197  Integration of an agriculture-based class into the core curriculum at the University of Georgia. R. B. Beckstead*, J. A. Morris, and K. E. Shayne, University of Georgia, Athens, GA.

As land-grant institutions have grown in size and complexity, a smaller percentage of students are being exposed to agriculture-based classes taught by their respective colleges of agriculture. Over the past several decades, there has been a growing disconnect between people and how their food is produced. Even among students with an agriculture-based major, such a poultry science, there is limited exposure to agriculture as a whole in their curriculum. Many classes dealing with agriculture are being taught by departments with no direct connection to modern agriculture, frequently providing inaccurate information and presenting current agricultural practices in a negative light. Because the curriculum is fixed for most majors, there exists little opportunity for the inclusion of courses within majors both in and outside the colleges of agriculture. To allow students to take an agricultural class at The University of Georgia that would qualify as more than just a general elective, we designed a course that was accepted into the University core curriculum. This class, The Effects of Global Agriculture on World Culture, explores the relationship between agriculture and culture. By integrating culture into the class curriculum, this course has been approved to qualify as a University requirement for World Language and Culture. Before its inclusion in the core curriculum, 6 students enrolled in this course for the fall 2013 semester. The semester after approval, enrollment increased to 60 students and is projected to reach 150 for fall semester of 2014. By offering a course originating within the College of Agriculture, we are able to present current and accurate information to students who would otherwise have limited or perhaps negative exposure to the relationship between their culture and agricultural systems.

Key Words: education, technology, teaching, labs, distance education

198  Can technology be used to help teach lab classes? P. A. Curtis*, Auburn University, Auburn, AL.

The objective of this presentation is to provide some examples of how technology can be used to assist in teaching lab and other “hands-on” type classes and to enhance critical thinking. Science teachers have believed that lab experiences are important to science instruction since the 19th century. Research has identified 5 groups of objectives typically achieved through the use of science laboratories. These include (1) skills (manipulative, inquiry, investigatory, organizational and communicative); (2) concepts (hypothesis, theoretical model and taxonomic category); (3) cognitive abilities (critical thinking, problem solving, application, analysis and synthesis); (4) understanding the nature of science (scientific enterprise, existence of multiplicity of scientific methods, interrelationships between science and other disciplines); and (5) attitudes (e.g., curiosity, interest, risk-taking, objectivity, precision, confidence). Research has also shown that technology based activities can also achieve some of these objectives. Several examples will be shown of how the Auburn University Food Systems Institute has utilized technology to achieve these objectives. One example will include an online training for PCR. This training includes a simulation that instructs the user in lab safety, sample preparation, PCR at a molecular level, gel electrophoresis and data analysis of the resulting gel. The user interacts with the simulation to by actually performing the necessary steps in the process. The simulation complements other multimedia training for a more comprehensive learning experience. A second example of will be demonstrated of how a video game can be used to enhance critical thinking and improve skills. The technology examples will provide some innovative ways technology can be used to enhance classes with labs, “hands-on” activities and critical thinking objectives.

Key Words: education, technology, teaching, labs, distance education

199  Developing a curriculum addressing legal issues in poultry and livestock production. E. Rumley*, University of Arkansas, Division of Agriculture, Fayetteville, AR.

In today’s increasingly regulated society, legal issues affect agriculture, and specifically animal agriculture, in more varied ways. For example, consider laws such as California’s Proposition 2, regulations including those governing organic production, and policies such as the FDA’s guidance for the use of antimicrobials in livestock and poultry. As a result, students focusing on poultry and animal sciences are increasingly confronted by laws and regulations that affect their future lives and careers. To address this need, an issues-oriented course discussing the legal issues involved in the production of poultry, swine and livestock has been developed at the University of Arkansas. The curriculum focuses on the laws, regulations and policy arguments involved in different aspects of animal agriculture. The course begins with an overview of the American legal system and develops into a discussion of animal welfare versus animal rights, highlighting the legal implications of each viewpoint. From there, course topics range from animal welfare to humane slaughter, from farm animal confinement to the use of antimicrobials, and from food labeling to animal identification. Students completing the course are able to identify areas in need of additional legal study, areas undergoing policy shifts at the local, state, regional and national levels, and areas in which close scrutiny of legal and policy matters can result in impacts to poultry, swine and livestock operations.

Key Words: law, legal issues

200  Managing mediums: Education and field studies in the Alberta egg industry. B. L. Schneider*1, V. L. Carney1, and D. R. Korver2, 1Alberta Agriculture, Edmonton, AB, Canada, 2University of Alberta, Edmonton, AB, Canada.

Since 2003, Alberta has produced the largest proportion of medium-sized eggs relative to the rest of Canada at a significant cost to the industry. Since egg size is affected by many factors, an education program, surveys, and a field study were developed to examine the specific causes of the excess medium problem and provide solutions. Economic scenarios were used to illustrate the effect on the industry and as an incentive to change. Alberta farmers are paid a guaranteed price for medium eggs, $0.18/dozen less than large. Alberta produced 1.7 million dozen mediums above the Canadian average in 2013, a loss of $306,000. Excess mediums are purchased by the provincial marketing board at a guaranteed price and sold as industrial product (IP) to processors at Urner-Berry prices (2013 price differential was $1.01/dozen). The difference in price is covered by an IP levy paid by farmers on all eggs marketed. In 2013 cost of the IP program was ~$900,000 in Alberta. Alberta egg producers were surveyed (36.6% response) on awareness of the medium problem and management practices related to egg size (e.g., pullet rearing habits, BW collection, feed and lighting programs). Only 32.8% of producers felt medium eggs were a problem, however, 80%
of that group reported medium production above the Canadian average for their last 2 flocks. Surprisingly, despite the lower price for medium eggs, some producers indicated that they keep egg size small to reduce cracks and undergrades, which result in no return to the producer. These findings influenced the design of a follow-up field study. Nine farms participated in the field study, balanced between low, average and high medium egg production. Data collected included feed samples, BW, grade-outs, management practices, feed intake and costs of production. Utilizing farm records, economic analyses were performed to illustrate the effect of medium eggs on the individual producer and the industry. Strategies to manage egg size were presented in education materials and workshops and were designed to reinforce good management practices with proven examples from the field study. 88% of workshop participants indicated they would implement new practices on their farm.

Key Words: egg size, economics, field study, management, laying hen

203 Poultry farmers’ forum—A way out for small-scale poultry farmers in Bangladesh. M. N. Islam1, K. Kozaï1, M. A. Rashid1, and M. S. K. Sarkar1, 1Bangladesh Livestock Research Institute (BLRI), Savar, Dhaka, Bangladesh, 2Japan International Cooperation Agency (JICA), Tokyo, Japan.

Bangladesh Livestock Research Institute (BLRI) is a national research institute for conducting problem-solving research on poultry and livestock. The poultry sector is becoming a potential source of income generation and employment opportunity with an increasing annual growth rate of 6.2%. In Bangladesh approximately 80% of farmers are rearing 200 to 500 chickens. With no suitable job opportunity within their reach, rural poor people are investing what little funds they have in poultry farming in hopes of using their idle family labor. With poor technological knowledge and skill, they often fail. To increase their knowledge and skills, 12 poultry technology disseminating areas (TDA) were established in the country. Each TDA works with groups consisting of 8 to 12 farmers. Two representatives from each group work together as a forum which interacts with the local government and public representatives, which helps to increase the groups’ negotiating power. Together, forum members are better able to work with agencies of concern to mobilize poultry production input (e.g., feed, chick, vaccine, medicine) and also marketing their products (eggs and meat). Members of the forums are trained in feeding management, biosecurity measures and disease control. TDA staffs are responsible for guiding and monitoring poultry rearing activities through the Forum. In the case of disease outbreak and TDA staff need a laboratory diagnosis, he or she can send digital images of lesions or sample to the central laboratory to get a rapid diagnosis and recommendation through the internet. The farmers benefited from these arrangements. These successful models can be replicated all over the country for supporting better nutrition and livelihood of the poultry farmers.

Key Words: poultry farmers’ forum, technology disseminating area, inputs, chick, egg and meat