GRADUATE EDUCATION IN MEAT SCIENCE AS SEEN THROUGH THE EYES OF A RECENT GRADUATE*

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It is a privilege to have this opportunity to share with you some thoughts on graduate education in Meat Science from the viewpoint of a new college teacher.

I believe we should emphasize the following factors to have a successful graduate program in the future. First, we must work to make the graduate program more flexible with fewer instead of more absolute requirements. Learning is an individual experience; thus, the graduate program should be geared for the individual taking into account his educational background, experience, interest and occupational desires. Second, the research conducted for the thesis should be formulated and conducted mainly by the graduate student with leadership from the major professor and guidance committee. More leadership is logically needed for the masters candidate; however, a doctoral candidate should have the freedom to choose his own research area, design the experiment and direct his own research with little guidance from the major professor or committee.

I have been asked to comment on the following questions:

1. For subsequent college employment, what type of graduate experience is now needed? The answer to this question depends upon the specific meats position to be discussed. In my own case, I am the only meats man on our Animal Science staff at L.S.U.; thus, I am responsible for undergraduate and graduate teaching, research and extension. A person in my position needs a strong background in Animal Science with special training during graduate work on research and teaching techniques. Another recent graduate in Meat Science may be in a Food Science Department with several other experienced faculty members. In this case he may have needed a different slant on his graduate training to be qualified for the job. During graduate school the student does not know what type of jobs will be available upon graduation so he must try to have a somewhat general background to be prepared for more than one position.

The graduate program also depends upon the type of undergraduate education the student has received. Geyer (1969) outlined a program to meet the future educational needs of Animal Science students. If a student does not have a strong foundation in mathematics and

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physical sciences then he should take these courses at the beginning of graduate school. At past Reciprocal Meat Conferences (RMC) some excellent outlines have been presented on the type of courses recommended for a graduate student in meat science.

2. How broad or specialized should the training be?

Again the answer to this question depends upon the individual position. At the 1969 RMC, Dr. D. L. Huffman predicted that graduate programs will likely become more specialized during the 1970's because of the large quantity of new knowledge we are gaining in science. I agree that not many meat scientists can become experts in every area of meat science and technology but I believe the graduate student should be exposed to as much as possible. Also during the 1969 RMC, Dr. R. B. Sleeth emphasized that there is still a need in industry for specialization but the research scientist must also be able to talk intelligently about any phase of the meats industry. From my standpoint, I feel we need a broad training with specialization during the doctoral program.

3. What type of training, experience or program is needed to prepare college teachers?

Most of the qualities that make a good college instructor cannot be acquired from the classroom or textbooks but actual teaching experience can be a real asset. From the standpoint of the graduate student it would be best to set up a program where the graduate student would be responsible for teaching an undergraduate course or a laboratory section. This may not always be possible and some undergraduate students may object to this program. A more workable program may be that the graduate student should be required to assist with at least one course during his graduate work. This should include helping prepare the outline, preparing and presenting one or more lectures and submitting questions for an exam.

Another idea may be to conduct a seminar on educational principles and methods. Faculty members in your department who are recognized as good teachers and guest speakers from other departments could be asked to participate. This idea was tried at Michigan State and seemed to be successful. A graduate course on teaching methods and educational principles could also be taught in the department or a graduate student might consider taking courses in the education department. This is stated more as a question than comment. College teachers and graduate students can also gain ideas from papers on educational methods such as the paper by Kauffman et al. (1971) and papers given at the educational sessions of the RMC.

4. What should be the purpose and function of a graduate assistant?

Like all graduate students, his primary purpose is to obtain an advanced degree. The second purpose of a graduate assistant is to

work toward the success of the total meats program. This could be especially true during busy times such as judging contests, carcass shows, conferences, etc. All the work assistants are required to do should help them gain new knowledge and techniques that will benefit the graduate student. A case in point would be requiring a certain graduate assistant to teach a section of a course several times just because he may be more qualified to teach that course than some other graduate assistants.

Summary

Graduate education in meat science must be flexible and primarily geared to the individual to remain relevant. While some colleges still have only one meat scientist who must try to cover the entire field, the trend is toward specialization. A program to train future college teachers needs to be established in order to maintain excellence in college teaching. While pursuing advanced degrees, graduate assistants should work for the success of the total meats program by helping at special functions, teaching classes and conducting research.

Literature Cited

Geyer, R. E. 1969. Meeting the educational needs of future animal science students. J. Anim. Sci. 29:359.

Huffman, D. L. 1969. Student preview--1969. Proc. Recip. Meat Conf. 22:17.

Kauffman, R. G., J. F. Thompson, D. B. Anderson and R. E. Smith. 1971. Improving the effectiveness of teaching animal science. J. Anim. Sci. 32:161.

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R. F. PLIMPTON: I have a growing concern. I feel I'm more confused now than when I entered at 8:00, but that's a personal problem we won't go into. The next speaker this morning I would like to consider a recent graduate. If I'm recent, he's recent. This gentleman is Dr. Harold Herring who is Section Head of Food Chemistry, the Research Division of Armour & Company and I think it's time that we got down to brass tacks and heard what industry is thinking from the standpoint of our graduate programs. Harold.

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