COMPANION ANIMALS: GEORGE C. FAHEY COMPANION ANIMAL NUTRITION SYMPOSIUM: PREPARING FUTURE COMPANION ANIMAL BIOLOGISTS

0193 Challenges in training companion animal biologists: Missing the research component, how to overcome it? J. P. McNamara*, *Washington State University, Pullman.*

The basic missions of Departments of Animal Sciences are to train leaders in endeavors related to domesticated animals and to conduct and disseminate research related to domesticated animals. For agricultural animals we have been successful and society has benefitted greatly. Yet, as a result of this success and many other factors, the number of people involved in agriculture has declined over half in the last 50 yr. We have seen a major change in demographics of our undergraduate and graduate students, who are now overwhelmingly suburban and urban and interested in companion animals. Yet we still have a mission and a need to train and do research with agricultural animals. Many departments have responded to the changing demographics with expanded course offerings related to companion animals, by including examples from companion animals in our core disciplinary classes and in some cases by opening and expanding research into the biology of companion animals. The future, as always, does hold some great promise and great challenges for furthering these efforts. The research and teaching endeavors will not be similar across states. A few states will maintain significant activity in agricultural animals and have some effort in companions. But many more states will (if they have not already done so) shift significant effort to study and training with companion animals. Recent research and applications with animal behavior, welfare and training; use of service and therapy animals; the social and economic relevance and challenges with companion animals (the horse slaughter issue and increases in drop-offs to animal shelters as examples); the equine, canine and feline genome projects; and the revival of 'dual purpose' animal research at the federal level provide many opportunities for classroom learning and undergraduate research. Many of our undergraduates have experience at animal shelters, with service and therapy animals and in animal training. We should tap that expertise, provide education, and work with the communities (service learning courses; community outreach by faculty and students) to improve and expand the use of such animals and reduce the unwanted animal population. The "Masters in Agriculture" programs that train individuals to improve production provide a successful model that can be adapted to companion animals. Dogs, cats and horses make up the vast majority of 4H projects and this is an opportunity to expand the role of Animal Sciences.

Key Words: companion animals, curriculum, undergraduate

0194 Extension outreach: Use of technology in companion animal biology and nutrition. L. Karr-Lilienthal*, *University of Nebraska, Lincoln.*

Today's technology has changed the way teaching and extension programs are provided and will continue to do so. With changes in technology, we must evaluate the best practices for providing companion animal biology information to youth and students globally. Distance education has become increasingly popular with universities and students. Using technology effectively in the classroom should foster relationships between student and instructor to continue to provide a personal connection. It should be easily accessed from a variety of platforms and locations. There are many options available to educators looking to use technology. Using a combination of tools is probably most effective in student learning. Repetition, practice, and variety of delivery methods will help to reinforce concepts students may struggle with. Student performance in the Companion Animal Nutrition course offered at the University of Nebraska-Lincoln does not differ between online and in class sections. However, different approaches must be taken to ensure student connections and participation. Students tend to ask questions for clarification less frequently in the online section. Providing clear methods to obtain feedback helps to open lines of communication. Often university teaching and outreach programs have limited personnel resources. Technology is a key way to improve collaboration between experts at other universities and within the industry. Online meeting rooms can increase your pool of guest speakers and decrease costs related to speaker fees for programs. Using programs such as Adobe Connect that allow for streaming video and an audio connection will improve the learner experience. The Companion Animal Community of Practice at eXtension.org is one way to improve collaborations among extension and outreach professionals. The use of eXtension provides educators with a simple system for delivering online material to the general public through webinars, articles, and short courses. Published content on eXtension is peer reviewed and is based in science. Effective use of technology should provide ease of use, accessibility, and allow for increased target audience. For learners to feel comfortable with technology, a sense of community should be established both for online teaching as well as online extension efforts. Community can be developed through social media tools, discussion posts, regular communication, and videos. Requesting feedback from the learners improves use of technology in classroom.

Key Words: companion animal, technology, teaching, outreach

0195 A circuitous route: Preparing for a career in the companion animal industry. A. K. Shoveller*, *The University of Guelph, Guelph, ON, Canada.*

Today's companion animal industry refers to food and products for the pet owner and predominantly includes products for dogs and cats. US Pet Industry expenditures in 2012 were ~53.3 billion and have been steadily increasing over the past 20 yr, suggesting a large growth opportunity. There is also growing interest from undergraduate and graduate students to pursue companion animal biology. Professionals are needed to do research in animal biology (health, metabolism, behavior); communicate complex findings to academics, industry professionals and pet owners; develop and market food and products; and maintain the regulatory requirements that tend to be different between countries. "Pet passion" is a necessary attribute for a career in the pet care industry. Individuals need to be effective in multi-functional teams, have strong communication skills and thought processes. These processes also require collaboration outside of internal teams with academic, government and business partners and effective professionals need to be able to utilize a diverse knowledge set. These individuals need to be strategically and operationally agile, enabling them to see the big picture yet know when to be detail oriented. Successfully acquiring knowledge and experience in animal biology will put you in a solid position to compete in the companion animal industry. Despite this requirement, there are still few companion animal programs in North America outside of veterinary school, and because of that, the majority of professionals in the companion animal industry are trained in production animal or human biology. While an individual can build and continue to acquire new knowledge and skills outside of a formal academic program, academia has historically been, and continues to be, responsible for teaching the base of knowledge in undergraduate programs and deeper knowledge and problem-solving skills in graduate school. Programs and funding that encourage collaboration between government, industry and academia, with a solid commitment to generate the next generation of highly-trained technologists and future leaders for the pet care industry, are needed. Furthermore, long-term strategic programs with greater levels of collaboration among academic institutions may help to provide continuity in basic training. Educated and experienced individuals working together across government, academia and industry can help set strategies that would further enable advancements in companion animal health and well being and enhance our knowledge of the role of companion animals in improving the lives of their families.

Key Words: pet care, career, opportunities

0196 How to effectively communicate science with pet owners and society: Understanding pet owner purchasing decisions and sensory characteristics of pet foods. K. Koppel*, *Kansas State University, Manhattan*.

Science communication to targeted communities is a topic that has received a great deal of attention and published research. For the sake of human health there has been an emphasis on food-related communication and comprehension in publications such as human nutrition guidelines, labeling, and risk management of different types of foods. Only recently have pet food related issues been covered extensively in the media. There is a growing awareness of pet owners regarding pet food ingredients and health concerns surrounding pet obesity issues. While traditional animal science has focused on efficiency and yield, companion animal science redirects the target to perceptions about quality, animal wellness, and the pet-owner relationship. This changes the opportunities in research and communication through to the classroom. Recent trends in companion animal and pet food research include understanding drivers behind purchase decisions, relating pet owner behavior characteristics to issues with pets' weight management, and understanding pet food characteristics in association with food composition and animal preference. At Kansas State University our lab is focusing research activity on sensory properties and volatile compounds of pet food, ingredient effects on sensory and palatability aspects, and pet owner behavior studies. This research is being transferred to the classroom and shared with the scientific community and the pet food industry. This presentation describes how pet food science is being studied, taught, and communicated at Kansas State University in the Sensory Analysis Center and Department of Grain Science to educate and train the next generation of companion animal specialists.

Key Words: companion animals, pet food, ingredients