Mission and Aspirations

Mission: To contribute to the viability and long-term sustainability of animal agriculture by conducting integrated discovery, learning and engagement programs that provide unbiased, research-based information to our student and producer clientele while also enhancing the health and well-being of our consuming public.

Departmental Goals:

- **Discovery** - Conduct research necessary to enhance the sustainability of animal agriculture in a dynamic economic paradigm while maintaining or improving the renewable resources and health of our consumer clientele through a balance of basic and applied studies.
- **Learning** - Provide students with an appropriate depth of knowledge and ability to communicate, to critically evaluate information and apply it in a manner allowing them to be successful problem-solvers while maintaining a thirst for knowledge over their lifetime.
- **Engagement** – Use an interdisciplinary approach to interpret research and develop educational programs delivered in a multitude of approaches in order to anticipate and address needs of animal agriculture and consumer clientele.

Previous Planning/Accomplishments

- Have strengthened collaborative interdisciplinary research efforts in Molecular and Cellular Life Sciences (MCLS), Fetal Programming and Reproductive Biology.
- Have leveraged the five state-funded graduate assistantships by splitting them and requiring soft-money funding of the balance. Assignments are made based on a tiered system giving priority to those who have soft-money funding. Currently have 20 funded ANSC graduate students which highest number in the past 10 years and a 43.9% increase over the average from 1998-2002.
- New faculty hires have all attended grant-writing workshops.
- Established a Laramie Research and Extension Center with a Livestock/Facilities Utilization Committee for more effective and efficient utilization of animals and resources within the Department and College.
- Have utilized both Departmental and Joint (ANVS) Curriculum Committee on an annual basis to assess both undergraduate and graduate course offerings and continue to assess student needs.
- Have expanded internship opportunities for undergraduate students and continue to encourage students to take advantage of these although short of requiring mandatory internships.
- Assessment progress has included exit surveys completed by B.S., M.S., and Ph.D. students for consideration in curricular changes; in addition, our ANSC curriculum has been mapped in relation to our student learning outcomes.
- Departmental specialists continue to support Extension initiatives in Profitability and Sustainability of Agricultural Systems and Nutrition and Food Safety with our limited Extension FTE’s.
Expanded use of Departmental Website to share research results and communicate with our clientele.

Have made annual departmental reports available in County Extension Offices as well as on our website.

Department regularly communicates with clientele through articles published in *Cow Country* and *WY Livestock Roundup* as well as other regional livestock publications and newsletters.

**Relevant Institutional Issues**

The Department of animal science has faculty subject matter expertise concentrated in four general areas. These include nutrition, reproductive biology, meat science and food technology and livestock production systems. New departmental hires in food microbiology and extension/livestock production systems will add depth to all four areas of expertise which should allow us to contribute additionally to areas of distinction defined in Creation of the Future 3.

The Department of Animal Science contributes to several areas of distinction outlined in the aforementioned document. Our Meat Science and Food Technology and Reproductive Biology programs are major contributors to the Life Sciences initiative. The later also includes expertise from Zoology/Physiology, Psychology and Molecular Biology. The Center for the Study of Fetal Programming (CSFP) integrates both of the aforementioned interdisciplinary programs along with our nutrition and livestock production systems groups. It uses sheep and beef animal models to conduct biomedical research with direct implications to human health as well as problems associated with beef and sheep production systems which are so relevant to range livestock production in Wyoming and the West.

In addition to being associated with the Life Sciences, the animal nutrition group is also aligned with the area of distinction defined as a Critical Area of Science and Technology Unique to the Environment. A major goal of this group along with our Livestock Production Systems group is to economically produce value-added products from sustainable, forage-based livestock and agronomic systems. In the current economic environment, this is a critical component of profitable and sustainable livestock production systems in Wyoming and throughout the West.

Our Meat Science and Food Technology program promotes improved human health through enhanced meat animal products and improvements in food safety. New faculty members in this area have added a molecular dimension to Meat Science and Food Microbiology, providing further collaboration with the interdisciplinary microbiology program since food safety and human health issues were described action items in previous academic plans. Meat Science/Food Technology is a critical component that integrates Reproductive Biology/CSFP, animal nutrition and sustainable livestock production systems to the health and well-being of the consuming public.

**Action Items**

**Discovery**

*Situation* - Graduate students energize research programs. Over the past 7 years, the number of departmental state-supported graduate assistantships have dropped by 37.5% (from 8 to 5). We have leveraged those received by splitting and assigning them on a tiered priority system giving benefit to partial grant-funding. We currently have 20 graduate students on stipends which is approximately a 40% increase over our four-year rolling average.
Action 1: Work with upper administration to make an increase in state-funded graduate assistantships a priority so as to double current state-funded GA’s. Seventy-five percent of the new GA’s should be directed toward Ph.D. students. Responsibility: VP for Academic Affairs/Dean of Graduate School/Head/Dean of Ag College/Head. Timeline: 2009-2014.


Action 3: Work within our current budget framework to provide a pool of additional travel monies for each of the four areas of scientific expertise within our department to help fund travel for faculty and/or graduate students to attend scientific meets to further networking with scientists from peer institutions. Responsibility: Head. Completed by August 1, 2009 and continuing annually through 2014 as long as budgets will allow.

Action 4: Request review of Departmental graduate program by Dean of the Graduate School. Responsibility: Head/Dean of Graduate School. Constructive critique to enhance graduate education to be reflected in future graduate student assessments. Completed by June 30th, 2010.

Situation – Continue to strengthen collaborative interdisciplinary research efforts across campus.

Action 5: Additional depth provided by new faculty hires will expand integrated research efforts and extramural funding from USDA, NIH, NSF and SARE in Sustainable Livestock Production Systems, Food Safety, and MCLS while continuing development and faculty participation in Reproductive Biology and Fetal Programming. Responsibility: Head/faculty. Percentage increase in extramural funding as well as funding for collaborative projects. Timeline: June 30, 2010 and annually thereafter.

Action 6: Expand Livestock/Facilities Utilization Committee to include a faculty member of each area of the four focus areas within the Department, Laramie R&E Center Superintendent, unit managers, meat lab manager and two faculty members from other Departments within the College. Committee will evaluate funded proposals based on mission of department, college and university. Responsibility: Head/Director of AES/Faculty. Timeline: June 30th, 2010.

Action 7: Continue to incorporate costs associated with feed and livestock use into grant proposals while encouraging collaborative, system-based research at SAREC as well as the McGuire Ranch. Responsibility: Head/Director of AES/Faculty. Expanded number of projects using the facilities; Increase of funding associated with long-term animal projects. Timeline: completed by end of FY 2009 and annually thereafter.

Learning
**Situation** - Whereas the knowledge and skills needed by graduates entering the work force are continually changing, our ANVS curriculum and course offerings need to be evaluated annually based upon assessment at both undergraduate and graduate levels.

**Action 8:** Develop an undergraduate and graduate student recruitment and retention plan. **Responsibility:** Head/faculty/staff. **Completed by July 1, 2010.**

**Action 9:** Evaluate ANVS options to assure they are best serving the needs of our students. Consider advantages of combining or restructuring existing options or developing new options to enhance marketability of our programs and usefulness to our students. With the upcoming addition of a new equine specialist, an equine or possibly an inclusive companion animal option should be evaluated. **Responsibility:** Head/Departmental Curriculum Committee/faculty. **Measures:** Increase in number of majors; percentage increase in student employment and graduate study opportunities. **Timeline:** Completed by end of 2012.

**Action 10:** Develop a strategy as how to best assist or redirect students in the Pre-Vet Option who do not have a high enough GPA to have a legitimate chance to gain entrance to a College of Veterinary Medicine. **Responsibility:** Head/Departmental Curriculum Committee/faculty. **Completed by end of 2009 academic year.**

**Action 11:** Expand current assessment activities to include the administration of surveys to graduates who are one and four years removed from obtaining their degree. In addition to feedback from Internship employers, an evaluation will be administered to employers of our students. **Responsibility:** Head/Joint Curriculum Committee (JCC). **Completed after 2009-2010 academic year and each year thereafter.**

**Action 12:** Increase the number of students participating in Internships by 10% annually. **Responsibility:** Head/Internship Coordinator/faculty. **Completed by end of 2009-2010 academic year and annually thereafter.**

**Action 13:** Develop informational collaborations with International Programs to make students aware of international study opportunities. **Responsibility:** Head/faculty. **Timeline:** 2009-2014.

**Action 14:** Explore increasing access to ANSC programs by offering credit courses to non-traditional students via web-based and other distance learning opportunities. **Responsibility:** Head/Departmental Curriculum Committee/JCC/interested faculty. **Timeline:** 2009-2014.

**Action 15:** Explore collaborative distance learning opportunities with other institutions to provide access to courses that do not have adequate student numbers to be taught by individual institutions. **Responsibility:** Head/Departmental Curriculum Committee/JCC/interested faculty. **Timeline:** 2009-2014.
Engagement

**Situation:** Whereas our external clientele have increasingly tight schedules and are squeezed by economic constraints, Animal Science Extension Specialists as well as our teaching and research faculty provide lifelong learning opportunities via multiple delivery systems to provide unbiased, research-based information for livestock producers and consumers of animal products to empower them to make choices and solve problems.

**Action 16:** Support extension programming efforts associated with the Profitable and Sustainable Agricultural Systems (PSAS), Nutrition and Food Safety and 4-H and Youth Development state initiative teams, as well as Livestock and Small Acreage cross-initiative issue teams. **Responsibility:** Extension Specialists/Head. **Timeline:** 2009-2014.

**Action 17:** Continue to collaborate with commodity groups and organizations throughout WY, the region and the nation in support of the livestock industries (i.e., WSGA, WWGA, WBCIA, NCBA, WY Business Council, WY Beef Council, etc.). **Responsibility:** Extension Specialists/Head/All Faculty. **Timeline:** 2009-2014.

**Action 17:** Develop additional clientele educational models (e.g., WYO BEEF Short Course) utilizing hands-on educational techniques. **Responsibility:** Head/Extension Specialists. **Timeline:** By end of 2009 and annually thereafter. Measured by number of programs offered.

**Action 18:** Continue to develop and expand the departmental website as a means of sharing research-based information and communicating with our clientele. **Responsibility:** Head/Faculty/Staff. **Measures:** Feedback from clientele. **Timeline:** 2009-2014.

**Action 19:** Enhance methods of distributing research-based information for use by clientele: Regularly communicate with Area Extension Educators with monthly e-notes containing relevant research summaries for use in their newsletters, newspaper columns and radio programs; Provide annual training and educational opportunities for Educators; Develop monthly popular press articles that discuss research, relevant industry issues and promotes Departmental activities; Make annual reports available on the Departmental website. **Responsibility:** Extension Specialists/All Faculty/Staff. **Timeline:** 2009-2014. **Measures:** Number of items requested and distributed.