# School of Food and Agriculture Faculty Position Request-Priority #1

**Title:** Lecturer in Animal and Veterinary Science (fulltime, nine-month, 100% teaching, non- tenure-track)

**Justification:** Loss of faculty due to retirements in the coming months will reduce the ability of Animal and Veterinary Sciences (AVS) to meet needs of students and stakeholders. Student in- terest in the AVS program is perennially strong, with 78 FY students confirmed for fall 2018.

We stopped routine admission for students into AVS in mid-May due to lack of capacity in the laboratory sections of the introductory AVS course. More teaching, research, and advising ca- pacity is critically needed. Advising loads are heavy for program faculty, and the student to fac- ulty ratio is about 30. Dr. Stokes, the current AVS undergraduate Program Coordinator, retires in August, 2018. It is critical that we hire a new Program Coordinator.

**Critical Teaching Needs:** The teaching mission of this position is critical for the popular AVS program (~170-180 students). Formal teaching responsibilities include the introductory Animal Science class with a laboratory (4 cr.), and a 1 cr. introduction to the major course for first year students, both taught every fall semester. This position will also involve serving as the internship coordinator, teaching AVS 396 Field Experience, and maintaining strong connections between the AVS program and local farms, veterinarians, and businesses in order to build productive internship opportunities. The position will involve teaching one or two additional undergraduate classes based on her/his expertise and interests. The Program Coordinator role involves advising students, coordinating recruiting and retention initiatives, and working closely with other faculty. Responsibilities include serving as the program contact person, meeting with and corresponding with prospective students and their families, attending new student orientations, attending Open House and Accepted Students Days events, and working with faculty to assess and revise curricula and to document assessment of learning outcomes and program outcomes. This position will also be expected to advise the majority of the first year AVS students each year (~60 students as an advising load).

**Additional Information:** We seek a creative and engaging teacher to explore modern, evidence-based pedagogy and its application to the hands-on discipline of Animal Science. Although there is no formal research appointment for this position, there are opportunities to work with students on undergraduate capstone and honors research projects. Such student projects have involved cows, horses, and sheep at the Witter Center and aquacultured species at the Aquaculture Research Center. In addition, there are six or more student clubs related to different aspects of animal science, and this position will be expected to play a role in advising some of the student clubs. Broadly, this position is designed to encourage student interest in animal science and enhance student understanding of the many possible career paths open to students majoring in AVS. This position, in collaboration with other AVS faculty, will be expected to explore creative initiatives to increase AVS student retention. The person in this position will be encouraged to develop collaborative teaching relationships and innovative courses involving other faculty in the School of Food and Agriculture (for example those in food science and/or sustainable agriculture), as well as with Cooperative Extension faculty. Similar cooperative teaching relationships with the Schools of Economics and Biology and Ecology, as well as the Honors College, and other units across campus are possible. The most

economically-important animal sectors in Maine are dairy, aquaculture and poultry; beef, horses, sheep and goats are also significant. Maine agriculture is characterized by small, diversified farms with both crops and livestock. Interest and experience in animal production systems, food systems, and/or sustainable agriculture is preferred.

# Alignment with Unit Plans or Strategies

This proposed position aligns with a major goal of our unit of excellence in our undergraduate programs and providing strong and creative leadership for the AVS undergraduate program. This position will also likely support the unit goal of creating opportunities for more cross- disciplinary teaching across the diverse disciplines of SFA.

# Assurance Statement

This position has been discussed by AVS faculty and by all SFA faculty at the May faculty meeting. The justification has been circulated to all faculty to provide an opportunity for comments.

# School of Food and Agriculture Faculty Position Request-Priority #2

**Title:** Assistant Professor of Agroecosystem Sustainability (fulltime, nine-month, 50% research and 50% teaching tenure-track)

**Justification:** This position, related to an expected retirement, is essential for offering required classes in two programs, Sustainable Agriculture (SAG) and Environmental Horticulture (ENH), totaling around 70 students. This position will address challenges and opportunities related to the food system and foster student success across a range of programs. While this position is focused on sustainability of agroecosystems, we hope to attract an individual interested in research and teaching that connects the diverse programs in SFA, which impact many sectors of the food system, such as food makers (farms and food-processing companies), food sellers, and consumers. Makers, sellers, and consumers have interconnected roles and, collectively, have a large impact on Maine’s economy, as well as the health and well-being of Maine’s population.

**Critical Teaching Needs:** Formal teaching responsibilities include contributions to undergraduate and graduate programs in SAG and ENH, with most teaching at the undergraduate level. Likely classes include PSE 312 Sustainable Food Systems and PSE 215 Vegetable and Fruit Production (in alternate years), PSE 101 Cropping Systems (a writing intensive course in the major for SAG students), and PSE 430 (the capstone class for both majors). In addition this position is expected to have a leadership role in mentoring students in hands-on learning activities such as the Black Bear Food Guild and UMaine Greens. Advising undergraduate, graduate, and honors students is expected.

**Research Responsibilities:** The research mission of this position is to serve Maine's agricultural stakeholders through broadly synthetic research applicable to Maine agroecosystems. Examples of possible research areas include: lifecycle analysis of energy and resource use in agroecosystems, economic impacts of soil health-building management practices, managing risks due to climate change and extreme weather events, pre- and post-harvest food safety, reducing food waste, integrated crop-livestock systems, managing weeds and diseases in sustainable and organic systems, and reducing food insecurity. This position is expected to complement and strengthen efforts across campus, such as the Honors College Sustainable Food Systems Research Collaborative, which brings together students, faculty, and community partners to focus on problems of food production, food distribution, and hunger; and the recently funded Undergraduate Research Collaborative project “Making Maine’s local food system sustainable: Opportunities to address hunger and reduce waste”, coordinated through the Senator George J. Mitchell Center for Sustainability Solutions.

**Additional Information:** We seek a scientist with the training and motivation to work across disciplines conducting applied research that addresses multiple objectives benefiting diverse groups including agricultural producers, consumers, and policy makers. The ideal applicant might combine disciplinary expertise in plant or soil science with significant competence in using economic tools or policy approaches to analyze and solve food system problems. Building collaborative and innovative research and teaching partnerships with faculty in the Schools of Food and Agriculture, Economics, Biology and Ecology, the Honors College, and other units across campus is encouraged. Specifically this position is envisioned to be one of a ‘cluster hire’

with two positions proposed in SOE related to agriculture policy and economics (*see attached letter from SOE*). Hiring a cohort of faculty with similar interests, and different research and teaching approaches and skill sets, will multiply the beneficial effects of a single hire, increasing our ability to both attract strong applicants and retain new hires. This position will play a pivotal role in teaching across a range of undergraduate programs and offers many opportunities to connect with agricultural stakeholders. This position has an assigned laboratory in Deering. A request for funding for some needed renovation has already been submitted to the NSFA database.

# Alignment with Unit Plans or Strategies

This proposed position aligns with a major goal of our unit of creating opportunities for more cross-disciplinary research and teaching across the diverse disciplines of SFA.

# Assurance Statement

This position has been discussed by SAG and ENH faculty and by all SFA faculty at the May faculty meeting. The justification has been circulated to all faculty to provide an opportunity for comments.

[www.umaine.edu/soe](http://www.umaine.edu/soe) Phone: 207-581-3154

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To: Fred Servello, Dean, NSFA Fr: Mario Teisl, Director, SOE



Re: Support for SFA hire Dear Dean Servello,

I have had multiple conversations in the last couple of years with you, and the previous Dean of NSFA (Ed Ashworth), discussing ways that NSFA could increase its ability to provide economic research and training that would support Maine’s current and future agricultural and food industries. Five years ago SOE had four faculty primarily engaged in this type of work and currently we have zero. SOE plans on submitting for two positions in this area – one at the tenure track level, the other as an instructor/researcher.

Sue Erich, Director of SFA, and I have been having discussions over several months about ways we can improve how we coordinate our teaching and research efforts across our two units so we can increase support to Maine’s food industry by providing relevant research and by training future employees for the agri-food sector.

SOE is excited that SFA is requesting a position that would dovetail quite nicely with our request. On the research end, the SFA position would be quite interdisciplinary, as they are looking for a person with expertise in plant, soil or other agro-food science with some competence in economic or policy analysis. We see this position being able to work with some of our current economics and human ecology faculty that dabble in food-related research (Crawley: food industry studies, Teisl: food safety policy and Waring: social science of food systems) and the new agricultural economists we are proposing to hire. We also feel that overlap in the new faculty skill sets will lead to the exploration and development of new agri-food based coursework.

MAINE’S LAND GRANT AND SEA GRANT UNIVERSITY

*A Member of the University of Maine System*

# School of Food and Agriculture Faculty Position Request-Priority #3

**Title:** Assistant Professor of Animal and Veterinary Sciences - Animal Microbiome (fulltime, nine-month, 50% research and 50% teaching tenure-track)

**Justification:** Loss of tenure track faculty and research capacity due to retirements (Stokes, Bayer) in the coming months will reduce the ability of Animal and Veterinary Sciences (AVS) to meet needs of students and stakeholders. Student interest in the AVS program is perennially strong, with 78 FY students confirmed for fall 2018. We stopped routine admission for students into AVS in mid-May due to lack of capacity in the laboratory sections of the introductory AVS course. More teaching, research, and advising capacity is critically needed. The field of animal science is progressing rapidly, with increasing applications of cutting-edge molecular approaches, and there is a need to update both our research portfolio and curriculum to make our graduates more competitive in the job market. In addition, dairy, aquaculture, and other livestock and poultry contribute over $200 million yearly to the Maine economy.

**Critical Teaching Needs:** The teaching mission of this position is critical for the popular AVS program (~170-180 students). Formal teaching responsibilities include contributions to both our undergraduate and graduate programs in AVS*.* Likely classes include an undergraduate level senior paper sequence, a graduate seminar, an undergraduate class and a graduate class developed to train our students on the applications of microbiomics to understand and solve problems related to animal health and performance, food safety, and the impact of animal waste on the environment. This position will also be expected to advise AVS undergraduate majors, support undergraduate research and honors thesis projects, and to both recruit and advise graduate students.

**Research Responsibilities:** The research mission of this position is to serve Maine's animal stakeholders through applied research in areas which may include, but are not limited to: the role of the microbiome in animal production, reproduction, nutrition, health, and immune function; zoonotic and emerging diseases; food safety; antibiotic resistance; and the interactions of animal and aquacultural operations with the environment. The sectors benefited include Maine's dairy, aquaculture, and poultry industries. In addition, the growing number of small farms in Maine creates needs that extend to beef, horses, sheep, goats and wildlife. Maine's animal stakeholders face challenges in sustaining animal productivity and health, safe-guarding food safety, combatting the spread of antibiotic resistance, and understanding the environmental impacts of animal and aquaculture industries. In the US alone, the cost of antibiotic resistance adds $20 billion in health care costs with approximately 80% of the antibiotics consumed in the US being attributable to the food animal industry. Antibiotics have a significant impact on the gut microbiome, which plays a key role in the animal’s overall health. Recently significant public and private resources have been invested worldwide to strengthen our understanding of the relationship between the animal microbiome, pathogen colonization, and antimicrobial use.

**Additional Information:** A new hire in the area of microbiome science would complement and strengthen the recently established One Health Initiative at the University of Maine, which is fostering innovative interdisciplinary research partnerships among faculty in the Schools of Food

and Agriculture; Economics; Biology and Ecology; Marine Sciences; and Departments of Wildlife, Fisheries and Conservation Biology; and Molecular and Biomedical Sciences. All these unit leaders are aware this position, which will complement some current research, is being proposed. Because the microbiome is now recognized as critically important in human and animal health due to the spread of highly-pathogenic, antibiotic-resistant organisms in the human population, federal funding for microbiome research will likely be a priority for NIH, USDA and FDA for the foreseeable future, and a sound basis for an extramurally funded research program. Genomic analysis is progressing rapidly, with increasing needs for competency in data generation and interpretation. Outsourcing genetic sequencing is now reasonably priced, allowing scientists who do not have in-house capabilities to successfully study a range of topics and organisms. This position will require start-up funding, but purchasing of sequencing platforms will not be required. This position already has a renovated laboratory in Rogers Hall.

# Alignment with Unit Plans or Strategies

This proposed position supports the unit goal of strengthening AVS research. It also will likely create opportunities for more cross-disciplinary research and teaching across the diverse disciplines of SFA.

# Assurance Statement

This position has been discussed by AVS faculty and by all SFA faculty at the May faculty meeting. The justification has been circulated to all faculty to provide an opportunity for comments.