

# TN POULTRY NEWSLETTER

SPRING ISSUE - MARCH 2024

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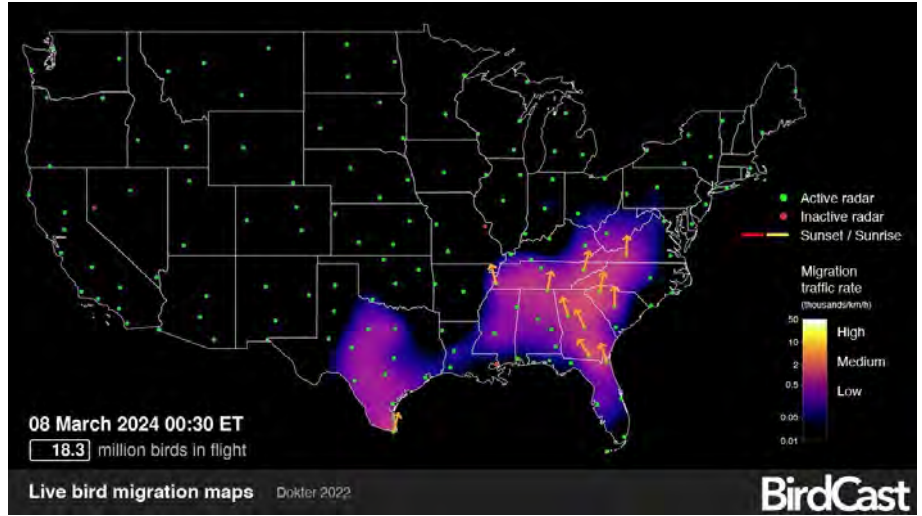


**Tennessee**  
Poultry Association

As the Spring wild bird migration northward begins, I thought you all might like to have the BirdCast link to [live bird migration maps](#). The maps update every ten minutes and provide a very accurate account of bird movement. Below is a picture of the actual map from around midnight on March 8, 2024. The arrows point in the direction the birds are flying, and the key on the right defines the migration traffic rate.

On pages 45-46 of this newsletter, you will find a submission from TN State Veterinarian Dr. Samantha Beatty and her staff that includes the NPIP biosecurity program standards. The list is a good reminder of things you already know but might want to review.

TPA is about to enter what I like to call "event season". I love our events, because I get to see so many of you in person. Last year was a record-breaking year for TPA for both meeting attendance and sponsorships, and we couldn't be more appreciative of everything you do to support us. We strive to put on the best meetings in the industry and are always open to suggestions about how we can improve. The graphic below shows all of our 2024 event dates, and, of course, we'll email you to make sure you don't forget about any of them.



Looking forward to seeing you soon!  
Tracy



Tennessee Poultry Association

# MARK YOUR CALENDARS

April 24TH Service Tech Workshop

May 21ST Scholarship Fundraiser Golf Scramble

May 22ND Scholarship Fundraiser Sporting Clays

Aug 9TH & 10TH Annual Meeting

Nov TBD Grower Meetings

FOR MORE INFORMATION VISIT OUR WEBSITE:



TN POULTRY ASSOCIATION

# HALF THE LIGHTS WATERPROOF LOW-PROFILE LONG LIFE

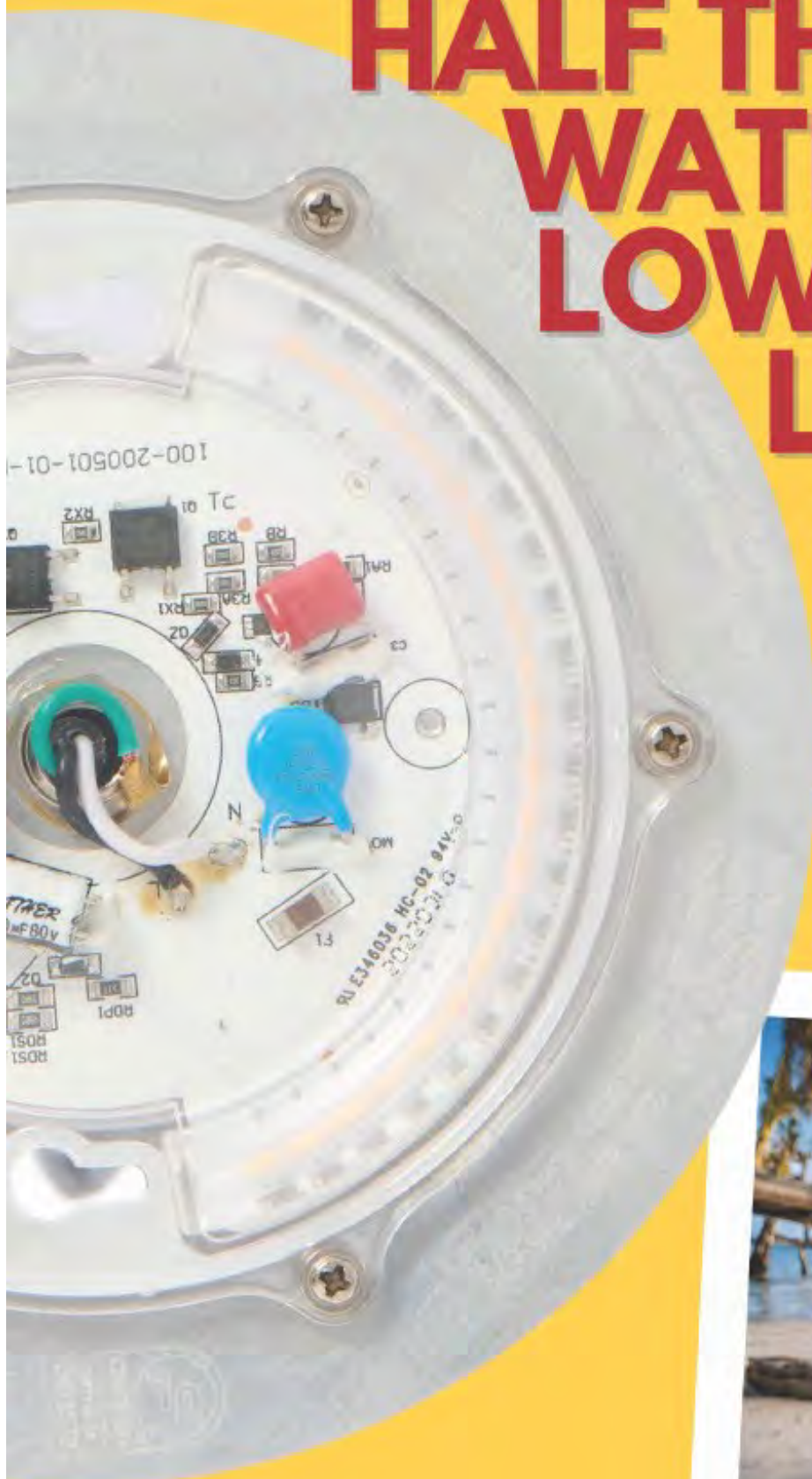
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## USPOULTRY Announces 2024 Family Farm Environmental Excellence Award Finalists and Award Recipients

February 1, 2024

U.S. Poultry & Egg Association (USPOULTRY) recognized six poultry farms that were nominated for the annual Family Farm Environmental Excellence Award at the International Poultry Expo, part of the 2024 International Production & Processing Expo. The award is given annually to recognize exemplary environmental stewardship by family farmers engaged in poultry and egg production.

"The outstanding job these family farms do in being good stewards of their land is an honor to celebrate. Our industry could not continue to perform and flourish without taking proper care of our natural resources. These six winners are to be commended for their efforts," remarked Jarod Morrison, Farbest Foods, and outgoing USPOULTRY chair.

Applicants were rated in several categories, including litter management, nutrient management planning, community involvement, wildlife enhancement techniques, innovative nutrient management techniques and participation in education or outreach programs. In selecting the national winners and finalists, applications were reviewed, and farm visits conducted by a team of environmental professionals from universities, regulatory agencies and poultry associations.

The 2023 TPA Farm Family of the Year - Swafford Farms of Dresden, TN - was recognized as State Poultry Association Nomination finalist. Keith and Jeanna Swafford were nominated by the Tennessee Poultry Association.

*Pictured below are Dale Barnett, Keith & Jeanna Swafford, and Tracy Rafferty*



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References:

1-3. Data on file at Boehringer Ingelheim.

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## USDA Announces Next Major Step in Promoting Competition in Agriculture

March 5, 2024 at [MorningAgClips.com](https://www.morningagclips.com)

The U.S. Department of Agriculture (USDA) has announced the finalization of Inclusive Competition and Market Integrity Under the Packers and Stockyards Act. The final rule will be effective 60 days following publication in the Federal Register. The final rule Inclusive Competition and Market Integrity Under the Packers and Stockyards Act (the Inclusive Competition Rule) establishes clearer, more effective standards under the Packers and Stockyards (P&S) Act for prohibited practices relating to discrimination, retaliation and deception in contracting. This will help producers and growers that have suffered from increasingly consolidated markets over the last 30 years by enhancing market integrity and ensuring fair access to economic opportunities. [Click here for full article](#)

## Industry blasts USDA's final PSA rule

March 5, 2024 at [MeatingPlace.com](https://www.meatingplace.com) by Tom Johnston

Meat industry trade groups criticized the USDA's final rule changing the Packers and Stockyards Act (PSA) to give contract farmers more leverage in business with meatpackers and integrators, arguing they introduce unnecessary regulations and costs. [Click here for full article](#)

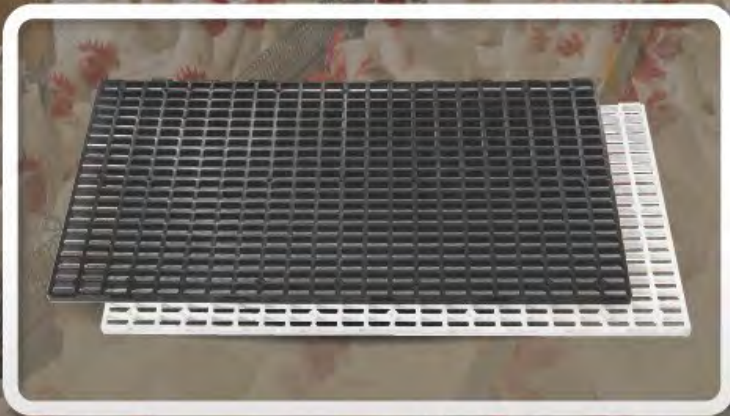
## USDA Releases 2022 Census of Agriculture Data

February 13, 2024 at [MorningAgClips.com](https://www.morningagclips.com)

The U.S. Department of Agriculture's (USDA) National agricultural Statistics Service (NASS) has announced the results of the 2022 Census of Agriculture, spanning more than 6 million data points about America's farms and ranches and the people who operate them down to the county level. The information collected directly from producers shows a continued decline in the total number of U.S. farms. However, the data also show a rise in the number of new and beginning (operating 10 or fewer years on any farm) as well as young (under the age of 35) producers.

The full Census of Agriculture report as well as publication dates for additional ag census data products can be found at [nass.usda.gov/AgCensus](https://nass.usda.gov/AgCensus). Ag census data can also be found in NASS's searchable online database, Quick Stats. [Click here for full article](#)

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## News From Around the Complexes

**Brandon Womble** has been named the new Senior Manager Live Production at **Tyson Shelbyville**. Brandon previously worked as the Live Operations Manager and Hatchery Manager for Tyson Humboldt. **Gary King** is the new broiler manager for the Shelbyville complex. He has 18 years of broiler experience - 12 years as a farm manager, 4 years as a broiler tech in GA and Humboldt, and 2 years as an animal welfare officer for Tyson Corporate.



**Rachel Breeding** with **Aviagen** in Crossville, TN was recognized at IPPE as a recipient of the 2024 Young Leaders Under 30 Award. She was a 2022 recipient of the TPA Young Leaders Under 30 award. Congratulations, Rachel!

## Allied Member News

**Boehringer Ingelheim** has announced the launch of Vaxxilive® Cocci 3, a poultry coccidiosis vaccine previously known as Hatchpak® Cocci III.

**Darling Ingredients Inc.** has been recognized by Newsweek as one of America's Most Responsible Companies of 2024, ranking #129 of 600 companies headquartered in the United States. [Click here for full article](#)

**Zoetis** has been selected as a 2024 Catalyst Award recipient for its global initiative, Awareness and Action Drives Impact, that is advancing equity for women and other under-represented groups across the company — from the frontlines to senior leadership. Zoetis is one of only two organizations receiving this global award and is the first animal health company to be recognized.

Ceva Poultry Sounds is the new podcast series from **Ceva Animal Health**. In the first podcast series, Marco-Aurélio Lopes, Ceva's global poultry marketing manager, discusses Gumboro disease with various experts, to improve the understanding of the disease, the impact it has and possible control strategies.

**D&F Equipment Sales** announces **Dawn Knox** as its new CEO/President. Knox began her career with the company as a young student, then returned after completing a degree in Management Information Systems from UAH.



## DATES TO REMEMBER

**REAP GRANT DEADLINE**  
**MARCH 31, 2024**  
[USDA.GOV](https://www.usda.gov)

**TPA LIVE PRODUCTION WORKSHOP**  
**APRIL 24, 2024**  
 FARM BUREAU EXPO CENTER  
 Lebanon, TN

**USPOULTRY POULTRY PROCESSOR WORKSHOP**  
**MAY 15, 2024**  
 EMBASSY SUITES  
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**TPA SCHOLARSHIP FUNDRAISER Golf Scramble**  
**MAY 21, 2024**  
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**TPA SCHOLARSHIP FUNDRAISER Sporting Clays**  
**MAY 22, 2024**  
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**TPA ANNUAL MEETING & SUMMER GETAWAY**  
**AUG. 9-10, 2024**  
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## USPOULTRY Releases Updated Report of Antibiotic Stewardship Within US Poultry Production

December 11, 2023 at [USPOULTRY.org](https://uspoultry.org)

Updated research, supported by the U.S. Poultry & Egg Association, was released today quantifying the U.S. poultry industry's on-farm antibiotic use. The updated report shows further improved antibiotic stewardship and commitment to disease prevention within poultry production. As part of its commitment to the transparency and sustainability of a safe food supply, the poultry industry aims to strike a balance between the responsible use of antibiotics "medically important" to human health and keeping poultry flocks healthy. [Click here for full article](#)

## WELCOME NEW ALLIED MEMBERS

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## Poultry political news in Tennessee

March 2024 submitted by Nathan H. Ridley

*You would have an easier time grabbing a bone from a junkyard dog than getting that man to let go of a grudge.” (Colson Whitehead)*

### 2024 Legislative Session

The 113th General Assembly is now in midsession form for its 2024 session. The subcommittee and committee dockets and the sponsor notebooks are full of amendments and fiscal memos. Appointments with legislators are typically hard to arrange now as harried assistants know the scheduled committee meetings and even floor sessions can easily run long and wreck an already crowded calendar. Reminds us that the best conversations in the advocacy arena happen outside of regular legislative session.

### Big Bills Remaining

Both committees on Finance, Ways & Means are conducting budget hearings for each of the state departments and agencies of state government. That process leads to the enactment of the state budget towards the end of the legislative session. In addition to the state appropriations bills which make up the state budget, big bills remaining include Governor Lee’s proposal for private school vouchers, and Governor Lee’s proposal to revise the state’s franchise tax law. Last but not least is the bill refining the state’s definition of a water of the United States. House sponsor of HB 1054, Representative Kevin Vaughan of Shelby County, has worked with stakeholders, and the bill is expected to be on the House Floor in the next two or three weeks. The Senate companion bill, SB 631 by Brent Taylor also of Shelby County, has just recently been scheduled for its first hearing before the Senate Energy, Agriculture & Natural Resources Committee.

### Be More Like Your Dog

A dog is always excited to see her human return home at the end of the day. She has forgotten that she chewed up what used to be a tasty running shoe and her human’s irritation with that bad dog behavior. Sometimes our legislative friends are very human and continue to nourish a real or perceived slight. Two bills come to mind. First is House Bill 2716 by Johnny Garrett of Sumner County that prohibits a local legislative body from reappointing a legislator who is expelled for disorderly behavior such as chewing up a sneaker. Second is HB 1652 by Gino Bulso of Williamson County that removes subject matter jurisdiction from any court of this state over “any legal action, challenging any rule, regulation, or procedure of the senate or house of representatives.” Both bills are well on their way to final passage in the House. Good poultry community members are good students of the legislative process and know that each body must pass identical language for a bill to become law. Presently, the Senate does not appear to be inclined to be a rescue dog for the House.

The regular session is expected to run through the end of April. Be respectful of their time in the long closing days of the session. They may well take a little longer to return a phone call or respond to your email.

*Nathan Ridley is an attorney with the Nashville office of Bradley Arant Boult Cummings, LLP. You may contact him by e-mail at [nridley@bradley.com](mailto:nridley@bradley.com).*

The graphic features a light blue grid background with a white arched banner at the top containing the text "TN Poultry Scholarship Program" in a blue, 3D-style font. In the center of the banner is a blue graduation cap with a yellow tassel and a rolled-up white diploma tied with a red ribbon. At the bottom of the banner, the text "Online applications are now being accepted." is written in a light blue font, flanked by two small yellow chick icons. Below the banner, the text "Deadline to apply is March 15th" is displayed in a bold, dark blue font.

Online applications are now being accepted.

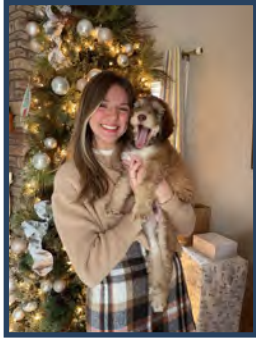
**Deadline to apply is March 15th**

## Meet Jocelynn Magan

If you've been to any TPA meetings over the past year, you've had the pleasure of seeing Jocelynn Magan's smiling face. From Beaver Dam, KY, Jocelynn is about to graduate from Western Kentucky University, where she will earn a degree in Marketing with a concentration in Social Media. It's no surprise that she is seamlessly transitioning from her role as a summer intern to a part-time Graphic Design and Social Media guru, and now, in May, our full-time Marketing Specialist.



Jocelynn's journey into the poultry industry began as a part-time intern, which marked a departure from her previous experiences in golf and fashion. But as she delved deeper into the world of poultry, she found a new passion that she never anticipated.



Family plays a significant role in Jocelynn's life. Her parents, Jessica and Jason Magan, are both graduates of WKU. Jessica holds a master's degree in education, while Jason thrives in the agriculture world as a Sales Manager for AdvanSix. Lillian, Jocelynn's younger sister, is a talented volleyball player who's set to follow in the family's footsteps and attend WKU next year. And let's not forget about Jocelynn's puppy, Topper, who is busy learning tricks and playing in puddles.

When Jocelynn is not busy crafting marketing strategies or designing eye-catching graphics, you can find her lost in the pages of a good book or indulging her creative side through painting and baking.

What excites Jocelynn most about furthering her journey with TPA is the opportunity to expand her knowledge and continue her journey in an industry she has come to love. While poultry might not have been in the cards initially, Jocelynn is certain it's exactly where she belongs.

## \$3,500 USPOULTRY Foundation Student Recruiting Grant Awarded to UTK

March 7, 2024 at [USPOULTRY.org](https://USPOULTRY.org)

The USPOULTRY Foundation awarded a \$3,500 student recruiting grant to the University of Tennessee in Knoxville. The University of Tennessee has a comprehensive poultry program to support student recruitment and career development, targeting four key groups: youth, high school students, undergraduates and graduate students. The University of Tennessee also supports the growth and development of graduate students, providing opportunities for them to connect with industry research professionals in the poultry industry and present their research findings at the International Poultry Scientific Forum at IPPE. [Click here for full article](#)



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## How Coccidiosis Control in Poultry Is Changing

December 15, 2023 at [WattAgNet.com](http://WattAgNet.com) by Elizabeth Doughman

Tracking and monitoring the effectiveness of different coccidiosis control methods in poultry can boost their effectiveness in the future. “By collecting data and actually analyzing and looking at what your performance actually turned out to be on a particular program, you’ve got solid facts behind you instead of going off a gut feel,” said Francene Van Sambeek, DVM, Elanco technical consultant. [Click here for full article](#)

## Intestinal Health in Poultry: Understanding Viral, Bacterial and Coccidiosis Challenges

January 15, 2024 at [ModernPoultry.media](http://ModernPoultry.media)

Having been linked to everything from yield gains, feed-conversion ratio and immunity to disease tolerance, mortality and animal welfare, intestinal health is foundational to the success of poultry operations today. “Understanding how to get the most benefit out of intestinal health begins with understanding the viral, bacterial and coccidial challenges that can compromise gut health and the potential outcomes when those challenges threaten your operation,” says Luis Gomez, DVM, senior director, Phibro Animal Health Corporation. [Click here for full article](#)

## Nutritional Considerations for Broilers with Coccidiosis

January 19, 2024 at [ModernPoultry.media](http://ModernPoultry.media) by Brett Lumpkins, PhD, and Greg Mathis, PhD

More is probably known about the nutrition of poultry than any other animal. Research determining requirements for chickens has been conducted for over half a century, and numerous publications and books have been written on the topic. Furthermore, the industry has nutritional-management guidelines from genetic-breeding companies that provide important nutrient values aimed at maximizing growth performance. [Click here for full article](#)

## Arkansas scientists seek vaccine for lameness-causing bacterial disease

September 14, 2023 at [ModernPoultry.media](http://ModernPoultry.media)

Help may soon be at hand for broiler flocks suffering from lameness caused by bacterial disease. [Click here for full article](#)



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## Environmental factors have more sway in broilers' microbiome than antibiotics

October 2, 2023 at [ModernPoultry.media](#)

Environmental factors appear to have a bigger impact on the microbiome found in the digestive system of commercial broiler chickens than the use of antibiotic feed additives, according to a Canadian study. [Click here for full article](#)

## Mitigating bacterial chondronecrosis with osteomyelitis in broilers

December 5, 2023 at [WattAgNet.com](#) by Elizabeth Doughman

Nutritional strategies can help prevent the development of bacterial chondronecrosis with osteomyelitis (BCO), a costly leg lameness in broilers. [Click here for full article](#)

## Understanding Post-Vaccination 'Takes' Critical for Managing Fowl Cholera

January 9, 2024 at [ModernPoultry.media](#)

Vaccination is key to managing fowl cholera in poultry. For a program to be successful, however, it's critical to train vaccination crews to monitor vaccine "takes" or major cutaneous reactions within a flock — no easy task with today's employee shortages and rotating vaccination crews.

"A hurried vaccination process or inexperienced crew members can result in a high number of poor vaccination takes and potential fowl cholera breaks," says Charlie Broussard, DVM, Merck Animal Health. "A proper vaccination should yield 95% to 100% post-vaccination takes." [Click here for full article](#)

## Scientists Explore Footpad Dermatitis and Gait Scores in Broiler Breeders

January 30, 2024 at [PoultryWorld.net](#) by Tony McDougal

Scientists from Norway have investigated footpad dermatitis and gait scores in broiler breeders, from rearing to end of life. Two of the most common animal-based indicators used to evaluate leg health in broiler chickens are footpad dermatitis (FPD) and gait scores, with retailers increasingly demanding disclosure among broilers. But these indicators are less explored in broiler breeders, prompting scientists from the Norwegian Meat and Poultry Research Centre to investigate FPD and gait scores in such stock during their entire life span. [Click here for full article](#)

## Supporting disease-challenged broiler chickens through nutrition

March 6, 2024 at [PoultryProducer.com](#) by Sophi Fairman

When broiler chickens are busy fighting the parasitic infection coccidiosis, they can't absorb nutrients efficiently or put energy toward growth. With consumer sentiment pitted against antimicrobials and other drugs, producers still have some options to ensure optimal growth during inevitable outbreaks. New research from the University of Illinois Urbana-Champaign suggests diet changes might help. [Click here for full article](#)

## Boltz: Salmonella prevention requires updated feed-processing methods

January 7, 2024 at [ModernPoultry.media](#)

Tightened-up feed-processing practices along with new hygienic feed options can help reduce salmonellosis outbreaks linked to poultry products, according to Tim Boltz, PhD, assistant professor of poultry nutrition and feed hygienics, Mississippi State University. [Click here for full article](#)

## Multi-Hurdle Approach Crucial to Controlling Salmonella in Poultry, Reports FAO/WHO

January 10, 2024 at [Food-Safety.com](#) by Food Safety Magazine Editorial Team

There is no one control measure that is sufficiently effective in reducing Salmonella in poultry; instead, a multi-hurdle approach is proven to have the greatest impact, according to a recent report from the Joint Food and Agriculture Organization of the United Nations (FAO)/World Health Organization (WHO) Expert Meetings on Microbiological Risk Assessment (JEMRA). [Click here for full article](#)

## Research Shows Vertical Transmission of Salmonella Reading in Breeders

February 15, 2024 at [USPOULTRY.org](#)

USPOULTRY and the USPOULTRY Foundation announce the completion of a funded research project by researchers at Mississippi State University that shows the vertical transmission of Salmonella Reading in breeders. The research was made possible in part by an endowing Foundation gift from Cargill. The research is part of the Association's comprehensive research program encompassing all phases of poultry and egg production and processing. A summary of the completed project can be found at the link below. [Click here for full article](#)

## Woody breast syndrome is declining, but still in need of answers

June 21, 2023 at [ModernPoultry.media](#)

The poultry sector has made progress reducing incidence of woody breasts, but it still impacts a significant portion of fillets. [Click here for full article](#)

## The Evolution of Marek's Disease: The Virus Has Become More Deadly

December 28, 2023 at [PoultryWorld.net](#) by Tony McDougal

A highly contagious poultry pathogen, which costs the global industry more than \$1 billion per year, has evolved to become more deadly, according to a team of international researchers. Using ancient DNA, experts from The Pirbright Institute have worked with a team of scientists led by Oxford and LMU Munich to trace the evolution of Marek's Disease virus. Published in the journal Science, the research, led by archaeologists and biologists, shows how viruses evolve to become more virulent, which could lead to the development of better ways to treat viral infections. [Click here for full article](#)

## Assessing competitive inhibition of pathogenic *Enterococcus cecorum*

December 5, 2023 at [WattAgNet.com](#) by Denise Heard

A new USPOULTRY study sought a treatment for pathogenic EC in broilers. [Click here for full article](#)

## UGA Pathologist: Fast-Spreading ILT Virus Growing More Prominent, Virulent in Poultry

March 1, 2024 at [ModernPoultry.media](#)

Samples tested from recent infectious laryngotracheitis (ILT) outbreaks on US poultry farms raised alarms that the current circulating virus is rapidly spreading. The samples also showed increased virulence compared to similar viruses 20 years ago when tested under experimental conditions. "What we are seeing in the lab is an indication of what we've seen before," Maricarmen Garcia, PhD, a professor at the University of Georgia who has worked extensively with the ILT, said in a webinar organized by the American Association of Avian Pathologists. "The currently circulating virus has the ability to rapidly replicate and spread, so we should expect a lot of the virus left behind in the chicken house environment and its surroundings." [Click here for full article](#)



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## WOAH: HPAI vaccination shouldn't impact trade

January 2, 2024 at [WattAgNet.com](http://WattAgNet.com) by Elizabeth Doughman

Vaccination against highly pathogenic avian influenza (HPAI) may be necessary to stop the spread of the disease and potential spillover into new species and meets all criteria for safe trade when implemented properly, the World Organization for Animal Health (WOAH) advocated in a policy brief published December 28, 2023. [Click here for full article](#)

## Senators call for trade agreement updates to accommodate bird flu vaccine

January 22, 2024 at [MeatPoultry.com](http://MeatPoultry.com) by Rachael Oatman

Senators Mike Rounds (R-SD) and John Thune (R-SD) sent a letter on Jan. 18 to Secretary of Agriculture Tom Vilsack and US Trade Representative Katherine Tai, asking them to begin taking steps to update trade agreements to allow for the potential usage of a highly pathogenic avian influenza (HPAI) vaccine. [Click here for full article](#)

## Shane: Vaccination needed in face of airborne HPAI threat

January 25, 2024 at [ModernPoultry.media](http://ModernPoultry.media)

Evidence that airborne spread of highly pathogenic avian influenza (HPAI) is possible near flocks of wild birds underlines that even extreme biosecurity won't completely protect turkeys and egg-laying flocks, according to poultry consultant Simon Shane, DVM, PhD. [Click here for full article](#)

## USDA: Trade partner opinions matter in vaccination debate

January 30, 2024 at [WattAgNet.com](http://WattAgNet.com) by Roy Graber

Under Secretary Alexis Taylor says people in some major markets have had "pretty strong reactions" when it comes to vaccinating for avian influenza. [Click here for full article](#)

## US is '18 Months Or So' Away from Finding Bird Flu Vaccine, says Ag Secretary

February 15, 2024 at [FoodMarket.com](http://FoodMarket.com) by Leah Douglas

The U.S. Department of Agriculture is "18 months or so" away from identifying a vaccine for the current strain of bird flu and is developing a process to distribute it, said Agriculture Secretary Tom Vilsack on Wednesday. [Click here for full article](#)



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## Are HPAI vaccines enough to stop the virus?

January 24, 2024 at [WattAgNet.com](https://www.wattag.net) by Elizabeth Doughman

Until a consensus is reached on HPAI vaccination in commercial poultry, biosecurity will stay a crucial component of any control program.

[Click here for full article](#)

## Confirmation of Aerogenous Shedding of AI Virus by Migratory Birds

December 31, 2023 at [Egg-News.com](https://www.egg-news.com) by Simon M. Shane

A recent publication\* from Taiwan confirmed that concentrations of migratory birds on wetlands excrete avian influenza virus that can be detected by air sampling. In the study, 357 ambient air samples were collected seasonally between October 2017 and December 2019 and were analyzed using rtPCR assay.

Strain H7 was detected in 12 percent of the air samples, H5 in 8 percent and H9 in 10 percent. The frequency of isolation was related to low temperature and the concentration of birds including common teal, spot-billed ducks, Eurasian widgeons, spoonbills and cormorants. The authors proposed that air sampling could be a predictive technique for outbreaks of avian influenza. [Click here for full article](#)

## Polar bear dies from bird flu as H5N1 spreads across globe

January 4, 2024 at [TheGuardian.com](https://www.theguardian.com) by Phoebe Weston

Current outbreak, which started in 2021, is estimated to have killed millions of wild birds and thousands of mammals globally. [Click here for full article](#)

## Can CRISPR stop the spread of avian influenza?

January 5, 2024 at [WattAgNet.com](https://www.wattag.net) by Elizabeth Doughman

Potentially game changing research revealed that altering a small section of chicken DNA improved resistance to avian influenza with no negative impacts on health or well-being. But, there are still several barriers to overcome before CRISPR can be used in commercial applications. [Click here for full article](#)

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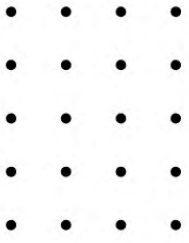
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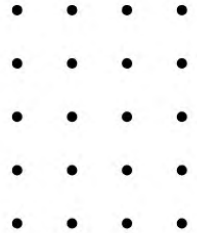
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- Jess Campbell - Summertime Ventilation
- Lunch - Pig Pen BBQ
- Scott Black - Improving Grower Communications
- Josh Payne - Litter Management

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## How to clean the waterlines in your poultry barn

December 8, 2023 at [CanadianPoultryMag.com](https://CanadianPoultryMag.com) by Mary K. Foy

We hear it all the time when it comes to getting our farms ready for a flock to be placed – clean the water lines. The assumption is that everyone just knows how to do this. Well, if you feel like you missed the memo on how to clean water lines, or if you just want a refresher course, we have you covered here. [Click here for full article](#)

## Rotary Drum Composting of Poultry Mortalities

December 11, 2023 at [PoultryProducer.com](https://PoultryProducer.com) by Sophi Fairman

In general, composting poultry can be described as an all-natural, environmentally friendly method of mortality management, which minimizes water and air pollution by retaining nutrients, pathogens, and odors. Given the right conditions, microorganisms break down organic material (poultry mortalities, in this case) and carbon into a useful and valuable finished product. Composting also can enhance disease prevention efforts and biosecurity practices by operating in an on-site, self-contained environment. [Click here for full article](#)

## Downtime Baiting Strategies for Rodent Control

December 12, 2023 at [ThePoultrySite.com](https://ThePoultrySite.com) by Hog Slat / Georgia Poultry

After the animals leave the farm, close the building up tight and simulate the same environment as when the birds or pigs were present. This practice keeps the rodents in the barn looking for food instead of migrating to another building. Remove all remaining feed, leaving the rodenticide as the only food source. Let the houses set undisturbed for two or three days, if possible, with seven days being ideal. [Click here for full article](#)

## Optimizing temperature control in broiler houses

December 22, 2023 at [WattAgNet.com](https://WattAgNet.com) by Mary Jo Davis

Maintaining correct broiler house temperatures contributes to rearing healthier birds better able to achieve their growth potential. [Click here for full article](#)



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## For Biosecurity, Keep Doors Closed

November 3, 2023 from *The Commercial Poultry Newsletter* by Sean Clougherty, Delmarva Farmer

Jon Moyle, Extension Poultry Specialist for the University of Maryland, shares a photo during recent presentations at poultry meetings. It's a picturesque, well-kept poultry farm in front of the evening colors of the setting sun.

But there's one problem: All the houses' end doors are open.

Left unattended, when houses are between flocks, Moyle said the open doors invite curious wildlife, and whatever pathogens they may be carrying, into the house.

Moyle said he's seen wildlife such as raccoons, vultures and eagles, walk into houses through unattended open end doors. "It's become less common but we're still seeing it a lot," he said. "With biosecurity so high, you want to do everything you can to prevent anything from coming in that shouldn't be."

The issue has come up a few times in recent presentations from specialists who all say the better option is to keep the doors closed and run minimum ventilation to remove excess ammonia, and some moisture, but most importantly, keep wildlife out.

Moyle said the practice of leaving the doors open goes back to a time when sidewall curtains were widely used in housing and after birds were taken out, growers dropped the curtains and opened the doors to "air out the house." With curtains phased out, Moyle said the only way to get any benefit from leaving the end doors open would be if the wind blew directly through the house.

"Even then, it's minimal. They're better off shutting the doors and running minimum ventilation," he said. For longer layouts, Moyle said periodical venting, not running continuous will keep ammonia from building up again after an initial ventilation.

Growers typically ventilate again ahead of setting up houses for the next flock as well, he added.

Moyle added on sunny days, using minimum ventilation with open attic vents to draw in warmer air radiating from the exterior roof can help, too, without the risk of wildlife entering.

Moyle said he's seen a difference of 40 degrees between roof temperatures and the air at ground level. "It's a great time for attic vents," he said. Electricity use is minimal too, Moyle said, costing a few dollars a day to run what is turned on via minimum ventilation.

"You just need something to keep the air moving," he said. "I know it's a pain in the butt, but unless you're working in there, there's no reason to have them open."

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## Watch for 'profound' mental health strain on poultry producers

August 2, 2023 at [ModernPoultry.media](https://www.modernpoultry.com) by Jeff Winton

Raising food animals on a commercial scale presents innumerable challenges under ordinary circumstances. The emergence of COVID-19, however, magnified those challenges to unprecedented levels. [Click here for full article](#)



## Propane retail prices are higher now at ~\$1.47/gal. but should be coming back down

February 29, 2024 submitted by Dale Barnett, Johnson Energy Solutions, LLC

The Mont Belvieu **Propane Spot Price** on Feb. 26, 2023, was at **\$0.87/gal.** which is in line with the futures market predictions over the winter months. The lowest spot price experienced during 2023 was \$0.525 on July 3<sup>rd</sup> and the highest was in January of 2023 when it reached \$0.938. The highest spot price experienced thus far in 2024 was \$0.954 on Feb. 15<sup>th</sup>, and the lowest for the year thus far has been \$0.694 on Jan. 8<sup>th</sup>.

Allowing for an average of \$0.60 per gallon for tariffs, handling and delivery to most areas, **the average current retail price can be expected to be roughly \$1.47/gal.** Larger accounts can often negotiate a lower price agreement by as much as \$0.05/gal., or more. Hopefully, everyone was able to **lock into a good price** last summer around \$1.15-1.20 per gallon! To follow Mont Belvieu spot pricing, go to [https://www.eia.gov/dnav/pet/hist/eer\\_epllp\\_pf4\\_y44mb\\_dpgD.htm](https://www.eia.gov/dnav/pet/hist/eer_epllp_pf4_y44mb_dpgD.htm). TPA's allied member propane companies welcome discussing this with you to obtain best pricing and services. Their contact information is at the back of this newsletter in the allied member listings.

**Propane futures** settled at 0.897 for Feb. 2024 and are shown to decline steadily into the summer months to 0.7825 in July. Futures are then shown to stay flat for the remainder of the year dropping to \$0.70 by the summer of 2025. To follow the futures trading for spot pricing go to <https://www.cmegroup.com/trading/energy/petrochemicals/mont-belvieu-propane-5-decimals-swap.html#>.

For **REAP grant funding** for energy retrofit projects go to <https://www.rd.usda.gov/programs-services/rural-energy-america-program-renewable-energy-systems-energy-efficiency>. The next **application deadline** is March 31, 2024. Visit your local NRCS county office for more information.

For current updates anytime for **FMCSA emergency declarations, HOS waivers, and exemptions** go to <https://www.fmcsa.dot.gov/emergency-declarations>.

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## Stimulating Activity Can Reduce 'Kinky Back' in Broilers

December 22, 2023 at [ModernPoultry.media](https://www.modernpoultry.com)

Increased activity in broilers can reduce kinky back — a spinal deformity that can affect mobility in fast-growing chicks between 3 and 6 weeks of age. According to Leonie Jacobs, PhD, assistant professor at Virginia Tech, kinky back — or spondylolisthesis, as it's called in clinical circles — can cause lameness, imbalance and, in severe cases, paralysis. [Click here for full article](#)

## New Broiler Starter Feed Formulation Boosting Bird Performance

August 12, 2023 at [PoultryWorld.net](https://www.poultryworld.net) by Tony McDougal

Feed trials focusing on meeting bird nutritional requirements, supporting strong gut health, organ and skeletal development and muscle growth, have shown encouraging improvements in leg health, efficiency and reductions in mortality. The first stages of the specific trial started in January 2022 but was a continuation of work ABN has been looking at on feed quantities during the first two weeks of the bird's life. The initial 12-month commercial scale trial took place across 9 farms of varying sizes and the results of the new feed formulation saw a rise of 32 points in the European Performance Efficiency Factor (EPEF) level from 368 for the average 6 crops before to 400 for the average trial crop. [Click here for full article](#)

## What's holding back phages in the poultry industry?

March 4, 2024 at [WattAgNet.com](https://www.wattag.net) by Mark Clements

Bacteriophages could be an important tool for bacterial control in poultry production, but various hurdles are keeping the industry from enjoying their benefits. Change, however, is afoot. [Click here for full article](#)

## Energy efficiency for broiler production: options for cost reduction

March 5, 2024 at [ThePoultrySite.com](https://www.thepoultrysite.com) by Axel Schulz and Janett Peschel

Apart from feed costs, costs for energy incur the highest expenses for broiler producers today. This article describes efficient measures to save energy. Since the war in Ukraine, energy prices have risen significantly, and the switch from fossil to alternative energy sources has accelerated as a consequence. This situation is a major challenge for every one of us, including farmers. At the same time, society calls for broilers to be kept in comfortable climate conditions for improved welfare. [Click here for full article](#)

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## Daily Poultry Farm Mortality Management

Submitted March 6, 2024 by Tom Tabler<sup>1</sup> and Shawn Hawkins<sup>2</sup>

<sup>1</sup>Professor and Extension Specialist, Animal Science Department, and <sup>2</sup>Professor and Extension Specialist, Biosystems Engineering and Soil Science Department, University of Tennessee



The number of poultry farms across the country has dramatically decreased in recent decades. Farms that remain have significantly increased in size. Many commercial broiler operations today have six to eight or perhaps more production houses on a single farm, whereas a generation ago, two to four houses were more common. In addition, the size of individual production houses has increased substantially compared to a generation ago. The increase in production capacity of commercial poultry farms means more normal daily mortality must be managed in a smaller geographic area. While normal daily mortality losses are often small, they are continuous throughout the flock grow-out cycle. Therefore, **dead bird disposal is an essential daily management chore**. Composting is a common option for these daily mortalities that is cost-effective, environmentally sound, and a biosecure management technique that also produces a valuable and useful soil amendment. Composting daily poultry mortality on the farm has several advantages (when done correctly), including:

1. Averts the potential for groundwater pollution that, in the past, was associated with burial or use of open disposal pits.
2. Avoids high fuel cost and potential air pollution challenges associated with incineration.
3. Prevents potential disease transfer caused by moving mortality off the farm.

However, there are requirements and specific procedures to consider for the composting process to be successful.

Composting, the biological decomposition of organic matter under purposefully controlled conditions, is the most widespread method used to manage normal daily mortalities on commercial poultry farms. Composting is a safe and efficient disposal method if the proper procedure and timeline are followed. To use composting successfully for daily mortality management, it helps to understand that composting is a natural, aerobic process (meaning oxygen is required) that is carried out by microorganisms that metabolize organic wastes as an energy source for growth. With mortality composting, this involves transforming poultry mortality into a stable form of organic matter that degrades further only slowly, without nuisance odors and fluids release, and that has added value as a fertilizer and soil amendment.

Although this process can be highly effective, attention to management detail is essential for success. Failure to properly manage poultry carcass composting will create odors and flies, produce noxious fluids, attract unwanted scavengers and other vermin to your farm/compost site, and leave you with a material that is not stable in final storage and that is not suitable to land apply without creating nuisance odor. Proper mortality compost management is critical to avoid nuisance complaints. Successful mortality composting simply requires following a recipe with an orderly mixing of ingredients for the microorganisms to do their job and completely break down carcasses in a timely and efficient manner.

### Proper composting requires following a recipe

Creating good mortality compost is much like making cookies or baking a cake; you simply have to follow a specific recipe. Otherwise, the end product of your composting efforts is not going to have the desired characteristics, perhaps most notably a lack of offensive odor. In mortality composting, the recipe is designed to best accommodate the microorganisms to easily break down carcasses. These microorganisms require carbon, nitrogen, oxygen, and moisture in the proper proportion to efficiently degrade carcasses in the shortest time possible. Any ingredient lacking or in excess will slow down decomposition and microbial growth, resulting in inadequate heat production and a poor composting environment. As a general rule, it is best to add twice the volume of a bulking material to carcasses; this bulking material can be recently de-caked litter (if the carbon to nitrogen (C:N) ratio is correct) and/or a largely carbonaceous bedding material such as wood shavings/chips. This recipe/mixture is designed to provide the ideal C:N ratio that compost microorganisms need to grow rapidly. Critically, the added bulking/carbon materials provide voids through which air can flow to the microorganisms degrading the carcasses. Because the degradation process produces heat, continuous airflow occurs through the compost material as hot air rises and induces a draft that draws in replacement air through the compost.

While there are multiple composting methods available to poultry growers, the composting recipe remains fixed regardless of the method used (Tabler et al., 2016a; Tabler et al., 2016b; Tabler et al., 2018; Simon and VanDevender, 2018; Tabler et al., 2023). In the past, bin composters (Figure 1) that included primary and secondary bins were a popular mortality management methodology. More recently, alleyway composters (Figure 2) have become a popular choice because they ease material handling. In-vessel rotary drum composters (Figure 3) are the newest composting method to manage poultry mortalities and can significantly increase efficiency and decrease the time required to produce a high-quality compost product. *(continued on page 35)*



## NCC: What poultry producers need to know about cell-cultured chicken

January 3, 2024 at [ModernPoultry.media](#)

In June 2023, the USDA Food Safety Inspection Service (FSIS), approved the sale of cell-cultured (sometimes called “lab-grown”) chicken by two California companies.

What is cell-cultured chicken? How is it labeled? What is its impact on energy consumption and the environment?

National Chicken Council’s Tom Super, senior vice president of communications, recently addressed these and other questions for the poultry industry. [Click here for full article](#)

## Cultivated chicken makes MIT’s ‘worst technology’ list

January 17, 2024 at [WattAqNet.com](#) by Elizabeth Doughman

Lab-grown meat’s failure to achieve price parity and manufacture at scale could slow the technology’s progress. [Click here for full article](#)

## Proposed legislation would ban cultivated meat from school lunches

January 26, 2024 at [MeatPoultry.com](#) by Rachael Oatman

New legislation introduced by Senators Mike Rounds (R-SD) and Jon Tester (D-Mont.) would ban cultivated meat products from being served in school lunches. [Click here for full article](#)

## New bill takes aim at accurately labeling ‘cultivated’ meat products

March 4, 2024 at [PoultryTimes.com](#) by Elizabeth Bobenhausen

With new products emerging on the market daily, one of the most recently discussed has been the introduction of what is termed “cultivated meat.” Restaurants in California and Washington, D.C., which initially offered items prepared with the cultivated meat products have now taken them from their menus. And there is a new bill in Congress that is looking at accurate product labeling regarding cultivated products.

“The American consumer deserves to know what they are eating and feeding their families,” U.S. Rep. Mark Alford (R-Mo.) said. [Click here for full article](#)



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## Activist Watch Weekly – by Will Coggin

**January 15, 2024**

### Watch Our New Video on Lab-Grown Meat

We have released a new video in our campaign on lab-grown meat. The video was released on TikTok to an audience of younger consumers. [View it here](#), and view our broader campaign at [www.LabMeat.com](http://www.LabMeat.com).

### Court Upholds Farm Protection Law; PETA Loses

The 8th Circuit Court of Appeals [upheld](#) an Iowa law prohibiting “agricultural facilities fraud.” PETA and the Animal Legal Defense Fund had challenged the law, claiming it was a violation of free speech rights. The law was passed after the Court of Appeals had struck down a previous Iowa law.

**February 17, 2024**

### Major Decline in Lab Meat Investment in 2023

Investment in lab-grown meat companies [declined 78% between 2022 and 2023](#). That said, lab meat companies have raised \$3 billion to date, and may get propped up by millions in state and federal grants.

**February 24, 2024**

### Lab-Grown Meat Faces State Scrutiny

In Florida, bills to ban lab-grown meat are [gearing up for votes](#) in the full legislature and have the support of Gov. Ron DeSantis. The Alabama Senate [approved a ban](#) on lab meat. Bans are also alive in [Tennessee](#), [West Virginia](#), and [Arizona](#). Texas has a ban on file but the legislature doesn't meet this year.

## US consumers unconcerned about food sustainability

December 28, 2023 at [MeatingPlace.com](http://MeatingPlace.com) by Chris Scott

American consumers remain more concerned about affordability, flavor, freshness and food safety than efforts to improve the sustainability of beef products, according to a recent survey by the Beef Cattle Institute at Kansas State University. [Click here for full article](#)



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## Plasma-Activated Water and Chemicals: Next-Gen Technology to Improve Food Safety and Plant Sanitation

December 11, 2023 at [MeatingPlace.com](https://www.meatingplace.com) by Amit Morey, PhD

Over the years, the poultry industry has made significant strides in controlling pathogen and microbial contamination of both raw and finished products, as well as processing surfaces and the environment, through the use of synthetic and natural chemicals. However, consumers are concerned about using chemicals used either to wash poultry, or as additives. The use of chemicals to wash poultry plants can lead to wastewater issues. To cater to the consumer demands and to improve sustainability of the operation, poultry companies are continuously looking for alternative antimicrobial/food safety technologies. [Click here for full article](#)

## Lawsuit over poultry line speeds dismissed

February 27, 2024 at [MeatingPlace.com](https://www.meatingplace.com) by Lisa M. Keefe

A lawsuit filed four years ago by the Humane Society of the U.S. and four other animal rights groups seeking a stop to faster line speeds in poultry processing plants has been dismissed by the U.S. District Court for the Northern District of California. [Click here for full article](#)

## Tossed line speed case is coming back

March 5, 2024 at [FoodSafetyNews.com](https://www.foodsafetynews.com) By Dan Flynn

The federal case of The Humane Society of the United States (HSUS) v. Sonny Perdue was dismissed in late February after hanging around for four years. [Click here for full article](#)

## Vilsack Says Extensions Will Be Granted for Line Speed Waivers

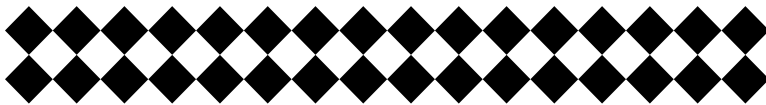
March 1, 2024 at [WattAgNet.com](https://www.wattag.net) by Roy Graber

U.S. Agriculture Secretary Tom Vilsack said poultry processors whose line speed waivers are set to expire at the end of March can expect to get an extension. Vilsack addressed the issue when questioned by Sen. Tommy Tuberville, R-Alabama, at a Feb. 28 Senate Agriculture Committee meeting. Tuberville said that after learning that extensions were granted earlier in the week concerning pork plant line speeds, he was wondering if the situation would be the same for poultry processors. [Click here for full article](#)

## Study Sheds Light on Salmonella Survival in Food Processing

January 10, 2024 at [Feedstuffs.com](https://www.feedstuffs.com)

In an ongoing battle against foodborne pathogens, researchers have uncovered a promising avenue for enhancing food safety through the exploration of bacterial interactions within the food processing environment. This pivotal research centers on the interplay between Salmonella and environmental biofilms and has significant implications for the broader field. [Click here for full article](#)



## Poultry alliance reveals new bird welfare guidelines

January 26, 2024 at [MeatingPlace.com](https://www.meatingplace.com) by Joanne Cleaver

A short life can still be a good life, according to the International Poultry Welfare Alliance, a consortium of 90 organizations committed to the well-being of chickens and turkeys raised for consumption. To that end, the IPWA has just released a set of comprehensive guidelines that enable producers to meet its “key welfare indicators” for healthy birds. The organization’s goal is to set science-based, lifespan standards for bird health and safety. [Click here for full article](#)



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## Navigating poultry's current challenges and opportunities

November 22, 2023 at [WattAgNet.com](http://WattAgNet.com) by Jan Henriksen

Investing in technology and people, while being transparent and raising awareness, are essential for the poultry industry to continue progressing. [Click here for full article](#)

## Poultry industry looks back on 2023 successes

January 4, 2024 at [PoultryTimes.com](http://PoultryTimes.com) by Elizabeth Bobenhausen

The year 2023 has come to an end and the National Chicken Council looks back on having a great year. In NCC's "Washington Report," the organization said "these qualities also position chicken as an essential, high-quality protein that can help end hunger in our nation and world. In fact, the meat and poultry category is one of the most purchased and consumed food items by Supplemental Nutrition Assistance Program (SNAP) households, and proteins like chicken are one of the top three most requested items at food banks." [Click here for full article](#)

## REPORTER: New Research "Illuminates" the Future of Poultry Production

January 9, 2024 at [FoodMarket.com](http://FoodMarket.com) by Dylan Hughes

The commercial broiler industry has come quite a long way since its inception back in 1923. What began as a small flock of roughly 500 meat-type birds in Sussex County Delaware has since snowballed into a multi-billion-dollar business sector, which routinely produces more broilers annually than there are people walking the planet! [Click here for full article](#)

## Poultry to Remain the Winning Protein, Despite Challenges – Rabobank

January 19, 2024 at [ThePoultrySite.com](http://ThePoultrySite.com) by Global Ag Media

With declines expected in pork and beef markets, poultry is expected to be the fastest-growing protein in a global animal protein market forecast to grow just 0.4% year-on-year, according to a recent Rabobank report. Lower input costs, and therefore lower-priced chicken, should help stimulate chicken consumption in 2024 and accelerate growth in the industry. [Click here for full article](#)



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## Focus On Making Your Succession Plan Fair, Not Equal

December 22, 2023 at [AqWeb.com](https://www.aqweb.com) by Heyenne Kramer

What might be considered equal doesn't always make sense when the succession plan involves family members who actively work on the farm and others who do not. [Click here for full article](#)

## AFBF: New Census Shows Alarming Loss of Family Farms

February 13, 2024 at [MorningAgClips.com](https://www.morningagclips.com)

New agriculture census data released by USDA today is cause for concern as the number of farms operating in the United States and the number of farm acres have both fallen significantly. The 2022 Census of Agriculture reports 141,733 fewer farms in 2022 than in 2017. The number of farm acres fell to 880,100,848, a loss of more than 20 million acres from just five years earlier. [Click here for full article](#)

## Vilsack discusses rural future during Ag Outlook Forum

February 22, 2024 at [MeatPoultry.com](https://www.meatpoultry.com) by [Matt Noltemeyer](#)

US Agriculture Secretary Tom Vilsack, speaking to a Washington crowd and a livestreamed global audience this month, said there is a larger consideration beyond prices and production of agricultural commodities: the fate of America's rural areas. [Click here for full article](#)

## How chicken eggs are helping scientists research cancer

February 13, 2024 at [WattAgNet.com](https://www.wattagnet.com) by Meredith Dawson

Researchers are using fertilized chicken eggs to evaluate how medications affect tumor samples in children. [Click here for full article](#)

## Humans Can Tell by Chickens' Calls if They Are Happy or Frustrated, Research Finds

January 5, 2024 at [PoultryProducer.com](https://www.poultryproducer.com) by [Sophi Fairman](#)

People can tell if chickens are chirpy or frustrated from their calls, according to researchers who believe that listening to the birds could help breeders improve the welfare of their flocks. Scientists played audio recordings of hens to nearly 200 volunteers and found that 69% could tell the difference between birds that were happy about an imminent treat and those that were annoyed that no such reward was forthcoming. [Click here for full article](#)

## Calculating the value of poultry litter and proper storage considerations

December 22, 2023 at [PoultryProducer.com](https://www.poultryproducer.com) by [Sophi Fairman](#)

The use of poultry litter can contribute to reducing the cost of fertilizer inputs for many operations, depending on the price and transportation cost of the litter. For many farmers, the use of poultry litter may represent significant savings particularly in times of high fertilizer prices. However, for many producers there is a "hassle factor" with using poultry litter. Reliable delivery, storage site location, uniform application, access to application equipment, and odor can all be additional challenges to producers unfamiliar with its use and should be a consideration. [Click here for full article](#)

## McDonald's: Chicken revenue now equal to beef

February 7, 2024 at [WattAgNet.com](https://www.wattagnet.com) by [Elizabeth Doughman](#)

The struggle to develop a competitive chicken sandwich at McDonald's is over, with the quick service restaurant chain reporting that sales of the McCrispy chicken sandwiches and chicken nuggets now equal that of beef burgers. [Click here for full article](#)

## Taco Bell says 'yes' to more chicken

February 23, 2024 at [MeatingPlace.com](https://www.meatingplace.com) by [Melissa Sue Sorrells](#)

Taco Bell has declared 2024 to be the year of the chicken. (Sorry, dragon!) [Click here for full article](#)

## KFC Chizza: An international favorite comes to the US

February 23, 2024 at [WattAgNet.com](https://www.wattagnet.com) by [Roy Graber](#)

A pizza-like product that has proven to be popular in other markets for nearly a decade is finally coming to KFC locations in the United States. [Click here for full article](#)



## US Agriculture Secretary Sees 'Chaos' in Meat Market Without Congressional Action on Prop 12

February 15, 2024 at [FoodMarket.com](https://www.foodmarket.com) by Leah Douglas

There will be chaos in the U.S. meat marketplace without congressional action on California's Prop 12 law that tightened animal welfare requirements for pork products sold in the state, Agriculture Secretary Tom Vilsack said during a congressional hearing on Wednesday. [Click here for full article](#)

## From The National Agricultural Law Center – “The Feed” newsletters

### Discharge Limits

EPA is proposing revisions to wastewater discharge limits for some meat and poultry processing plants. Under the preferred plan laid out in EPA's proposal, direct discharge limits for nitrogen would be tightened, and the first phosphorus standard for processing plants would be established. The preferred plan also includes pretreatment standards for oil, grease, suspended solids, and biochemical oxygen demand for facilities discharging into sewers. EPA expects the proposal to affect about 850 of the nation's 5,055 meat and poultry processing plants. The agency will hold hearings on the proposed rule on Jan. 24 and Jan. 31. To view the proposal, click [here](#). For more information from EPA, click [here](#).

### Ag-Gag

The Eighth Circuit Court of Appeals has reinstated two Iowa statutes that prohibit undercover access to agricultural operations and engaging in either video or audio recording on trespassed property. Both laws had previously been struck down by a federal district court which had concluded that the statutes violated the First Amendment of the U.S. Constitution. However, the Eighth Circuit disagreed, concluding that because the Iowa statutes do not impose “viewpoint-based” restrictions on speech, the laws do not violate the First Amendment and are constitutional. To read the Eighth Circuit's decision, click [here](#).

### Hearing on Effluent Limitations

EPA plans to host an additional public hearing to collect input on its proposed initiative to reduce pollution levels from meat and poultry processing facilities. The hearing, scheduled for March 20, will take place virtually. Moreover, the agency is contemplating an extension of the comment period for the proposal. Information regarding the previous and future hearings can be found [here](#). To learn more about the proposal, click [here](#) to view NALC article “EPA Proposes Effluent Limitations for Meat and Poultry Processors.”

### Ag Trespass

The Kentucky State Senate passed [Senate Bill 16](#), a proposal that would prohibit audio and visual recording at animal feeding operations and food manufacturing plants without owner consent. The proposal would also prohibit distribution of any such recording. Under SB 16, the first offense would be treated as a class B misdemeanor, punishable by jail time and fines. All subsequent offenses would be treated as Class A misdemeanors. The bill passed the Senate with 30 yes votes and six no votes and now proceeds to the Kentucky House of Representatives.

### Corporate Transparency Act

According to the [USDA's 2022 Census of Agriculture](#), there are roughly 1.9 million farms and ranches operating in the United States. Each of those farms and ranches is likely operating as a business entity. Under the Corporate Transparency Act (CTA), which went into effect on January 1, those operations will have until the end of the year to file their first beneficial ownership information report or face steep fines. Most small businesses, including single member LLCs, that were in existence prior to the first of the year have until the end of 2024 to file reports under the CTA. New businesses have an even tighter deadline, that will grow tighter still in 2025. NALC will host an upcoming webinar to provide further information on which entities will be impacted by the CTA, when reports must be filed, and what information must be disclosed. To register, click [here](#).

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## EPA releases proposal to cut down meat, poultry plant waste

December 18, 2023 at [MeatingPlace.com](#) by Chris Moore

The United States Environmental Protection Agency (EPA) introduced a proposed rule on Friday targeting water pollution stemming from Meat and Poultry Products (MPP) facilities, which discharge pollutants into the nation's waters and Publicly Owned Treatment Works (POTWs).

The rule targets pollutants such as oil, grease, organic material, salts, ammonia, nitrogen, and phosphorus.

EPA's preferred option focuses on existing direct dischargers, establishing more rigorous effluent limitations for nitrogen and, for the first time, limitations for phosphorus. Additionally, the option introduces pretreatment standards for oil and grease, total suspended solids, and biochemical oxygen demand, applying to approximately 850 of the 5,000 MPP facilities nationwide.

The proposal includes two alternative options, seeking public input, which extend effluent limitations to additional direct and indirect dischargers. These alternatives also introduce pretreatment standards for nitrogen and phosphorus for select indirect discharging facilities.

EPA is soliciting comments on a provision suggesting the segregation and management of high-salt waste streams produced at some facilities, along with the addition of E. coli bacteria as a regulated parameter for direct dischargers.

The proposed rule aims to reduce pollutants discharged through MPP facility wastewater by an estimated 100 million pounds annually.

Public hearings on the proposed rule [were held in] January 2024.

## EPA wastewater standards published in Federal Register

January 23, 2024 at [MeatPoultry.com](#) by Ryan McCarthy

The US Environmental Protection Agency (EPA) took the next step with its revised wastewater discharge standards for meat and poultry facilities by publishing the other details in the Federal Register on Jan. 23. [Click here for full article](#)

## Congressmen file bill to prohibit EPA meat processing regulation

January 29, 2024 at [MeatPoultry.com](#) by Ryan McCarthy

As more stakeholders continue to work through the proposed wastewater discharge standards for meat and poultry facilities by the US Environmental Protection Agency (EPA), two congressmen have decided to take a strong stance against the possible regulation. [Click here for full article](#)

## More pushback on proposed EPA water regulations

January 30, 2024 at [MeatingPlace.com](#) by Lisa M. Keefe

The fighting is picking up intensity over the [Environmental Protection Agency's proposed tighter regulations on meat and poultry processing water effluent](#), with a bill introduced in the House by Reps. Ron Estes (R-Kansas) and Eric Burlison (R-Missouri). [Click here for full article](#)

## NCC comments on EPA's proposed strategy for reducing food waste

February 6, 2024 at [MeatPoultry.com](#) by Rachael Oatman

WASHINGTON — The National Chicken Council (NCC) sent comments to the Environmental Protection Agency (EPA) on Feb. 3, outlining ways chicken producers reduce food waste, recycle byproducts and utilize products that otherwise would be sent to landfills. [Click here for full article](#)

## In a 2023 Recap, USDA-FSIS Says It Aims to Publish Formal Regulatory Proposal for Salmonella in Poultry by Early 2024

February 6, 2024 at [Food-Safety.com](#) by Food Safety Magazine Editorial Team

After announcing its intent to propose a regulatory framework to reduce Salmonella infections linked to poultry products, FSIS completed a peer-reviewed risk profile for Salmonella subtypes and collaborated on peer-reviewed quantitative risk assessments for Salmonella in chicken and turkey to inform new policies for the pathogen. For example, in June 2023, FSIS and the Food Emergency Response Network (FERN) published the findings of a study that assessed Salmonella rates in not-ready-to-eat (NRTE) breaded and stuffed chicken products.

FSIS continued to hold meetings with stakeholders, including a virtual public meeting on reducing Salmonella in poultry and a meeting with small and very small establishments. All comments received in these forums were reviewed and considered in developing a formal regulatory proposal, which is expected to publish in early 2024. [Click here for full article](#)



Figure 1. Static-bin composter

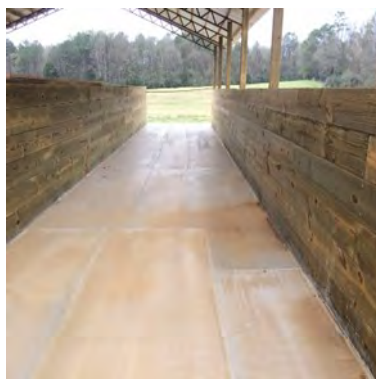


Figure 2. Alleyway composter.



Figure 3. In-vessel rotary drum composter.

### Factors affecting mortality composting

The composting recipe is relatively simple. However, each ingredient is critical, and the success of the composting process depends on how the ingredients all come together, including:

- **Moisture:** 50-60%, when squeezed into a ball compost holds shape; very little free water.
- **C:N ratio:** 25-30:1, about a 2:1 volumetric ratio of bulking/carbon material to mortality
- **Temperature:** should peak between 130-150°F.
- **Oxygen:** voids are required to promote airflow, refreshed with mixing/turning.
- **Amendment Particle Size:** avoid old, finely divided litter which will inhibit air flow.
- **Pile Surface Area:** large piles have a low surface area promoting poor airflow.
- **Microbial Population and Activity Level:** heating (temperature) is the key indicator.
- **Mortality Size:** large birds require more carbon and decomposition time.

If the recipe is followed correctly, the correct C:N is achieved, but the moisture content and oxygen level, in particular, must still be managed carefully, otherwise the composting process will work inefficiently as indicated by a lower than expected temperatures (<110-120°F). Further, improper compost management is an environmental concern because the end product that is land applied is capable of spreading disease and causing nuisances as a result of soft carcass tissue decomposition. On the other hand, high temperatures, which are achieved with the correct compost recipe and good management, kills disease organisms and fully decomposes 100 percent of soft carcass tissues. Temperature of 122°F maintained for 24 hours, or equivalently a temperature of 142°F for 1 hour (both achieved throughout a compost pile), is required to kill pathogenic bacteria, viruses, and insect and worm larva. The right recipe and proper compost management, which results in these high temperatures, will not attract scavengers, flies, or vermin that dig into the compost material and drag potentially diseased, partially degraded carcasses onto neighboring property. Without proper heating, flies and malodors are sure to be issues that results in neighbor complaints.

While all recipe ingredients are critical to produce a high-quality end product, the moisture content is likely the most important factor. The moisture level primarily controls whether the compost process occurs under aerobic or anaerobic (without oxygen) conditions. A moisture content in the 50-60 percent range works well. Composting slows significantly at a moisture content less than 40 percent (when squeezed into a ball, the material readily falls back apart). Anaerobic conditions, which are indicated by noxious odors, lower temperatures, and the production of noxious fluids referred to as leachate, generally occur at a moisture content greater than 70 percent (when squeezed into a ball, free water is readily released).

The C:N ratio is also critical to the composting process because it affects biological activity of the microorganisms. A C:N ratio of 25-30:1 works best. Nitrogen will be lost as volatilized ammonia if the C:N ratio drops below 25:1, a process that reduces the compost fertilizer value and results in noxious odors and neighbor complaints and possibly lawsuits if not resolved. Table 1 lists common bulking agents and their C:N ratios. Note that wood products tend to work best as carbon sources because of their high C:N ratios. However, sawdust may not be ideal as its small particle size may compact too much and exclude oxygen from the microbial population. Decaked litter is often used successfully as a bulking agent, particularly in combination (50:50 volumetric ratio) with carbon materials. In any case, older and drier, finer litter should not be used in mortality composters. For reference in examining Table 1, a broiler carcass has a C:N ratio of approximately 5:1. See table on next page

It is often better to add more bulking material or carbon source than you think you need - do not skimp on the bulking/carbon material. This seems like a simple enough process to manage, that is adding enough bulking/carbon material, but is more difficult than one might think and it is where most people fail with daily composter management. Birds are constantly increasing in size each day and therefore adjustments to the amount of bulking material must continually be made to balance this size increase. While a low 1:1 ratio of bulking material to mortality may work for 1-week-old chicks, it can take a 5:1 ratio (or greater) for large market-age birds. (continued on next page)

Table 1. Common composting bulking agents and their C:N ratios.

Source	C:N Ratio
Softwood shavings	641:1
Hardwood chips	560:1
Sawdust	442:1
Wheat straw	127:1
Rice hulls	121:1
Straw (general)	80:1
Corn stalks	67:1
Finished compost	40:1
Horse manure	35:1
Hay (general)	24:1
Cattle manure	19:1
Broiler litter	12:1

Extra bulking/carbon material is needed for large birds to absorb the additional moisture in the daily mortality losses. While week-old baby chicks will release very little water per bird as they degrade, each 8 lb market-age broiler can release  $\frac{3}{4}$  of a gallon of water. Therefore, growers must constantly increase bulking material amendment rates not only to account for fluctuations in daily mortality losses (5 birds vs 25 birds per day), but also for individual bird size (baby chicks vs. market-age birds). With practice, composting is a process that anyone can learn to manage so long as you carefully observe and react to temperature, odors, and the presence of noxious leachate, for example.

One thing to keep in mind is that composting is a somewhat forgiving process. If you mess it up, given a little time and the proper adjustments, you can fix it. For example, if your mortality compost gets too wet, say due to wind-blown rain, you can mix in some additional dryer bulking material to absorb the excess moisture and the process will go back to working again. If the material gets too dry in summer, adding the right amount of water to bring the moisture content back into the 50-60 percent range will result in improved composting you can easily measure as a temperature increase. Note that while it is possible for the compost to become too dry, most growers that fail with composting poultry mortality fail because the material gets too wet. Excessively wet compost is usually caused by not using enough carbon material to soak up the fluids released from decomposing carcasses, or because proper layering for mortality in compost bins (see below) is not followed. One common mistake that leads to excessively wet compost is to place mortalities into compost bins in a layer that is too thick. This effort to try to improve space efficiency of composting actually results in a very low C:N ratio and poor air flow, which in turn adversely affects the activity of the microbial population degrading the carcasses.

### Composter management

Bin and alleyway composters require similar management practices. Each consists of one or more bins of various sizes constructed of treated lumber set on a concrete slab with a roof overhead. The slab prevents the compost material and any draining fluids (referred to as leachate) from attracting flies and seeping into soil or groundwater. The walls keep the compost contained. The roof protects the material from precipitation. For each of these types of composters, ingredients should be layered as illustrated in Figures 4 and 5 below. Failure to do so will result in only partial composting and yield a malodorous product that is not suitable for land application. The steps to successful composting in bin and alleyway composters include:

- First, begin a new mortality compost cycle by placing an initial 12-inch layer of decake or fresh cleanout litter or carbon material on the concrete slab floor. Litter will supply the bacteria to start the composting process, will help absorb carcass fluids or excess water that may be added to the composter by wind-blown rainfall, provides voids through which air can flow to the carcasses as they are being degraded, and finally insulates the compost material from excessive heat loss through the concrete floor.
- **Do not dump mortalities into a compost bin or alleyway in a heap!** Dumped bird masses have poor airflow that causes the carcasses to putrefy and rot, generating leachate and bad odors. Rather, add a single bird thick layer of carcasses arranged side by side, touching each other. Place carcasses no closer than 6 inches to the walls of the compost bin because heat loss from the composting material is high where it touches the walls. Carcasses placed too near the walls will not compost as rapidly because of lower temperatures and this will also tend to generate cause noxious fluids (leachate) that more easily seep from the compost bin through the wall openings.
- **Do not skimp on the carbon material, which can be litter, carbon bedding material, or a mixture of litter and carbon material.** This layer should be twice as thick as the layer of carcasses underneath. If only a partial layer of birds is placed for that day's mortality, **all birds must be adequately covered when placed, otherwise you will create a prolific breeding ground for flies.** The rest of the layer can be used for mortality in the coming days. To emphasize these points again, **you cannot dump a front-end loader bucket of dead birds into the composter and then simply cover them with just enough bulking material so that they are out of sight. This is not composting, and it will not produce a suitable product for land application.** (*continued on next page*)

- Continue to add subsequent single bird layers of carcasses and litter/carbon source until reaching a height of 5 to 6 feet. A stacking height of 5 to 6 ft, with adequate porosity and moisture is not a fire hazard. However, excessive height can induce compost temperatures that exceed 170°F and increase the chance of spontaneous combustion and a shed fire.
- Cap the final layer of birds with a layer of 12 inches of litter/carbon source. This final cap is critical to retain heat and moisture and avoid attracting flies.
- It is important to measure compost temperature regularly because it is an excellent method to gauge performance and detect recipe and management problems early on, when they can be fixed. It takes just a few minutes, and you only need two things: a 3 ft long compost thermometer and a clipboard to record data. Record the temperature of your compost bins frequently, ideally twice a week. For alleyway composters, record temperatures along the length of the alleyway as it is filled with compost.
- **When you observe a temperature decline below 120°F in your newly formed compost pile (generally after 2-4 weeks) you must then rotate the material to a new bin.** This newly mixed material should be covered immediately with 8-12 inches of fresh litter or carbon-based bulking material to avoid excessive heat and moisture loss and to avoid attracting vermin and flies. **This process of mixing the compost materials adds oxygen to reinvigorate aerobic decomposition of all the carcass soft tissue, a process that will be indicated as an increase in temperatures following turning.** Turning the compost at least once is critical to make sure pathogen destruction occurs throughout all the compost materials. Approximately 4-6 weeks after turning, the compost should be inspected to verify soft tissue has been consumed (ideally any remaining bones will be soft). If necessary, the compost can be re-turned to provide an improved end product.

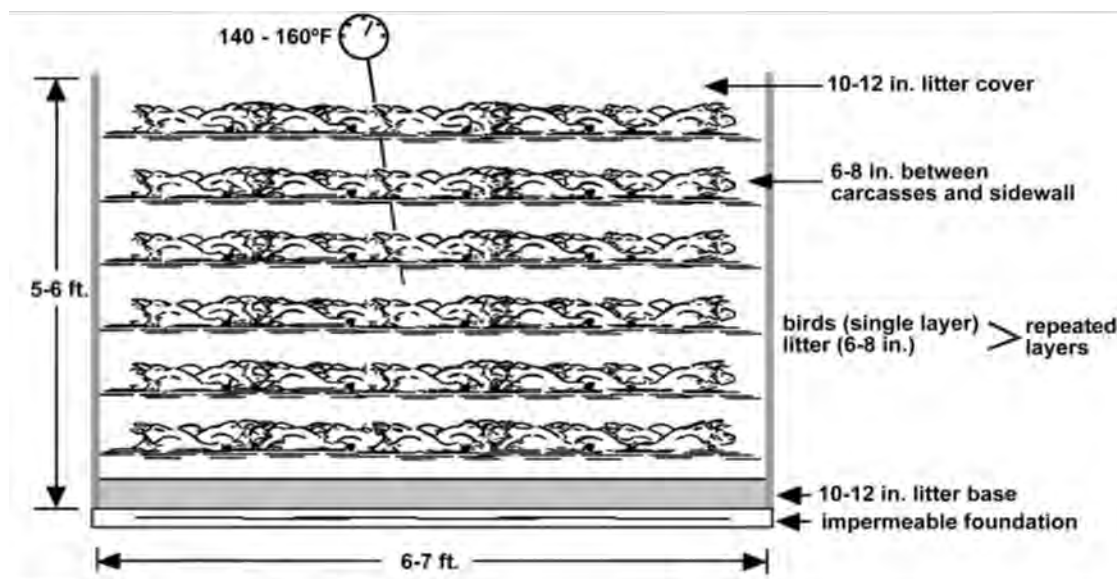


Figure 4. Bin composting diagram. Side view of mortality and bulking/carbon material layers in a compost bin. The bin is 6-7 feet wide and 5-6 feet high. The bin sets on a concrete slab which eliminates vermin burrowing. A 12-inch layer of litter/carbon source is placed on top of the slab to begin composting. Single bird thick layers are then alternated with 6-8 inches of litter and/or carbon material. Finally, there is a 12-inch cap of litter placed on the final layer of birds. Note that there is 6-8 inches of space between the bird carcasses and the bin sidewalls on all 4 sides.

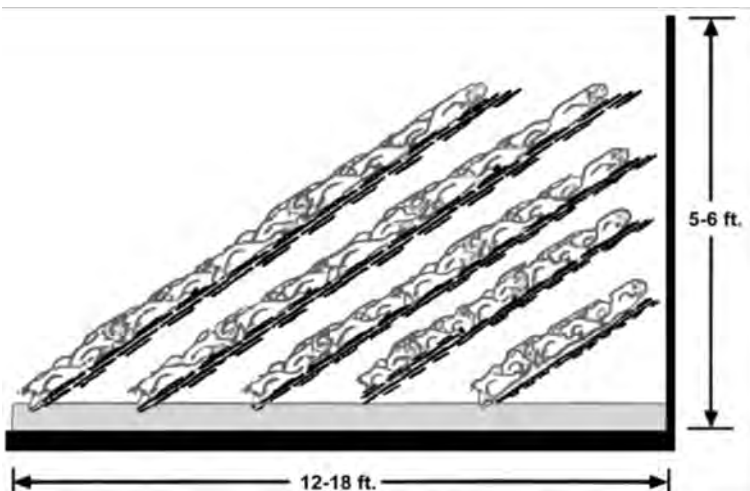


Figure 5. Alleyway composting diagram. Side view diagram of an alleyway composter. Width is usually 12-18 feet with a wall height that should not exceed 5-6 feet. The bin sits on a concrete slab to prevent burrowing vermin. Leave 6-8 inches of space between bird carcasses and the alleyway back and sidewalls.

#### In-vessel rotary drum composters

The process of turning mortality compost is automated with rotary drum composters, but these devices still require a similar ingredient recipe as traditional bin and alleyway composters. (continued on next page)

Because the turning process occurs daily or perhaps multiple times daily, and the drums use controlled forced aeration from blowers, oxygen easily infuses throughout the compost materials near continuously, speeding up the composting process. A nice feature of these devices is that they have built-in thermometers used to control the mixing and aeration process and which allow you to constantly monitor the temperature of the material inside the drum. The drums also greatly reduce the ill effects of weather on the composting process because the product is contained inside the drum. This protects the compost from blowing rainfall and cold winds which can increase heat loss. The drums are also more aesthetically pleasing than a bin or alleyway composter, enhancing public perception of the task of composting dead birds. Public acceptance of agricultural practices is increasingly important today. Every commercial poultry farming operation needs to recognize this and take public perception of on-farm mortality management seriously.

### Troubleshooting mortality compost issues

Even with good management, you should expect and plan for problems and difficulties to arise. These problems will be most evident in the temperature data you collect, which will show poor or very slow heating performance. Use Table 2 below to categorize and correct these problems and get your mortality compost system back to working efficiently.

Table 2. Troubleshooting guide for carcass composting.

Problem/Symptom	Potential Cause	Correction
Improper temperature	Too dry	Add water
	Too wet	Add bulking material and turn pile
	Low C:N ratio	Increase bulking/carbon material amendment rate
	Improper layering of ingredients	Layer birds in single bird thick layers covered with adequate bulking material (see Figures 4 and 5).
	High heat loss	Ensure adequate bulking material is used for cover and base
Failure to decompose	Low C:N ratio	Increase bulking/carbon material amendment rate
	Carcasses layered too thickly	Carcasses must be placed in a single bird thick layer
	Carcasses at outside edges	Maintain 6-10" between carcasses and edges
Bad Odors	Too wet	Add bulking material and turn
	Low C:N ratio	Increase bulking/carbon material amendment rate
	Inadequate cover over carcasses	Cover every layer of carcasses promptly with 12 inches of bulking material
	Inadequate cover over carcasses	Cover every layer of carcasses promptly with 12 inches of bulking material
Flies	Too wet	Add bulking material, turn pile, cover pile with 12 inches of carbon material; avoid leaching from pile, cover leachate with carbon bulking agent promptly if this occurs
	Failure to reach proper temperature	Assess C:N ratio and layer management
	Inadequate cover over carcasses, inadequate final cover	Place 12 inches of bulking material cover promptly over fresh mortalities layers. Avoid initial entry with a fence, barrier, or cover where vultures are a problem.

### Summary

Composting is the most common method of managing daily poultry mortality losses on commercial farms and the process works well if it is managed properly. Commercial poultry producers should view mortality composting as a value-added process that produces a beneficial product. This realization justifies the daily attention and invested management time the process requires. Composting is a simple recipe, a properly proportioned mixture of poultry mortality and a bulking agent or carbon source to achieve the correct C:N ratio, which then requires oxygen and right amount of moisture to turn large quantities of organic matter, in this case dead birds, into an inoffensive and useful soil amendment in a short period of time. (*continued on page 42*)

## Poultry House Springtime Windspeed Maintenance Checklist

March 2024 by Jess Campbell, Jeremiah Davis, Cody Smith, & Kelly Griggs  
National Poultry Technology Center – Auburn University



The idea of this article is to serve as a guideline of things to consider doing prior to hot weather arrival or annual wind speed checks. The goal is to achieve maximum full tunnel wind speed, evaporative cooling performance, exceed minimum wind speed requirements with ease, and help prevent emergency repairs during hot weather operation.



**Figure 1:** Can you identify the problem with the fan in this picture? A. no motor, B. no propeller, C. not clean, D. all the above. If you answered, "D. all the above", you would be correct. It is also interesting to note that the adjacent tunnel fan #3 is plugged into the outlet above this fan, tunnel fan #1. This fan is not ready for hot weather.

**TUNNEL FAN MAINTENANCE CHECKLIST** – The tunnel fans are the lifeblood of tunnel windchill cooling and getting the bird cooling we drastically need during hot weather. All tunnel fans must be in top shape before they are needed. Insufficient fan maintenance often results in insufficient wind speed and reduces hot weather performance. Below is a list of items to check.

**1. DRIVES (PULLEYS AND BELTS)** - The drives transmit power and provide the gear ratio between the motor speed and propeller speed. Anything that goes wrong with the drive system causes lost fan performance. Check belt tension: loose belts reduce the gear ratio, causing loss of airflow, and reduce belt life. Check belts for wear: Belts riding lower in the pulleys change the gear ratio and lower fan performance. Check pulley alignment: Misaligned pulleys cause excessive belt wear and more drive losses. Check pulleys for wear: cupped out pulleys allow belts (even a new belt) to ride lower in the pulley, which changes gear ratio and lowers air flow.

**2. TENSIONERS** – Fan tensioners must deliver full tension on the fan belt for the fan to operate at maximum designed potential. These must be lubricated, exercised by hand, and inspected closely to make sure they are in alignment with prop and motor pulleys. Make sure the dry bearing on this pulley is not damaged and causing unnecessary drag on the fan belt and motor. One or two bad tensioners can keep a house from reaching full wind speed potential. In most cases, damaged tensioners simply need to be replaced with a new one to regain like-new fan performance.

**3. SHUTTERS AND GUARDS** - Anything that obstructs the airflow causes lost fan performance. Clean shutters once per week during tunnel ventilation. Dirty shutters require more energy from the airflow to open and they reduce airflow and efficiency. Clean guards once a week because dirty guards present more surface area to obstruct airflow. All butterfly shutters or dampers must be in perfect working condition. If they don't fully open and fully close, this is a problem with house tightness. Significant ventilation problems can be the result of damaged butterfly shutters.

**4. MOTORS** - Most electric circuits and electrical devices run more efficiently and last longer at cooler temperatures. Clean motors once per flock. Dirty motors run hotter, lose efficiency, and have reduced motor life. It is a good idea to have at least one motor already wired and a pulley installed so the job of a quick motor swap is possible when needed.

**5. BEARINGS** - Lubricate bearings twice per year where applicable (Spring and Fall). Dry bearings require more power to turn, causing you to lose fan efficiency and shorten bearing life. Go ahead and bring some new grease fittings with you when you start greasing because there seems to always be one or two that won't take grease. *(continued on next page)*

**6. POWER CORDS** – Make sure all power cords are in good operating condition and the power outlets, if applicable, are not loose, charred, or damaged in any way. Eliminate human safety hazards, fire hazards, and fan failures from happening when fans are called to run continuously.



**Figure 2:** Can you identify the problem or problems in this picture taken from the inside of a broiler house looking through the tunnel inlet? A. cobwebs on pads, B. cobwebs on bird wire of inlet, C. light and air leak entering between the floor and wall of the doghouse, D. floor is dirty, E. all the above. If you answered, “E. all the above”, you would be correct. This doghouse and pad system is not ready for hot weather.

**EVAPORATIVE COOLING CHECKLIST** – Time and effort spent maintaining the evaporative cooling system not only improves the cooling performance of the house, but it also extends the life of the evaporative pads and pumps. Read below for more tips.

**1. PADS** – Blow debris from inside or outside of pad system to doghouse with backpack blower with pads dry. Then thorough cleaning of the system and rinsing of the system is in order. Excessively dirty pads are often the result of poor wind speed and high static pressure. If pads are damaged or cannot be adequately cleaned, they must be replaced in order to restore the house to like-new airflow and wind speed potential.

**2. DOGHOUSE** – Sweep all cobwebs and other debris from the back of the pads with a broom or blow out with a blower. Once everything is on the floor, remove it from the doghouse. Once this is complete, do a thorough inspection for any air leaks that might be present. Check along the ceiling, floors, and evaporative system for any places air can bypass wet pads. Spray foaming air leaks is a quick and simple method to fill cracks, but usually not a permanent fix.

**3. FILTERS** – Remove and clean or replace filters. Replacement filters must be stored on site and be readily available when needed. Filters must be inspected once a week at times of high use. Do not operate a system without filters or screens in place.

**4. PUMPS, FLOATS, AND TANKS** – Make sure pump intake screens are clean, floats are in place and adjusted and tanks are clean and free from debris. Pump screens must be inspected at least once a week during periods of high use of cooling system or as often as system is drained and flushed.

**5. DISTRIBUTION HEADER** – Flush the distribution header. Loosen the union at distribution header and carefully clean all distribution holes in header with screwdriver or soft bristle brush. Do not change the size of the hole in the header. Run water in system to ensure all holes are free from debris or clogs.

**6. WATER SUPPLY** – Test run recirculation system to make sure water fill levels are adjusted properly, and adequate water is available to fill system. Make sure the supply system fully wets the entire pad system and no dry streaks occur on pads. If water quality problems surface, additional filtration or treatment may be necessary. One simple way to extend system life is by routinely flushing the water during periods of high use. One system flush per week is much better than once per flock or per year!

**7. TUNNEL INLET OPENING** - Inlet curtain opening must be at least a minimum of 80% of the area of the cooling pad system area. For example, for 1,000 square feet of 6-inch recirculating pad, there must be a minimum of 800 square feet of free air unobstructed inlet opening. Bunched up curtains or partially opened tunnel doors must not restrict the tunnel inlet opening!! This is ideal time to test run the tunnel inlet for proper operation. We often find broken strings, damaged pulleys, holes in curtains, and twisted cables keeping inlets from functioning properly. (*continued on next page*)



*Figure 3: Can you identify the problem or problems in this thermal image of an end wall door? A. top of door leaking hot air, B. no insulation in ceiling, C. air leaking between ceiling and end wall, D. the hot air leaking through these openings would lower full tunnel wind speed and additional heat gain from missing insulation, E. all the above. If you answered, "E. all the above", you would be correct. Once again, this house is not ready for hot weather and might not pass a house tightness test or wind speed test.*



**TUNNEL HOUSE TIGHTNESS CHECKLIST** – Minimize all possible air leaks that will take away from the full house wind speed potential. Now is an ideal time to conduct a house tightness test per company guidelines to make sure houses are sealed for efficient environmental control. We recommend that this test result and the fan or fans used are recorded and documented in the control room of each house for future reference and repeatability.

- 1. CEILINGS** – All attic access boards, doors, and leaks need to be inspected and sealed to keep the house from leaking attic air into the house. Damaged attic inlets need to be replaced or removed and covered with plywood or equivalent.
- 2. DOORS** – All end wall doors must be inspected for safe operation and for air leaks. Inspect, seal, and repair as needed.
- 3. PERIMETER INLETS** – All sidewall or ceiling inlets need to be inspected for air leaks and proper operation. If the insulation is damaged, now is a good time to repair or replace it. We find a lot of air leaks around damaged metal vent doors. They are like Dion Sanders, “they ain’t hard to find”.
- 4. FOUNDATION** – Make sure all sidewall and foundation leaks have been identified and sealed properly. Small foundation leaks added together end up being significant contributors of hot air leaks and these leaks are often low at the foundation. The hottest place in the house during tunnel ventilation and the lowest windspeed location is typically along the foundations down each sidewall.
- 5. CURTAINS** – All tunnel houses that have sidewall curtains should have a top curtain flap and bottom lumber strip or equivalent seal at the bottom. Loose curtains can drastically reduce full tunnel wind speed, if allowed to exist. Holes and tears in curtains must be repaired with curtain tape or an equivalent method that will last.
- 6. INLET AND VENT MACHINES** – Tunnel inlet and sidewall vent machines and strap machines must be cleaned, inspected, repaired, and serviced just like any other piece of equipment. Grease those gears! Make sure all connections, limits, cables, and straps are in reliable condition and function flawlessly. These machines can sometimes get out of adjustment and need to be recalibrated or reset in the controller to make sure they fully open and fully close when used.

**BOTTOM LINE** - Even though this is not a comprehensive maintenance item list, we hope it helps identify maintenance items that may go overlooked when time is short. Our goal is to promote full potential wind speed, performance, and prevent emergency repairs during hot weather operation. Good luck this spring from the Auburn University National Poultry Technology Center!

## Daily Poultry Farm Mortality Management (*continued from page 39*)

Mortality compost must be properly managed, otherwise bad odors, flies, scavenging, and vermin will plague you as well as your neighbors. These problems can be easily avoided by monitoring compost temperatures and using the troubleshooting guide in Table 2. Following the composting recipe and giving attention to process detail on a daily basis will ensure that your finished compost product is free of disease pathogens and suitable for land application as a valuable soil amendment without creating nuisance odors. *References available upon request.*

## Commodity Report

November 30, 2023 at [Egg-News.com](http://Egg-News.com) by Dr. Simon M. Shane

### OVERVIEW

Prices for feed ingredients were little changed from last week. Prices were influenced by short covering arising from geopolitical concerns and revised projections for crop sizes in Brazil. Secondary factors included disruption in shipping in the Red Sea and Panama Canal, carryover from the 2023 U.S. crop, export orders and predicted ending stocks of corn and soybeans for the 2024 crop.

At 12H00 on February 29th the CME price for corn was up 1.7 percent compared to the previous week to 414 cents per bushel for March delivery. Corn price was influenced by lower ethanol demand and the proportionally high ending stock from the 2023 crop. Export orders for the current market year have increased in response to lower prices. Volumes and prices are indirectly influenced by events in the Black and Red Seas. Orders by China resumed at the end of the 2022-2023 market-year and have extended through February despite an elevated dollar Index offset by low FOB prices. Total exports for the current market year are 34.4 percent higher than for the corresponding week during the 2022-2023 year.

Soybeans were down 1.7 percent from last week to 1,129 cents per bushel for March 2024 delivery. Gains were attributed to short covering and projections for the 2024 Brazil harvest. Total exports for the current market year are 26.8 percent lower than for the corresponding week in the 2022-2023 year.

Soybean meal was down 0.6 percent to \$333 per ton for March delivery compared to \$335 per ton last week. Price was influenced by demand coupled with high crush volumes for three consecutive months through December but with volume reduced by January cold weather. Price will fluctuate to reflect the CME price for soybeans and the rising demand for biodiesel. The market previously responded to the increased 2023 crop and higher stocks together with projections for 2024 included in the February WASDE Report.

WTI was 0.6 percent higher from last week to \$78.54 on February 28th with low world demand in relation to supply. The rise in price is partly attributable to disruption of shipping in the Red Sea, turbulence in the Middle East but countered by U.S. production and reserves. The upward trajectory in price may continue if production cuts by OPEC become a reality. There was little inter-day fluctuation in price during the week (\$70.58 to \$79.14 range) with an upward trend. Crude oil inventory in the U.S., other than the Strategic Reserve, was up 4.9 percent to 31.0 million barrels last week following the seasonal trend. The U.S. is now producing 13 billion barrels of crude each day, constraining domestic and international prices.

Factors influencing commodity prices in either direction over the past four weeks included:

- ◆ Weather conditions in areas of the World growing corn and oilseeds especially in Brazil and also Argentine with favorable rain recently under the influence of a strong El Nino the 2023 U.S. harvest was completed ahead of the corresponding weeks in 2022 with higher carryover (downward pressure).
- ◆ Geopolitical considerations continue to move markets, especially in the Mideast. Cancellation of the BSGI in July and ongoing attacks on Ukraine port facilities impacted prices of wheat, corn, oilseeds, and vegetable oils. Loaded bulk vessels are sailing from Black Sea and Danube River ports using the "Humanitarian Corridor" to various destinations. This route is operational despite threats by the Russian Federation to mine the entrance to ports and deploy airborne missiles. Exports from Ukraine are approaching 1.5 million metric tons per week with a total of 26 million metric tons market year to date, down 11 percent from the equivalent period for 2022-2023 year. Grain production in Ukraine during the current year will be lower than 2021/2022 (Downward pressure on corn and wheat and an indirect effect on soybeans)
- ◆ Macroeconomic U.S. factors:
- ◆ Most economists in academia and the private sector are confident of a "soft landing" for the economy following the release of revised Q4 2023 GDP and recent releases of economic parameters including the CPI and anticipated PPI and a decline in bond rates. Annual inflation as measured by CPI declined from 8.9 percent in June 2022 to 3.1 percent in January 2024. This is in part a response to a series of 11 FOMC rate raises that curbed inflation and cooled the labor market but without precipitating unemployment. There is evident stability in the bank sectors in both the U.S. and Europe. Large U.S. banks passed stringent mid-year "stress tests". There is now concern over regional banks with exposure to commercial real estate.
- ◆ The Federal Reserve held the benchmark interest rate steady at the monthly FOMC meeting on January 31st, 2024, the fourth sequential pause. The Federal Reserve commentary indicated that the rate would be held at 5.25 percent until a pivot with possibly two to three reductions of 25 basis points each in 2024, after the April meeting at the earliest. Chairman Powell in Congressional testimony and documented in FOMC minutes has indicated that decisions would be based on data and progress in reducing inflation to achieve an annual 2.0 percent target by mid-2025. Market optimism with projections of five reductions during 2024 now appear unrealistically optimistic, with no reduction expected before June.
- ◆ The February 28th Bureau of Economic Affairs announcement of the advanced estimate of Q4 GDP confirmed a value of 3.2 percent, slightly below the consensus estimate of 3.3 percent. The rise was attributed to increased consumer and government sector spending and investment in inventory.
- ◆ The February 8th, 2024, S&P Manufacturing Purchasing Managers' Index Report (PMI) rose to 51.8 in January from 51.0 in December 2023. The PMI is approximately three percent below the 10-year average preceding the COVID years. The recent upward trend suggests recovery from the effects of successive raises in the Federal reserve benchmark interest rate. *(continued on next page)*

- ◆ On February 29th the Bureau of Economic Analysis released the January Personal Consumption and Expenditure Price Index (excluding food and energy) that was up 0.4 percent from the previous month. This was in line with estimates. Food prices increased 0.5 percent, but energy was down 1.4 percent. The Index was up 2.4 percent year-over-year also corresponding to estimates. Food prices were up 1.4 percent and energy down 4.9 percent year-over-year. The PCPI is closely followed by the Federal Reserve and confirms declining inflation.
- ◆ The February 13th Bureau of Labor Statistics release of the January 2024 CPI confirmed a 0.3 percent increase from December 2023. The annual increase of 3.1 percent was down from 3.4 percent in December but higher than the anticipated value of 2.9 percent. The increase in the core value (excluding food and energy) was 0.4 percent, and 3.9 percent for the 12-month period, in line with estimates. Food at home was up 0.4 percent from the previous month. Food away from home was up 0.5 percent from December. On an annual basis all food was up 2.6 percent with food at home up 1.2 percent and food away from home up 5.1 percent. Energy was down 0.9 percent in January and down 4.6 percent over 12-months, mainly due to a decline in gasoline (-6.4 percent) and fuel oils (-14.2 percent). The shelter category was up 0.6 percent for the month and 6.0 percent over the past year. The macro trend is clearly towards reduced inflation due to a fall in energy prices. The CPI influences FOMC rate decisions
- ◆ The January Producer Price Index for Final Demand (PPI) released on February 16th was up by 0.3 percent from December and up 0.9 percent over the past 12-months. This is compared to a 6.4 percent increase in 2022. The reduction was attributed mainly to a 0.2 percent decline in final demand for goods and the concurrent cost of energy. The core PPI value excluding volatile fuel and food, was up 0.6 percent for January and up 2.6 percent for the 12-month period. Food was down 0.3 percent compared to a 0.7 percent decrease in December and 1.5 percent over 12-months.
- ◆ A Federal Reserve release on February 15th confirmed that industrial production fell 0.5 percent in January against a projection of a 0.1 percent rise in December. Production was adversely affected by inclement weather during January 2024 with plant closures. Capacity utilization was down 0.2 percent to 78.5 percent, 1.1 percent below the 1972-2020 average.
- ◆ The February 26th report on Durable Goods Ordered for January 2024 was unexpectedly lower by 6.1 percent against a consensus estimate of a 4.5 fall. Transportation and specifically aircraft orders were down 16.2 percent. Excluding the Transportation component, new orders decreased by 0.3 percent in January impacted by inclement weather. Shipments of durable goods decreased 0.9 percent following a fall of 0.6 percent in December 2023.
- ◆ The February 15th release of retail sales data showed a monthly fall of 0.8 percent in January against an expected 0.1 percent decline. This value is compared to the revised 0.4 percent rise in December 2023. Core retail sales increased 0.6 percent in January. Retail sales in January were affected by harsh winter storms and a change in the basis of calculation. The Federal Reserve FOMC closely monitors this index as a measure of the trend in inflation.
- ◆ The February 1st ISM<sup>®</sup> Manufacturing Index for January rose to 49.1 from 47.4 in December.
- ◆ The Conference Board Consumer Confidence Index released on February 27th for January/February, declined to 106.7 points. This reading was down from a revised 110.9 for the preceding four-week period.
- ◆ The February 23rd University of Michigan Index of Consumer Sentiment rose to 79.6 for February up from a revised 79.0 in January. Both the Current Economic Index (81.5 slightly down from 81.9 in January) and the Index of Consumer Expectations (78.4 up from 77.1 in January) denote a cautious increase in consumer sentiment influenced by lower interest rates and moderating inflation despite geopolitical concerns.
- ◆ Non-farm payrolls increased by 353,000 for January, as documented by the Bureau of Labor Statistics on February 8th. This was 6.0 percent higher than the revised December value. The increase is attributed to workers in the business, health care and services industries but a decline in the energy sector. The unemployment rate held at 3.7 percent for the third consecutive month. Real average weekly earnings for January showed a 0.6 percent increase over December. Average hourly earnings rose 0.6 percent to \$34.55 in January, up 4.5 percent over 12 months. Wage rates are closely followed by the Federal Reserve.
- ◆ The Bureau of Labor Statistics Job Openings and Labor Survey report released on January 30th estimated 9.0 million job openings in December, unchanged from November and consistent with estimates. The December job openings number was the lowest value in 32 months.
- ◆ Seasonally adjusted initial jobless claims released on February 29th rose to 215,000 for the week ending February 24th, up 13,000 from the revised value for the previous week and higher than estimates of 210,000. The four-week moving average fell 3,000 to 212,500. The Bureau of Labor Statistics estimated 1.91 million continuing claims for the week ending February 17th up 45,000 from the previous week. There is evidence from data over the past three months that the labor market is cooling despite sporadic weekly reduction in new claims.
- ◆ The February 1st Bureau of Labor Statistics report recorded a 3.2 percent increase in non-Farm Productivity for Q4; Unit Labor Cost was up by 0.4 percent on a normalized basis and Hours Worked was up by 0.4 percent in Q4.
- ◆ The ADP<sup>®</sup> reported on January 31st that private payrolls increased by 107,000 in January, down 51,000 from the revised 155,000 in December and compared to the Reuters estimate of 145,000 jobs. The increase in employment was mostly in the service sector. Annual pay was up 5.2 percent year-over-year. The increase will not directly influence the probability of short-term future changes in interest rates since the ADP<sup>®</sup> is regarded by the FOMC as an unreliable statistic.

#### FACTORS INFLUENCING COMMODITY PRICES

- ◆ The 2023 harvests of corn and soybeans were completed by late November 2023. The February 8th WASDE provided a projection for acreage to be planted, yields, crop size and ending stocks for the 2024 crop. (continued on next page)

- ◆ It is evident that both polarization in the closely divided chambers of Congress and intra-party conflict between and among both sides of the aisle in the House will delay adoption of appropriations bills. Passage of the 2023 Farm Bill will be contentious and is subject to a 12-month extension as a stop-gap measure. Progress on the 2023 Farm Bill has been impeded by contention over SNAP eligibility and other entitlements that collectively represent 75 percent of total expenditure. The August 2nd downgrade of U.S. debt from AAA to AA+ by Fitch Ratings recognizes Congressional dysfunction. On November 10th, 2023, Moody's downgraded U.S. credibility from 'stable' to 'negative' based on an inability to pass required fiscal legislation. The House failed to pass eleven appropriations bills and passed an 11th hour continuing resolution deferring action to November 17th to finance the Federal government. Again, failure to enact appropriations bills resulted in a second continuing resolution on November 15th freezing spending at FY 2013 levels pending votes on appropriations with extended deadlines of January 19th and February 2nd. Little progress occurred in the closely divided House under current leadership with distraction caused by peripheral issues including dissention over the border situation, foreign aid and the magnitude of the national debt. A third continuing resolution was passed on January 18th extending the laddered deadlines to March 1st and 8th respectively. A Federal shutdown should be avoided with passage of a continuing resolution on Friday March 1st. There is an assurance from Speaker Mike Johnson (R-LA) and Senate Majority Leader Chuck Schumer (D-NY) that an agreement has been reached on six appropriations bills to be enacted before March 8th and the remainder before March 22<sup>nd</sup>.
- ◆ The delayed 2023 Farm Bill is mired in conflict in both the House and Senate. There is no consensus on major issues comprising the magnitude of SNAP payments and eligibility and requested price supports for crops. The Chair of the Senate Agriculture Committee Sen. Debbie Stabenow (D-MI) is standing firm on maintaining both SNAP-WIC benefits and climate remediation funding even if the Farm Bill is delayed through to the 119th Congress.
- ◆ The February 8th WASDE #645 Projected both corn and soybean production parameters with a potential record corn harvest for the 2024 crop. There will be ample world availability of ingredients although inequitable distribution will result in shortages in some nations. Soybean exports will comprise 39 percent of the 2024 U.S. crop with a 12.5 percent increase in ending stock. (See WASDE Report in this edition confirming availability, use and ex-farm price projections)
- ◆ There is an expectation that for market-year 2023-2024, Brazil will harvest 148 million metric tons (5,438 million bushels) of soybeans down from a previous estimate of 155 million metric tons (5,695 million bushels). Exports of 100 million metric tons (3,674 million bushels) are anticipated and Brazil will crush 56 million metric tons (2,057 million bushels). A corn harvest of 129 million metric tons (5,027 million bushels) is anticipated with exports of 54 million metric tons (2,125 million bushels). (Lower prices in the future subject to favorable reports on crop progress and actual harvests)
- ◆ The Dollar Index (DXY) was 103.8 on February 28th, down 1.0 point from last week and just under a three-month high with fluctuation following uncertainty over future interest rates and prospects of a prolonged delay in the anticipated pivot by the Federal Reserve FOMC. The DXY has ranged from 99.9 to 107.0 over the past 52 weeks. The dollar index influences the timing and volume of export orders and indirectly the price of WTI crude.

## EXPORTS

The FAS Export Report for corn, released on February 29th for the week ending February 22nd confirmed that outstanding export orders for corn amounted to 17.92 million metric tons (705.33 million bushels). Net orders for the past week for the 2023-2024 market year amounted to 1.08 million metric tons (42.59 million bushels). Shipments recorded during the past working week amounted to 1.22 million metric tons (47.86 million bushels). For the current market year to date cumulative export of 20.20 million metric tons (795.00 million bushels) is 34.4 percent higher compared to the equivalent week of the previous market year. For market year 2024-2025 outstanding orders attained 1.02 million metric tons (63.76 million bushels) with 0.17 million metric tons (6.49 million bushels) ordered this past week. (Conversion 39.36 bushels per metric ton. Quantities in metric tons rounded to 0.1 million)

The FAS Export Report for soybeans covering the week ending February 22nd reflecting market year 2023-2024, recorded outstanding export orders amounting to 6.32 million metric tons (232.2 million bushels). Net orders this past week attained 0.16 million metric tons (5.87 million bushels). Shipments for the past working week attained 1.10 million metric tons (40.48 million bushels). For the current market year to date cumulative exports of 32.70 million metric tons (1,202 million bushels) are 26.8 percent lower compared to the equivalent week of the previous market year. Outstanding orders for the 2024-2025 market year amount to 189,800 metric tons (6.97 million bushels) with no orders this past week. (Conversion 36.74 bushels per metric ton)

For the week ending February 22nd, 2023, outstanding orders for soybean meal and cake attained 3.87 million metric tons. Net orders this week for soybean meal and cake amounted to 456,200 metric tons. During the past week 276,400 metric tons of meal and cake combined were shipped. The quantity exported to date is 15.3 percent higher than the volume for the corresponding weeks of the previous market year. For the next market year outstanding sales have attained 17,600 metric tons with 6,400 tons ordered this past week. The February 8th, 2023, WASDE projected:

- ◆ Corn area planted for all purposes in 2024 ('new crop') will attain 94.6 million acres, down 0.3 from last year. According to the February WASDE, yield was projected at 177.3 bushels per acre with a resulting production of 15,342 million bushels with 2,172 million bushels as ending stock. The USDA retained the average ex-farm price to 480 cents per bushel for the 2024 crop.
- ◆ Soybean area to be planted for 2024 will attain 83.6 million acres, unchanged from 2023. According to the February WASDE, yield was predicted at 50.6 bushels per acre with production of 4,165 million bushels with 315 million bushels as ending stock. The USDA estimated an average season price of 1,265 cents per bushel.
- ◆ Crushers are expected to produce 54.15 million tons of soybean meal. Ending stocks will attain 400,000 tons. The USDA held the average projected price at \$380 per ton.
- ◆ At the 100th Annual Agricultural Outlook Forum in mid-February, Dr. Seth Meyers revised areas to be planted to the two major crops in 2024. Corn will be planted over 91.0 million acres, down 3.8 percent from 2023. Soybean acreage will increase 4.7 percent to 87.5 million acres. (continued on next page)

The preference for planting corn over soybeans in 2023 was based on a favorable projection of the corn to soy benefit ratio. Planting data for 2024 will be ascertained following surveys of farmers during March concerning their planting intentions.

#### COMMODITY PRICES

The following quotations for the months of delivery as indicated were posted by the CME at 12H00, February 29th, 2024, compared with values at close of trading on February 22nd, 2024 (in parentheses):

##### COMMODITY

Corn (cents per bushel)	March 414 (407)	May 428 (419)
Soybeans (cents per bushel)	March 1,129 (1,148)	July 1,153 (1,161)
Soybean meal (\$ per ton)	March 333 (335)	July 332 (335)

Changes in the price of corn, soybeans, and soybean meal over five trading days this past week were:

Corn: March quotation up 7 cents per bushel. (+1.7 percent)

Soybeans: March quotation down 19 cents per bushel (-1.7 percent)

Soybean Meal: March quotation down \$2 per ton (-0.6 percent)

The CME spot prices for feedstuffs per short ton at close of trading on February 28th, 2024, with prices for the previous week were:

Corn (ZC): \$154 per ton, was \$151. Up \$3 per ton from the previous week. 52-week range \$151 to \$241

Soybean Meal (ZM): \$328 per ton, was \$337. Down \$9 per ton (-2.6 percent) from the previous week. 52-week range \$340 to \$513

#### COMMENT

Subscribers are referred to the December 8th 2023 WASDE #643 for the 2023 harvest. The preliminary USDA projection for 2024 harvests is included in the February 8th WASDE retrievable under the STATISTICS tab. The USDA Planted Acreage Report and the quarterly Grain Stocks Report posted under the STATISTICS Tab.

Following cancellation of the Black Sea Grain Initiative (BSGI) Ukraine commenced limited shipment of commodities from the three main Black Sea and Danube Delta ports that remain functional. Projected harvest during the 2022/2023 season will amount to 49.0 million metric tons, 42 percent lower than for 2021/2022. Exports were projected to attain 38.1 million metric tons, 26.5 percent lower than the previous market year.

Either more intense action by Ukraine, a negotiated peace treaty with concessions to the Russian Federation, or their combination will be required to restore unrestricted shipping in the Black Sea. Increasing passage along the coastal-route ("Humanitarian Corridor") has allowed sea-transport of commodities since early August to supply Asia and Africa. [Click here for full article](#)

## Biosecurity

### Why Biosecurity is Important to the Poultry Farmer - Part 1

*Submitted by Dr. Samantha Beaty, TN State Veterinarian, and Eric Medley, TN Poultry Programs Coordinator*

Biosecurity is critical to ensure that your flock is healthy and marketable with as few added inputs as possible. Biosecurity doesn't need to be intimidating or expensive. Most people already have the items they need to implement good biosecurity.

The impact of disease in a flock is profit loss for the producer. For example: an incursion of a disease like Avian Influenza can be catastrophic for farm owners who lose their entire flock. In an article by Jordan Shockley, He examined the financial impact of contracting HPAI in a standard four broiler house (43 ft. x 600 ft.) operation in Kentucky with 32,300 broilers per house, a 56-day grow-out period, and 17 days to clean between flocks. The loss in net farm income from contracting HPAI was \$46,512, \$97,658, and \$158,348 for the loss of one, two, and three flocks, respectively. This loss in net farm income could also be interpreted as the on-farm equity required to self-insure the operation from HPAI. (Shockley , 2022) [On-Farm Cost of Contracting High Path Avian Influenza in a Commercial Broiler Flock \(southernagtoday.org\)](#)

Growers of infected flocks are responsible for disposal, cleanup and disinfection of the farm per government standards in order to qualify for any reimbursement for costs by the USDA. An Avian Influenza detection will lead to trade restrictions for the impacted region/state interstate and even internationally. In the meantime the producer will not be allowed to place new birds until the response is concluded. Regulatory agencies like USDA and TDA are responsible for overseeing the response activities on farms according to standardized federal guidance. This ensures trade partners that efforts to stamp out disease have been successful.

Companies and producers must strive to prevent the introduction of disease to ensure commerce remains robust and industry is protected.

As the owner of the farm, in the end you are responsible for biosecurity implementation and ensuring that anyone who enters your farm is following biosecurity protocols. There is no way to eliminate all risk of disease, but there are ways to heighten biosecurity to minimize the threat.

This series will review the principles and implementation of biosecurity and how disease at the farm level impacts producers. There are 14 biosecurity principles set forth in Standard E of the National Poultry Improvement Plan Program Standards. [ProgramStandardsA-E.pdf \(poultryimprovement.org\)](#) (page 60) *(continued on next page)*

**1. Biosecurity Coordinator**

The Biosecurity Coordinator is tasked with developing, implementing, and maintaining the biosecurity program. Companies will have a biosecurity coordinator who can assist in the development of a good biosecurity plan for your farm. The producer/grower is responsible for implementation and maintenance of the biosecurity plan after development. The plan should be reviewed by the company and grower yearly to ensure that no revisions are needed.

**2. Training**

Education is paramount in ensuring that all individuals involved in poultry farming understand and adhere to biosecurity measures. Training materials should cover site-specific and broader procedures, and all caretakers regularly entering the perimeter buffer area (PBA) must undergo annual training. New hires should be trained upon being hired. Training records should be retained as stated in Title 9-CFR §145.12(b) and 146.11(e)

**3. Line of Separation (LOS)**

The Line of Separation serves as a functional barrier, protecting poultry from potential disease sources. For most farms, the line of separation is going to be the control room or the door in the house. The site-specific biosecurity plan should define the LOS, accounting for practical deviations. In outdoor pen situations, similar principles apply, and in emergencies, enclosing poultry is recommended.

**4. Perimeter Buffer Area (PBA)**

The Perimeter Buffer Area (PBA) is a designated zone surrounding poultry houses, separating them from unrelated areas. It includes structures like feed bins, manure sheds, and essential facilities. A site-specific biosecurity plan outlines PBA boundaries and entry/exit procedures for caretakers, visitors, and suppliers. The PBA acts as a protective barrier, minimizing the risk of disease transmission and contributing to overall poultry health and productivity.

**5. Personnel**

The biosecurity plan must detail procedures and personal protective equipment (PPE) for on-site personnel. It should also outline procedures and biosecurity PPE for non-farm personnel. Additionally, the plan must specify protocols for individuals with recent contact with other poultry or avian species before re-entering the Perimeter Buffer Area (PBA).

**6. Wild Birds, Rodents, and Insects**

Control measures to prevent contact with and protect poultry from wild birds, rodents, and insects are crucial. Periodic reviews during heightened disease transmission risks ensure the effectiveness of these measures.

**7. Equipment and Vehicles**

Provisions for cleaning, disinfection, and restriction of equipment sharing should be detailed in the biosecurity plan. Defined vehicle access and traffic patterns further contribute to preventing disease spread.

**8. Mortality Disposal**

Safe and timely disposal of mortality is essential to prevent attracting wild birds and other scavengers and minimize cross-contamination. On-site disposal is recommended, and site-specific biosecurity plans should detail the disposal process. Mortality should be removed daily.

**9. Manure and Litter Management**

Proper removal, storage, and disposal of manure and spent litter prevent disease agent exposure. Storage practices should limit attraction to wild birds and other animals.

**10. Replacement Poultry**

Sourcing replacement poultry from health-monitored flocks, ensuring clean transportation, and implementing biosecurity protocols are vital for preventing disease introduction.

**11. Water Supplies**

Using a contained water supply, such as a well or municipal system, is recommended. If surface water is used, treatment is necessary to reduce disease agent levels, with subsequent disinfection to prevent transmission.

**12. Feed and Replacement Litter**

Delivery, storage, and maintenance of feed, feed ingredients, bedding, and litter should minimize exposure and contamination risks. Timely cleanup of feed spills within the PBA is essential.

**13. Reporting of Elevated Morbidity and Mortality**

Any increase in morbidity and/or mortality above expected levels must be reported as per the site-specific biosecurity plan, with appropriate actions taken to rule out reportable disease agents.

**14. Auditing**

Audits of biosecurity principles are based on flock size, following 9 CFR 53.10, for breeding flocks with a minimum of 5000 birds. Official State Agencies conduct audits at least once every two years to ensure compliance. Each audit includes a review of training materials, NPIP Biosecurity Principles implementation, corrective actions, and the Biosecurity Coordinator's annual review. Audit summaries, indicating satisfactory or unsatisfactory outcomes, are submitted to the NPIP National Office by the OSAs. Participants failing the initial audit may opt for a check audit by a team appointed by the National NPIP Office, including an APHIS poultry expert, the OSA, and a licensed poultry veterinarian. To regain compliance, participants must demonstrate corrective actions taken after the audit by the NPIP-appointed team.

I know that some of that seems like not your problem as a farmer, but this is the foundation for all the biosecurity for the companies you grow for. A better understanding of this may help you figure out why that annoying tech is bothering you about the grass being mowed. If you, as a farmer, have any questions about this, please reach out to your company's flock advisor.

## How negative pressure ventilation keeps poultry houses warm

January 5, 2024 at [WattAgNet.com](http://WattAgNet.com) by Mike Czarick

Negative pressure ventilation is the most common method of ventilating poultry houses during cold weather worldwide. Exhaust fans are used to bring in a precise amount of fresh air, while air inlets help not only distribute the fresh air uniformly throughout a house but also direct the cool incoming air along the ceiling. As the cool outside air moves across the ceiling, it will be warmed and dried by the heat produced by radiant heaters/furnaces, as well as by heat produced by birds before it moves down the floor level. The longer the cool incoming air moves along the ceiling, the more the incoming air will be warmed and dried, and the more control a producer will have over house temperature, air quality, litter moisture, and, in turn, broiler performance, health and welfare.

**Measuring negative pressure** - The level of negative pressure the exhaust fans create is typically measured in “inches of water column.” If a house has a negative pressure of 0.10 inches and a tube is run from inside the house and the end is placed in a glass of water outside the house, the water would be drawn up the tube 0.10 inches. When exhaust fans come on during minimum ventilation, the negative pressure created by the fans will be the same throughout the house, no matter the size. As a result, it doesn't matter where negative pressure is measured within a house.

The negative pressure created by the exhaust fans does not affect birds. This is because the negative pressure created by the exhaust fans is extremely small relative to the everyday changes in outside atmospheric pressure. Atmospheric pressure typically varies between 29 and 31 inches of mercury, which is equivalent to 394-421 inches of water column, a 27-inch difference. The pressure created by exhaust fans during minimum ventilation is typically between 0.08 and 0.12 inches of water column, less than 0.04% of the pressure experienced by the bird by passing weather fronts.

The level of negative pressure exhaust fans create during minimum ventilation depends upon the amount of “opening” available to the fans. The greater the opening, the lower the negative pressure created by the exhaust fans. If two 36-inch fans have 20 square feet of opening available to them, the pressure will be approximately 0.15 inches. If the amount of opening available to the fans were doubled to 40 square feet, the pressure would decrease to approximately 0.04 inches.

**Maximize the warming of incoming air** - The level of negative pressure determines the speed at which the air enters through an inlet. The higher the level of negative pressure, the faster the air will enter through an inlet. For instance, at a static pressure of 0.05 inches, air will enter through an inlet at a speed of approximately 900 feet per minute. If the pressure is increased to 0.10 inches, the speed will increase to 1,250 feet per minute. In general, the faster the air enters a house, the longer it will stay along the ceiling and the warmer it will be before moving down to the floor level. For instance, increasing the static pressure from 0.05 to 0.10 inches (with the same inlet opening size) can increase how far the cold incoming air moves along the ceiling by between 30 to 40%.

It is important to remember that the level of negative pressure is not the only factor determining how far the incoming air will travel along the ceiling. For any given house, how far the air entering through an inlet will travel along the ceiling before going down towards the floor also depends primarily on factors such as inlet opening size and inside and outside air temperature difference.

The larger the inlet opening, the more momentum the air jet will have, and the farther the air will travel along the ceiling. Theoretically, at a static pressure of 0.10 inches, increasing the size of an inlet opening from 1 to 2 inches will increase the distance the air will travel along the ceiling by 20 to 30%. The challenge for producers is that as the inlet opening size increases, the static pressure decreases, which lowers the speed at which the air enters the house. As a result, increasing the static pressure by reducing the size of a house's inlet openings may not increase how far the air travels along the ceiling. Because of this, it can be more effective for growers to increase static pressure by closing a portion of their inlets during cold weather.

For instance, instead of increasing the static pressure by reducing their inlet opening size from two to one inch, they can close half the inlets and maintain a two-inch inlet opening with a higher pressure/airspeed. The combination of the two-inch inlet opening and the higher static pressure will help to ensure that the cool air does not drop to the floor prematurely, leading to cool, drafty conditions at floor level.

**Impact of temperature differential** - Many growers do not realize that the difference in air temperature inside and outside the house generally has a more significant effect on how far the air will travel along the ceiling than the level of negative pressure or inlet opening size. Theoretically, increasing the difference in inside/outside temperature from 10 F to 70 F will reduce how far the incoming air travels along the ceiling by 70%. For example, if a poultry house has air entering through inlets that moves across the ceiling at 90 F inside and 60 F outside, but the following day the temperature outside fell to 40 F, if the static pressure and inlet opening remain the same, 0.10 inches and 1.5 inches, respectively, the much heavier incoming air quickly falls to the floor on the second day. This is why it is generally recommended that the target static pressure be increased as outside temperatures fall.

**Temperature differential impacts the optimum solution** - Though using a negative pressure ventilation system during cold weather is a proven and widely used method of ventilating poultry houses, it can sometimes be challenging to manage. This is because there is no one single optimal combination of the number of minimum ventilation fans, inlet opening size and static pressure that will work for all farms under all inside and outside air temperature conditions.

A good starting point for a house with day-old chicks would be to operate one cubic foot per minute (cfm) per square foot of floor space on an interval timer (20,000 per square house = 20,000 cfm of timer fan capacity, i.e., two 36-inch fans) and work to create a static pressure of approximately 0.10 inches with side wall inlets open approximately two inches. From here, a grower can experiment with slightly different combinations of static pressure, inlet opening size and number of inlets to obtain what they feel is the best environment for their birds.

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3. Name/company \_\_\_\_\_
4. Name/company \_\_\_\_\_
5. Name/company \_\_\_\_\_
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8. Name/company \_\_\_\_\_

### Sporting Clays Registration Form

1. Name/company \_\_\_\_\_
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6. Name/company \_\_\_\_\_
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