

TRENDS

A Newsletter of the Mississippi Poultry Association

MISSISSIPPI'S POULTRY INDUSTRY IS CHANGING RAPIDLY IN 2021

Mark Leggett - President, Mississippi Poultry Association

The poultry landscape in Mississippi is changing rapidly in 2021 and the Mississippi Poultry Association is changing with it.

MPA now represents all the current poultry and egg companies in the state when Koch Foods joined the association in August.

"MPA has always seen itself as the voice of all the state's poultry industry and now that Koch Foods' as a member of the association, our voice will be that much stronger," said MPA President Mark Leggett. "The industry has undergone so much change since 1937 but MPA's aim then and now is to serve our members and explain their needs to policy makers and the public."

Sanderson Farms, in August announced the pending sale of the company to Cargill and Continental Grain. Cargill raises chickens in other nations, but none in the United States. Continental Grain is the parent company of Wayne Farms which will operate the Sanderson Farms plants.

Wayne Farms announced in September they will sell their Laurel plant which could bring another poultry processor into the state and hopefully into the MPA.

All the growers under contract to an integrator that is a member of MPA are eligible to be members of the association. Several Koch growers have already joined the association. Each company also names six members to the MPA Grower Advisory Committee.

Koch Foods notes on its website that, "In the last 30 years, we've grown from a one-room operation to one of the largest vertically integrated poultry processors in the country. In 1985, Koch Foods started as a one-room chicken de-boning and cutting operation with 13 employees."

Headquartered in Park Ridge, Ill., Koch foods purchased the B.C. Rogers assets in Mississippi and has facilities in Morton, Forest and Flowood. Koch also has operations in Illinois, Alabama, Ohio, Tennessee, and Georgia.

In 1947, D.R. Sanderson opened a supply store to help local farmers get the highest quality feed, seed, and fertilizer. In 1961, Sanderson Farms, Inc., formed and the Miss Goldy trade name is adopted as the company becomes a poultry processor. Sanderson Farms now has plants in Mississippi, Louisiana, Georgia, North Carolina and Texas.

Wayne Farms, based in Oakwood, Ga., has been operating in Mississippi since 1965. Wayne Farms has plants in Alabama, Arkansas, Georgia and North Carolina. ■

WHAT'S INSIDE:

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MISS. POULTRY FOUNDATION TRUSTEES SET CRITERIA FOR BECKY BEARD MEMORIAL SCHOLARSHIP

At its annual meeting in August, the Mississippi Poultry Foundation Board of Trustees approved the criteria for awarding scholarships from the Becky Beard Memorial Scholarship.

Created to honor the memory of Becky Beard, the Mississippi's Poultry Association's administrative assistant who died in 2020, the criteria reflect Becky's desires to help in-state students who have a strong work history in the industry while in high school and college. The first scholarship should be awarded in February 2022.

The Foundation, created in 2005 has raised funds through the annual scholarship auction started in 2006. The auction has raised \$370,173 since it began. In addition to the auction, the following companies have

created annual scholarships or travel grants through the Foundation: First Financial Bank, International Paper, BankPlus, Southern Ag Credit, and First South Farm Credit.

In addition to scholarships, the Foundation makes an annual \$3,000 donation to the MSU Extension Service Poultry Chain in which elementary through high school students compete in raising poultry. In 2020, the Trustees created a travel grant for students at the MSU College of Veterinary Medicine's Poultry Research and Diagnostic Lab in Pearl. ■



THREE SPECIAL LEGISLATIVE ELECTIONS SET FOR NOV. 2

Mark Leggett - President, Mississippi Poultry Association

Voters in eleven counties will be voting on Nov. 2 in three open legislative seats after the retirement of two senators and one representative, all Democrats, earlier this year. In special elections candidates do not have to declare a party and the two candidates receiving the most votes advance to a runoff.

In Senate District 38 Kelvin Butler of McComb is facing pastor Gary Brumfield of McComb. They are seeking to replace Tammy Witherspoon, who was elected mayor of Magnolia in June. Butler represented the district from 2004

to 2016. Senate District 38 includes precincts in Adams, Amite, Pike, Walthall, and Wilkinson counties.

The open seat in Senate District 32 composed of parts of Kemper, Lauderdale, Noxubee and Winston counties, drew nine candidates seeking to replace Sen. Sampson Jackson of Preston, who retired in June after served from 1992 – 2021.

The candidates are W.J. Coleman, James Creer, Justin Curtis Creer of DeKalb, Minh Duong of Meridian, Rod Hickman of Macon, Kim Houston of Meridian, Stan Copeland of Preston, Bradley Sudduth of Meridian and

Keith K. Jackson, son of the retired senator. The two with the most votes will advance to a runoff on Nov. 23.

The final open seat is composed of precincts in Bolivar and Sunflower counties. Rep. Abe Hudson of Shelby retired in August. Keveon Taylor of Merigold and Robert Sanders of Cleveland will face off on November 3. Taylor lost a challenge to his residence in the district, and so Sanders is elected without opposition.

The three retirees this year brings the total number of legislators who have retired since the start of this term in January 2020 to seven. ■



EMERGING
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2021 • Issue 3

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If you want to join the Mississippi Poultry Association as a Grower Member, call the MPA office at (601) 932-7560 for more information!

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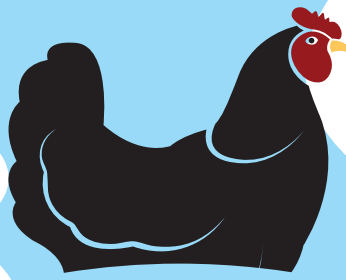
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DEADLINE TO APPLY FOR CFAP2 FUNDS IS OCTOBER 12 AT FSA OFFICES

Mark Leggett - President, Mississippi Poultry Association

Growers have until Oct. 12 to sign up for the Coronavirus Food Assistance Program 2 (CFAP 2). The CFAP 2 program provides producers with financial assistance that gives them the ability to absorb some of the increased costs and losses associated with the COVID-19 pandemic.

Under the latest rule from U.S. Department of Agriculture, growers can now choose either Jan. 1, 2018, through Dec. 27, 2018 or Jan. 1, 2019 - Dec. 27, 2019 as a comparison to their 2020 income. This latest revision to the rule allows growers who added houses or got into the business in 2019 to benefit.

Growers who filed earlier and used 2019 income in their application must refile if they want to use 2018. Those who filed their application earlier with their local FSA office and want to stick

with 2019 do not need to do anything further.

The original rule from the USDA required growers to compare their 2020 revenue vs. 2019 to show a loss in 2020. That rule did not take into account growers who got into the business during the period or those who added or lost houses during the period.

You must file your application with your local Farm Services Agency (FSA) office. You will need to bring your contract and the 1099 for 2020 and for the year being used as the base (2019 or 2018). The difference in revenue is then multiplied by a discount factor of 80 percent to determine a final payment.

Contract producers of broilers, pullets, layers, and poultry eggs – among other contract commodities

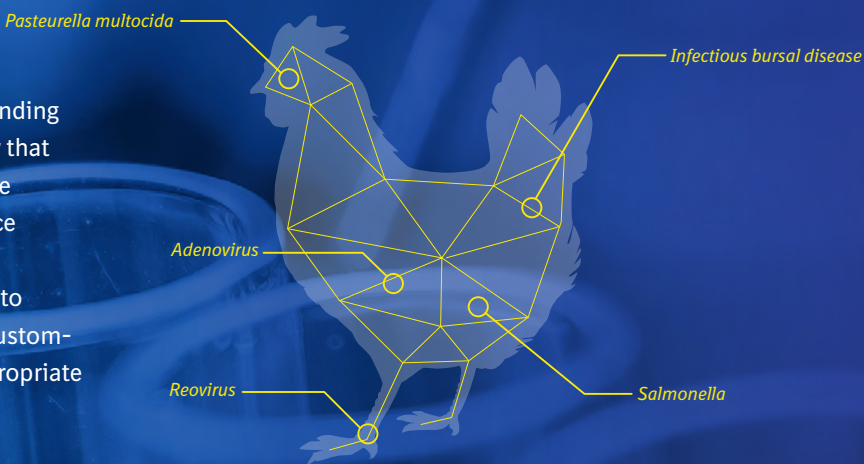
– eligible for assistance. According to USDA's press release, this update includes eligible breeding stock and eggs of all eligible poultry types produced under contract.

Payments to contract producers may be factored (reduced based on funds available) if total calculated payments exceed the \$1 billion in funding and will be made after the application period closes, according to USDA.

The National Chicken Council and MPA commend Mississippi's two U.S. Senators, Roger Wicker and Cindy Hyde-Smith and Congressmen Trent Kelly, Benny Thompson, Michael Guest, and Steven Palazzo for pushing USDA to make the program work for poultry growers. ■

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John Milner serves as counsel to the Mississippi Poultry Association and has special expertise in poultry-related environmental issues. Partner Gene Wasson also has impressive abilities in the environmental sector. Partner Trey Jones has significant Environmental Litigation experience.



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MPA, FARM BUREAU WIN APPEAL OVER MONROE COUNTY POULTRY FARM SETBACK RESTRICTIONS

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



The Mississippi Poultry Association and the Mississippi Farm Bureau Federation on Sept. 23, 2021 won their case against the Monroe County Board of Supervisors (Board) over the Board's 2017 ordinance that essentially doubled the Mississippi Commission on Environmental Quality (CEQ) regulatory setbacks for poultry farms from certain property boundaries. These CEQ regulations are administered by the staff of the MS Department of Environmental Quality (MDEQ).

MPA and Farm Bureau challenged the Board decision in the Monroe County Circuit Court. The case was first heard in 2018 by the late Judge Jim Roberts. After his death, the appeal has been dormant on the court's docket until it was set for oral argument before newly appointed Circuit Judge Chip Mills on September 23.

The Board adopted setbacks for poultry farms of 1200 feet for neighboring residences and 300 feet from the property line after residents in the Hamilton area objected to a planned broiler farm. Monroe County was the only county with setbacks greater than the CEQ regulatory limits because in 2018, MPA and Farm Bureau were successful in getting a bill passed in the Mississippi Legislature to prevent cities and counties from going beyond the regulatory limits.

The key provision of the 2018 legislative bill, House Bill 1122, specifically stated as follows:

No governing authority of any municipality or of any county shall adopt or impose any ordinance, regulation, rule or policy that prohibits or restricts agricultural operation, forestry activity or traditional farm practices on agricultural land or land that is otherwise unclassified if the land is used for an agricultural operation, forestry activity or traditional farm practices. Additionally, if the activities being conducted on the land are regulated by the Mississippi Department of Environmental Quality, the Mississippi Department of Agriculture and Commerce or the Mississippi Forestry Commission, the provisions of those agencies' statutes or the regulations promulgated by those agencies shall govern.

House Bill 1122 Section 2 (a), 2018 Session, Mississippi Legislature (as approved by Governor).

Monroe County was exempted from the 2018 law because the lawsuit over the county's ordinance was in court at the time the law took effect. MPA and Farm Bureau decided to continue to pursue the case after the law passed.

In court briefs, Monroe County took the position in the oral argument that the MPA and Farm Bureau did not have standing to sue. Sheldon Alston, with Brunini, Grantham Grower & Hewes, representing MPA and Farm Bureau, argued that (1) the Board's ordinance was arbitrary and capricious, (2) improperly pre-empted CEQ's regulatory authority and (3) was also improper because it was an illegal "spot zoning" and therefore invalid since Monroe County has no county-wide zoning plan.

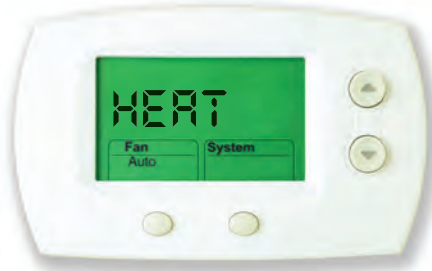
After the oral arguments by the lawyers, Judge Mills decided:

1. MPA and Farm Bureau did have standing to appeal the board's decision;
2. The Board members who held a public hearing and conducted research in 2017 were not arbitrary and capricious in the adoption of the ordinance;
3. The Supervisors did not pre-empt CEQ's authority by adopting greater setbacks, but finally,
4. The ordinance was a land use restriction and because Monroe County does not have a county-wide zoning plan, the ordinance is void and unenforceable.

The decision brings Monroe County in line with the other 81 counties and 300 municipalities which are prohibited by the 2018 legislation from developing their own environmental regulations on agriculture in place the CEQ regulations implemented by MDEQ staff. The ruling is a significant victory for the poultry industry since it confirms that only the CEQ can promulgate environmental restrictions and requirements for poultry farms or other facilities.

If you have any questions concerning this article, feel free to contact John Milner, MPA Counsel, at jmilner@brunini.com or (601) 960-6842. ■

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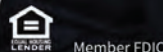


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BREEDER-HATCHERY 2021

Mark Leggett - President, Mississippi Poultry Association

The August 10-11 Breeder-Hatchery webinar wrapped up MPA's educational offerings for the year – all done virtually for the first time.

There were 76 participants in the Breeder-Hatchery webinar, but that number could be higher since some companies had groups listening in one location. For the year, there were more than 245 who participated in the Poultry Health Seminar, Management School, and the Breeder-Hatchery Seminar.

The 12 speakers for the Breeder-Hatchery webinar covered a wide range of topics.

Dr. Sue Ann Hubbard with Merck, explained coccidiosis in pullets. She said that while there have been six drugs approved for pullets, there have been no new ones since the 1960s. Protecting pullets from coccidiosis begins with “good animal husbandry 101: density, feed, water, warmth, light, ventilation and litter condition.”

Scott Jordan, with Cobb-Vantress, talked about incubation effects on chick quality, stressing that temperature, humidity, and ventilation are the foundations of chick quality. He said a large navel is a sign the temperature was too high and that red hocks are a sign humidity was not right.

Dr. Shawna Weimer with the University of Maryland spoke on animal welfare and sustainability. She defined animal welfare as how an animal copes with the conditions in which it lives. The five freedoms include freedom from (1) hunger/thirst, (2) discomfort, (3) injury or disease, (4) freedom to express normal behavior and (5) freedom from fear and distress. She reminded the listeners that the hatchery has the most concentrated bird population of any unit in poultry production.

Dr. Austin Jasek with Zinpro listed all the stressors on hens including light, vaccination, and movement

from pullet house to breeder farm. He said that as the genetics of birds have changed over time it is important to re-evaluate the minerals in their diets.

Mary Foy with Proxy-Clean pointed out the importance of water sanitation in the hatchery, especially since the removal of antibiotics began in 2014. A good filtration system is important to prevent minerals building up in water lines. Hatcheries could also benefit from a mineral analysis of their water. Standing water anywhere, including water on the roof that could be pulled into the HVAC system, is a breeding ground for bacteria. She said humidifiers and spray nozzles should be cleaned regularly.

Randall Vickery with Aviagen compared “Managing Egg Production and Fertility” to something like the process investigators go through on the television show “CSI” to find problems. Record keeping and performance objectives are important and part of that is monitoring egg



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weights daily as an indicator of nutritional deficiency. He said every-day feeding is becoming more common in the industry.

Kirk Dawkins with Jamesway Chick Master spoke about the micro-environment of the embryo. In the early phase of development, the embryo absorbs heat and dampers are closed, in the second phase dampers are opened more, as the embryos continue to develop and produce increasing amounts of heat. In the final phase, egg turning is not required after 18 days of incubation when embryos are transferred from the incubator to the hatcher and ventilation increases in response to the increasing heat load from the developing embryos.

Dr. Kristen Roza-Sutherland with Boehringer-Ingelheim said a strong immune system is a cornerstone of good poultry production from breeder health to broiler health and for optimal growth. When taking hen blood samples, she said 15-23 samples is a statistically valid number. Factors

in running tests is the cost, how quickly the results are available, the difficulty to run the tests, regulatory requirements, and the accuracy.

Rogerick Thomson with the National Resource Conservation Service said if growers are preparing to get a new nutrient management plan, they need a soil test less than two years old and a manure litter test less than one year old. He said NRCS does not transmit anything to Miss. Department of Environmental Quality, that the grower is responsible for submitting the nutrient management plan to MDEQ as part of their state permit.

Tracy Tomkins with MDEQ said the nutrient management plan is the meat of the Dry Litter Poultry Permit and she urged growers to begin getting their plans up to date before the new permit is required. She said growers need to be aware of the expiration dates of their nutrient management plans and of their permits, since they often expire at different times. Growers need to go by

their NRCS office six months prior to the expiration of the plan.

State Veterinarian Dr. Jim Watson said he has been working with other state veterinarians on a low-path AI plan. He also reminded growers that they need to have an emergency burial location approved by the NRCS and submitted to the state Board of Animal Health. He said these should be trenches and not deep pits.

Dr. Mary Beck, head of the Miss. State University Department of Poultry Science said faculty, students and staff had completed the move to their new building on campus. She said she is raising funds for a new feed mill that the department and others on campus would use. ■

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PROPOSED DEQ POULTRY PERMIT TO MAKE MINOR CHANGES TO NOTIFICATION REQUIREMENTS

Mark Leggett - President, Mississippi Poultry Association

The Mississippi Department of Environmental Quality has put the new Dry Litter Poultry Permit out for public comment. After the public comment period, the permit could take effect later this year or in early 2022.

The current permit expired in January 2019, but growers were still covered until this new permit goes into effect. The comment period runs through October 12.

The four major changes to the permit, which lasts for five years are underlined below.

1. An applicant for a new or expanding facility must send a notification, using Appendix B of the Dry Litter Poultry Forms Package, to contiguous landowners of the proposed facility via certified-return receipt requested (CRRR) mail. The applicant must submit copies of the signed CRRR receipts which the applicant received or copies of the certificate of mailings, a copy of the land tax records map obtained from the tax assessor office that identifies all contiguous landowners, and a completed copy of the notification form with the applicant's DLPNOI (Dry Litter Poultry Notice of Intent).
2. If the applicant does not receive all of the signed CRRR receipts within 30 days from the contiguous landowner notification postmark date, the Permit Board may issue coverage under the General Permit without further delay.
3. For a new or expanding facility, once the required submittals are deemed administratively complete, notification of the proposed project will be placed on MDEQ's website for a minimum of 10 days. Contiguous landowners who receive such notifications must submit written comments, if any, to the Mississippi Department of Environmental Quality within 30 days after the postmark date of the notification or by the end of the MDEQ 10-day online notification period . . . , whichever is later.
4. CONTIGUOUS (PROPERTY) LANDOWNER means a landowner/property adjacent to (touching) another person's property. Land divided by public access roads is considered contiguous.

At MPA's Breeder-Hatchery Webinar on Aug. 11, Tracy Tomkins, who is Water I Branch Manager in the MDEQ Environmental Permits Division gave the following information.

The paperwork growers are required to submit to obtain coverage under the general permit are:

1. For existing facilities growers must have on file with DEQ, the Dry Litter Poultry Notice of Intent (NOI) and have a current nutrient management plan from the National Resource Conservation Service.
2. For new facilities or existing facilities adding houses growers, they are also required to send out the contiguous landowner notification in addition to the above and submit
 - a. Construction Stormwater Storm Water Pollution Prevention Plan, and
 - b. Large construction Notice of Intent if the site covers 5 or more acres, and
 - c. Wetlands documentation from the U.S. Army Corps of Engineers, if applicable.
3. For coverages with no changes, the NOI will be scanned and placed on the website 10 days before DEQ can act on it.
4. For new facilities or expanding facilities, the NOI will be scanned and placed on the website for 10 days once we deem the application complete and the site inspection has been performed.
5. Any proposed projects that receive comments will be presented to the Permit Board for approval.

The basis of the permit is the comprehensive nutrient management plan that growers get from their local Natural Resources Conservation Service office. ■

84TH ANNUAL CONVENTION SHOWED MEMBERS WERE READY TO GET “BACK TOGETHER AGAIN”

Reed Wade - Grower Relations Coordinator, Mississippi Poultry Association

With t-shirts announcing, “Back Together Again,” about 320 members of the Mississippi Poultry Association met for the association’s 84th annual convention, Sept 16-18 at the Sandestin Hilton.

The 83rd convention was cancelled last year due to COVID-19 and there were doubts during the summer about whether the 84th meeting would take place, but many members were able to meet this year.

The group heard from Dr. Ashley Peterson, the National Chicken Council’s senior vice president of scientific & regulatory affairs, who reported on regulations proposed by the Biden administration, Will Coggin, director of the Center for Consumer Freedom, speaking about activist groups working to disrupt meat production and the growing fake meat industry. State Sen. Chris Johnson, R-Hattiesburg, spoke to the Past Chairman’s breakfast about the busy session facing the Miss. Legislature in 2022 and Nath Morris, U.S. Poultry and Egg Association vice president of expo, outlined plans for the 2022 International Poultry and Processing Expo after the 2021 event was cancelled.

Due to steady rains from the remnants of Hurricane Ida during the early part of the week, the International Paper/McNeely Plastics Golf tournament was cancelled. One team of golfers sloshed through the course, though. Those who signed up for the American Packaging/Deep South Equipment Fishing tournament were able to go out into the Gulf on Friday.

The donations to put on the Convention also helps fund for the association’s work in the last part of the year. This year there were 98 donors. The MPA appreciates all those

companies that helped put on this year’s convention.

The convention, since 2006 concludes with the scholarship auction. This year’s auction raised \$36,302, the second highest amount behind 2019. In addition to bidding on more than 94 items donated by companies and individuals. The items ranged from guns to jewelry to trips, and Mississippi State University memorabilia.

For the first time, participants could make direct donations from their cell phones to the Mississippi Poultry Foundation, which netted \$4,899.

Also, for the first time, auction participants were able to make donations to the Becky Beard Memorial

Scholarship Fund. Created last year, the fund will make annual \$1,000 scholarships in honor of MPA’s long-time administrative assistant who died in May 2020. With the auction’s \$4,825 in donations this year, the Becky Beard fund now stands at \$18,725.

Bud Holcomb III who has worked as a sales representative for Cobb-Vantress for 25 years was named the Association’s Allied Industry Leader of the Year. Bud, who retired at the end of September, also won the award in 2005 when the honor was known as the Salesman of the Year. Bud has been a major supporter of the Convention throughout his career with Cobb, which has been the longest-running sponsor of the Ladies Program. ■



Saturday Reception



MPA Ladies Program



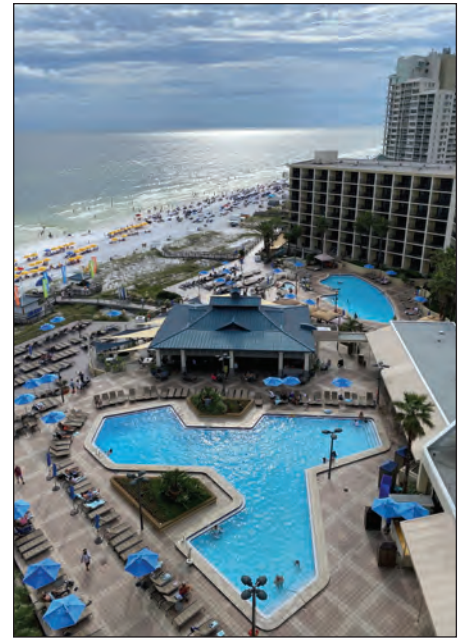
Past Chairman's Breakfast



Senator Chris Johnson speaks at the Past Chairman's Breakfast



MPA Live Auction



Sun peeking out at the Sandestin Hilton



MPA Live Auction



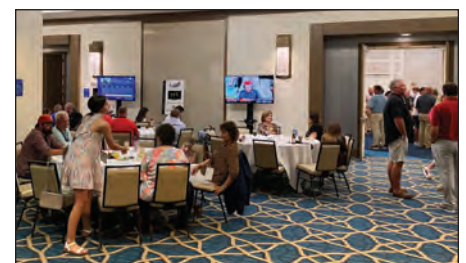
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Awards are presented once each year. Typically one award is given to a family farm from each geographic region in the United States.

Any USPOULTRY integrator or egg processor may submit one family farm for each complex in each state supporting their operations.

For companies with multiple complexes in a single state, note that while a nominee can be submitted for each complex, the Review Committee may not select two semifinalists from the same state and complex.

Any independent producer or grower who is a member of USPOULTRY may self nominate. Each affiliated state association may submit two nominees.

Previous winners must wait three years before resubmitting an application. (e.g. If a family farm wins the award in 2020, the family farm can submit an application again for the 2023 award.)

Applicants are encouraged to submit an electronic copy of all application documents by Friday, Oct. 29 to Ireyes@uspoultry.org or sent to:

Lisette Reyes
U.S. Poultry & Egg Association
1530 Cooledge Road
Tucker, GA 30084-7303

CENSUS RESULTS FOR STATE LEGISLATIVE DISTRICTS

Mark Leggett - President, Mississippi Poultry Association

The 2020 Census revealed long-term population trends continuing in Mississippi, requiring changes in the state Legislature House and Senate districts.

The long term trends are the loss of population in rural areas to suburban areas and the continuing loss of population in the western half of the state.

According to information compiled by the Business and Industry Political Education Committee comparing the 2010 and 2020 Censuses,

IN THE HOUSE'S 122 DISTRICTS:

- 68 Districts saw population declines (39 Democrat, 27 Republican, 2 Independent)
- 54 Districts saw population increases (5 Democrat, 49 Republican)
- On average, Republican districts gained +4.67% / Democrats lost -8.3%
- The population shifts range from a decline in population from HD 82 - Charles Young (D-Meridian) of 19.94% to an increase of +55.46% in HD73 Jill Ford (R-Madison).

IN THE SENATE'S 52 DISTRICTS:

- 30 Districts saw population declines (15 Democrat, 15 Republican)
- 22 Districts saw population increases (1 Democrat, 21 Republican)
- On average, Republican districts gained +3.24% / Democrats lost -7.95%

The changes range from a loss of -16.83 % in SD 28 - Sollie B. Norwood (D-Jackson) to SD 1 - Michael McLendon (R-Hernando) at +19.23% increase.

In redistricting, the Legislature must compare to the ideal district population and try to get all districts as close to 56,948 in the Senate and 24,273 in the House. In the House, there are 34 districts with more than 5 percent too many people and 47 that need to add 5 percent or more in population. In the Senate, 16 districts are more than 5 percent beyond the ideal size and 18 districts need to add more than 5 percent to their population.

Taking a longer-term look (from 1970-2020) at county population, Mississippi has 744,285 more people than

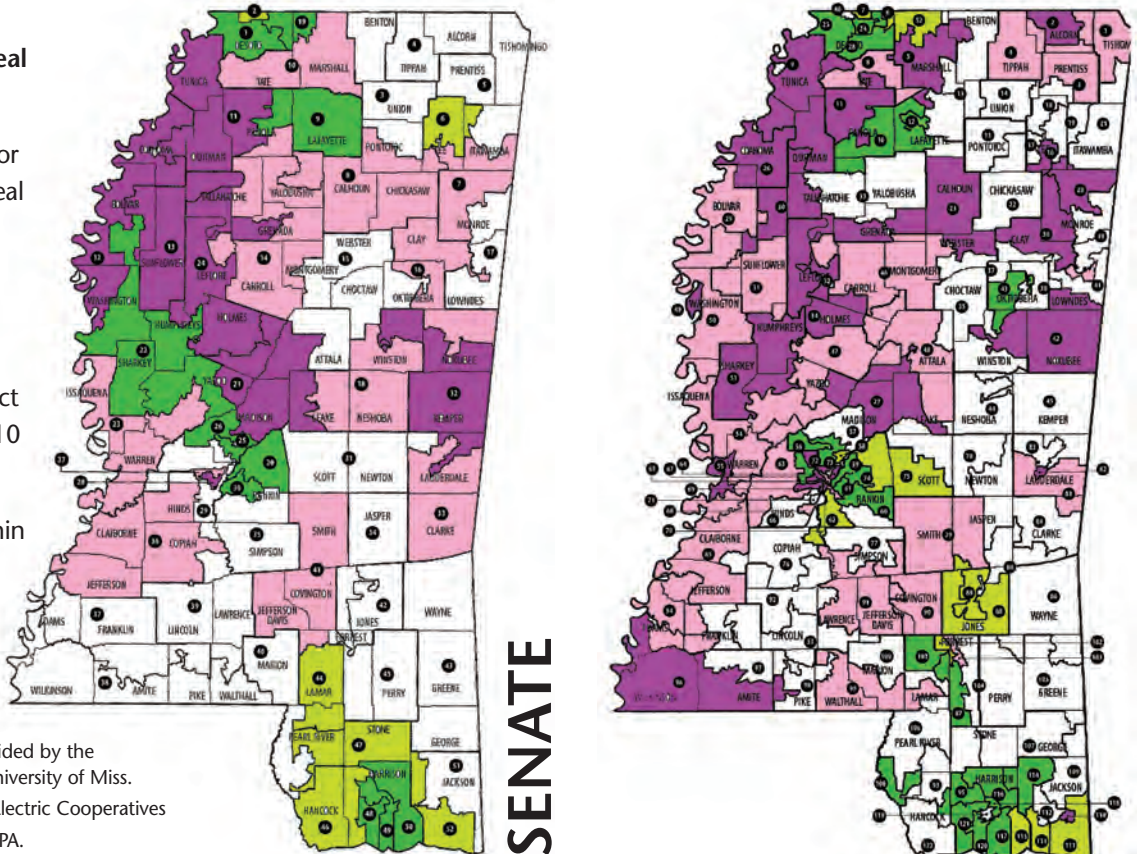
Deviation of Each District from the Ideal District Population

Purple is 10 percent or greater below the ideal district. Pink is 5-10 percent below.

Dark Green is 10 percent or greater above the ideal district and light green is 5-10 percent greater.

All the white are within 5 percent above and below ideal size.

Sources:
Data from the Census provided by the State Data Center at the University of Miss.
Blank map from the Miss. Electric Cooperatives
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in 1970 for a 33.6 growth rate for the state over the half-century. But looking at the changes by county shows where the population has grown or declined.

The following counties have more than doubled their population since 1970:

County	Growth	Percent
DeSoto	149,429	416.4
Lamar	49,013	322.3
Madison	79,408	267.0
Rankin	113,098	257.4
Hancock	28,666	164.9
Lafayette	31,632	130.8
Stone	10,232	126.3
Pearl River	28,343	102.0

The counties below have lost more than one quarter of their population since 1970:

County	Loss	Percent
Holmes	(6,120)	-26.5
Noxubee	(4,003)	-28.0
Sunflower	(11,076)	-29.9
Leflore	(13,772)	-32.7
Tallahatchie	(6,623)	-34.3
Washington	(25,659)	-36.4
Bolivar	(18,424)	-37.3
Humphreys	(6,816)	-46.7
Coahoma	(19,057)	-47.1
Issaquena	(1,399)	-51.1
Sharkey	(5,137)	-57.5
Quitman	(9,712)	-61.1.



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POSSIBLE 2022 LEGISLATIVE ISSUES

Mark Leggett - President, Mississippi Poultry Association

The Mississippi Legislature faces a lengthy agenda for the next six months, both before and during the 2022 session. These are issues that will impact the state for at least a decade to come.

The first issue to come up for consideration could be the **creation of a medical marijuana program** during a fall special session. Senate and House leaders say they have an agreement on a bill to allow, regulate and tax medical marijuana and are waiting on Gov. Tate Reeves to call a special session.

In May, the state Supreme Court invalidated the initiative that voters approved to allow medical marijuana. News reports say the legislative plan would subject medical marijuana to the 7 percent sales tax and impose an excise tax of 5 percent. The bill calls for Commissioner of Agriculture and Commerce Andy Gipson to regulate the indoor growing of medical marijuana, but in numerous letters, Gipson has said he does not want to be involved in the regulation of what is an illegal substance under state and federal law.

The May decision in which the state Supreme Court struck down the medical marijuana initiative voters approved, the court also invalidated the **initiative and referendum** provisions in the State Constitution. For voters to continue to propose constitutional amendments, the Legislature must create a new system for citizens petitions to place issues on the ballot. The Legislature in the 2022 regular session could create an alternative method. There have been discussions of allowing voters to propose laws but not constitutional amendments. There is also the possibility that the Legislature takes no action.

Another subject that could come up in a special session is **redrawing the state's four Congressional districts** to reflect population shifts revealed in the 2020 Census. Mississippi lost 6,018 people from 2010 to 2020, but the 2nd Congressional District, the state's only black majority district composed primarily of the Delta counties lost 67,000 people. Legislators will have to balance the population among the four districts, adding people to the 2nd district by taking them from the others. The new districts will be used for Congressional elections in 2022, 2024, 2026, 2028, and 2030.

During the 2022 session, a top priority for legislators will be to **redraw their 52 Senate and 122 House districts**. The major change revealed by the 2020 Census was the continued loss of population in the Delta and increases in DeSoto County south of Memphis, the Jackson metro area, and along the Gulf Coast. The counties around the state's three largest universities, Forrest, Lamar, Lafayette and Oktibbeha also saw growth. Legislative candidates will run in these districts in elections in 2023, 2027 and 2031.

The Legislature will come into the 2022 session with an abundance of cash to spend. There is the **\$1.8 billion in 2020 federal American Rescue Program act funds** to spend over three years. There will be a flood of proposals from cities and counties, state agencies and organizations for how to spend the money.

In addition to the federal funds, state government in the fiscal year that ended June 30, took in more than the estimated for the \$5.69 billion general fund budget leaving a **\$1.64 billion surplus**. During the 2022 legislative session, lawmakers will decide how to spend this surplus. MPA believes the money should be spent on long-lasting, one-time expenditures such as roads and bridges and not recurring expenses. MPA has a seat on the Emergency Road and Bridge Repair Fund (ERBRF) Advisory Board which has helped set priorities for bridge repairs.

The House twice during the 2021 session passed legislation to raise the **sales tax** from 7 percent to 9.5 percent and add 2.5 percent to other sales taxes on items taxed at lower rates, such as cars and trucks. The bill eliminated the **personal income tax** and cut the sales tax on groceries from 7 percent to 3.5 percent. In their second version, the House removed the 2.5 percent increase on agricultural replacement parts including those in a poultry house. The Senate did not act on the House bills. House Speaker Phillip Gunn has been speaking across the state promoting the House tax proposal.

Two other citizen initiatives and one court case could become issues in the 2022 session.

- There was a citizen initiative petition drive underway to allow **early voting** when the state Supreme Court struck down the initiative process. No early voting bills have passed in the Legislature, but bills will likely be introduced. On another voting issue, the state could lose a federal lawsuit over the provision that requires people convicted of certain, but not all, felonies to appeal to the Legislature to have their voting rights restored.
- The other citizen initiative pending was to expand Medicaid. The Legislature has not voted to expand Medicaid. Gov. Tate Reeves and House Speaker Philip Gunn have opposed expanding Medicaid coverage under Obamacare. The State Economist came out with a report in September saying that expanding Medicaid would bring in more to the state budget than it would cost. ■



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BROILER LITTER: ODOR AND MOISTURE CONCERNS

Tom Tabler, PhD, Extension Professor, Mississippi State University Poultry Science

Yi Liang, PhD, Associate Professor, Biological and Agricultural Engineering Department, University of Arkansas

Jonathan Moon, Poultry Operation Coordinator, Mississippi State University Poultry Science

Jessica Wells, PhD, Assistant Clinical/Extension Professor, Mississippi State University Poultry Science



Broilers in the U.S. are raised in houses with earthen floors on litter material (often reused multiple times) composed of an initial bedding material (pine shavings, rice hulls, peanut hulls, etc.) mixed with feathers, spilled feed, water, and manure. In general, litter is a loose, friable, absorbent material that provides thermal insulation, absorbs moisture, provides cushioning from the earthen floor, and allows birds to demonstrate certain natural behaviors such as dust bathing and scratching (Collett, 2012; Shepherd and Fairchild, 2010). Good-quality litter should readily give up moisture and offer a reasonably quick drying time (Bilgili et al., 2009; Grimes et al., 2002) and should have a dedicated use after removal from the broiler house (fertilizer, soil amendment, etc.).



Often, in congested locations near feeders, drinkers, and/or exhaust fans, a compacted layer with a high moisture content (≥ 40 percent), referred to as “cake” (Miles et al., 2008), forms over the litter surface. Management practices should focus on preventing/limiting cake formation, as it creates issues with wet litter, ammonia (NH₃) production, and increased bacterial load in the house. Both loose, friable litter and wet cake are potential fertilizer sources for row crops or hayfields/pastureland once removed from the broiler house.



However, the conversion of nitrogen (N) compounds in manure to NH₃ is a source of environmental concern. Furthermore, lack of homogeneity (dry litter versus cake) makes it difficult to accurately estimate NH₃ volatilization from the litter surface, even

though fundamental relationships among litter, pH, moisture, and uric acid N are well known (Gates et al., 1997). Let's look at odor and moisture concerns associated with broiler litter.

Odor

Odor is a natural part of broiler production resulting from aerobic and anaerobic microbial activity in the litter (Pillai et al., 2012). Unfortunately, odor from litter in broiler housing has, at times, led to nuisance complaints. Complaints continue as many former urban dwellers move to the country and subdivisions spring up adjacent to existing poultry farms. Odor itself is a complex mixture of odorous ingredients composed of volatile organic compounds (VOCs) and non-VOCs such as NH₃,

hydrogen sulfide, and other compounds. There are a variety of odorous compounds released during decomposition of organic matter, making litter the primary source of odor from broiler houses. However, conditions within the litter will influence the concentration and character of odor exhausted from broiler houses (Wadud et al., 2012).

Broilers deposit moisture-laden organic matter (manure) onto the litter surface and gradually mix it into the litter during their daily activities. Some odors are from nutrients in the manure, while others are directly from the manure (Dunlop et al., 2016a). Nutrients in the litter fuel microbial decomposition processes that release these odorants (Mackie et al., 1998). In addition, the birds produce substantial amounts of heat (particularly as they near market weight) and warm the litter when they sit down. Microbial growth and diversity in litter are influenced by a variety of factors, including stocking density, original bedding material (pine shavings, rice or peanut hulls, etc.), pH, moisture content, and litter temperature. In addition, frequent wetting and drying cycles might result in a more diverse microbial population compared to chronically wet conditions (Woodbury et al., 2015).

Daily bird activities such as scratching and dust bathing expose emission sources at the litter surface, which may result in more odor (Dunlop et al., 2016a). The birds themselves have a large impact on odor emissions; houses with birds have a seven-fold higher level of VOCs compared to houses without birds (Trabue et al., 2010). It is important to characterize odor emissions from facilities while birds are present because there are distinct differences in both odorant diversity and concentrations with or without birds on the farm. This is in part because birds affect airspeed and turbulence at the litter surface, which may affect evaporation and emission rates.

Larger birds better insulate the litter surface toward the middle and end of the flock, thereby restricting airflow across the litter, which may influence litter gas flux more than seasonal conditions (Miles et al., 2008). However, seasonal changes in temperature require complementary ventilation adjustments to help birds maintain the appropriate body temperature. Increasing the house temperature by 1–2°C can greatly increase NH₃ volatilization (Elliott and Collins, 1982).

Ventilation rate controls litter moisture, and winter ventilation rates are often less than in other seasons as growers reduce ventilation in an attempt to lessen heating costs (Gates et al., 1997). However, decreased winter ventilation leads to increased litter moisture and NH₃ levels that can threaten flock health and performance. Increased ventilation rates are often required to maintain acceptable NH₃ levels within houses. In addition, these rates are generally higher than rates required for moisture removal alone (Xin et al., 1996). Even though odor is a natural part of broiler production, keeping litter at or near 25 percent moisture content will lower odors and ammonia emissions.



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Moisture

Moisture is a key factor influencing litter quality in broiler houses (Tabler et al., 2012). The higher the moisture content, the longer bacteria can survive in litter. For example, in dry litter, bacteria may only survive a few hours or days, while in wet litter, survival may extend up to several weeks. In addition, wet litter is associated with a variety of concerns such as lost performance, animal welfare, flock health, food safety, and environmental impacts (Dunlop et al., 2016b). Wet litter is often related to poor drinker/ventilation management, disease outbreaks, and digestive issues (van der Hoeven-Hangoor et al., 2013). However, wet litter can sometimes be outside a grower's control, as in the case of several days of cool, damp, rainy weather.

Wet litter has been recognized as a problem for almost 100 years (Dann, 1923) and is an issue of considerable economic and pathological importance (James and Wheeler, 1949). Unfortunately, as an industry, we have made little progress in resolving wet litter issues during the past 100 years.

Managing litter moisture is a continual process throughout the grow-out, not something to address only if litter gets wet. Moisture level at the surface of broiler litter is important but rarely measured; we generally measure average moisture of the entire litter depth. If the surface is damp, manure caking occurs, slowing the rate of drying and movement of water into the litter below the caked surface (Dunlop and Stuetz, 2016).

What happens to manure after it is deposited on the litter surface depends on litter conditions, particularly moisture content, and management practices. If litter is near the optimal moisture content of 25 percent (Collett, 2012), birds tend to work manure into the litter by scratching, dust bathing, and normal daily activity. If ventilation keeps litter loose and friable, wet manure is constantly mixed with drier litter particles, aiding the drying process. However, if litter can't absorb all the moisture being applied, birds may be unable to mix fresh manure into the litter. This can happen when:

- litter has become matted or compacted,
- litter is too wet (>35–45 percent moisture content), or
- rate of manure deposition increases (disease, water quality issues, feed issues).

Caked litter, with its higher moisture content, reduces the birds' ability to incorporate fresh manure into the litter, and a wet layer forms on the litter's surface. This highlights the importance of litter management. Unless the ventilation rate exceeds the manure deposition rate, the caked layer will grow and remain wet. Wet litter is an animal welfare issue and puts the flock at risk of higher NH₃ production, increased microbial and bacterial loads, footpad dermatitis, and other disease threats. If, however, the deposition rate is less than the evaporation rate, cake will begin to dry, and over time, the entire caked layer may dry back out. Management is critical, however, and time is short to correct the problem, so you must increase ventilation quickly if caked litter begins to form.

A host of multidimensional factors contribute to wet litter, including bedding material properties, litter conditions (friability, moisture content), bird activity, deposition rates, and ventilation program (Dunlop, 2017). In addition, litter is not homogeneous throughout its depth. The formation of cake results in a multi-layer mixture in the litter, with friable litter and caked layers having substantially different physical and chemical properties that can affect odor formation and emission (Miles et al., 2011). There are essential properties that

all bedding materials should possess in order to avoid wet litter problems, including having good water-holding capacity and relatively quick drying times (Grimes et al., 2002). Following are key contributing factors and causes of wet litter and cake (Dunlop, 2017):

- Moisture wicking from earthen floor; leaks in walls/roof/ceiling
- Drinker spillage (normal)
- Drinker spillage (issues), such as mismanagement, pressure, height, design
- Abnormal manure excretion (disease, water quality, feed quality)
- Stocking density
- Increased water excretion (nutrition imbalance or ingredients, disease, increased water consumption, water quality, gut microbiota)
- Increased in-house relative humidity (exhaled moisture, wet litter, high ambient humidity, poor in-house temperature control)
- Season (winter is always a critical time for wet litter)
- Condensation
- Lighting program (light intensity and its effect on bird activity, photoperiod)
- Insufficient ventilation/air exchange (in-house humidity buildup)
- Farm biosecurity/cleaning practices
- Litter/bedding material type (some materials are more absorbent than others)
- Insufficient or excess litter depth (3–6 inches works best)
- Cool/warm litter and cool/warm in-house air
- Litter moisture content/water-holding capacity

Manure deposition and normal drinker spillage throughout a flock add as much as 0.08 gallon per square foot per day, with a cumulative total of over 2.45 gallons per square foot during a 56-day grow-out (Dunlop et al., 2015). For a 25,000 square-foot house, that's over 60,000 gallons of water. This quantity of water tends to be manageable with today's housing designs and proper ventilation management, but any additional water (from diseases, drinking water quality issues, improper diet, use of certain feed ingredients, or reduced evaporation from extended periods of high outside humidity) may result in wet litter (Dunlop, 2017).

What this means to broiler growers is that litter management has never been more important than it is today, and challenges to maintaining good litter quality have never been greater. No antibiotics ever (NAE) programs come with increased risks of coccidiosis and necrotic enteritis that can threaten litter quality; at the same time, litter quality is even more important to birds in NAE programs than to conventional birds. If drinking water bacterial, mineral, and/or pH levels are outside acceptable ranges in NAE programs, wet litter conditions can occur. Adequate ventilation rates (particularly during winter) are critical to maintaining evaporation and ensuring that litter stays loose and friable.

Don't be afraid to burn a little fuel to save litter quality. As a rule, increasing air temperature by 20°F doubles the moisture-holding capacity of air. We bring in relatively cool, dry air from outside, heat it up so that it holds more moisture than it did



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when it entered the house, and then remove this moisture-laden air with minimum ventilation. If fan run-time settings are adequate for bird age, moisture build-up should not occur because more moisture-laden air will be exhausted than pulled in. If settings are inadequate, moisture levels may continue to build in the house until litter becomes saturated and begins to slick over and form cake.

Summary

Odor and moisture are two of the biggest daily challenges that broiler growers face in their poultry houses. These challenges have implications for animal welfare, flock health, productivity, and the environment. Management goes a long way in addressing both odor and moisture issues. More specifically, your ventilation program is key to controlling odor and wet litter.

Many growers tend to reduce ventilation during winter to save fuel, but this can backfire if you aren't careful. You must spend time in the chicken house and constantly assess litter conditions. If the litter starts to slick over, you have two options: 1) increase the ventilation rate, or 2) lose control of litter quality. Losing control of litter quality will come back to haunt you.

It is important to increase the ventilation rate and save the litter quality, even at the expense of a little additional fuel. Remember that it is better (and less expensive) to prevent cake from forming than to try and dry litter out once wet cake has formed. In addition, better litter quality will result in improved flock performance, less footpad dermatitis, improved welfare conditions, and less environmental impact. ■

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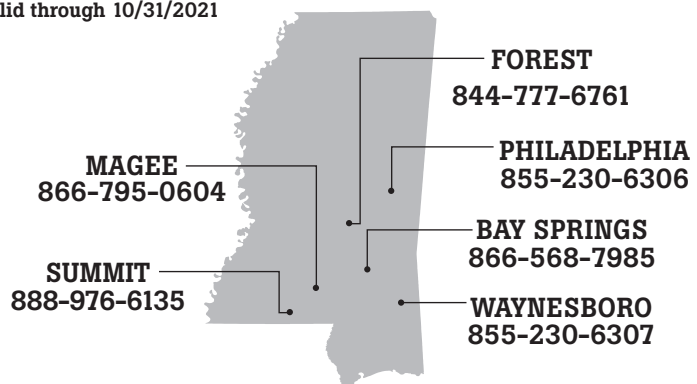
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IMPORTANCE OF RESPIRATORY VACCINE REACTIONS IN COMMERCIAL POULTRY

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



Respiratory diseases such as infectious bronchitis and Newcastle disease and infectious laryngotracheitis can induce decreased body weights and uniformity, poor feed conversion, and increased condemnations. An ultimate effect of respiratory diseases is poor productive performance that may be associated with medication costs in some companies, and consequently increased production

costs per pound of broiler meat. Live attenuated vaccines are applied to stimulate the chicken's immune system and to limit the losses due to these diseases.

What a respiratory vaccine reaction is?

Live attenuated respiratory viral vaccines that are widely used include Newcastle disease, infectious bronchitis vaccines and in some areas infectious laryngotracheitis. Following the administration, these vaccine viruses must infect target cells and replicate to stimulate the immune system. This viral replication means that although these vaccine viruses are attenuated, they still can cause some level of cell damage in the upper respiratory tract. In few words, live Newcastle disease and infectious bronchitis and infectious laryngotracheitis vaccines induce mild forms of diseases, because these vaccine viruses are “weakened” forms of potentially pathogenic viruses. The syndrome that includes the clinical manifestations observed in the poultry houses as consequence of this viral replication, and their resultant pathology, is called “vaccine reaction.”

The flock's response to vaccinations can be variable due to differences in the flock health and management practices. To develop a successful vaccine program, a proper house management that promotes a low-stress environment is essential. Respiratory viral vaccines that are administered properly to healthy birds will elicit a “normal” vaccine reaction, although this reaction may vary considerably among flocks.

The clinical presentation of a respiratory vaccine reaction in the field

A normal respiratory reaction should be detected between two to three days after the birds received the vaccine and should last for five to seven days. The clinical manifestations in the birds usually include mild respiratory manifestations such as respiratory noises (snicking), head shaking and watery eyes. Some birds may huddle together. Optimum vaccine reactions should be self-limiting. A typical pattern of the presentation of clinical manifestations among the birds during a normal vaccine reaction due to vaccination at the hatchery with boost in the field at two weeks is presented Figure 1.

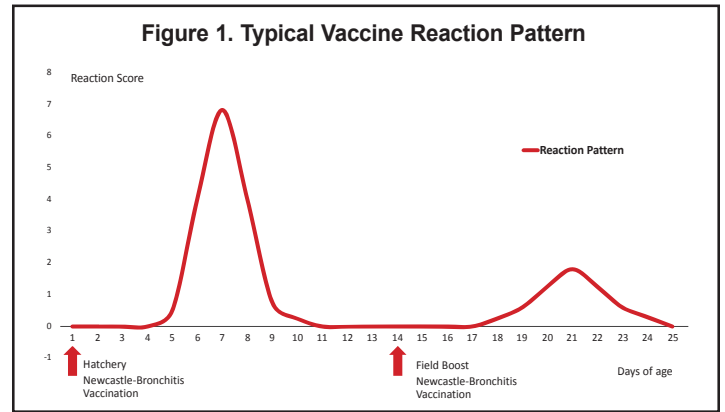


Figure 1

If the vaccination reaction appears clinically to be unusually severe or prolonged, it is often referred to as a “rolling” vaccination reaction or simply, as a severe vaccination reaction.

Is it right to observe no vaccine reaction after vaccination?

If no reaction is detected, then something went wrong with the vaccination. A vaccine reaction is a natural response of the birds to the vaccine. It is very likely that birds exhibiting no vaccine reaction did not properly receive the vaccine, and most likely little or no stimulation of the immune system will occur, therefore, these birds may be still susceptible to field disease.

The significance of severe vaccine reactions

Severe or prolonged vaccination reactions after application of infectious bronchitis or Newcastle disease vaccines are very frequent in the commercial poultry industry. A common consequence of vaccine reactions with increased severity in broilers is the development of respiratory colibacillosis, interaction of viral respiratory vaccine viruses with *Escherichia coli* is the most common respiratory disease of commercial poultry.

Impact of the house environment on the intensity of the vaccine reaction

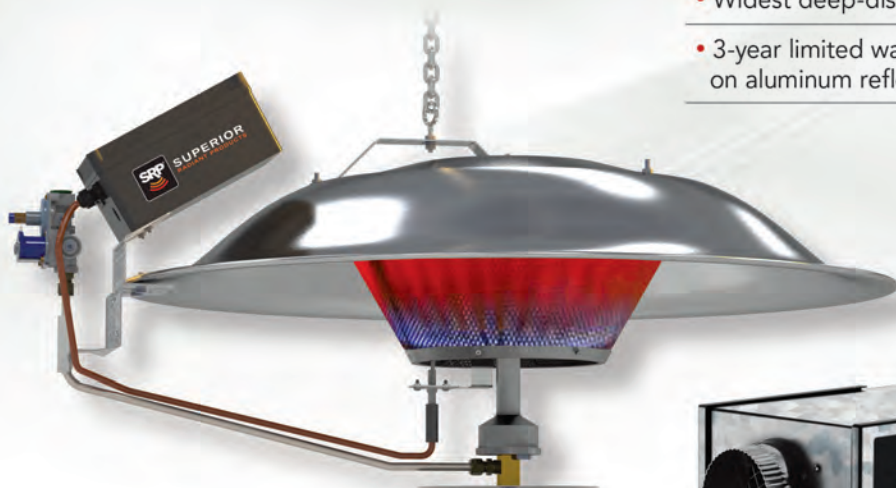
Environmental factors can influence the intensity of a vaccination reaction. Ammonia and dust can interact with respiratory pathogens to enhance the severity of disease. This interaction is similar with respiratory vaccine viruses. During winter, poultry houses are closed, and the air circulation may be suboptimal. Furthermore, the concentration of pathogenic agents is higher than in summer. Due to these factors, vaccine reactions are more severe and may last longer during the winter months.

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Improper application of vaccines can enhance the severity of vaccine reactions

Proper vaccination procedures are essential to limit the severity of vaccine reactions. Live vaccines must be applied correctly to assure that they do not cause similar health problems or production losses through interactions with other agents as their wild-type counterparts.

When respiratory vaccines are applied by aerosol or spray, the correct particle size is critical to ensure a proper immune response. If vaccination is conducted with a very fine spray, the vaccine virus will have access to deep respiratory tissues and will result in excessive viral replication in lungs and air sacs, in addition to eliciting a stronger immune response.

Another critical factor in vaccination is the coverage or uniformity of the vaccine delivery. The most important effect of poor vaccine delivery uniformity is the presence of properly vaccinated birds with birds that received a suboptimal dose and even birds that remained non vaccinated, all comingling together in the same house. It has been demonstrated that vaccinated chickens shed vaccine respiratory viruses shortly after vaccination. Live Newcastle disease, infectious bronchitis and infectious laryngotracheitis may become more virulent if they spread from vaccinated birds to non-vaccinated and highly susceptible birds, this serial-passaging of the virus in the chickens will reduce the attenuation of the vaccine viruses and will extend the amount of time that vaccine viruses circulate in the farm.

Improper application of vaccines in the drinking water can prevent all birds in a house from receiving an immunizing dose of vaccine, thus providing an opportunity for spread of the vaccine virus with a concomitant increase in virulence of the virus in similar way as the spray vaccination. The vaccine reaction may be prolonged in duration and of increased intensity.

Finally, the timing of vaccination will also have a role in the development of vaccine reactions. Infectious bronchitis spray vaccination of birds older than two weeks will increase the severity of the reaction. Chickens could be successfully vaccinated with live attenuated infectious laryngotracheitis vaccines at one day of age, but the reaction may be intense at these early ages.

Immunosuppressive factors can increase the severity of vaccine reactions

There are different agents such as viruses, mycotoxins or even environmental factors that can induce temporary or permanent dysfunction of the immune response because of damage to the immunocompetent cells. This situation is called immunosuppression and will increase the susceptibility to pathogens. It has been widely documented that immunosuppression compromises the bird's ability to limit replication of a respiratory virus vaccines, allowing a severe vaccination reaction to occur.

Interaction with other pathogens can make vaccine reactions worse

Flocks infected with *Mycoplasma gallisepticum* require special consideration when designing vaccination programs. It is

recommended to use only the vaccines that are necessary, vaccination at an earlier age, and using a less aggressive route such as vaccination by drinking water. In some cases, it may be considered antibiotic therapy to control *M. gallisepticum* during the vaccine response. Aerosol vaccination also resulted in more severe airsacculitis after challenge with *M. synoviae*.

Newly hatched chicks that have hatched in an environment heavily contaminated with *Escherichia coli* also may develop severe respiratory reactions when vaccinated at a young age with live Newcastle disease and infectious bronchitis vaccines.

How vaccine reaction can be monitored?

In 1991, Dr. Louise Dufour proposed a system to evaluate vaccine reactions in the field. A group of birds (300 to 500) in a corner of the house are examined for some minutes to detect respiratory noises, scores for respiratory noises, birds shaking heads and with watery eyes are given as per the following system:

a) Birds with respiratory noises

Score	Estimated percentage of birds with respiratory noise
0	0
1	1-25%
3	26-75%
5	76-100%

b) Birds with shaking heads is evaluated and scored as follows:

Score	Estimated percentage of birds shaking heads
0	0
1	1-25%
2	26-75%
3	76-100%

c) Birds with watery eyes are evaluated as follows:

Score	Estimated percentage of birds with watery eyes
1	Less than 1% (1 to 5 birds)
2	More than 1% (More than five birds)

Using this system, the maximum score is 10 (5+3+2). For practical purposes, a mild reaction will have a score between 1 to 3. A moderate reaction will score between 4 to 7, and a severe reaction will score between 8 to 10.

Monitoring vaccine reactions should be a part of an overall health program in broilers. The monitoring can include examination of the birds during the vaccine reaction, as well as evaluation of the house environment, and necropsy lesions of dead and fresh killed birds. ■

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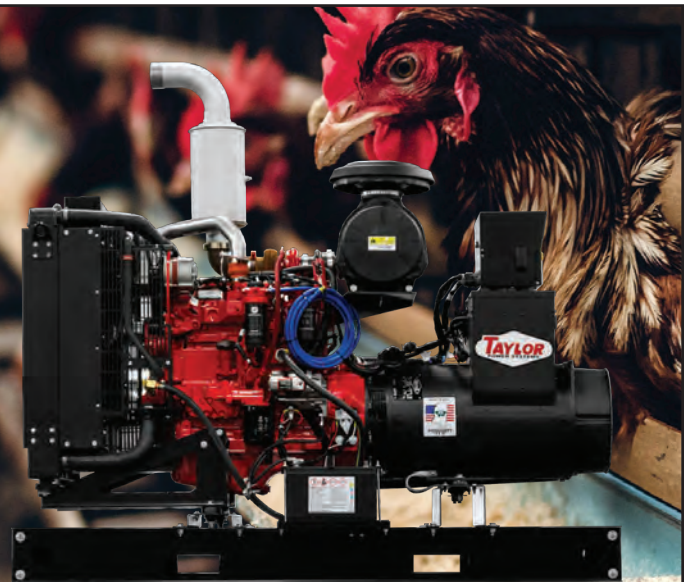
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THE POULTRY INDUSTRY HAS GROWN MORE SUSTAINABLE AND IMPROVED ANIMAL WELFARE

Everybody likes to eat but it seems like some people want to blame farmers for causing environmental problems, but this graphic from the National Chicken Council shows that poultry growing practices are much more sustainable than 60 years ago.

On September 15, The National Chicken Council (NCC) released its inaugural sustainability report. The report provides a comprehensive overview of the broiler industry's collective progress in its environmental, broiler welfare and social impact journey, as well as efforts to build a more sustainable food system.

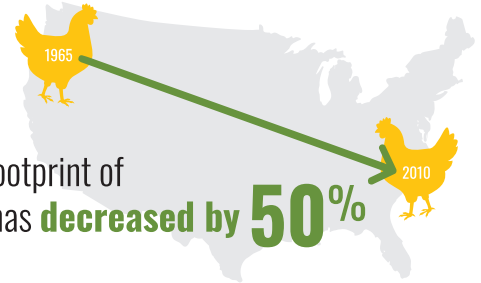
Six essential industry topics are addressed in NCC's report, including: air, land and water; broiler health and welfare; employee safety and wellbeing; food and consumer safety; community support; and food security. Data points from the report on the industry's progress, include

- Decreased broiler chicken on-farm mortality rates by 72% since 1925.
- Defined the essential elements of broiler chicken care with NCC's Welfare Guidelines.
- Donated more than \$133 million and 20 million meals to local communities at the height of the pandemic in 2020.
- Bolstered global food security with broiler exports totaling 7.4 billion pounds in 2020.
- Provided Americans and people across the world – throughout all life stages – with affordable, nutritious protein.
- Achieved an 86% decline in Occupational Safety and Health Administration recordable injuries and illnesses in the poultry processing sector over the past 25 years.

If you want more information, you can find the full report on the NCC website www.nationalchickencouncil.org/industry/sustainabilityreport/. The NCC submitted the report to the Scientific Group of the U.N. Food Systems Summit 2021, ahead of the U.N. Food Systems Summit held September 23 in New York City. ■

Chicken Production in the U.S. is More Sustainable Than Ever Before

The environmental footprint of chicken production has **decreased by 50%** since 1965.



It takes **75% fewer resources** to produce the same amount of chicken than it did in 1965!



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farm land



58% less
water



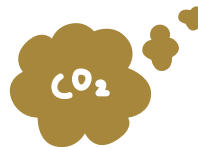
39% less
fossil fuels



- Over **95% of poultry litter** is recycled and reused to fertilize crops.



36% reduction in **greenhouse gas emissions**



Chicken farmers are continuously adopting **new technology** to reduce energy use.



Study Reference: Patnam, Ben, et al. "A retrospective analysis of the United States poultry industry: 1965 compared with 2010." Agricultural Systems, vol. 157, 2017, pp. 107-117. Note: All metrics referenced are in terms of 1000 kg of live weight broiler poultry.



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BUILDING RESILIENT INFRASTRUCTURE AND COMMUNITIES (BRIC)

Mark Leggett - President, Mississippi Poultry Association

The MPA Board of Directors voted to contribute \$5,500 to hire a consultant to assist the Mississippi's Department of Agriculture and Commerce (MDAC) in making a grant application under the Federal Emergency Management Agency's (FEMA) BRIC program.

The purpose of BRIC is to reduce the costs of disasters by strengthening buildings and other infrastructure before there are storms. The MPA Board believes strengthening poultry houses could help hold down the rising cost of insurance premiums.

The grant would be used to strengthen poultry houses against wind and lightning. The BRIC Program began accepting applications in 2020 but Mississippi was the only state that did not submit a BRIC application in 2020. On the state level, the Mississippi Emergency Management Agency makes the requests.

The BRIC website lists definitions and requirements, including:

- **Defining resilience** as the ability to prepare for anticipated hazards, adapt to changing conditions, and withstand and recover rapidly from disruption.
- **Ancillary benefits** refer to benefits other than the project's primary risk reduction objective including those related to water/air quality, habitat creation, energy efficiency, economic opportunity, reduced social vulnerability, cultural resources, public health, mental health, etc.
- How will the proposed project **reduce risk(s)** and to what level?
- Does the project **consider multiple hazards** (e.g., wind/storm surge, wildfire/mudslides) to address risks beyond the proposal's primary risk reduction objective?

- **Non-federal cost share must exceed 25 percent.**
- A community's building code adoption and enforcement activities are a factor.
- Communities must document their status as a **small, impoverished community** (a community of 3,000 or fewer individuals identified by the applicant that is economically disadvantaged, with residents having an average per capita annual income not exceeding 80 percent of the national per capita income. ■

ROTISSERIE CHICKEN FLATBREAD

Mary Alice Cain, M.S., R.D., L.D., USAPEEC's Registered Dietitian

One grocery store rotisserie chicken can supply many great meals for the week! When pulling the last of the meat, try adding to a homemade flatbread. Start with an oil base then add any veggies that are starting to turn in the fridge. Spice things up with your own combo of seasonings and herbs for a deliciously filling meal.

PREPARATION

1. Preheat oven to 400 degrees F. Remove dough and shape into a thin crust onto an oiled pan. Drizzle oil over the dough then sprinkle garlic across.
2. Par-bake flatbread until crust begins to set and bubble. Remove from oven.
3. Layer slices of tomato, peppers, and chicken across dough. Sprinkle mozzarella over then dot with fresh basil leaves.
4. Bake until crust is golden and crispy. Slice and enjoy! ■

INGREDIENTS

- 1 pre-made whole wheat pizza dough
- 3 Tbsp olive oil
- 3 cloves garlic, chopped
- 1 large tomato, sliced
- Fresh peppers of choice, diced
- Rotisserie chicken, shredded
- 1 cup shredded mozzarella
- Fresh basil leaves, roughly torn



Recipe and photo copyright Cain's Corner, USAPEEC

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UPCOMING EVENTS:

■ Election Day
NOVEMBER 2, 2021

At all events involving growers, please practice strict biosecurity procedures

Due to the uncertainty surrounding COVID-19, please continue to check www.mspoultry.org for more information on MPA events.

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

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