

EMERGING TRENDS

2023 ■ Issue 1

A Newsletter of the Mississippi Poultry Association

MISSISSIPPI HPAI UPDATE

Dr. Jim Watson, State Veterinarian



To date, Mississippi has had four outbreaks of Highly Pathogenic Avian Influenza (HPAI) in domestic poultry, along with around 200 confirmed cases in wild birds such as ducks, geese, eagles, and vultures.

Interestingly, two poultry cases occurred within days of each other in November in completely different parts of the state, and then again in February, two cases occurred within a week of each other in different parts of the state. Our first pair of cases occurred in Lowndes and Lawrence Counties, then the second pair in Leake and Copiah counties. When you look at a map of where

all the wild bird and domestic poultry cases have occurred, there is very little of our state not at risk for the disease.

Our first commercial poultry outbreak was in 52-week-old broiler breeders on a four-house farm in Lawrence County on November 3rd. After depopulation, the farm was cleaned and disinfected and has now been restocked with pullets. Our second commercial poultry outbreak occurred on February 6th in 28-day-old broilers on a six-house farm. This farm also involved an adjacent four-house farm owned by the same individual and required depopulation as well.

The ten broiler houses were depopulated on February 8th using foam and whole-house gassing with CO₂. Disposal was accomplished by burial of all the birds along with the litter of the affected house, then composting of the litter of the other nine houses inside the poultry houses. As one would imagine, there were quite a few technological challenges associated with the depopulation and disposal of birds and litter on a large farm. The owner and the company really worked together alongside the Board of Animal Health/ USDA team to get the job accomplished in a timely fashion. The final phase of cleaning and disinfecting the inside of the poultry houses is known as the Virus Elimination Stage. The final task before allowing the farm to re-stock is to conduct environmental testing inside the houses to prove the virus has been eliminated.

In addition to the work to make sure the virus is eliminated from the farm, there are other activities that have to occur to make sure the virus isn't present in other areas around the farm. A six-mile control area and a 12-mile surveillance zone are created around the infected farm. Within the control area, no movements are allowed onto or off poultry farms without a permit, and testing for surveillance was also conducted in both areas. In addition, my office contacts all known backyard poultry producers in the area to make them aware of the outbreak and to report to our office any poultry deaths. In addition, MSU Extension works with our office to create educational material for backyard poultry producers.

All these activities are needed to stop the spread of disease, as well as to assure our international trading partners that we have controlled the disease so our markets can re-open.

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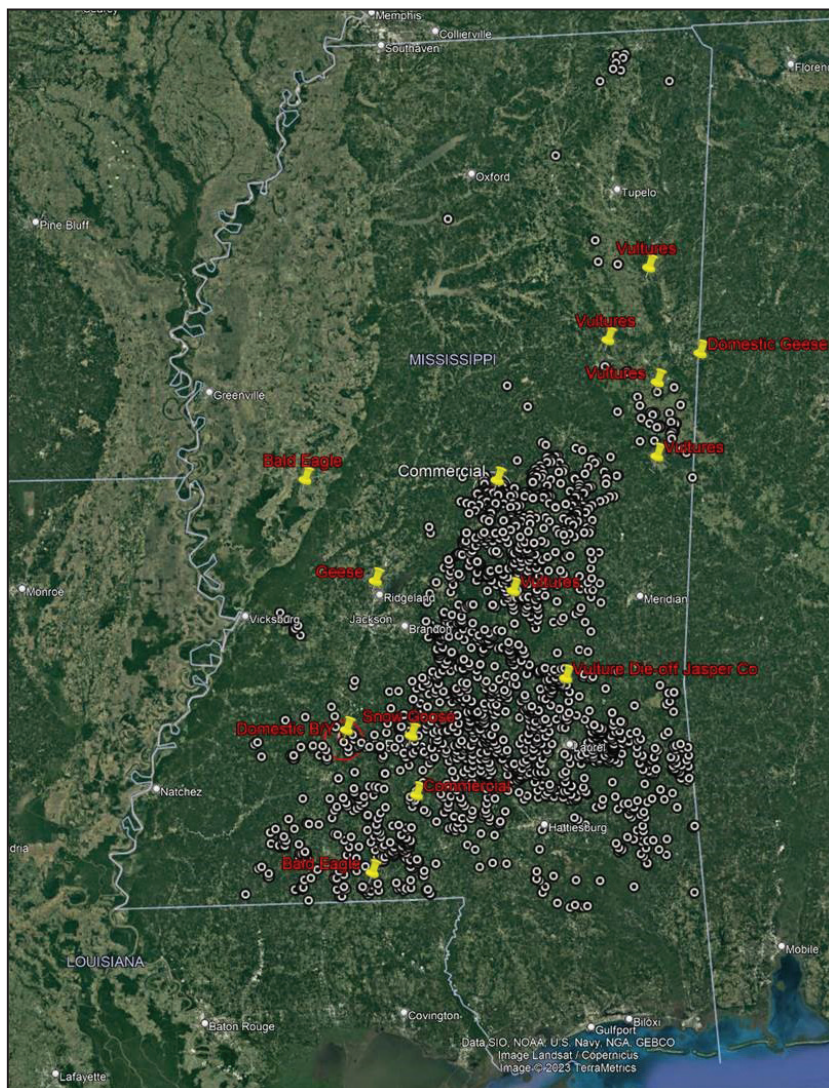


We are unsure what the future holds with regards to the threat of disease here in Mississippi. Wildlife biologists tell us that the virus is going to continue to be present in migratory waterfowl throughout this year, and being bordered by the Mississippi River assures that our state will continue to be exposed to migrating waterfowl carrying the virus. My message to poultry growers is to continue practicing a high level of biosecurity. Nationally, our rapid response to infected farms by depopulation as close to 24 hours as possible has kept the virus from being spread from farm to farm. However, the threat is one of “walking” the virus into your chicken house by bringing the virus from a contaminated environment into the house. Prevention is by...

- 1) Wearing boot covers and dedicated clothing for each house.
- 2) Prevent wildlife from coming into contact with your birds.
 - a. Keeping any spilled feed cleaned up.
 - b. Making sure every house is bird/wildlife proofed.
- 3) Proper operation of your composter to keep wildlife and vultures from having access to your mortality.

As we move forward, thank you for the hard work everyone is doing to keep the disease off their farms. I also want to thank everyone from the growers, integrators, laboratory, state and federal personnel that have put in lots of long hours to respond to our current outbreaks.

If you have any questions, please check our website at www.mbah.ms.gov or call my office at 1-888-646-8731. ■



MPA FAMILY MOURNS THE DEATH OF HALL OF FAME MEMBER TOM SPARKS

MPA is sad to report the death of Mississippi Poultry Hall of Fame member Thomas W. Sparks.



Tom, who was inducted into the Hall of Fame in 1988, died March 8, 2023. According to the obituary in the *Magee (MS) News*, he was a native of Hillsboro, MS. He was born January 28, 1934, attended Morton High School and East Central Junior College, and graduated from Mississippi State University with a bachelor's degree in poultry science.

Tom joined the US Army, then married Marreta White in 1956. After his time in the Army, he began working for HF McCarty Feed and Seed in Magee that later became McCarty Farms. Tom served as chief operating officer for McCarty Farms for 33 years.

He was a past chairman of the Mississippi Poultry Association Board of Directors and served as president of the Southeastern Poultry and Egg Association. He was named Workhorse of the Year by Southeastern, now known as the US Poultry and Egg Association, for his dedication to the poultry industry.

Other national poultry positions he held included as a member of the Grow-out Committee of the National Broiler Council, on the USDA Advisory Committee on Poultry Health, and the National Poultry Improvement Program's Industry Advisory Council.

He was a member of the First United Methodist Church in Magee, where he taught Sunday school for many years, as well as serving on various committees. ■



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EURASIAN H5 CLADE 2.3.4.4, HIGHLY PATHOGENIC AVIAN INFLUENZA VIRUSES... WHY THESE GUYS ARE DIFFERENT

Alejandro Banda, DVM., MSc., Ph.D. Dipl. ACPV, Dipl. ACVM

Clinical Professor, Poultry Research and Diagnostic Laboratory, College of Veterinary Medicine, Mississippi State University



Due to the recent avian influenza problems, I think it is a good idea to make a review about avian influenza viruses and why these new Eurasian H5 viruses are special.

Avian influenza (AI) viruses produce syndromes ranging from low pathogenic infection with respiratory manifestations and losses in egg production to highly

pathogenic presentations characterized by severe, systemic disease with mortalities that can reach 100%. Gross lesions are characterized by severe tissue destruction (necrosis) and inflammation in multiple visceral organs, including the nervous and cardiovascular systems, as well as in the skin and associated structures as combs and wattles.

If we looked into all the different viral families, we will find the influenza viruses as members of the family *Orthomyxoviridae*. These viruses have been present in nature for a long time, producing subclinical infections in wild waterfowl and shorebirds, thus these birds have been serving as natural reservoirs of influenza viruses. Wild birds, particularly waterfowl (i.e., ducks, geese, swans, gulls, and shorebirds) have long been recognized as natural hosts and reservoirs for all type A influenza viruses, also known as Low Pathogenicity Avian Influenza (LPAI) viruses.

Until the emerging of the Eurasian viral strains, in general, influenza viruses had developed a perfect relationship with the reservoirs. In these reservoirs, influenza viruses produced mostly enteric infections with no severe disease nor mortality, and the viruses have had a perfect place to remain in nature and to mutate or reassort, producing a remarkable diversity of influenza viruses. From the natural reservoirs, influenza viruses have jumped or spilled over into commercial poultry and other animal species, including humans. Thus, there are influenza viruses circulating in poultry and wild birds (avian influenza), other influenza viruses circulate in humans (seasonal flu), swine (swine influenza), horses (equine influenza), dogs, cats (canine and feline influenza), and different wild species.

The “Anatomy” of Avian Influenza Viruses and How These Viruses Work... for Dummies.

In Figure 1, on the left there is a photograph of the virus taken with a powerful electron microscope, and on the right, there is an illustration showing the virus and three very important components of the virus; the hemagglutinin and the neuraminidase proteins which are key molecules for the establishment of viral infections, and in the center of the virus, is the segmented genome which plays a pivotal role in the virus variations and the emerging of new subtypes of avian influenza.

The hemagglutinin (HA), shown on Figure 1 as “red rods,” is a very important component of avian influenza viruses because it determines “how aggressive” or virulent the virus will be; explained in more scientific terms, this protein is the main virulence factor of influenza A viruses. There are 18 known HA subtypes (H1–H18). Of these subtypes, HA subtypes H5 and H7 are the most important for poultry because of the potential of these subtypes to become highly pathogenic. The hemagglutinin functions like a key we use to open the door of our houses. The HA binds to the molecules of sialic acid (“the lock”); as soon as the binding between the HA protein and the molecules of sialic acid (“key and lock”) occurs, the infection in the cell will take place. However, there is a previous step or a prerequisite that the influenza viruses are required to accomplish to be able to infect the cells; this is a change in the configuration of the HA protein, also known as cleavage.

In its native form, the HA protein is inactive, and to initiate the infection, HA needs to be cleaved by different enzymes naturally present in the avian tissues into two subunits. Interestingly, not all the influenza viruses behave in the same way, thus, there are “very aggressive” or highly pathogenic avian influenza viruses (HPAIV), and there are “less aggressive” or low pathogenic avian influenza viruses (LPAIV). This difference in the level of virulence (“aggressiveness”) is determined by how easily the HA protein can be cleaved by the different enzymes present in the chicken tissues. Among human societies, we see different kinds of people; some individuals are very social, outgoing, and they can interact and establish positive relationships or even friendships with different kinds of people. In the same way, the HPAIVs are very “social viruses,” and their HA proteins can be cleaved by a variety of enzymes that are present in different kinds of cells or tissues in the chicken. That is the reason HPAIVs produce systemic infections with severe clinical signs and high mortality rates.

On the other hand, there are less social, shy, and reserved individuals that are more selective about the people they

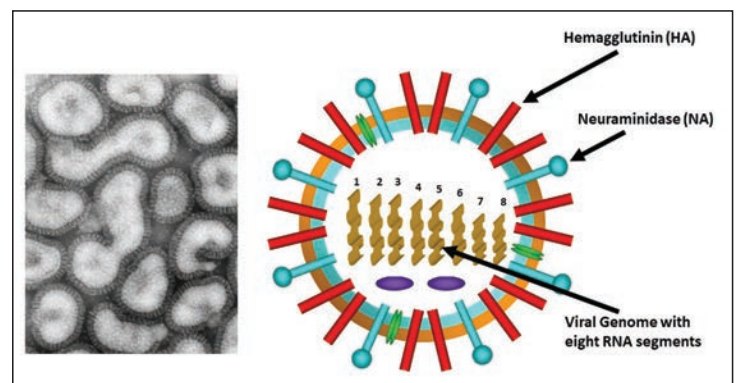


Figure 1

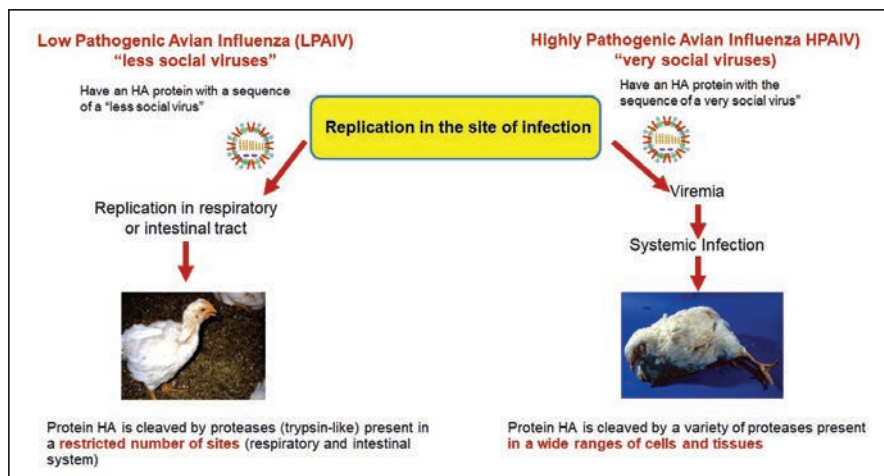


Figure 2

interact with, and they may develop more reduced social networks, establishing meaningful interactions with fewer people. In this same way, LPAIVs are "less social viruses," and their HA proteins can be cleaved only by a very specific group of enzymes: trypsin-like enzymes that are present mostly in the respiratory and digestive system of the chickens. That is the reason LPAIVs can replicate mostly in the respiratory and digestive systems, inducing less severe disease characterized by respiratory manifestations. You can review all these concepts on Figure 2. Briefly, the HA protein is a very important factor that will determine the virulence ("aggressiveness") of avian influenza viruses.

The neuraminidase (NA) protein is represented on Figure 1 as a blue structure with a stem and a globular head. Most likely, this protein prevents the aggregation of the newly formed viral progeny at the time these newly formed viruses are being released from the infected cell. To explain this in more understandable terms, let us think about our childhood when we played with soap bubbles. We would introduce a loop into a soap solution and then blow through the loop producing the bubbles. Most of them emerged as individual bubbles, but occasionally, some groups of bubbles emerged joined in clusters. In the same way, upon leaving the infected cell, the recently formed viral particles may join and form clusters; if this happens, they become non-infective and the cycle stops here. Thus the NA prevents the aggregation of newly produced virus into clusters. In human medicine, NA inhibitors (NAIs), such as oseltamivir phosphate (Tamiflu), prevent the release and spread of newly formed virions from the cell surface by blocking NA anti-aggregation function. The neuraminidase also facilitates the activity of HA protein.

The different subtypes of avian influenza viruses are designated according their combinations of the two groups of proteins described above hemagglutinin or "H" proteins, of which there are 18 (H1–H18), and neuraminidase or "N" proteins, of which there are 9 (N1–N9). If a subtype is designated as H5N1, this means that this virus has on its envelope the hemagglutinin type 5 and a type 1 neuraminidase.

Now let us talk briefly about the genetic information carried by the avian influenza viruses and briefly review their genome. The viral genome of avian influenza viruses is composed of eight segments of RNA that include all the information to code the proteins needed by the virus. In humans and other superior organisms, the complete genetic

information is included in the chromosomes. In the cases of avian influenza viruses, the genome is represented by these eight segments. These genomic segments are also represented on Figure 1.

Mark Twain once said, "Anyone who can only think of one way to spell a word obviously lacks imagination." Well, according to Mr. Twain, we can say that avian influenza viruses are very imaginative, because the enzymes (scientifically known as polymerases) that are in charge of replicating, or making new copies of the genome segments, frequently introduce "misspellings," better known as mutations. A mutation is a modification of a descendant gene that will differ from the parental gene. Unfortunately, avian influenza viruses exhibit very high mutation

rates (they are very imaginative, according to Twain), and this situation allows the viruses to change, producing a variety of viral subtypes in nature and to increase their virulence or "aggressiveness."

Furthermore, this segmented genome format of avian influenza viruses allows them to develop a very important evolutive mechanism that nowadays is causing headaches for the poultry industry, the animal health authorities, and the scientific community worldwide. This mechanism is known as viral reassortment.

Viral Reassortment: When Avian Influenza Viruses Play Dominoes and the Emergence of Eurasian H5 HPAI Viruses.

Before playing a round of dominoes, the tiles are placed facing down on the table, and then one of the players mixes the tiles so that they are thoroughly shuffled. Then each player draws seven dominoes to put together a hand. When the round is over, all the tiles are returned to the general pool and shuffled again, then the players will again pick a new set of dominoes for the next round.

A similar process happens when two or more influenza viruses co-infect the same cell. In a similar way as the domino players get different tiles in each round, influenza viruses

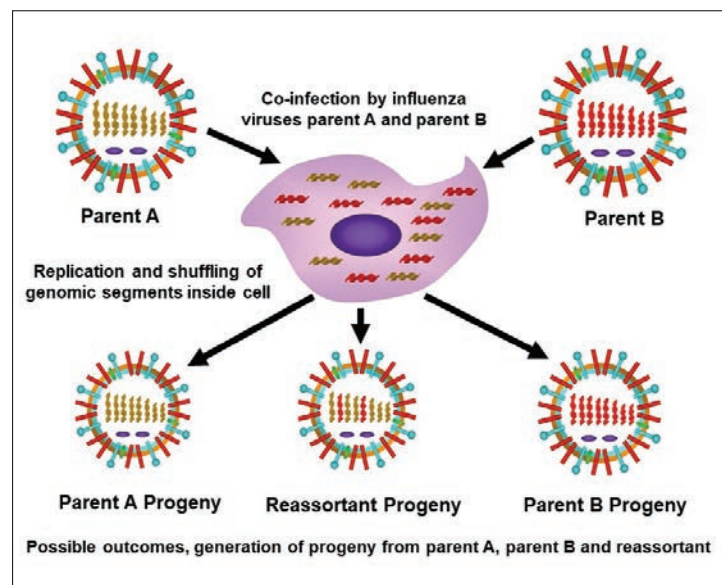


Figure 3

can package each other's genome segments into nascent viral particles, thereby producing hybrid viral progeny. One co-infecting virus incorporates the genome segment or segments of another co-infecting virus in place of its own, and viral progeny containing genes derived from more than one parent is created. This process is explained in Figure 3. This viral process is scientifically known as reassortment. This process is exclusive to segmented RNA viruses like avian influenza viruses and can potentially confer important fitness advantages on the progeny viruses. The major changes in the influenza A viruses originated by reassortment is known as "antigenic shift."

Reassortment is central to the evolution of influenza viruses and occurs frequently. Influenza viruses with epidemic and/or pandemic potential can be created in this way. Reassortment may be most frequent in wild waterfowl as these birds harbor the largest number of influenza subtypes. One of the most important outbreaks due to reassorted viruses have has been by the emergence of Eurasian H5N1 influenza viruses.

The HPAI viruses have risen from H5 or H7 LPAI viruses after circulation for some time in commercial poultry, chickens, and turkeys. During this circulation, they have developed mutations in their HA gene, conferring the traits of high pathogenicity. Most previous HPAI virus epizootics have been geographically limited and were eradicated by stamping-out programs. These HPAI viruses normally were not present in wild bird host reservoirs. However, a major exception has happened with the virus H5N1 identified as A/goose/Guangdong/1/1996 (Gs/GD), which arose in 1996 and has spread and been maintained in poultry and wild aquatic bird reservoirs until the current date, producing infections in poultry, wild birds, or occasionally in humans. These Eurasian viruses have drastically changed the perspective on HPAI biology. Due to the severity of the disease, the number of birds affected, and their broad geographic distribution, this viruses have become panzootic, which means they have disseminated in most of the world.

This Eurasian lineage of H5 viruses arose from a series of reassortment events ("domino rounds" as explained above) that are simplified on Figure 4. In a few words, the hemagglutinin (H5) gene was donated by a H5N1 virus circulating in geese, the neuraminidase (N1) gene was proportioned by a H6N1 virus from teals, and the internal genes were donated by a virus (H9N2) from quails and from the H6N1 virus from teals.

Due to their mutation capabilities since its emergence, viruses from this Eurasian H5N1 viral lineage have evolved into 10 genetically distinct virus subgroups also known as clades (0–9) and multiple subclades. Due to their global spread and virulence, one specific clade has capture most of the attention worldwide—the clade designated as 2.3.4.4. Viruses from this lineage have expanded in distinct geographical areas, likely via long-distance migratory bird dispersal onto the four continents and by poultry trade among neighboring countries. Coupled with regional circulation, the viruses have been evolving further by reassorting ("playing dominoes") with local viruses.

After the analyses of several viral genomes, there is evidence that Iceland may have been the "stepping stone" for the dissemination of these viruses from northern Europe to North America by infected-but-mobile wild birds.

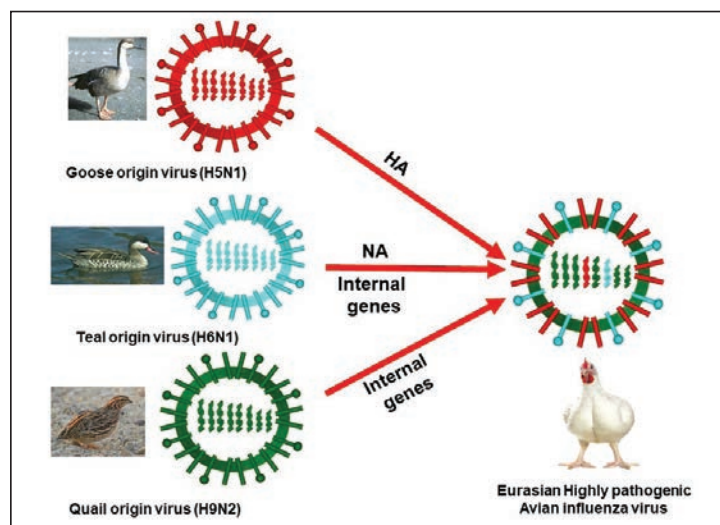


Figure 4

What Is the Deal with These Eurasian H5 Clade 2.3.4.4, HPAI Viruses?

These Eurasian viruses have repeatedly spilled over from poultry to wild birds, and the eventual emergence of this clade 2.3.4.4 has led to more persistent circulation of these viruses in wild birds and high numbers of illnesses and deaths in poultry on multiple continents. A wide range of avian species, including wild and domestic waterfowl, domestic poultry, and even zoo birds, appear to be susceptible to the infection by these clade 2.3.4.4 viruses. In general, the infected birds exhibit severe clinical disease, with high mortality, and severe lesions at the necropsy that are indicative of a typical HPAI virus infection.

Chickens and turkeys may exhibit a very severe disease, with systemic infection (the "social viruses"), with 100% morbidity and mortality rates that can reach 75% or more. The sick birds exhibit severe listlessness before death and some neurological dysfunction, but keep in mind that some birds may die very fast, and they can die peracutely with no clinical signs. Therefore, any remarkable increase in mortality must be investigated. Usually, chickens and turkeys die within two days after the infection.

Unfortunately, due to the high level of dissemination and the wide range of avian species that can be infected, these viruses will most likely be around for a long time, and the risk for outbreaks will continue. Therefore, it is highly advisable to review and improve biosecurity plans and cleaning and disinfection procedures. ■

2023 MPA POULTRY HEALTH SEMINAR SPEAKERS



The MPA Poultry Health Seminar addressed avian influenza; nutrition and management; and vaccinations and disease management at the Mississippi Ag & Forestry Museum in Jackson, MS on February 15, 2023. We would like to thank our speakers and sponsors and the 50 members who attended. Recordings of the presentations are available. Email wade@mspoultry.org if you are interested.



Avian Influenza

Due to the current outbreak of avian influenza in wildlife and domestic poultry, a large portion of the program was devoted to discussions of the status of this disease in the various bird species around the world as well as in the USA. Speakers discussed the actions, strategies and roles of regulatory agencies, corporate and private owners, and the diagnostic laboratory. The known and unknown future of the management and control of this disease was also discussed.

Avian Influenza: A Global Perspective (*David Suarez, USDA ARS, Athens, GA*)

Avian Influenza: Detections in Wild Birds (*Kris Godwin, MS Wildlife Services, Miss. State, MS*)

Avian Influenza: Detection in Commercial Poultry (*Erin Riley, Wayne-Sanderson Farms, Laurel, MS*)

Avian Influenza: Diagnostic Laboratory Experience (*Natalie Armour Manginsay, MSU PRDL, Pearl, MS*)

Avian Influenza: Regulatory Perspective (*Jim Watson, Mississippi State Veterinarian, Jackson, MS*)

Avian Influenza: Where Do We Go From Here? (*David Suarez, USDA ARS, Athens, GA*)

Nutrition and Management

The commercial poultry industry is constantly seeking methods and practices to enhance and improve the procedures used to economically produce the protein needed to feed the world. The audience was enlightened on ways that researchers approach nutritional and production issues that impact commercial companies daily. Research procedures and strategies were discussed and explained. The application of research results to the production industry was described.

Just because “we’ve always done it this way” does not mean that there isn’t a more effective way to reach production goals. In some instances, another way may also be better for animal welfare and overall bird health.

Feed Additives: Nutritional Considerations and Practical Application (*Kelley Wamsley, Poultry Science Department, Miss. State, MS*)

Effect of the First 7-Day Photoperiod on Live Performance in Broilers (*Chris Magee, USDA ARS Poultry Research Unit, Miss. State, MS*)

USDA ARS Update (*Joseph “Jody” Purswell, USDA ARS Poultry Research Unit, Miss. State, MS*)



Vaccination and Disease Management

Understanding poultry diseases and their transmission and development must be achieved if we hope to control those diseases. While we know that management of the birds is

important in production efficiency, it also plays a role in disease control. The speakers covered topics dealing with diseases that are recognized in certain production systems or bird types but not others. In some cases, controlling the disease involves the use of vaccine. Whether vaccinating the breeders, embryos, or production birds, management of the birds, the processes and the procedures is a must if we hope to control the diseases while minimizing the effects of handling.

Handling During Vaccination and Move (*Kelli Jones, Ceva Animal Health*)

In Ovo Vaccination of Live Bacterial Vaccines (*Katie Elliott, USDA ARS Poultry Research Unit, Miss. State, MS*)

Control of Coccidiosis in Long-Lived Birds (*Alexandra Reilly, Merck Animal Health*)

Focal Ulcerative Dermatitis Syndrome (FUDS) in Broiler Breeder Hens (*Gunnar Dunnam, MSU PRDL, Pearl, MS*)

Genotypic Characterization of IBDV (*Hugo Ramirez, MSU PRDL, Pearl, MS*) ■

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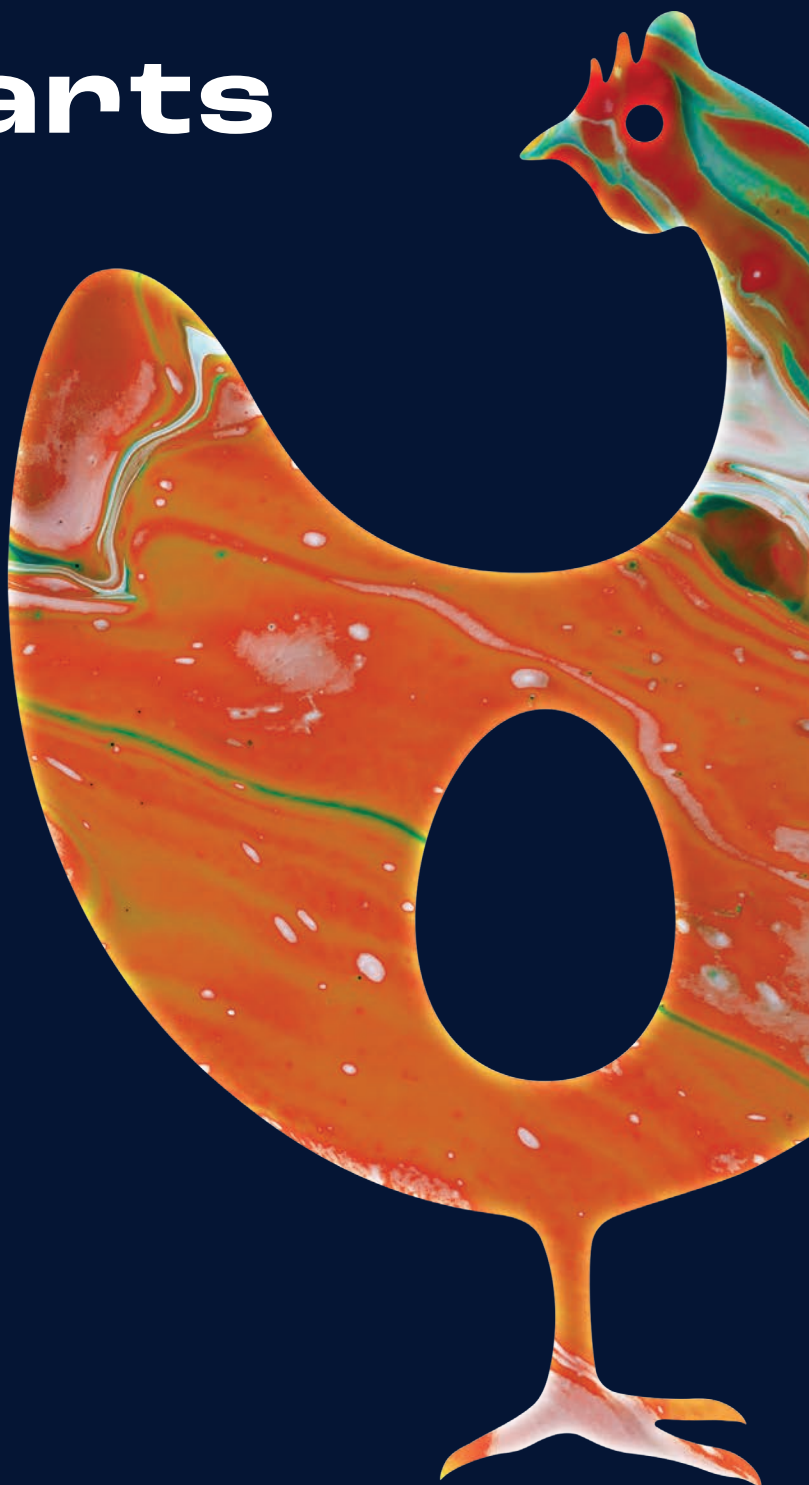
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2023 DIXIE NATIONAL CREPE SHOWDOWN

Lauren Fortenberry, Event Coordinator

On Saturday, February 11, the Mississippi Poultry Association, the Mississippi Egg Marketing Board, and Mississippi Beef Council hosted the 2nd annual Dixie National Rodeo Days Crepe Showdown. Several Mississippi 4-H youth competed to see who makes the best crepe.

First place was a sibling team from Hinds County, Luke and Clara Sanders. The sibling duo assembled a strawberry cheesecake delight crepe. Placing second from Rankin County was James Bragg with his peaches and cream crepe. Passion Terrell from Humphreys County placed third with her banana caramel chocolate swirl crepe. The Best of Beef award was presented to Claire Randle of Pontotoc County, who had a beef and mushroom crepe.



WLBT Anchor Maggie Wade-Dixon, Professional Rodeo Announcer Mack Ginn, Clara Sanders, Luke Sanders, Author Deborah Hunter, James Bragg, Past MPA Chair Dr. Ryn Laster, Passion Terrell, Claire Randle, and MPA Event Coordinator Lauren Fortenberry



First place winners, sibling team, Luke and Clara Sanders from Hinds County

The contestants placing first, second, and third were awarded cash prizes by the Mississippi Poultry Association in amounts of \$75, \$50, and \$25. The Mississippi Beef Council awarded \$25 to the Best of Beef crepe.

A total of eleven contestants from around Mississippi competed in the crepe cook off, presenting their entry to a panel of judges within an hour. Also competing were Caroline Pannel of Sunflower County, Andrew Bragg and Hunter Banes of Rankin County, and Aaron Porter, Ayden Conner, and Kwentrez Johnson from Noxubee County.

WLBT Anchor Maggie Wade-Dixon, Professional Rodeo Announcer Mack Ginn, and Mississippi Poultry Association's Event Coordinator Lauren Fortenberry served as judges for the cook-off. Serving as the Mistress of Ceremonies was the delightful Deborah Hunter, author of *My Delicious Mississippi Life*, a collection of stories and recipes.

The Mississippi Egg Marketing Board President and MPA Past Chair, Dr. Ryn Laster said, "These young people are so serious about cooking, and it is so fun to watch. They are creative, and they also learn a lot about food safety. That food safety knowledge is valuable." ■





BIG Event

April 13, 2023

NEW LOCATION
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AGRICULTURAL COALITION SUES OVER BIDEN WOTUS RULE

John E. Milner, MPA Counsel - Brunini, Grantham, Grower & Hewes, PLLC



On Jan. 19, 2023, several agriculture groups and stakeholders filed a complaint against the Biden Administration Environmental Protection Agency (EPA), challenging the clarity of the final definition of the “Waters of the US” (WOTUS). [Note that this is another version of the WOTUS definition. It has changed frequently since 1980 due to the EPA and court-imposed revisions according to a report by the National Agricultural Law Center *Waters of the United States: Timeline of Definitions*, dated April 21, 2020, updated January 7, 2023.]

The plaintiffs include the US Poultry & Egg Association, the National Cattlemen’s Beef Association, the American Farm Bureau Federation, and the National Pork Producers Council. See *AMERICAN FARM BUREAU FEDERATION, et al v. U.S. ENVIRONMENTAL PROTECTION AGENCY, et al*, Civil Action No. 3:23-cv-20 in the United States District Court for the Southern District of Texas, Galveston Division (“AFBF Case”):

Paragraph 1 of the AFBF Case complaint describes its purpose:

This is a lawsuit for declaratory judgment and injunctive relief challenging the legality of the final administrative rule titled “Revised Definition of ‘Waters of the United States’”(the “Rule”)... The Rule was signed by Administrator Regan on December 29, 2022, and by Assistant Secretary Connor on December 28, 2022, and was published in the Federal Register at 88 Fed. Reg. 3004 on January 18, 2023.

A key allegation of the alarming potential results of the new Biden EPA WOTUS Rule on business, industry, and the public is clearly stated in Paragraph 6 of the complaint. The US Environmental Protection Agency and the US Army Corps of Engineers are collectively referred to as the “Agencies.”:

The Rule imposes impossible—and unpredictable—burdens on land owners, users, and purchasers. It requires them to assess not only their own land, but also vast expanses of land beyond their own holdings, using multiple vaguely defined connections to potentially remote features, in an effort to determine if their land is regulated under the CWA (Clean Water Act). Those burdens result from the Agencies’ predicated jurisdiction over enormous swaths of the country on their misreading of a single concurring opinion in *Rapanos* (*Rapanos v. U.S.*, 547 U.S. 715 (2006)) that articulated a view rejected by the other eight justices. The consequence is a sweeping and unwieldy regulation that leaves the identification of jurisdictional waters so opaque, uncertain, and all-encompassing that Plaintiffs and their members and clients cannot determine whether and when the most basic activities undertaken on land will subject them to drastic criminal and civil penalties; and that strips the States of their primary authority and traditional powers over land and waters that Congress intended them to retain.

The National Association of State Departments of Agriculture (NASDA) issued the following statement regarding the Biden EPA WOTUS Rule:

“The EPA’s latest rule on defining ‘waters of the United States’ is a statement of federal overreach that ignores states’ authority to regulate intrastate water quality and the Clean Water Act’s statutory mandate for cooperative federalism. In turn, although we recognize the EPA’s attempt at clarifying through a roster of exemptions, its rule **ignores the voices of nearly all in American agriculture** who have long been seeking clarity on this issue, especially regarding the debate over what is and is not a navigable water,” NASDA CEO Ted McKinney said. “Farmers are committed to being responsible stewards of the land and water that they use to grow food, and the effectiveness of WOTUS should be taken with the same seriousness.”

As NASDA previously stated in multiple sets of comments and input throughout this regulatory process, the Clean Water Act establishes limits on federal jurisdiction and the role of the federal government to regulate interstate commerce, thus recognizing the role of states in regulating non-navigable waters.

Further, the release of this ruling ahead of the US Supreme Court ruling on *Sackett v. EPA* wastes tremendous federal, state, and private sector resources as the decision of SCOTUS will invariably shift water regulations across the United States yet again significantly. This is in stark contrast to the comments previously made by Administrator Regan to the US House Appropriations Subcommittee on Interior and the Environment that the EPA’s rule would “be in a position to respond and adjust to the Supreme Court ruling.”

The first hearing in the AFBF Case is scheduled for April 5. This video conference hearing will be conducted by federal Magistrate Judge Andrew M. Edison. The court will enter a docket-control order at the video conference. The parties are allowed to begin their discovery work prior to the April 5 video hearing. The Magistrate decided that proceedings in the AFBF Case would not wait for a decision by the US Supreme Court in a related case, *Sackett v. EPA* [8 F.4th 1075 (9th Cir. 2021), cert. granted Jan. 24, 2022] in which the Supreme Court has already held oral arguments. The high court’s ruling in *Sackett* is expected by June of this year.

We will keep you updated with regard to the proceedings in the AFBF Case, *Sackett*, and other related WOTUS legal and regulatory actions. If you have any questions concerning this article, please contact the author, John Milner of Brunini Law Firm, who is MPA Counsel, at jmilner@brunini.com or (601) 291-4696; or Mark Leggett, MPA executive director, at leggett@mspoultry.org or (601) 932-7560. ■



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MISSISSIPPI AGRICULTURE HITS \$9.7B OVERALL VALUE IN 2022

Ms. Bonnie A. Coblenz, MSU Extension Service

Mississippi agricultural producers shattered previous records in 2022 with an estimated \$9.7 billion in production value based on high market prices that almost kept pace with higher production costs.

However, Josh Maples, agricultural economist with the Mississippi State University Extension Service, said strong commodity prices do not reflect the sharply higher costs of production the agricultural sector faced this year.

"Farmers are generating more revenue this year, but they are also incurring higher expense," Josh Maples said.

Poultry, consistently the state's No. 1 commodity, saw the biggest increase in estimated value. MSU Extension experts calculate that poultry had a value of \$3.8 billion in Mississippi in 2022.

"Poultry's 48% increase in value of production contributed \$1.2 of the overall \$1.8 billion increase," Josh Maples said. "Chicken and egg prices have been much stronger in 2022 than in recent years, and that is the major driver in the sharp value increase."

Soybean is the next giant in Mississippi agriculture, bringing an estimated \$1.8 billion in value in 2022, up 22% from 2021.

Trent Irby, Extension soybean specialist, said the increase in value is attributed to a slight increase in acreage, along with higher market prices. Mississippi growers harvested about 2.28 million acres of soybeans this year, up about 100,000 acres from 2021.

"Input costs kept pace with market prices, so profit potential wasn't any greater this year, even with the good market prices," Irby said.

Environmental challenges to the crop ranged from a very



hot and dry summer to excessive rain in late August when crops were ready to harvest.

"This resulted in either lost yield potential from the heat and drought or lost quality of seed from those acres ready for harvest when we had the big rain events in late August," Irby said.

Third on Mississippi's list of top agricultural crops is forestry, up 15% in estimated value in 2022 to \$1.3 billion.

"Through October 2022, the number of trees harvested increased 5.3%, and delivered wood prices for all product classes increased 16% over the same period in 2021, which is why the 2022 value of production is estimated to increase," said John Auel, certification programs coordinator with the Mississippi Forestry Association and retired Extension assistant professor of forestry. ■

POULTRY PRODUCTION VALUE FALLS JUST SHORT OF \$4B

Mr. Robert Nathan Gregory, MSU Extension Service

The estimated value of production for the state's poultry in 2022 was \$3.8 billion. This 48% increase over 2021's record production value of \$2.6 billion will rewrite the record books if these totals hold when the final numbers are released by the US Department of Agriculture next April.

Josh Maples, agricultural economist for the Mississippi State University Extension Service, said stronger prices are the driver for the higher value of production.

"Broiler production is estimated to be down slightly from 2021, but broiler prices are up nearly 40%," he said. "So even though we will likely produce less when the final 2022 numbers are tallied, the stronger prices still lead to a big surge in total value of production. Egg prices have been exceptionally strong this year—more than double the average price seen in 2021."

Broilers make up nearly \$3.3 billion of the total, while eggs make up the remaining approximated \$572 million.

Higher market prices helped producers cover high prices for feed and other inputs.

"The price for corn and soy has been high this year, which was less of a factor in the first three quarters, but the feed costs

have not come down as prices for chicken have fallen," said Mark Leggett, president of the Mississippi Poultry Association.

"The levels on the wholesale market late in the year are well below costs. The markets peaked out in the spring and have been coming down since. Consumers are very stretched, and it is having an impact at restaurants as has inflation across the board."

Maples said consumer demand for chicken has been strong in 2022 overall. He said he does not expect 2022's numbers to hold in 2023, as inflation and corn and soy prices continue to concern industry professionals.

"The current USDA forecast is for broiler prices to drop about 7% in 2023, which would likely lead to a lower value of production," he said. "Egg prices are expected to decline back to more normal levels from the prices seen in 2022. All of this is wrapped up in the broader inflationary environment that is affecting the price of nearly everything. There are some signals that inflation is slowing."

2022 marks the 28th straight year poultry has topped the list of agricultural commodities in Mississippi. ■

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BENEFITS OF MPA MEMBERSHIP UPDATE

MPA Grower members receive several benefits from the Association, especially important are government relations and grower relations. The Association works to support a unified industry and to represent the industry to our government and the public.

The poultry and egg industry will continue to face significant legislative and regulatory challenges in years to come. As regulations increase from USDA, FDA, EPA, Miss. DEQ, Miss. Dept. of Revenue, and other federal, state, and local agencies, MPA communicates on behalf of the industry to legislators and regulators.

MPA has a solid track record of accomplishments helping growers reduce costs and regulatory burdens. Just a few examples are:

- Eliminating the sales tax on electricity, propane, and natural gas for plants and for farms.
- Lowering the sales tax on farm equipment and parts and labor for repairs to farm implements to 1.5%. This includes poultry house equipment and parts.
- Working with the Department of Environmental Quality to reduce paperwork for permits.
- Passing legislation preventing local governments from adding additional environmental regulations beyond what is required by the state.
- Doubling the amount farmers can borrow interest-free from the Emerging Crops Loan Program.
- Passing legislation to prevent local governments from imposing bans on food items so preventing a patchwork of local menu requirements.
- Working to maintain and increase funding for MSU divisions important to poultry.

Further Benefits

- A grower relations coordinator on staff to help growers solve problems and get answers to questions.
- Four issues of *Emerging Trends* newsletter.
- Opportunity for your child or grandchild to receive one of four \$4,000 Scholarships awarded each year.
- Four growers are members of the MPA Board of Directors, and the chairman of the Grower Advisory Committee is a member of the Executive Committee.
- Free attendance to all MPA seminars, including Management School at Mississippi State (May 16th and 17th). A two-day event where growers and service technicians learn about the latest advancements and techniques in our industry. We hope you will make the decision to become a part of the Mississippi Poultry Association and help us to maintain our position as the #1 Agricultural Commodity in the State of Mississippi.

Please contact Reed Wade at (601)932-7560 for more information. ■

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TRADE SHOW NOW PART OF MISSISSIPPI POULTRY ASSOCIATION'S MANAGEMENT SCHOOL ON MAY 16 & 17 AT MSU

The 2023 MPA Poultry Management School, set for May 16–17 in Starkville, M, changes some things up. Both days of the meeting will be held at the MSU College of Veterinary Medicine with lunch on day two moving to the MSU Poultry Science Department building. Instead of the crawfish boil this year, MPA has reserved The Rooftop Club at Dudy Noble Field for the MS-North Alabama baseball game on May 16. Transportation will be provided to and from the baseball game.

For the first time, you have the opportunity to set up a booth at Management School this year. Your table will be out for both days at the MSU College of Veterinary Medicine outside the auditorium.

You can make a room reservation at one of the following hotels. Registration information and a more detailed agenda will be coming soon:

- Hilton Garden Inn Starkville
- La Quinta Inn & Suites by Wyndham Starkville at MSU (wyndhamhotels.com)
- Hampton Inn Starkville (hilton.com)
- Comfort Suites Starkville (choicehotels.com)
- The Courtyard by Marriott Starkville MSU

If you would like to help sponsor this event for \$250 or buy a booth for \$75, call our office at 601-932-7560 and speak with Lauren Fortenberry.

Tentative MPA Poultry Management School Agenda

Tuesday, May 16, 2023

11:00 A.M. Registration - CVM Lobby | 1:00–4:20 P.M. General Session - Main Auditorium

Start Time	End Time	Topic	Speaker	Company
1:00	1:05	Welcome/Housekeeping		
1:05	2:30	AI Panel: 1st Person History/Experience, Signs to Look For	Will Dillard, Shelley Gardner, Erin Riley, Rachel Thieman, Steve McCarter, Jim Watson	Dillard & Gardner-Peco, Riley-Wayne-Sanderson, Thieman-Koch, McCarter-Tyson, Watson-MBAH
2:30	3:00	Break in Exhibit Area		
3:00	3:20	Avian influenza: Detections in Wild Birds	Kris Godwin	Mississippi Wildlife Services State Director
3:20	3:50	Fan Maintenance and Performance	Jessica Drewry	MSU Ag & Bio Engineering
3:50	4:20	Continuous Improvement	Joel Cline	Wayne-Sanderson Farms
5:15	5:45	Board Buses at your hotel to Dudy Noble Field		
6:00	-	Hospitality Time		

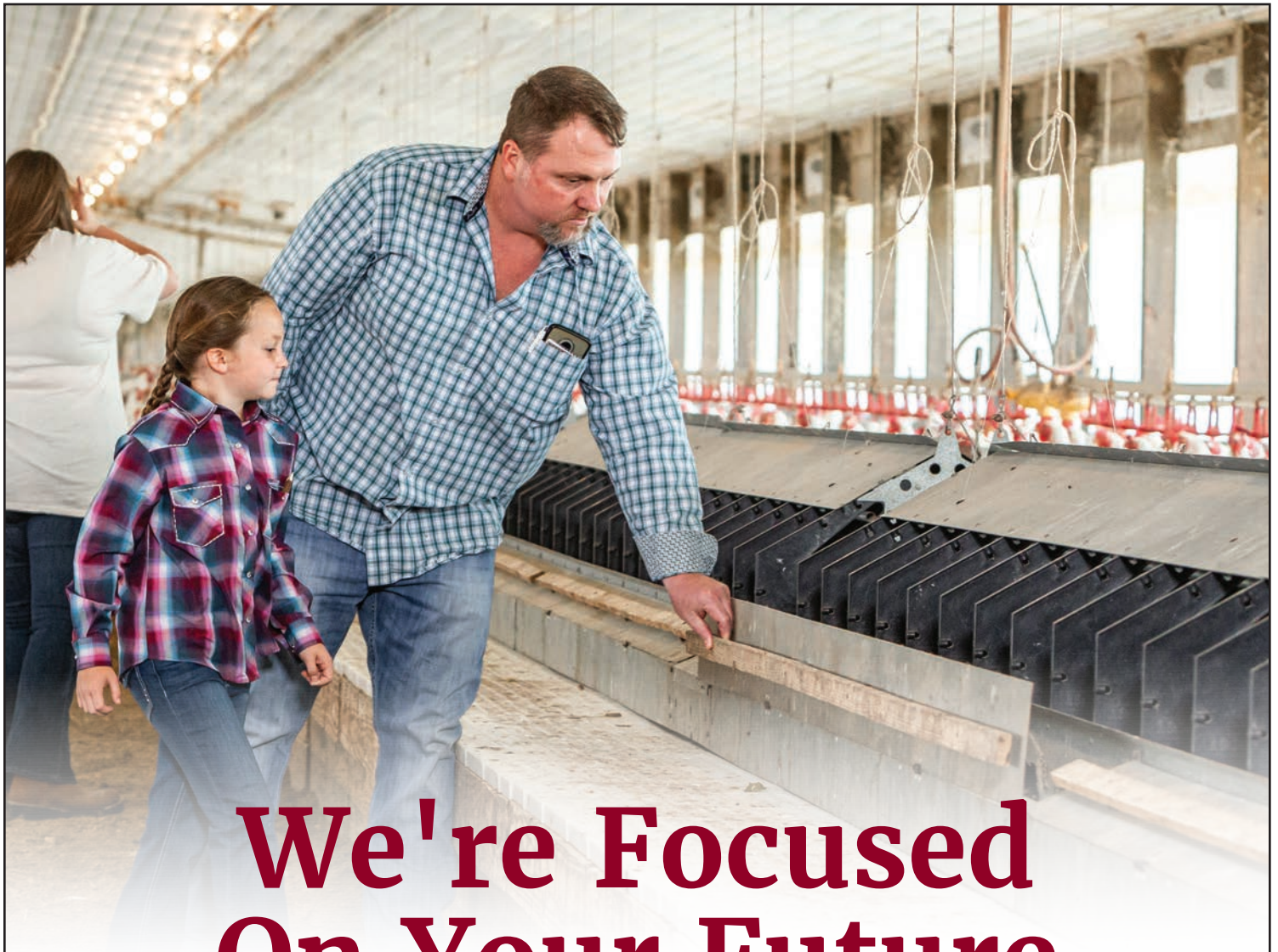
MPA Poultry Management School

Wednesday, May 17, 2023

7:30–11:00 A.M. Registration - CVM Lobby | 8:00–11:45 P.M. General Session - Main Auditorium

Assorted pastries and biscuits will be served

Start Time	End Time	Topic	Speaker	Speaker's Employer
8:00	8:15	Poultry Science Department Update	Ken Macklin	MSU Poultry Science Department Head
8:15	8:45	Seven-day Mortality Causes & Cures	Sue Ann Hubbard	Consultant, Professional Poultry, LLC
8:45	9:30	Necropsy	Tim Cummings	Zoetis
9:30	9:50	Break in Exhibit Area		
9:50	10:20	Gut Issues/Enterococcus	Travis Cigainero	Ceva
10:20	10:45	What the Lab Is Seeing/ How to Properly Send Samples	Natalie Armour	MSU CVM PRDL
10:45	11:15	Animal Rights	Will Coggin	Center for Consumer Freedom
11:15	11:45	Poultry Management	Jonathan Moon	MSU Extension
12:00	-	Lunch at Poultry Science Building		



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MPA'S BEST CHICKEN WINGS IN MISSISSIPPI CONTEST WINNER

The winner of the Mississippi Poultry Association's first Best Chicken Wings in Mississippi contest is Nectar Farms in Pearl. The winner was announced at the Dixie National Rodeo.

The MPA contest solicited votes from the Mississippi Restaurant Association's members who are Mississippi-based, independently owned restaurants. More than 3300 people voted for 89 different restaurants in the first round on the MPA Facebook page.

In the second round, the customers of the Top 10 restaurants voted for the title of Best Wings in Mississippi. Nectar Farms won by a wide margin. The mom-and-pop restaurant was opened in the Outlets of Mississippi two and a half years ago by Mark and Melissa Skaggs.

"We are incredibly honored to win best chicken wings in Mississippi. When we started our little business two and a half years ago, we never thought it would explode the way that it has," Melissa said.

The most popular wing flavor is "honey hot." Melissa said they don't offer a new sauce without first allowing customers to test it for free. Originally from New Orleans, the Skaggs also serve pizza, mini-crawfish pies, and shrimp baskets.



MPA Board Chair Bobby James of Amick Farms and Past Chair Dr. Ryn Laster of Cal-Maine presented a plaque to the Skaggs' at the Dixie National Rodeo.

The others in the top 10 listed in alphabetical order were:

- Hickory Hog, Lucedale
- M-Bar Sports Grill, Jackson
- Main Street Seafood, Columbia
- Sal & Mookie's, Jackson
- STAGgerIN, Starkville
- The Compound, Belzoni
- Uptown Soulfood Diner, Columbia
- WTF@, Starkville
- Zachary's, Columbus

MPA would like to thank everyone that voted and shared our contest. Make sure to swing by Nectar Farms in Pearl and try their famous wings!

Poultry is Mississippi's largest agricultural industry with an economic impact of \$23 billion on the state's economy. MPA represents the state's 1,700 poultry growers, the seven poultry and egg processors and allied companies that provide goods and services to the industry. Mississippi produces more than 700 million broiler chickens per year, ranking sixth in the nation. ■



Front row, left to right: Bobby James (MPA Board chair), Sara Wightman (Nectar Farms employee), Mark and Melissa Skaggs (Nectar Farms owner), and Ryn Laster (MPA past chair); Back row, left to right: Clinton Wightman (Nectar Farms employee) and JD Poole (Nectar Farms employee)

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MPA LEGISLATIVE LUNCHEON

The Mississippi Poultry Association and Egg Marketing Board hosted the Legislative Luncheon on February 1, 2023.

The event was held at Galloway Methodist Church. Guests were greeted by Mississippi Department of Agriculture and Commerce and MPA employees. Attendees were given a bag that contained logo items from MPA members and the Egg Marketing Board.

Mississippi Poultry Association Board of Directors Chair Bobby James welcomed guests and asked the blessing on the food. An omelet cooking demonstration was done by local TV chef and author Deborah Cook. Legislators and MDAC's Youth Council prepared omelets for all of the attendees. Salad and chicken tenders were also provided. Chicken was donated by Wayne-Sanderson Farms. ■



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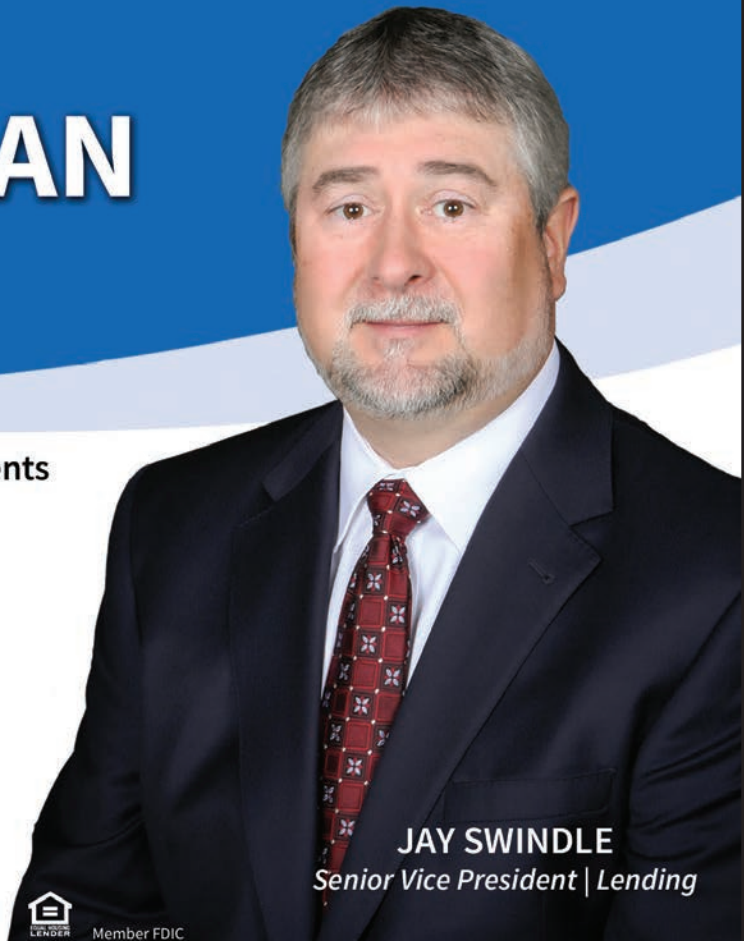
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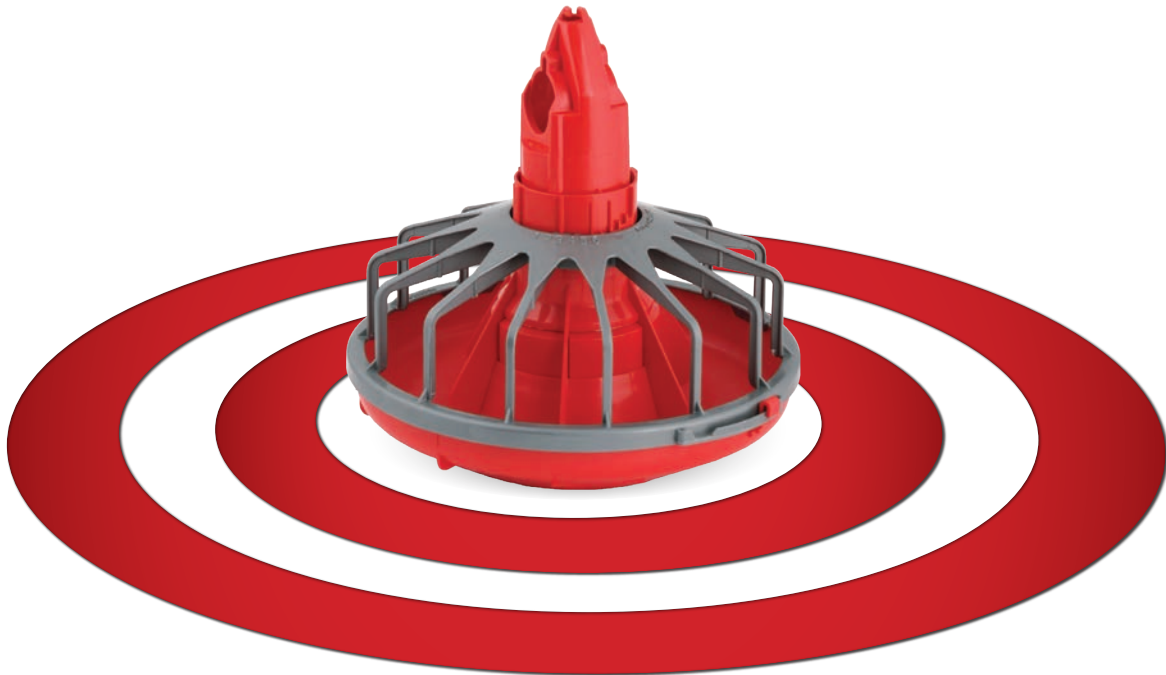


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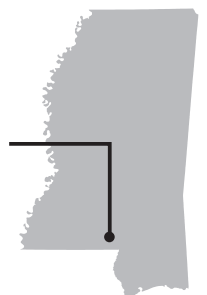


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range of research-proven innovations and science-driven solutions we offer. The & symbol represents our unwavering belief in the power of addition, that there’s always one more #ScienceHearted opportunity to be unlocked for you and the industry. Then another. Then several more after that.

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Knowing that each farm and processor has its own unique challenges, we offer customized offerings based on our research and product development. From solutions targeting a farm’s microbial makeup to food safety interventions tackling pathogens in processing, the ARM & HAMMER™ ScienceHearted Center in Waukesha, Wisconsin is the birthplace of our customized products formulated to address a wide variety of challenges.

ARM & HAMMER has evolved its offerings over the years strengthening our commitment to deliver industry-leading insights, technology, and advancements for the poultry industry based on natural, safe, and effective products. Our products help farms meet demands to raise birds without antibiotics without sacrificing productivity. ARM & HAMMER also provides Bacillus-based products that target specific pathogens found on farm.

The use of natural products extends to the food processing sector with phage-based technologies that also target specific pathogens. Our phage products along with other antimicrobial technologies allow us to provide a multi-technology, multi-hurdle approach to offer the best food safety and food quality solutions.

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threats from avian pathogenic E. coli (APEC) and Clostridium perfringens (CP). Selecting the right Bacillus strains helps combat the specific challenges that impact bird performance.

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The Arm & Hammer Animal and Food Production team includes nutritional innovators, microbial pioneers, and food safety experts who work globally to meet challenges facing customers throughout the world. The ARM & HAMMER food chain specialists unlock opportunities to feed the world by improving animal and food production systems. Most importantly, though, they’re a ScienceHearted team that’s eager to partner with you and help solve your unique challenges.

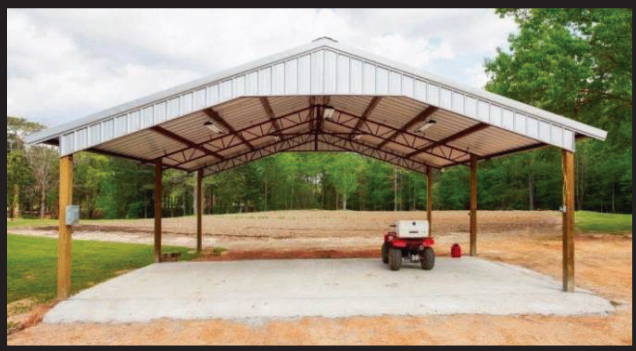
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MISSISSIPPI POULTRY FOUNDATION HAD A GREAT 2022, PREPARING FOR 2023 SUCCESS

The Mississippi Poultry Foundation, which gives out more than \$30,000 in scholarships per year, had a great 2022 and is preparing for 2023 success.

Noteworthy events in 2022 included:

- Egie Pierce won a Henry Golden Boy .410 lever action shotgun with a bid of \$5,000, the largest winning bid for a single item in the 17-year history of the Foundation's scholarship auction.
- The auction had its second-best gross auction income in the 17-year history at \$38,593. The best year was \$47,000 in 2019. The auction has really bounced back from the COVID years.
- Awarded the first Becky Beard Memorial Scholarship. Donations from members at the auction and throughout the year have ensured the scholarship can be continued for at least another 22 years.
- Awarded \$30,300 in scholarships and research and travel grants to 17 students. The total does not include sponsorship of the MSU Poultry Chain or the scholarships awarded through the Endowment at MSU.

The Foundation Board of Directors and the generosity of MPA members have combined to grow the Foundation's impact on the education of the next generation of industry leaders.

The Foundation assets have grown from \$105,712 at the end of 2013 to \$177,777 by December 31, 2022, a 68 percent increase. Over that period, the Foundation Board has added six new scholarships and increased the amounts given out in others.

New scholarships include the \$1,000 Becky Beard Memorial Scholarship and a College of Veterinary Medicine Travel Grant for poultry veterinarians. The Foundation Board increased the amount per student of the Mississippi Poultry



Steve McLaurin and Egie Pierce

Foundation Scholarship from \$1,500 to \$4,000 per student over the decade. The annual donation to the MSU Poultry Chain competition was increased from \$2,500 to \$3,000.

Over the last decade, the Foundation Board created an endowment at Mississippi State University. The board has added to the corpus until it now stands at \$50,000, allowing \$2,000 in scholarships per year. The Board plans to continue building the endowment.

The number of named scholarships and grants in which MPA members make annual donations for scholarships or travel grants has grown from one of \$1,500 to five, totaling \$9,500 per year.

These donations to the Foundation are by first year and amount: the First Financial Bank Scholarship (2010, \$1,500), the International Paper Research Grant (2014, \$5,000), BankPlus Travel Grant (2016, \$1,000, and now \$2,500), Southern Ag Travel Grant (2016, \$1,500), and the First South Farm Credit Scholarship (2020, \$2,000).

The 2023 recipients of the Mississippi Poultry Foundation Scholarships will be announced in the summer edition of *Emerging Trends*. We will also soon begin requesting donation of items for the auction to be held on the last night of the MPA Convention in September.

The Mississippi Poultry Foundation Board of Trustees are Chair Mark Hickman, CEO, Peco Foods, Inc.; Vice Chair Dolph Baker, chairman of the Board of Cal-Maine Foods Inc.; Treasurer Glen Sowell, Southern AgCredit; Lou Ayers, Alabama & Mississippi operations manager, Mar-Jac Poultry; Jimbo Harvey, Forest complex manager, Tyson Foods, Inc.; Fred West, vice president, Amick Farms; Dr. Shannon Morgan, senior director of live operations, Koch Foods; and Pic Billingsley, senior vice-president and general manager of retail sales, Wayne-Sanderson Farms, Inc. ■





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MISSISSIPPI'S CONGRESSIONAL DELEGATION'S WELL-POSITIONED WITH COMMITTEE ASSIGNMENTS

The members of Mississippi's Congressional delegation in the new 118th Congress are in the right places to benefit the state over the next two years. Mississippi is well represented on Appropriations, Agriculture, Armed Services, Homeland Security, and Transportation committees.

IN THE SENATE

Senator Roger Wicker, Mississippi's senior senator, is on the:

- **Commission on Security and Cooperation in Europe** (Co-chairman)
- **Committee on Armed Services** (Ranking member) and the following subcommittees:
 - Airland
 - Cybersecurity
 - Emerging Threats and Capabilities
 - Personnel
 - Readiness and Management Support
 - Seapower
 - Strategic Forces
- **Committee on Commerce, Science, and Transportation**
- **Committee on Environment and Public Works**
- **Committee on Rules and Administration**
- **Select Committee on Intelligence.**

Sen. Cindy Hyde-Smith, the state's junior senator, is on the

- **Committee on Agriculture, Nutrition, and Forestry**
- **Committee on Appropriations** with service on the following subcommittees:
 - Agriculture, Rural Development, Food and Drug Administration, and Related Agencies
 - Energy and Water Development
 - Homeland Security
 - Interior, Environment, and Related Agencies
 - Labor, Health and Human Services, and Education, and Related Agencies
 - Transportation, Housing and Urban Development, and Related Agencies (Ranking)
 - Energy and Natural Resources
- **Committee on Rules and Administration**
- **Joint Committee on the Library.**

IN THE HOUSE

First District Congressman Trent Kelly will serve on the

- **Committee on Agriculture**
- **Committee on Armed Services** with appointments to the subcommittees:
 - Intelligence and Special Operations
 - Seapower and Projection Forces
- **Permanent Select Committee on Intelligence** and the following subcommittees:
 - Defense Intelligence and Overhead Architecture
 - National Intelligence Enterprise

Second District Congressman Bennie Thompson serves on the **Committee on Homeland Security**, which he chaired from 2021 to 2022.

Third District Congressman Michael Guest serves on the

- **Committee on Appropriations** and the following subcommittees:
 - Energy and Water Development, and Related Agencies
 - Homeland Security
 - Military Construction, Veterans Affairs, and Related Agencies
- **Committee on Ethics**
- **Committee on Homeland Security** and on the Border Security and Enforcement subcommittee.

Fourth District Congressman Mike Ezelle is on the

- **Homeland Security Committee**, serving on the following subcommittees:
 - Cybersecurity and Infrastructure Protection
 - Oversight, Investigations, and Accountability
- **Committee on Transportation and Infrastructure** with appointments to the following subcommittees:
 - Coast Guard and Maritime Transportation
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 - Water Resources and Environment.



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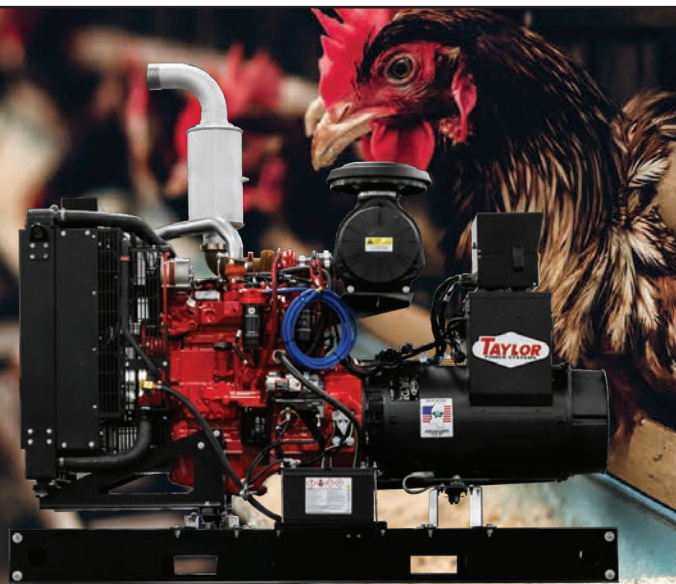
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OVERALL, 2023 ELECTIONS DON'T PORTEND MAJOR CHANGES

Other than the governor's election and the changes to legislative district lines that moved some voters into new districts, the 2023 election season seems rather subdued, at least this early in the election year.

The party primaries are August 8, and runoff elections are August 29. The general election is November 7. All county, legislative, district, and statewide positions are on the ballot this year. If any of the eight statewide candidates do not receive a majority on November 7, there will be a runoff on November 28. Voters in 2020 changed the state constitution, removing the provision for the House of Representatives to pick the winner if no candidate received a majority to instead require a runoff after the general.

The premier match-up is between Republican Gov. Tate Reeves, who is seeking a second term, and Democratic Northern District Public Service Commissioner Brandon Presley. This will be Reeve's sixth statewide election, including two for treasurer and two for lieutenant governor. Presley has been elected four times to his current post.

Reeves defeated former Attorney General Jim Hood four years ago. The 2019 election was the closest gubernatorial election in 20 years. Reeves and Hood had each run four successful statewide elections before 2019. Presley has won four times in the northern third of the state but has never run a statewide election. Gov. Reeves faces two candidates in the Republican primary, but the state Democratic party disqualified two of Presley's opponents, ensuring he did not have a primary.

The other statewide elected officials, who are all Republicans, face a Democrat opponent in November. Only Lt. Gov. Delbert Hosemann and Insurance Commissioner Mike Chaney also have an August primary as well. Hosemann faces state Sen. Chris McDaniel, R-Laurel, who twice ran unsuccessfully for US Senator.

In the district races, Presley's seat on the Public Service Commission will go to a Republican since no Democrats qualified. The Central District PSC is a rematch between incumbent Republican Brent Bailey and Democrat D'Keither Stamps. Southern District Commissioner Dane Maxwell faces

	Already Elected		
	House	Senate	Total
Total	55	25	80
Democrats	19	7	26
Republicans	35	18	43
Independent	1	0	1

	Decided in August		
	House	Senate	Total
Total	30	10	40
Democrats	10	3	13
Republicans	20	7	27

a primary. On the Transportation Commission, in the Northern District, John Caldwell is unopposed. In the Central District, Democratic incumbent Willie Simmons has a November race. In the Southern District, state House Transportation Committee Chairman Charles Busby, R-Pascagoula, has a November race against an independent candidate.

In the Legislature, 80 incumbents of the 174 were technically re-elected on

February 1, when no other candidates qualified. Another 40 face only August primaries. The remainder will have to wait until November to be decided.

There are several interesting results that became apparent on the February 1st qualifying deadline. Mississippi Cattlemen's Association Executive Director Andy Berry, R-Magee, was the only person to qualify for SD35, and Beth Waldo, R-Pontotoc, was the lone candidate for HD15.

There are 23 legislators who are retiring or running for other offices (18 House, five Senate). The open seats include two House seats and one Senate seat that moved because of redistricting. One House seat moved from northeast Mississippi to DeSoto County, and another moved from Tallahatchie County to the Gulf Coast. The Gulf Coast seat will be a pick up for Republicans. The Senate seat moved from southwest Mississippi to Rankin County.

Among MPA members in the Legislature, Rep. Michael Ted Evans, Ind.-Preston, a Koch grower, is not seeking re-election and is instead running for sheriff of Kemper County. Reps. Vince Mangold, R-Brookhaven, a Wayne-Sanderson grower, and Price Wallace, R-Mendenhall, a Koch grower, are unopposed. In the new Rankin County Senate district, MPA member Brian Rhodes, a Koch grower, is running in a race that will be decided in the Republican primary.

Among legislators, 23 are retiring or seeking other offices. This year, the House has 18 of its 122 members who will not be running for re-election to their current seat. There are five in the 52-member Senate. In 2015 and 2019, there were 16 House members who retired each year. In the Senate, there were 12 in 2019 and 5 in 2015 not seeking re-election. ■

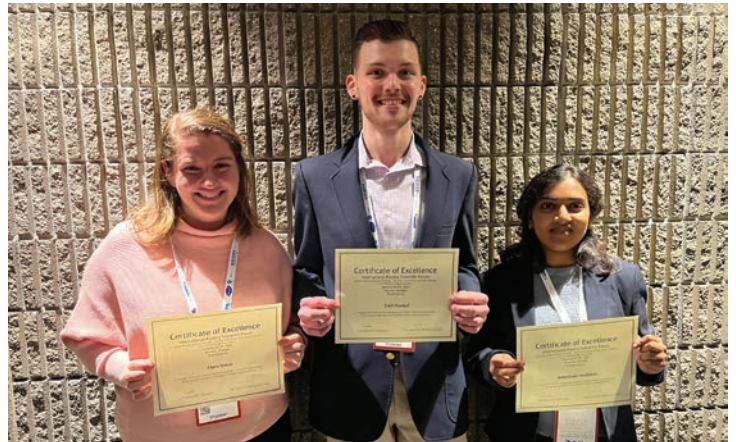
MSU POULTRY SCIENCE STUDENTS WIN SOUTHERN AG CREDIT TRAVEL GRANT

Mississippi State University poultry science graduate and undergraduate students working on research to benefit the poultry industry won the 2023 Southern Ag Credit Travel Grant given through the Mississippi Poultry Foundation.

This is the seventh year Southern Ag Credit has funded the scholarship. The \$1,500 scholarship is a travel grant that covers costs of students presenting their research results at the International Poultry Scientific Forum (IPSF) held in January just ahead of the International Production and Processing Exposition in Atlanta. This travel grant helped cover the costs for 12 grad students to attend the IPSF.

"Southern Ag Credit is pleased to play a role in allowing Mississippi State University students to attend the International Poultry Scientific Forum to present their research that will further the growth of the poultry industry. Southern Ag Credit is committed to investing in future generations that will continue to ensure a strong poultry industry," said Brent Barry, regional vice president of Southern Ag Credit.

Graduate and undergraduate students present and compete for awards of excellence at the IPSF. Sessions for talks and posters include Metabolism & Nutrition, Physiology, Environment & Management, Processing & Products, Pathology, and SCAD. For 2023, over 365 abstracts were



submitted and accepted. Attendance is generally around 1200–1400, with many international speakers and attendees.

With the use of the Southern AgCredit Travel Grant, three MSU students won certificates of excellence for their research presentations. These students are (from left) Charis Waters (Tennessee resident) from Dr. Pratima Adhikari's lab, Caleb Marshall (Mississippi resident) from Dr. Kelley Wamsley's lab, and Sethulakshmi Sasidharan (India resident) from Dr. David Peebles' lab. ■

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MSU POULTRY SCIENCE DEPARTMENT WELCOMES NEW HEAD

Margaret Henderson, Mississippi State University



Ken Macklin
(Photo by Grace Cockrell)

Illinois native Ken Macklin has joined the department after serving as a research professor and extension specialist at Auburn University. He has over 25 years of experience researching diseases that affect poultry, with special expertise in genetics, immunology and bacteriology. Macklin is a member of the Alabama Poultry and Egg Association, Southern Poultry Science Society, and Poultry Science Association; a board member of the Southern

Conference on Avian Diseases; and until his move to MSU, served as treasurer for the AU chapter of Sigma Xi, a non-profit honor society for scientists and engineers.

"I am most excited about coming to MSU and working with all the great faculty, staff and students in the department and university," Macklin said. "I know that together we will be able to accomplish great things."

While settling into his new role, Macklin is already thinking about future goals and opportunities for the department.

"At this moment, I want the department to reach its goal of building a feed mill. Additionally, I would like to increase our visibility on the state and national levels for our academic and research programs and our work with industry stakeholders," he said.

Macklin's current research involves determining the effect of feed additives on common foodborne bacteria and pathogens in poultry. He also is exploring management practices that will reduce both poultry and food pathogens in poultry houses, since reducing these pathogens will improve bird health and performance and reduce the incidence of the pathogens entering the human food chain.

"I am confident in Dr. Macklin's leadership and ability to lead the Department of Poultry Science," said Scott Willard, dean of MSU's College of Agriculture and Life Sciences and director of the Mississippi Agricultural and Forestry

Experiment Station. "His research will contribute to our state's largest agricultural commodity, ensuring food quality and safety for the poultry industry while also training the next generation of poultry leaders."

At Auburn, Macklin had a 50% Extension appointment, and his programs were aimed at educating both the commercial poultry industry and small flock producers in the areas of biosecurity, poultry health, food safety and environmental issues.

"We are excited to have Dr. Macklin join our Extension team to deliver research-based education to the poultry industry and to the many backyard growers that depend on best practices developed by MSU Extension to help them produce successful flocks," said Steve Martin, interim director of the MSU Extension Service. "Dr. Macklin understands the land-grant mission of teaching, research and service, and his previous Extension experience will be an asset to the state and the industry."

Macklin received his Ph.D. in poultry science from Auburn University in 2003 and his master's and bachelor's degrees in biology from Northern Illinois University in 1995 and 1992, respectively.

For more on MSU's poultry science department, visit www.poultry.msstate.edu. ■



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MSU POULTRY SCIENCE DISTINGUISHED FELLOW OF THE YEAR: TYSON'S DR. KARYN CHRISTENSEN



Tyson veterinarian Dr. Karen Christensen was named the 2023 Distinguished Fellow for the Mississippi State University Department of Poultry Science.

The award is announced each March at an MSU College of Agriculture and Life Sciences (CALS) banquet. Each department that makes up CALS chooses an outstanding alumnus.

Dr. Christensen, a native of Washington state, is Tyson's senior director of Animal Welfare. She lives in Huntington, AR and manages Tyson's Poultry Welfare Team and the Broiler Welfare Research Farm.

She graduated from MSU with her doctorate in Poultry Science. She credits her time at MSU for opening doors in the industry. She said Dr. Yvonne Vizzier Thaxton and the late Dr. Paul Thaxton were supportive in achieving her goals.

Previous Poultry Science Distinguished Fellows are Dr. Sue Ann Hubbard, Professional Poultry LLC; Dr. Ryn Laster, Cal-Maine Foods; Steve McLaurin, Peco Foods; and Sherman Miller, Cal Maine Foods. ■

AVOCADO CHICKEN SALAD

Jessi Heggan

PREPARATION

- 1) In a large bowl, combine the smashed avocado, mayonnaise, lemon juice, Dijon mustard, salt and pepper and whisk to combine.
- 2) Add the cooked chicken, green onions, walnuts and celery and mix until everything is combined.
- 3) Gently mix in the grapes. Serve immediately or store in an airtight container.

INGREDIENTS

- 1 cup Florida avocado, smashed
- 1/4 cup mayonnaise
- 3 tablespoons lemon juice
- 1 tablespoon Dijon mustard
- teaspoon sea salt
- 1/2 teaspoon black pepper
- 3 cups cooked chicken, shredded
- 1/2 cup green onions, sliced
- 1/2 cup walnuts, chopped
- 3/4 cup celery, chopped
- 3/4 cup grapes, quartered

If you're looking for a protein-packed lunch, try this Avocado Chicken Salad. Serve it on bread or atop lettuce for a satisfying low-carb meal.



Recipe and photo from farmflavor.com

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UPCOMING EVENTS:

*At all events involving growers, please
practice strict biosecurity procedures*

*The Grower Advisory Committee will meet
quarterly at the call of the Chairman.*

■ **Magnolia Beef &
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APRIL 13, 2023
Magnolia Center on the
Laurel Fairgrounds

■ **Poultry Management
School**
MAY 16-17, 2023
Mississippi State University

■ **Breeder/Hatchery
Seminar**
AUGUST 9, 2023
C.L. Neil Building at
Jones College, Ellisville

■ **MPA, Inc. Convention**
SEPTEMBER 14-17, 2023
Hilton Sandestin Golf &
Tennis Resort, Destin, FL

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