

Graduate education in animal science survey results

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Graduate education in animal science is at a crossroads at many colleges and universities. As faculty numbers have dropped and research areas have become increasingly specialized, possessing the critical mass of students for classroom instruction on advanced animal science topics has become impossible for many institutions. An online survey was undertaken during the summer of 2010 to assess the quality of graduate instruction. This survey was sent to graduate students members of the American Society of Animal Science, American Dairy Science Association, and Poultry Science Association. In addition, an open listening forum was held during the Joint Annual Meeting of the Federation of Animal Science Societies during the national meeting in July, 2010. One graduate student representative was invited from every major animal science institution that attended the meeting.

One hundred respondents completed at least part of the 12 question survey on their experience of graduate education in animal science. The level of education pursued was 34% Masters of Science and 66% Doctor of Philosophy. Animal areas represented by the survey were 19% beef, 15% swine, 27% dairy, 25% poultry, 2% equine, 6% small ruminant, 2% companion animal and 4% other animals. Research areas emphasized were 54.1% nutrition, 8.2% animal breeding and genetics, 5.1% physiology, 8.2% management & production systems, 10.2% reproduction, and 14.3% were studying other emphasis areas.

Ninety-three graduate students identified the academic institution that they were attending. When divided into the 4 major United States census areas, 8.8% were from the North East, 34.1% from the Midwest, 31.1% from the South, 8.8 % from the West, 7.7% from Canada, and 10% from other countries. Thirty-two different Land Grant universities were represented in the survey.

Satisfaction with the current level of animal science courses available to students was 49.5%. Basic graduate courses were available to 71.7% of the survey takers. 60.6% of animal science departments teach advanced graduate courses. Participating in internet based graduate education to augment currently offered classes was rated 87% favorable. When asked about their preference in distance based instruction, 65.3% preferred live lectures broadcast from another university, whereas 34.7% preferred self paced online learning. Following graduation, 37.8% plan a career in industry, 38.8% academia, 16.3% are undecided, and 7.1% plan a career in a different area.

When asked in an open format question what courses they would take if newly offered, the responses were categorized as follows; 6 indicated a basic graduate level ruminant nutrition class, 12 an advanced

ruminant nutrition class, 16 a basic graduate level nutrition class, 12 an advanced nutrition class, 8 animal behavior, 7 animal welfare, 4 meat science, 7 animal science statistics, 9 management & production, 3 reproduction, 5 genetics, 4 species specific classes, 2 lactation physiology, 12 physiology, 3 food science, and 16 other requests.

When asked in an open format question what courses their department does an excellent job of providing, the responses were categorized as follows; 9 indicated a basic graduate level ruminant nutrition class, 9 an advanced ruminant nutrition class, 17 a basic graduate level nutrition class, 15 an advanced nutrition class, 2 animal welfare, 3 meat science, 2 animal science statistics, 6 management & production, 9 reproduction, 6 genetics, 1 breeding, 1 species specific class, and 10 physiology.

In conclusion, strong demand exists for additional graduate education in animal science. Most students are accepting of courses offered by some sort of distance education; online courses would allow students to seek out courses that would complement their home department course offerings. A strong synergy exists between courses identified as in need along with excellent courses currently provided. Instruction across universities would allow an increase in enrollment numbers for instructing instructions, better training for all graduate students, and more competent future animal scientists.