

the last 2 weeks the ADG of AFB1 diet was significantly lower than the other diets ($P < 0.01$) and was about one-half of the values reported for the same group in the first period. The contamination with ochratoxin A did not affect fattening performance of pigs during the whole experimental period. No damages were found in kidneys of all diets. Moreover, no evidence of association between observed liver damages and different diets. Finally, no differences between experimental diets were evidenced for the haematological parameters. The research was supported by the project *Sicurezza e qualità nella filiera suinicola regionale* funded by the Regional Authorities

Key Words: Pig, Mycotoxins, Glucmannan polymer

798 Ghrelin secretion is more closely aligned to the energy balance than with feeding behaviour in the grower pig. P. C. Wynn*, K. Scrimgeour, M. J. Gresham, P. Thomson, and R. E. Newman, *Faculty of Veterinary Science University of Sydney, Sydney, NSW, Australia.*

Ghrelin secreted from the gastric fundus is thought to act as an initiator of feeding behaviour in the arcuate neurocircuitry of the hypothalamus across species. Thus this hormone has the potential to

stimulate feed intake and therefore animal productivity. In our study we have evaluated changes in the circulating total ghrelin activity in response to different patterns of meal feeding over a 24h period and related these to insulin and metabolite status in grower pigs. Male Large White \times Landrace pigs (57.5 kg) maintained at 22°C in a 12:12 light:dark lighting regime were offered a commercial pelleted ration (13MJ DE and 6.2g Lysine per kg) ad libitum for 7 days. Blood samples were collected hourly for 24h from indwelling ear vein catheters without restraint. Animals were then offered 95% of ad libitum feed intake in 2 meals (1 hour each) at 0900 and 1600h daily for 2 days. Animals were then bled hourly for 12 hours over the 2 feeding periods. The same protocol was repeated on the subsequent day with the exception that feed was provided only at 1600h. The 12h bleeding protocol was repeated on this day. During ad libitum feeding ghrelin status (Phoenix kit) remained constant for the 24h and was not related to either insulin, glucose or free fatty acid profiles. Similarly ghrelin status did not change when animals were offered their feed as 2 meals nor as a single meal. However it was associated with a gradual rise in FFA status during meal feeding. In contrast insulin status changed in line with the increased glucose following each meal. Our results suggest that ghrelin is not an acute regulator of feeding in grower pigs.

Key Words: Ghrelin, Feeding, Pigs

Teaching/Undergraduate & Graduate Education: From Choosing a Graduate Program to Embarking on a Successful Career: A Guide for Livestock and Poultry Science Students

799 Choosing a graduate program. D. R. Notter*, *Virginia Polytechnic Institute and State University, Blacksburg.*

Interest in graduate education in the animal sciences is widespread among both new graduates and midcareer professionals, and graduate training opportunities in the field are becoming more diverse. Students therefore need to develop a clear understanding of their training goals and be proactive in identifying opportunities consistent with those goals. Most land-grant universities provide excellent educational opportunities for motivated undergraduates, but the choice of an individual to act as graduate advisor is critical. Consultation with faculty at the student's home institution is usually the first step in choosing a graduate program. Departments can facilitate these discussions in seminar classes and workshops. On-line resources are useful, but students should also initiate communication with prospective advisors early in the application process. Few things warm the heart of a prospective major professor more than a well-composed, grammatically correct message from a prospective student expressing enthusiasm and understanding regarding an area of study. Students should likewise expect clear signals about deadlines, funding options, and potential research areas. In most cases, if a message to a prospective advisor does not elicit a reply, look elsewhere. Recent trends in graduate education include increasing emphasis at many universities on retention of their own undergraduates and growing preferences for doctoral students. Yet we often advise students to change institutions and to complete an M.S. before embarking on the Ph.D. A critical aspect in comparing graduate programs involves visiting the campus to meet prospective advisors and current students. The objective is

to find out if students in the program are doing things that you aspire to do. Strong programs have students that are engaged, enthused, and mentored, with clear understanding of the expectations of their program and the relevance of their research. A campus visit provides opportunity to ask existing students about their relationship to the department and assess the extent to which they feel respected and valued.

Key Words: Advising, Graduate education, Teaching

800 Research and teaching: what else? The unwritten guide to graduate school. C. C. Taylor-Edwards*, *University of Kentucky, Lexington.*

What makes a successful graduate student? Graduate school is all about taking classes, teaching, and research, so these must make you successful, right? Many employers may disagree. Several of the skills that employers desire in a new hire are lacking in graduate students. Graduate students often have poor communication skills, the tendency to avoid risk, a lack of vision, and a failure to understand the value of time. However, with the awareness and willingness of the graduate student, the process of graduate school can develop a core set of competencies that can be transferred successfully to a multitude of careers. This set of skills includes time management, effective presentation communication, interpersonal relationship building, goal-setting and prioritizing, organization, and independence. These

are skills that will make an employer take notice; furthermore, they can be achieved via a variety of venues. Teaching and taking classes and conducting research certainly all lend themselves to improving these skills. However, to become an exceptional graduate student, extra effort is needed. Become involved with your department, guest lecture in classes, participate on panels about graduate school, and be involved in departmental or university-wide committees and programs. Be engaged in professional organizations; not only are they a great place to network and raise your visibility to future employers, but often offer opportunities for professional development, such as symposia, workshops, and leadership opportunities. Strive to become a well-rounded individual. In a world of increasing specialization, graduate students and faculty are often isolated in their department or discipline. This specialization isolates us socially and intellectually, and creates an environment in which it is difficult to “think outside the box”. Finally, remember that with the stress and long hours of graduate school, the importance of family, friends, good health, and sleep is often underestimated. Keeping these a priority can improve productivity in the classroom or lab and lead to the formation of a highly successful graduate student, valued by future employers.

801 Opportunities outside of the lab, international experience, networking, and professional societies? J. S. Radcliffe*, *Purdue University, West Lafayette, IN.*

Obtaining a graduate degree in Animal Sciences requires a significant amount of laboratory, animal, and course work. However, often opportunities outside of these traditional settings may be most beneficial to the student and to the advisor’s research program. Individuals seeking a laboratory to complete a graduate degree in are often instructed not to get all of their degrees from one institution. The rationale behind such advice is that it is good to gain different experiences and perspectives by attending more than one University. While this advice seems reasonable, it still usually limits the student’s exposure to labs conducting similar research within the United States. As the globalization of agriculture continues, it is becoming increasingly important for individuals in Animal Sciences to have a global rather than a national perspective of agriculture. International opportunities for graduate students during their degree program are invaluable in helping students to obtain a broader perspective of agriculture and how their research may impact animal agriculture. Providing graduate students with an international opportunity can be as simple as letting them attend an international meeting or as complex as allowing them to complete a portion of their research in a lab based outside of the United States. The advantages and disadvantages of such opportunities will be discussed based on personal experience as a student and advisor.

Key Words: Graduate Education, International Experience

Bio Ethics - Livestock and Poultry

802 Why it is important to understand bioethical concepts. R. D. Reynnells*¹, C. C. Croney², and D. J. R. Cherney³, ¹*USDA/CSREES/PAS, Washington, DC*, ²*Oregon State University, Corvallis*, ³*Cornell University, Ithaca, NY.*

Understanding bioethics helps us discern how food animals ought to be treated, and is basic to our views of animal welfare and animal rights. Few of us were trained in philosophy or ethics. Our ethical training primarily is based on religious concepts or societal expectations. Bioethics, ethics applied to biological systems, increasingly influences decisions by stakeholders and officials. Philosophical attacks on food animal production may first eliminate Judeo-Christian religious concepts, and then dissect secular ethics based on rules of logic. Change is promoted based on these chains of logic that discard current norms for animal use in favor of new found “truths”. Organizations are changed by decision makers’ understanding of issues, structural requirements and goals, desires, political pressure, etc. Agricultural firms are no different. Decision makers may include consumers who make purchasing decisions (drive market demand), voters, government officials, and producers. Historically, cheap food demand has been a major change agent for agriculture, as has the desire of farmers to avoid undesirable situations. It is increasingly difficult, and yet imperative, to balance ethical considerations with economic and practical aspects of animal agriculture. This balance is complicated if production changes are not market driven but imposed by persons apparently attempting de facto management, absent the risks, of farmer’s resources. New standards for change are not restricted to questions about how to efficiently raise food animals, but include concepts of refinement, reduction, and replacement of animal management and care practices. Consideration of whether or not we should use animals for food is a

crucial ethical concept. Several bioethical concepts will be discussed. Should bioethical and animal welfare science considerations be the basis of our management and regulatory decisions? Should a person’s or organization’s vision of ethical behavior be forced on an industry and society, or should changes in agriculture come through true market demand? Also to be discussed is how our awareness of bioethical concepts facilitates our ability to properly address animal welfare issues.

Key Words: Animal Welfare, Bioethics, Societal Expectations

803 The ethical landscape of non surgical embryo-transfer in pigs: An explorative study of public concerns. F. R. Stafleu², D. W. B. Ducro-Steeverink¹, and J. W. M. Merks*¹, ¹*IPG, Institute for Pig Genetics B.V., Beuningen, the Netherlands*, ²*Ethics Institute, Utrecht University, Utrecht, the Netherlands.*

Non surgical embryo transfer (nsET) focuses on the development of a technique in pig production to improve genetic preservation and international trade. In modern society however, the public is concerned about ethical aspects of animal production. To get an impression of these “public concerns”, an opinion about the nsET technique was asked of four groups: agricultural professionals involved in nsET, professionals of the Eurogroup for Animal Welfare, volunteers of the Dutch Society for the Protection of Animals and a group of members of the public. An ethical analytical tool (the ethical Matrix) was used to collect these opinions in a standardized way. Rooted in these opinions, an ethical analysis of moral problems possibly connected