Bioethics: A Scientist's Guide to Approaching Bioethics

26 Bioethical considerations of food animal products and production. W. R. Stricklin*, *University of Maryland*, *College Park*.

Humans obtain a number of products from animals. These include food, clothing, medical materials, companionship and research knowledge to name a few. A valued ethic contends that it is inappropriate for one to treat another as a means to an end. In short, it is wrong to treat another as simply a product. Historically, non-human beings have not been included as "others" and thus their treatment as products has been generally accepted. However, a growing view holds that animals are "subjects of a life" and deserving of consideration beyond their economic worth. Accordingly, the public asks increasingly for assurance of appropriate animal well-being. At the same time, polls indicate that the public majority does not wish to give up using animal products. The research community has dealt with these somewhat conflicting viewpoints by adopting animal care and use committees (ACUC). Research animals continue to provide a product (i.e., data points) for researchers, but the ACUC, not the researcher, is responsible for the animal's life, i.e., its care, treatment and well-being. This uncoupling of the research animal's life from the animal as a product via the ACUC has generally been successful and may serve somewhat as a model. But ultimately, animal agriculture faces the challenge of developing its own methodology for uncoupling the animal "as a subject of a life" from the animal product, and doing so without destroying the integrity and economic viability of animal agriculture. Third-party accreditation programs can help, but input from educators and possibly additional methods from industry leaders are also needed. Addressing the ethical implications of treating animals as subjects of a life, and not simply as products, meets with the longterm goal of animal scientists. Accordingly, developing an animal agriculture that is bioethically grounded should be consistent with developing a system that is sustainable.

Key Words: bioethics, animal products, animal welfare

27 Thinking critically about bioethical issues. K. K. Schillo*, *University of Kentucky*, *Lexington*.

Animal scientists embrace a humanist ideology; i.e., a perspective that emphasizes the characteristics, experiences and interests of *Homo sapiens*. According to this view, humans are so different from all other organisms that they deserve supreme status over the rest of nature. The ability to reason in an abstract manner is the basis for this distinction. Humanists believe that this degree of intellectual ability allows humans to ascertain a true understanding of nature and that such knowledge can and should be used to advance the species. This idea underlies an ethical framework that assumes that rational analysis leads to discovery of what is right and wrong thereby perpetuating moral progress and improving the human condition. No matter how popular and appealing this approach might be it should not be immune to critical analysis. Before we begin to think critically about bioethical issues we should think critically about ethics itself. I should like to establish a framework for doing so, by discussing two major concerns. First, we should recognize that humanism is an anthropocentric perspective and may not be compatible with the overall structure and function of nature. More specifically, we should consider whether the notion of ethics is compatible with the biological principles that govern all life, including humans. Second, it is questionable that human intelligence provides the only or best means to understand or cope with nature. Basic emotions may be just as useful as or even more useful than reason in helping humans live skillfully, if not ethically.

Key Words: bioethics, humanism, rationalism

28 A pedagogical tool for scientists faced with ethical issues. C. C. Croney*, *The Ohio State University*, *Columbus*.

In the United States, escalating concerns about current farm animal science and production methods have resulted not just in increased food animal protection policies, but also, animal welfare legislation. Animal scientists and industry leaders are apprehensive that such policies may primarily be driven by emotion and lack of scientific understanding, and thus, may have unforeseen consequences. The potential impacts of animal care and use decisions on producers, animals, concerned citizens, and implications for the environment and food prices must also be considered. Balancing the interests and values of all stakeholders has presented a considerable challenge. An ethics assessment process developed for addressing biomedical ethics issues presents a more inclusive model to combine socio-ethical concerns with relevant factual information, thereby facilitating decision-making that is both ethically responsible and pragmatic. A case study will illustrate application of this model, which includes identification of the ethical problems, the embedded values, the relevant facts and moral tests that can be applied.

Key Words: ethics, science, values

Breeding and Genetics: Dairy Cattle Breeding I

29 Using veterinary and milk recording data for a genetic analysis of health traits. J. Moro-Méndez*[1], E. Bouchard[2], and R. I. Cue[1], [1]*McGill University*, *Ste-Anne-de-Bellevue, QC, Canada*, [2]*Université de Montréal, Faculté de Médecine Vétérinaire*, *Saint-Hyacinthe, QC, Canada*.

The objective was to estimate clinical incidence of diseases (CI) and the genetic variability of health traits in commercial dairy herds. Health events from a veterinary health database were obtained from Dossier Sante Animal (DS@HR); 296,170 cow-calving dates from 123,867 cows. Animal identification and pedigree information were obtained via Valacta and CDN and merged with the health event data. Merges were performed for Holstein (HO) and Ayrshire (AY). This process produced 155,740 and 8,130 herd-cow-date of calving records from 70,168 HO and 3,365 AY cows, in common between DS@HR and Valacta/CDN files, with 197,755 and 10,797 HO and AY health event records, respectively. Then, binary traits were created for each health event-parity combination: coded 1 when the cow had the disease during the lactation, otherwise the trait was coded as 0. Binary traits were created for milk fever (MF), retained placenta (RP), cystic ovaries (CO), displaced abomasum (DA), mastitis 1st case and 2nd cases (M1, M2, respectively), reproductive (RP), digestive (DG), locomotive (LO), and metabolic (ME) problems. Lactational incidence rates (LIR) were calculated from the CI and the number of lactations at risk for each herd.