

NEWS & VIEWS

USPOULTRY
U.S. POULTRY & EGG ASSOCIATION

July/August 2020

**IPPE Attendee Registration
& Housing Opens Oct. 26**

**Waters of the US –
Uncertainty Returns**

**Enhancing Food Safety to
Feed the World's Growing
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**The Value of Face-to-Face
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News & Views is produced quarterly by the U.S. Poultry & Egg Association, the world's largest and most active poultry organization. USPOULTRY represents the entire industry as an "All Feather" Association. USPOULTRY is a nonprofit organization which represents its poultry and egg members through research, education, communication and technical assistance. Membership includes producers and processors of broilers, turkeys, ducks, eggs and breeding stock, as well as allied companies. Formed in 1947, the Association has member companies nationwide and affiliations in 28 states. USPOULTRY also sponsors the International Poultry Expo.

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IPPE 2021 Moving Forward

We've had several questions regarding the status of IPPE 2021. Currently, more than 1,000 exhibitors have committed to being in Atlanta, Jan. 26-28, 2021, at the Georgia World Congress Center (GWCC) – a number that is pretty typical for this time of year. They are looking forward to the opportunity to offer timely, important and efficient ways for producers and processors to continue operations to feed our world, even during this pandemic!

I'm very pleased that the GWCC was the first convention facility in the nation to obtain the Global BioRisk Advisory Council (GBAC) STAR certification. Essentially, the GBAC STAR™ program establishes requirements for facilities on work practices, protocols, procedures and systems to control risks associated with infectious agents, such as the virus causing COVID-19 (gbac.issa.com). In our own industry's vernacular, this is analogous to a HACCP program to mitigate biorisk. Similarly, our primary exhibit contractor, as well as our registration company, our hotel partners and other vendors are also evaluating and implementing similar safety protocols. Delta, our airline partner, and other airlines have additionally adopted biorisk mitigation practices in accordance with appropriate health authority guidelines. Finally, IPPE itself is considering a whole range of options, from a greater emphasis on pre-mailing badges, to remote registration areas, to many other steps to minimize biorisk.

So, together with our partners and vendors, we are 100% committed to planning and executing a safe and successful IPPE 2021. However, we do have to acknowledge none of us possesses a crystal ball to know if there will be governmental or industry-driven restrictions in place that impact IPPE 2021. Certainly, we all have seen the fluidity of requirements and best practices these last few months. We will keenly monitor such developments over the next few months, and keep our members, exhibitors and industries up to date on any changes pertaining to IPPE 2021.

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SAVE THE DATE: 2021 IPPE Attendee Registration and Housing Opens Oct. 26

The International Production & Processing Expo (IPPE) will open registration and general housing on Oct. 26.

“We are pleased to open both housing and registration for general attendees at the same time through Experient, our official registration and housing service provider,” IPPE show organizers stated.

Attendees interested in securing registration and housing for the 2021 IPPE should go to www.ippexpo.org, and click on the registration and housing link located at the top of the webpage.

For more information about IPPE and to see a complete list of exhibiting companies, visit www.ippexpo.org.

2021 IPPE DATES / SHOW HOURS:
Tuesday, Jan. 26: 10 a.m. – 5 p.m.
Wednesday, Jan. 27: 9 a.m. – 5 p.m.
Thursday, Jan. 28: 9 a.m. – 3 p.m.



GWCCA Attains GBAC STAR Accreditation

The Georgia World Congress Center Authority (GWCCA), where the 2021 IPPE will be held, announced it is the first convention center in the U.S. to achieve GBAC STAR™ facility accreditation from the Global Biorisk Advisory Council (GBAC), a Division of ISSA, the leading trade association for the cleaning industry. The GBAC STAR program helps commercial and public facilities of all sizes establish and carry out an organized approach to cleaning, disinfection and infection prevention.

To achieve GBAC STAR accreditation, facilities must demonstrate compliance with the program's 20 elements, which range from standard operating procedures and risk assessment strategies to personal protective equipment and emergency preparedness and response measures.



Dates Announced for Latin American Poultry Summit

The International Poultry Expo (IPE), part of IPPE, WATT Global Media and the Latin American Poultry Association (ALA) announce the date for the 2021 Latin American Poultry Summit, to be held Monday, Jan. 25, 2021. In response to attendee feedback, several upgrades are being made to the program. This includes the development of a one-day agenda to allow all attendees to have as much time as possible to attend the IPPE exhibition.

New for the 2021 Latin American Poultry Summit will be an opening keynote presentation on export capacity development and other factors that will influence future poultry development in Latin America. A second keynote address discussing poultry health status in Latin America will be held in the afternoon.

Other sessions will cover gut health, grain markets, developments in poultry production from incubation to the processing plant, vaccination improvements, welfare productivity of broilers in enriched environments, and more. In addition to the education sessions focused on the issues and topics relevant to the Latin American poultry processing industry, the Latin American Poultry Summit will provide several networking opportunities including a luncheon, coffee breaks and an evening reception. Special recognition will be given to students and advisors participating in the USPOULTRY Foundation International Student Program during the event.

The 2021 IPPE show dates are Jan. 26-28, and the event will be held at the Georgia World Congress Center in Atlanta, Georgia. More information on the 2021 Latin American Poultry Summit can be found at www.latinamericanpoultrysummit.org.



Sponsored by USPOULTRY

Randall Ennis Receives PSA Distinguished Poultry Industry Career Award



Randall Ennis, chief executive officer of the World Poultry Foundation, was recognized with the 2020 Poultry Science Association Distinguished Poultry Industry Career Award, sponsored by USPOULTRY. The Distinguished Poultry Industry Career Award recognizes

distinctive, outstanding contributions by an industry leader. In addition to sponsoring the award, USPOULTRY also makes an annual contribution to the Poultry Science Association Foundation on behalf of the award recipient.

“USPOULTRY is pleased to honor industry leaders exemplified by Randall Ennis. He is widely recognized for his many years of work and contribution to the poultry industry, ranging from production to primary breeding, as well as through his current role as chief executive officer of the World Poultry Foundation,” said Greg Hinton, Rose Acre Farms, and USPOULTRY chairman.

“Randall has been a long-time supporter of USPOULTRY, with personal involvement in our seminar programs and the IPPE. He has also contributed his time to our Foundation’s College Student Career Program that supports the recruitment and training of students and promotes careers in the poultry and egg industries,” commented John Starkey, president of USPOULTRY.

After obtaining a Bachelor of Science degree in Poultry Science from Auburn University in 1983, his career has covered a variety of technical and managerial positions in the integrated and primary breeding sectors of the industry. In 2015, Ennis transitioned into the non-profit sector with a focus on poultry in developing countries. He has traveled to more than 75 countries during the span of his career.

Ennis has served on numerous boards including the National Chicken Council, the Alabama Poultry and Egg Association (past president), the National Poultry Technology Center, and the European Primary Breeders Council. His awards and honors include Outstanding Alumni from Auburn University (2014), Alabama Poultry and Egg Presidential Award (2015), the Auburn University Alumni Service Award (2017), and he was honored as a graduation commencement speaker for the Auburn University graduating class of 2018.

USPOULTRY Announces 2021 Family Farm Environmental Excellence Award Competition

USPOULTRY is now accepting nominations for the 2021 Family Farm Environmental Excellence Award. The award recognizes exemplary environmental stewardship by family farmers engaged in poultry and egg production. Those eligible for the award include any family-owned poultry grower or egg producer supplying product to a USPOULTRY member or an independent producer who is a USPOULTRY member. Nominations are due Oct. 30.

In January of this year, the award was presented to six outstanding family farmers in various regions of the country: Central, South Central, North, Northeast, Southeast and Southwest. In addition, a new State Poultry Association nomination was presented. The winners were Marvin and Colleen “Coke” Anderson, M&C Anderson Pullets, Sioux Rapids, Iowa, nominated by the Iowa Poultry Association; Michael and Heather Lewis, Michael and Heather Lewis Farm, Mount Joy, Pennsylvania, nominated by Tyson Foods; Wayne, Jason and Logan Lambertson, Lambertson Family Farms, Pocomoke, Maryland, nominated by Tyson Foods; John and Carla Mishler, Mishler Turkey Farm, Seymour, Missouri, nominated by Cargill; Chad Blake, Blake Farms of North Carolina, LLC, North Wilkesboro, N.C., nominated by Tyson Foods; and Jamie and Sherri Chmelar; Boelden and Leann Chmelar, and Natalie Chmelar

Zgaba, C3 Farms & Poultry, LLC, Caldwell, Texas, nominated by Sanderson Farms.

Six finalists were also recognized in 2020. They were Matthew and Colby Gray, Gray Poultry Company, Union City, Tennessee, nominated by the Tennessee Poultry Association; Stephen Purlee, Stephen Purlee Farm, Salem, Indiana, nominated by Tyson Foods; David and Spring Tribbett, Twin Maples Farm, LLC, Ridgely, Maryland, nominated by Amick Farms; Dalen Bell, Dalen Bell Farm, Tuscumbia, Missouri, nominated by Cargill; Mike and Karen Hill, Hillcrest Farm, Hanceville, Alabama, nominated by Tyson Foods; and Terry and Robin Fisher, R&T Farm, Mulberry, Arkansas, nominated by Cargill.

Nominations for the 2021 competition may be made by a USPOULTRY member, an affiliated state poultry association or by a poultry or egg producer that grows poultry or produces eggs for a USPOULTRY member. Each integrator or egg processor may nominate two growers or producers for each processing facility in each state that they operate.

“Best management practices are consistently utilized by poultry growers to enhance environmental stewardship on their farms. The commitment and resourcefulness that our award winners and finalists exhibit each year through their environmental management

practices is admirable,” said Greg Hinton, Rose Acre Farms, and USPOULTRY chairman.

Winners of next year’s awards will receive a trip that covers travel expenses and hotel accommodations for two nights to attend the 2021 International Poultry Expo, part of the IPPE, in Atlanta, Georgia. Each will also receive a Family Farm Environmental Excellence Award sign to display near the entrance of their farm.

The winner for each region will be named at a special award ceremony that will take place at the end of the Animal Agriculture Sustainability Summit, held in conjunction with IPPE, on Jan. 26, 2021. Each regional winner will also receive a \$1,000 cash award. In addition, the farm for each regional winner will be spotlighted on USPOULTRY’s website, and the Association will assist in publicizing the farm’s award in local, regional and national media.

Competition details are available on the USPOULTRY website at www.uspoultry.org/environment.

For more information on the Family Farm Environmental Excellence Award competition, contact: Lisette Reyes, U.S. Poultry & Egg Association, 1530 Cooledge Road, Tucker, GA, 30084-7303; phone: (678) 635-9053; fax: (770) 493-9257; e-mail: lreyes@uspoultry.org.



2020 Family Farm Environmental Excellence Award winners with Mike Levgood (left), Perdue Foods and USPOULTRY vice chairman; Greg Hinton (middle, back), Rose Acre Farms, and 2020 USPOULTRY chairman; and John Prestage (9th from right), Prestage Farms, and 2019 USPOULTRY chairman.

Lambertson Family Farms Recognized for Environmental Excellence by USPOULTRY

Lambertson Family Farms of Pocomoke, Maryland, was one of six farms across the United States to receive USPOULTRY's Family Farm Environmental Excellence Award during the 2020 IPPE in Atlanta. USPOULTRY sponsors the annual awards in recognition of exemplary environmental stewardship by family farmers engaged in poultry and egg production.

Applicants were rated in several categories, including manure management, nutrient management planning, community involvement, wildlife enhancement techniques, innovative nutrient management techniques, and participation in education and outreach programs. Applications were reviewed and farm visits conducted by a team of environmental professionals from universities, regulatory agencies and state poultry associations.

Lambertson Family Farms has been located on the Eastern Shore of Maryland in the Chesapeake Bay Watershed for generations. The family raises broiler chickens for Tyson Foods.

In such an environmentally sensitive area, the issue of resource management and responsible farming is crucial, and the Lambertson family has made sustainability a key facet of their operation. In a testament to this dedication, the Lambertsons have been voluntarily implementing a nutrition management program at their farm since 1995, long before it was mandated by the state of Maryland. Throughout the years, their conservation efforts have expanded to include the creation of vegetative buffers and wildlife habitats, as well as a consistent system of crop rotation and no-till farming to preserve the soil's nutrients. Manure from their poultry operation is carefully transferred from poultry house to field, strictly adhering to the standards of the Maryland Manure Transport Program.

The Lambertsons have made a point of making sure their farms are a part of the innovative future of agriculture. By partnering with and providing land to a local company, the Lambertson Family Farms have become a

testing ground for innovative new technologies in anaerobic digestion in manure management, a process which mitigates the levels of phosphorus in the final product and creates green energy for use on the farm. They have also implemented solar panels throughout the farm, which has provided their operation with a cheaper and more sustainable source of energy.



Mike Levensgood, Perdue Foods and vice chairman of the USPOULTRY board of directors, presenting the award to the Lambertson family.

M&C Anderson Pullets Recognized for Environmental Excellence

M&C Anderson Pullets of Sioux Rapids, Iowa, was also one of six farms across the United States to receive USPOULTRY's Family Farm Environmental Excellence Award during the 2020 IPPE in Atlanta.

M&C Anderson Pullets is a family farm that has been owned and run by Colleen "Coke" Anderson and her husband Marvin for the past 50 years. Together, Colleen and Marvin have grown their pullet operation from a single building to nine large buildings throughout their land, cultivating a pattern of careful environmental maintenance as their farm has flourished.

In addition to their pullet operation, the Andersons have grown row crops on their farm for decades, which are fertilized with their own poultry litter. The litter is removed from the

buildings daily and transported to compost and storage buildings in order to preserve the quality of the nutrients in the fertilizer. Composted manure is also sold to an outside company that then provides the fertilizer to other farmers in Iowa, further supporting agriculture within the state.

The Andersons' support of the agricultural community in Iowa reaches well beyond their fertilizer. For several years Colleen served on the Poultry Advisory Board of the Farm Bureau, and she is a present board member of the Iowa Poultry Association (IPA). She also serves as chair of the IPA Environmental Committee and serves on the Environmental Committee of the United Egg Producers. In 1999, she became the first woman to be elected as chairman of the board of the American Egg Board. Additionally,

M&C Anderson Pullets has created two annual scholarships for ag students and continues to search for opportunities to support and fund poultry education efforts throughout the county.



Levensgood with Colleen "Coke" Anderson

Waters of the US – Uncertainty Returns

In 2006, the Supreme Court delivered a decision in *Rapanos v. United States* that threw a dim, if not nonexistent, light on what waters were jurisdictional under the Clean Water Act. The decision was essentially split 4-4. Four justices called for broad jurisdictional control over water drainage features and wetlands, while four other judges asserted the Clean Water Act only covered waters with permanent flow and drainage features with a continuous surface water connection between it and a permanent water body. In the middle was Justice Robert Kennedy, who somewhat agreed with limiting the jurisdictional scope but left a door open to pull some drainage features into Clean Water Act jurisdiction by “linking” them to a traditional navigable waterway, asserting that a “significant nexus” exists between the two. Who would judge whether a significant nexus existed? The regulators, of course.

This concept of a significant nexus determining Clean Water Act authority over thousands of water sources, wetlands and drainage features was almost certainly the largest factor in arguing for a clearer definition of “Waters of the United States.” The administration in office in 2008 took their opportunity to do just that. Unfortunately, their solution was to over-reach, and in 2015 the “Clean Water Rule” that defined almost every water source and drainage feature a “Waters of the United States” was finalized by the Environmental Protection Agency (EPA).

In 2016, upholding their commitment to remove regulatory burden on the public, the current administration began the process of rescinding and revising the definition of “Waters of the United States.” After four years, EPA finalized the “Navigable Waters Protection Rule.” To go even further in their pursuit to add clarity to what water sources are jurisdictional under the Clean Water Act, EPA issued an interpretive statement that indicated, “All releases of pollutants to groundwater are excluded from the scope of the [NPDES] permitting program even where pollutants are conveyed to jurisdictional surface waters via groundwater.”

This statement was ultimately challenged in the Supreme Court. In its recent decision in *County of Maui, Hawaii v. Hawaii Wildlife Fund (MAUI)*, the Court has managed to return landowners to a state of uncertainty and

ambiguity. Couple this decision with a litany of lawsuits challenging the recently finalized “Navigable Waters Protection Rule,” and it is likely the regulated public will be more confused than ever before.

The central matter in the MAUI case focused on whether treated wastewater injected into wells, that were specifically designed for that purpose, was a violation of the Clean Water Act. Why is this even a question? The answer is because when Congress passed the Clean Water Act, they limited the laws of jurisdictional authority to surface waters (e.g. “Waters of the United States”). Congress intentionally excluded regulating groundwater in the Clean Water Act, recognizing the states have a right to regulate groundwater within their territorial boundaries. Justice Breyer somewhat conceded this in his MAUI opinion by indicating, “...the structure of the statute indicates that, as to groundwater pollution and non-point source pollution, Congress intended to leave substantial responsibility and autonomy to the States.” However, the final decision didn’t fully follow that standard.

In this instance, the treated wastewater being injected into the wells eventually flowed into the Pacific Ocean, which is a “Waters of the United States” by definitions outlined in the Clean Water Act. Perhaps the most important aspect of the Clean Water Act, the National Pollutant Discharge Elimination System (NPDES), requires individuals that discharge pollutants into a “Waters of the United States” to obtain a permit if the discharge originates from a discernable feature, otherwise known as a “point source.” In the MAUI case the central issue was are the injection wells a point source that require a NPDES permit despite the fact they discharge to groundwater, which again is not regulated under the Clean Water Act?

Here’s where the ambiguity and uncertainty come in. In their ruling, the Supreme Court said “maybe.” Hinging the majority’s decision on the context of the word “from,” as in where the discharge came “from” can define the source of the pollution as a “functional equivalent of a direct discharge” and “whether pollutants that arrive at navigable waters after traveling through groundwater are ‘from’ a point source depends upon how similar to (or different from) the particular discharge is to a direct discharge.”

The majority’s decision admitted this approach is difficult and it does not explain how to deal with what the court referred to as “middle instances.” The court goes on to explain that while time and distance will be the most important factors determining the “functional equivalency” of the discharge in question, other factors that may be relevant include the nature of the material through which the pollutant travels, the extent to which the pollutant is diluted or chemically changed as it travels, the amount of pollutant entering the navigable waters relative to the amount of the pollutant that leaves the point source, the manner by or area in which the pollutant enters the navigable waters and the degree to which the pollution (at that point) has maintained its specific identity. The majority further admitted that too many factors prohibit the court from providing more specific language but provided assurance that, “EPA, too, can provide administrative guidance (within statutory boundaries) in numerous ways, including through, for example, grants of individual permits, promulgation of general permits or the development of general rules.” In other words, review each circumstance on a case-by-case basis and likely require more permits.

Not that it changes the level of uncertainty this ruling creates, but Justice Alito recognized the impractical idea of the “functional equivalent of a direct discharge” by noting, “This is not a plausible interpretation of the statutory text and, to make matters worse, the Court’s test has no clear meaning.”

Meanwhile, numerous lawsuits have been filed challenging the 2020 “Navigable Waters Protection Rule” – a Rule that finally provided the clearest outline of jurisdictional waters since the Clean Water Act was passed. At least one judge has indicated, while granting a preliminary injunction against the Rule, that he will likely invalidate it. Will the previous Rule, finalized in 2015, that claimed jurisdictional authority over almost every water source and drainage feature on the landscape be restored and with it will the idea of the “significant nexus” binding mechanism be reinstated? It is hard to know but one thing is almost certain, uncertainty will most surely return.

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Research Results

Funded by USPOULTRY and the USPOULTRY FOUNDATION

USPOULTRY and the USPOULTRY Foundation announce the completion of a funded research project. The project is part of the Association's extensive research program encompassing all phases of poultry and egg production and processing. A summary of the completed project is shown below. Information on other Association research may be obtained by going to USPOULTRY's website, www.uspoultry.org.



Research Examines the Role Dietary Calcium Plays in Necrotic Enteritis Development and Pathogenesis

Project #BRF009: The Role of Dietary Calcium in Necrotic Enteritis Development and Pathogenesis

Dr. Audrey McElroy, at Texas A&M University in College Station, recently completed a research project that was made possible in part by an endowing Foundation gift from Sanderson Farms. She conducted two experiments to better define the involvement that calcium has in changes that occur in the intestinal environment, resulting in NE morbidity and mortality in broilers. She also evaluated the effect that calcium source has in broiler diets that contain animal protein and those that do not (all veggie) on natural occurrence of NE. Following are the results of the research.

Necrotic enteritis (NE) is a complex intestinal health issue with important economic impacts on poultry production. Losses due to NE are not only associated with increased mortality but also decreases in bird performance and feed efficiency. *C. perfringens*, the bacteria responsible for NE, is naturally occurring in the intestines of chickens; however, its presence alone is not a determining factor for disease development. Pre-disposing factors leading to an overgrowth of *C. perfringens* have been reported to include diets, immune status, stress, intestinal functions and coccidiosis. Little research has evaluated the role of

dietary mineral levels during episodes of NE. Published data indicates that altering dietary calcium (Ca) levels and sources may result in differences in the development and pathogenicity of naturally occurring NE. That information has led to further investigation of the role and mode of action of Ca source (availability and solubility) in different diet types and the resulting impact on NE development and pathogenesis and concurrently, leg health.

The specific goals and objectives of the two experiments in this research project were to: (1) evaluate diets with different limestone Ca sources (differences in particle size and solubility), in *C. perfringens* challenge trials, to better define the involvement of Ca in changes to the intestinal environment resulting in NE morbidity and mortality and changes in leg health; and (2) utilize the results from Experiment 1 to evaluate Ca source in diets with and without (all veggie) animal protein on natural occurrence of NE in broilers on a commercial coccidia vaccination program fed non-medicated diets, a bioshuttle feeding program, or diets with BMD inclusion.

Experiment 1 compared two limestone sources (different geographical locations) and two particle sizes (coarse and fine) of each of the sources at two dietary levels of Ca. There was an interaction between particle size and dietary Ca levels on grower phase mortality resulting from NE. Birds fed the high level of fine particle limestone had increased NE mortality. Through day 35, there was a three-way interaction of dietary Ca level, limestone source and limestone particle size on performance. Birds fed higher levels of an industry standard particle size of limestone source had decreased body weight and increased feed conversion ratio. In summary, this experiment indicated that the higher level of dietary Ca was detrimental to intestinal

health (NE occurrence) and performance. At the lower level of dietary Ca, the negative impacts on performance were not observed and there was no increase in NE associated mortality. Smaller particle size contributed to more NE mortality, but larger particle size was more detrimental to performance.

Experiment 2 investigated the role dietary protein type (all veggie vs. animal protein) in combination with dietary Ca level and limestone source have on the pathogenesis of NE. Not only was there an interaction of Ca dietary level and limestone source, as in Experiment 1, but results were also dependent on if the diet was veggie or animal protein based. Results suggested that the higher level of dietary Ca in diets with animal protein was more related to mortality resulting from NE.

Overall, dietary Ca level appeared to be a risk factor for NE occurrence. The most impactful finding of this research was that dietary Ca, in particular limestone particle size, limestone geographic source and diet inclusion levels, are complex contributors to intestinal health and broiler performance. Both experiments suggest that limestone characteristics need to be further examined for the influence they have on intestinal health, nutrient digestibility and bird performance. Furthermore, the effects of Ca level and limestone characteristics were dependent on the diet protein type (animal vs. veggie). These results have direct application to the poultry industry for consideration of not only level of dietary Ca in formulation, but Ca sources regarding the characteristics of the limestone and the impact on intestinal health, potential risk for NE and broiler performance dependent on the protein type of diet.

Effective Sanitation Practices of Shell Egg Processing Equipment and Facility Surfaces

The next few pages will describe in more detail several recent research projects funded by USPOULTRY and the USPOULTRY Foundation. The researchers have outlined the purpose and objectives of the research.



An effective sanitation program is essential in reducing the likelihood of a foodborne outbreak due to microbial cross-contamination of eggs. Sanitation is an essential step to ensure the eradication of microorganisms or debris on surfaces and equipment following the cleaning step. Previous surveys have identified the need for improvements in the sanitation practices of egg processing facilities, noting no changes in microbial counts before and after sanitation. During a recent federal investigation associated with a foodborne illness outbreak linked to shell eggs, investigators found accumulated food debris (i.e. dried egg and shells) on egg processing equipment post-sanitation (FDA, 2018). Egg processing equipment is a food safety concern since improperly sanitized equipment could cross contaminate clean eggs. Currently, there are guidelines regarding the sanitation programs of USDA-Agricultural Marketing Service (USDA-AMS; USDA, 2011) official egg processing facilities.

Principal investigator, Dr. Javier Garcia within the Egg Safety and Quality Research Unit at the United States National Poultry Research

Center/ USDA/ARS was recently awarded funding by USPOULTRY and the USPOULTRY Foundation and made possible in part by an endowing Foundation gift from MPS Egg Farms, to provide a better understanding of effective sanitizing practices that could be used in egg processing facilities. The research project will test various sanitizing compounds and practices on different egg processing equipment parts and non-contact surfaces. A greater understanding of effective sanitation practices will be developed through this process. Further, the information gathered can be utilized by the egg industry for assessing the cleaning and sanitation program within each facility.

What Are the Objectives and Expected Outcomes of This Study?

There are two major objectives to investigate. The first objective is to assess effectiveness of various sanitizing compounds in reducing microbial (*Salmonella spp.*, *Campylobacter jejuni*, *Listeria monocytogenes*, *Enterobacter cloacae*) counts. The microorganisms used in this study will originate from isolates obtained from egg processing facilities, as these isolates would best reflect what is commonly found at egg processing facilities. The second objective is to assess effectiveness and ability of various sanitizing compounds in breaking down or penetrating egg content residue and/or biofilms (microbial assessment). To achieve the objectives, key equipment parts, such as belts, rollers, carriages, flaps, transfer units, as well as non-contact surfaces including sealed and unsealed concrete, will be tested. Various egg contact and non-contact surfaces, selected to represent materials and surface textures commonly found in egg processing facilities,



will be tested under soiled conditions. "We expect to find sanitizing compounds and practices that are the most effective in reducing microbial levels on egg processing equipment and non-contact surfaces," commented Dr. Garcia. The sanitizing compounds would also need to be effective in breaking down organic matter, as organic matter can provide an environment in which microorganisms can adhere and proliferate. Ensuring egg processing equipment and non-contact areas are as clean as possible play a big role in preventing cross-contamination of eggs.

Co-Principal Investigator Dr. Deana R. Jones remarked, "In partnership with the egg processing facility sanitation survey study funded through USPOULTRY, this research project will utilize microorganisms commonly found in the egg processing environment to conduct a 'real world' assessment of best practices for cleaning and sanitizing egg processing facility surfaces. This will allow for a direct transfer of research outcomes to the egg industry for immediate impact."

How Will This Study Potentially Benefit Sectors of the Poultry Industry?

The outcomes of this study will provide a better understanding of sanitizing compounds and their uses. This knowledge will aid processors in improving and designing effective sanitation programs in egg processing facilities, reducing the potential of contaminated eggs reaching consumers. The outcomes may also be utilized by industry for risk-based assessments of facility sanitation programs. The recall of products during an outbreak can be very costly to the overall egg industry, depending on the severity of the recall. Taking steps to prevent and/or reduce bacterial cross contamination is essential in improving food safety and averting future costly recalls.

"Comprehensive work of this degree and importance will answer many questions for the egg processing industry. We look forward to the discoveries of this project," remarked Dr. Denise Heard, USPOULTRY director of research.

Identifying Vaccine Candidates for *Campylobacter jejuni*: Enhancing Food Safety to Feed the World's Growing Population



Poultry is an affordable source of high quality protein and globally the most consumed meat. However, there are challenges that the poultry industry faces in terms of food safety issues associated with *Campylobacter jejuni* (*C. jejuni*). *C. jejuni* is the most common cause of bacterial gastroenteritis in the United States. Approximately 80% of the human *C. jejuni* infections are associated with poultry; thus, the continuing growth of poultry production puts increased pressure on the poultry industry to control *C. jejuni* contaminate in poultry.

Principal investigator Dr. Li Zhang, from Mississippi State University, was recently awarded funding by USPOULTRY and the USPOULTRY Foundation and made possible in part by an endowing Foundation gift from Peco Foods, to utilize molecular techniques to identify possible vaccine candidates for *C. jejuni*, aimed at reducing the bacteria in living poultry.

Dr. Li commented, "Effective control of *C. jejuni* through sustainable, proactive vaccines will allow for enhanced safety of poultry products, decreased production costs and ultimately provide a safe, affordable, high quality source of protein to feed the world's growing population."

Why Is There an Immediate Need for This Research?

Current on-farm intervention measures may have limited effect or are hampered by economic aspects and consumer acceptance. Because there is a consumer push to remove antibiotics from poultry production (due to fear surrounding antibiotic resistant pathogens), alternative methods to control this organism are needed. These issues and

concerns have led to a variety of strategies for vaccine development. However, despite many encouraging studies, there is currently no commercial vaccine available to reduce *C. jejuni* colonization in poultry. This is due to cost and labor requirements that are substantial, as well as variations in bacterial strains and the technical limitations associated with previous vaccine design approaches.

New technology (i.e.; next-generation sequencing) to be employed within this research may be the answer to the flaws associated with traditional vaccine development. Harnessing this technology led to the novel idea of using genomic information to discover unique antigens that had previously been missed by traditional vaccinology methods.

Innovativeness

Genomic technologies are expected to play a key role in vaccine research, offering revolutionary tools for the identification of surface associated proteins and virulence factors. The information from complete bacterial genome sequences provides a comprehensive inventory of all potential candidate antigens. This will allow mining of the bacterial blueprint and discovery of novel antigens. Many candidates will be identified at this stage, and then a biological analysis and a rapid non-animal test model will be utilized to prioritize the most promising potential vaccine candidates. This innovative approach will guide and optimize the identification of protective antigens much quicker and at a reduced cost compared to traditional methods.

What Can We Expect?

This research will provide crucial information for development of efficient vaccines against *C. jejuni*. The novel vaccine development approach applied in this research has a much faster turnaround time than conventional vaccine production methods and can be completed at a fraction of the cost. Additionally, innovation applied in this study may be generally used in vaccine development against other disease-causing agents. Data produced will provide effective pathogen contamination management to help the poultry industry

produce a safer, more affordable product for consumers. Further, findings will help control *C. jejuni* through vaccines, while decreasing the subsequent use of antibiotics on farm, as well as address the global consensus to reduce the emergence of antimicrobial resistance. Ultimately, the research will not only benefit the poultry industry but will also protect human health.

Co-Principal Investigator Dr. Pratima Adhikari stated, "These research findings will provide us with an opportunity to understand one more step on the intervention strategies on common food-borne pathogen, *C. jejuni*. Vaccine strategies against *C. jejuni* are limited by an incomplete understanding of its pathogenesis and development of immunity. The comparative genomic analysis method that will be used in this study will help to predict the antigens that are most likely to be efficient vaccine candidates. The overall outcome will be beneficial for the poultry industry to improve poultry safety by reducing *C. jejuni* contaminants in meat and poultry supply. We would like to thank the U.S. Poultry & Egg Association for providing this great opportunity."

Benefits to All Sectors of the Poultry Industry

Availability of efficient vaccines will help safeguard our poultry supply by reducing the concentration of pathogens that are known to cause foodborne outbreaks. Reduction of the bacterial contamination of the food chain and the environment will not only benefit the poultry industry but also provide a level of protection to human health. Having the means to control pathogenic contamination through sustainable vaccines will make poultry products more readily available worldwide and contribute to the farm to fork concept of food safety and supply.

"We are pleased to support this research and look forward to the results. The utilization of genomic technology and reverse vaccinology offers a promising opportunity to focus on targets for vaccine development," remarked Dr. Denise Heard, USPOULTRY director of research programs.

Using Electrostatic Precipitator to Improve Indoor Air Quality in Cage-Free Layer Houses

Consumers are concerned about animal welfare associated with their food and how it is produced. These concerns resulted in major food retailers pledging to go to cage-free eggs by 2025. The United States Department of Agriculture estimates that by 2026, 64% of all hens will be in cage-free systems in order to meet the projected demand. Housing of cage-free hens is in barns where they have access to a litter floor, permitting the birds to express their natural behaviors (e.g., dust bathing, and scratching).



Compared with cage housing, cage-free houses have reduced air quality with higher dust and ammonia levels. Fine dust particles can travel into the lungs of animals causing or exacerbating lung and heart diseases. Dust particles can also transport odors and harmful gases as well as microorganisms, including pathogens. There is also concern about the impact of higher dust levels on reduced egg production and poultry health in cage-free houses attributed to poorer air quality than in caged houses. Air quality is poorer during winter when reduced ventilation to conserve energy and keep the birds comfortable is used. The spraying of water and/or diluted acid solutions may reduce both dust and ammonia levels but causes undesirable chilling and dust caking on the eggs.

There is a current need to improve air quality in cage-free houses. Hence, Principal Investigators Dr. Sanjay Shah, Dr. Kenneth Anderson and Dr. Lingjuan Wang-Li, at North Carolina State University, were awarded a research grant by USPOULTRY and the

USPOULTRY Foundation and made possible in part by an endowing Foundation gift from Cal-Maine Foods to evaluate a technology that can reduce these environmental issues. Their work assesses Electrostatic Precipitation (ESP) effectiveness in cage-free layer houses in reducing dust levels.

Rationale and Innovativeness

In ESP, air is charged using high voltage, which causes the dust particles to attach to one another and settle out on the floor or on grounded surfaces reducing dust and microbial concentrations from the air. Previous research using ESP was performed by passively charging the air with electrodes hung from the ceiling of the barn. However, this novel ESP-based recirculating air cleaner pulls in barn air, and dust particles acquire charge and attach to the duct surface. The attached dust will be knocked off the duct walls using a rapper and deposited in a dust collection bag at the bottom of the duct, preventing resuspension of the dust into the house by workers and birds. The charging occurs inside the duct, improving the effectiveness of dust collection than systems suspended from ceilings. The ESP air cleaner will be tested in a commercial cage-free barn for its ability to improve air quality.

Objectives and Expected Outcomes

This research project will design and fabricate a full-scale recirculating ESP unit. The objective will be to evaluate the removal efficiency of the ESP in the cage-free layer house for particulate matter, ammonia, and airborne bacteria and fungi. While optimizing the ESP system's zone of influence, the investigators expect that the air cleaner will trap a substantial fraction of the dust passing through it, leading to proportionate removal of ammonia and microorganisms from the air stream. The air cleaner could substantially improve air quality by reducing dust, microbial and ammonia levels within its zone of influence.

Dr. Denise Heard, director of research programs for USPOULTRY, commented, "If this technology can effectively remove particulate matter, ammonia, and bacteria and can be adaptable



to the broiler and turkey industries as well, the industry will benefit tremendously."

Potential Benefits to the Poultry Industry

Cage-free layers will experience improved bird performance and welfare due to better indoor air quality. ESP can improve conditions for poultry workers and reduce emissions of air pollutants including odor. In warm weather, where high ventilation rates provide adequate particulate dilution, the air cleaner's fan could be used to provide additional air movement over the nest boxes where air speeds are much lower than over the litter.

"Improving indoor air quality is a win-win proposition, since it can enhance bird performance, health and welfare, benefit the workers, and could even reduce harmful air emissions," stated the principal investigators.

To Resolve Health and Welfare Challenges: Automated Tracking of Laying Hens in a Cage-Free Aviary Environment

Consumer perception towards animal welfare and food of animal origin has driven the egg industry in the United States towards cage-free production systems. There are close to 77 million cage-free laying hens (23% of total US laying hen population) as of April 2020, already housed in newer commercial systems like the multi-tier aviary systems; and these figures are continually increasing. The sustainability of these housing systems relies on the well-being of the birds and efficient production of safe products. In comparison to conventional cage houses, hens in the cage-free systems are kept in larger colonies with more space per bird and in a complex environment that includes perches, nest-boxes and access to the floor and litter. As a result, management decisions in a commercial cage-free house with anywhere from 100,000 to 500,000 birds must rely on the level of physical activity, resource use and different behavior exhibited by the birds. This is unlike conventional cages where one person and/or manager could manage a large population of hens primarily by controlling environmental factors.

Tracking the birds in a commercial-style housing system for resource use and behavior is the first step towards gathering and using documented information to resolve health and welfare challenges faced by the hens in cage-free systems. USPOULTRY and the USPOULTRY Foundation awarded a research grant to Dr. Prafulla Regmi, with North Carolina State University, to compare the space and time-related patterns of housing systems used by laying hens during different periods of lay.

When asked about his research interests, Dr. Regmi replied, "My research interests lie in using appropriate technology to integrate information on behavior and physiology of birds in commercial cage-free systems. Such technology should be affordable and robust with a potential to be implemented in a commercial operation."

Rationale and Objectives

A multitude of unique production, health and welfare challenges have been reported in different cage-free systems. Pecking

and cannibalism, high prevalence of bone fractures, and outbreaks of different bacterial and protozoal diseases, mislaid eggs and 3-dimensional space utilization are the major problems associated with cage-free and floor-rearing systems. Furthermore, commercial cage-free systems, such as the multi-tier aviary system, allow hens to perform horizontal as well as vertical movements within the system and in the open litter area. On average, 40% of hens simultaneously use the litter while consistently entering and exiting into and out of the cage-free system throughout the day.



To effectively evaluate and predict welfare problems and/or production issues, systems that can reliably track hens' movement in the cage-free environment should be developed. A system of this type must be robust in terms of signaling capability and affordable to be implemented to a subset of hens within a flock at commercial production. One such technology is radio-frequency identification (RFID). Utilizing a multi-point RFID antenna system connected to an open-source electronics platform will provide real-time data logging of bird movement between tiers and sections of the system.

The overarching goal of this project is to track hen movements in a cage-free housing system in a reliable and affordable manner. The study aims to test and validate the reliability of multi-point RFID system to track individual hen movement in a multi-tier aviary system. Further, the space and time-related patterns of housing system use by laying hens during peak-lay, mid-lay and end-lay in a multi-tier aviary system will be compared.

Expected Outcomes and Innovativeness

The investigators will develop and test a radio-frequency identification (RFID) system that utilizes open-source electronic platforms for functioning and collecting data on bird movement between different tiers and sections within a cage-free aviary system. Additionally, they plan to use wearable activity trackers and video cameras in conjunction to complement and validate RFID. Data will be timestamped and recorded using an existing database server. Vision sensors will further allow validation of the RFID system and provide significant information regarding the location and movement of birds within the aviary system.

Potential Benefit to the Egg Industry

The proposed system could serve as an interface to quantify interaction between a hen and her environment (housing system). The objective information on movement and location can help tackle the unique challenges of cage-free production such as floor eggs, keel bone fractures, aggressive feather pecking, etc. Such information about individual and flock behavior will help nutrition, management and design intervention to promote productivity and welfare. The data collected from this study will also help members of allied industry to optimize nutritional programs and housing designs.

Dr. Denise Heard, USPOULTRY director of research programs, remarked, "The findings from this study will provide the industry with a performance-based outcome of animal welfare."

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What Can a Fitbit and Artificial Intelligence Tell You About the Presence of Woody Breast?

Scientists at the University of Arkansas System Division of Agriculture have been awarded a research grant from USPOULTRY and the USPOULTRY Foundation, and made possible in part by an endowing Foundation gift from George's Inc., for their proposed work on detection of woody breast using accelerometer technology, which is the technology used in Fitbits.

Principal Investigator, Dr. Casey Owens, professor of poultry science, focuses her research on meat quality defects such as woody breast and white striping in broiler meat. She developed predictive models for detection of woody breast in broiler carcasses using image analysis in a previously funded USPOULTRY grant. Co-Principal Investigator, Dr. Yan Huang, assistant professor of animal science, focuses his research on skeletal muscle development in livestock and poultry. Co-principal investigator, Dr. Qinghua Li, associate professor in the University of Arkansas department of computer science and computer engineering, conducts research in mobile sensing, artificial intelligence and cybersecurity. He has used various sensors on mobile platforms to develop anomaly detection and machine learning technologies to address challenges in multiple disciplines.

"The broiler industry has been challenged with a condition referred to as "woody" breast for the past several years that can affect a significant proportion of products," said Owens, who is also the Novus International Professor of Poultry Science at the Arkansas Agricultural Experiment Station, the research arm of the Division of Agriculture.

"It is a condition that develops early in life and becomes more pronounced as birds get closer to market age. It results in compositional changes within the meat, namely an increase in collagen and fat, which further impacts meat quality," remarked Owens.

Woody breast has lower water holding capacity and decreased binding ability in further processed products. Cooked meat



texture alterations can be rubbery, tough or crunchy.

"The result can be substantial economic losses for the poultry industry," Owens noted. "This issue can cost the industry millions of dollars annually due to lost yield, increased processing costs for more labor to sort product and lost business because of customer dissatisfaction."

Owens stated that the ability to detect woody breast would be beneficial to the industry. Hence, she teamed up with Li and Huang to use technology from the world of fitness and health monitoring for an application in the poultry industry.

"Woody breast must vibrate and transfer vibration differently from a normal breast," Li said. "Modern accelerometers have high resolution, as shown in various health applications, and should be able to capture such differences when combined with machine learning."

Preliminary data suggest that muscles can present varying vibration patterns via accelerometers depending on degrees of woody breast severity. It is likely that muscle with fibrosis/scar tissue (indicating woody breast) and normal muscle have rather different mechanical properties that would lead to differences in vibration patterns.

"Development of tools that the industry can use has been an interest for us," Owens said. "We will have the ability to use this technology and combine it with other measurements that we have assessed for woody breast predictors, such as bird and carcass dimensions and fillet hardness."

"This proposed research is novel, unique and has the potential to provide a useful tool to the poultry industry in detection of woody breast in the live broiler and in fillets," Owens remarked.

There is a great deal of ongoing research to determine root causes of this condition in broilers. Developing a more predictive method of identifying birds in the field would allow better selection of animals for research and breeding programs.

Owens added that on-line process control is a developing area for poultry processing, because it can allow processors to have more real time process control. The use of online assessment tools to predict woody breast would be beneficial to processors for its ability to sort fillets, segregate and divert woody breast away from premium whole muscle products into more suitable products, like patties, nuggets, etc.

When asked about this study, Dr. Denise Heard, USPOULTRY director of research, commented, "This study offers a novel and unique approach that has not been used in previous studies. Little is known about the cause of the condition, and this has stimulated the poultry industry to conduct research to determine the cause and find solutions. Continued support of research in this area is a top priority for USPOULTRY and the USPOULTRY Foundation."

Pest-Repellent Paint: Poultry-Safe and Environmentally Friendly!

The pest-control technologies that are currently in use for poultry facilities primarily rely on spraying pesticides to disinfect waterers and feeders. Despite its simple implementation, the current spray-based method is limited by multiple factors. Only a nominal percentage of the sprayed pesticide goes directly to the target pest. Further, sprayed pesticide often forms aerosol that can cause respiratory problems to poultry upon inhaling. Moreover, it can be readily degraded even at the ambient condition which can potentially produce byproducts. Dr. Gibum Kwon at the University of Kansas Center for Research was recently awarded a research grant by USPOULTRY and the USPOULTRY Foundation, made possible in part by an endowing Foundation gift from Wayne Farms LLC, to investigate how 'pesticide-embedded paint' can overcome these limitations.

Rationale

Due to the absence of a feasible methodology that can enable environmentally-safe, sustainable and versatile pest control, the primary focus of this research project is to design and fabricate a pest-repellent paint that resolves the shortcomings of conventional spray-based methodologies. When asked about the approach, Dr. Kwon responded, "We will introduce a new approach to pest control by developing a pest-repellent paint that is referred to as EPC paint."

An Innovative and Unique Approach

The proposed pest-repellent paint can resolve the limitations of current pest control approaches in several ways. The EPC paint is prepared by utilizing all plant-derived "green" materials. Therefore, the usage of "green" materials bestows exceptional compatibility with the physiology of poultry, as well as with the surrounding environment and water resources. Pesticide degradation in an ambient environment has long been a challenge that has resulted in detrimental economic impacts. The proposed EPC paint can contribute to economic profitability by providing sustained and reliable pest control with long-term efficacy. Current anti-pest methodologies control pests by relying on either repelling or

exterminating. A methodology that enables both approaches simultaneously would maximize the pest control aptitude. The proposed EPC paint is advantaged by its dual functionality that enables pest repellency or extermination depending on the exposure time with the target pest. Poultry pests consist of a variety of species that require targeted control by utilizing varied pesticide formulations. The investigator believes that the EPC paint can address this challenge by introducing an adjustable formulation that enables versatile pest control.

What Are the Expected Outcomes?

The investigator expects favorable outcomes at the completion of this project. The EPC paint will demonstrate a sustained pest-repellency that can endure for at least 24 months. This will be a significant improvement to the currently used pesticides with relatively shorter service life, due to their susceptibility to degradation and weathering. A versatile pest-repellency will be demonstrated by the EPC paint that will be effective against a wide range of pest species in poultry facilities, including wingless pests such as ants and ticks, as well as flying pests such as mosquitos and flies.

"We expect that the findings of this study will ultimately contribute to economic growth and environmental protection," commented Dr. Kwon.



How Will This Study Potentially Benefit Sectors of the Poultry Industry?

The proposed pest-repellent paint may benefit the sectors of the poultry industry that are involved in production, such as poultry breeding, hatcheries, feed services in addition to benefitting the processing sectors such as meat and egg processing and packaging. Further, it will also benefit the designers, manufacturers and suppliers of specialized poultry equipment and housing. The "green" chemistry of the EPC paint complies with the strict regulations on environmental protection, which reduces the regulatory burdens on the poultry industry. This will reduce the final costs in all sectors and will also act as a financial incentive to private parties for further investments in developing the infrastructures in the poultry facilities. Additionally, the traditional reliance of the poultry industry on spray-based pest control has proven infeasible. The long-term durability and efficacy of EPC paint can compensate for both financial loss due to material wastage and degradation.

"The inception of EPC paint can mark a paradigm-shifting milestone not only for the sectors in the poultry industry but also for the universal effort against the spread of communicable diseases and infections by pests," remarked Dr. Kwon.

Never Fear, Meat Will Still Be Here

It's deeply frustrating, though not at all surprising, to see the endless parade of op-eds, social media posts, online petitions and more from activist groups, activist authors and others taking advantage of current circumstances to call for an end to animal agriculture and meat consumption. The Alliance wants to put your mind at ease – meat is not going anywhere, and you can remain confident about eating it, given the animal agriculture and meat community's commitment to food safety, worker health, animal welfare and sustainability. Never fear – meat will still be here.

We, at the Animal Agriculture Alliance, like to take a moment to correct some of the false narratives that are running rampant, thanks to the efforts of animal rights extremists who are determined to take meat, milk, poultry and eggs off of our plates.

The COVID-19 Pandemic Is Not Connected to Animal Agriculture.

This rumor continues to float around, despite expert after expert debunking it, including former USDA Undersecretary for Food Safety Richard Raymond, MD, UC-Davis' Alison Van Eenennaam, PhD and Iowa State University's Dan Thomson, DVM, PhD. The exact origins of the pandemic have not been determined, but there is absolutely no evidence to suggest that it has anything to do with animal agriculture or eating meat, nor does eating meat increase your risk of being infected.

Farms and Plants Are Taking Extraordinary Measures to Protect Worker Health and Safety While Remaining Operational to Fulfill Their Critical Role in the Food Chain.

Processing plant workers are heroes for coming to work to feed families around the world. Meat and poultry companies' first responsibility is to the safety of their workers. They are conducting temperature checks, providing masks, erecting station dividers, slowing lines to spread out shifts, building temporary tents for more space for break rooms and taking other measures to keep employees safe. Additional guidance has been provided by CDC and OSHA to ensure the health and safety of meat and poultry processing employees. This additional guidance provides state and local governments with the information they need to protect worker safety, while continuing to support the operation of processing plants.

Meat, Poultry, Dairy and Eggs Are Sustainable Food Choices That Have a Role to Play in a Healthy, Balanced Diet. Animal Agriculture Is Not the Leading Cause of Climate Change.

Activists claiming that animal agriculture is the leading cause of climate change is a tale as old as time, but it is still far from the truth and repeating it over and over does not make it more accurate. Animal agriculture in the U.S. is responsible for less than 4 percent of greenhouse gas emissions. Agriculture is a distant fourth in a sector-by-sector comparison of contributions to total U.S. greenhouse gas emissions. The industry is also committed to continuous improvement and doing more with less. For example, due to innovative farm practices and new technologies, the environmental impact of producing a gallon of milk in 2017 shrunk significantly since 2008, involving 31% less water, 21% less land, and a 20% smaller carbon footprint. On the beef side, the modern U.S. beef industry uses 19% less feed, 12% less water, 33% less land and has a 16% lower carbon footprint compared to beef production in the 1970s. Other parts of the animal agriculture community have similar stories to tell.

Farmers and Ranchers Are Committed to Responsibly Caring for Livestock and Poultry and Animal Welfare Remains Top-of-Mind.

Farm families take the ethical obligation of providing the best quality care to their animals very seriously. Although farm size and type of production practices may vary, one thing farmers and ranchers have in common is the commitment to caring for their animals. Each sector of the animal agriculture community has animal care guidelines that are aimed at continuous improvement and help farmers and ranchers ensure they are providing the best care to their livestock and poultry. Animal welfare includes responsible antibiotic use. America's farm families have a long-standing commitment to protect the health and safety of their animals, families, employees and consumers. Antibiotics are an important tool in ensuring animal health and high standards of animal care. Farmers work closely with veterinarians to use antibiotics responsibly and provide consumers with safe food.

Meat Alternatives Are Not Taking Over the Meat Case.

Despite some opportunistic groups (that want to sell more plant-based meat alternatives) trying to spin the facts to say otherwise, the

vast majority of Americans are continuing to purchase meat and poultry and the market share of plant-based alternatives remains a blink-and-you'll-miss-it blip on the radar screen. According to Anne-Marie Roerink of 210 Analytics, since the onset of the pandemic-related changes in grocery patterns, the meat department has seen an additional \$5.0 billion in sales, versus an additional \$100.3 million for plant-based meat alternatives. Anne-Marie goes on to point out that as a percentage of the total (meat department plus plant-based meat alternative sales), the share for plant-based alternatives stood at 1.50% during the week of March 1. Because of the absolute gains in meat dollars, the market share for plant-based alternatives has since dropped to a low of 1.18% during the week of April 12 and stood at 1.27% the week ending May 10. A drop in the bucket, despite the exaggerated claims that these products are selling like hotcakes. Make no mistake – the vast majority of people want real meat and poultry, and our farmers and ranchers along with the rest of the food chain are going to continue to work around the clock to get it to them.

As long as there is animal agriculture (which we strongly believe there always will be, despite what some columnists have to say), there will be critics doing everything they can to undermine its reputation – even in the time of a global pandemic and heightening fears about food security. Rest assured our farmers and ranchers will remain undeterred in their work to provide you with nutritious, affordable choices. Farmers and ranchers (and all workers along the food chain) deserve our applause and support and we hope you will join us in giving it to them.

The Animal Agriculture Alliance works to bridge the communication gap between farm and fork, and USPOULTRY is a sponsor of their organization. To learn more about their efforts, visit <https://animalagalliance.org> or email them at info@animalagalliance.org to start a conversation!



The Value of Face-to-Face Meetings to a B2B Industry

As COVID-19 has turned our world upside down in every aspect, who would have thought that we would ever be discussing such a thing as the possibility of not doing face-to-face meetings? USPOULTRY recognizes the value of meeting the poultry and egg industry's continuing education needs. We are committed to ensuring that those face-to-face meetings continue, while, of course, following recommended safety guidelines and precautions. Face-to-face meetings are more focused and more productive, and the networking aspect is a tremendous benefit. Our industry suppliers rely heavily on such networking opportunities, as do producer members, and they use these continuing education opportunities to learn ways to become more efficient in their day to day roles and operations. I'm not saying we can't use platforms like Skype, Zoom or WebEx, as I use them all the time. But I am saying that we should never completely stop having face-to-face meetings, especially in the early, formative stages of business relationships where you are getting to know each other.

There are other tremendous values of face-to-face meetings, such as:

1. As mentioned above, continuing education to help you be more productive in your day-to-day responsibilities. While virtual meetings are a mode of doing this, the ability to read the body language of the other people in the room, which often sends a very different message to what their words are saying is crucial in learning. Non-verbal communication is just as important as the words being said and being able to see this live is hugely valuable.
2. It's a lot easier to brainstorm while face-to-face and is less distracting than a virtual platform.
3. Face-to-face meetings allow for greater social interaction, which we are all aware that our younger generation of future leaders prefer. There would be a plethora of missed opportunities for them if we stop doing face-to-face meetings.

So, think about your current business relationships. We are all in the people business. Regardless of how tech-savvy you may be, face-to-face meetings are still the most effective way to capture the attention of participants, engage them in conversation and spark productive collaboration. Yes, there may be some "new normals" for meetings, but USPOULTRY is committed to continue offering face-to-face learning environments to meet the needs of the industry as you continue working toward business success.

Although we are compelled to move to a virtual platform for some of our fall meetings/conferences, don't fret. We will be back in face-to-face meetings again!

Barbara Jenkins
Vice President, Education & Student Programs
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2020 USPOULTRY Financial Management Seminar

Unprecedented Challenges and Optimism Moving Forward

USPOULTRY Financial Management Seminar attendees safely gathered in a small group in Amelia Island, Florida, recently. Safety precautions and protocols were in place, including masks, gloves, sanitizing and six-foot distancing.

“When people talk to me these days, everyone wants to know three things – where are we, where are we headed and what does all of this mean? That’s what the business sector wants to know, but it’s also what every individual wants to know, sitting at our coffee tables with friends and around dinner tables with our families. No one has the answers to those questions right now,” said Jack Kelly, public policy officer for the McPherson Group in Washington, D.C.

Kelly’s Washington Update gave a broad overview of the social, political and global factors creating the unprecedented situation the world is facing in 2020. His approach was pragmatic, directly addressing the reality of the various problems facing the country. However, Kelly ended on an optimistic note by stating, “No matter how long of a night we may face, do not worry – the dawn always breaks eventually.”

In his Economic Update, Mark Talasaki, consultant at Advance Trading, Inc., also



Jack Kelly
McPherson Group

addressed the myriad troubles affecting the economy. He chose to focus on the silver lining, though – the opportunity for the agricultural industry.

“People are eating better. They want more pork; they want more chicken; and they want

more beef. This rise in consumer demand is happening on a global scale. If you are looking for the positive in 2020, it’s this. It’s a very promising situation for the agriculture industry,” remarked Talaski.

Jeff Clemons, director of risk and cyber advisory services for Frost PLLC, discussed “IT Business Continuity During a Pandemic.” His presentation detailed the importance of creating and implementing proactive troubleshooting strategies that allow IT departments to remain flexible and maintain the technical needs of businesses in tumultuous times.

“You have to sit down and talk about this – grab coffee and discuss these plans with your teams at least once a year,” explained Clemons. “What do you do if you are hit with a cyberattack and your IT manager is out sick? By including all team members in these discussions, you empower them to be part of the solution. Make them understand that all of them, as individuals, are an important part of these conversations. The plan may start at upper management, but it relies on the involvement of these IT technicians that you rely on every day.”



Safe distancing at the 2020 Financial Management Seminar

USPOULTRY Member News

Elanco Closes Acquisition of Bayer Animal Health

Elanco Animal Health Incorporated announced it has closed the acquisition of Bayer Animal Health. The transaction, valued at \$6.89 billion, expands Elanco's scale and capabilities, positioning the company for the long term as a leader in the attractive, durable animal health industry.

Kemin Human Nutrition and Health Promotes Senior Team Members to New Leadership Roles

Kemin Industries has tapped two of its longtime Kemin Human Nutrition and Health team members for new leadership roles within the global business unit. Joanne Lasrado has been named sales and technical services director for North America, effective Aug. 3; and Valerie de Bourayne has been appointed head of regulatory affairs, effective Sep. 1.

Tyson Foods Launches New, Nationwide COVID Monitoring Strategy; Expands Health Staff

As part of its commitment to team member safety and continually evolving efforts to protect workers from COVID-19, Tyson Foods, Inc. is launching a new, industry-leading monitoring program and expanding its occupational health staff, including a new chief medical officer position. The comprehensive COVID monitoring strategy was designed with the assistance of outside medical experts and includes ongoing, data driven COVID testing of workers without symptoms, as well as those who exhibit certain symptoms or have been in close contact with someone who has the virus.

Boehringer Ingelheim Acquires GST to Strengthen Its Stem Cell Capabilities in Animal Health

Boehringer Ingelheim has acquired Global Stem cell Technology (GST), a Belgian veterinary biotech company. GST is dedicated to the research, development and production of evidence-based, regenerative medicines (stem cell therapies) used to treat orthopedic and metabolic diseases in animals. Boehringer Ingelheim already entered into a partnership with GST in 2018; in 2019, the companies launched Arti-Cell® Forte in Europe.

Peco Foods Names Former Sales and Marketing Consultant, Steve Evans, Chief Commercial Officer

Peco Foods is announcing Steve Evans as its chief commercial officer. In this position, Evans will be responsible for driving progress in developing and implementing the corporate commercialization strategy, building a cutting-edge infrastructure to grow the market for Peco's products and increasing revenue growth.

"We have been fortunate to work with Steve in a consulting capacity since October and are thrilled to welcome him to our leadership team in this much-needed role after a long vacancy," said President and CEO Mark Hickman.

Cargill Commits to Restoring 600 Billion Liters of Water by 2030

Reliable access to clean water is essential for people and agriculture. Increasingly, poor water availability and quality threaten many communities around the world. Cargill is committed to developing and accelerating agriculture solutions that protect and enhance water resources. As a result, the company has set new global water targets to achieve sustainable water management in its operations and all priority watersheds by 2030.

Aviagen Breaks Ground on New Tennessee Feed Processing Facility

Global poultry breeding company Aviagen® will break ground this month on a new state-of-the-art feed processing facility (feed mill) in Pikeville, Tenn. The new facility will supply the company's growing number of internal flocks with high-quality, pathogen-free feed. The \$35.3 million allocated to the feed mill is part of a larger \$100 million investment for the company in the communities of Pikeville and Crossville in southeastern Tennessee.

Environmental Management Seminar and Poultry Processor Workshop Going Virtual

The USPOULTRY Environmental Management Seminar and Poultry Processor Workshop are going virtual. The timely and quality information you are accustomed to receiving at both events is now being offered in a condensed, virtual format. The Virtual Environmental Management Seminar will be held on Sept. 17. The Virtual Poultry Processor Workshop will be held Oct. 7. Both programs will be FREE for approved, registered USPOULTRY member company attendees.

Online registration and other details regarding the virtual seminars will be available soon on the USPOULTRY website at https://www.uspoultry.org/edu_index.cfm. USPOULTRY anticipates the seminar program to resume its normal schedule next year.