

PROGRAM REVIEW IMPLEMENTATION PLAN PROGRESS REPORT

Animal and Food Sciences 2021–2024

Recommendation 1.

Establish a long-term faculty-hiring plan that grows the research capabilities of the department.

Assessment method:

New Department Chair started in July of 2023. As part of the Chair's startup package, 5 new faculty positions were agreed to, which included: 1) Ruminant Nutritional Physiologist, 2) Swine Reproductive Physiologist, 3) Equine Growth and Developmental Biologist, 4) Fermentation Scientist, and 5) Open-TBD. Following discussion with Faculty in the Fall of 2023, it was decided to proceed with advertisements for the Ruminant Nutritional Physiologist and a Reproductive Physiologist, widening the description from swine specific.

Results:

The Ruminant Nutritional Physiology position was filled in July of 2024 by Dr. Ron Trotta. The Reproductive Physiology search yielded a strong pool of applicants with 3 exceptional candidates interviewed in-person. Based on search committee recommendations, the Chair decided to pursue two of the candidates, which required a re-posting of a similar position. One candidate, Dr. Katherine Halloran has accepted an offer and will begin on January 1, 2025. The second candidate is pending.

Analysis of results and reflection:

Department is actively pursuing new hires. Prioritization of new hires has shifted slightly based on a strong applicant pool in Reproductive Physiology and a possible spousal hire scheduled to interview in late October, 2024.

Ongoing improvement actions:

Involving faculty in discussions to prioritize new faculty hiring requests is essential as the department moves forward. A new online recommendation form has been created to allow faculty to recommend new positions. That being said, the top priority may not be what is requested first depending on college priorities. The Chair and Associate Chair will continue conversations with MG-CAFE Office of Philanthropy about developing plans to seek gifts to support endowed faculty lines.

Recommendation 2.

Prioritize the hiring and retention of beef, swine, and small ruminant extension specialist positions.

Assessment method:

New Department Chair started in July of 2023 with a swine background that can help with some of the swine needs. Dr. VanValin was hired in January of 2020 and bolstered the department's beef extension efforts. The college recently hired a new small ruminant extension specialist.

Results:

Following assessment, it appears that needs are currently being met, but may need to be revisited in the future, particularly for swine.

Analysis of results and reflection:

Departmental and new college hires are filling these voids at the moment.

Ongoing improvement actions:

Involving faculty in discussions to prioritize new faculty hiring requests is essential as the department moves forward. A new online recommendation form has been created to allow faculty to recommend new positions. That being said, the top priority may not be what is requested first depending on college priorities. The Chair and Associate Chair will continue conversations with MG-CAFE Office of Philanthropy about developing plans to seek gifts to support endowed faculty lines.

Recommendation 3.

Develop appropriate benchmarking against peer institutions.

Assessment method:

New Chair started in July of 2023. It does not appear that any progress was made in this area prior to this. As part of Department's 5-year review and strategic planning process, peer-institutions and benchmarks will be identified.

Results:

Nothing to report yet.

Analysis of results and reflection:

Nothing to report yet.

Ongoing improvement actions:

Nothing to report yet.

Recommendation 4.

Engage college administration to define and communicate an optimal structure that will allow the equine program to reach its full potential.

Assessment method:

Undergraduate student numbers and FTEs assigned to cover EQM and ASC teaching, advising, and planning for the academic enrichment experience will be evaluated annually to determine if needs for both undergraduate degree programs are being met.

Results:

Enrollment numbers in both majors remain at relatively high levels. These high student numbers, coupled with reductions in faculty teaching FTEs due to cut open faculty positions during COVID, have resulted in greater student: teacher ratios in both ASC and EQM courses. Faculty are being hired again, but with relatively low teaching FTEs as a result of a college shortage in teaching FTEs.

Analysis of results and reflection:

Student numbers and available faculty to meet the responsibilities of teaching, advising, and planning for the academic experience of both EQM and ASC need constant evaluation to ensure students enrolled in these programs obtain the best educational experience possible. These evaluations should guide conversations with college administration on how to best allocate resources for these two important degree programs. It is clear that additional financial resources are needed to hire additional instructional FTEs if both these degree programs are to grow.

Ongoing improvement actions:

Work to improve communication and teamwork between Animal and Food Sciences and Equine Programs. Will also continue working with the CAFE Office of Philanthropy and Alumni to secure funding to expand both the teaching and research infrastructure at the AFS Horse Unit so that the growing needs for teaching do not hinder the research program.

Recommendation 5.

Develop strategies and faculty incentives to expand the creation and delivery of multi-media and on-line content across all missions.

Assessment method:

Several assessment methods will be used to measure departmental success in creating and delivering multi-media and online content. These will include number of online courses, number of students enrolled in online courses, number of multi-media resources developed for extension and research clientele, and number of downloads of multi-media resources from departmental web pages.

Results:

ASC 209, Veterinary Medical Terminology, is being offered as an online course, and expanded online options will be offered in a proposed pre-veterinary certificate program. Traditional AFS courses are still predominantly offered in-person only. The department's extension faculty and staff have become very proficient at offering many of their educational opportunities for youth and adult clientele/stakeholders in distance learning formats.

Analysis of results and reflection:

Transitioning appropriate undergraduate courses to hybrid and/or online platforms allow easier access of courses to both resident and non-resident students, allow for a variety of different content delivery methods to be used, and once developed may reduce faculty time needed for teaching. Developing a variety of multi-media resources for extension and research clientele provides resources in a form desired by clientele, and in forms that often facilitate the transfer of knowledge. While remote learning can be an effective tool to utilize for some instructional and outreach activities, the COVID pandemic demonstrated that we must also maintain a strong in-person presence to best facilitate learning.

Ongoing improvement actions:

The department will continue to evaluate where the delivery of online and multi-media content would enhance our missions of teaching, research, and extension, and as time and resources allow will continue to develop and offer these kinds of resources.

Recommendation 6.

Identify the physical and programmatic needs required to replace the Garrigus building and construct an on-campus multi-use livestock teaching/event facility.

Assessment method:

The college completed a review of research laboratory space in Garrigus in 2017 that identified several physical limitations that limit research capabilities. Additionally, the college has completed a comprehensive review of classroom space utilized by students that highlighted the needs for additional classroom space for teaching.

Results:

The construction of the Martin-Gatton Agricultural Science Building will provide new classroom space for MG-CAFÉ and the department. In addition, a planned expansion of the hospital necessitates the demolition of Ag North and Garrigus with a new research building, vivarium and Meats and Foods Workforce Development Center in various stages of design and construction. Completion of all facilities is expected in late 2026 through early 2027 providing the department with new research and teaching laboratory space, and a new vivarium on south campus, and a new Meats Laboratory located at the Oran. C. Little Research Center. The new USDA ARS FAPRU facility planned on the UK campus will provide some new laboratory and office space for a few department research faculty and their support staff, but has been delayed.

Analysis of results and reflection:

All projects, with the exception of the USDA ARS FAPRU facility are moving forward at the moment and will provide much-needed new facilities. Additional funding is needed for phase 2 of the Meats and Foods Workforce Development Center (MFWDC) to add a teaching pavilion and additional further processing space.

Ongoing improvement actions:

The Chair and Department faculty are heavily involved in the design and oversight of construction of

new facilities. Initial discussions with philanthropy have been started to investigate funding options for phase 2 of the MFWDC along with discussion about a new equine teaching complex.

Recommendation 7.

Develop a mechanism and timeline to improve/expand off-campus facilities, specifically the milking parlor, equine unit, and swine teaching barn.

Assessment method:

See Recommendation 8 below (This recommendation combined with Recommendation 8 to provide a more holistic approach for the development and maintenance of facilities.)

Results:

See Recommendation 8 below (This recommendation combined with Recommendation 8 to provide a more holistic approach for the development and maintenance of facilities.)

Analysis of results and reflection:

See Recommendation 8 below (This recommendation combined with Recommendation 8 to provide a more holistic approach for the development and maintenance of facilities.)

Ongoing improvement actions:

See Recommendation 8 below (This recommendation combined with Recommendation 8 to provide a more holistic approach for the development and maintenance of facilities.)

Recommendation 8.

Develop a mechanism for continued off-campus facility maintenance, repairs, and renovations, and sustaining budgets through fluctuating agriculture markets.

Assessment method:

The department annually conducts a review of current facilities to determine renovation, repair, maintenance, and/or facility replacement needs. The annual assessment of needs has identified numerous items requiring attention. Current high priority identified include (1) relocation of the facilities that support the dairy calf nutrition and dairy heifer development research programs, and remodeling of the Boar Stud into a laboratory and office/meeting facility for the dairy research program, (2) relocation of the Poultry Unit, (3) development and construction of new research facilities at the Equine Unit, (4) construction of a new Meats Lab, (5) updating and modernizing animal research space in the Garrigus Building basement, and (6) updating and modernizing analytical laboratory space

throughout the Garrigus Building.

Results:

(1) relocation of the facilities that support the dairy calf nutrition and dairy heifer development research programs, and remodeling of the Boar Stud into a laboratory and office/meeting facility for the dairy research program- The Department no longer has Dairy Facilities or Faculty. As of now, Dairy facilities are not a priority. The Boar Stud is being used as temporary office and storage space for the poultry unit, and therefore any future renovation is on hold.

(2) relocation of the Poultry Unit- A new farm has been constructed at the Oran C. Little Research Center. However, the farm is without office space, lab space, egg washing facilities or bathrooms. Funding has been pledged to construct these facilities, but is coming in over time.

(3) development and construction of new research facilities at the Equine Unit- Initial discussions have begun between AFS, Equine Programs and Philanthropy on Equine Teaching Facility needs.

(4) construction of a new Meats Lab- Phase 1 of this project has funding, which will replace facilities in Garrigus. Facility design is on-going, with the project tentatively schedule to go out for bid in February of 2025.

(5) updating and modernizing animal research space in the Garrigus Building basement- A new vivarium will be built as part of the New Agricultural Research building. This will include research space for rodents, rabbits, poultry, sheep and swine.

(6) updating and modernizing analytical laboratory space- New laboratory space is being built in the New Agricultural Research building being constructed south of Cooper Drive.

Analysis of results and reflection:

Major investments in new facilities are currently being made, resulting in replacement of all on-campus facilities used by the department.

Ongoing improvement actions:

Continue to work with college administration to develop a budget strategy that provides stability and sustainability for the department's animal units. Work with college administration and the Office of Philanthropy and Alumni to increase philanthropic efforts in securing funding for maintenance and repair of facilities.

Recommendation 9.

Define the facility and resource needs to create a dynamic and sustainable undergraduate and graduate food science program in the department.

Assessment method:

Several metrics have been used to evaluate the success of the department's food science program. These include the number of undergraduate students majoring in Food Science, number of graduate students being trained by Food Science faculty, grant and gift dollars secured to support the research and graduate student training program, and success in developing a Food Processing Pilot Plant.

Results:

The Chair and Associate Chair worked with the Food Science faculty and Academic Coordinator to develop a new Food Science undergraduate degree program that will utilize three distinct tracks within the major: (1) Distillation, Fermentation and Beverage Sciences, (2) Business Operations, and (3) Research and Development. New recruiting methods are also being explored to increase awareness of the new undergraduate degree program.

Analysis of results and reflection:

The goal of the changes to the undergraduate degree program and the improved methods of recruitment is to increase undergraduate student numbers from 25 to 50 over the next 5 years.

Ongoing improvement actions:

The Chair will continue to work with Food Science faculty and the Academic Coordinator to identify more effective ways to recruit undergraduate Food Science students. The Chair will also work with faculty and the Office Philanthropy and Alumni to secure funding to develop a Food Processing Pilot Plant to enhance both undergraduate and graduate student instructional and research capabilities.

Recommendation 10.

Engage extension specialists to explore sustainable funding models for program support.

Assessment method:

Assessment metric will include funding received (grants, gifts, philanthropic, etc.) to support extension programming efforts.

Results:

The Beef Extension group has successfully partnered for several years with KBN to bring in outside funding. However, federal grant submissions to support Extension programs remains low. A collaborative effort between AFS and Equine programs did result in a USDA-FANE grant award with several other submissions outstanding. Conversations with other departmental specialists are ongoing with regards to identifying new funding models.

Analysis of results and reflection:

Nothing to report yet, other than there is a clearly recognized need to identify alternative and sustainable funding models to support the department's extension efforts.

Ongoing improvement actions:

The Chair will work with extension specialists to (1) identify and evaluate funding models used at other land grant institutions to fund programs, (2) develop a strategy that provides for ongoing evaluation of programs offered to clientele to ensure clientele needs are being met, (3) develop USDA-funded integrated grants [i.e., extension/research and research/extension grants], (4) engage CAFE Office of Philanthropy and Alumni to secure funding for support personnel and other extension programming expenses, and (5) engage MG-CAFE administration to explore the feasibility of counties providing financial support for some extension travel and programming.

Recommendation 11.

Enhance undergraduate and graduate experiential learning.

Assessment method:

Metrics to measure the success of the department's undergraduate and graduate experiential learning activities have yet to be developed, but will be part of the Department's strategic planning process.

Results:

Nothing to report yet, other than the department's Undergraduate Curriculum Committee and Graduate Activities Committee continue looking at ways to develop a diverse and impactful experiential learning program for both undergraduate and graduate students.

Analysis of results and reflection:

As fewer students come from farming and animal production backgrounds, the need for providing hands-on, experiential learning opportunities as a part of the educational process has grown dramatically. Additionally, the college has added the requirement for all students having an "academic enrichment experience" to help fill this need.

Ongoing improvement actions:

Continue work with the Curriculum Committee, Graduate Activities Committee, and faculty to develop a menu of academic enrichment experiences that will be of most benefit to our undergraduate and graduate students. Work with research and teaching faculty to develop a process for increasing

undergraduate classroom and lab teaching opportunities for graduate students. Work with CAFE administration and the Office of Philanthropy and Alumni to secure funding for an Academic Enrichment Experience Coordinator position.

Recommendation 12.

Increase funds available for undergraduate ASC scholarships, graduate student stipends, and graduate student tuition.

Assessment method:

Metrics to use for assessment will include funds available for scholarships, stipends paid to graduate students, and funds available to support graduate student tuition. Other metrics will include number of scholarships awarded and number of graduate students, and comparison of our graduate student stipends relative to our benchmark universities.

Results:

Efforts are underway to identify ways to increase funding for these efforts. The Department did receive a significant donation in 2024 that will add \$30-\$40,000 in undergraduate scholarship funding per year, beginning in the Fall of 2025.

Analysis of results and reflection:

Limits on the number and value of scholarships available to graduating high school seniors with interests in pursuing Animal Science as a major makes it difficult for us to compete with regional universities in recruiting many Kentucky students. Additionally, decreasing departmental funds available for graduate student stipends and tuition has placed tremendous pressure on faculty to supplement (or fully fund) funds for graduate student training. Decreasing competitive federal funding levels further exacerbate this problem.

Ongoing improvement actions:

Work with the Office of Student Success to develop a plan for greater involvement of Animal Science faculty in the awarding of scholarships. Work with MG-CAFE Office of Philanthropy and Alumni to secure funding for graduate full tuition scholarships, and funding to increase both the number and amount of graduate student stipends.
