

TPA NEWSLETTER...from the Tennessee Poultry Association

LOW PATH AI IN MISSOURI AND TEXAS

March 6, 2018: USDA confirmed a case of H7N1 low pathogenic avian influenza (LPAI) in a commercial meat turkey flock of 20,000 birds in Jasper County, Missouri as a result of routine, pre-slaughter testing & surveillance. There were no clinical signs of illness or increased mortalities and the turkeys were to be depopulated through controlled marketing. Jasper County is located in southwest MO, near the KS border.

March 7, 2017: USDA reported a case of H7N1 LPAI in a broiler breeder flock in Hopkins County, Texas as a result of routine, pre-slaughter testing & surveillance. The flock of 24,000 birds exhibited a slight increase in mortality and a decrease in egg production. The birds were to be depopulated on March 8th. Hopkins County is located in northeast TX, near OK and AR.



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Leah Watson

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Charlie Sneed

"I cannot thank TPA enough for their support of my college and future career. The scholarships I received have helped me tremendously to be able to continue my education and earning my degree. The TPA remembers to give back to the communities it is a part of and that is what makes them great."



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LEGISLATIVE UPDATES:

AMMONIA REPORTING UPDATE: On February 1, 2018, the DC Circuit Court of Appeals granted EPA's motion to further stay issuance of the [CERCLA](#) mandate until May 1, 2018. Farms with continuous releases of ammonia do not have to make their initial continuous release notification until the DC Circuit Court of Appeals issues its order, or mandate. Meanwhile, a bi-partisan bill, the Fair Agricultural Reporting Method (FARM) Act was introduced Feb. 13, 2018 by twenty senators to restore the desired CERCLA exemptions. Numerous national organizations, including USPOULTRY, NCC, NTF, UEP, pork, cattleman's and the American Farm Bureau Federation, are very involved in supporting this legislation. The outlook is positive but not certain. [S. 2421 Fischer/Donnelly](#)

News
flash

NEW CAFO REGULATIONS PASSED FOR TN. Legislation was unanimously passed in both the House and the Senate and signed into law by Gov. Haslam on Feb. 28, 2018 that no longer requires dry litter poultry operations of any size in TN to have a CAFO permit (State Operating Permit). This finally brings TN in line with federal CAFO regulations for poultry, to not exceed EPA's requirements. Growers who wish to obtain and maintain a state operating permit will have that option to apply. *Growers who are currently permitted are advised to continue meeting their existing permitting obligations for compliance until the new rules are finalized and posted by TDEC later this spring.* Additional information will be sent to the live production managers and TPA grower members as the final rules and guidelines are established by TDEC. Growers who do not obtain or maintain a CAFO permit of any kind (SOP or NPDES) are encouraged and best advised to follow the Univ. of TN's nutrient management guidelines. These guidelines are available in a simple format that can be completed in as little time as 20-30 minutes for the average poultry operation in TN at no cost to a grower, to document best management practices and to establish simplified recordkeeping guidelines. Note that General Construction Permits (GCPs) and Storm Water Pollution Plans (SWPPPs) are a separate permitting process and are still required when one or more acres of land are disturbed for new chicken house construction.

[SB 2217 Bell – HB 2317 Hawk](#)

Proposed tax exemption for water in TN. Exempts any water furnished by a utility district that is used exclusively in a poultry or other farming operation from taxes (must be on a designated meter). This bill is still making its way through the House Finance Ways & Means Committee and has a fiscal note attached that will reduce income for the state, so may not have the support needed to get it passed.

[SB 2669 Bailey - HB 1887 Lollar](#)

Proposed permit shield for TN. A permit shield protects a permit holder from enforcement by TDEC for discharge if the permit holder is in compliance with the permit. This will be a good bill for farmers and the processing plants to have in place to help minimize possible fines and penalties. The SB passed in committee and the HB is up next in the Commerce & HR Committee on 3/18.

[SB 2229 Southerland - HB 2313 Lollar](#)

Workers Comp clarifications proposed. The language in this bill is similar to the language for small businesses with under 5 employees to ensure the chapter would apply to farmers who do provide workers compensation to their employees. If passed this bill will provide favorable clarification for growers as employers.

[HB 2105 Halford - SB 2141 Gresham](#)

TPA would like to thank the TN Farm Bureau Federation and TN Dept. of Ag for their support of these proposed bills and thank them for passage of the CAFO bills. Please contact your TN state Representative and Senator and ask for their support of these bills.

Special Note of Thanks

We'd like to take a moment and say thanks to all of our members, advertisers and supporters. Because of you, we are able to make a difference in the poultry industry in TN in so many ways. Our scholarship program has become very special to us, as we get to see firsthand how it impacts the lives of young people who have grown up in the poultry industry in TN, or have dreams of being a part of it in the future. Since beginning the program in 2014, TPA has had the pleasure of awarding \$44,500 to 32 very deserving students.

Thank You

Please consider this our formal invitation for you to join us in April to shoot sporting clays, play golf or lend your support in other ways. We are accepting sponsorships, cash donations and door prizes at this time, and already signing up teams. Call or email us if you'd like to get involved. We'd sure appreciate it.

Tracy Rafferty - TPA Member Services, tracy@tnpoultry.org

We are now accepting applications for the **2018 TPA Scholarships**. Applications are due **April 1** and are available on pages 44-48 of this newsletter, or on our website at www.tnpoultry.org. If you know a college student who grew up on a TPA grower member farm, or who is a resident of TN pursuing a degree in the poultry industry, please share this with them. For more information, email Tracy@tnpoultry.org.



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SBA Comments on Loans to Poultry Farmers

SBA Inspector General Report examined loans made from FY2012 – FY2016

March 12, 2018 SBA News Release: This week, the U.S. Small Business Administration received a report from its Inspector General on loans made to poultry farmers. The report focuses on 11 loans that were made from FY 2012 - FY 2016 and, by extension, questioned whether the remaining 1,500 poultry loans made during that five year period met SBA's eligibility requirements. The SBA has reviewed those 11 loans, and confirmed that they were correctly made in accordance with Agency policy at the time. The loan guarantees will continue to be honored for those and other similar poultry loans. As always, SBA loan guarantees are backed by the full faith and credit of the U.S. Government.

Small business loans are at the core of the SBA mission, and the Agency is examining the policies and procedures around poultry loans to ensure SBA loans continue to be directed towards those small businesses most in need of assistance.

To view the IG's report go to https://www.sba.gov/sites/default/files/oig/SBA-OIG-Report-18-13_0.pdf □

Maryland Debating Proposal to Study Whether Large Poultry Farms are Causing Air Pollution

February 16, 2018, in *Environmental*

The Maryland House of Delegates is debating a proposal to study whether large poultry farms are polluting the air in the state. The proposed legislation would establish an eight-person committee to design a study tracking air quality in areas in the state that have a higher concentration of agricultural operations. Motivation behind the study is not only to determine whether air pollution problems are caused or exacerbated by large poultry farms, and if so, whether it is playing a factor in human health. □

Tyson Foods Agrees to Purchase Western Tennessee Grain Elevator Operations

Springdale, Ark. – February 14, 2018 – As part of its continued expansion in western Tennessee, a subsidiary of Tyson Foods, Inc. (NYSE: TSN) has signed a definitive agreement to purchase three commercial grain elevators from the Grain Group of The Andersons, Inc. (Nasdaq: ANDE). The elevators are located in Dyer, Humboldt and Kenton, Tennessee and will support Tyson Foods' existing operations in Union City, Tennessee as well as its planned chicken complex in Humboldt.

"This project will help secure vital inputs for us, and position us to grow and support our customers," said Doug Ramsey, group president of poultry for Tyson Foods. "We look forward to creating more direct relationships with the grain producers in the area."

The transaction is expected to close in March, and terms of the agreement are not being disclosed. It is expected that about 20 employees of The Andersons will become employees of Tyson Foods. No disruption to existing contracts with area farmers is expected.

Tyson Foods developed a program called Local Grain Services (LGS) to build relationships with and resources for farmers who provide grain to feed chickens grown for the company. Buying corn, wheat and soybeans directly from local farmers promotes local economies and is part of the company's strategy to sustainably feed the world with the fastest growing portfolio of protein-packed brands.

The company has developed multiple resources for farmers to sell their grain, including a mobile app and website. Farmers can visit the [TYSON LGS WEBSITE FOR MORE INFORMATION](#). □

Morrison Poultry Recognized for Environmental Excellence by USPOULTRY

Morrison Poultry in Wingo, Ky., was one of six farms across the United States to receive U.S. Poultry & Egg Association's Family Farm Environmental Excellence Award during the 2018 International Production & Processing Expo in Atlanta. USPOULTRY sponsors the annual awards in recognition of exemplary environmental stewardship by family farmers engaged in poultry and egg production.

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

Morrison Poultry is owned and operated by Tim and Deena Morrison. The Morrison's raise broiler chickens for Tyson Foods as well as grow corn and soybeans. Their poultry farm has been in operation since 1999. On the farm, Tim and Deena incorporate a number of practices, including water diversion structures, ponds to detain excess rainwater runoff, and grassed waterways to ensure they are being good stewards of the land and water.

[Click here for full article](#) □



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Koch Foods renovating hatchery in Henagar, Alabama

JANUARY 19, 2018 FROM WATTAGNET.COM

Facility will have a weekly setting capacity of more than 3.7 million eggs

Koch Foods is completely renovating its hatchery in Henagar, Alabama. When the project is completed, the facility is expected to be the largest fully integrated, single stage broiler hatchery in the Western Hemisphere.

Once completed, the renovated hatchery will have a weekly setting capacity of more than 3.7 million eggs.

According to a press release from [Pas Reform](http://PasReform.com), the hatchery will be equipped with 84 SmartSetPro setters with a capacity of 132,192 eggs each, and 92 SmartHatchPro hatching machines, each with a capacity of 22,032 hatching eggs.

A new hatchery automation system is designed to process 800,000 day old chicks in an eight-hour operating day. To achieve this, the system incorporates three transfer candling lines with individual stacking, destacking and clear egg removal; a double chick take-off line with destackers, separators and innovative, animal-friendly SmartCount chick counters.

Also included in the facility project is a complete renovation of the climate control and automation systems to make the hatchery one of the most energy efficient in North America.

The Henagar hatchery renovation is the second hatchery project Koch Foods has initiated in recent months. In October 2017, it was announced that the [hatchery in Crossville, Alabama](http://hatchery.inCrossville,Alabama), was being renovated. Koch Foods partnered with Pas Reform on that project as well.

Gary Davis, vice president, Eastern Division at Koch Foods, commented: "Before embarking on a company-wide hatchery renovation-expansion program, we tested Pas Reform's equipment and technologies extensively in the Henagar facility.

"Once we saw improvements in hatch and feed conversion rates, we worked with the Pas Reform/NatureForm team to evaluate the project's viability and, based on return on investment calculations, our experience with the renovation of our Crossville, AL facility and the very comprehensive support package that has also been a key success factor for other major hatcheries in the U.S.A., the project was approved." □



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John Harrison (Sweetwater Valley Farms)



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Gulke: Unexpected Reactions to WASDE

FEBRUARY 10, 2018 in AgWeb.com by [Jo Windmann](#), Senior Web Producer

The reactions to USDA's World Agricultural Supply and Demand Estimates (WASDE) report were not as one would expect. Thursday saw a neutral response to a bullish corn report that lowered carryout by 125 million bushels and USDA increased soybean carryout by 60 million bushels taking us to levels of ending stocks not seen in quite a few years.

Jerry Gulke, president of the Gulke Group says, "Even though I expected that, I was surprised the government would make such big moves."

Looking ahead at the global demand in corn, typically, when production goes up the demand goes up; however, *this is the first year in a while the global demand for corn will exceed the stocks globally.* Conversely, we're also seeing soybean supplies greater than the demand. Gulke notes it's not significant enough to impact the market at this point but it does signify a shift in the balance, which could be positive for corn prices and negative for soybeans but it may be too soon to tell. While hope springs eternal, no one is willing to take any risks with such tight margins right now.

Listen to Jerry Gulke's full commentary on this week's Weekend Market Report with host Pam Fretwell at AgWeb.com □

Hubbard facility awarded Compartment status in France



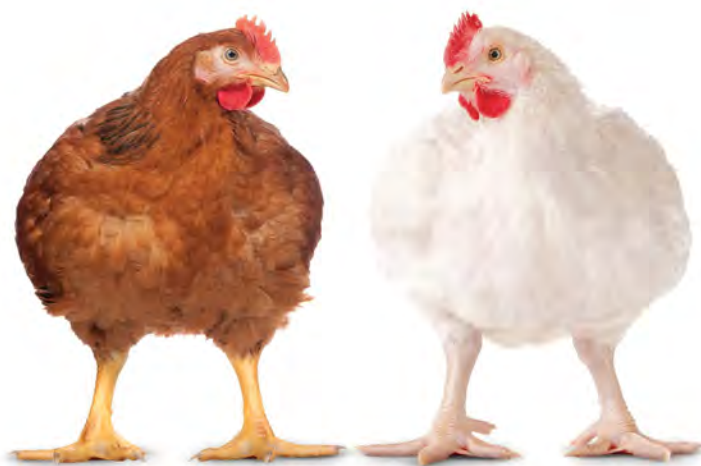
Hubbard is pleased to announce that their French primary breeding operations have officially obtained Avian Influenza Free Compartment status, following the audit conducted by the French Veterinary Authorities under the provisions of Commission Regulation (EC) No 616/2009 and of the OIE Terrestrial Animal Health Code.

"Zoning and compartmentalization are procedures implemented by a Member Country with a view to defining subpopulations of distinct health status within its territory for the purpose of disease control or international trade. While zoning applies to an animal subpopulation defined primarily on a geographical basis (using natural, artificial or legal boundaries), compartmentalization applies to an animal subpopulation defined primarily by management and husbandry practices related to biosecurity."

This newly obtained accreditation comes in recognition of Hubbard's prime health status and biosecurity procedures, and should facilitate trade for the high end chicks or eggs produced from these primary breeding operations.

<https://www.hubbardbreeders.com/newsroom/hubbard-press-release/718-hubbard-facility-awarded-compartment-status.html> □

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UGA HOT WEATHER MGMT WKSHP/WEBINAR

April 16-18, 2018
Watkinsville, GA

SPRING SCHOLARSHIP FUNDRAISERS

TPA Sporting Clays Shoot
April 18, 2018
Nashville Gun Club

TPA Golf Tournament

April 19, 2018
The Hermitage Golf Course
Nashville, TN

HOT WEATHER HANDS-ON TRAINING

April 25, 2018
Auburn University - NPTC
<http://www.aces.edu/poultryventilation/>

SHOOTING HUNGER

June 7, 2018
Carroll Co. Shooting Sports Park

TPA ANNUAL MEETING & SUMMER GETAWAY

August 3 & 4, 2018
DoubleTree Nashville Downtown

PROPANE SPOT PRICING:

As of March 5, 2018 Mont Belvieu Propane Spot Price has decreased since the 1st of the year from \$0.98/gal. to a currently fairly steady rate of \$0.76/gal. These prices varied from \$0.75 – \$0.93/gal. throughout the month of February.

Allowing for an average of \$0.41 per gallon for tariffs, handling and delivery to most areas, the average current retail price is roughly \$1.17/gal. Larger accounts can often negotiate a lower price agreement by as much as \$0.05/gal., or more. To follow Mont Belvieu, TX spot pricing go to: https://ycharts.com/indicators/mont_belvieu_propane_spot_price □

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USDA will not allow faster speeds at poultry processing plants

JAN. 31, 2018 IN WATTAGNET.COM BY ANN REUS

The U.S. Department of Agriculture (USDA) has rejected a request by the National Chicken Council (NCC) that would have allowed faster speeds on lines at poultry processing plants.

The USDA Food Safety and Inspection Service (FSIS) in 2014 published new regulations through the New Poultry Inspection System (NPIS), which reduced the amount of birds that could be processed per minute to 140. The NCC petitioned to implement a waiver system to allow processing plants participating in the NPIS to operate without the line speed caps imposed by the NPIS. NCC said increasing line speeds would give the U.S. a competitive edge over countries that don't have an "arbitrary" speed cap.

In a letter on Monday from USDA Acting Deputy Undersecretary Carmen Rottenberg to NCC President Michael Brown, the agency said it has decided to deny the petition. The letter said the NCC "did not include data to demonstrate that inspectors can conduct an effective carcass-by-carcass inspection at line speeds faster than those authorized."

"Because FSIS has already implemented procedures for establishments to request regulatory waivers, we have determined that it is not necessary to establish a separate system to provide line speed waivers to young chicken establishments operating under the NPIS," the USDA letter said. "We have received over 100,000 comments on the petition and intend to respond to the issues raised by the comments in a separate document that also will be made available to the public. We will be publishing this letter as well."

Of the more than 100,000 comments the USDA received about the petition, most were negative.

NCC still hopeful

NCC's proposal sought for eligible establishments to be allowed to operate at any line speed at which they can maintain process control, with those establishments developing a process for monitoring and maintaining process control at the chosen speed and issuing corrective actions for any problems.

Brown said he is hopeful that some of the plants operating under the NPIS will soon be able to petition for increased line speeds "if they maintain a record of process control." Then the cap would be 175 birds per minute.

The USDA said it would make available criteria for broiler plants that have been operating under the NPIS for more than a year and that it "expects to grant a limited number of additional waivers" to operate at speeds up to 175 birds per minute.

"While we are disappointed about the denial of the petition, NCC is encouraged that there will be a viable path forward in the near future for those plants operating under NPIS to petition the agency for increased line speeds, if they maintain a record of process control," Brown said in a statement. "That was the original intent of the petition and we look forward to working with the agency and our members on the soon to be released criteria to apply for such a request."

Rep. Doug Collins, R-Georgia, had written to U.S. Agriculture Secretary Sonny Perdue, encouraging him to consider implementing policies that would increase line speeds at U.S. poultry plants, while a group of House Democrats said any attempt to increase line speeds would have detrimental effects on food, worker and animal safety. □

FSIS' Criteria for Consideration of Waiver Requests from Young Chicken Slaughter Establishments to Operate at Line Speeds Up to 175 Birds per Minute

As recently stated in the denial of a petition requesting the waiver of maximum line speeds for certain poultry slaughter establishments operating under the New Poultry Inspection System (NPIS), FSIS is making available criteria that it will use to consider waiver requests from NPIS young chicken establishments to permit these establishments to test new equipment, technologies, or procedures that will allow them to maintain process control at faster line speeds. These waivers will be in addition to line speed waivers granted to the 20 former HACCP-Based Inspection Models Project (HIMP) young establishments after they converted to NPIS. FSIS intends to use the data collected from the additional young chicken establishments that are granted waivers to evaluate their ability to maintain process control when operating at line speeds up to 175 birds per minute (bpm). FSIS intends to limit the additional line speed waivers to establishments that have the ability and intent to operate at line speeds faster than 140 bpm.

[Click here for full article](#) □

Aviagen Updates 2018 Parent Stock Handbooks with Latest Best Management Practices

In keeping with an ongoing commitment to provide global customers with the most current parent stock management advice, Aviagen® announced the release of a set of 2018 Parent Stock handbooks for the Arbor Acres®, Indian River® and Ross® brands of broiler breeding stock. The handbooks cover best practices to achieve the highest level of health, welfare and performance of Aviagen brands at the breeder level. Aviagen's continual focus is to offer customers flock management advice and support to help them maximize the genetic potential of our birds and thus remain competitive in their regions throughout the world.

[Click here for full article](#) □



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PROPANE UPDATES

[Determining OPEC, crude's impact on propane values](#)

Mar 5, 2018: by Mark Rachal in [LPGasMagazine.com](#)

Any forecast on propane prices begins with trying to determine where crude will be priced. [Read more»](#)

[Price spread between Mont Belvieu, Conway balloons](#)

Feb 26, 2018: As the impacts of winter demand wane this time of year, it is not unusual to see Conway prices move toward the weak side. [Read more»](#)

[Drop in exports a key factor in late-winter price weakness](#)

Feb 20, 2018: There have been two primary factors behind the late-winter weakness in propane prices: rising propane production and lower propane exports. [Read more»](#)

[Favorable relative value for Mont Belvieu, Conway propane](#)

Feb 12, 2018: Cost Management Solutions' Mark Rachal takes a look at propane's relative value to crude and how it is trending compared with last year. [Read more»](#)

[Seeking opportunity to secure supplies, lock prices next winter](#)

Feb 5, 2018: It is now the homestretch for winter, but forecasts for a cold February mean there is much work still to be done. [Read more»](#)

[Propane prices retreat despite strong domestic demand](#)

Jan 29, 2018: U.S. propane prices have returned to where they began the winter – in a price decline that has surprised many, given strong domestic demand support. [Read more»](#)

[Propane supplied from natural gas processing jumps](#)

Jan 22, 2018: U.S. propane production from natural gas processing plants jumped in October 2017, according to the latest data from the U.S. Energy Information Administration. [Read more»](#) □

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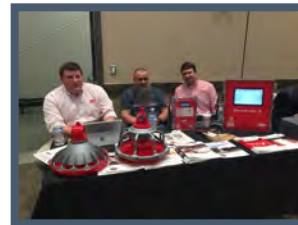
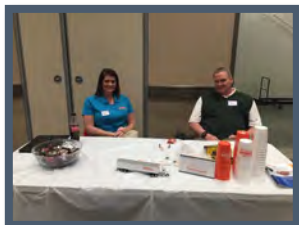
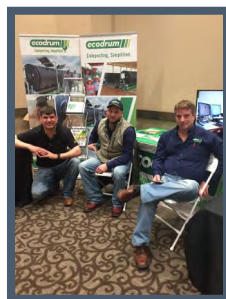
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Avian flu outbreaks emerge across the globe

Highly pathogenic avian flu outbreaks have affected countries in Europe, Asia and Africa in the past week. Countries hit are the Netherlands, India, South Africa and Saudi Arabia.

Mar 2, 2018 in PoultryWorld.net by [Tony McDougal](#)

Dutch officials have reported that an outbreak of H5 poultry reported near the city of Oldekerk has been confirmed as reassortant H5N6, according to a report from the OIE.

CIDRAP reported the virus killed 230 of nearly 28,000 susceptible birds, with the remaining birds culled to control the virus spread. In a separate report, officials also reported H5N6 in a wild duck found dead in North Holland.

South Africa, which has been hit hard by [avian influenza](#), has reported another H5N8 outbreak in backyard poultry. Further H5N8 cases have been found in seabirds in the Western Cape province.

In Saudi Arabia, officials have reported 7 more cases of H5N8 bird flu on farms in Riyadh province, which killed nearly 38,000 birds. The remaining 450,000 susceptible birds were also destroyed.

And in India, authorities have detected H5N1 in house crows in the city of Pardeep in Orissa state in the eastern part of the country. The event has led to the death of more than 170 crows but the source of the virus is not known. ▢

Avian Flu updates from around the world

FEBRUARY 5, 2018 INFORMATION FROM WATTAGNET.COM BY [JACKIE LINDEN](#)

Avian flu virus revealed in imported chicken in Hong Kong

Taiwan, South Korea and South Africa also report new cases of avian influenza.

Veterinary authorities in Hong Kong have reported the return of highly pathogenic avian influenza (HPAI) to the region in imported chicken meat, while new outbreaks of the disease have been confirmed at poultry farms in Taiwan and South Korea, and in commercial ostriches in South Africa.

After a brief absence, HPAI has been detected in chilled chicken at a shop in Hong Kong. According to the report from the territory's animal health agency to the [World Organization for Animal Health](#) (OIE), an intensive program of surveillance for the disease has revealed that one swab taken from the chicken tested positive for the H5N6 virus. The meat had been imported. This virus was last detected in Hong Kong in December last year.

Hong Kong food safety officials stressed that the risk of infection to consumers was "very slim" if the meat is properly handled, reports [South China Morning Post](#).

There were a further four outbreaks of HPAI linked to the H5N2 HPAI virus family in Taiwan during the second half of January. In its report to the OIE, the agriculture ministry confirms the infection in a flock of meat ducks in the county of Yunlin, and in native chickens in Pingtung. After suspicious signs were observed at two slaughterhouses in Taipei and New Taipei, the virus was also detected in 58 native chickens. In total, more than 15,800 poultry died or were destroyed in these latest outbreaks.

In South Korea, H5N6 HPAI viruses have been detected in two flocks of laying hens in the province of Gyeonggi, which surrounds the capital city, Seoul. Over 800 hens died, and the remaining 290,000 have been destroyed.

H5 avian flu virus has been detected in a wild bird found dead on the South Korean resort island of Jeju, reports [Yonhap](#). According to the news agency, the authorities have imposed movement restrictions on poultry and livestock within 10 kilometers of the location for a period of 21 days.

Africa: South Africa confirms new HPAI outbreaks

South Africa's total number of H5N8 HPAI outbreaks has increased to 139, with new cases among the wild bird population and in the commercial ostrich sector.

According to the official report to the OIE, 24 cases of HPAI linked to the H5N8 virus variant were confirmed among more than 2,200 ostriches at three farms in Western Cape Province during the first two weeks of January this year.

For the four weeks following December 27, 2017, a total of 15 wild birds at 10 locations tested positive for the same HPAI virus. The majority of the cases were seabirds of the Laridae family. All but one were found in Western Cape Province or the city of Cape Town.

Europe: More wild bird deaths in the UK

While the United Kingdom has not experienced an outbreak of HPAI caused by the H5N6 virus variant in poultry flocks in this winter season, there have been further cases among the wild bird population.

Latest to be affected are a flock of swans on the River Thames at Windsor in Berkshire to the west of London. According to [Windsor Observer](#), at least seven of the birds have died, with HPAI suspected as the cause of death. By long tradition, all unmarked mute swans on the river are *owned by the Queen*.

Previously, the agriculture department had informed OIE that 15 wild birds had tested positive for the H5N6 HPAI virus at three locations in England. The infected birds were found dead in natural parks as widely distributed as the London area, West Yorkshire, and East Midlands. All these locations are in or near areas with a high concentration of wild waterfowl or water birds. ▢



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Mass Poultry Mortality Composting Videos

Submitted by Josh Payne, Technical Services Manager for Jones-Hamilton Co. - Agriculture Division

The highly pathogenic avian influenza outbreak has become the largest animal health emergency in U.S. history. Infected birds have either died from the disease or been euthanized to control disease spread. Proper carcass management is vital for managing nutrients and controlling disease. Mass mortality composting was implemented on the majority of infected poultry operations during recent U.S. avian influenza outbreaks. The following videos provide an overview of mass poultry mortality composting and are intended for use as educational tools for the poultry industry, state and federal agencies, and emergency response contractors.

https://www.youtube.com/playlistlist=PLBX_xiiFGiPKN66fDmXwycr34GSFMkowx □



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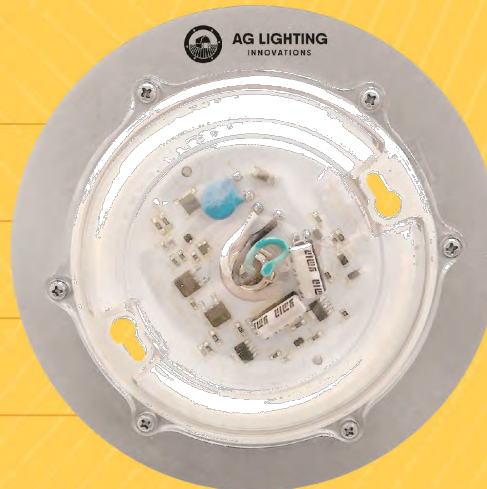
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Scientists to look into how rapidly bird flu can adapt to infect humans

Scientists at 2 leading UK research establishments have been awarded a grant to research what makes particular strains of bird flu more likely to adapt to infect humans, possibly initiating a pandemic.

Feb. 2, 2018 information from PoultryWorld.net by [Tony McDougal](#)

The Biotechnology and Biological Sciences Research Council funding for the Pirbright Institute and Imperial College, London, will be used to look at which avian flu strains can rapidly accumulate genetic adaptations that help avian flu viruses infect mammals.

This will enable scientists to identify which strains pose a threat to humans and potentially cause major problems across the globe.

The speed that bird flu viruses are able to change has become a great concern, especially in Asia, where high levels of flu circulating in poultry, regular human contact with birds and low levels of biosecurity increase the risk of transmission from birds to humans.

H9N2 is able to quickly adapt

One of the most recent avian flu strains to cross the bird-human barrier was H7N9 (the Eurasian strain, not the North American wild bird strain), which has infected over 1,500 people since 2013 and has a 40% mortality rate.

Although H7N9 has not yet shown evidence of being able to transmit human to human, there is currently no way of telling whether it will be able to do so in the future. Understanding what features allow rapid adaptation is therefore at the top of the list for many flu researchers.

The Influenza Viruses group at Pirbright has previously shown that the bird flu strain H9N2 is able to quickly adapt the viral genes involved in replication during infection of mice. Since it is known that the H9N2 strain donated genetic material to the H7N9 virus, it may have provided H7N9 with crucial traits that improve the ability to infect humans.

As a result, Pirbright scientists are looking at the H9N2 genes to see what features they give the virus which enable it to rapidly adapt to a non-avian host.

Dr Holly Shelton, leader of the Influenza Viruses group, said: "Understanding more about how flu viruses change in hosts will help us to know what genetic characteristics to look out for when predicting the next strains that could cause human pandemics.

"We want to know how quickly mutations can appear that allow H9N2 to infect mammals, if other strains have the potential to adapt at the same rate, and what features help them to adapt to mammals so rapidly." □



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- 1 Data on file.
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PREVENTION WORKS

Shaping the future of poultry health

Avian flu biosecurity plan is key to rapid response

The U.S. avian flu outbreak of 2017 reinforced the need for site-specific biosecurity plans for poultry farms with approved emergency response plans.

Dec. 18, 2017 in WattPoultryUSA-digital.com by [Deven King](#)

No poultry farm is immune to an avian influenza outbreak; therefore, having a plan to deal with such a situation is crucial, explained Dr. Charles Hatcher, state veterinarian with the Tennessee Department of Agriculture at the 2017 Live Production and Welfare Seminar in Nashville, Tennessee.

"You can never do too much planning," Hatcher said.

A lapse in biosecurity practices is the most likely way for viruses to enter the house. Each premise must have its own site-specific plan and conduct internal audits of facilities and their practices regularly. The state of Tennessee will be requiring producers to have a National Poultry Improvement Plan (NPIP) compliant biosecurity plan by the end of October 2017.

The southern outbreak

Tennessee's first case of a highly pathogenic strain of H7N9 avian influenza was announced on March 5, 2017 and it affected a broiler breeder flock in Lincoln County. A flock of chickens at a commercial broiler breeder operation in Giles County, Tennessee, tested positive for low pathogenic H7N9 avian influenza. The state's second avian influenza case in 2017 was confirmed on March 8.

On March 14, the Alabama Department of Agriculture and Industries (ADAI) issued a stop movement order for certain poultry in the state, after three potential cases of avian influenza were identified. It halted movement of birds to poultry shows, swap meets, flea markets and poultry auctions.

The possible infections occurred in three north Alabama counties that border Tennessee, where the two cases of avian influenza were previously confirmed. These cases were a backyard flock of layers, a commercial broiler breeder flock and a backyard flock of guinea fowl, which were confirmed as positive for low pathogenic avian flu on March 10, 14 and 15, respectively.

In Alabama on March 16 and 17, cases of a low pathogenic strain of the disease were confirmed in a commercial poultry breeding operation in Pickens County and a backyard flock in Madison County. Both detections were not related to highly pathogenic avian influenza (HPAI) detections elsewhere in the country. On March 22, the department confirmed another low pathogenic case in a commercial broiler breeder flock in Cullman County.

A press release from ADAI said the commercial flocks were under quarantine.

In total, there were eight commercial broiler breeder farms impacted during the southern outbreak. These operations were spread out among four states, including Georgia, Kentucky, Tennessee and Alabama. Those outbreaks dealt with six different companies. Approximately 252,000 birds died from the disease or from depopulation in hopes of controlling further outbreak, according to the Epidemiologic and Other Analyses of HPAI/LPAI Affected Poultry Flocks report released by the United States Department of Agriculture in June 2017.

Planning methods and processes

Rapid detection, notification and depopulation remains critical in stopping the spread of disease. "Depopulate within 24 hours of detection; we were able to do this by foaming," said Hatcher when discussing his idea of disease control goals.

Dr. Kate Hayes with Aviagen discussed lessons learned from avian influenza from her experience with the Tennessee outbreaks at the same conference in Nashville. After the experience with foam she implied foaming will not be their method again should the disease become a problem for the company.

She said it was challenging to clean up in housing systems with concrete flooring.

Hatcher noted that he would consider carbon dioxide to depopulate if need be.

The fact that broiler breeders were involved in this outbreak is significant when considering the efficacy of using foam for euthanasia. Foam seems to work well when the floor is flat and the birds are all on one level, but not so well if there are multiple levels for the birds to inhabit or if it is below freezing out.

Hatcher said there are only two real options for disposing of the birds, onsite burial or composting.

"We did onsite burial this time but that wasn't without issues," he said.

Hatcher would like to do composting only. Preferably in the house or under cover, he added. The disposal method will be preapproved by the state before the next outbreak. When going through suggestions for producers' individual planning processes, Hatcher suggested that Emergency Resources Management System (ERMS) coupled with the new Gateway is the way to go.

"Preloading premises numbers ahead of an outbreak is a must," he said.

continued on next page

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Avian flu biosecurity plan is key to rapid response *(continued from previous page)*

These numbers are used for tracking lab results. If this isn't done it could slow down producers' whole process of verification and depopulation as needed, potentially by a couple days even.

Proper surveillance is also crucial, Hayes noted.

"Emergency surveillance samples were collected in one day and test results completed within 48 hours," she said. Hatcher suggested increasing testing during time of high risk.

Preparing for an outbreak of Avian Influenza

Hayes suggests making sure equipment and supplies are ready to go should an outbreak occur. A plan might include having a mobile response trailer, mobile shower and restroom trailer for burial sites, she added. Keep inventory of your supplies too. Know what kind of equipment you will need at each site and have it readily available. It is also important to monitor employee health and fatigue when managing these situations.

"Collaborate and communicate," Hatcher said. Make sure everyone understands how to follow the plan before actions need to take place. "Trained and experienced strike teams for depopulation and disposal would be nice." Producers should make decisions based on high risk or worst case scenario situations.

"Use your common sense," Hatcher said.

He asked to help with future planning and management practices by support funding for state and federal disease prevention and control efforts. □

Costs of US avian flu outbreak in 2014-15

Jan. 5, 2018 from PoultryWorld.net by Tony McDougal

Trade losses from the devastating high pathogenic avian influenza outbreak in 2014/5 totaled £1.3bln and more than 50 million birds were lost, leaving the US poultry sector substantially impacted, according to a new report.

The USDA Economic Research Service study said trade restrictions during and after the outbreak affected all poultry commodities, but the overall market impact differed for each commodity, reflecting several factors. *(continued on page 22)*

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Costs of US avian flu outbreak in 2014-15 *(continued from page 20)*

Egg and turkey production decreased as a result of the large number of birds lost or destroyed during the outbreak, so despite export losses from restricted trade, egg and turkey prices rose. The huge loss of birds was nearly three times more than the previous worst US bird flu outbreak in 1983/4 which claimed 17 mln chickens and turkeys.

Though these higher prices increased revenue for producers not directly affected by the outbreak, producers that lost birds and consumers who paid higher prices for products were negatively impacted.

The study, “*Impacts of the Highly Pathogenic [Avian Influenza](#) Outbreak on the US Poultry Sector*” said that economic losses in the broiler sector due to trade restrictions from foreign markets were serious even though very few birds were lost or destroyed from bird flu in this sector.

Authors Sean Ramos, Matthew MacLachlan and Alex Melton said “these restrictions decreased overseas demand for broiler products and led to lower prices for broiler producers – highlighting the importance of policy responses to the total cost of the outbreak.”

The report highlighted that:

- The US poultry sector was able to recover quickly from population losses from disease events but that other market impacts – such as trade losses and price instability – can persist. Poultry production returned to more typical levels in early 2016 as the egg and turkey industries recovered. However, prices for many poultry products remained at multi-year lows in 2016, partly due to lingering export weaknesses related to the outbreak and other factors.
- Disease events can result in disparate impacts across the poultry sector. [HPAI](#) had very negative impacts on many producers as bird losses per operation averaged 50,000 for turkeys and over 1 million for layers where the disease was confirmed. Many other egg and turkey producers lost no production – they received higher prices in the short run without bearing the high costs incurred by those directly affected.
- Disease events can impact related industries even if the disease has no direct effect. While the broiler industry lost less than 0.01 of its numbers, the threat of potential infection was the basis of the trade restrictions that contributed to much lower prices in 2015 and 2016.

Commenting on the report, James Sumner, president of the US Poultry and Egg Export Council, said some export markets had not fully returned with foreign firms finding substitutes for US products.

Mr. Sumner said China had been closed to US eggs for three years: “We’re hoping that changes in the near future, but there’s not necessarily any positive indication that will be the case. We don’t think (the closure) has any validity,” he added.

Prior to the outbreak, China took 7% of the US export market for turkeys and 4% for broilers. □

Poultry Owners Urged to Help Prevent Outbreak of Avian Influenza

Wednesday, January 17, 2018 | 11:22am

NASHVILLE – When the temperature drops, the risk of avian influenza rises. The Tennessee Department of Agriculture is advising poultry owners to take precautions to safeguard their flocks.

Avian influenza has not been detected in any domesticated poultry in Tennessee in 2018. However, in March 2017, strains of highly pathogenic avian influenza (HPAI) and low pathogenic avian influenza (LPAI) sickened three commercial chicken breeder flocks in the state. The affected premises were quarantined and the flocks depopulated to prevent spread of the illness.

Avian influenza circulates naturally among the wild bird population and can be deadly to domesticated poultry. Biosecurity is the term used to describe steps taken to protect your birds from disease.

“This cold weather creates the perfect environment for avian influenza to thrive,” State Veterinarian Dr. Charles Hatcher said. “We know it can happen here, and are prepared to respond immediately to an outbreak. We are counting on poultry owners to practice good biosecurity and to report any spike in mortality. Protecting backyard and commercial flocks is critical for livestock health and safety in Tennessee.”

Dr. Hatcher’s recommendations include:

- ◆ Always disinfect shoes, tools, vehicles, and equipment used with poultry and avoid sharing items with neighbors
- ◆ Prevent wild birds and animals from accessing flock areas
- ◆ Enroll in the National Poultry Improvement Plan
- ◆ Watch for signs of illness and report any unusual deaths to the state veterinarian’s office at 615-837-5120

The state veterinarian and staff are focused on animal health and disease prevention. In 2017, the Kord Animal Health lab tested more than 31,000 samples from poultry for avian influenza. If avian influenza is detected, Tennessee has a response plan which includes quarantine, testing, disposal, cleaning, disinfection and monitoring. For more information, please visit the [avian influenza resources page](#). □

New Reference Book from AAAP Helps Pinpoint Avian Diseases

The American Association of Avian Pathologists (AAAP) has published a new reference book, *Gross Pathology of Avian Diseases: Text and Atlas*, authored by Tahseen Abdul-Aziz, DVM, PhD, and H. John Barnes, DVM, PhD, both of North Carolina State University.

"Veterinarians, scientists, students or anyone involved in the diagnosis of avian diseases will benefit from the pictures and disease descriptions in this book," said Suzanne Dougherty, DVM, executive vice president for AAAP.

[Click here for full article](#) □

New Chicken Immune Cell Increases Susceptibility to Marek's Disease

03 January 2018 from ThePoultrySite.com

Marek's disease virus (MDV) is highly contagious and causes a deadly cancer of the lymph nodes (lymphoma) and immunosuppression in poultry. The virus's ability to suppress immune responses of birds is one of the reasons MDV is such a major threat to the poultry industry, as it prevents recovery and makes birds susceptible to secondary infections.

In their most recent study published in *PLOS Pathogens*, researchers from the [Avian Immunology group](#) demonstrated an association between the number of the new immune cells, known as suppressor lymphocytes, and susceptibility to lymphoma formation. Their findings also show that infection with Marek's disease virus increases the number of suppressor lymphocytes, which are able to suppress the chicken immune response.

Dr. Shahriar Behboudi, Head of the Avian Immunology group at Pirbright, said: "Some viruses exploit host immune cells for their own purpose to evade normal host defenses. We found that MDV can modulate immune responses by activating suppressor lymphocytes, contributing to immunosuppression and lymphoma formation."

The scientists also noted that lymphoma cells have similar characteristics to suppressor lymphocytes, meaning they too can suppress immune responses. Combined, these findings identify new pathways that are involved in the development of the disease, which can help identify chicken lines that are more resistant to MDV.

Losses relating to MDV are estimated to be up to \$2 billion worldwide. Nearly 22 billion vaccine doses a year are used in an attempt to control the disease, but the virus continues to evolve and form increasingly virulent strains. Understanding how MDV causes immunosuppression is therefore a vital area of research that Pirbright scientists are working on.

This study was funded by the Biotechnology and Biological Sciences Research Council, grant number BBS/N002598/1. □

DNA region in chickens identified for disease resistance

Feb 9, 2018 information from PoultryWorld.net by [Tony McDougal](#)

Researchers from Wageningen University and Hendrix Genetics found that one region in the DNA of a chicken explains a large difference in possible disease resistance between birds.

This DNA region contains, among others, an important sensor for activating the immune system, which might explain why some chickens become ill and others do not.

Pathogens can easily spread through poultry housing systems and the reduction of use of antibiotics and the move to group housing of layer chickens has increased the need for a more robust layer chicken. In previous research, scientists found that birds have natural antibodies, which inhibit and prevent further infection in the body, but also warn and activate other parts of the immune system. Earlier studies have shown higher natural antibody (Nab) levels in layers that were associated to an increase chance of survival, and levels are heritable and thus can be influenced by breeding.

Applications and future plans

Frans van Sambeek, director of research and development at Hendrix Genetics, said the study offered direct applications for breeders to select layer chickens for increased disease resistance by selecting for this specific DNA region.

"Currently we are investigating how we can apply these research findings into the breeding programs of pure bred line.

"At the moment, we are running 3 field experiments with layers with high or low NAb levels. These hens will be monitored for livability and production," he added. In addition, plans are being made to investigate the TLR1A-sensor: "We have good indications that TLR1A is our candidate but this still needs to be proven." With investigations in this area ongoing, Hendrix Genetics believes that, in the long term, this could result in improved vaccines and health-promoting nutrition. Eventually, this could lead to animals with a higher general disease resistance with lower antibiotic use, lower costs for farmers and higher animal welfare.

To see the full article, [click here](#). □

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Video: Will restricting feed for broilers prevent woody breast?

Jan. 30, 2018 from WATTAgNet.com by [TERRENCE O'KEEFE](#)

USDA scientist suggests that microbial imbalance in the gut is connected with the breast muscle abnormality known as woody breast.

The cause of the broiler muscle myopathy referred to as woody breast has not been identified yet, but researchers are busy looking for clues. Dr. Michael Kogut, lead scientist and microbiologist, [USDA Agricultural Research Service Laboratory](#), College Station, Texas, offered the hypothesis that a dysbiosis, microbial imbalance, in a broiler's digestive tract is one of the causes of woody breast.

"It's a hypothesis based on results during the development of woody breast (that) there is an issue at the gut level," Kogut told the audience at the DSM Nutritional Products Breakfast Meeting on January 30, 2018. "It's one of the components. It's not the sole reason, but there is a dysbiosis occurring at the gut usually due to overfeeding. There's an excess of nutrients and that is resulting in a chronic inflammatory response which has systemic types of effects. You affect the gut, you affect the muscle. We have data on that," he said.

Kogut said that this data hasn't been published yet, but he pointed out another example of dysbiosis negatively impacting muscle tissues. "Even if you have a Salmonella infection, you effect the muscle leading to a lot of fat deposition," he said.

Moving away from ad libitum feeding of a nutrient-dense diet to a restricted feeding program was suggested by Kogut as a potential measure for preventing the development of woody breast. He said that ***an excess of nutrients in the gut, either nutrient metabolites or nutrients that are indigestible by the bird, can trigger dysbiosis in the gut. Preventing the dysbiosis from developing in the bird's gut might also prevent the onset of woody breast***, according to Kogut. He stressed that this was still just a hypothesis, but one that is suggested by the data his lab has collected.

If broilers are raised on restricted diet - either in quantity of feed or nutrient density of the feed - from placement on the farm, Kogut said that the feed restriction shouldn't trigger dysbiosis.

To view the video go to: <https://www.wattagnet.com/articles/33354-will-restricting-feed-for-broilers-prevent-woody-breast?eid=186562392&bid=1987060> □

Researchers Develop Method for Making New Types of Vaccines

USPOULTRY and the USPOULTRY Foundation announce the completion of a funded research project at the U.S. National Poultry Research Center, Southeast Poultry Research Laboratory in Athens, Ga., in which researchers developed a method for making new types of vaccines. The research is made possible in part by an endowing Foundation gift from Claxton Poultry and is part of the Association's comprehensive research program encompassing all phases of poultry and egg production and processing.

[Click here for full article](#) □

EPA Releases '18 Ethanol Volumes at Maximum levels; Chicken Producers Cry Foul

Agency keeps pumping corn ethanol into a saturated fuel market

November 30, 2017 NCC Press Release

The U.S. Environmental Protection Agency (EPA) today announced that it is mandating the statutory maximum 15 billion gallons of ethanol be added to the domestic fuel supply in 2018, the second consecutive year EPA has mandated the maximum amount of ethanol allowed under the Renewable Fuel Standard (RFS). The currently mandated volume for 2017 is also 15 billion gallons; with only weeks left in 2017, the Energy Information Agency (EIA) of the U.S. Department of Energy is forecasting the total domestic use of ethanol for the year to be just 14.4 billion gallons.

"Corn ethanol, of all blends, has saturated the domestic market, and the industry, protected by the RFS, just continues to produce ethanol at a pace faster than consumption can grow," noted the National Chicken Council [in comments submitted](#) in August to the EPA.

The EIA's November forecast puts ethanol production this year at approximately 15.8 billion gallons. The RFS adopted by Congress in 2007 provides a cap on conventional ethanol at 15 billion gallons.

"EPA just keeps trying to pump more ethanol into a fuel market that doesn't have room," said NCC President Mike Brown. "Over the past decade the RFS has created an incredibly volatile corn market to the detriment of all corn users, and producers too. Today's announcement adds to the long list of reasons that Congress should repeal the RFS and the mess it has created for both food and fuel markets." □

Group asks Iowa lawmakers to halt new, expanded livestock farms

Feb. 14, 2018 from MeatingPlace.com by [Chris Scott](#)

A group made up of 55 organizations is asking Iowa lawmakers to support a proposed legislative moratorium on new and expanded large livestock farms in Iowa, citing a “water pollution crisis” in the state. Iowa is home to a large number of hog farms.

The groups sent a joint letter to all of Iowa state legislators alleging that the U.S. Environmental Protection Agency and state governments have failed to regulate the environmental impacts of these farms and Iowa waterways are “some of the worst in the nation.” The letter also notes that Iowa’s livestock farms generate an estimated 22 billion gallons of manure annually that are applied to fields at rates that crops are unable to effectively process, resulting in harmful run offs into rivers and streams.

The letter also explains that local communities have very little influence in the establishment of new or expanded farms. Nearly 25 percent of Iowa counties have passed resolutions in favor of stronger local control or a legislative moratorium regarding the process of approving new or expanded family farms, the letter added. □

Rendering: A Sustainable, Essential Link in the Food and Feed Chain

“Rendering is sustainable and an essential link in the food and feed chain,” said Nancy Foster, president of the National Renderers Association (NRA) and Fats and Proteins Research Foundation, during her presentation at the International Rendering Symposium, held in conjunction with the 2018 International Production & Processing Expo in Atlanta, Ga. NRA and USPOULTRY sponsored the program.

[Click here for full article](#) □

Comparing the welfare of different broiler breeds

JANUARY 3, 2018 BY [TERRENCE O'KEEFE](#) IN WATTAGNET.COM

Global Animal Partnership funded research at the University of Guelph will attempt to validate welfare measurements for broilers and then compare modern strains with slower-growing breeds.

A significant group of U.S. and Canadian restaurant chains, food service distributors and food processors recently pledged to purchase chicken meat from broilers raised according to [Global Animal Partnership](#) (GAP) standards by some future date. One part of many of these [GAP welfare pledges](#) is that the breed of broilers selected to be grown to produce the meat purchased will have demonstrably better welfare than others.

[Read the entire report about broiler welfare standards exclusively in the January issue of WATT PoultryUSA.](#)

Most welfare standards for poultry do not make breed specifications, rather they are either resource- or outcome-based welfare standards and the choice of breed is left up to the producer. If producers are to make breed selections based on bird welfare, then research is needed to compare breeds based on objective welfare measurements.

The [Campbell Centre for the Study of Animal Welfare](#) received funding from both GAP and [Food From Thought](#) to conduct research to evaluate the welfare and sustainability of modern and slow-growing breeds of broilers. Dr. Stephanie Torrey, senior research scientist, and Dr. Tina M. Widowski, director of the Campbell Centre, are heading up the “Optimizing Broiler Project.” The initial phase of the project commenced in September 2017.

The objectives of the project are to:

- ◆ Validate behavioral and physiological indicators of welfare for three fast-growing genotypes under standard production practices;
- ◆ Benchmark data on the welfare of slow-growing genotypes and compare to fast-growing genotypes. Genotypes will be assessed on behavior, physiology, health, production as well as carcass and meat quality;
- ◆ Determine nutrient utilization and benchmark indices of gut health and function in slow and fast growing genotypes.

The project’s long-term objectives are to:

- ◆ Develop a database from which a life cycle assessment can be performed;
- ◆ Initiate a study on the economic viability and consumer preferences for slow-growing broilers.

Validating broiler welfare measures

Torrey said animal welfare often is seen as having three components. The first component is biological functioning. Is the bird healthy, or is it sick? Is it lame? The second is the effective state of health, is the bird experiencing fear or stress, or on the other side, is the bird experiencing boredom?

[Read the full article.](#) □

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Scientists Examine Factors to Further Minimize Peracetic Acid Exposure in Poultry Plants

Feb. 12, 2018 – USPOULTRY and the USPOULTRY Foundation announce the completion of a funded research project at the Georgia Tech Applied Research Corporation, Atlanta, Ga., in which scientists studied the use of antimicrobial peracetic acid (PAA) in poultry plants to assess factors to minimize exposure of PAA to poultry processing workers. Peracetic acid has been used increasingly in the food and medical industries as a disinfectant, and its use in poultry processing has further enhanced food safety.

A brief summary of the completed project is shown below. A complete report, along with information on other Association research, may be obtained by going to USPOULTRY's website, www.uspoultry.org. The project summary is as follows.

Project #BRU010: A Pilot Study of Exposures to Peracetic Acid-Based Disinfectants among Poultry Processing Workers

(Jenny Houlroyd, Occupational Safety and Health Programs Office, Georgia Tech Applied Research Corporation, Atlanta, Ga.)

Jenny Houlroyd and her colleagues at the Georgia Tech Applied Research Corporation recently completed a research project intended to increase industry knowledge of exposure to peracetic acid (PAA), or its component chemicals, and begin assessing factors that further minimize exposure. Sampling for PAA required researchers to sample for both acetic acid and hydrogen peroxide, due to the chemical properties of PAA and its reactivity with these two chemicals. Methods were developed to simultaneously sample hydrogen peroxide and PAA, with acetic acid being sampled separately. Traditional methods as well as real time sampling was conducted for PAA.

A review of the results versus proposed levels of the American Conference of Governmental Industrial Hygienists (ACGIH) and the National Institute of Occupational Safety and Health (NIOSH) was conducted. The ACGIH in 2014 set a threshold limit value (TLV) or short term exposure limit (STEL) for PAA of 0.4 parts per million (ppm), calculated as a 15 minute time weighted average (TWA). In 2015, NIOSH published a draft immediately dangerous to life or health (IDLH) value for PAA of 0.64 ppm. The research results fall well below these proposed threshold levels. Additional employee monitoring and study in certain areas are recommended to further reduce potential PAA exposures in the poultry plant environment.

The research [summary](#) can be found on the USPOULTRY website. Information on other Association research may also be obtained by visiting the USPOULTRY website, www.uspoultry.org. □

Poultry plants have jobs to fill, but workers are scarce

Jan. 21, 2018 by Nick Watson nwatson@gainesvilletimes.com

On the floors of a poultry processing plant in Murrayville, workers speak 13 different languages.

Fieldale Farms President Tom Hensley said he estimates about 50 or so refugees and other immigrants come to Murrayville from the metro Atlanta area daily to work in the plant.

"They come up in 15-passenger vans full, so there'd be five or six vans every day coming from Clarkston up to Murrayville and going back from Murrayville to Clarkston every day," he said.

But Hensley could use 200 more people right away at the company's locations in Gainesville, Murrayville and Cornelia. It's a tough job market statewide for poultry employers trying to find workers, Georgia Poultry Federation President Mike Giles said.

"It can sometimes be a challenge to fill out the worker ranks that are needed, and that's been true regardless of the unemployment rate," Giles said, though he could not cite specific statistics.

Gainesville has a 3.6 percent unemployment rate, according to the Bureau of Labor Statistics.

Giles said countries such as Myanmar in Southeast Asia have been mentioned in the refugee employment conversation.

In 2004, Hensley said 70 percent of the workforce across all three locations was Hispanic. Now, that stands at 25 percent. He said the Hispanic workforce has slowly disappeared.

A section of Georgia's "Illegal Immigration Reform and Enforcement Act of 2011" was the requirement for private employers to register and use E-Verify, a federal work authorization program.

Giles said the strength of the Hispanic workforce in the poultry industry has varied across the state, as some areas have stayed constant.

The Times reached out to multiple poultry companies in the area for comment, but those were unsuccessful.

Enforcement on undocumented immigrants has swelled since President Donald Trump took office. There were about 11,000 more arrests by deportation officers in 2017 between Jan. 22 and April 29 as compared to a similar stretch in 2016.

Immigration attorney Rathi Rao said she and many others in the field have seen increased enforcement especially in the 287(g) program, which is a partnership between local and federal authorities. The Hall County Sheriff's Office is one member of 287(g). Information on detainees can be handed over to Immigration and Customs Enforcement for further review for anyone booked into the Hall County Jail.

In 2015, the Obama administration instituted the Priority Enforcement Program, which focused on deporting illegal immigrants convicted of serious crimes. Trump issued an executive order Jan. 25 to change deportation priorities, reverting to the Secure Communities policy that had been in force until 2015, and didn't specify types of crimes when considering immigrants for deportation.

"Before, our clients could get a driving without a license (charge) or a speeding ticket — any sort of traffic violation — and not necessarily get into ICE custody. Now, it's pretty much routinely if they get any sort of traffic violation, they're being turned over to ICE. ICE puts a hold on them, and then they end up in removal proceedings," Rao said.

Rao said it caused clients' families to become more fearful, as they leave each morning not knowing whether they'll return.

"It's the breadwinner who was most likely out and about driving to go to work to provide for the family. When the parent is detained, it's basically debilitating for the family," she said.

ICE's statistics show the removals from inside the U.S. were up to 81,603 in fiscal year 2017 compared to 65,332 the previous fiscal year.

A federal judge ordered earlier this month to allow children covered under the Deferred Action for Childhood Arrivals' program to sign up for renewals.

Rao said the reaction is bittersweet: There is relief that people can sign up again, but families are afraid their updated information is being given to the government.

"We have been encouraging everybody to go ahead and renew and being hopeful that something more permanent will happen," Rao said.

Rao and attorney Arturo Corso have noticed a trend of cases being reopened that were previously administratively terminated, even for low-level offenses.

Corso said about a dozen of his cases fall under that category.

"It's been difficult trying to explain to the clients not only are they reinstating your case, but the odds aren't in your favor," Rao said.

□

ALLIED MEMBER NEWS

Chore-Time now offers Vike Aviary Systems as part of its acquisition of the Volito Group. Vike Aviary Systems have integrated VOLITO™ Valego™ Nest Systems, which are available with highly efficient rack-drive expulsion (RDE) or moveable-floor expulsion (MFE) systems. They feature smart “Click & Fix” assembly of nest walls and roofs, as well as other features that allow the systems to be installed and maintained easily using common tools. The nest systems also offer durable, A-grade, film-faced plywood construction, which provides a sturdy, quiet environment for birds that is easier to clean and more durable than plastic or steel. AstroTurf® nest pads are also included for improved hygiene. They also now offer the Volution Rearing System. The Volution Rearing System is a two-tier system that caters to natural bird behavior by training pullets to jump, move around and perch from day one. As a result, the birds are more likely to live a longer, healthier and more productive life when transitioned to cage-free production. To help train the pullets, the Volution System features adjustable-height platforms and drinking lines inside the system that are gradually raised as the pullets grow. Automatically extendable perches help birds access the upper tier, and movable interior perches help birds easily jump to outer perches.

BioSafe Systems is proud to welcome **Jeffrey Madewell** to the Meat, Poultry, and Seafood (MPS) team as Technical Manager. Working in Fayetteville, AR Jeff will be responsible for assisting the MPS and Animal Health team and aiding BioSafe’s Technical Service team with the coordination of routine service visits and managing details for the installation of on-site equipment. He holds a degree in Hospitality Administration from Arkansas Technical University and most recently Jeff worked with Zep, Inc. where he spent the last seven years supplying sanitation, chemical, and maintenance solutions to food manufacturers.



The [DOL 53 ammonia sensor](#) has been shown by the Univ. of Georgia to be able to measure ammonia within a few ppm of their extremely sensitive and expensive photoacoustic ammonia meters used for research studies. DOL 53 is an electrochemical, long-term stable NH3 sensor developed by the company Dräger. The **Big Dutchman** group is the first and only equipment supplier offering this sensor. For details of the Univ. of GA test results see the latest Poultry Housing Tips at [DOL 53 Ammonia Sensor....A First Look](#). For more information on the DOL 53 go to <https://www.bigdutchman.com/en/egg-production/news/detail/poultry-climate-control-new-sensor-is-a-milestone-for-poultry-production.html>.

Darling Ingredients Inc. has named **Brad Phillips** as its executive vice president – chief financial officer and **John O. Muse** has become its executive vice president – chief administrative officer. Both will report to **Randall C. Stuewe**, the company’s chairman and CEO.

Cumberland has launched two new poultry production technologies. The **Double Stack Komfort Kooler** is designed to help maximize cooling performance and allow more efficient use of vertical wall space on taller buildings and shorter tunnel openings for improved airflow through the building. Producers can also save money on installation with fewer pumps and trough. The **Protegg Community Nest** system provides maximum bird comfort to achieve the highest number of hatching eggs and fewer floor eggs. Its durable, performance-driven design provides 25 percent more usable nesting space compared to conventional nesting systems. The system accommodates heavy birds, light birds and layers with easy expel and front closure wire modification.

Elanco Animal Health has named **Sarena Lin** as senior vice president, North America operations and global strategy, joining Elanco’s leadership team and reporting to Elanco President Jeffrey Simmons. Lin will manage the entirety of the company’s U.S. and Canadian food and companion animal businesses. She will also oversee global strategy for the top-tier animal health company, applying her extensive knowledge in corporate development to grow and strengthen Elanco’s business.

Live Oak Bank’s agriculture lending team is thrilled to announce it has reached a new milestone of having lent \$1 billion in poultry farm loans. Since 2014, poultry growers across the nation have been able to start their own small businesses with Live Oak’s cash flow lending model. Reaching the \$1 billion closed loan milestone is very special and Live Oak is proud of what the agriculture lending team has done to help great rural families positively impact great rural communities. The bank has made significant investments in educating poultry growers on how to best use financing to support their businesses.

USPOULTRY Releases Video on Knife Safety & Cutting Techniques for Poultry Deboning Lines

TUCKER, Ga. – Mar. 8, 2018 – The poultry industry has been systematically improving worker safety over the last three decades, with current injury/illness rates now essentially the same as manufacturing as a whole. To continue this improvement, U.S. Poultry & Egg Association (USPOULTRY) is releasing a training video demonstrating proper breast deboning cutting techniques. The video features a holistic approach to breast deboning that includes employee protection and ergonomics, prevention of cross contamination and foreign material, and proper knife handling and care. The video is intended for new hire and refresher training in poultry processing plants.

The video is available in high resolution (720P). It is offered in English and Spanish, and closed captioning is also offered. The knife safety and cutting techniques training [video](#) is available for USPOULTRY members only and is downloadable from the USPOULTRY [website](#). □



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Leveraging Litter Management to Control Pathogens

By Josh Payne, Ph.D. in [pH Matters](#) by Jones-Hamilton Co. – Summer 2017

Consumer groups, restaurant chains and food retailers are challenging the poultry industry—to raise birds using fewer or no antibiotics. The challenge for producers has always been to maintain good animal health, performance and welfare. The demand for antibiotic-free birds transforms this challenge.

Poultry litter consists of bedding, manure and feathers; all of which harbor pathogens. These pathogens survive in litter when temperature, moisture content and pH conditions are optimal. They then manifest disease in birds and, if undetected, lead to food safety problems for human consumption. By manipulating the conditions of poultry litter, producers may effectively control pathogens impacting bird health and human food safety. Awareness of this approach will help members of the poultry industry to meet the demand for healthy birds raised with less reliance on antibiotic use.

The Impact of pH Manipulation on Poultry Litter

The acidity or alkalinity of an environment, measured by pH, has a profound effect on microbial viability and survival. While different microorganisms exhibit growth in different extracellular pH environments, the intracellular pH must remain near neutral. In a highly acidic external environment, the organism becomes overburdened as it tries to maintain a neutral intracellular pH. In the highly acidic environment, the microorganism will eventually deplete its energy reserves and die.

Poultry litter usually contains a slightly basic pH, between 7.5 and 8.5, which is optimal for pathogen growth. Poultry Litter Treatment (PLT®), which contains sodium bisulfate, is commonly used in poultry houses to reduce harmful ammonia levels by lowering litter pH. This process works by releasing hydrogen ions into the litter, creating an acidic environment to neutralize ammonia.

In recent years, it has emerged that pathogen control is a secondary benefit of reducing litter pH to an acidic level (below pH 4). PLT not only lowers litter pH below 2.0 but also releases sodium ions creating an unfavorable environment for pathogens. Most pathogens will be reduced or destroyed in a low pH environment. PLT is commonly applied to the litter prior to flock placement and is often used to shock treat the pad in poultry houses that have a history of disease challenges.

Water's Effect on Litter: Water activity (A_w) or Equilibrium relative humidity (ERH)

All organisms require water; its availability is essential to the growth of microorganisms, which means wet litter can promote both pathogen growth and ammonia release. Moisture content measurements include both unavailable (bound) and available (unbound) water. Therefore, knowledge of moisture content alone is not sufficient evidence to determine whether an environment is compatible for microorganism growth or survival since a proportion of the total moisture content is bound and unavailable to the microorganism. To control for pathogenic growth, producers must make a closer determination about water availability.

Water activity measures how tightly water is bound structurally or chemically to a substrate (ie. bedding material). It is equivalent to the relative humidity of the surrounding air—the equilibrium relative humidity (ERH). Both of these indicate water availability. Water availability (A_w) is crucial for microorganism survival on the surface within poultry litter.

Research has shown that when the ERH of the air at the litter surface increases above 84%, conditions are favorable for pathogen growth. Controlling relative humidity inside the poultry house, ideally at 50-70%, well below the 84% threshold, is an optimal way to control litter water availability and prevent microbial growth. Controlling ERH is a vital management strategy for controlling pathogens.

Strategies for Controlling ERH

Proper ventilation is a key management tool for removing excess moisture from the broiler house. Combatting the challenge of excess moisture can be largely overcome by ensuring proper directional airflow through sidewall inlets within the house, allowing cooler, outside air to mix with warmer air at the house ceiling. Proper mixing increases the moisture-holding capacity of incoming air, which allows increased moisture removal from the litter. This is possible because the saturated air can then be circulated out of the house leaving a drier litter. Cold air that enters through leaks in the house or through sidewall inlets at a low velocity will drop downward along the sidewalls resulting in cold drafts, chilled birds, wet litter, increased ammonia levels and increased fuel usage.

Preventing leaks from water lines is another control measure to ensure dry litter. Wet litter can be caused by water lines that are too low, water pressure that is too high, or leaking nipples. Uneveled drinker lines can also be problematic especially in houses that have been windrowed. Air pockets can form in the line causing unequal water pressure. Even if the litter conditions are perfect in the rest of the house, donuts under drinker lines are sufficient to downgrade paws and create litter conditions favorable for pathogen development.

Proper decaking of wet litter between flocks also helps to control moisture levels. Only caked litter from high moisture areas of the house should be removed. Decaking equipment should be adjusted to remove only the top-caked portion of the litter, leaving the dry litter underneath.

(continued on next page)

Leveraging Litter Management to Control Pathogens *(continued from previous page)*

Adding new bedding at a proper depth of 4 to 6 inches helps further. When adding new bedding, it's ideal to select a clean, dry material with desirable absorption properties.

Temperature is considered one of the most important environmental factors affecting growth and survival of microorganisms. The optimum temperature for most pathogens is around 98°F. If temperatures rise to high levels (above 131°F), pathogen growth rate sharply declines, proteins denature and thermal breakdown of the cell membrane occurs resulting in cellular death.

In-house windrow composting of built-up broiler litter has been adopted in some production complexes as an attempt to reduce or destroy pathogens during flock downtime. If properly conducted, the process can achieve adequate temperatures for pathogen control; however, careful management is required for this process to work. The nature of modern litter management strategies and relatively short downtimes between broiler production flocks create challenges for successful adoption of in-house litter windrowing.

Litter management strategies attempt to achieve a dry litter, which conflicts with achieving optimal moisture content for effective windrowing. For windrows to properly heat and achieve pathogen kill, adequate C:N ratios (25:1) and moisture (at least 40%) are necessary. Normal litter has a C:N ratio of 15:1 and a moisture content around 20-25%. These conditions are not conducive for effective windrowing, thus temperatures (which often go unchecked) do not reach adequate levels. Mixing wet litter into the windrow to provide the necessary moisture may only redistribute disease-challenged litter throughout the house.

The high level of ammonia produced both during and following the windrow process presents another challenge. Proper management must be in place so that ammonia concentrations after windrowing do not negatively affect the health of the next flock. Following windrow spreading, houses should be given sufficient time, with proper ventilation, to purge ammonia prior to chick placement. Thus, extended down times are required in order to manage the ammonia levels post windrow leveling.

Finally, windrowing litter degrades carbon bedding material to a fine particle size. Over time, windrowed litter becomes too fine and loses its absorption characteristics. Instead of moisture caking at the surface, it migrates to the pad to create deep litter ammonia challenges.

The Role of Litter Management in Alternative Pathogen Control Strategies

As the industry continues to shift to non-conventional production, efforts to control pathogens for bird health and human food safety will involve an understanding of pathogen-growth conditions. Proper litter management is a key component for effective poultry production. By better understanding the ecology of poultry litter, along with the environmental factors such as temperature, moisture content and pH, the industry can develop alternative pathogen control strategies for improved performance and bird health, and reduced food safety risks. □

Consumers love meat, want to ban slaughterhouses

Feb. 22, 2018 by [Lisa M. Keefe](#) in [MeatingPlace.com](#)

While more than 90 percent of U.S. consumers eat meat at least occasionally, nearly half (47 percent) of respondents in a recent survey agreed with the statement, "I support a ban on slaughterhouses."

In the monthly [Food Demand Survey](#) (FoodS), conducted by Oklahoma State University, the survey asked those who agreed if they were aware that slaughterhouses are necessary to the consumption of meat; of those, nearly three-quarters (73 percent) said they were.

This contradictory set of responses echoes a survey conducted late last year by the Sentience Institute, in which 42 percent of respondents agreed with the statement, "I support a ban on slaughterhouses".

"The number frankly seemed outrageous, given that more than 90 percent of Americans eat meat regularly and it is rather difficult to do so without slaughtering houses," said the FoodS authors, Prof. Bailey Norwood and Susan Murray. They set about to recreate the survey to see if they got the same results.

The startling outcome "provides a teachable moment on the use of survey responses," the FoodS authors said. "However useful they are, people will state attitudes in surveys that run contrary to their behaviors in the real world. That said, surveys can sometimes tell us more about what consumers want in their social and political institutions than their individual behaviors."

Demand steadies

Elsewhere, consumer demand for various meat products seems to have returned to a more expected trend, after dropping across the board [in November](#) and then increasing across the board [in December](#). Compared with one month ago, consumers in January were willing to pay less for chicken breast and hamburger — and pasta — while willingness-to-pay for steak and pork chop remain essentially flat. Deli ham and chicken wings — and rice and beans — were the winners, with willingness-to-pay up nearly 14 percent for deli ham. □

A revolution in meat production?

Feb 13, 2018 by [Fabian Brockotter](#), editor of [PoultryWorld.net](#)

Recently one of Europe's largest poultry producers PHW-Gruppe from Germany formed a strategic partnership with the Israeli clean meat start-up company SuperMeat. ***Their plan is to produce chicken meat, without growing and slaughtering birds.***

Simply said, the companies want to extract stem cells from live birds and produce clean meat by growing the cells in ideal lab conditions, forming high-quality chicken cuts. Peter Wesjohann, PHW-Gruppe's chief executive officer says: "We at PHW have time and again left the beaten path in conducting our business."

Cleaner more protein-rich diet

"This approach not only facilitates the development of best-in-class animal welfare concepts in our core poultry business, but will also lead to the strengthening of our vegan product portfolio, confirming our leading role in the global consumer trend towards a cleaner, more protein-rich diet." And let there be no misunderstanding, this can be done, technically and at a competing price level in the near future.

Artificial looking cultured meat

A partnership like this is a real revolution in the poultry industry, however, producing cultured meat isn't. Of course recent developments in this field have promising results, hence the partnership. But the idea is not new. It was the great statesman Winston Churchill who stated in 1936: "50 years hence, we shall escape the absurdity of growing a whole chicken in order to eat the breast or wing, by growing these parts separately under a suitable medium." However in the previous century there was no good alternative, with cultured meat being spongy and artificial looking. We have gone beyond this, in the meantime cultured meat has been surpassed by non-meat alternatives.

Meat substitutes

The real revolution that could influence the future of poultry meat production is the creation of plant based meat substitutes. And we are not talking about the good old tofu. Recent developments in the art of structuring plant proteins have led to a meat substitute that is as good or even better than real meat. Challenges in taste, texture, bite, food experience and nutritional value have all been tackled.

On top of that it has the added value of being 100% plant based. For those producers it is just the challenge of convincing the consumer to move away from meat, their product then does the rest. □

Tyson Foods invests in cultured meat with stake in Memphis Meats

JANUARY 29, 2018 in [WATTAGNET.COM](#)

Food tech startup is a leader in cultured meat produced directly from animal cells

Tyson Ventures, the venture capital arm of Tyson Foods Inc., has invested in food tech startup Memphis Meats, a leader in cultured meat produced directly from animal cells.

The investment is an example of Tyson Foods' commitment to explore innovative, new ways of meeting growing global demand for protein.

While the terms were not disclosed, Tyson Foods investment represents a minority stake in the business. Tyson Foods joins a diverse group of investors in Memphis Meats, which includes industry leaders, top venture investors and mission-driven groups, such as DFJ, Atomico, Cargill, Bill Gates and Richard Branson.

"We're excited about this opportunity to broaden our exposure to innovative, new ways of producing meat, especially since global protein demand has been increasing at a steady rate," said Justin Whitmore, executive vice president corporate strategy and chief sustainability officer of Tyson Foods. "We continue to invest significantly in our traditional meat business, but also believe in exploring additional opportunities for growth that give consumers more choices."

"We are excited that Tyson Foods will be joining us in our mission to bring meat to the table in a sustainable, affordable and delicious way," said Uma Valeti, co-founder and CEO of Memphis Meats. "Our vision is for the world to eat what it loves, in a way that addresses today's challenges for the environment, animal welfare and public health. We are accelerating our work and building out a world-class team to make this a reality."

Memphis Meats expects to use the funds to accelerate product development. The company is recruiting to expand its team of chefs, scientists, creative people and business people. □

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USCA petitions USDA to label alternative ‘beef’ products

By [Tom Johnston](#) on 2/12/2018 in [MeatingPlace.com](#)

The United States Cattlemen’s Association (USCA) on Friday submitted a [petition](#) to the USDA’s Food Safety and Inspection Service (FSIS) asking the agency for rulemaking on beef labeling to clarify for consumers what is beef derived from cattle and “beef” products created in a laboratory.

The petition comes on the heels of Tyson Foods’ recent investment in Memphis Meats, a company creating meat from animal cells in a petri dish. Cargill also has invested in Memphis Meats.

“Consumers depend upon the USDA FSIS to ensure that the products they purchase at the grocery store match their label descriptions,” USCA President Kenny Graner said in a news release. “We look forward to working with the agency to rectify the misleading labeling of “beef” products that are made with plant or insect protein or grown in a petri dish. U.S. cattle producers take pride in developing the highest quality, and safest, beef in the world, and labels must clearly distinguish that difference.”

USCA is not the only meat industry group asking questions about how lab-grown meat will be regulated. The North American Meat Institute also made it [a hot topic](#) at the recently held International Production and Processing Expo in Atlanta. □

U.S. Consumers Want Protein Raised with Same Natural Health Supplements Humans Use

Feb. 14, 2018 in USPOULTRY Wire

Millennials, ever interested in where and how their food is produced, want their protein to be raised with the same natural health supplements they would use themselves—and they are driving this trend among the general U.S. consumer base. Cargill’s latest Feed4Thought survey, which polled more than 1,000 people in the U.S. in Dec. 2017, found 62 percent of millennials want the protein they eat to be raised with the same health supplements used in humans, such as probiotics, plant extracts and essential oils. Consumers in general report they are three times more likely to prefer protein that were fed those natural feed additives to improve the animal’s digestive health and overall well-being.

[Click here for full article](#) □

San Francisco Will Require Grocers to Disclose Information About Meat and Poultry Supplier Antibiotic Use

November 14, 2017 excerpts from [Food Industry Executive.com](#) news by Hilary Smith

San Francisco’s Board of Supervisors [passed a city ordinance](#) requiring grocery stores to report details about antibiotics used in the meat and poultry they sell. Although San Francisco is the first to take this action, it could be the start of a widespread movement to respond to growing consumer concerns regarding antibiotics.

The ordinance will make all the information public – even consumers from other cities and states will have access. What does this mean for meat and poultry processors?

The ordinance

On October 17, San Francisco’s Board of Supervisors unanimously voted “yea” on the new ordinance. Grocery stores within the city limits that have 25 stores or more are subject to enforcement, including big players like Walmart, Safeway, and Target. Each store has to disclose [specific information](#) about their meat and poultry suppliers, including what antibiotics were used on the animals and in what quantity.

City departments are also subject to the ordinance, including San Francisco General Hospital and the county jail. They’ll have to list all of their suppliers, which ones use antibiotics, and what the cost would be to switch to antibiotic-free meat and poultry.

Industry response

The meat and poultry industry is [not happy with the new rule](#). The North American Meat Institute called the ordinance “a recipe for disaster.” The main issue the industry has with the ordinance are the cost of the required documentation, which they say is duplicative and will cause prices to rise.

The FMI said it is “disappointed that in the passage of this ordinance, the Board did not take into consideration the concerns of the city’s grocers, their customers, or the commonsense modifications proposed by FMI to exempt products marked as USDA certified organic, ‘Raised without Antibiotics’ or an approved variation of this nomenclature.”

To see the full story go to: <http://foodindustryexecutive.com/2017/11/san-francisco-will-require-grocers-disclose-information-meat-poultry-supplier-antibiotic-use/> □

Improving ROI with Ventilation

By Scott Black, South Regional Technical Representative

Twenty-five years ago the poultry industry looked completely different than it does today. Then you could drive through the country and see two or even three poultry houses tucked back off the main road with a nice brick rancher, where the grower lived somewhere in view of the farm. In today's landscape, the farm looks completely different than it did in previous generations. Today's operation is closer to six, eight or even ten houses, the farm is way off the road, and the grower might live within a mile of their farm with the farm tied directly to the internet in order to alert the grower of any potential risk involved.



So, where does the term return on investment (ROI) come in? Return on investment is a term used in the business environment to let investors know how long it will take for them to get a return on their initial investment. For some, it may be five years before they see a return on their investment, and for others they might see a return in 20 years. So, how does ventilation tie into ROI? I want you to consider looking at ventilation as an investment in four to five key areas.

The first area where a poultry grower needs to invest is in the environment of the house. Creating the ideal environment for the chickens to grow in costs money. This is an investment that the grower will see only when the flock sells and he/she gets paid for raising the flock. A couple of key areas to invest in are great air quality (which includes low ammonia, low CO₂, and low dust) along with the ideal temperature to provide perfect bird comfort. When the weather turns cold, a grower continues to run the proper amount of air in order to ensure good air quality, while others are cutting back on their ventilation to prevent a higher propane bill. This decision compromises the birds' comfort and health, which will later show up in higher conversions, higher condemnments or mortality. Creating the best environment will cost a little more but it will pay good dividends in the end.

Another area for consideration when looking for an ROI is in your equipment selection. Today's market place is not any different than other business markets. There is a price point (price that consumers are looking for at which they feel the value is comparable to the price) for poultry equipment. We have all heard the saying "cheaper is not always better," and we can say that with confidence when we look at pricing equipment for a 40-year investment. Consider the following example: Every poultry house has ventilation fans. For the sake of simplicity, we will say that every fan in the house is a 48-inch fan. The house needs a total of 12 of these fans. When pricing fans, one can expect to pay somewhere in the range of \$800 for a galvanized prop exhaust fan on the low end to as much as \$1,400 on the high end with a fiberglass prop exhaust fan. If you are buying 12 fans per house and you are building six new houses, there is a difference of \$43,200 between buying a low-end fan and a premium fan. One would be tempted to go with the low-end purchase; however, when looking at the CFM per watt, the premium fan will pay for itself and create a significantly lower cost in electrical costs for the life of the fan, thus increasing one's long-term profits. BESS Lab is the industry leader in providing the framework for each and every fan made for poultry houses. Simply put, when you are looking at equipment, think long term and efficient in order to make a good investment.

The third most-often seen mistake in the industry is not understanding how to run a poultry farm like a business. The industry is full of multigenerational farmers who have gotten into the business because they had a family member who grew chickens and enjoyed the benefits. However, when looking to build houses, or if you have been growing chickens for 15 years, one needs to run his/her farm like a business and not like a chicken farm. Think of it this way: If you were to take the same money you borrowed to build six new houses and invested it in a restaurant franchise, they would require you to follow their proven plan of success and profitability. Some of the stipulations for franchisees are: completely overhauling the cosmetic structure every six years, changing out the seating every four years, replacing the flooring every six to eight years, and applying new paint every two years to the interior of the building. This is just an example, but it is a mandatory requirement in order to be a part of the franchise that has proven success in other parts of the town or country. All these updates are very expensive; however, over time they continue to allow the owner to profit by keeping customers coming through the front door. A clean look helps attract business and keeps customers coming back. A franchisee may easily spend hundreds of thousands of dollars simply keeping his/her restaurant up to date. When you invest that same amount of money in a poultry farm, it is vital that you update your equipment, your structure and your technology to maximize profits. In the last 15 years, the industry has developed a few cost-saving products that allow growers to update their housing while also utilizing lower dependence on electricity and propane. A few examples where wise investments can be made are the following: environmental controllers, lighting, replacing old, inefficient fans, circulation fans, solid walls, reinsulating ceilings and many others. Our industry needs to look at the poultry houses as a 45-year investment, much like a franchisee, instead of a building and not making updates to it.



(continued on next page)

Improving ROI with Ventilation *(continued from previous page)*

Most investments have a targeted approach, and a poultry operation is not any different. Knowing where to invest for the best return is very important. Recently, there have been programs available that will audit your operation and let you know where opportunities are to save money. The program will quantify the savings and investment and give you a ratio in order that you may compare the investment versus the savings. These energy audits are extensive and very detailed-oriented; therefore, they provide a road map for extended profitability. One of the largest expenses that growers incur is the amount that is spent on heating and energy. This is where the audit will focus. Minimum ventilation fans in older houses simply are not efficient anymore. It is rare to find someone who will pull out those old fans and replace them with fans that pull more air, thereby being more efficient and allowing the grower to pull air to the desired static pressure. In almost every situation where a grower pulls out an old 36-inch fan and replaces it with a high-efficiency fan, we hear the following: "I wish I would have done this years ago. It completely changes how my house runs, and I use less fuel and energy."

The last area that we need to focus on is profits and reinvesting. Anyone who has been in the poultry business knows that we are not a get-rich-quick business. It is taking longer and longer to get returns on our initial investments with longer loan terms; however, once we start making bigger profits, what do we do with the money? A mistake that is made way too often is when a grower needs to spend a portion of the proceeds to minimize his/her taxes. More times than not, the grower will purchase a new truck, a utility vehicle or a new piece of machinery for the farm. Although these items are nice to have, in most cases they simply are a tax deduction and not an improvement to the business. Why not get the deduction from some new fans or add equipment and see the results from lower energy costs? By delaying the "wants" and purchasing these other items, the grower can use the energy savings later down the road to fund a newer truck or equipment for the farm. One of the biggest mistakes growers tend to make is that they want to buy a newer vehicle for tax reasons instead of purchasing more efficient exhaust or tunnel fans, which will lower their electric cost for the next 15 years. Both will save them on taxes; however, one will save the grower money and will pay better dividends in the end. A few examples of reinvesting for a ROI are: going from curtain-sided to solid walls, stir fans to destratify heat buildup, installing environmental controllers, newer minimum ventilation fans, energy-efficient lighting, new heating sources and the list goes on.

In conclusion, when we are looking for a return on our investment, we don't have to wait for five to ten years. We can capture returns at the end of a flock (60 days or less) when we invest it properly. Growers have choices when it comes to getting a return on their investment: He/she may make "wiser" fan choices at the beginning of the journey of growing chickens, reinvest in newer, efficient replacement fans, run the needed amount of air in order to provide the ideal environment, and anticipate the desired gain at the end of the flock. As you can see, ROI is not just a business term that is restricted to Wall Street. At the end of the day, every poultry grower needs to weigh the cost and benefits of investing wisely now and reaping the rewards for months and years down the road. ▢

Ventilation during incubation is a complex matter

Feb. 14, 2018 information from PoultryWorld.net

Optimal chick quality and maximal hatchability depend largely on the environmental conditions that we create in the setters and hatchers. When these conditions meet the demands of the embryo, conversion of egg content into embryo and the development of the embryo will be optimal. Good quality day old chicks will be the result.

Next to adequate turning of the eggs, there are 3 priorities in incubation:

- 1. Control of the internal temperature of the eggs.** As this temperature determines the speed of the development of the embryo and with it the balance in supply and demand of nutrients for the embryo, a precise and uniform control of the temperature is needed.
- 2. An adequate control of the relative humidity (RH).** The egg needs to lose a certain amount of moisture during incubation to create the air cell, and RH creates the driving force for the moisture loss of the egg. In older machines that have limited cooling capacity, evaporation of water is needed to supply additional cooling. With this evaporation the RH in the machine will change, so also for temperature control the RH is important.
- 3. Air exchange.** The embryo needs oxygen (O₂) and produces carbon dioxide (CO₂), so the machines need to exchange the air to provide this

To learn more about ventilation requirements and excel programs to calculate ventilation budgets provided by Ron Meijerhof, Poultry Performance Plus and Sander Lourens, Wageningen University go to:

http://www.poultryworld.net/Eggs/Articles/2018/2/Ventilation-during-incubation-is-a-complex-matter-247936E/?cnpid=NLC|worldpoultry|2018-02-14|Ventilation_during_incubation_is_a_complex_matter ▢

Research: Why roosters don't go deaf

Jan. 31, 2018 from PoultryWorld.Net by [Tony McDougal](#)

Roosters have their own natural mechanism to prevent them from going deaf from their loud crowing, researchers have found.

Analysis has shown that a rooster's crow averages over 100 decibels, which is equivalent to a chainsaw. People who regularly use chainsaws without ear protection go deaf due to the damage to the tiny hair cells in the inner ear. But researchers from the University of Antwerp and the University of Ghent, Belgium, have discovered why roosters don't suffer the same consequences as chickens of both genders have such hairs in their ears.

In a paper published in the journal *Zoology*, they outline how they placed a tiny microphone near the ears of sample roosters to measure how loud the crowing would sound and they performed micro-computerized tomography scans on the skulls of the birds.

They discovered that half of the birds' eardrum was covered by a soft tissues that dampened incoming noise. And they also found that when the rooster tilted its head back to crow, another bit of material covered the ear canal completely, serving as a built-in ear plug.

The researchers noted the birds also have another advantage – unlike humans, birds can regrow damaged hair cells – particularly useful as the study found that sound pressure levels from the crowing can reach amplitudes of 142.3 decibels.

Roosters also tend to seek a vantage point offering maximum reach when they crow (away from the hens and chicks), making sure everyone within earshot knows that the hens that live there are his! □

EU member states decide to ban formaldehyde in poultry feed

Dec. 22, 2017 information from WorldPoultry.net by Tony McDougal

26 European Union countries backed a proposal by the European Commission to deny authorization of formaldehyde as a feed additive, even though the European Food Safety Authority (EFSA) has said the compound does not cause cancer and could be authorized as a feed additive as long as worker protection measures were taken.

The American Feed Industry Association has urged the Commission "to provide authorization of formaldehyde for salmonella control in swine and poultry feed."

For more information go to: <http://www.poultryworld.net/Nutrition/Articles/2017/12/EU-member-states-decide-to-ban-formaldehyde-in-poultry-feed-228694E/> □

Over 500 Vo-Ag students from across the state were at Hyder-Burks Arena at TTU in Cookeville on Feb. 7 to participate in various poultry, livestock and horticulture judging clinics. The poultry judging clinic was taught by Dr. David Frazier of Tarleton, TX and had nearly 80 participants.



AFIA urges FDA to reduce regulatory burden

Feb. 12, 2018 in AllAboutFeed.com

The American Feed Industry Association (AFIA) is calling upon the Food and Drug Administration (FDA) to consider reducing the regulatory burden for feed manufacturers.

AFIA wants FDA to consider streamlining or removing several federal regulations and record-keeping requirements that are unclear, duplicative, antiquated or do nothing to enhance the safety of America's animal food supply at the great expense of small and large animal food manufacturers.

Opportunity to provide feedback

AFIA submitted formal comments to the agency in response to its federal docket (FDA-2017-N-5104) requesting input from industry and other stakeholders on current human and animal food safety regulations and information collection requirements that could be improved upon or reduced. Upon submitting the letter to the FDA, Richard Sellers, AFIA's senior vice president of public policy and education, said: "The American Feed Industry Association appreciates the opportunity to provide feedback to the Food and Drug Administration on several regulations impacting the animal food manufacturing industry and hopes the agency will review our comments in the spirit they are offered, mainly, as an effort to reduce the regulatory burden, both on the Center for Veterinary Medicine and regulated industry, while not compromising animal food safety."

AFIA hired several new staff during the last presidential administration just to keep up with the breadth and depth of new regulations impacting our industry and appreciates the current administration's goal of rolling back unnecessary and burdensome regulations facing American manufacturers. As such, we hope our comments, and those of many others, are not stored somewhere and never reviewed. We believe the development of meaningful regulatory reform ideals would provide tremendous benefit in time and resources not just to the regulated industry, but also to the FDA, and urge the agency to seriously and swiftly review these comments and move toward a concerted effort to make positive changes in regulations."

Several requests

[AFIA's letter](#) outlines several requests for the FDA to consider in its effort to make its regulations more impactful, including:

- ◆ Reducing the need for FDA inspectors to learn, and large feed mills to comply with, 2 sets of current good manufacturing practices (CGMPs), by aligning the Food Safety Modernization Act (FSMA) CGMPs with those of the medicated feed CGMPs, which have been in place for 40 years.
- ◆ More clearly defining when the FSMA written preventive controls and written supply-chain programs are or are not required to reduce the ambiguity facing animal food manufacturers and facilitate the better training of and inspections by state and federal regulators. As currently written, most facilities will assume they must follow preventive controls. These controls are estimated to cost the industry an excess of \$ 800 million with very little benefit to animal food safety.
- ◆ Removing several elements of the FSMA hazard analysis (i.e., illness data, scientific reports and the assessment and determination of the probability of hazards), which would be overly cost-prohibitive for small animal food manufacturers to comply, with little indication that such egregious hazards exist.
- ◆ Establishing speedier and more consistent ingredient review processes that allow innovative products to come to market to benefit animal nutrition, animal food safety and human food safety.
- ◆ Eliminating several other unnecessary or duplicative written record-keeping requirements, including: under Part 11 **Veterinary Feed Directive** and medicated feed CGMPs, FSMA's written assurances, and the FDA's annual drug establishment registration for medicated feed mill license applications. □

Kansas Bill Sets Boundaries on Concentration of Chicken Houses to Help Open its Doors to Broiler Operations

February 16, 2018, in *Agriculture News, Legislative*

A Kansas Senate bill, which is reportedly receiving widespread support, would set boundaries on concentration of chicken houses in the state and the number of birds at each site. The legislation was introduced with the goal to help improve recruitment of companies interested in making investment in the state and potentially opening the state to new poultry operations.

Under [Senate Bill 405](#), introduced in the Kansas Senate Ways and Means Committee, poultry barns in Kansas could not be closer than a quarter of a mile from an occupied home, excluding a homestead located on the same property with the chicken barns. The bill also would require farms with more than 125,000 broilers or 82,000 layers to obtain a federal permit. Under the bill, the density of confined poultry operations and proximity to residential units would be a matter of state law. In addition, production barns operating under the Senate bill would have to deploy a dry-manure system to limit objectionable smells from the chicken houses. □

Climate change trends that will affect Midwestern farms

MARCH 1, 2018 BY [ANDREA GANTZ](#) IN [WATTAGNET.COM](#)

"It is an observable, comprehensive shift," said Kenny Blumenfeld, senior climatologist at the Minnesota State Climatology Office during a presentation at the 2018 Midwest Organic and Sustainable Education Service [Organic Farming Conference](#) on February 23 in La Crosse, Wisconsin. "Any way you cut this, it matters."

Blumenfeld outlined [climate changes currently impacting agriculture](#) and what Midwestern farmers in the Corn Belt should expect during upcoming growing seasons. First, however, he wanted to make one thing clear: "Observations and projections are two different fields of climate science." It is past observed data versus modeled or simulated future data. When we talk about the past, explained Blumenfeld, we are talking about things that we have measured: temperature, wind, moisture, humidity, rainfall, pressure, solar radiation. When we talk about the future, we are talking about simulating a range of scenarios that could happen based on our understanding of how this atmosphere behaves. The two different fields are often confused, and it's important to understand them and their differences.

It is also important to understand variability. "We can have a trend, and we can also have variability along that trend. And having one does not disprove the other or prove the other," said Blumenfeld. For example, he explained, in the winter of 2014, many places in the upper Midwest had the most severe winter seen in 80 years. "A lot of people thought, 'Where's global warming now?'" said Blumenfeld, who then stressed, "We have variability. We're allowed to get cold even while we warm."

Coping with a changing climate: What will the future bring?

Weather and climate patterns are a driving force behind the success or failure of Corn Belt cropping systems. The upper Midwest region has seen a 15 percent increase in water occurring in bigger events, with most of the rest of the region receiving 10 percent more rainfall, according to USDA data. North Central Ohio received 15 inches of rain in September 2016. More water to deal with means saturated soils, water quality issues, more runoff and nutrient loss. Extreme events, such as floods, can cause erosion and damage to fields. Winter is warming about seven times faster than summer in the Midwestern region, shared Blumenfeld. In Minnesota, it's 13 times faster.

"I don't know anyone who has a future thermometer," said Blumenfeld. "But we do have a very good understanding of how the atmosphere works, and we also have a strong and growing understanding of how we have changed the composition of the atmosphere and how, therefore, the atmosphere should respond."

According to data presented by Blumenfeld, the upper Midwest's most pronounced trends and the projected impact are:

- ◆ Becoming warmer and wetter, projected to continue
- ◆ Rapid winter warming and loss of cold/cool extremes, will continue
- ◆ Extreme rainfall events increasing, projected to continue

Good news, and staying up to date with climate change data

When he looks at the data, Blumenfeld sees three things that are good news: "Hot days, warm nights and heatwaves in the upper Midwest show absolutely no current sign of long-term or short-term increase." This is often a surprise to people, because they assume that global warming must mean more hot days. But Blumenfeld said to note that we're warming because of more greenhouse gasses, not because the sun has intensified. These greenhouse gasses don't intensify the sun, and in some cases, they actually make it harder for the sun to penetrate. But what they do really well, he explained, is prevent heat from escaping at night and in the winter time.

In the upper Midwest, the following important weather phenomena show no trends:

- ◆ Hot days, warm nights: no worsening observed, but projected as likely
- ◆ Drought: no worsening observed, but projected as possible
- ◆ Tornadoes, severe convective storms: trends unclear, projections unclear

"Right now, we're not seeing anywhere in the region anything that remotely resembles an increase in extremes of heat," said Blumenfeld. However, he stressed, the models indicate that this warming will catch up with us. Winter could be eroded in as soon as twenty years, starting spring and summer at a much warmer baseline. Then, add a normal amount of summer heat to that warmer baseline, and temperatures will be noticeably hotter.

Blumenfeld encourages anyone who is skeptical of climate change to step away from their opinions and beliefs and just look at the data, as it is all publicly available. He also encourages farmers and producers to check in with the data every three to five years. "We need to stay up to date," he stated. "It's my job to stay up to date, and I'm telling you, I can't. There's so much information coming in." □

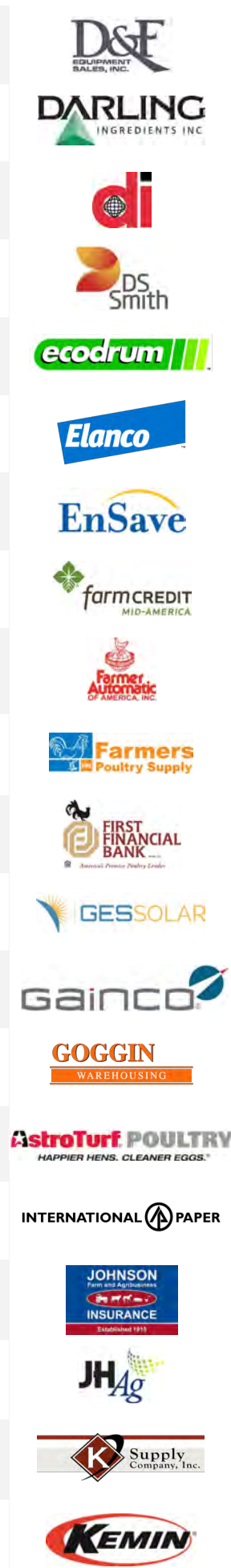
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Let us know topics that are of interest to you and we'll do our best to include them in our upcoming newsletters. Email tracy@tnpoultry.org.

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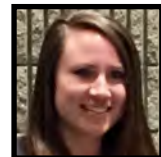
NEWS FROM AROUND THE COMPLEXES

Tom McCue is the Complex Manager for the new **Tyson Foods** poultry complex coming to **Humboldt, TN**. Tom has been with Tyson Foods Shelbyville for 24 years and served in various management roles, most recently as Live Production Manager. **David Corvin** has been named Live Production Manager for Humboldt. David has been with Tyson Foods since 2010, working in live operations at Obion County, TN Complex. He began as a Breeder Technical Advisor, Broiler Technical Advisor, and was later promoted to the Breeder Manager position.

Rob Brown, former broiler manager for **Tyson Foods** in **Union City** is now the complex's Breeder Manager. Rob has been with Tyson Foods for over 12 years and has a total of 18 years' experience within the poultry industry. **Denver Melton** has been promoted to the position of Broiler Manager. Denver has worked for Tyson for 16 years and has been in the Broiler department for the last 13 years.

Marshall Miller has been promoted to Live Production Manager for the **Shelbyville Tyson Foods** complex. Marshall has been employed with Tyson Foods eleven years and served in various roles on the live side. His career began as a Broiler Technician Advisor, was promoted to Building Coordinator and was promoted again to Broiler Manager. Marshall has a degree in Animal Science from MTSU. **Kenny Brown** has accepted the new role as Broiler Manager with Tyson Foods **Shelbyville**. He has been with the Shelbyville complex for 37 years, previously as Broiler Technician Advisor.

US Poultry and Egg Association presented **Kalyn Reed**, Quality Assurance Manager for **Aviagen**, with a 30 Under 30 award at IPPE 2018. Kalyn was honored due to her leadership, enthusiasm and dedication. She is an Animal and Veterinary Science graduate of Clemson University.



Aviagen® has announced that **Dr. Jose J. Bruzual** has been named Senior Poultry Veterinary Specialist for Aviagen's Global Veterinary Technical (GVT) team. Dr. Bruzual will work with customers in both North America and Latin America, helping them optimize the health, quality and performance of their poultry breeding stock. Before moving to the new position, Dr. Bruzual served as the regional technical manager for Latin America, and was also the former regional technical service veterinarian for the GVT, offering health and management advice and conducting research on poultry health in both positions. Dr. Bruzual earned a Doctorate in Veterinary Medicine from the Central University of Venezuela, and a Master's in both Poultry Science from NCSU and in Avian Medicine from the University of GA.

Poultry companies sued by distributors alleging inflated prices

Feb. 1, 2018 in WattAgNet.com

A group of U.S. food distributors and other poultry buyers are suing several poultry processing companies for allegedly conspiring to inflate wholesale prices for chicken. The complaints were filed in federal court in Illinois on January 30.

Companies named in the separate complaints, including Tyson Foods Inc., Pilgrim's Pride Corp., Perdue Farms, Koch Foods Inc., Sanderson Farms Inc., Wayne Farms L.L.C., Foster Farms, Mar-Jac Poultry, Fieldale Farms, Claxton Poultry Farms and Harrison Poultry Inc., control 80 percent of the chicken supply in the U.S.

For more information, [click here](#). □

Not currently a member of TPA?

Contact Tracy at (270) 363-2078 or tracy@tnpoultry.org for more information about member benefits.



March 1, 2018

Fellow Allied TPA Members,

As you know, the Tennessee Poultry Association's Annual Scholarship Fundraisers are quickly approaching. The Sporting Clays event will be held April 18, 2018 at the Nashville Gun Club. The Golf Tournament will be held April 19, 2018 at The Hermitage.

As chairman of the newly formed Allied Committee, I am asking all of our allied members to contribute to the events, both in participation and donations. The events rely heavily on our contributions, which attract additional entries.

As you know, these events raise money to support scholarships for the next generation of poultry industry leaders and we should demonstrate our commitment to the industry we rely on for our company's success.

Please contact Dale, Tracy, or me and let us know what you will be sending for gift bags or door prizes for the aforementioned events. Please make arrangements to have the items to TPA prior to the event.

I would also like to mention that the Annual Meeting will be held in Nashville at the Doubletree on August 3rd and 4th. Please make arrangements to donate a silent or live auction item to this event as well.

Please don't hesitate to contact me if you have suggestions about how we can improve our efforts to support TPA. If you are interested, I invite you to join our committee.

Thank you for your generosity and support of TPA!

Sincerely,

Bart Smith
TPA Allied Committee Chairman
bart.smith@sunbeltrentals.com
205-602-2485



2018 TN Poultry Association Grower Member Scholarship

*For students of TPA grower member family poultry farms in TN.
Students must be directly related to, **and** live or work on the family farm.
Application must be typed. Deadline: April 1, 2018*

Personal Information:

1. Name: _____
(Last) (First) (Middle)
2. Address: _____

3. Telephone: _____
4. Email Address: _____

Farm Family information for students of TPA grower member families:

5. Farm Name: _____
6. Owner of farm: _____
7. Farm Address (city/zip): _____ TN, _____
8. Relationship to you: _____
9. Grows for (name of poultry complex): _____
10. Is the farm a current member of TPA? _____ *(must be a current member)*

Educational Information:

11. High School Graduation Date (Month and Year): _____
12. Name of college/university/technical school you will be attending this **Fall 2018** school year: _____
13. Planned Major: _____ Minor: _____

14. Have you been officially accepted by this college/university/school? _____

15. Classification this Fall 2018 (circle one): Fresh. / Soph. / Jr. / Sr. / Other/yr.: _____

16. Advisor's name: _____

Advisor's email: _____

17. Anticipated College/Tech School Graduation Date: _____

18. The following attachments must accompany the application to be considered:

- ☐ Copy of most recent transcript; Current GPA: _____
- ☐ Two (2) Letters of Recommendation (including names and addresses) to be e-mailed directly to TPA by the 2 people making the recommendations:
 - 1) Name & email: _____
 - 2) Name & email: _____
- ☐ Individual personal essay including career goals and future plans (see #21 below)
- ☐ Digital photograph e-mailed directly to TPA to be used for promotional purposes by TPA

19. List extracurricular activities, **including year** (i.e., school clubs, offices held, sports, church activities, band, fundraisers, charitable events, etc.). Attach a separate sheet if needed.

20. List pertinent work experience, internships and volunteer efforts **including dates** (also, list employer name, city & state and email address for each). Attach a separate sheet if needed.

21. On a separate page, type a minimum 300 word **essay** of your career goals and future plans after you complete your education. Please include your name and date.

22. Provide two (2) Letters of **Recommendation** from teachers, counselors/advisors, employers, industry professionals, etc. Ask the person writing each recommendation to include their name, title and affiliation and have that person email their recommendation directly to tracy@tnpoultry.org.

By submitting this completed, original application along with the required materials, I understand that I am applying for a scholarship towards a College/University Degree or Vocational/Technical certificate, and will be eligible to apply for a maximum of four (4) years.

I certify that, to the best of my knowledge, the information I have given in this form is accurate and complete.

Applicant Signature _____ Date _____

NOTE: Please email all applications and requested materials to TPA in .pdf format along with your digital photograph to Tracy Rafferty at tracy@tnpoultry.org. Letters of Recommendation can only be received directly from the person writing the recommendation.



2018 TN Poultry Association Scholarship

for residents of Tennessee pursuing a career in the poultry industry

Application must be typed. Deadline: April 1, 2018

Personal Information:

1. Name: _____
(Last) (First) (Middle)
2. Address: _____

3. Telephone: _____
4. Email Address: _____

Educational Information:

5. Planned Major: _____ Minor: _____
6. Name of college/university/school in TN you will be attending this **Fall 2018** school year:

7. Have you been officially accepted by this college/university/school? _____
8. Advisor or school contact: _____
9. Advisor's email: _____
10. High School Graduation Date (Month and Year): _____
11. Anticipated College Graduation Date (Month and Year): _____
12. Classification for the Fall 2018 school year (circle one): Fr. / So. / Jr. / Sr. / Other/Yr: _____
13. Current GPA: _____
14. The following attachments must accompany the application to be considered:
 - ☐ Copy of most recent transcript
 - ☐ Two (2) Letters of Recommendation to be e-mailed directly to TPA by the 2 people making the recommendations:

1) Name & email: _____

2) Name & email: _____

- ☐ Individual personal essay including poultry career goals and future plans (see #17 below)
- ☐ Digital photograph e-mailed directly to TPA to be used for promotional purposes by TPA

15. List extracurricular activities, **including the year** (i.e., school clubs, offices held, sports, church activities, band, fundraisers, charitable events, etc.). Attach extra pages if needed.

16. List pertinent work experience, internships and/or volunteer efforts **including dates** (also list employer name, city & state and email address for each). Attach extra pages if needed.

17. On a separate sheet of paper, type a minimum 300 word **essay** of your poultry career goals and future plans after you complete your education. Please include your name and date.

18. Provide two (2) emailed **Recommendations** from teachers, counselors/advisors, employers, industry professionals, etc. Ask the person writing the recommendation to include their name, title and affiliation and have them sent directly to tracy@tnpoultry.org.

By submitting this completed, original application along with the required materials, I understand that I am applying for a scholarship towards a College/University Degree or Vocational/Technical certificate, and will be eligible to apply for a maximum of four (4) years.

I certify that, to the best of my knowledge, the information I have given in this form is accurate and complete.

Applicant Signature: _____ Date: _____

NOTE: Please email all applications and requested materials to TPA in .pdf format along with your digital photograph to Tracy Rafferty at tracy@tnpoultry.org. Letters of Recommendation can only be received directly from the person writing the recommendation.