Impact of production animal scholars program on developing production veterinarians. E. L. Karcher*1 and D. Grooms2, 1Purdue University, West Lafayette, IN, 2Michigan State University, East Lansing, MI.

Animal science undergraduate programs have undergone a dramatic change with increasing numbers of students having limited experiences with agricultural animals. Between 2005 and 2008, several reports cited a reduced number of large animal veterinarians and the potential impact on national food security. Recognizing the need to educate and encourage undergraduate students to consider a career in production animal medicine, Michigan State University (MSU), in 2008, developed a cooperative program between the Department of Animal Science and the College of Veterinary Medicine (CVM). The Production Animal Scholars (PAS) program provides undergraduate students education in the areas of basic sciences and animal management, as well as provides a special admissions pathway to MSU CVM. The objective of this study was to determine the impact of the PAS program on developing production veterinarians. Three surveys were developed and each administered in Fall 2016 to one of each of the following populations: (1) 31 undergraduate Animal Science students currently enrolled in the PAS program, (2) 15 PAS students currently enrolled in CVM, (3) 14 veterinarians who completed PAS as undergraduates as well as graduated from MSU CVM. The response rate for undergraduates, current CVM students, and graduated veterinarians was 54.0%, 80.0%, and 92.8% respectively. 91.3% of current PAS CVM students and 58.3% of PAS veterinarians agreed or strongly agreed that participation in PAS benefited their veterinary program. A total of 14 veterinarians have graduated as alumni of PAS. Of these, 58.3% are currently working with production animals. Of those answering no, 80% reported hoping to find a position that involved production animals as circumstances allow. In conclusion, the PAS program offers a unique opportunity to engage undergraduate students interested in attending veterinary school with a focus on serving the food animal industry, in a curriculum that is based strongly in animal management and basic sciences. Participants in this program view this preparation positively in helping them to meet their career goals.

Key Words: production, undergraduate, veterinarian

The use of virtual farm tours in a dairy cattle management course. E. L. Karcher* and P. Reid, Purdue University, West Lafayette, IN.

On-farm visits in Dairy Cattle Management courses provide students the opportunity to utilize all of their senses when describing and evaluating management practices on farms. However, obstacles may exist that prohibit classes from visiting farms. Alternative instructional methods, such as virtual farm tours, must be considered. The objective of this study is to evaluate the use of virtual farm tours as an effective instructional tool in a Dairy Management course. Three farm videos were created and viewed by students throughout the semester. The 35 students enrolled in the course were divided into 8 groups (4 to 5 students/group). Immediately following each video, online technology was used for a question and answer period with the producer. Groups were then asked to evaluate the dairy and provide a written evaluation, including strengths, opportunities, and recommendations for the farm. At the end of the semester, groups did one on-farm evaluation and were asked to complete the same assignment. A survey was developed to better understand student perception of the videos’ impact on the learning process and administered to the class (82.8% response rate). Additionally, group responses for each of the virtual farm assignment questions were compared with those from the on-farm visit and differences evaluated using a paired t-test. Enthusiasm for the course was high with 89.7% of students indicating they were very interested in the content area of the course. The majority of the students agreed or strongly agreed that the virtual tours stimulated interest in the subject matter (63.0%) and allowed them to apply subject matter to real-world settings (72.4%). No overall differences were observed for the strengths and opportunities questions between the 2 scenarios. There was a difference in the scores for the farm recommendation question between 2 of the 3 virtual farm tours (1: 71.9% ± 10.8%; 2: 75.0% ± 6.7%) and the on-farm visit (81.3% ± 7.3%)(P < 0.05). Students felt (69.0%) that virtual tours and live producer interviews were a worthwhile part of the course. Initial data suggest that virtual farm tours are a useful instructional tool in a dairy management course when on-site farm visits are not an option.

Key Words: teaching/undergraduate, video

Male seniors were the lowest performing students in an introductory to dairy cattle science course. C. G. Burgett*, J. A. Sterle, and J. M. Bundy, Iowa State University, Ames, IA.

With increased enrollment in animal sciences and limited class sizes, demographics of sophomore-level specie-specific courses vary by age and student background. Upperclassmen would be expected to outperform underclassmen due to more collegiate experience and more curriculum background. The effects of student demographics and year in school on class performance were evaluated in a sophomore-level introductory dairy cattle science course. In the fall of 2016 ANS 235 Dairy Cattle Science, student demographics of the 108 enrolled students were sophomores (n = 25), juniors (n = 53), and seniors (n = 30). Of those, 85 were female and 23 males with less than half (n = 32) of the class from a farm background. Each participant completed a 21-question survey pertaining to both demographic and agricultural involvement growing up (4-H, FFA and/or a high school agriculture course). Students also completed a 10 question pre-test on the first day of class and students answered the same 10 pre-test questions incorporated into their final cumulative exam. Progress between pre- and post-test questions and overall course grade were used to evaluate student performance. Least-squared means and the differences between least-squared means were calculated using the PROC MIXED procedure in SAS. Sophomore and junior status students out performed (P ≤ 0.01) seniors by more than 6.39%. Male seniors earned the lowest final grade (P < 0.01) and showed the least improvement (P ≤ 0.04) between pre- and post-test questions compared with all other gender/classification combinations. Surprisingly, no differences (P = 0.26) were found in overall course grade for those students who took an agriculture course in high school (n = 56) compared with those who did not (n = 52). Involvement in 4-H and FFA had no effect (P ≥ 0.51) on the students’ overall course grade. However, female students who grew up on a farm (n = 20) had an increased (P ≤ 0.01) overall performance in the course compared with females who grew up in an urban area. Additionally, female farm students had greater (P ≤ 0.02) performance than males (n = 12) who grew up on a farm at the end of the semester. New methods may need to...
be implemented in sophomore-level specie-specific production courses to engage certain demographics.

Key Words: dairy science, gender, teaching

An assessment of the impact of the U.S. Dairy Education and Training Consortium (USDETC) on dairy education. M. A. Tomaszewski¹ and G. R. Hagevoort², ¹Texas A&M University, College Station, TX, ²New Mexico State University, Clovis, NM.

With dairy courses and access to dairy cattle declining at many universities, the US Dairy Education and Training Consortium was established in 2008 to provide a unique educational opportunity through both classroom and experiential learning experiences. Since its inception, 342 students have completed the 6-wk program. A survey of the former students was conducted (62% response rate) to determine the impact the consortium had on their future and the impact the classes and hands-on experiences had on their professional career. Of the 213 respondents, 99 are currently still enrolled at a university, 111 are employed and 3 are not employed. Of those enrolled at a university, 37% are undergraduate students, 30% are working toward advanced degrees and 30% are obtaining a veterinary degree. Of the former students which have since entered the job market, 34% have found employment on a dairy, 33% are employed in a dairy related position (allied industry), 5% are in a non-dairy livestock position, 6% are in a non-dairy agricultural position and 21% are employed outside of agriculture. Of those employed, 87 students obtained a BS, while 11 completed their MS, 2 students are Ph.D.’s and 9 students graduated with a DVM degree. When asked “What impact attending the consortium had on their current status,” 92% replied important, very important or extremely important. When asked about the impact the classes and experiential learning experiences had on their course work and subsequent careers, 44% replied extremely helpful, 35% very helpful and 15% helpful. When asked to rank the consortium classes as compared with other courses taken, 55% gave the consortium an A+ and 36% an A. When asked for general comments, the hands-on experiences and access to exceptional faculty were the student’s main remarks. The USDETC has proven to be a positive alternative or complementary education opportunity for students that do not or have limited access to dairy courses or the related experiential learning experiences at their home universities.

Key Words: dairy education, dairy training, experiential learning.