

## Section XII: Appendices

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### Appendix H. Response to Graduate School

#### Review Questions From the Graduate School

- 1. Fall 2003 enrollment in the Animal Sciences was 32 students (13 international, 19 domestic; 16 female, 16 male; 17 Ph.D., 15 M.S.). How do these figures compare with other Midwest graduate programs? Nationally? Have current challenges in attracting international graduate students affected the recruitment of international students to the program for 2004-05?**

*The data for international vs domestic and female vs male is not readily available; however, we sent a survey to the Big 10 Animal Science DGSs by e-mail to attempt to compile this data. The information we received was very similar with respect to both female vs male (all were 50/50) and international vs domestic (all were 35% international/65% domestic. The average enrollment for Animal Science graduate programs in the Big 10 is 32 Ph.D. and 38 M.S. for 2003. The University of Minnesota's Animal Science graduate program averages significantly lower enrollment. The current U.S. requirements for foreign nationals, although perhaps cumbersome for students and ISSS, has not been an impediment to attracting international students to our program. The primary restriction to accepting students into the program is lack of funding for assistantships. There has been a two-fold increase in the cost of funding an assistantship over the last 5 years. This has been created due to increased tuition and healthcare expenses (fringe rates). With this economical model of supporting an RA vs a Postdoc and the comparison of productivity, the balance is inclined to the Post-doctoral position.*

- 2. Animal Science never nominates its students for Graduate School fellowships. Why is this?**

*The Animal Science graduate program has a rolling application and has no set deadlines for a given semester. A fair number of students applying to graduate school begin as pre-veterinary students and view Animal Science as an alternative if they are not accepted to Veterinary College. They do not receive a response from Veterinary admissions until mid to late spring semester. Therefore, applications to the Animal Science graduate program do not always coincide with applications for graduate school fellowships, however, when an outstanding application is received and meets the Graduate School deadline, the applicant is nominated. There is a greater tendency to submit nominees for graduate school fellowships for current graduate students based on performance in graduate school. In addition, there are several fellowships in the Department such as the Donker and Shoffner fellowships that are specifically awarded to Animal Science graduate students and industry sponsored fellowships such as the John Brandt fellowship awarded to an outstanding dairy student. Also, in the first three years of the Hueg-Harrison fellowship in COAFES, two Animal Science Ph.D. students were recipients.*

3. **What does the field of Animal Science encompass? Is this subject matter typically offered in a free-standing graduate program? What schools offer similar programs? Is this content ever offered in a broader context? If so, please describe this context. Would it be possible to offer this content under the Veterinary Medicine umbrella? Why or why not? (The current Student/Staff Directory lists the Department of Animal Sciences with separate telephone numbers for each of the following areas: an animal arena, animal barns, beef cattle, dairy cattle, poultry, sheep, swine, Rosemount poultry, animal science extension, and meat processing and sales. The Swine Center is a separate facility that is under the aegis of both COAFES and the College of Veterinary Medicine.)**

*The Animal Sciences Graduate program offers five areas of emphasis including: genetics, growth biology, nutrition, physiology and production systems. Students also have the option of taking a management component in conjunction with the specialization area. In addition, there is a focus on individual animal species including, poultry, beef cattle, dairy cattle, swine and sheep. These subject matters are typically offered in free-standing graduate programs. Other institutions in the Big 10 offering the same type of program include Purdue, Penn State, Ohio State, Michigan State, University of Illinois, University of Wisconsin, and Iowa State. Other schools offer Animal Science graduate programs; however, they may vary with specialty areas. It would not be possible to offer this content under the Veterinary Medicine umbrella because of different focuses with Veterinary College addressing animal biology in the context of health and disease and Animal Science addressing animal biology in the context of animal production. Also, loss of visibility of an Animal Science program would most definitely have a similar impact to that with Animal Physiology when it became part of Animal Science.*

4. **The Animal Physiology program merged with Animal Science in 1995, and Animal Science changed its name to “Animal Sciences.” How is the merger working? Are the faculty achieving the goals the merger was designed to accomplish? Why or why not?**

*The Animal Physiology Program was merged with the Animal Science program at the request of the graduate school due to low enrollment. The merger has had a devastating effect on the number of students applying to the Animal Sciences program and who are interested in animal physiology for two reasons:*

- 1) *The degree is being offered in Animal Sciences and not in Animal Physiology. Accordingly, students who are interested in physiology do not apply to the Animal Sciences program.*
- 2) *The complete lack of visibility of animal physiology and the retirement of faculty in classical reproductive physiology, whose positions were partially replaced with faculty in cellular physiology such as signal transduction, electrophysiology and functional genomics, has made it very difficult to attract graduate students interested in classical physiology (reproduction and growth).*

5. **What is the nature of the program's relationships with industry? How do these relationships contribute to the graduate program? Are there opportunities for student support from industrial liaisons?**

*The program's relationship with industry is driven by faculty's interactions/partnerships/etc with industry. Industry indirectly funds assistantship salaries and provides funds to support the research which allows our labs to have the vitality needed for graduate student research*

(\$3,856,702 total over the last 5 yrs). We have also received several John Brandt fellowship awards given to support a graduate student in Dairy Research. Industry representatives support the program by providing speakers for lectures at the DAS seminar series and in graduate student courses.

- 6. According to the current Student/Staff Directory, the department has twenty Professors, four Associate Professors and six Assistant Professors. Are these numbers about right? Are the Assistant Professors sufficient in number to suffuse new energy into the department? Are there other implications for the department in this distribution of faculty among the several ranks?**

*The current faculty composition is 20 Professors, 5 Associate Professors and 5 Assistant Professors. This is a mature faculty group with a lean number of assistant professors. However, given the current budget constraints at the University we have been fairly successful at recruiting at least some new faculty positions and replacements for retirements. Our faculty are able to provide quality teaching and research in all areas necessary to fulfill our commitment to the Animal Sciences graduate program. Our ability to retain this level of quality will depend on replacement faculty when retirements occur.*

- 7. What is research productivity like in the department?**

*The department currently has approximately 12.75 FTEs in research. The faculty are highly productive, publishing on average 3.4 peer-reviewed publications per year, per research FTE and bring in on average ~\$1,832,233 per year in grants and research gifts over the last 5 years.*

- 8. Is the advising load evenly distributed among the faculty?**

*The majority of graduate students in Animal Science are funded by research assistantships. Dependent on the research fund allocations (by % research appointment) and grant monies obtained, the faculty member will have the ability to offer research assistantships. This dictates the number of advisees each faculty member has. It is not the case that graduate students are accepted and then assigned an advisor.*

- 9. The Program Profile, last completed in November 2003, describes seven students graduating three years ago with a degree in Animal Sciences (four doctoral recipients and three master's recipients), yet the program did not know where these graduates were employed. Why is this? What kind of placement assistance does the program provide to its students? Are the faculty certain that its graduates are finding suitable employment? According to the Program Profile, Animal Sciences plans to increase the number of both doctoral and master's students in the program by twenty percent. Are employment opportunities sufficient to warrant this increase in enrollment?**

*We do not have information as to the reference that the program did not know where some graduates were placed. Individual faculty advising graduate students are aware of where their students have found employment. Please refer to the Review Report Document Section IX, Item C. on Page 3 to view a listing of graduate student placement for the last five years. The*

*graduate faculty are confident their advisees are not only finding suitable employment, they are acquiring excellent academic and industry positions. This is further evidenced by the placement listing cited above. The diversity of disciplines within the Animal Science program necessitates that individual faculty provide placement assistance to their advisees. This is a well-accepted and accomplished responsibility. Achieving our plans to increase the number of students in the program will primarily be a function of the available funding for assistantships. Our experience has been that graduates of this program have good range of employment opportunities. Based on our knowledge of animal industry and animal research related fields, the employment market for M.S. and Ph.D. Animal Science graduates is excellent and could benefit from an increased number of graduates.*

- 10. It also appears from the Program Profile that the program does not periodically evaluate its graduate faculty with respect to continued membership, as required by the Graduate School constitution. Is this correct? If so, what plans does the program have to adopt a process and appropriate criteria for periodic graduate faculty review?**

*The DGS and the Administrative Support Staff for the graduate program annually review the membership of our program as to active membership and whether the faculty member advises students and serves on committees. Graduate faculty who do not appear to be actively involved are contacted and a discussion follows as to whether they wish to retain membership and why they have not recently been active. They are removed from the membership if it is not deemed necessary for them to remain. In the future it will be proposed that the Animal Sciences graduate studies committee annually request from faculty a report on their contributions to the program. During this review, a change of membership status can be requested by individual faculty members and voted upon by members of the Animal Science graduate program.*