

Report: Sustaining Animal Agriculture Symposium

June 8-10, 2010
Washington, D.C.



Hosted by the Council for Agricultural Science and Technology

CAST hosted a symposium of more than 30 speakers and panelists to address the impacts of regulations on food-animal agriculture at all levels and analyze the intended and unintended consequences of those regulations. More information, including the full event program, is available online at http://www.cast-science.org/websiteUploads/pdfs/CAST%20Symposium%20Agenda%20with%20sponsors%20and%20times_May18.pdf.

1. “Integration of competing concepts surrounding food animal production”

Wes Jamison, Palm Beach Atlantic University

Jamison spoke of five competing concepts that surround the production of food animals. These concepts are: disintegration, pluralism, a collapsing world view, the delegitimizing of optimistic scientific humanism, and the disintegration of the “two standards” approach.

- Disintegration of our contact with animals:

Today society views animals in a fundamentally different way than we have in the past. The public has lost contact with their food supply and the contact that they (the public) do have with animals is much different than when we were an agrarian society.

- Pluralism and Collapsing World View:

Today we have no single perspective on animals. Pluralism transitions into the third concept of a collapsing world view. In the past we have had a cohesive world view on what animals are; this is no longer the case. Jamison posed the fundamental question “What is an animal?” and demonstrated that we as a society have no cohesive understanding of what an animal is.

- The delegitimizing of optimistic scientific humanism:

Here, Jamison stated that there has been erosion in the belief that science can help solve problems and provide answers; people have lost trust in science. Finally Jamison posed that we have experienced disintegration of the “two standards” approach, and stated that our separate but equal view of animals was being challenged.

Jamison went on to provide an idea of what future integration might look like. He stated that social unrest could lead to a shift in the location of much of our agricultural production, that we would continue to increase our reliance on science, and that we would most likely experience additional market and product segmentation.

In conclusion, Jamison posed the question of “why does animal agriculture continue?” and answered it briefly by stating “because animals can take nature we can’t use and turn it into nature we can use.” Furthermore he stated that animal agriculture would continue; however, social unrest over competing concepts could lead to a change in its location and methods.

Quotes and Observations:

- “Americans want animals at the center of their lives and at the center of their plates.”
- “Animals have moved from a tool that humans use for food to a tool that we use for enjoyment.”

2. “Impressions from the agricultural community regarding food-animal welfare and agricultural regulation”

Gregory P. Martin, Pennsylvania State Cooperative Extension

Martin began his presentation by listing some of the challenges that production agriculture faces, including the monumental task the industry faces in feeding over 300 million people with less than 6.2 million engaged in production agriculture, the changing farm environment with regard to fiscal constraints, taxes, environmental pressure and regulations, and changes in production practices. Martin went on to provide the producer perspective to many of these issues. He stated that it is the overarching belief that consolidation of the food animal industries will negatively affect the rural economies. It is also the opinion of many producers that ballot issues regarding animal welfare will negatively affect their operations and lead to reduced profitability and eventually few producers. It is the belief of Martin along with many in the agriculture industry that as agriculture moves forward there will be a continued and increased dialogue between consumers, producers, and government agencies that regulate.

Quotes and Observations:

- Dr. Martin’s blog is available at <http://www.drbirdnotes.blogspot.com>.

3. “Taking a look back to look forward”

R. Douglas Hurt, Purdue University

Hurt provided an overview of the history of agriculture and discussed the future. He discussed disease control, biodiversity, feed improvement, feedlot performance and many other issues. He stated that the food industry will continue to change with science and technology. He emphasized that marketing and consumer concerns about food production are also important.

4. “Historical perspective on the integration of animal agriculture”

Ronald L. Plain, University of Missouri

In his presentation, Ron Plain provided some historical perspective to the integration of animal agriculture, provided some examples of proven past practices, and offered some insight into what the industry might look like in the future as it overcomes current challenges. First, Plain discussed that we would most likely see expanding production. He provided data that illustrated his point by showing how over the past fifty years the U.S. population has increased both in size and in per capita consumption of

food. Furthermore, the U.S. has increased its agricultural exports over this time frame, as well. It is likely that neither of these trends will end any time soon; leading to a needed expansion in production.

Next, Plain spoke to the rise of fewer and bigger operations. He credited this to deflating prices and economies of size stating that producers have been faced with two choices: either get bigger or live on less money. Plain went on to state that a need for increased efficiency has led to specialization on many farms across the country. Animal agriculture has also seen an increase in integration. In 2006, for example, 27 percent of hog processors were raising hogs compared to only six percent in 1994. Plain attributed this to an increased consumer guarantee and the added ability of the processor to make money. Plain went on to state that 90 percent of chicken farmers own no chickens and nearly 50 percent of hog farmers own no hogs. Contracting has many benefits to both the contractor and the farm, including a shared risk, reduced capital investments, steady supply and quality, and traceability. Contracting is a mutually beneficial tool and a trend that will most likely continue for years to come.

Plain added that the trend towards increased efficiency is one that will surely continue as agriculture producers increase their knowledge and utilization of technology. Lastly, Plain spoke about agriculture's shrinking footprint. An example of this can be found in the hog industry where production is growing nearly three times as fast as feed consumption and waste. This growth can be attributed to our added understanding of swine and changes in our production methods. In 1960, only about 10 percent of hogs were housed indoors. Today, that number is 94 percent. This trend has led to our shrinking footprint and has added animal health and increased profitability on America's hog farms.

Quotes and Observations:

- In 1970, Americans spent 42 percent of their income in order to buy 194 pounds of meat. In 2009, it took just 1.61 percent of the average American's income to buy 210 pounds of meat.

5. "Building trust in contemporary food production"

Steve Sapp, Iowa State University

Sapp began by stating that the American people don't know where their food comes and that they must place a great deal of trust is placed in our food system. He provided some ideas on how to communicate with consumers about their food. Sapp offered a 'diffusion of innovations' approach in which the agriculture industry obtains endorsements from an opinion leader in order to influence public opinion. Sapp also provided his 'consumer trust' model to explain how to instill trust in the consumer. In his model, confidence and competence are key to instilling trust. Compiling with regulations is one way to instill trust.

Sapp argued that agriculture can't simply tell consumers to 'let science be the guide' when making complex decisions because input from the public must be valued. He said that educating the public is a good goal but because negative information carries disproportionate weight, education efforts can actually lead to decreased trust.

Quotes and Observations:

- “Agriculture must communicate the competence of the food system and focus on doing the right thing.”

6. “Redefining sustainability: ethically grounded, scientifically verified, and economically viable”

Ray Stricklin, University of Maryland

According to Stricklin, sustainability can simply be defined as “that which lasts.” A sustainable system has the least negative impact possible on nature, humans, animals, and the environment. He went on to question the difference between ‘science’ and ‘ethics.’ He stated that science is ‘what is’ whereas ethics is ‘what ought to be.’ Furthermore, he stated that animal welfare is a question of ‘what ought to be’ and cannot be based solely on science.

Stricklin disagreed with the idea that “science alone should be the basis of dealing with animal welfare.” Animal agriculture should actively work toward promoting the long term health and well-being of the environment, food animals and people associated with it. He also indicated that labor represents the largest portion of the food dollar. Stricklin stated that we must have consumer support and confidence.

He stated that the U.S. will not be able to continue to avoid the issue of animal welfare in trade agreements on the basis that animal welfare is an issue of science. He said that some trends are not sustainable and will soon near a leveling-off or end point, including confinement, increased productivity, and biotechnology.

Stricklin added that there has not been an increased in vegetarianism over the last 50 years. People want to eat meat. In order to protect food production, the U.S. will have to develop standards that don’t offer unfair advantage to small or large producers.

Quotes and Observations:

- “Animal Agriculture should actively work toward promoting the long term health and well-being of the environment, food animals, and the people associated with the production of food animals.”
- “Americans have come to expect ‘cheap’ food.”
- “Vegans propose to liberate food animals by bringing forth their non-existence. Non-existence is not preferable to existence if given reasonable quality of life.”
- “Ag that is not considered bioethical is not sustainable.”

7. “Trends in society and their impact on our future food-animal systems”

Charlie Arnot, Center for Food Integrity

Janet M. Riley, American Meat Institute

Jay Vroom, CropLife America

Charlie Arnot

Arnot spoke on the importance of building consumer trust and confidence. He addressed social licenses and the necessary role they play in operations. His model of a social license demonstrated the relationship between social benefits and social costs as well as how they coincide to maintain social trust.

Arnot said that a truly sustainable agriculture system must be economically viable, scientifically verified, and ethically grounded.

According to Arnot, people align the majority of their trust and responsibility in their food with farmers and producers. Furthermore, Arnot mentioned that people care most about issues that directly impact them.

He illustrated a comparison of today's agriculture practices with that of the 1950s by saying it was like comparing a modern car with a '57 Chevy- the old car was good, but there were a lot of safety, efficiency, and environmental issues that have been since improved upon.

Janet M. Riley

Riley started off her presentation with a collection of social media statistics to illustrate how the trend of social media has spread around the world. Riley shared that 38 percent of people surveyed stated that they 'attempt to influence others online.' She spoke of how very few boundaries exist within social media as well as our society's need to be constantly connected, how most interactions were "surface deep" and how we are more and more becoming visually driven. Riley also mentioned how we can market food nostalgia and the extreme importance to connect and communicate with consumers.

She said that today's "knowledge void" is an opportunity for agriculture (or activists) to fill with information. She said that there has been a shift from 'general trust' to 'particularized trust,' meaning that most people only trust others like themselves. Agriculture must overcome the challenge of point-of-view reporting in the media in order to get factual information about agriculture to the public.

Riley encouraged agriculture to find new ways of connecting with the public by:

- Connecting in ways that are meaningful
- Communicating shared values
- Increasing transparency
- Communicating rapidly and concisely
- Communicating visually

Jay Vroom

Vroom spoke of the synergistic relationship between crop and animal agriculture. He addressed the new dynamic face of modern agriculture. Vroom also encouraged cooperation and support across the various

sectors of the agriculture industry and expressed a need for agriculture to work together. He reiterated that “agriculture doesn’t need to fight among ourselves on the public platform.”

He said that 70 percent of the increased food production that will be required by 2050 will come through the use of biotechnology. He said that “modern agriculture means food for all.”

8. “Ethical and practical implications of food-animal agriculture”

Paul B. Thompson, Michigan State University

Thompson spoke about the various types of consumers in terms of their opinions about animal welfare.

He stated that people are divided. Forty-six percent of people are ‘naturalists’ and think that the kind of life that animals would lead in nature is the moral norm. Fourteen percent are ‘price seekers’ who think that only minimal levels of physical well-being matter and 40 percent are ‘basic welfarists’ who believe animals can experience of pain, satisfaction, frustration and contentment.

9. “Different perceptions of sustainable agriculture”

James R. (Tres) Bailey, Walmart

Mike Morris, YUM Brands

Bryan Dierlam, Cargill

James R. (Tres) Bailey

Bailey offered Walmart’s view of sustainability and shared goals established by Walmart to help make their company more sustainable, including using 100 percent renewable energy, achieving zero waste in their facilities, and selling more sustainable products. He also spoke of consumers’ desire for transparency and trust in both food safety and sustainability.

He said that consumers in the EU are more focused on social issues but are sometimes mistaken in their beliefs. For example, consumers assumed that the greenhouse gas emissions were higher for berries that were imported rather than locally grown, but in reality, the opposite is true.

Quotes and Observations:

- Walmart has 8,400 retail outlets and serves 140 million customers in the U.S.
- Grocery sales account for half of Walmart’s revenue.

Mike Morris

Morris is the Animal Welfare Manager for YUM brands. He gave YUM brands’ views on animal welfare as well as sustainability. Morris’s company, Yum Brands, represents the retail food outlets Kentucky Fried Chicken, Long John Silvers, A&W Root Beer, and Taco Bell. Yum Brands is the number one private food contributor to fighting world hunger.

Morris said that his company's primary goal is to "give consumers what they want." He said that he is very confident in the ethics of the farmers and ranchers who provide food for his company's restaurants.

Quotes and Observations:

- "We are very comfortable with the ethics of our suppliers."
- "The future (of food production) is in intensive production systems."
- "You will not feed the people of this planet simply with small-plot ag practices."
- "Throwing out one of the wonders of the world-modern ag production- is nonsensical."
- "We don't disregard protests from activists. We investigate the issue. It has no market effect on our business. We listen to the concerns of any group but science must determine whether we are doing the right thing."

Bryan Dierlam

Dierlam, Federal Government Relations Director for Cargill, shared the efforts of his company to increase their sustainability. Currently Cargill is making huge strides to reduce their water and energy usage as well as looking for new ways to increase their environmental sustainability. Dierlam spoke of Cargill's High River Alberta Beef Plant where they are capturing methane gas and using it help power the plant.

Cargill regards food safety as their number one concern and devotes a wealth of resources to ensure the safety of their products.

10. Panel: How can we move forward- the need for a collaborative vision

Jack Fisher, Ohio Farm Bureau Federation

Chandler Goule, National Farmers Union

Christine Bushway, Organic Trade Association

Joe Stookey, North American Food Animal Well-being Commission for Beef; Univ. of Saskatchewan

Jack Fisher

Fisher discussed the campaign tactics used in support of Issue 2 in Ohio. They developed an animal care board that consists of 10 Ohioans connected to agriculture. He stated that "you can't consider what is best for the animals without considering what is best for the humans." Fisher said that 7 out of 10 Americans wrongly believe that HSUS is a pet shelter "umbrella group" as shown by a nationwide poll by Opinion Research Corp. He then reiterated Wes Jamison's idea that "Americans want animals at the center of their lives and at the center of their plates."

He said that animal care issues have a far-reaching impact on animal health, biosecurity, disease, food safety, affordability, and animal health. He said that it is worrisome that consumers “believe anecdotes over statistics.”

The Ohio Farm Bureau Federation’s new Center for Food and Animal Issues gives a voice to farmers, consumers, pet owners, and hunger advocates.

Quotes and Observations:

- “People have the right to utilize animals and the responsibility of them.”
- “We need a new dictionary for the food chain for words like puppy mills, sustainability, humane, etc.”
- “If there is infighting, we are doomed. If there is a bad actor, speak out against it. Listen to those with questions.”

Chandler Goule

Goule states we need to work together to make a safe and wholesome food supply. Goule said that there is a place for everyone in the food system- conventional or organic, large and small. He said that agriculture should work with the nutrition community to forge alliances.

Christine Bushway

Bushway described what the word organic means to her organization. Organic deals with the production, processing and distribution. A lot goes into a product being organic- it is not just a matter of what the animal is fed. She stated that there are more than 100 certified agencies. In 2009, there was \$26.6 billion in organic sales, a 5.5% increase. Bushway also said that organic products have a higher profit level in comparison to traditional ag products.

Bushway reiterated that organic producers do not “attack” conventional producers’ way of doing things. She said that organic is part of the solution to feeding the world.

Quotes and Observations:

- “There are not enough slaughter facilities for organic products.”

Joseph Stookey

Stookey described the most important aspects of the animal agriculture industry. He stated that food safety, the environment and animal welfare are all very important and that they revolve around economics and profitability. Stookey showed concern that with fewer producers, sustainability would be jeopardized.

He also addressed the issues of changing times. He showed pictures of downed dairy cows and although he admitted that it does seem wrong to process these types of animals now, he also indicated that historically it was a “sin” to waste or throw away an animal that has salvage value.

He said that the newly-formed North American Food Animal Well-being Commission for Beef will focus on top issues including environmental conditions, painful procedures, disease, transportation, non-ambulatory animals, employee training, unwanted calves, cull cows, and euthanasia.

11. Economics of size and scale applied to biological systems

Brian Buhr, University of Minnesota

Buhr began his discussion by stating that “agriculture is increasingly driven by ‘externality’ attributes- no direct benefit or cost to the consumer.” He then defined an externality as actions taken that affect others. He gave an example of BP and the oil spill.

Studies show that consumers must be willing to pay 25 percent more for pork from hogs housed in group pens. Buhr stated that “all people [should] have equal access to safe, nutritious food.”

12. Future welfare of farmers and their animals

John Deen, University of Minnesota

Deen stated that in animal agriculture every natural death is a failure. He said that producers’ goal should be to euthanize their animals at an economically optimal point when the well-being of the animal can no longer be sustained. Deen discussed the debate over whether the value of a human life is more important than that of an animal.

13. Panel: Comprehensive analysis of certification and regulatory programs

David A. Townsend, Smithfield Foods and Yvonne Vizzier Thaxton, Mississippi State University- Poultry Industry

David A. Townsend

Townsend started his presentation by explaining the different issues that the agriculture community must consider, including food safety, animal welfare, environment, employee care and communities support. These aspects are very important to analyze. Some of the issues that he stated were most important included pathogens, antibiotics, animal welfare, and green house gas emissions among many others.

In regards to animal welfare, he named several ways that the pork industry is working towards maintaining and improving animal care. Some of these programs include Pork Quality Assurance, the Transit Quality Assurance, and the American Meat Institute’s Animal Care and Handling Guidelines.

Yvonne Vizzier Thaxton

Thaxton stated that the poultry industry will not need to change in the future but production will be more expensive. She stated that certification has been customer and market driven. Regulation has been complaint and activist driven.

14. World and U.S. population growth: How can we feed everyone?

William Weldon, Elanco

Weldon said that the common theme of today's agriculture industry is technology. He said that in 50 years we will need 100 percent more food and 70 percent of it must come from efficiency and technology. He believed that by working together we can achieve an "ultimate win." This "win" is defined by affordability, abundant supply, food safety, sustainability and an ample amount of grain for bio fuels.

Studies that Weldon reviewed indicated that only 7 percent of consumers worry about ag production methods and in 2008 consumer's primary food concern was affordability. He also stated that 75 percent of the world's population cannot afford organic foods. One study analyzed the number of cows needed in 1944 in comparison with 2007 to produce a certain amount of milk. It was clear that today's dairy industry is capable of producing more milk with fewer cows.

Quotes and Observations:

- "Only 7 percent of consumers worry about ag production methods."
- "Primary food concern in 2008- affordability."
- "75 percent of the world's population can't afford organic foods."

15. "Should there be biotechnology in our future?"

Val Giddings, PrometheusAB, Inc.

Giddings began by giving some examples of biotechnology, including fermentation, tissue culture, embryo rescue, somatic cell transplantation, marker assisted breeding and others. He also gave examples of what biotechnology delivers- higher yields, lower input costs, and reduced labor. Currently, there are 80 different species of field crops tested with biotechnology. A study indicated that in 2008 there was a greenhouse gas reduction of 15.6 billion kg of CO₂. This is equal to the emissions of 6.9 million cars for one year.

In 2025, fifty percent of consumers will live in cities and will need to be fed through market channels. By 2020, animal agriculture will account for 50 percent of all agriculture products. He described his plan for doubling production: 20 percent of increases would come from additional farmland, 10 percent will come from increasing intensity and 70 percent will come from innovative technology.

16. "Agricultural productivity strategies for the future"

Gale Buchanan, Retired Under Secretary, USDA/REE

Buchanan discussed CAST's first paper written by Norman Borlaug and the recently published CAST paper- Agricultural Science and the Public, which is an update of Dr. Borlaug's 1973 work.

Buchanan said that projections show that by 2025 demand for farm products will be 143 percent of the year 2000 demands.

He added that in adapting to these population increases we must deal with restraints. Some of the restraints include soil, water and crop issues, animal welfare issues, green house gas emissions, waste management, food security, biotechnology, complying with the Endangered Species Act, and fertilizer resources.

17. "Sustainability myths and musts"

Jason Clay, World Wildlife Fund

Clay stated that current consumption patterns can't be sustained by the planet. He also indicated that it is not always a population issue- developed countries over-consume resources. "We need to use less... to produce more from less," he said. Studies indicate that most calories come from only 8-10 crops. Some of these crops are wheat, rice, corn, sugarcane, soybeans and potatoes.

"Income from ag is increasing," Clay stated. He also addressed green house gas problems, saying that 85-90 percent of green house gases are from how food is produced, not how it is transported. Soil carbon is critical to farmers and ranchers. He also stated that the fact that agriculture uses 70 percent of water is a serious issue. Studies show that by the year 2050, there will be 3 billion more people, income will increase 2.9 times, consumption will double and 70 percent of people will live in cities- as many as are alive today in the entire world. Clay said that the need to produce more food calories requires more land and that every ag system needs to double production in 40 years.

18. "Trade considerations and OIE guidelines"

Phil Seng, U.S. Meat and Export Federation

Seng focused on the growing population and the need to increase production of agriculture products. He stated that by 2020 we will need to produce twice as much pork as the present. There has been 109 percent growth in meat production since 1980. He also indicated that livestock use one-third of the cereals produced. Agriculture uses 86 percent of water.

Seng explained that animal welfare is a growing concern for international trade. The EU has already passed laws banning many production practices and the U.S. should watch closely to ensure that our products are not barred from global trade. It is important to remember that different countries have different perspectives- China is very food safety-focused after suffering through its avian flu outbreak. Also of note- China is a net food importer and throws away more food than it produces.

19. "Are the poor a recognized stakeholder?"

Joseph Glauber, USDA Chief Economist

Glauber went in depth in describing how American households distribute their income. He stated that less than 13 percent of total expenditures go towards purchases of food. Glauber also indicated that less than 2.1 percent of total expenditures go to animal products.

He elaborated that lower income families spend a greater percentage of their income on food.

20. “Are farmers and rural communities destined to be second-class citizens?”

Paul Lasley, Iowa State University

Lasley began his presentation by stating small farms aren’t efficient enough to enjoy economies of scale. He said that the agriculture industry faces both technical and social challenges. These challenges relate to the idea that more and more often people are further removed from the farm. Lasley described the changing culture- people have new animal care values. He went on to say that although structure has changed, the primary function of agriculture is still the same- to produce food, feed, fuel and fiber.

Lasley suggested that “we need to do a better job communicating to consumers.” We need to convey that “it is not farm size that is important, it is the intention, values and compassion of the operator.” He stated there are over 200 national and international agriculture groups.

Quotes and Observations:

- “It is not farm size that is important, it is the intention, values and compassion of the operator.”