority of the assistantships offered would continue to be in research, it would enable limited screening to take place or possibly even allow the department to more critically allocate new graduate students. I would even expand on this by recommending that at least 10% of the graduate enrollment (if available) in the department be placed on a teacher apprenticeship program. This could be done regardless of the classification of his assistantship and would not be intended to replace research responsibilities.

Assistantships and Compensation

Funding of graduate programs is probably as frustrating as the budget of the graduate student with a family. Priorities have to be established and limitations imposed. Departments should not be expected to provide assistantships to all applicants, but, by the same token, they should not limit themselves to specific categories such as research-oriented candidates. Quality should be emphasized rather than quantity. To me, this is closely associated with salaries and, in order to induce

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the superior candidate (especially one with a family), justification conceivably would indicate that the number of assistantships could be reduced and the compensation increased for those that remain. True, every staff member may not have funds enabling him to have a graduate assistant, but which would benefit the department the most? This could be the very stimulant needed for more cooperative research within the realm of animal science or even in individual sections such as ruminant nutrition.

Money continues to "talk", and the animal science departments are going to have to learn the language. The agri-business industry can be expected to increase their efforts to recruit the top students, but it is my belief that we, as animal scientists, can compete by offering the proper incentive. Whether we like to admit it or not, a portion of the incentive is salary.

Designation of Advisors

Graduate students generally have a specific faculty member in mind when they write to make application for a research assistantship. My question concerns the student that desires to teach. Should his advisor be a noted researcher? The answer would be easy if all researchers were good teachers and there are definitely those that do excel in both teaching and research. For sake of discussion, I would like to suggest that each department designate specific advisors for those students interested in teaching, regardless of their area of specialization. These advisors should be the recognized outstanding teachers and would be responsible for supervising the teaching apprenticeship portion of the graduate students program. An additional advisor representing the area of research specialization would supervise the candidates research program. Both advisors would serve as the nucleus of the committee that recommends content of the individual’s doctoral study program. As indicated, this could be one individual if he is outstanding in both research and teaching.

Language Requirements

The foreign language requirement has been revised, reviewed, or reaffirmed by many institutions. Generally speaking, the requirements have been liberalized, offering more alternatives to the graduate student. My only attempt in this section will be to offer one primary recommendation. For those students preparing for a teaching career, I would suggest a collateral field consisting of courses in college teaching, philosophy of education, audio-visual aids, psychology of learning or equivalent courses. At least this would be an attempt to prepare them more adequately to meet their responsibilities as teachers. The decision regarding the second collateral field or a foreign language should be consistent with departmental requirements.

Teacher Supervision

How many college teachers received supervised teacher training during their doctoral program? Why not create an apprenticeship program to supervise and stimulate superior teaching? I would suggest considering a seminar devoted to college teaching. Use this as an avenue to promote development of teaching skills, to improve public speaking, to install self confidence, and to utilize selected audio-visual teaching aids. After completion of the seminar, give the student an assigned topic. Let him develop an outline for a lecture to be given to one of the animal science classes. Then let the student present the lecture and offer suggestions for improvement. This would be done under the supervision of the advisor responsible for teacher training.

Employment Assistance

It does not make any more sense to assume that all new Ph.D.’s are capable of being good teachers than it does to insinuate that all present animal science faculty members are good teachers. Therefore, I believe that an important part of an advisor’s responsibility is to counsel and assist his advisees in the employment process. The American Society of Animal Science can and should provide the initiative to create and maintain up-to-date listings of research and teaching positions available. These lists should be provided at periodic intervals to colleges and universities offering the doctorate in animal science. It can become an ordeal to be waiting for a reply to an application or for a final decision on a position for which you have interviewed; especially when there is a delay of 3 months between application and the departmental reply. For courtesy’s sake, all applicants should be notified when a position is
definitely filled or, as in recent instances, cancelled because of insufficient funds.

Summary

Brown and Thornton (1963) suggest several plans for increased competence in college teaching. Among these are separate doctorates for the teacher and researcher in each discipline; a revitalization of the master's degree as a teaching degree; the establishment of an intermediate degree based on 2 years of graduate study; or a conscious effort to plan that all interested doctoral candidates undergo a meaningful and supervised experience in teaching. The last alternative appears to me to offer the greatest potential for animal science disciplines and served as a basis for my suggestions. It seems the opinion that good teachers are born rather than trained is too prevalent. If men must be born, not taught, to teach, is not eugenics the only source also of doctors, lawyers, chemists and other professional people.

Literature Cited