Agricultural Animal Bioethics Teaching Workshop

January 26-28, 2017

BWI Marriott Hotel

https://vet.purdue.edu/CAWS/bioethics/
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**Background**

The January 2017 Agricultural Animal Bioethics Teaching workshop is one of the outcomes of a funded USDA Higher Education Challenge grant proposal. (Candace Croney (PI), Alan Beck (Co-PI), Raymond Anthony (Co-PI), Ray Stricklin (Co-PI), Janice Siegford (Co-PI), Janice Swanson (Co-PI) and Gary Varner (Co-PI). The goal to develop an integrated curriculum for teaching animal bioethics: farm animal welfare, agricultural environmental ethics, and rural societal issues based on a cross-disciplinary pedagogy.

**Program Goals**

- Develop a series of educational modules and case studies in Agricultural Animal Bioethics that complement and strengthen existing courses in animal welfare, contemporary issues and sustainable agriculture
- Provide educators with the pedagogical tools and support they need to effectively deliver the curriculum content.
  - Workshops will be developed to 1) show faculty how to adapt and incorporate the materials to meet specific needs, and 2) explore innovative forms of content delivery and evaluation of undergraduate students.
  - An interactive, dynamic website will be developed to provide resources and instructional support for faculty teaching agricultural animal bioethics, such as templates for course development produced by faculty during the workshops.
Agenda

Thur, Jan 26th

7:00-8:00 pm  Registration and meet-and-greet with soft drinks and snacks

8:00- 9:30 pm  Program start:
Welcome; overview of Challenge Grant Goals and goals of conference (Ray Stricklin)
Self intro of conference attendees including teaching experience and reasons for interest in bioethics
(1 slide each to be submitted before start of conference)

Fri, Jan 27 th

Breakfast  On your own

8:30-8:45  Introduction of late arrivals

8:45-9:30  Overview of bioethics topics; importance to animal agriculture and veterinary medicine
(Ray Stricklin, Candace Croney)
Challenges in teaching ag animal bioethics
Review participant themes; discussion

9:30-10:00  Addressing challenges; standardizing curriculum
Overview of lectures, modules, goals (Janice Siegfoid, Janice Swanson)
Tailoring curriculum to meet needs: what topics all students should learn at minimum (tie back to developed curriculum; discussion and feedback)

10:00-10:15  Break

10:15-11:30  Teaching bioethics in ag and vet sciences (mock classroom)& breakout groups (1 philosopher and 1 scientist Co-PI/group)
• A. Understanding basics of moral philosophy and translating to bioscience students (goal setting, how much detail, how do you effectively convey these and demonstrate application?) (Gary Varner, Candace Croney, Ray Stricklin)
• B. Reviewing and delivering basic concepts related to sustainability (Paul Thompson, Ray Anthony, Janice Swanson)

11:30-12:15  Teaching bioethics in ag and vet sciences: breakout groups (1 philosopher and 1 scientist Co-PI/group)
• Facilitating teaching in large groups (Gary Varner, Candace Croney, Janice Swanson)
• B. Facilitating teaching in small groups (Ray Anthony, Paul Thompson, Janice Siegfoid)

12:15-1:15  Working lunch; summary of morning activities

1:15-2:15  Implementing effective bioethics curriculum: deliberation vs. debate (Dane Scott)
2:15-3:15 Utilizing moral deliberation/ethics assessment; case study (Candace Croney and Ray Anthony)
Break out groups (practice using moral deliberation)

3:15-3:45 Break

3:45-5:00 Fostering and facilitating productive student discussions (Dane Scott)
Break out groups;
Participants practice fostering discussion using different developed modules; peer feedback
Participants practice curriculum delivery with modules of interest
(All PIs, Paul and Dane; each team member assigned to work with a group)

Group reporting; what worked, what didn’t, Q & A, feedback

Assignment: how might curriculum & exercises be incorporated into existing or new planned courses?

6:00 Dinner on your own

Saturday, Jan 28th

8:30-10:00 Mock classroom breakout exercises (Dane Scott, Ray Anthony plus all Co-PIs)
Enviropig
Aquabounty

1000-10:15 Break

10:15-11:00 What makes a good case study? (Gary Varner)
Break outs (identifying useful cases for participants’ needs)

11:00-12:00 Evaluating students; effective assignments; (Candace Croney, Dane Scott; Paul Thompson and all Co-PIs)
Break out groups: begin syllabus planning

12:00-1:00 Working lunch; summary of morning activities

1:00- 2:15 Curriculum integration into course syllabi: peer feedback and discussion

2:15-2:30 Summation of conference (Ray Stricklin)

2:30-3:00 Feedback and evaluation of conference by attendees (completion of evaluation form)

3:00 Close and thanks to all attendee
Project PIs
Candace Croney, Purdue University, PI
Ray Anthony, University of Alaska Anchorage, Co-PI
Alan Beck, Purdue University, Co-PI
Janice Siegford, Michigan State University, Co-PI
Ray Stricklin, University of Maryland, Co-PI
Janice Swanson, Michigan State University, Co-PI
Gary Varner, Texas A & M, Co-PI

Workshop Facilitators
Dane Scott
Paul Thompson

Program Evaluator
Chanda Elbert

Postdoctoral Coordinator
Amy Bauer, Purdue University

Participants
Charlie Apter    Mark Bauer    Debbie Cherney
Robert Chiles   Courtney Daigle  Chris Gray
Angela Green    Lindsey Hulbert  Harvey James
Marlon Knights   Dawn Koltes    Martin Maquivar
Melissa Merrill  Jeannette Moore  Kasey Moyes
Meghann Pierdon  Giovanna Rosenlicht  Monique Udell
Kimberly Ange van-Heugten


Personnel
Project PI and Co-PIs
Dr. Candace Croney

Professor of Animal Behavior and Well-being
Depts of Comparative Pathobiology and Animal Sciences
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Dr. Candace Croney is director of Purdue University’s Center for Animal Welfare Science and professor of animal behavior and well-being in the departments of Comparative Pathobiology and Animal Sciences. She has a PhD in animal sciences from The Pennsylvania State University, USA. Following postdoctoral training at the University of Maryland, College Park, she went on to serve as Assistant Director of Conservation Education at the American Zoo and Aquarium Association and has held faculty appointments in Animal Sciences and Preventive Medicine at Oregon State University and The Ohio State University before joining the faculty at Purdue University.

Her research, teaching and outreach efforts focus on the interactions between animal behavior, cognition and well-being, the effects of rearing environments and enrichment on animal behavior and welfare, the ethical implications of animal care and use decisions, and public perceptions of animal agriculture.

Her research has been featured in national and international broadcast programs by National Geographic, the BBC, and their affiliates.

She serves as scientific advisor on animal welfare to numerous groups, including the American Humane Association, Bob Evans Farms, Cargill, McDonald’s, Merck, MARS Pet Care, and Target.
AGRICULTURAL ANIMAL BIOETHICS TEACHING WORKSHOP
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Name: Candace Croney  University: Purdue University

Key Teaching Activities/Interests Relevant to Bioethics: I teach a graduate level course in ethical issues and animal welfare and lecture on animal welfare and ethics in agricultural science and veterinary medical courses. I also conduct research on the social and ethical implications of animal care and use decisions and policies.

Previous or anticipated challenges: Getting students engaged on ethics of animal use; facilitating discussions that are productive and potentially move people toward problem solving rather than polarized, biased debates; overcoming disciplinary prioritization of animal welfare science over ethics.

Your expectations from this workshop: Learning new strategies; improved understanding of the challenges in animal bioethics teaching; improving our curriculum and instructor support; building a stronger network of educators on the subject.
Raymond Anthony is Professor of Philosophy at the University of Alaska Anchorage and specializes in environmental, food, animal and agricultural ethics, and ethical theory and the philosophy of technology. He has been at UAA since 2005 and previously taught at Iowa University and the University of British Columbia. Currently, he is pursuing values-aware research in global food security, sustainability, animal welfare and climate ethics. He serves as Ethics Advisor for the American Veterinary Medical Association’s Animal Welfare Committee and Panels on Euthanasia, Humane Slaughter and Depopulation.

You may find more information about his research, teaching and service at: https://alaska.digication.com/raymond_anthony_professor_of_philosophy/Welcome/published

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Name: Raymond Anthony  
University: University of Alaska Anchorage

Key Teaching Activities/Interests Relevant to Bioethics: I teach ethics, environmental ethics and philosophy classes, which include content related to the intersection of food-animal-environmental-agricultural ethics

Previous or anticipated challenges: Exciting students from different disciplines to appreciate the importance of the relationship between science and ethics in their deliberations and acting on this understanding (and the diversity of value positions) when considering how to treat food animals and the environment. Staying ahead of technological or regulatory solutions as the dominant way to respond to food related issues

Your expectations from this workshop: Learn new strategies for discourse and deliberation in a multidisciplinary climate. Understand how conceptions of risk is evolving in the sciences
Dr. Janice Siegford

Department of Animal Sciences
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East Lansing, MI 48824
517-432-1388

Email: siegford@msu.edu

Dr. Siegford is an associate professor in the Animal Behavior and Welfare Group in Michigan State University’s Department of Animal Science. Her education combines training in animal welfare (postdoc), neuroscience (PhD), and zoology (MS) with science communication (BS), which allows her to approach questions related to understanding quality of life for domestic animals from a variety of perspectives and to convey this information to students and stakeholders. Dr. Siegford’s research examines the impacts of management practices and environment on the behavior and welfare of production animals. Dr. Siegford is currently working with colleagues to relate the social behavior of group-housed pigs to their genotypes in order to improve welfare through both selection and management. Another of her projects examines how laying hens adapt individually and as flocks to alternative aviary housing systems. Dr. Siegford also works to develop non-invasive, automated methods for collecting behavior and welfare data from individual animals in their home environments. In addition to her research, Dr. Siegford teaches courses in animal welfare and behavior using a learner-centered approach. She currently teaches two undergraduate face-to-face courses (Applied Animal Behavior and Companion Animal Biology and Management) and a graduate online course on Animal Welfare Assessment. She assists with instruction and small group facilitation for the Ethical and Animal Welfare course in MSU’s College of Veterinary Medicine and is an organizer for the annual Intercollegiate Animal Welfare Judging and Assessment Competition.
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Name: Janice Siegfried  University: Michigan State University

Key Teaching Activities/Interests Relevant to Bioethics: Teach graduate level welfare
course, assist in vet ethics and welfare course, teach companion animal course.
Always interested in conveying ethics—what ‘should’ we do when talking about
those animals

Previous or anticipated challenges: Framing issues with enough complexity to dig into
ethical issues, assessing responses to ethical assignments, and avoiding jargon

Your expectations from this workshop: Practice using materials, connect with
likeminded colleagues to share teaching content and strategies.
W. Ray Stricklin

Department of Animal and Avian Sciences
University of Maryland
College Park, MD 20742
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W. Ray Stricklin has been involved in animal welfare-related teaching, research, and policy activities for over 25 years. His past research focused primarily on social and spacing behavior of animals. More recent research involved the study of pain in cattle as monitored by electroencephalogram (EEG). The research of his graduate students has spanned outside domestic food animals and included wild animals in natural settings as well as captive wild animals. He helped write the “Guide for the Care and Use of Agricultural Animals in Agricultural Teaching and Research,” and he contributed a section to the PHS-NIH “Institutional Animal Care and Use Committee Guidebook.” He has served on the boards of the Scientists Center for Animal Welfare, the International Society of Applied Ethology and the American Society of Animal Science. He has served on over 30 animal care program assessment teams at university, government and industry institutions in service to the “Association for the Assessment and Accreditation of Laboratory Animal Care, International.” He has lived and served on faculty of universities in Canada and Sweden. The NE-American Society of Animal Science recognized him as the 1985 “Outstanding Young Researcher” and the 2005 recipient of the “Distinguished Service Award.” He has served as assistant dean in the College of Agriculture and Natural Resources and chair of the university animal care and use committee. The University of Maryland Center for Teaching Excellence has recognized him with a Certificate of Teaching Excellence (1997), as a Lilly Fellow for Teaching Excellence (2002), and as a Phillip Morrill Presidential Scholars Faculty Mentor (2005). His recent teaching activities have focused on a senior-level course entitled “Animal Welfare and Bioethics” and a University Honors course entitled “Applied and Cognitive Ethology: From Animal Thinking to Animal Feelings”.
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Name: W. Ray Stricklin

University: Maryland, College Park

Key Teaching Activities/Interests Relevant to Bioethics:
ANS453 (Animal Welfare and Bioethics); HONR238F (Applied & Cognitive Ethology)

Previous or anticipated challenges:
Retirement

Your expectations from this workshop:
To be the last one I ever host!
Dr. Janice Swanson
Professor
Department of Animal Science
Michigan State University

Email: swansoj@msu.edu

Janice Swanson is professor and chair of the Department of Animal Science at Michigan State University. She received a PhD from the University of Maryland in Applied Ethology in 1988, and MS and BS in animal science from the University of Connecticut. Swanson’s career includes five years as a technical information specialist in the U.S.D.A. Animal Welfare Information Center and 15 years as a faculty in the Department of Animal Science and Industry at Kansas State University. At KSU, she taught courses in animal behavior and welfare, conducted outreach, served as director of the department’s international program, and as interim department head. In 2007 Janice assumed the position of professor and Director of Animal Welfare at MSU to coordinate outreach, teaching and research in the area of animal welfare with a focus on social responsibility in the food system. She is a member of the MSU Animal Behavior and Welfare Group and has been serving as the chair of the Department of Animal Science since 2010. In addition to her administrative and academic responsibilities in teaching, research and extension, Janice has provided scientific service to government, industry and scientific animal welfare advisory committees including: the United Egg Producers, McDonalds, Food Marketing Institute, Bob Evans, Darden, Leprino Foods and Tysons. She was co-chair of the scientific committee leading to the third edition of the FASS Guide for the Care and Use of Agricultural Animals in Research and Teaching, chairs the taskforce for the annual review and revision of the Michigan Generally Accepted Agricultural and Management Practices for the Care of Farm Animals administered under the Michigan Right to Farm Act, and served as the scientific co-director of the Coalition for Sustainable Egg Supply Project. Email contact: swansoj@msu.edu.
Name: Janice C. Swanson  
University: Michigan State University

Key Teaching Activities/Interests Relevant to Bioethics: I teach a senior level required course in ethical issues and animal agriculture. My position at MSU is to provide support/programming in research, teaching and extension/outreach on issues of animal welfare and social sustainability in the food system.

Previous or anticipated challenges: One of the more vexing challenges is inspiring students to conduct “deeper dives” to search, identify and examine the validity of evidence utilized in their deliberations about ethical issues.

Your expectations from this workshop: Learning from others, generating a living-network of instructors delivering ethics curriculum, and receiving helpful feedback on our curriculum!
Gary Varner wrote one of the first dissertations on environmental ethics and has since published three books and over 50 shorter pieces on related topics, including hunting, animal agriculture and human nutrition, medical research, cloning, and pet ownership, as well as philosophical issues associated with the National Environmental Policy Act, the Endangered Species Act, and the property takings debate. His 2012 book, *Personhood, Ethics, and Animal Cognition* (Oxford University Press) develops an approach to animal ethics grounded in the two-level (or “Kantian”) utilitarianism of R.M. Hare. His current book project, *Sustaining Animals: Envisioning Humane, Sustainable Communities* (forthcoming from Oxford) will apply the approach to various issue areas, including animal agriculture, pets and working animals, medical research on animals, and wildlife and ecosystem management.

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**Name:** Gary Varner  
**University:** Texas A&M

**Key Teaching Activities/Interests Relevant to Bioethics:** My research areas are environmental ethics and animal ethics. I regularly teach in both areas at the undergraduate and graduate levels.

**Previous or anticipated challenges:** Facilitating class discussions and knowing enough about the related science.

**Your expectations from this workshop:** I hope that it will be useful to participants!
Workshop Facilitators
**Dr. Paul Thompson**  
**Michigan State University**

Paul B. Thompson holds the W.K. Kellogg Chair in Agricultural, Food and Community Ethics at Michigan State University. He received a Ph.D. in philosophy from Stony Brook University in 1980, and has held faculty appointments at Texas A&M University (1981-1997) and Purdue University (1997-2003) before joining the Departments of Philosophy, Community Sustainability and Agricultural Food and Resource Economics at MSU in 2003. Thompson is the author of over 200 journal articles and book chapters, mostly focused on ethical issues and environmental impacts in global, regional and local food systems, along with risk analysis and the foundations of sustainability science. He is a two-time winner of the Agricultural and Applied Economics Association Award for Excellence in Communication and his book *From Field to Fork: Food Ethics for Everyone* (Oxford University Press) was selected as the Book of the Year for 2015 by North American Society for Social Philosophy.

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Name: Paul B. Thompson  
University: Michigan State University

**Key Teaching Activities/Interests Relevant to Bioethics:** I teach in philosophy and environmental studies at MSU. For philosophy, I teach a course dedicated to animal ethics, while in environmental studies I teach courses on the theoretical foundations of sustainability.

**Previous or anticipated challenges:** The biggest challenge I face with the animal courses I teach is coping with the extreme range of ability and willingness to consider philosophical questions among different undergraduates. I find it difficult to introduce material appropriate for an upper division course in philosophy.

**Your expectations from this workshop:** See old friends; make some new ones.
Dane Scott

Director
Mansfield Center
University of Montana
Missoula, Montana
59812

Dane Scott is Director of Mansfield Program in Ethics and Public Affairs and Associate Professor of Ethics in the Department of Society and Conservation in the College of Forestry and Conservation, at The University of Montana. He received his Ph.D. in philosophy from Vanderbilt University and has a BS in soil science from the University of California-Riverside. Scott has been at UM since 2006. Scott’s research focuses conservation ethics and ethical issues arising from the use of emerging technologies to address environmental problems, particularly biotechnology and climate engineering. Scott has been the principle investigator on two successfully completed National Science Foundation projects: “The Ethics of Geoengineering: Investigating the Moral Challenges of Solar Radiation Management,” and “Debating Science: A New Model for Ethics Education for Graduate Students in Science and Engineering.”
Postdoctoral Coordinator
**Dr. Amy Bauer**

Postdoctoral Researcher  
Center for Animal Welfare Science  
Comparative Pathobiology  
Purdue University School of Veterinary Medicine  
Veterinary Pathology Building  

Email:  [bauer20@purdue.edu](mailto:bauer20@purdue.edu)

Amy Bauer received her Bachelor of Science degree in Zoology from Michigan State University in 1995 and her DVM from Michigan State University in 1999. During veterinary school she completed externships at Brookfield Zoo/the Chicago Zoological Society, the Duke University Primate Center (now Duke Lemur Center) and Midwest Bird and Exotic Animal Hospital. She carried her interest in exotic animal medicine into practice at Roseland Animal Hospital in South Bend, Indiana from 1999 to 2011. While in practice, she developed interests in zoonoses in the context of the human-animal bond, infectious disease ecology, and conservation biology. During this time she also volunteered in the lab of Dr. Jessica Hellmann at the University of Notre Dame assisting in research utilizing butterflies as models of genetic response to climate change. After serving a semester as an adjunct faculty member in a training program for veterinary technicians, she came to Purdue University to pursue a PhD in comparative epidemiology and public health.

While collecting blood, milk, reproductive, and fecal samples from 654 goats to complete her doctoral project Dr. Bauer was a teaching assistant in veterinary comparative anatomy, served as a tutor in Purdue College of Veterinary Medicine’s case-based learning course, and taught her research to 8th grade science students through the Purdue GK-12 program. She completed her doctoral studies in December of 2015. Dr. Bauer has remained at Purdue as a post-doctoral researcher in the lab of Dr. Candace Croney where she applies her epidemiological training to the welfare of dogs in commercial breeding facilities. Dr. Bauer enjoys travel, reading, music, coffee, and chocolate. A comic book geek, she can name the main members of the Justice League as well as the seven Endless. She participates in NaNoWriMo every November, though she has yet to finish a novel within the time limit.
Name: Amy Bauer  
University: Purdue University

Key Teaching Activities/Interests Relevant to Bioethics: I am interested in developing a One Health focused curriculum for pre-health professions students. Central to the concept of One Health is the interdependence of human, animal, and ecosystem health. Bioethics is an essential topic when discussing this intersection.

Previous or anticipated challenges: The course I am currently developing is an introduction to population health. I anticipate challenges in presenting bioethics in a way that balances both the individual and population perspectives, particularly as I have limited formal training in bioethics.

Your expectations from this workshop: I am hoping to learn more about the pedagogical aspects of bioethics.
Participants
Charlie joined the faculty of the Department of Animal and Avian Sciences at University of Maryland College Park in August 2012 as Livestock Lecturer. He received a BS from Clemson University and a PhD in Animal Science (Equine) from Texas A&M University, after which he taught for 11 years in NE Missouri at Truman State University where he managed a 45-head university-owned horse herd. He was then named Director of Agriculture at Northeast Texas Community College in Mount Pleasant, TX, where he worked for five years before joining the faculty at University of Maryland. He has spent much of the last 20 years teaching animal science and equine-related coursework, and most of his teaching has focused on the basic science of animals including anatomy, physiology, reproduction, nutrition, and behavior, and the practical implications of animal science for the management of horses, cattle and other livestock. His teaching assignment at UMD includes a mix of equine, livestock, and animal science courses.
Name: Charlie Apter  University: University of Maryland College Park

Key Teaching Activities/Interests Relevant to Bioethics:
• Livestock Management – production course (beef, swine, sheep/goat) – welfare implications of management techniques, facilities design, slaughter process
• Eating with Eyes Wide Open – general education course open to any university student
• Animal Behavior – senior-level behavior course with some cross-over into welfare and bioethics

Previous or anticipated challenges:
• Students lack a farm backgrounds and often have idealized perspective of farm animal welfare
• Instructor needs to communicate a more cohesive and informed message to students

Your expectations from this workshop:
• To better understand issues related to transgenic animals
• To better articulate linkage between sustainable livestock production and animal bioethics
• To better grasp implications of best management practices for halal and kosher meat production
Dr. Marc Bauer  
Associate Professor  
Department of Animal Sciences  
North Dakota State University  
155 Hultz Hall Dept. 7630  
Fargo, ND 58108-6050  

Phone. 701.231.7691

My training was in ruminant nutritional physiology from the University of Nebraska (MS) and University of Kentucky (PhD). I have been at North Dakota State University for 20 years in a research and teaching position. My research has been in the area of growing and finishing cattle nutrition and nutrition of pregnant beef cows. My current teaching assignments are Applied Animal Nutrition (ANSC 324), Growing and Finishing Cattle Management (ANSC 487/687), Research and Issues in Animal Agriculture (ANSC 478), and Digestive Physiology (ANSC 776). I also coordinate the undergraduate teaching program and advise many undergraduate students.

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Name: Marc L. Bauer  
University: North Dakota State University

Key Teaching Activities/Interests Relevant to Bioethics:

1. Research and Issues in Animal Agriculture – we discuss many varied issues; student lead discussions
2. Applied Animal Nutrition – ethical issues surrounding what we feed animals (e.g., antibiotics, animal byproducts)

Previous or anticipated challenges:
- Respect
- Fact based

Your expectations from this workshop: No background in philosophy
Dr. Debbie Cherney

329 Morrison Hall
Department of Animal Science
Cornell University
Ithaca, NY 14853-4801
Phone: 607-255-2882

Email: djc6@cornell.edu

Debbie Cherney is an Associate Professor in the Department of Animal Science, CALS, Cornell University. She received her B.S. in Animal Science at the University of Florida, her M.S. in Agronomy at Louisiana State University, and Ph.D. in Animal Nutrition at the University of Florida. Debbie had a Post-Doctoral Fellowship at Purdue University for two years, studying Rumen Microbiology. More recently Debbie received an MA in Medical Bioethics from the Medical College of Wisconsin. Her 60% teaching appointment includes teaching three courses: Introduction to Animal Science; Introduction to Animal Welfare; Ethics and Animal Science. She has taught the Dairy Science Welfare Issues and Transportation Issues for the College of Veterinary Medicine’s Ethics Class for the last four years. Debbie’s initial training in agricultural bioethics was at the Iowa State Bioethics Institute under the tutelage of Dr. Gary Comstock.
Name: Debbie Cherney
University: Cornell University
Key Teaching Activities/Interests Relevant to Bioethics:
- Introduction to Animal Welfare (Fall semester)
- Ethics in Animal Science (Spring Semester)
Previous or anticipated challenges:
- Incoming knowledge and biases of students
- Teaching large class
- Keeping class interested
Evaluations
Your expectations from this workshop:
- Learning from other participants their ideas on teaching classes like this; sharing some of my experiences; learning techniques from excellent PIs

I. Rationale:
   ANSC 3100 Introduction to Animal Welfare
   In its simplest form, animal welfare is about relationships between us and animals. Many of us are not aware of issues that are scientifically proven issues of welfare, both for production animals and for companion animals. This poses a serious threat to animal industries and to our environment.

   I. ANSC 4140 Ethics in Animal Science
   American society has changed in the last 100 years from one where most people had some connection to agriculture to where less than 2% do today. While a student at Cornell University, you have learned many scientific facts and figures and proper ways of handling animals. You may not thought much of human-animal relationships and how animals ought to be treated, however (apart from management and welfare). This course endeavors to alert you to identify the ethical issues that are involved in animal agriculture, now and in the future; learn how to critique an ethical argument; and learn how to present your science-based ethic.
**Dr. Robert M. Chiles**

Assistant Professor of Rural Sociology  
Research Associate in the Rock Ethics Institute  
Department of Agricultural Economics, Sociology, and Education  
Department of Food Science  
The Pennsylvania State University  
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[http://aese.psu.edu/directory/rmc263](http://aese.psu.edu/directory/rmc263)

Email: rchiles@psu.edu

Broadly, my scholarship examines ethical and epistemic controversies about food and agriculture, particularly as concerns sustainability, political economy, nutrition, technology, animals, and everyday consumer culture.

My dissertation work explored how the social acceptability of meat has been disrupted and renegotiated in the aftermath of numerous controversies (e.g. meat safety recalls and undercover videos). I’m currently studying the practical, historical, and ethical obstacles which appear to inhibit the universalization of ethical obligations to animals, particularly in subsistence and pastoral societies. Addressing these questions can provide further insight into how ethical obligations towards animals can be integrated into a broader commitment to development ethics. I’m also interested in the ethics and cultural politics of *in vitro* meat (a nascent technology that attempts to produce meat from stem cells) and the measurement and governance of agricultural greenhouse gas emissions with respect to climate justice considerations.

I received a PhD in sociology at the University of Wisconsin-Madison and a BA in philosophy and political science from Stanford University.
Name: Rob Chiles  
University: Penn State

Key Teaching Activities/Interests Relevant to Bioethics:

(1) studying food ethics and sustainability in everyday and institutional contexts, particularly with respect to meat controversies

(2) investigating the epistemological, methodological, and ethical dimensions of agrifood system research (e.g. how the research itself is practiced)

Previous or anticipated challenges: My primary concern with the teaching of animal ag bioethics is that all voices won't be heard - either the teacher isn't interested in presenting the full spectrum of views on the topic, or the students aren't interested in listening to different perspectives. How can we most effectively address/facilitate this?

Your expectations from this workshop: learn about best practices for student and public engagement; obtain/develop new tools and teaching modules; meet new colleagues, discuss future research, teaching, and grant opportunities

Unit I:

- Examine contrasting positions on food ethics
- Develop ethical “toolbox”
- Look at historical and political-economic context
- Question students’ assumptions about truth, knowledge, trust

Unit II:

- Topics: social inequality, food security and food sovereignty, sustainability, and the role of animals in the food system

Unit III:

- personal lifestyles/consumption, career paths, public policy, and dispute resolution
Dr. Courtney Daigle

Assistant Professor, Animal Welfare  
Texas A&M University  
Phone: 979-862-9171

Email: cdaigle@tamu.edu

Undergraduate Education  
B.S. in Zoology, Oklahoma State University

Graduate Education  
M.S. in Zoo & Aquarium Management, Michigan State University  
Ph.D. in Animal Science, Michigan State University  
Postdoctoral training, Center for Animal Welfare Science, Purdue University

Awards  
American Society of Animal Science Young Scholars Award, 2014  
Junior Fellowship, Wageningen Institute of Animal Science, Wageningen University, 2011

Dr. Courtney Daigle is an Assistant Professor in the Nutrition section of the Department of Animal Science. She received a Bachelor of Science in Zoology in 2004 from Oklahoma State University. She worked in the zoo industry for several years before continuing her education at Michigan State University where she received a Master of Science in Zoo & Aquarium Management (2008) and a Doctor of Philosophy in Animal Science (2013). During her graduate training she worked as an intern with the Smithsonian’s Conservation Biology Institute (2008), was a Junior research fellow at Wageningen University (2011), and was the technician for the Animal Behavior and Welfare Laboratory at Michigan State University (2008-2014). She worked as a Postdoctoral Research Associate in the Center for Animal Welfare Science at Purdue University (2015).

Dr. Daigle specializes in evaluating management and husbandry practices to optimize animal health, productivity, and welfare. The Daigle Lab quantifies behavior to develop and validate technologies designed to measure species-specific behaviors important to health, welfare, and productivity.
Name: Courtney Daigle  University: Texas A&M University

Key Teaching Activities/Interests Relevant to Bioethics:

ANSC 310: Behavior & Management of Domestic Species
ANSC 610: Applied Animal Welfare
Animal Welfare Judging and Assessment
Pen Rider Husbandry Certificate Program
Dr. Christopher Gray, VetMB, MA, MBA, MRCVS

Director, Veterinary Medical Center
Michigan State University
517-763-4189

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In January 2014 I joined Michigan State University as Director of the Veterinary Medical Center.

I am an elected council member of the Royal College of Veterinary Surgeons in the United Kingdom.

I completed a part time executive MBA programme at Durham University between January 2010 and January 2012, with my dissertation research title being ‘Does the introduction of veterinary clinical performance measures lead to an improvement in commercial outcome?’

In my spare time I enjoy cycling, particularly taking part in long distance day events from 60 – 120 miles. This fall I hope to complete my first triathlon.
Chris Gray

Key Teaching Activities/Interests Relevant to Bioethics:
Teaching DVM students a required 2 credit ethics course from fall 2017
“Ethical and Animal Welfare Issues in the Veterinary Profession”

Anticipated challenges:
No previous ethics teaching experience
Student engagement/interest

Your expectations from this workshop:
Better understanding of teaching ethics/teaching models
Dr. Angela Green
Agricultural and Biological Engineering
University of Illinois

Email: angelag@illinois.edu

Angela Green’s professional interests include decision support for animal management, animal welfare, understanding animal-environment interactions, and animal production sustainability issues. She joined the Agricultural and Biological Engineering department at the University of Illinois in 2008, with a teaching and research appointment. She currently teaches three formal courses and periodic special courses, including TSM 311 Humanity in the Food Web, ABE 100 Introduction to Agricultural and Biological Engineering, and ABE 474 Indoor Environmental Control. She completed her doctoral degree (‘08) in Agricultural and Biosystems Engineering at Iowa State University, where she was supported as a National Science Foundation PhD Graduate Fellow, with research emphasis on systematic assessment of laying hen housing for improved hen welfare. She earned her BS (‘02) and MS (‘04) in Biosystems and Agricultural Engineering from the University of Kentucky, with an emphasis on controlled environments and physiological responses of transported horses. She studied animal behavior assessment methods in 2005 at Silsoe Research Institute in Bedfordshire, England, assessing tolerance of atmospheric ammonia in laboratory mice. She currently leads the Animal Welfare and Environmental Systems Laboratory at the University of Illinois (awesome.illinois.edu).
AGRICULTURAL ANIMAL BIOETHICS TEACHING WORKSHOP  
26-28 JANUARY, BALTIMORE, MD

Name: Angela Green, University of Illinois

Key Teaching Activities/Interests Relevant to Bioethics:
Humanity in the Food Web (TSM 311)
*Team taught, Gen Ed – Advanced Composition and History &Philosophy
http://publish.illinois.edu/humanityinthefoodweb/syllabus/

Previous or anticipated challenges:
Meaningful content delivered in a digestible format for students, while balancing a large audience and connecting across course topics

Your expectations from this workshop:
Networking, idea sharing
Dr. Lindsey Hulbert  
Assistant Professor of Applied Ethology and Immunology  
Kansas State University  
127 Call Hall  

Email: lhulbert@k-state.edu

Dr. Lindsey Hulbert grew up in the southwest (AZ, NM) then began her career in animal physiology and behavior in Lubbock, TX through an undergraduate research program at Texas Tech University. Her first research projects involved understanding how housing and management conditions affect the behavior and stress responses in swine. Her research evolved into how stress affects the health and immune systems in other species, including laboratory rodents, beef and dairy calves, and poultry. She also worked for the USDA-Agriculture Research Services, Livestock Issues Research Unit in Lubbock, TX. Dr. Hulbert was a post-doctoral at the University of California, Davis before joining the department of Animal Sciences and Industry at Kansas State University in January of 2013. Dr. Hulbert’s research team studies: 1) Development and validation of automated technologies to monitor health and welfare of domestic animals; 2) Understanding the effects of early-life stressors on nutritive and non-nutritive oral behaviors; 3) Improving resilience to stressors and immunocompetence through housing, management, and feeding strategies, and; 4) Determining biomarkers of stress and inflammation for predicting and identifying disease. Dr. Hulbert teaches: A) ASI 595-Contemporary Issues in Animal Agriculture; 2) ASI 655 Domestic Animal Behavior, and; 3) ASI 825 Stress Physiology.
Name: Lindsey E. Hulte  University: Kansas State University

Key Teaching Activities/Interests Relevant to Bioethics:
- ASI 595 Contemporary Issues in Animal Science and Agriculture (Two instructors)
- ASI 655 Domestic Animal Behavior
- ASI 825 Stress Physiology of Livestock

Previous challenges: My main goal is to help students develop critical-thinking. Our students are used to lectures about facts, then spitting out facts on exams. It is a challenge to assess learning of critical thinking. We find that our students are rarely made to think about animal practices in previous courses; they are seniors or grad students, so it is challenging to help them see that these issues need to be addressed.

Your expectations from this workshop: I want to make sure I am covering the similar material as the other universities and gain some perspective on how bioethics can be taught in more of an active form, rather than lectures.
Dr. Harvey James

Professor of Applied Economics
University of Missouri
146 Mumford Hall
Columbia, Missouri

Harvey James is Professor of Applied Economics, Chair of the Department of Agricultural and Applied Economics, and the Department’s Director of Graduate Studies, at the University of Missouri, in Columbia, Missouri. Dr. James is also editor-in-chief of the journal *Agriculture and Human Values* and a member of the editorial board at *Business Ethics Quarterly*. Dr. James has a BA in economics and an MS in sociology from Brigham Young University, and an MA and PhD in economics from Washington University in St. Louis.

Dr. James teaches courses in microeconomics and agricultural ethics for undergraduates and research methodology for graduate students.

Dr. James' research focuses on applied ethics and the economic foundations of trust and ethical behavior. He is currently conducting research on how ethical behavior affects economic growth and entrepreneurial activity and how the structure of business networks relates to principles of fairness.

Dr. James has produced two edited books: *The Ethics and Economics of Agrifood Competition* examines the question of whether there is adequate competition in the agrifood industry; *New Ideas in Contracting and Organizational Economics Research* explores emerging research on business organization. He also co-authored the book, *When Businesses Cross International Borders: Strategic Alliances and Their Alternatives* (with the late Murray Weidenbaum, former chairman of the Council of Economic Advisors under U.S. President Ronald Reagan). Dr. James has published more than 100 academic articles and book chapters.

Dr. James is a member of the American Economic Association; the Agricultural and Applied Economics Association; the Association for Social Economics; the Agriculture, Food and Human Values Society; and the Society for Business Ethics.

His interests include spending time with his family, reading, genealogy, composing music, and running (best half marathon time is 1 hour, 25 minutes).
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Name: Harvey James          University: University of Missouri

Key Teaching Activities/Interests Relevant to Bioethics: I teach a course called “Ethical Issues in Agriculture” (since 2004), junior & senior level, writing intensive, humanities credit, sustainable ag minor requirement, ag econ public policy elective

Previous or anticipated challenges: Students lack interest in ethics, want clean answers to difficult problems and have poor reasoning and writing skills

Your expectations from this workshop: Networking, improvements in course
I am an Associate Professor of Reproductive Physiology at West Virginia University. At WVU I teach Principles of Animal Science, Beef, Pork and Small Ruminant Production. I also teach a Study Abroad course- Tropical Animal Production and Health, and contribute to teaching in Reproductive Physiology related courses. My research focuses on increasing lifetime productivity of the breeding herd/flock and the role of Anti-Mullerian Hormone on reproductive outcome in cattle, water buffaloes and sheep. I have and continue to work with various governments in the Caribbean region on approaches to increase productivity of livestock operations and on Good Agriculture Practices for the livestock sector.
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• Name: Marlon Knights University: West Virginia University

• Key Teaching Activities/Interests Relevant to Bioethics:
  • Courses Principles of Animal Science
  • Beef Production
  • Pork Production
  • Small Ruminant Production
  • Tropical Animal Production and Animal Health

• Previous or anticipated challenges:
  • Integrating Animal Bioethics into syllabus
  • Convincing colleagues of the need for substantial focus on Animal Bioethics in the Curriculum
  • Knowledge

• Your expectations from this workshop:
  • Enhance knowledge of Animal Bioethics
  • Developing learning outcomes that can be included in existing courses
  • Examples and strategies for teaching (Developing an entire course for delivery online)
Dr. Dawn Koltes
University of Arkansas
Division of Agriculture
479-575-6872

Email: delkins@uark.edu

I grew up in rural Arkansas on a rice farm. Upon high school graduation, I wanted to become a veterinarian. I enrolled in Animal Science department at the University of Arkansas. This is where I discovered another side to animal agriculture, agricultural animal research. Upon completing a Bachelor’s degree in Animal Science at the University of Arkansas (2006), I went on to complete a Master’s degree in Animal Breeding and Genetics at the Iowa State University (2008), and Doctorate in Philosophy in Genetics at Iowa State University (2013). While my graduate studies focused on genetics, my graduate research focused on understanding the mechanisms that control lipid breakdown in adipose tissue in dairy cattle. In my pursuit to advance agricultural animal health, I am studying gastrointestinal health in swine and chicken. Additionally, I teach a graduate level endocrine physiology of domestic animals class, guest lecture a graduate level advanced analytical methods in animal science laboratory, and undergraduate level livestock improvement through animal breeding and domestic animal physiology.

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Name: Dawn Koltes University: University of Arkansas

Key Teaching Activities/Interests Relevant to Bioethics:
Integrating animal bioethics into undergraduate and graduate production and physiology classes

Previous or anticipated challenges:
Effectively discussing and communicating ethical reasons for methods used in animal agriculture and animal agricultural research. For example, different euthanasia or handling techniques or the use of surgical procedures for experimental purposes
**Biography**

Martin Maquivar was born in Mexico City where he grew up. He obtained a Doctor of Veterinary Medicine and Zootechniques in 2001, a Master’s degree in Animal Production and Medicine in 2003, and a specialization in Cattle Production Medicine in 2005 at the National Autonomous University of Mexico. He moved to Columbus, Ohio to pursue his PhD at The Ohio State University, completing it in 2011 in Animal Sciences, specifically studying the link between nutrition and reproduction on the onset of puberty in beef cattle. Then he started a postdoctoral fellowship at the Preventive Veterinary Medicine at The Ohio State University Veterinary medicine School in 2012 working with reproduction and welfare of dairy cattle. After that he worked briefly as reproductive specialist at Aurora Organic Dairy before he moved to Washington State University Department of Animal Sciences in 2013 where he currently works. At WSU, he teaches introductory to animal sciences, physiology of reproduction and animal rights and animal welfare. In addition to his teaching commitment he conducts undergraduate research focusing in expression of estrus in dairy and beef cattle, animal welfare, puberty, and teaching research.
Name: Martin G Maquivar
University: Washington State University

Key Teaching Activities/Interests Relevant to Bioethics:
- Introductory to Animal Sciences (AS 101)
- Animal rights and Animal welfare (AS 285)
- Physiology of reproduction (AS 350) and laboratory (AS 351)

Previous or anticipated challenges:
- Make students to think critically about the animal rights and animal welfare efforts
- Use of information sources to promote a better understanding of the animal as a whole
- Engage in constructive discussions issues regarding animal rights and animal welfare
- Express concepts, propositions, and beliefs in coherent, concise and technically correct form regarding animal rights and animal welfare

Your expectations from this workshop:
- Learn teaching tools to create better and more conducive learning environment in animal rights and animal welfare class
- Learn from other instructors and facilitators techniques that can be applied to the classroom
- Establish a teaching/learning network with other professionals from different universities to share information and teaching experiences
I have been at NC State for 13 years, with a teaching and research appointment. My research program has focused on swine genomics with a dual benefit for animal and human health with an emphasis on using commercial swine as models for osteoarthritis and pharmacogenomics studies. With respect to teaching, every Fall semester I teach a sophomore-level “Agricultural Genetics” course to ~140 undergraduate students majoring mostly in Animal Science, Poultry Science, and Horticultural Science. Topics in that course include Mendelian genetics, pedigree analysis, genomics, and one lecture on ethics. Since 2010 I have also taught a 4-week freshman-level “Introduction to Plant Molecular Biology” summer course to ~20 high school students and a senior- and graduate-level biotechnology course “PCR and DNA Fingerprinting” to 16 students. In the summer course we discuss molecular biology, genomics and one lecture on ethics. Since 2013, I have served as the Undergraduate Programs Coordinator in the Department of Animal Science, and am responsible for curriculum and course development in the department as well as coordinating academic advising, course scheduling, and student recruitment.
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Name: Melissa Merrill  University: NC State University, Dept. of Animal Science

Key Teaching Activities/Interests Relevant to Bioethics:
• Teaching Coordinator for the department having ~750 undergrads
• I teach two courses each year—“Agricultural Genetics” (140) and “Intro to Molecular Biology” (20)—where ethics are discussed briefly (1 lecture), would love to incorporate more specific animal examples
• Discussion in our department of developing a “Current Problems in Animal Science” course where bioethics would be covered in more detail

Previous or anticipated challenges: How to actively discuss/debate bioethics with 140 students

Your expectations from this workshop: Acquire case studies, examples of bioethics-related assignments or discussions

Purdue University  University of Maryland  Michigan State University  UAA  Texas A&M University  USDA

United States Department of Agriculture
National Institute of Food and Agriculture
Dr. Jeannette Moore teaches and mentors undergraduate and graduate students while serving as Chair of the NC State University Faculty (2015 to 2017) and as the departmental Undergraduate Coordinator for Transfer Students and Study Abroad. Dr. Moore received her Ph.D. (1987) and M.S. (1983) degrees in Animal Nutrition from the University of Arizona, Tucson and her B.S. degree in Animal Science from California State Polytechnic University, Pomona (1980).

After a post-doc position at North Carolina State University (1990), Dr. Moore joined the Animal Science faculty in a 100% teaching appointment (Visiting Assistant Professor, 1992) and later became Assistant Professor and Undergraduate Teaching Coordinator for the Department of Animal Science (1998); she was promoted to Associate Professor in 2004 and Full Professor in 2011.

Dr. Moore's professional affiliations include Alpha Zeta, the American Society of Animal Science (has served on the Undergraduate Education Committee), Gamma Sigma Delta (Past President of NCSU chapter), North American Colleges and Teachers of Agriculture (current Membership Director; past President; past Southern Region Director and past chair of the Teacher Recognition Committee), National Block & Bridle (past President), and Phi Kappa Phi.

Her professional accomplishments include receiving the North American Colleges and Teachers of Agriculture (NACTA) Murray Brown Leadership Award (2015), the CALS at NCSU Board of Governors Award for Excellence in Teaching (2013), the NACTA Southern Regional Outstanding Teacher Award (2011), the NACTA Teacher Fellow Award (2001), being inducted into the Academy of Outstanding Teachers at N.C. State University (2001), receiving the CALS Outstanding Faculty Advisor Award in 1998, and being named the Outstanding Faculty Member in Animal Science by the students in 1994, 1997, and 2000. She was honored to receive the Alumni Distinguished Undergraduate Professor award and title in 2008 from North Carolina State University.
Name: Jeannette Moore          University: NC STATE UNIVERSITY

Key Teaching Activities/Interests Relevant to Bioethics:

- ANS 150, Intro to Animal Science & lab
- ANS 408, Small Ruminant Management & lab
- ANS 101 Introduction to Livestock and Poultry Industries (for AAS degree) & lab

Jeannette Moore

Previous or anticipated challenges:

- Production practices
- "Contemporary Issues in Animal Science"
- Animal behavior and welfare
- Public (and student) perception of Animal Science
- Fewer students with livestock experience
- Trans- and cis-genic animals in medicine and production

Your expectations from this workshop:

- Learn from others' experience
- New teaching ideas, new approaches
Dr. Kasey Moyes

Assistant Professor
University of Maryland, Bldg 142
Department of Animal and Avian Sciences
College Park, MD  20742

Email: kmoyes@umd.edu

Dr. Kasey received her BS from Michigan State University in animal science in 2001. She her MS degree in animal science at the University of Connecticut under the direction of Dr. Sheila Andrew in 2004. She received her PhD in animal science from the University of Illinois in animal science under the direction of Drs. James K Drackley, Juan J Loor and Klaus L Ingvartsen in 2008. She completed her postdoctoral research training at Arhus University in Denmark are the direction of Dr. Klaus L Ingvartsen in 2012. In 2012, she joined the Department of animal and avian sciences at the University of Maryland, where she instructs the introductory course ANSC 101 titled ‘principles of animal science’ and ANSC 443 ‘physiology of lactation’.

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Name: Kasey Moyes
University: University of Maryland

Key Teaching Activities/Interests Relevant to Bioethics:
• ANSC 101: ‘Principles of animal science’, 3 Credits, Given every spring and fall semester, interested in adding a bioethics lecture
• ANSC 443: ‘Physiology of lactation’, 3 Credits, Given every other spring semester

Previous or anticipated challenges:
-I have limited experience relating to bioethics

Your expectations from this workshop:
-To develop a lecture regarding animal bioethics for my ANSC 101 course
Dr. Meghann Pierdon
Researcher and Assistant Director
Swine Teaching and Research Center
Department of Clinical Studies
University of Pennsylvania
New Bolton Center
382 West Street Rd
Kennett Square, PA 19548

Email: mpierdon@vet.upenn.edu

Dr. Pierdon earned her B.A. degree in Biology from Wellesley College and her V.M.D. from the University of Pennsylvania in Philadelphia. She has been the staff veterinarian for Country View Family Farms, LL and was the sole veterinarian responsible for a vertically integrated swine production company overseeing 45,000 sows, 125 finishing sites and 36 nurseries, as well as a swine technical consultant for Elanco Animal Health. Currently, a Researcher and Assistant Director of the Swine Teaching and Research Facility at the University of Pennsylvania School of Veterinary Medicine, she has taught food animal pharmacology, swine production courses, and large animal medicine labs. She created, developed curriculum and managed a new course “Introduction to Animal Welfare” and teaches as well as teaching animal welfare history, concepts and ethics as part of the core veterinary curriculum. In addition, Dr. Pierdon was involved with the “Principles of Ethics in relation to Animal Use” course in Catharines College, Cambridge, UK as well as the Ethics of Animal Welfare, Utrecht University online course.
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Name: Meghann Pierdon
University: University of Pennsylvania
Veterinary school

Key Teaching Activities/Interests Relevant to Bioethics:
• 2 hours of animal welfare in the curriculum for 1st year veterinary students
• Course organizer and teach 2 hours on ethics for animal welfare elective 2nd year vet students

Previous or anticipated challenges:
• Finding topics in bioethics that students see as relevant
• Guiding discussion on bioethics that combine multiple ethical frameworks

Your expectations from this workshop:
• I would like to get some new ideas for teaching, especially the welfare elective, that will engage students. I really enjoy ethics and I hope this will help me convey that and share that with students.
Giovanna Rosenlicht DMV (IT)

Instructor-Department of Animal and Rangeland Sciences  
Office (541)737-1918, Cell (541)829-1431  
112 Withycombe Hall  
Oregon State University  
Corvallis, OR 97333

Giovanna.rosenlicht@oregonstate.edu

Giovanna Rosenlicht is a companion animal veterinarian, and an instructor in the Department of Animal and Rangeland Sciences at Oregon State University. She received her DMV (Dottoressa di Medicina Veterinaria) from the Facolta’ di Medicina Veterinaria, at the University of Perugia in Italy. After graduating she returned to the US and spent a year at Iowa State University College of Veterinary Medicine, after which she accepted an associate veterinarian position in WA, where she worked with a wide variety of companion animals. She quickly found that as a veterinarian, she enjoyed concentrating on specific species rather than a large range, and now her veterinary focus is primarily dogs and cats.

Before accepting a position at OSU, Giovanna’s employment history included working in general practice, being the medical director of a shelter, and working in emergency clinics. While she has a full time instructor position at OSU, she continues to work as a veterinarian whenever possible. In addition to her instructor duties, she is a member to the Human-Animal Interaction Lab at OSU where she studies, the effect of oxytocin genotype on affiliative behavior in dogs, and is a co-advisor for Pre-Veterinary Medicine Club at OSU.

Specific areas of professional and personal interest are behavior, animal welfare, shelter medicine, and the human animal bond. In addition to her professional activities, Giovanna also spends time with her family (a son, two dogs, two cats and some backyard chickens). She is also on the Board of Directors of Heartland Humane Society, and is a member of the OSU Triathlon Club.
Dr. Monique Udell

Assistant Professor of Animal and Rangeland Sciences
Oregon State University
Animal and Rangeland Sciences
112 Withycombe Hall, 2921 SW Campus Way, Corvallis, OR 97331

Email: Monique.udell@oregonstate.edu

Dr. Monique Udell, PhD is an Assistant Professor of Animal & Rangeland Sciences at Oregon State University where she conducts research and teaches courses on animal behavior and cognition, animal learning, behavior modification and animal enrichment. As director of the OSU Human-Animal Interactions Lab, her research has primarily focused on applied animal behavior, human-animal attachment bonds, and the study of evolutionary and lifetime variables contributing to the social cognition and problem solving behavior of dogs, cats, human-socialized wolves and livestock.

Lab website: https://thehumananimalbond.com/
Dr. Kimberly Ange van-Heugten

Assistant Professor of Animal Sciences
North Carolina State University
Riddick Hall 466A

Email: kim.ange@ncsu.edu

Dr. Ange-van Heugten grew up in North Carolina working on her family’s swine operation. Therefore, NCSU was a natural fit to earn her BS in Animal Science with a minor in nutrition. She continued her education at NCSU to complete a MS in nutrition with a minor in physiology.

After her MS, she spent two years as a nutritionist at the Brookfield Zoo in Illinois. She left the zoo to teach in the Animal Science department at NCSU. While working at NCSU, she completed a PhD in animal science working with exotic animal conservation via Wageningen University, The Netherlands.

She has consulted and conducted research at aquarium, circus, livestock and zoological facilities and presented seminars in the US and internationally. Her position at NCSU for the last 16+ years has been 100% teaching with the focus being companion animal education and nutrition. She has been able to acquire significant grant funding and has actively participated in the training of nine MS students. She teaches between four and seven courses per year with an average annual enrollment of over 425 students (6,500+ in 16 years).

She has also directed 150+ teaching assistants to help in course development and research projects. She has authored or co-authored at least 31 peer reviewed publications, 58 proceedings and abstracts, 15 invited presentations, three published course manuals, and a book chapter. Her current interests include canine, elephant, rhino and chelonian nutritional research and the development of the first NCSU graduate level canine and feline nutrition course. Dr. Ange-van Heugten stays active at NCSU via advising clubs and being a member of the faculty senate. She is also the proud mother of four and volunteers within the public school system.
Agricultural Animal Bioethics Teaching Workshop
26-28 January, Baltimore, MD

Name: Kimberly Ange-van Heugten    University: NC State University

Key Teaching Activities/Interests Relevant to Bioethics:
- Companion animal courses
- Nutrition courses (undergrad and grad level)
- Comparative species research

Previous or anticipated challenges:
1) More of my students and peers appear to have a less favorable opinion of animal industries every semester (this is true for all industries – livestock / companion / laboratory animal / zoo / circus, etc.).
2) Some of our students feel “in the minority” about their animal interests and I would like to give them more confidence in their ethical choices.

Example peer e-mail sent to me Fall 2016: “When animal science students take classes ..., are they informed of the wide range of realities - treatment, environmental impacts, antibiotic usage, etc.? Each semester there is at least 1 animal science student in my ethics class who is indignant at any criticism. Last semester I had a student insisting antibiotics were never given and this year, 4 times now, a student has indignantly said that any and all negative reports are misinformation.”

Your expectations from this workshop:
Help educating students and peers alike as to the current progress within animal welfare and the true future of animal programs
Dr. Beth Ventura

Assistant Professor
University of Minnesota
2250 Haecker Hall
1364 Eckles Ave
St. Paul, MN  55108

Email:  bventura@umn.edu

Dr. Beth Ventura is the Assistant Professor of Teaching for Companion Animal and Equine Behavior and Welfare at the University of Minnesota. Originally from California, Beth holds a BS in Animal Science from Michigan State University and an MS in Animal and Avian Sciences from the University of Maryland, College Park. Beth earned her PhD in animal welfare from the University of British Columbia in Vancouver, Canada in 2015. Her research sought to understand stakeholder priorities and concerns in the dairy industry, with the goal of identifying policy solutions that work for both farmers and animals. Broadly, her research interests center on bridging the gap between diverse stakeholder expectations for animal welfare in food production.

With the University of Minnesota since Summer 2016, Beth is developing an undergraduate teaching program to equip animal science students with the foundational skills to navigate issues facing animal production in a rapidly changing society. Her focus is on helping students interpret and balance the science and values affecting food, companion, research and entertainment animals. She brings new courses to the department in animal welfare science and ethics of animal use, applied animal behavior, and advanced animal welfare assessment. She is also in the process of redeveloping a course around animals and society, to be deployed online in Fall 2017. Finally, she co-instructs a debate-style class around contentious issues with animal use.
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Name: Beth Ventura  
University: University of Minnesota (Animal Science)

Key Teaching Activities/Interests Relevant to Bioethics:
• Developing 4 new courses this year inc. “Animal Welfare Science & Ethics of Animal Use”
• Co-instruct a debate-style course of contentious issues with animals

Previous or anticipated challenges:
• I’m not an ethicist! I did terribly in my one philosophy course in undergrad
• Having just a surface-level understanding of ethical theories
• Making ethics relevant to production students

Your expectations from this workshop:
Gaining better understanding/knowledge of how to navigate student questions

Spring courses:
200-level Animal Welfare Science and Ethics of Animal Use
(cap at 50 students; 3 credits)
200-level Introduction to Applied Animal Behavior
(current cap at 35 students; 2 cr. w/ plan to expand)

I’ve got these.

Fall courses:
100-level Animals and Society
overhauling and migrating online; 100’s of students; 3 cr.
300-level Advanced Animal Welfare Assessment
(student-led course to go to competition); 10 students max but may include grad/vet students
300-level Hot Button Issues
~30 students; 3 credit; debate

This is my big problem: how to deal with 1) online, 2) within a week, 3) engaging 100’s? 4) Designing assessment that ISN’T written?

Minor:
How do I give framework before debates to help them critically incorporate references to ethics/morality?
Workshop notes
AGRICULTURE'S CHALLENGE IN ADDRESSING ETHICAL ASPECTS OF ANIMAL CARE & WELFARE

- Most animal scientists remain unmotivated by ethical concerns.
- Lack of tools to critically evaluate current systems (Oxman, 2006; Sldls, 2003).
- Often assume little is wrong with current methods.

WHICH HOUSING SYSTEMS SHOULD BE ALLOWED?

ANIMAL WELFARE AS A MULTI-DIMENSIONAL SCIENCE & ETHICS PROBLEM

Focus is often on effects on animals (Animal Welfare Science).
But ethics, especially social justice issues are embedded.
ANIMAL WELFARE POLICY AS A SOCIAL JUSTICE PROBLEM

- Animal care ethics (impacts on integrity)
- Human health concerns
  - Worker health and safety
  - Food safety and quality, food access, security
  - Livestock nutrition and production ideas and impacts on rural communities
- Environmental considerations (particularly on scale of agriculture grows)
  - Direct and indirect impacts on land, water, air

ADDRESSING THE CHALLENGES

USDA NIFA HEC CHALLENGE GRANT

Faculty from five universities funded to address bioethics education in animal agriculture
GOALS
- Provide students with the opportunity to critically consider the ethical and moral dimensions of scientific research
- Engage students in the practice of cooperative deliberation
- Help students become more productive participants in public debates over science
- Build faculty competence & confidence in facilitating deliberation

PROJECT OBJECTIVES
- Develop educational modules/case studies in agricultural animal bioethics
  - Complement & strengthen courses in animal welfare, contemporary issues, sustainable agriculture
  - Provide educators with the tools and support needed to effectively deliver content

PRODUCTS
- Workshops
  - Show faculty how to adapt/incorporate materials to meet specific needs
  - Explore innovative forms of content delivery and evaluation
- Interactive, dynamic website
  - Provide resources and instructional support (e.g., templates for course development)
FACTORS TO CONSIDER IN ETHICS EDUCATION

- Student participation is essential
- Students learn more when interacting with others of differing opinions/values
- Critical to create a classroom environment in which students feel safe to express their opinions
- Well-planned exercises combined with rules regarding respect for the views of other persons are needed

DISCUSSIONS CAN EASILY BECOME PROBLEMATIC

THE CASE OF THE MORALLY RELEVANT DIFFERENCES BETWEEN THE DOG AND THE PIG

Question posed to students in ANS 420:

"What is the morally relevant difference between the dog and the pig that allows us to raise pigs in crates that allow them only to stand and lie down, but makes doing the same to dogs abhorrent?"
SAMPLE RESPONSES

- "IT'S TOO EXPENSIVE TO NOT KEEP PIGS IN CRATES."
- "THERE IS NO OTHER WAY TO DO THINGS."
- "WHO'S GOING TO PAY TO CHANGE THE SYSTEM?"
- "DOGS SMELL."
- "WE EAT PIGS."
- "PIGS DON'T DO MUCH ANYWAY."
- "WHAT ARE THE DOGS BEING USED FOR?"
- "HOW MUCH ARE THE DOGS WORTH?"
- "DOGS ARE SMARTER THAN PIGS."

INTERPRETING ANS 420 RESPONSES

- DO NOT ADDRESS UNDERLYING CONCERNS ABOUT Morally Correct TREATMENT OF PIGS
  ANIMALS
- ILLUSTRATE POOR GRASP OF THE ISSUES, FAILURE TO LINK
  MORAL PHILOSOPHY AND SCIENCE
- UTILITARIAN PHILOSOPHY, DOGMA, AND OFFHANDED
  SELF-JUSTIFICATION PERMIT CONCLUDING "IT IS OK TO
  RAISE DOGS IN CAGES"
- RETRACES THAT WHEN ETHICAL AND ECONOMIC
  CONCERNS COLLIDE, ECONOMICS TRUMPS ETHICS

CHALLENGES TO STUDENTS

- MOVING BEYOND DOGMATISM, OFF-HANDED SELF-
  JUSTIFICATION & RELATIVISM (WESTON, 2001)
- PHILOSOPHICAL VIEWS BESIDES UTILITARIANISM
- UNDERSTANDING THE PITFALLS OF
  UTILITARIANISM
- CONSTRUCTING & CRITICIZING "ARGUMENTS"
  VERSUS ARGUING
- RELINQUISHING ECONOMICS AS THE SOLE
  PRIORITY
CHALLENGES TO STUDENTS

• Recognizing and appreciating ethical disagreements
• Reflecting different circumstances, knowledge levels, values, attitudes and beliefs
• Expectations of simplistic, reductionist problem-solving
• What is the "right" answer?
• What do I need to know?

CHALLENGES TO INSTRUCTOR

• Limitations in formal ethics education
• Understanding limitations of traditional didactic approach
• Presenting ethical theories appropriately
• Educating rather than indoctrinating
• Acknowledging personal beliefs/biases
• Facilitating students developing their own attitudes and beliefs

CHALLENGES

• Stakeholder misinformation and emphasis
• Lack of training in ethics
• Relevance to VET students who emphasize science
• Bias
• Ability to have 2-way conversations
• Discussions in big courses
CHALLENGES

- Defensiveness
- Do students really understand what is happening in animal ag?
- Student interest in ethics
- Fostering critical thinking
- Presenting full spectrum of views

CHALLENGES

- Convincing colleagues of need for bioethics education
- Incorporating ethics into science courses where procedures are being done without ethical consideration
- Information sources
- Making information relevant to non-ag majors
- Some students dominate discussions

WORKSHOP GOALS

- Address existing & anticipated challenges
- Facilitate teaching collaboration & effectiveness
- Improve student engagement
- Explore needed curriculum content & delivery
Case Studies
Case studies (see https://vet.purdue.edu/CAWS/bioethics/workshops.php#cases)

1. **AquAdvantage**

2. **Enviropig**
   o Minard, Anne. "Gene-Altered 'Enviropig' to Reduce Dead Zones?", *National Geographic*

Discussion points
- What is the central issue?
- Are there competing ethical principles?
- Are there legitimate concerns?
- What else do you want or need to know?
- Is there a common ground from which to work?
- Who does the decision impact?
- What will be the best course of action?
No genetically engineered (GE) animals are currently available to consumers. The public seems to accept at least a limited number of genetically engineered crops, for example, in the United States genetically engineered corn, soybean, cotton, and papaya dominate the acres planted in these crops. However, the public remains skeptical of GE animals. Two GE production animals have been widely discussed and debated in the press, AquAdvantage Salmon and Enviropig. It is likely that the GE salmon will make it to some supermarket shelves, while efforts to bring the GE pig to market have been shelved.

Should it be so difficult to bring GE production animals into the market place?

AquaBounty Technologies, the company that developed the genetically engineered salmon, first approached the Food and Drug Administration (FDA) for approval in the late 1990s. In November of 2016 the FDA finally certified AquAdvantage Salmon as safe to eat. The GE salmon is engineered to be fast growing and they require less feed. These salmon will be raised in land-based, closed containment systems. It is advertised as a technological solution for declining wild fish stocks, an alternative to environmentally problematic open-net cage farming, and a way to meet the rapidly growing demand for salmon, more generally protein. Supporter of GE fish argue that this technology can make a significant contribution to sustainably feeding a growing world population. Many consumer and environmental groups disagree, and have forcefully opposed GE fish as a potential threat to human health and biodiversity. Nonetheless, after years of effort this GE salmon is likely to make it to the supermarket. Advocates for GE fish are keeping their fingers crossed that it will be a success, as its success could open the gates for other GE fish and animals. Opponents are keeping their fingers crossed that it will fail, as its success could open the gates for other GE fish and animals.

In 2012 researchers at the University of Guelph who developed Enviropigs announced that they were halting research on this GE pig. At the time they were still waiting for the FDA to certify the pork safe for consumption. The researchers lost their funding and no company was willing to invest. Public resistance to GE animals is the most commonly cited reason for the failure, at least for a time, of Enviropig. Consumer and environmental groups opposed to agricultural biotechnology celebrated. The Enviropig is a technological fix. It is designed to mitigate the environmental impacts of phosphorus (P) pollution from industrial pig farms. Phosphorus pollution is a major global concern as it causes algae blooms and can lead to dead zones in aquatic systems. The cereals and grains that are fed to pigs are high in phytate, a P containing compound. Pigs need P as a nutrient but lack the enzyme, phytase, to digest the phytate in feed. The result is P passes through the pigs system and is concentrated in their manure. Farmers either add digestible P to feed for as a supplement or add the phytase enzyme, often from a GE fungus, to cereals and grains at extra costs. In 1998 scientists at the University of Guelph engineered the Enviropig to synthesize phytase in its salivary gland. Depending on the pig’s age and diet the manure of an Enviropig can contain up to seventy-five-percent less P than non-GE pigs. Groups opposed Enviropig argue that these efforts are misguided. Their position is that this attempt to “fix” industrial pig farms with biotechnology should be abandoned due to larger environmental and animal welfare concerns. They argue that more sustainable and humane farming practice should be found.
Resources
Team Building

http://info.catme.org

Creating diverse teams

What is your gender?

Please indicate the race/ethnic group with which you most identify:

Please check the times that you are busy and unavailable for group work.

(You may select in the rows or columns by clicking the column/row header)

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In this course, you intend to work how many hours per week outside of class (not counting lectures or lab):

Please select the statement you most closely identify with:

- I have more ideas in 5 minutes than most folks have all day, but hate to do the details
- I prefer the ideas phase but can do details
- I am balanced between ideas and details
- I prefer the details but can come up with ideas
- While the restaurateurs are dreaming, I can get the project done and the report written
Departments/Organizations

NYU School of Medicine, NYU Langone Medical Center High School Bioethics
www.med.nyu.edu/highschoolbioethics/briefs/ethics-animals

National Institute of Health Department of Bioethics.
https://www.bioethics.nih.gov

Presidential Commission for the Study of Bioethical Issues
www.bioethics.gov

University of Washington Department of Bioethics & Humanities. https://depts.washington.edu/bhdept/

The Department of Medical Ethics and Health Policy, Perelman School of Medicine, University of Pennsylvania
www.bioethics.upenn.edu

Animals Used in Research-Latest Government Facts and Figures
www.navs.org/animal-testing/latest-facts

University of Alaska Anchorage. Philosophy Department. Ethics Center.
https://www.uaa.alaska.edu/academics/college-of-arts-and-sciences/departments/philosophy/ethics-center/faculty-publications.cshtml
Books


Livestock, Ethics and Quality of Life. Ed Hodges, John and Han In K. CABi Publishing, UK. 1999,


Publications


Ethics and Animal Farming. A Web-based interactive exercise for students using the Ethical Matrix. Students’ Guide. Written and produced by Professor Ben Mepham and Sandra Tomkins


Kelly T. “The Good, the Bad and the Ethical: Regulative Ideals and Role Obligations” with Stephanie Bauer. In proceedings of the University of Alaska Anchorage Ethics Center Convocation. 2014.
