168 The avian biology undergraduate major at the University of Georgia. M. Malloy* and A. Davis, University of Georgia, Athens.

The Poultry Science Department in the College of Agriculture and Environmental Science was interested in increasing student enrollment by creating a science-based major that attracted students with a general interest in birds, and which prepared them educationally for the scientific and technological advancements of industry and for further professional educational opportunities. The Avian Biology undergraduate major was created in 2004 to complement and enhance the department’s existing Poultry Science major. Curriculum development related to this major has included the revitalization of existing courses in physiology, production and reproduction, as well as the development of lecture-based courses in introductory avian biology, animal behavior, avian ecology, avian physiology, and laboratory-based courses in avian biomedical techniques and avian molecular diagnostics. To further assist with recruitment and compliment the new major, a faculty-led summer study abroad course in Costa Rica, was launched in 2008. This course offers an opportunity to study avian physiology and behavior and reinforce these principles through field observation, as well as help students gain respect for Costa Rican agricultural principles and culture. Since the introduction of the Avian Biology major, over 75 students have graduated with a degree in this program and overall student enrollment has more than doubled within the department. Recruitment for the Avian Biology major has also enhanced the number of Poultry Science majors. Enrollment in the Avian Biology major has initially been driven by capturing existing students at the University of Georgia who have been introduced to the major through enrollment and completion of one or more of the new courses developed for the major. The vast majority of Avian Biology graduates have continued on to veterinary school, followed by enrollment in Poultry and Avian graduate programs. Other graduates have pursued poultry and other industry-based careers. The creation of the Avian Biology major and its associated curriculum has been a successful marketing tool in attracting students to the University of Georgia Poultry Science Department.

Key Words: education, recruitment

169 Effective strategies for advising pre-veterinary poultry science undergraduates. J. B. Golden*1 and A. J. Davis2, 1North Carolina State University, Raleigh, 2University of Georgia, Athens.

It is well known that admissions to US veterinary schools has become increasingly competitive over the past 10–15 years. With only 28 US veterinary schools ranging in class sizes from 50 to 140 students, the number of applicants far exceeds the number of students admitted. Due to the large proportion of undergraduate Poultry Science students with a desire to attend veterinary school, it is imperative that undergraduate academic advisers provide a strategic and thorough advisory plan that incorporates pre-veterinary academic coursework, veterinary experiences, undergraduate research opportunities, GRE examination preparation and test taking opportunities, and veterinary school application completion and submission guidance. To develop and implement a multi-faceted advisory plan for pre-veterinary Poultry Science students, it is most effective to develop a 4-year timeline for incoming Freshmen that can be modified throughout the course of their undergraduate studies. This timeline should include 3–4 diverse veterinary experiences under the supervision of a D.V.M. or Ph.D. to provide students with a significant breadth and depth of veterinary experiences, extracurricular and leadership opportunities, as well as undergraduate research and study abroad experiences. It is imperative that this timeline plans required pre-veterinary courses in a sequential and logical fashion that promotes successful academic performance. The development of such a plan relies upon an understanding of the current qualifications of successful veterinary school applicants. Thus, it is also important that academic advisors are aware of resources offered for advising pre-veterinary students through the Association of American Veterinary Medical Colleges (AAVMC) and the American Pre-Veterinary Medical Association (APVMA) which provide significant resources to pre-veterinary students. By implementing effective and thorough advising practices, undergraduate Poultry Science academic advisors can significantly increase the veterinary school admissions rates of their Poultry Science pre-veterinary advisees.

Key Words: pre-veterinary, advising strategies

170 “A.S.P.I.R.E.”- ACT Supplemental Preparation In Rural Education: A North Carolina cooperative extension program aimed at increasing admissions rates of students to traditional agricultural degree programs by bridging deficits in ACT college entrance examination scores. M. V. Herman,* K. A. McCraw, and J. B. Golden, North Carolina State University, Raleigh.

The use of standardized test scores for college admissions decisions can often be detrimental to rural high school students with lower socioeconomic statuses, while benefiting students with more resources to increase their test achievement, and therefore college acceptance rates. Due to their traditionally lower socioeconomic status, rural high school students often lag behind their non-rural counterparts in college enrollment and degree attainment. For land grant institutions trying to recruit students into traditional agricultural programs such as Poultry Science, performance on college entrance examinations represents a significant admissions roadblock for many rural students who have a sincere interest in pursuing higher education in agricultural fields. In NC, 2011 college entrance examination scores (ACT and SAT) of students residing in the top 10 livestock and crop producing counties were significantly lower, up to an 8 point deficit on the 36 point ACT scale and up to a 320 point deficit on the SAT 1600 point scale, than students residing in urban NC counties. To bridge these deficits in rural students’ performance on the ACT College Entrance Examination and to ensure the longevity of NC Agriculture, the A.S.P.I.R.E. program trained 25 NC Cooperative Extension Agents to deliver The Princeton Review’s Best-In class Live ACT Preparatory Courses to students from rural, ag-intensive, economically distressed counties across the state. Additionally, A.S.P.I.R.E. agents assist students with the college application and selection process as well as college visitation opportunities to NC State and NC A&T Universities. The A.S.P.I.R.E. agents will collectively offer ACT Preparatory Courses to ~800–1000 NC rural, ag-intensive students over the 2012–2013 academic school year. This program represents a novel role for NC Cooperative Extension Agents who are actively preparing the future leaders of NC Agriculture.

Key Words: ACT, admissions, cooperative extension
171 **Standardization of on-farm fertility tests.** B. L. Schneider1, V. L. Carney1, and F. E. Robinson2, 1Alberta Agriculture, Edmonton, AB, Canada, 2Alberta Hatching Egg Producers, Edmonton, AB, Canada.

Hatchability in Alberta has lagged behind the Canadian average since 2005. To address the hatchability issue, an extensive field study and education program was developed to identify practical on-farm management practices that are associated with production success. Reduced hatchability is a multi-factorial problem and can be influenced on-farm and at the hatchery. Timely feedback on flock fertility and hatchability is key to support decision making. However, the provision of fertility and hatchability data from hatchery to producer is not consistent throughout Alberta. Typically producers receive a hatch report which contains valuable feedback on flock fertility; unfortunately, it is 3–4 weeks out of date when received by the producer. More timely fertility data can be obtained by incubating eggs on-farm. 56% of Alberta producers and several allied industry members attended workshops with 3 objectives: to a) provide scientific and economic information, b) hands-on experience in fertility testing and c) standardize on-farm fertility testing. Following an overview of embryonic development and a cost/benefit analysis of assessing fertility on-farm, attendees were divided into small working groups. Each group was given embryonic development materials and hatching eggs incubated for 3, 5 and 7 d to perform a break-out. Enthusiastic communities of practice were quickly established as producers and hatchery personnel worked together to determine fertility and progressed to staging embryonic development. To support on-farm fertility testing, all producers were given a table-top incubator and embryonic staging materials for use on their farm. Surveys conducted following the workshop indicated that 100% would use the skills they had learned on their farm. In a more extensive survey conducted 6 mo following the workshop, 7 of the 8 survey respondents that had also attended the workshops were using the skills they had developed at the workshop. By providing hands-on learning experience and equipment, producers were better equipped to make more informed management decisions and the research team was empowered to provide support beyond the workshop.

**Key Words:** fertility, embryonic development, experiential learning

172 **Evaluating male quality.** V. L. Carney1, B. L. Schneider1, and N. A. Robinson2, 1Alberta Agriculture, Edmonton, AB, Canada, 2Alberta Hatching Egg Producers, Edmonton, AB, Canada.

Since 2005, Alberta hatching egg producers have experienced lower (2–3%) hatchability rates than Canadian averages. An extensive field study and education program was developed in cooperation with the hatching egg industry, and included producers, hatcheries and government. Reduced hatchability is a multi-factorial problem and can be influenced on-farm and at the hatchery. Genetic progress in poultry strains requires dynamic management skills to respond appropriately with each new flock. Hatchability is directly related to fertility, thus male management is critical to hatchling success. As part of the field study, research team members recognized variation in male management strategies. In response, the team developed a breeder male management workshop. The objectives of the workshop were to: a) address current male management issues b) provide scientifically based information and c) training for assessment of male quality. Prior to the workshop, producers were surveyed for a top 10 list of male management questions to ensure that the workshop addressed real industry issues. An industry expert on male management lead the discussion. The team hired a videographer to visit breeder farms and film male behaviors in situ. Males from the videos were brought to the workshop so producers could practice evaluating male condition in relation to male behavior. Assessments were made on BW, fleshing, coloring, behavior and footpad condition. Males were dissected and testes development was evaluated. 75% of Alberta hatching egg producers participated by submitting questions that set the agenda and by attending the workshop with allied industry. Producers commented that the video added value to male quality assessment. Engaging producers to set the agenda for the workshop ensured that topics were relevant and could be implemented on their operations. The provision of scientific data and experiential learning equipped producers to make more informed male management decisions. Further observations throughout the field study indicated that participating producers implemented new practices learned at the workshop into their breeder male management strategies, potentially increasing hatchability rates.

**Key Words:** fleshing, experiential learning, behavior, video, breeder male

173 **The benefits of keeping chickens as identified by small flock owners in the mid-Atlantic region.** B. N. Lister* and B. A. McCrea, Delaware State University, Dover.

Little research has been done to identify the benefits of owning small flocks of chickens. Among the information provided by small and backyard flock owner’s comments about their personal happiness. These anecdotal statements are not unlike the benefits stated by dog and cat owners. Small flock owners treat their chickens the same as many other pets by giving them names; growing attached to them; and using strong words to describe the loss of flock members. To find out more about the benefits of keeping a small flock of chickens, a survey was developed. Many questions were similar to those utilized in surveys of dog and cat owners. The survey was distributed at various locations such as feed stores, and targeted only small flock chicken owners. One hundred and 50 2 surveys were collected from 5 states and 30 counties in the Mid-Atlantic Region. Of those surveyed 36% were male, and the remaining 61% were female. Of those surveyed, 74% primarily used their flocks for eggs, 14% viewed their flock strictly as pets, 9% raised chickens for meat, for show or breeding, and 3% raised chickens for meat. Forty-Seven percent of those surveyed spent between 2 and 10 h researching chickens before acquiring their flock. The results showed that there were many contributing factors to the level of flock attachment by owners, as well as factors that influenced stress levels felt by owners. Our preliminary results showed that 21% of people who were surveyed had a reduction in stress after interacting with their chickens on a daily basis. When surveyed on a scale of one to 5, with 5 being the highest attachment level, 36% of flock owners rated their attachment at a level of 4.

**Key Words:** small flock, benefits, stress, attachment, backyard flock