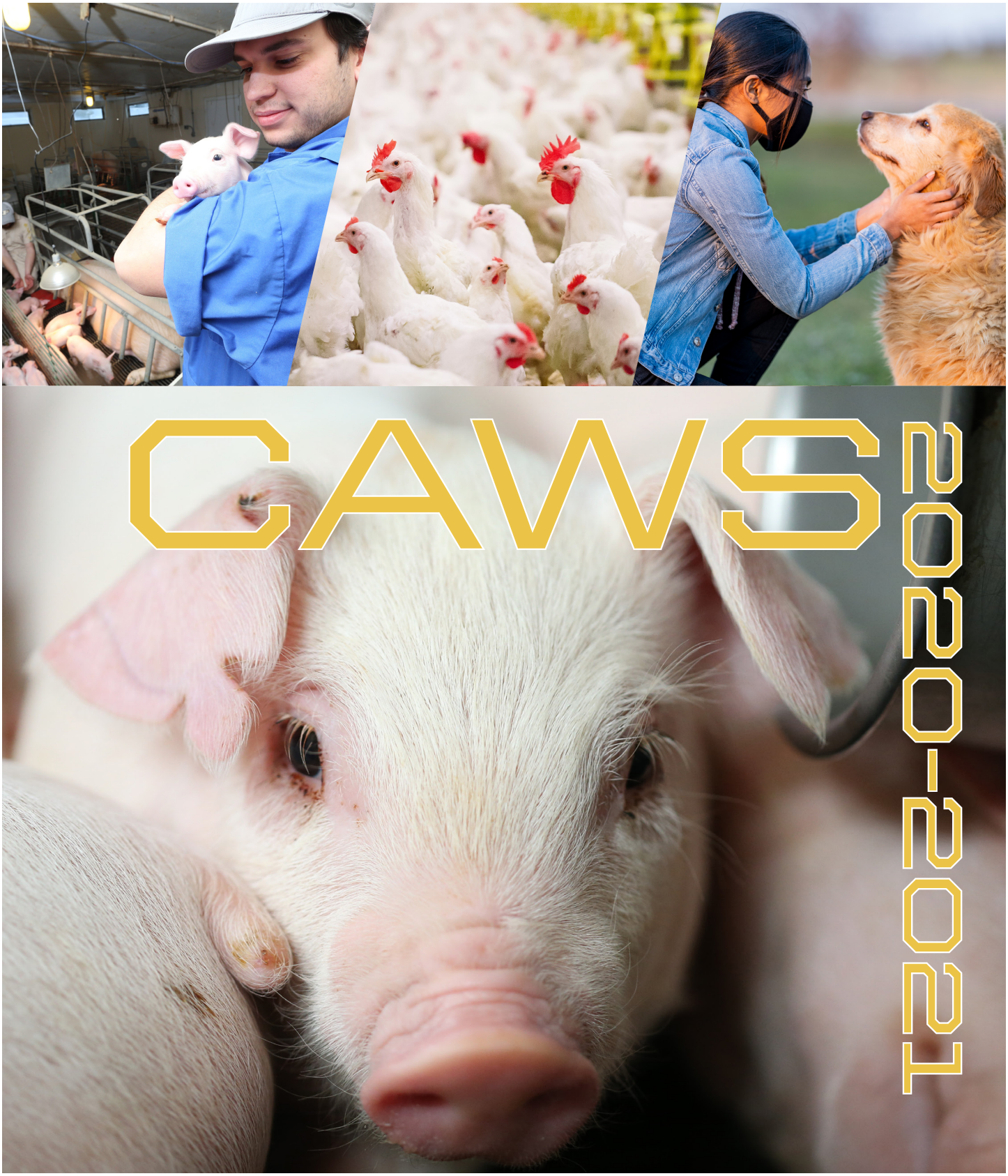
PURDUE UNIVERSITY | Center for Animal Welfare Science



CAWS 2020-2021

VET.PURDUE.EDU/CAWS

CENTER FOR ANIMAL WELFARE SCIENCE

We facilitate the well-being of animals using sound science and ethics to investigate and promote the best animal care and management practices.

Despite challenges brought about by the global pandemic, the Center for Animal Welfare Science (CAWS) had a productive 2020-21. In a time of considerable uncertainty, the Center faculty responded to COVID-19 and the issues important to our diverse stakeholders. Their work demonstrates the commitment we have to the Land-Grant Mission - which encompasses research, education, and extension programs - allows for the creation and dissemination of knowledge that improves the lives of not only citizens of Indiana, but also the nation and people around the globe.

Events that have unfolded during the COVID-19 pandemic have clearly illustrated the inter-connections between animal, human, and environmental health and welfare, as well as the inter-dependence of people who work with animals in the food producing sectors and those who depend on and are impacted by them. Nuances of broader human-animal interactions and their implications for mental, physical, and socio-economic welfare have also been revealed, emphasizing the need for a "One-Welfare" approach in considering how to balance and optimize human and animal interests both during and outside times of crisis. The ethical imperative to be intentional about considering, identifying, and supporting marginalized and particularly vulnerable communities while also prioritizing animal welfare must also be addressed. It is therefore critical to understand the challenges of developing more integrative approaches and to explore scientific evidence that provides insights that can inform responsive, agile practice and research prioritization.

As we look ahead, we know that we have an opportunity to make a significant impact on the lives of animals and the lives of our stakeholders. Together, we can make a difference.

Candace Croney, PhD
Director, Center for Animal Welfare Science
Professor, Animal Behavior and Well-being

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CAWS RESPONDS TO COVID-19

CAWS faculty members were interviewed this year by media outlets seeking perspective on the COVID-19 pandemic.

CAWS PROGRAMS & PARTNERSHIPS

Faculty are taking their research to more stakeholders using online and hybrid delivery methods.

SUPPORTING OUR PARTNERS

Collaboration in the animal welfare community means having strong partnerships within Purdue, external stakeholders, and other institutions looking to solve complex problems.

CAWS RESPONDS TO COVID-19

CAWS faculty provide insights and answers on how COVID-19 is impacting animal welfare.

Candace Croney, PhD

- Plant closures prompt farmers to advertise hogs on Craigslist
- The Road from Farm to Table
- Changes, challenges: The not-so-secret life of pandemic pets
- Managing your fur workers supporting your pets while working from home

Marisa Erasmus, PhD

- Animal sciences professor cautions against 'panic buying' chicks during the COVID-19 pandemic
- Tempted to 'Panic Buy' Some Chicks? Read This First

Jayson Lusk, PhD

- The Road from Farm to Table
- Blog posts by Dr. Jayson Lusk
- Faculty invited to participate in Purdue COVID-19 Social Science Research Pop-Up Lab sessions

Maggie E. O'Haire, PhD

- Can your pet help you cope during social distancing? Science says yes.
- Purdue Experts on COVID-19 video

Nicole Olynk Widmar, PhD

- We're Talking About Toilet Paper & Meat Again (And We've Brought Some Consumer Data!)

"The Road from Farm to Table" released by Purdue Agricultural Communications, which Dr. Jayson Lusk, department head and distinguished professor of agricultural economics significantly informed with contributions by Dr. Candace Croney, provided background and insight into how COVID-19 impacted the food supply chain and animal welfare. Both faculty provided numerous follow-up interviews with national news outlets.

IN FARM BUREAU

The CAWS director spoke with the Regional Managers of IN Farm Bureau at the request of their Livestock Development Specialist on the topic of how to effectively and sensitively communicate on animal welfare and ethics during the pandemic in May 2020.

OUR MISSION IS TO PROMOTE ANIMAL WELFARE THROUGH SCIENCE-BASED INFORMATION AND EDUCATION TO ADVANCE SOCIALLY RESPONSIBLE DECISIONS CONCERNING ANIMAL CARE.

ONLINE CERTIFICATION COURSE

CAWS is working toward development of a new online certification course on animal welfare. All interested members will be able to participate and benefit. The focus will be on professionals and stakeholders with limited access to animal welfare courses who may then better serve IN and national agriculture.

ONLINE SEMINARS

With the success of our online symposium in 2021, we have plans to continue our CAWS Seminar Series with an online component in order to make it accessible to a larger audience. By transitioning to a hybrid method we can build community and provide valuable opportunites to interact with experts from anywhere in the world.

PROMOTING RESOURCES

Dr. Marisa Erasmus, an assistant professor and extension specialist is collaborating with the new Poultry Extension Collaborative (PEC) which consists of faculty from Purdue University, Virginia Tech, University of Georgia, and University of Maryland.

ONLINE CONTINUING EDUCATION PROGRAMS

Darrin Karcher's successful Purdue Extension program, Shell Egg Academy (SEA) was held virtually on June 21-25, 2021. SEA is a learning experience and education opportunity for the egg production and processing industries. Welfare considerations in housing systems continues to be a component of the curriculum.

The online resource will help advance poultry welfare and disseminate science-based information to guide poultry welfare decisions in practice. All major poultry species that are commercially produced are covered.

ONLINE VISITOR DATA (2020)

- 1815 people visited the CAWS website 2579 times and looked at 6603 pages for an average of 2 min & 36 seconds per visit.
- 77.94% of that traffic came from the US, the rest from 72 other countries on every continent, not including Antarctica.
- Within the US, 33.7% of traffic was from Indiana with the rest coming from every other state, except Montana.

SUPPORTING OUR PARTNERS

CAWS continues to support and promote the work of Purdue researchers and extension specialists. We are fortunate to add five new faculty to our roster of collaborators in 2020-21. Each of these new members will be featured on the CAWS website in the coming year. As we expand our researcher base, we can continue to grow our industry partnerships.

NEW FACULTY

Luiz F. Brito, PhD
Assistant Professor
Animal Sciences
- Quantitative Genetics and Genomics

Betty Feng, PhD
Assistant Professor
Food Science

Kari J. Ekenstedt, DVM, PhD
Assistant Professor
Basic Medical Sciences
- Companion Animal Genetics

Greg Fraley, PhD
Terry and Sandra Tucker Family Endowed Chair of Poultry Science
Animal Sciences
- Poultry neuroendocrinology and welfare

Robert M. Stwalley III, PhD
Agricultural & Biological Engineering
- Thermodynamics, energy analysis, and heat transfer associated with animal culture

GENETICS & ANIMAL WELFARE

The addition of new faculty working in the area of genetics provides CAWS with an opportunity to help develop new genetic tools to improve animal welfare.

>>> Brito's research focuses on the definition of novel phenotypes and genomic tools to enable successful implementation of genomic selection for improved animal welfare and overall resilience in livestock while maintaining or increasing productive efficiency. This includes genetic selection for thermal tolerance, temperament, health issues, and adaptation in precision livestock farms. Brito's group works across livestock species and integrate multiple data sources, including large-scale phenotypic datasets from precision livestock farms and multiomic datasets. The genetic progress obtained from genetic selection for more robust and resilient animals is cumulative over generations, and therefore, their work has a great impact in livestock welfare.

>>> Ekenstedt's research group uses the latest molecular genetics and genomics tools to study Mendelian and complex genetic traits and diseases in canine populations.

Brito

Feng

Ekenstedt

Fraley

Stwalley

>>> Fraley specializes in how environmental changes can alter brain chemistry and gene expression that regulates feeding, growth and reproduction, specifically in regards to poultry.

<<< CAWS members, Dr. Bob Stwalley of Agricultural and Biological Engineering and Dr. Allan Schinckel of Animal Sciences, are working diligently to commercialize a swine cooling pad, which improves animal welfare by reducing the physiological (continued on page 4)

<<< (continued from page 3) effects of thermal stress on the animal. Actively pumping waste heat away from a sow in a farrowing barn allows her to maintain an appetite and milk production in a warm environment better suited for new born piglets. Drs. Stwalley and Schinckel believe that their efforts are leading to a greater understanding of the complexities of metabolic heat production in swine and should eventually improve the overall quality of life for commercially produced pigs.

INCREASING ACCESS TO THE DISCIPLINE THROUGH INCLUSIVE EXCELLENCE

CAWS is building on the 2019 CAWS conference on the topic of increasing access to the discipline through inclusive excellence.

COLLABORATING WITH TUSKEGEE UNIVERSITY

Dr. Croney is collaborating with Dr. Sara Crawford of the National Pork Board and Dr. Olga Bolden-Tiller at Tuskegee University to expand animal behavior and welfare coursework offered at Tuskegee, providing live and in-person lectures and labs for Tuskegee students since the 2019 conference. The goal is to further collaborate on mentoring students and to develop and expand research collaborations with Tuskegee on animal welfare. Participation by other interested CAWS participants is welcomed.

Dr. Sara Crawford, Assistant VP of Sustainability, National Pork Board

Dr. Olga Bolden-Tiller, Department Head of Agricultural & Environmental Sciences, Tuskegee University

PATHWAYS TO ANIMAL WELFARE SCIENCE

CAWS has a new focus on illustrating pathways to animal welfare science graduate study and careers with the goal of showcasing our students while also demonstrating some of the diverse ways in which students can gain access to the discipline. A new website is under development to feature interviews with graduate students who are members of the Center. Graduate students were asked to respond to several questions in hopes that their answers might help perspective students understand their pathways to Animal Welfare Science research.

SECURING SPONSORSHIPS

CAWS is continuing to work to secure sponsorships to help remove barriers to participation in our animal welfare science education programs. Read on for an example of how corporate partnerships on the 2021 CAWS symposium provided a first step toward this goal.

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www.vet.purdue.edu/CAWS

PATHWAYS TO ANIMAL WELFARE SCIENCE

LEANNE NIEFORTH

ANIMAL WELFARE & HUMAN-ANIMAL INTERACTION

What field of study is your undergraduate degree in? I graduated from North Carolina State University with a BSin Animal Science and an MS in Communication.

How/where were you first exposed to ideas about animal welfare? My parents did a great job teaching me how to interact with and learn about my various childhood pets. They were the first to expose me to ideas about animal welfare and appropriate human-animal interactions.

What background or experiences do you have that led you to an animal-related career? I have always been interested in the bond between humans and animals, but in college I started working at an organization that did equine-assisted psychotherapy for teenage girls who had experienced trauma. The progress that the girls made in the program and in their everyday lives once they had started working with the horses fascinated me.

What is the relationship between your research on the human-animal bond and animal welfare? My research focuses on defining the efficacy and role of service dogs for veterans with PTSD. As we continue to learn more about the service dog/veteran relationship, we can further explore the best ways to uphold high standards of canine welfare.

What advice would you give to a novice student who hasn't had your background or experiences to get their foot in the door as a graduate student in animal welfare at Purdue? I would encourage them to build a network of people who study Animal Welfare and related topics. Ask questions of these individuals and build knowledge from their collective experiences that can frame what you want to explore in your graduate program.

CURRENT STATUS: GRADUATE STUDENT
DEPARTMENT: COMPARATIVE PATHOBIOLOGY
FACULTY ADVISOR: DR. MAGGIE CLARE

What type of a job are you interested in when you receive your degree? I would love to be Professor of Human Animal Interaction once I receive my degree.

How did you get connected with a faculty member in your area? As an undergraduate, I got connected with faculty by sending an email mentioning that I was interested in getting involved in research and asking if they would be willing to meet and talk about the research that they were currently working on. I followed through on those meetings and made sure I was prepared to discuss and to ask questions.

Any advice for an aspiring undergraduate? Never hesitate to ask questions. Every faculty member and graduate student was an undergraduate at one point in time. Though their individual experience may be different, the perspective and advice they have may be exactly what you need.

WHY DID YOU SELECT PURDUE?

I selected Purdue because of the strength of its human-animal interaction program and the opportunity to learn from the amazing faculty.

ILLUSTRATING PATHWAYS TO ANIMAL WELFARE SCIENCE GRADUATE STUDY AND CAREERS

2021 // ONE WELFARE: WHAT HAS COVID-19 TAUGHT US ABOUT BALANCING HUMAN AND ANIMAL INTERESTS?

DAY 1: WEDNESDAY, MAY 19, 2021

Keynote Presentation:
"Adversity, Social Inequalities, and Multispecies Families: Lessons Learned from COVID-19"
Jennifer Applebaum, MS, University of Florida

Disease Detection Canines: A One Health Approach
Cynthia Otto, DVM, PhD, University of Pennsylvania School of Veterinary Medicine

Pandemic Puppies: New Spotlight On Old Problems
Lee Niel, PhD, University of Guelph

US Demand and Supply for Dogs: Implications for Canine Welfare
Roger Haston, PhD, The Institute for Animals

DAY 2: THURSDAY, MAY 20, 2021

Keynote Presentation:
"Prioritizing Human Health and Welfare During COVID-19"
Heather Fowler, VMD, MPH, PhD, DACVPM, National Pork Board

COVID-19 Effects on Livestock Production: A One Welfare Issue
Laura Boyle, PhD, Animal Welfare Teagasc Animal and Grassland Research and Innovation Centre

Industry Panel & Discussion
- Angela Baysinger, DVM, MS, Merck Animal Health
- Karen Christensen, PhD, Tyson Foods
- Heather Fowler, VMD, MPH, PhD, DACVPM, National Pork Board

The Road from Farm to Table and Views on Where We Are Now
Jayson Lusk, PhD, Purdue University

SCHOLARSHIPS WERE PROVIDED TO 14 INDIVIDUALS INTERESTED IN ANIMAL WELFARE EDUCATIONAL OPPORTUNITIES WHO MIGHT OTHERWISE HAVE DIFFICULTY ACCESSING OUR PROGRAM.

The 2021 CAWS Symposium was held virtually May 19-20. The two-day event explored the effects of COVID-19 on animal welfare, human health and well-being. Experiences and lessons learned about managing animal welfare during a human health crisis were discussed, incorporating perspectives from farmers, veterinarians, scientists, and global food producers. Implications for the US food chain as well as those working with animals in other sectors were explored, along with lessons learned about the practical, economic, and socio-ethical considerations that are needed for immediate implementation and improved preparation in future.

SPONSORSHIP

Cargill generously provided corporate sponsorship for this year's symposium which allowed us to provide scholarships to attendees for whom registration fees might have deterred participation. Two speakers graciously donated back their honoraria to provide additional assistance. The efforts to ensure inclusive excellence through outreach and support for new as well as established participants in animal welfare science are intended to extend the theme of our 2019 symposium entitled, " Building Capacity to Advance Animal Welfare Science". That program was funded by a grant from USDA NIFA, in collaboration with Tuskegee Univ., North Carolina A&T State, and the Univ. of North Carolina at Chapel Hill.

STAKEHOLDERS

In addition to 22 academic institutions, the following organizations participated in activities this year:

- American Kennel Club
- American Veterinary Medical Association
- Arizona Farm Bureau
- Cargill
- Chicago Zoological Society
- Covance
- Elanco
- Ethicon Endo-Surgery
- Hill's Pet Nutrition
- IN State Board of Animal Health
- KY Department of Agriculture Animal Care Advisory Board
- Merck Animal Health
- National Cattlemen's Beef Association
- National Pork Board
- New Fashion Pork
- Pet Friendly Services of Indiana
- Petland Charities
- Pinnacle Pet
- Tyson
- USDA
- Validus
- Veterinary United

ALABAMA A&M UNIVERSITY

GEOGE MASON UNIVERSITY

LOUISIANA STATE UNIVERSITY

PRAIRIE VIEW A&M UNIVERSITY

TUSKEGEE UNIVERSITY

135
PARTICIPANTS

30
STATES

08
COUNTRIES

14
SCHOLARSHIPS

22
UNIVERSITIES

SCHOLARSHIPS

14 scholarships were provided to students from the following institutions:

- Alabama A&M University
- George Mason University
- Louisiana State University
- Prairie View A&M University
- Tuskegee University

PROGRAM SATISFACTION

Extremely satisfied - 72%
Somewhat satisfied - 24%

PARTICIPANT COMMENTS

"This was a phenomenal symposium. All of the speakers were excellent and I enjoyed the variety of talks - from companion animals to livestock. The One Welfare message was really well done and has opened my eyes to what else research in my area needs to include. The Covid-19 focus/relevance was interesting as well. I learned a lot from this symposium. Thank you to all of the speakers and organizers!"

"I thought this remote symposium was very well done. Operated smoothly with the opportunity for questions. Speakers were outstanding."

BLOG POSTS BY FACULTY

JAYSON LUSK, PHD & NICOLE WIDMAR, PHD

Department Head/Distinguished Professor of Agricultural Economics Jayson Lusk's blog provided many important insights this year as we navigated the impacts of COVID-19 and the market. Several posts have specifically addressed animal welfare issues.

Visit https://jaysonlusk.com/.

Nicole Widmar, PhD (CAWS steering committee member and Professor, Agricultural Economics) has a new series of weekly letters and articles, entitled Consumer Corner. In addition to being socially relevant, many of her posts build on her extensive research on consumer perceptions of agriculture, providing perspectives that are critical for informing on animal welfare science. See a few highlights from her blog and visit

https://agribusiness.purdue.edu/consumer_corner/ to read more.

Nicole Widmar, PhD

The following are a sample of publications by Center faculty that received high profile media, involved multiple CAWS collaborators, or had high impact.

PROCEEDINGS

- 2019 Center for Animal Welfare Science Conference Proceedings

TECHNICAL REPORTS

- RP.2020-01 - Exploring demand for attributes of processed turkey products: turkey bacon and lunchmeat (Widmar, Erasmus, and Zuelly)
- OneWelfare.2020-01 - Public awareness of the roles and welfare of veterinarians (Widmar)

EXTENSION PUBLICATION

- Animal welfare and animal rights: Ethics, sciences and explanations (Erasmus)

JOURNAL ARTICLES

- Changing Human Behavior to Improve Animal Welfare: A Longitudinal Investigation of Training Laboratory Animal Personnel about Heterospecific Play or "Rat Tickling". *https://www.mdpi.com/2076-2615/10/8/1435* (Brady, O'Haire, Gaskill)

POPULAR PRESS ARTICLE

How can the dairy industry communicate more effectively on animal welfare?
https://www.progressivedairy-canada.com/topics/herd-health/how-can-the-dairy-industry-communicate-more-effectively-on-animal-welfare
(Croney)

JOURNAL ARTICLES CONT.

- A critical review of advancement in scientific research on food animal welfare-related air pollution. *https://www.sciencedirect.com/science/article/pii/S0304389420324584* (Ni, Erasmus, Croney)
- Laboratory Animal Welfare Meets Human Welfare: A Cross-Sectional Study of Professional Quality of Life, Including Compassion Fatigue in Laboratory Animal Personnel. *https://www.frontiersin.org/articles/10.3389/fvets.2020.00114/full* (Brady, O'Haire, Gaskill)
- Large-Scale Phenotyping of Livestock Welfare in Commercial Production Systems: A New Frontier in Animal Breeding. *https://www.frontiersin.org/articles/10.3389/fgene.2020.00793/full* (Brito, Schinckel)
- Acquisition of a Joystick Operated Video Task by Pigs (Sus scrofa). *https://www.frontiersin.org/10.3389/fpsyg.2021.631755* (Croney)