TPA NEWSLETTER ...from the Tennessee Poultry Association

News Flash

Growers will not be required to report ammonia emissions from their houses

News Flash

CERCLA and EPCRA reporting for air releases of ammonia or other hazardous substances from animal waste at farms *is no longer required!*

If a grower previously called in or submitted any reports, no additional reporting is required.

Due to legislative changes in the Consolidated Appropriations Act, 2018 (Omnibus Bill), "air emissions from animal waste at a farm" are exempt from reporting under CERCLA. On May 2, 2018, the D.C. Circuit Court of Appeals issued its mandate vacating the 2008 final rule. However, farms will remain exempt from the CERCLA reporting requirements as a result of the FARM Act. Additionally, these types of releases do not need to be reported under EPCRA. *(continued on page 2)*

Tennessee Poultry Association

ANNUAL MEETING & SUMMER GETAWAY

2018

AUGUST 3 - 4

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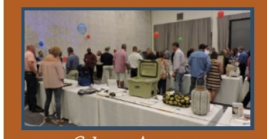
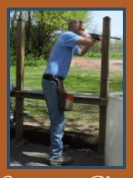
Speakers



Silent Auction



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INSIDE THIS ISSUE:

Growers are no longer required to report ammonia emissions from their houses

(continued from front page)

Two environmental laws, the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and Emergency Planning and Community Right-to-Know Act (EPCRA), require reporting of releases of hazardous substances that exceed reportable quantities within a 24-hour period. The purpose of the notification is for federal, state, and local officials to evaluate the need for an emergency response to mitigate the effects of a release to the community.

However, due to legislative changes in the "Fair Agricultural Reporting Method Act" or "FARM Act" in March 2018, "air emissions from animal waste at a farm" are exempt from reporting under CERCLA. These types of releases also do not need to be reported under EPCRA.

On March 23, 2018, the Consolidated Appropriations Act, 2018 (Omnibus Bill), was signed into law. Title XI of Division S of the Omnibus Bill, called the "FARM Act" exempts the reporting of "air emissions from animal waste at a farm" under CERCLA. On May 2, 2018, the D.C. Circuit Court of Appeals issued its mandate vacating the 2008 final rule. However, farms will remain exempt from the CERCLA reporting requirements as a result of the FARM Act.

Frequently Asked Question:

If a grower made an initial notification to the National Response Center before the FARM Act was passed, do they need to submit a written report to the EPA regional office?

No. Additional reporting is not required.

https://www.epa.gov/epcra/cercla-and-epcra-reporting-requirements-air-releases-hazardous-substances-animal-waste-farms ◻

Tyson to buy American Proteins, AMPRO Products assets

MAY 15, 2018 IN WATTAGNET.COM

Planned acquisition includes four rendering plants, 13 blending facilities

Subsidiaries of Tyson Foods have agreed to buy the poultry rendering and blending assets of American Proteins, and AMPRO Products, the companies announced.

The acquisition is expected to enable Tyson Foods to recycle more animal products for feed, pet food and aquaculture, among other things, and expand its presence in the growing animal feed ingredient business. The agreement is subject to customary closing conditions, including regulatory approval.

The purchase price is approximately $850 million. Over the next 12 months, the business is expected to generate adjusted net sales of more than $550 million. Tyson expects to realize synergies over time driven by manufacturing efficiencies, mix optimization and distribution network consolidation.

"Rendering plays a key role in growing our business and helping us deliver on our sustainability goals," said Tom Hayes, president and CEO of Tyson Foods. "Through this important business, no part of the animal goes to waste, and we can recycle valuable ngredients into feed for pets and aquaculture."

Rendering is an environmentally friendlier way to keep animal products out of landfills and potentially reduce greenhouse gas emissions. According to the National Renderers Association, rendering's contribution to carbon emission reduction in the U.S. and Canada is equivalent to removing more than 12 million cars from the road annually.

A 'great complement' to Tyson's existing business

"This acquisition is a great complement to our existing business, gives us the ability to render raw materials in a region we don't currently serve, and better positions us to meet the competitive, fast-growing national and global demand for animal protein," said Doug Ramsey, group president of poultry for Tyson Foods.

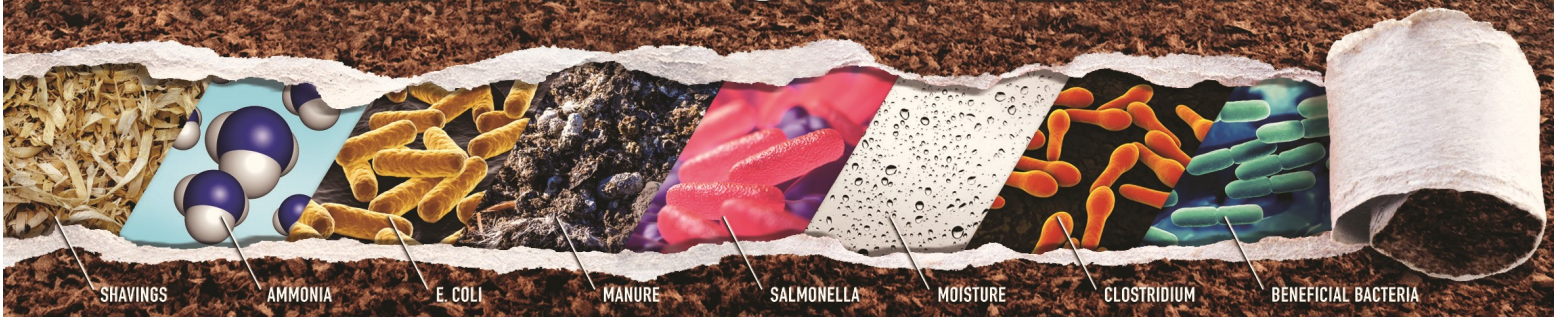
The acquisition includes four rendering plants located in Georgia and Alabama and 13 blending facilities located throughout Southeastern and Midwestern states. The facilities are expected to provide additional capacity to Tyson's current animal byproducts business.

American Proteins employees expected to be retained

Approximately 700 people work for American Proteins and most are expected to become Tyson Foods team members.

Mark Ham, president and CEO of American Proteins said, "We value and appreciate our 700 plus employees as well as the relationships we have with our suppliers and customers, and are confident that after the transaction closes the Tyson team will offer them the same commitment to service and quality as provided by American Proteins." ◻

COMPLEX ENVIRONMENT



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www.JonesHamiltonAg.com

Marfrig Announces Acquisition of Controlling Interest in National Beef and Decision to sell Keystone Foods

May 16, 2018 per USPOULTRY Wire

"Marfrig is undergoing a transition, which started with its strategic decision to adjust its capacity to the beef cycle in Brazil. The Company has been preparing itself to maximize its asset utilization and to ensure that it is well positioned to capture opportunities in the global beef market. Consistent with this vision, on April 9, 2018, the Company announced the acquisition of a 51% interest in National Beef for US$969 million, making it the world's second-largest beef producer.

National Beef is the fourth-largest beef processor in the United States and the country's most profitable and efficient. With processing capacity of over 3 million head per year (13% of U.S. processing capacity), the company's assets are located in one of the country's main producing regions, in Kansas.

With the repositioning of its growth strategy to focus on cattle, Marfrig also announced its decision to divest Keystone Foods; which should accelerate its deleveraging process and leverage improvements in its capital structure, which is a fundamental element for supporting its business model."

Click here for full article ◻

Marfrig: 5 potential buyers for Keystone Foods

May 23, 2018 in WattAgNet.com

Marfrig Global Foods says in notice to the market that second phase of bidding process has begun

Marfrig Global Foods said five companies have qualified to take part in a second phase of bidding for its Keystone Foods subsidiary.

According to a notice to the market dated May 23 on the Marfrig Global Foods website, that second phase includes access to the virtual data room, management presentations, site visits in the United States and Asia, and the submission of binding offers during the month of June.

Marfrig did not identify any of the five companies, but stated that it would keep its shareholders and the market in general adequately informed on the evolution of this process.

The Brazil-based company initially announced its intent to divest of the U.S.-based subsidiary in April. The company made that announcement at the same time Marfrig revealed its intent to acquire a majority stake in National Beef Packing Company, the fourth largest beef processor in the United States.

By selling Keystone Foods, the 10th largest broiler company in the United States, Marfrig Global Foods can better focus on its beef operations while accelerating its deleveraging process and leverage improvements in its capital structure.

Marfrig Global Foods last week released its financial results, as well as the financial results of Keystone Foods. Keystone achieved a net revenue of US $678.7 million for the first quarter of fiscal year 2018, up from the US $667.2 million it reported for the first quarter of fiscal year 2018. The company reported that the demand for Keystone Foods products was high during the quarter in the foodservice, retail and convenience channels in both the U.S. and Asia Pacific/Middle East/Africa (APMEA) region, and that "in some cases, the expectation of promotional success required Keystone to build product inventory to meet high future demand, and to engage manufacturing partners when demand for certain products exceeded Keystone's available capacity."

In 2017, Keystone Foods processed 23.8 million pounds of ready-to-cook chicken on a weekly basis. ◻

DUNS & SAM numbers are no longer required by NRCS for EQIP funding

Effectively immediately, Natural Resources Conservation Service (NRCS) financial assistance program participants will no longer need a Dun and Bradstreet Universal Number System (DUNS) number, or to register in the System for Award Management (SAM). The Consolidated Appropriations Act of 2018 (2018 Omnibus Bill), signed by President Donald Trump on March 23, eliminated these requirements.

According to U.S. Secretary of Agriculture Sonny Perdue, DUNS and SAM were designed for billion-dollar government contractors, not everyday farmers trying to support their families. These changes help streamline the customer experience of farmers, which is a top priority at USDA, he said. "This change greatly simplifies the contracting process for our customers and staff," said Curtis Elke Acting Minnesota State Conservationist. "Conservation program participants will soon receive letters from their local NRCS office with more details."

The exemption does not apply to any current or future agreements or federal contracts with eligible entities, project sponsors, vendors, partners, or other non-exempt landowners or producers. DUNS/SAM registration is still required for certain NRCS programs, but not for EQIP.

NRCS advises participants in its programs to ignore any emails, phone calls or other communications from third-party vendors offering assistance for registering in SAMS or applying for a DUNS number.

To learn more about NRCS financial and technical assistance, go to www.nrcs.usda.gov. ◻

Message from TPA Interim President Scott Black

If you are like me, you are knee deep into your summer plans, and the summer hasn't even started yet! The Association is also knee deep into several different avenues that we are very happy to bring you. First, several committees are going through 26 student applications for scholarships this fall. TPA will be awarding $18,000 in scholarship money in several different areas for college students. We are also excited about the addition of another complex into the state. Tyson was looking into several different locations for their upcoming expansion and they found Tennessee to be the ideal location. The company will be spending over $300 million and adding 1,500 jobs in West Tennessee. As our industry ramps up to continue to provide an affordable protein to the world, Tennessee is taking one step toward this goal with this addition in Humboldt. Last but not least, we want to say best wishes to Jay Daniels, our immediate past president, as he starts his new adventure. Jay has been a stronghold for our Association and provided solid leadership and great vision for the Board. He has served the Association since 2010 and will be missed by all. Jay still resides in Tennessee and is enjoying spending time with his new bride, Sandy. They just recently tied the knot a couple weeks ago and we are excited for them both.

Enjoy the summer and I look forward to seeing everyone in Nashville in August at the Annual Meeting.

Natural gas capacity concerns are real

May 29, 2018 by Dale Barnett, TPA Executive Director

If you are on natural gas you are encouraged to visit with the management and Board members of your utility to discuss capacity well before this next winter, *especially if you are east of I-65 in TN*. The gas utility company in Bedford Co. (BCUD) greatly exceeded their capacity during the months of Jan. and Feb. and the growers (and all other commercial and residential users) on NG in the county had to unexpectedly pay an astounding adjustment fee at a rate 40 -50% over expectations. There were a few growers, who had chicks placed right at the first of the year who experienced a NG *bill for the month of Jan. that was larger than their entire NG bill was for the whole year in 2017*. $4300/house was experienced by one grower (600' broiler houses) for the month of January.

I have since met with the TEAC (TN Energy Acquisition Corporation) in Clarksville, who manages all of the NG supplied to the utilities in TN, to learn more about "capacity" and to see what steps can and are being done to prevent this BCUD (and other) situation from ever happening again. NG utility companies basically purchase "capacity", measured in decatherms (DTs), so that the pipelines can best manage their supplies to all customers across the U.S. If that amount is exceeded by a utility there can be a very significant adjustment fee charged for each day that capacity is exceeded. One would think that all a utility would have to do is pre-purchase more capacity in advance if they are monitoring usage and doing their job well.

For NG utility companies east of I-65 in TN this unfortunately is not possible. The East TN Natural Gas Pipeline Co. is the *only* pipeline company supplying the eastern half of TN. One of their two pipelines runs roughly west (of I-65) to east TN through the upper Cumberland area, and then a second pipeline runs from west of I-65 through the lower part of the state before heading NE. These particular pipelines are at capacity themselves. They can't push more gas. *The eastern half of TN needs another NG pipeline*, one running north to south that would additionally help so it could tie into other supply lines.

TEAC states that there are not currently any capacity limitations or concerns for the western half of TN as they are supplied by different & various pipeline companies and the lines all pretty much run north-south.

Regarding the BCUD situation, pleas at all levels have been made to increase their capacity (from the current 400 DTs per day) so that these higher rates and adjustments are not encountered again. There is no guarantee this can or will happen, for again, there is no additional capacity to be bought as these two East TN pipelines can't push any more gas. It is possible for a utility to be taken over by a larger *non-profit* utility company. Private utility companies are not allowed by law to purchase or take over existing gas companies. Efforts to possibly obtain additional gas through a neighboring utility company who is being supplied by a pipeline running west to east through northern AL to GA is also being explored by BCUD and TAEC. Interestingly, the last time BCUD did try to buy more capacity the allotment that was available at the time (and was much larger than what BCUD needed and could afford) was sold to a *much* larger company. Awareness has been brought to this concern at many levels, with the focus being for the powers-to-be to hopefully better look out for and assist the smaller utilities.

If you are on NG you need to know that your supplier has plenty of capacity going forward and that they are keeping up with any growth. Just because they had enough capacity last winter doesn't automatically mean they will this winter *if significant business has been added to their service area*. If your community, county, has experienced significant growth of any type (commercial, residential and/or poultry) someone needs to be asking these questions to make sure this is being taken seriously and that the utility is being pro-active.

Needless to say then, *grower representation on your local NG Utility Board is strongly encouraged*. Know who the Board members are for your utility company and be confident that someone is looking out for your best interests. If you live east of I-65, please also be letting your state officials and legislators know that another pipeline is badly needed to keep up with rural economic development and growth. □

USDA report: Consolidation in poultry sectors over 30 yrs.

March 30, 2018 excerpts from PoultryWorld.net by Tony McDougal

Contract farming and the rise of vertically integrated operations has led to some consolidation in the poultry meat sector over the past 3 decades but not as far-reaching as in other agricultural industries.

Statistics from a new United States Department of Agriculture (USDA) report shows the midpoint broiler farm in the US grew from 300,000 birds in 1987 to 480,000 in 1997. It then rose to 680,000 birds in 2012, representing a 127% rise over 25 years.

Consolidation more prominent in arable and dairy sectors

Authors James McDonald, Robert Hoppe and Doris Newton say that while there has been consolidation in the poultry meat sector, it is even more pronounced in the arable and dairy sectors. This is due to the poultry meat sector undergoing striking changes in organization and technology well before the series of reports started in 1987.

Large and very large farms, with gross cash farm income of more than $1m accounted for 76% of specialty crop and 72% of dairy production but only 27% of poultry and hog production in 2015.

Small farms accounted for 46% of poultry and hog production but only 11% of dairy and 10% of specialty crops.

“To summarize, commodity mixes vary across farm size classes. Very large farms (sales basis) are more likely to specialize in specialty crops, dairy, egg production and cattle feeding and use relatively little land. Field crop farms tend to occupy a mid-size to large range of sales and to use lots of cropland. Many contract poultry and hog producers are relatively small farms.”

Rising (table) egg production

Egg production has grown significantly from a midpoint egg farm of 62,000 in 1982 to 117,839 in 1987 to 925,975 birds in 2012. This represents a 686% increase over the time-frame though there was evidence of a slower rate of growth between 2007 and 2012.

The study also showed increased specialization in the livestock commodity sector with 52% of poultry production in 2015 occurring on farms with no crop production.

This is due, say the authors, to poultry manure being lighter than other manure and easier to transport, which makes it more likely that a contract poultry operation could dispose of all of its manure off the farm, further discouraging the growth of on-farm crops.

There was also evidence of confinement feeding practices as part of the consolidation in the poultry sector. Increasing numbers of producers have moved poultry into climate-controlled housing, and then steadily improved their disease control, reproduction, nutrition/feeding and transportation technologies to realize substantial improvements in productivity. □

SCHOLARSHIP FUNDRAISERS

Our scholarship fundraiser sporting clays shoot and golf tournament were held April 18 & 19 at the Nashville Gun Club and Hermitage Golf Course. Despite the very cold temperatures for the golf tournament, everyone had a great time and we were all super thankful for the work gloves the TN Soybean Promotion Council had donated for the goody bags! The events were a huge success, raising the most money for scholarships since we began the program in 2014. We greatly appreciate everyone who sponsored, supported and participated in any way. *Congratulations to our Winners*!

Sporting Clays

1st place - Mark Turner, TN Farm Bureau Federation; **2nd place** - Breck Helms, Koch Foods; **3rd place** - Shane Joyner, Tyson Obion

Golf

Longest drive - Mark Wolfe
Closest to the pins - James Smith, Dean Strader, Ryon McKinney
1st place, 1st flight - Andrew Blair, Russ Bratton, Micah Abernathy, Meredith Thomas (Tyson Shelbyville)
2nd place, 1st flight - Steve Wilson, Mark Wolfe, Keith Bellenfant, James Smith (Goggin Warehousing)

You can see a list of our sponsors below, along with pictures from the golf course. Shooting pictures are on the following page.

Tennessee Poultry Association

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FREE Renewable Energy Assessments for Tennessee poultry growers!

Interested in exploring renewable energy but unsure how to start? Have a project in mind but want a third-party opinion? If so, make sure you sign up for a FREE renewable energy assessment! The Tennessee Renewable Energy Assessment Program is offering a limited number of assessments to poultry growers.

What is a renewable energy assessment?

It is a customized report that provides an unbiased, third-party evaluation of your renewable energy project to determine viability and ensure your project is properly sized. Not sure what type of system is best for you? We can evaluate a few options and present a comparison. Each assessment includes an economic evaluation to determine your return on investment.

Who is funding this?

The Southeast Tennessee RC&D, EnSave, and the Tennessee Poultry Association have been awarded a grant from USDA Rural Development to deliver these assessments statewide.

What can I do with my assessment?

The USDA Rural Energy for America Program offers grants up to 25% of your project cost and loan guarantees up to 75% of your project cost. You can use your energy assessment to apply for this funding.

Even if you don't use the assessment to apply for funding, the report contains valuable information to help you make a business decision about renewable energy.

What are the next steps?

We have up to 30 FREE reports available for poultry growers, so don't delay in applying as the program is first-come, first-served. Sign up now!

Call EnSave at (800) 732-1399 with questions or to request an application

- You sign and return your application
- You provide 12 months of energy use history (copies of your utility bills)
- EnSave follows up to obtain additional data (quotes, location data, etc.) if needed
- You receive your assessment within 8 weeks of submitting your data □

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South Korea adopts regionalization policy, limiting potential restrictions on U.S poultry exports

WASHINGTON, D.C. – March 16, 2018 – The U. S. poultry and egg industry heralds the announcement that South Korea's Ministry of Agriculture, Food and Rural Affairs has adopted a regionalization policy, which will prevent a countrywide ban on U.S. exports to Korea in the event of a future finding of highly pathogenic avian influenza (HPAI).

As a result, should a case be found, only exports from the affected state(s) will be restricted, allowing the rest of the U.S. to continue shipping poultry and egg products to the Korean market.

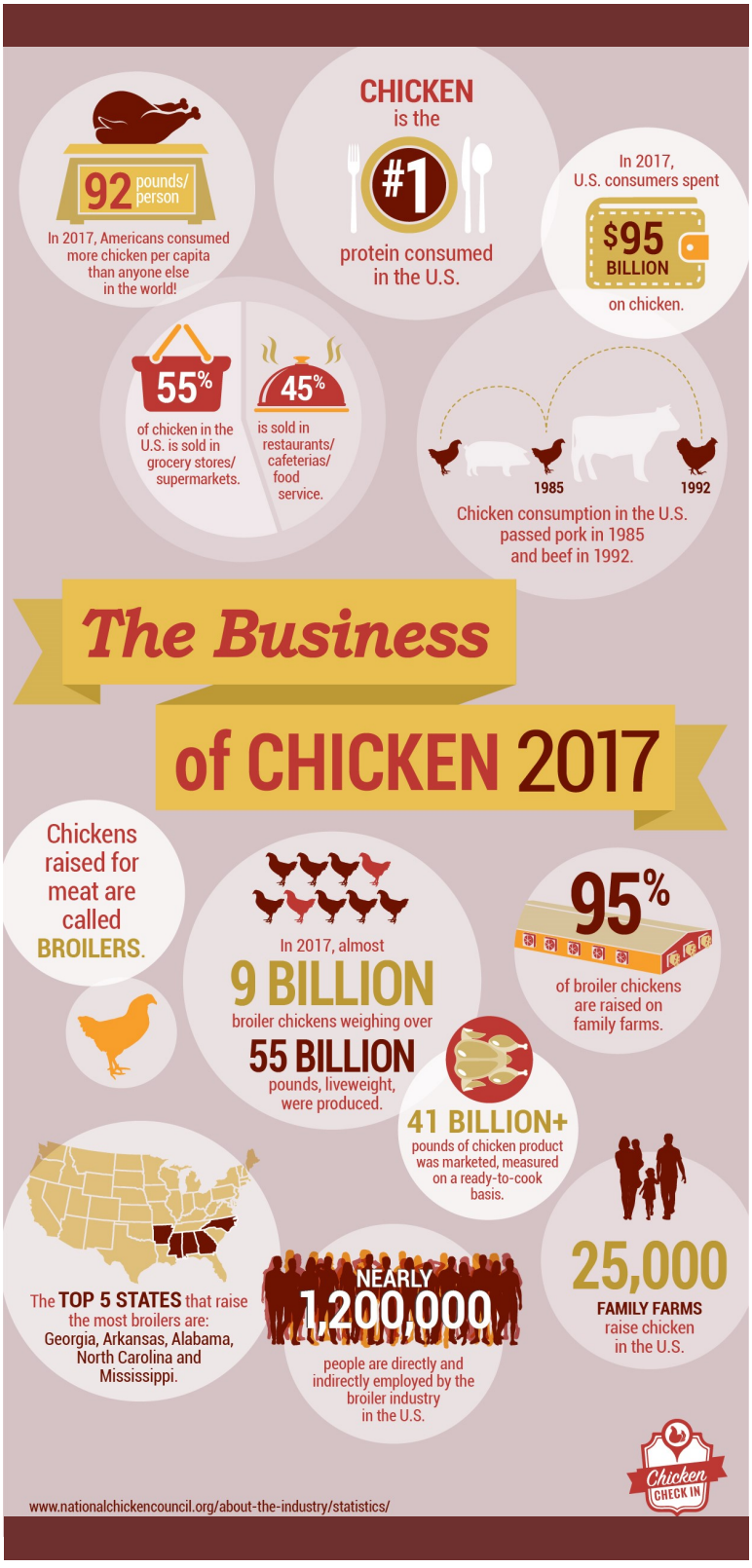
"The U.S. has one of the most stringent surveillance, eradication and monitoring programs in the world when it comes to avian disease," said National Chicken Council (NCC) President Mike Brown. "I want to thank our administration for their efforts in working with the South Koreans to adopt this policy of regionalization."

"The U.S. now becomes the world's most reliable supplier of poultry products to Korea," added Jim Sumner, president of the USA Poultry & Egg Council (USAPEEC). "No other country has such a regionalization agreement with Korea. We should now become their No. 1 outside supplier of chicken, turkey, eggs and egg products."

Korea was growing to become one of the leading markets for U.S. chicken, turkey, and eggs when the U.S. was hit by a devastating outbreak of HPAI in 2014 and 2015. That resulted in a series of lengthy bans on poultry and egg exports from the entire U.S., even though only certain states were affected. The outbreak cost the industry an estimated $4.2 billion in lost exports and U.S. domestic sales. Of that total, about $387 million, or 9.2 percent, can be attributed to South Korea.

We are most appreciative of the efforts of International Services and Veterinary Services at the U.S. Department of Agriculture (USDA) Animal and Plant Health Inspection Service (APHIS), which encouraged Korea to follow OIE (World Organization of Animal Health) guidelines, and provided assurances that the U.S. has a reliable system in place to assure that any future outbreaks would be contained.

NCC joined USAPEEC, the National Turkey Federation, United Egg Producers and American Egg Board in expressing appreciation for their efforts. ◻



May 18, 2018 news update on South Korea

South Korea's Ministry of Food and Drug Safety (MFDS) is now restricting and testing further processed products imported from the U.S. if they were manufactured from poultry sourced from the eight plants that were recently delisted for semicarbizide (SEM) detections. For more information from MFDS go to: http://www.mfds.go.kr/eng/index.do.

Is SEM a specific marker for nitrofurazone abuse? To see what the National Institute of Health (NIH) has to say about the fact that SEM can be present under certain conditions when nitrofurazone is in fact not being illegally used, go to: https://www.ncbi.nlm.nih.gov/pubmed/15204530 ◻

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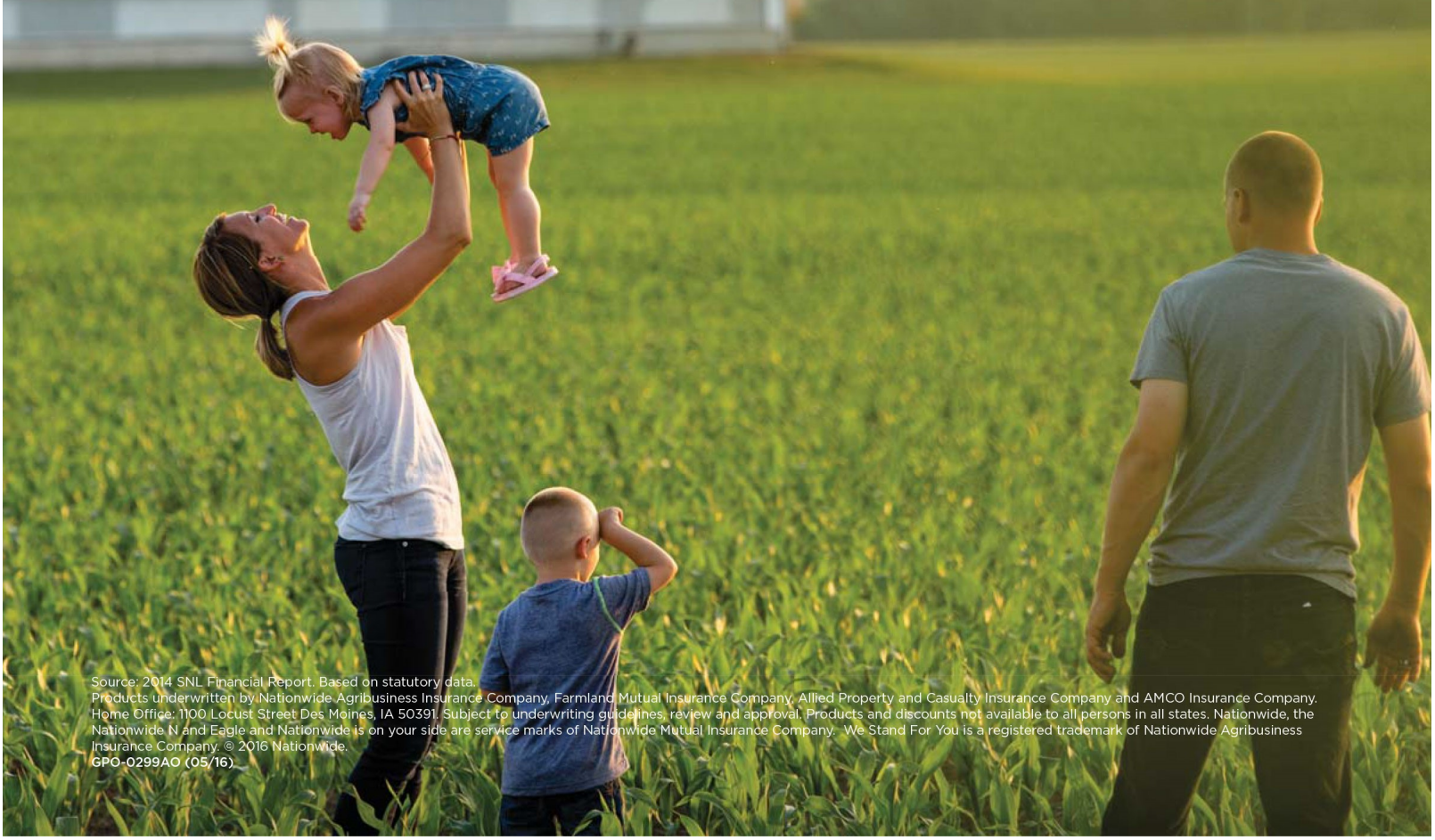


Infographic: GAP broiler standard commitments

April 6, 2018 By Roy Graber and Jennifer Keller on WattAgNet.com

List of companies pledging to source broilers raised according to Global Animal Partnership standards growing

While the pace has slowed down, companies continue to change their policies concerning the sourcing of broiler chickens, making pledges to source only slower-growing broiler breeds that are raised according to the Global Animal Partnership (GAP) standards, and in some cases, Royal Society for the Prevention of Cruelty to Animals (RSPCA) standards.

GAP standards call for the following criteria:

- Using broiler breeds scientifically proven to have markedly improved welfare outcomes
- Providing chickens with more space (maximum stocking density of 6 lbs./sq. ft.) and improved environments, including lighting, litter and enrichments

The trend of companies committing to follow those standards started in 2016, with nine companies making pledges to transition their broiler supply by 2024.

All companies to announce commitments so far in 2018 are restaurant chains. Those chains include: Bruegger's Bagels, La Madeleine French Bakery & Café, Mimi's Café, Brioche Doree, Papa John's and Pita Pit.

Companies announcing GAP or RSPCA pledges in the final two months of 2017 include: Firebirds Wood Fired Grill, Company Kitchen, True Taste Kitchen, Norwegian Cruise Lines, Revolution Foods, Pomptonian Food Service, Fresh Thymes Eatery, EatN' Park Hospitality Group and Benihana.

Two chicken processors have committed to have their entire supply raised according to those standards. Applegate Farms, a subsidiary of Hormel Foods, announced its commitment in early March 2017. In November, Bell & Evans, announced that it is currently transitioning to what it refers to as a higher-welfare, slower-growing, more flavorful breed of broiler chickens. The new breed, Das Klassenbester, will completely replace Bell & Evans' current breed of chickens by the end of 2018.

Two more processors have stated that they will transition some of their operations toward such standards.

In June 2017, Wayne Farms announced that it had launched its first GAP Step 2 Rated line of chicken products, branded Naked Truth. One month later, Perdue Farms announced that it had pledged to develop and maintain a sustainable supply of chicken that meets all of the animal welfare criteria outlined in the Joint Animal Protection Agency Statement on Broiler Chicken Welfare Issues, which calls for following either GAP standards or Royal Society for the Prevention of Cruelty to Animals (RSPCA) standards.

The infographic shown below lists the companies that through March 31, 2018 adopted policies to transition its broiler supply. The infographic will be updated, should more companies make similar commitments. □

Poultry growers, integrators score victory in Kansas

March 13, 2018 by Lisa M. Keefe from MeatingPlace.com

The Kansas State House of Representatives voted 84-37 to pass a bill that would allow companies to build large-volume poultry feeding operations in the state, according to the Lawrence (Kans.) *Journal-World* newspaper. The bill was previously passed by the Senate.

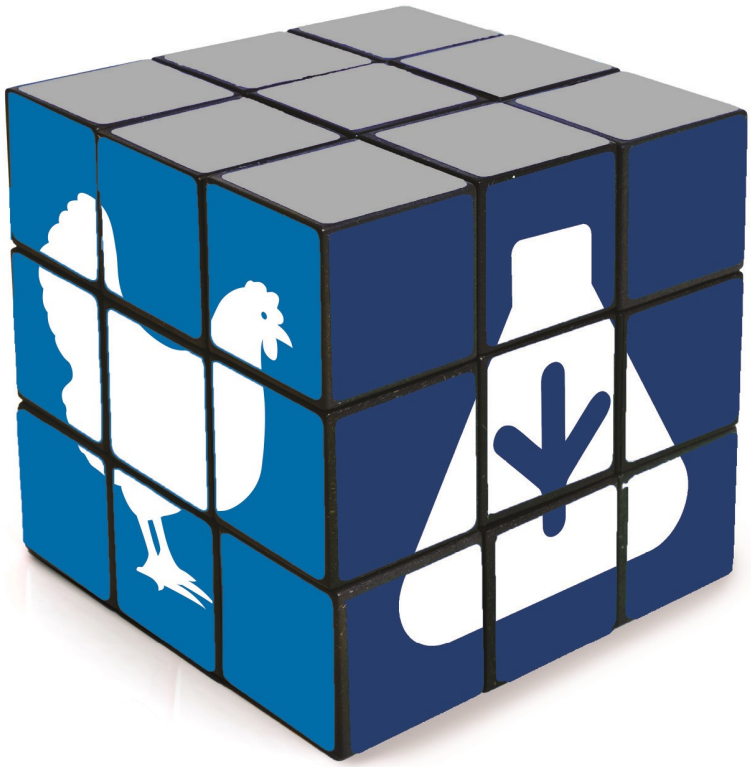
Senate Bill 405 would be expected to make it easier for companies to build large operations such as the one that Tyson Foods proposed near Tonganoxie last year. That proposal ultimately stirred too much protest among existing Tonganoxie residents, and Tyson instead decided to build in Tennessee. Still, Tyson reportedly is continuing to look for a place to build in Kansas, as well.

The legislation would allow farmers who use dry manure processing systems to raise up to one-third of a million birds per poultry farm before they would need a state health permit. The bill now goes to the governor for his signature. □

Poultry Feeding Operations in Nebraska Facing Opposition

Washington County could see as many as seven new poultry feeding operations to supply the developing $300 million chicken processing plant in Fremont. Nebraska-based Lincoln Premium Poultry will utilize a grower's network of 120 farmers in 12 counties to supply the plant for membership-based Costco. At least one location is already facing opposition.

Click here for full article □



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PREVENTION WORKS
Shaping the future of poultry health

‘Feed conversion 1.00 is the future’

Apr 23, 2018 by Dick van Doorn in WorldPoultry.Net

Broiler farm Bitterhoek in the Dutch village of Poortvliet raises its broilers in a six-story Vencomatic Patio system. Bram Bevelander says, “If we ever want to expand our company further, we will definitely build another Patio house.”

In the nineties of the twentieth century, the Bevelander family knew they could no longer make a living from their company with twenty bulls for fattening and 35 hectares of arable farming. They decided to apply for the necessary licenses to build their first broiler house. In 1998, the first 24,000 broilers arrived.

Successors Bram and Corina started thinking about the company’s future in 2006. Bram was 42 at the time and assumed he would have to continue working for quite some time. The next generation, 16 year-old son Martijn, was not sure he wanted to take over the company at first. “Because my parents had such clear plans for expansion, I decided to become a poultry farmer. However, we needed to grow substantially in order to become a future-proof company.” They heard about the Patio system and contacted Vencomatic. Bram states, “They had the predecessor of the current Patio system installed in an experimental poultry house at the Wageningen University & Research trial company Het Spelderholt. The moment we saw it, we thought: ‘This is it!’

Acquisition of the trial system

The family immediately saw the Patio system’s advantage of being able to do more rounds a year and keep 2.8 times the chicks per square meter. In 2006, the family decided to keep the chicks in the system for three weeks, rather than seven days, before transferring them to a regular broiler house. In the same year, Vencomatic asked the Bevelander family whether they would like to have the trial system installed in their regular broiler house, because the university had terminated the Spelderholt facilities.

Bram adds, “That is exactly what we did. However, the first three years were difficult. We really had to experiment to get everything in order. Getting the climate in the poultry house just right was especially hard.” A brand new Patio system was built in 2010, based on the experiences with the Vencomatic trial system in the Bevelander’s poultry house. The difference with the old Patio system was that the space between the stories went from 40 to 80 centimeters (15 ¾ to 31 ½ inches). Bram notes, “This made sense, because the chicks had to stay in the system for three weeks.” Because the first poultry house’s trial status expired in 2014, the family applied for a license in 2012 to build a Patio house next to the old trial house. The authorities did not consent, however. The family found a new location and built the current Patio house in Poortvliet. This poultry house has a ground surface of 2,400 square meters (25,833 sq. ft.) with a living space for the chicks of 5,800 square meters (51,666 sq. ft.) There are 150,000 broilers on six levels.

[Source: http://www.vencomaticgroup.com/en/products/broilers/housing-solutions/patio]

1 kg feed = 1 kg meat

The Bevelander family’s Patio house has many very special innovations. The hatching eggs are brought into the system automatically through a transport system. They only need to be put on a conveyor belt at the lift. The eggs are then hatched in the system, with Martijn using an egg temperature meter. The six [stories] can be checked rapidly with a control lift. The family works with all-in all-out. The chicks stay in for 38 days. Bram adds, “We do unload 20% twice in this period. The first time at 27 days and 1,550 grams, the second time at 32 days and 1,950 grams. At day 38, they will be 2.6 to 2.7 kg. We are only allowed to have 42 kg per square meter at day 38.”

Bram and Martijn want to be able to make 1 kg of meat from 1 kg of feed within five years. If everything goes according to plan, they will. The have already reached a feed conversion of 1.08 – 1.18. The family always uses Ross 308 chicks. They mix wheat of their own crop from 10 to 12 hectares in the chicks’ feed. This is about 30% of the company’s total feed requirements. “Another very special and useful part of the Patio system is that we can withhold the chicks’ feed before periodically unloading them. Because of this, we observe less intestinal disorders in the animals,” says Bram.

The family’s Patio system boasts 1.10 meters long and 2.4 meters wide conveyor belts that carry the chicks. Periodically unloading the chicks is very easy, because these conveyor belts run until about 20% of the chicks are in the system. Bram states, “As the conveyor belts run, the chicks are placed on a special broad transport belt. We lower this belt in front of the belt with the chicks. The chicks are then placed into a carousel with a discharge belt, where the catchers can easily reach them. We continually try to perfect the discharge system, because we want our chicks to reach the slaughterhouse without a scratch.”

Special ventilation system

Youngest son Martijn joined the company in January of 2017. Martijn: “It is very special that our chicks, that always come from two of the same breeders at most, have a sole lesion score of 0-35.” This is partly due to the poultry house’s ventilation that keeps the conveyor belts with the chicks nice and dry.

(continued on next page)

Feed conversion 1.00 is the future *(continued from previous page)*

A Vencomatic climate chamber has been installed in the patio house's attic. This chamber houses the Agro Supply heat exchangers: air-air changers that recycle the house's heat. The ventilation system was designed in such a way that this heated air is transported down through two large screens. It then goes underneath the screens and flows into the stories through small inlet valves, after which it rises again.

The family is very content with the new poultry house. Martijn adds, "We see less stress in the chicks and we are less at risk of infection, because we do not need to work with catch teams in the poultry house. We have been free of antibiotics for the past year-and-a-half."

To view the photos and see the full story go to https://www.poultryworld.net/Home/General/2018/4/Feed-conversion-100-is-the-future-275762E/?cmpid=NLC|worldpoultry|2018-04-23|?Feed_conversion_1.00_is_the_future? ◘

Visit our website at www.tnpoultry.org Like us on Facebook and Twitter (@tnpoultry)

Studies Show Whole Grains in Broiler Diets Increases Conversion While Feed Costs Decrease

March 30, 2018, in Research News

Studies on including whole grains in broiler diets at the University of Sydney have found that feed conversion rate increases while feed costs go down.

Research by Amy Moss at the university's Poultry Research Foundation has found that replacing some of ground grains in chicken feed with whole grains not only improves digestion, but also influences how efficiently birds convert feed into meat.

Moss' studies have found that using whole grain naturally enhances birds' innate capacity to digest. While pellets may be appetizing to chickens, the pellets break up very easily once ingested, which in turn, provides little stimulation to the gizzard. This lack of stimulation leads to less gastric stimulation and poorer digestion, ultimately reducing the amount of meat produced per kilo of feed consumed.

The study has found that by replacing about 30 percent of ground grain with whole grains, chickens produced 7.7 percent more meat per kilo of feed eaten, which in turn lowers the cost of feed.

Whole wheat can be added to poultry diets in two ways: after pelleting as a separate entity to the pellet (post-pellet whole grain feeding) or it can be incorporated during pelleting (pre-pellet whole grain feeding). Each method would appear to have its own benefits and drawbacks.

Post-pellet whole grain feeding results in the greatest gizzard response, both in terms of gizzard size and efficiency. However, this method requires an adaptation period, so chickens do not refuse the whole grains and flick them out of the feeder. ◘

To feed or not to feed? The importance of early chick feeding

April 19, 2018 by Dr. Keith Bramwell, Jamesway Incubator Company, in ThePoultrySite.com

Dr Keith Bramwell, senior technical advisor to the Jamesway Incubator Company, addresses whether feeding individual chicks immediately after hatch is beneficial to the uniform growth of the flock as a whole

Development of the avian embryo, or chick, can be categorized into one of two strategies designed to meet two very different physiological and biological needs. The avian embryo will develop as either an altricial or precocial chick, each with their own specific set of needs necessary to survive after hatch.

When comparing the two incubation and developmental strategies, the altricial chicks undergo a significant amount of their 'embryo growth and development' after hatch while the parents are feeding the helpless chick and precocial chicks undergo a more significant portion of their 'embryo growth and development' during the incubation period so they can hatch 'ready to go'.

Altricial chick development is common in perching type birds that usually nest in trees, birds such as songbirds, pigeons, raptors, etc. The young hatch as helpless naked birds which are unable to open their eyes or even hold up their heads. The young altricial chicks cannot maintain their own body temperature, even for short periods of time, and are thus very reliant on their parents for warmth and brooding.

Additionally, the parents, usually both are involved, are very instrumental in feeding and caring for the newly hatched chicks until they fledge the nest to begin life on their own. These types of birds will lay their clutch of eggs over several days and will usually begin to incubate the eggs before all eggs are laid, resulting in chicks hatching at various intervals over a period of a few days.

The newly hatched chicks will stay in the protected nest away from most predators and are fed individually by their parents. Because the chicks hatch over several days, there is often a great size difference between the chicks; with the last hatched and smallest of the clutch often succumbing to the increased competition for food and space from their larger siblings. The growing chicks are then fed and cared for until each one has developed enough to leave the nest.

Precocial chick development is common with the majority of the ground dwelling and ground nesting birds such as chickens, turkeys, ducks, pheasants, etc. The young precocial chick hatches with a warm covering and the ability to reasonably maintain body temperature, and eyes are open with no reliance on the parents to physically bring food back to the newly hatched chicks, as they are able to walk within hours after hatch.

The mother will lay her clutch of eggs over a period of several days to a couple of weeks, depending upon the clutch size. However, she will not begin incubating the eggs until *all* eggs are laid to try and maintain a narrow hatch window as the newly hatched chicks will *all* need to be escorted together by the mother away from nest site in search of food.

To enable these precocial chicks to hatch together and leave the nest together, there are a couple of biological mechanisms in place to facilitate this function. First, in the hours leading up to the completion of the hatching process, precocial chicks engage in an activity called 'clicking' where the chicks are able to communicate with each other from within the shell in an effort to synchronize the hatch time.

The second is that eggs that produce precocial chicks contain a higher percent yolk (~40 percent vs 25 percent) as compared to eggs from altricial chicks. This allows the chicks to remain in the nest after hatch to wait for the other chicks to hatch so they can ALL leave the nest together. Nature intended for the chicks to use this available yolk to synchronize the post hatch feeding process between all hatchlings.

If the first hatched chicks try to forage for food without the mother or the group they may become subject to predation without the protective instincts of the mother. This is what nature intended; that all chicks are able to begin feeding at the same time with the first hatched chicks utilizing the nutrients in the yolk in an effort to synchronize the early feeding process.

Feeding Commercial Hatched Chicks

Following what nature has designed and intended, is it really necessary and beneficial to feed newly hatched chicks immediately after hatch? In nearly every area of poultry production systems, uniformity is a key and very critical component to success.

When it is not achieved, inefficiencies often result in areas including the hatchery, the brooding house, and all the way to the processing plant. It is widely known and accepted that when chicks are not uniform from the start, problems will ensue whether they be replacement parent stock or broilers destined for the market.

Uniformity in replacement breeders has been shown to result in a better and more productive breeder house. Uniformity of young breeders tends to 'level the playing field' during rearing and allows the birds to more evenly compete with each other for resources such as food, water and space.

Feed consumption and light duration is controlled and limited to encourage the majority of the birds to mature at an even pace, responding to light stimulation together and thereby commencing egg production together. Uniformity in the breeder house has been shown to improve egg size uniformity, egg production and broiler flock performance. *(continued on next page)*

To feed or not to feed? The importance of early chick feeding *(continued from previous page)*

Uniform egg size results in uniform chicks. When placed chicks are more uniform, productivity of the entire flock is improved. Nearly every hatchery manager desires the most uniform egg size possible, and nearly every broiler manager or grower would greatly prefer chicks that are sourced from similar aged parent flocks to improve the uniformity of chick size at placement.

When chicks are placed that hatched from eggs or from parent flocks of greatly varying ages, dramatic size differences in the chicks is often the result and overall poor flock performance results. In the case of the various early feeding programs, a number of factors of concern must be considered. It is well known that research has continually shown that when feed is withheld from chicks after hatch, there is a delayed growth curve in those chicks as compared to chicks from the same hatch that were provided feed immediately at placement.

The chicks that had feed withheld from them for periods of time after hatch will never catch up with the others of the same age and hatch and therefore would take a day or so longer to reach the desired market weight. It would be unadvisable for anyone to intentionally place birds in a single house that had hatched and therefore begun food consumption at one or more days apart from each other, as final flock uniformity would be negatively affected and birds would be sent to the processing plant with one or more day's difference in growth rate.

Additionally, the unfed chicks placed in a house that are seeing food for the first time, have to compete with chicks that have had access and have consumed feed and water for various periods of time. This increased competition would likely be another cause to negatively affect uniformity as the chicks that have had feed for extended periods of time would be much more active and running around the chicks that are still searching for food.

Would a producer want to take a group of hatched chicks and immediately place some on feed and water then intermittently over the next 36 hours, place new groups of newly hatched chicks in that same house and let them compete for food and water with the older chicks?

Nearly all would decline to do this. This would create a less uniform housed group of chicks from the start, resulting with the last chicks placed, never catching up in terms of body weight. Essentially, this is what is happening when chicks are fed as soon as they hatch, they are all starting on feed at different time intervals in relation to each other.

If in replacement breeder farms, birds are fed and light managed in a manner to allow birds to mature at each birds own pace, the results would be exceedingly poor uniformity and poor overall performance of the breeders and the progeny. If hatched broilers are each allowed to consume feed as soon as they hatch, the same result is likely, poor uniformity.

Summary

Nature, and the biology of the precocial chick, is designed for the optimal survival of the group of chicks as a whole with the first chicks hatched utilizing their yolk reserves to be ready for all chicks to begin feed consumption at the same time. This is the natural process of precocial chick growth and development.

While it may be beneficial for an individual chick to begin feed consumption immediately after hatch, the growth and development and uniformity of the group of chicks may be hindered. Currently research in a controlled setting is underway to more fully investigate this practice of early feeding to compare livability, growth and uniformity of the birds through processing with groups of birds from the same hatch where feeding is initiated at the same time to the entire group of hatched chicks. Once these studies are concluded, the science will support the best procedure. □

Could Genetics Counteract Feather Pecking?

MAY 3, 2018 from **THE POULTRYSITE.COM**

Feather pecking remains both a trying welfare issue for producers as well as a serious economic consideration. A ban on beak trimming has recently been called for by Defra, but the industry remains apprehensive due to the potential for outbreaks of feather pecking and the damage in might cause – not to mention the emergency beak trimming which would be necessary as a result. This emergency beak trimming is normally done via hot blade which is an even more severe welfare issue.

In light of this pressure, research has steered producers towards providing greater enrichment for laying hens to allow for greater foraging opportunities and for the expression of natural behaviors, but recent research by Dr Werner Bessei, reports Melanie Epp for The Poultry Site, has shown that feather pecking could actually be a genetic issue, *not* a management issue.

Click here to for the full article □

What Poultry Farms Can Expect if Inspected by EPA

The U.S. Poultry & Egg Association (USPOULTRY) has released a video that demonstrates what poultry and egg farms can expect if their farms are inspected by the US Environmental Protection Agency (EPA). To ensure the information is accurate and beneficial, USPOULTRY collaborated with EPA personnel to develop and produce the video.

Click here to read the full article. □

Security Cameras in Poultry Operations

By Howard Holt at FarmCameras.com

Every day that goes by seems to bring more incidents at various points in the food chain. Either via some type of contamination, vandals, theft, bad actors that wish to disrupt the food chain or even groups that try to find fault with common practices. For these reasons and more, various government agencies are pushing to increase security at every point in the food chain.

As the industry strives to heighten security, starting with gates and fences, the logical next step is to add security cameras to your operation.

Cameras at Poultry Farms have a number of advantages. Let's take a quick look at some examples of how cameras can help you run your operation, and not only protect your property, but hold people accountable as well.

First of all, knowing who is coming through your gate onto your property can pay off in numerous ways: Do you see a vehicle that you don't recognize slipping onto your property to scope out what can be taken? Or is it a scheduled delivery that you need to confirm is actually happening when they say it is? Did the delivery driver cut too short and scrape a building or a piece of equipment? Did the driver fill the wrong silo? Did the propane company miss filling a tank?

Do you have employees or contractors that need to be spot checked for arriving on time or checking to see if they are cutting corners or have slipped into unsafe practices? Would it be helpful to look at cameras in each house to check lighting, leaks, humidity, temperature or other conditions?

There are lots of other ways that a quality security camera system could not only help you to run a leaner operation, but possibly achieve better profits, or even deter thieves and vandals. Many times thieves see security cameras and decide to choose an easier target. Even if they don't see the cameras and steal something, a good camera system can help identify thieves and their vehicles so that they can be caught and made to pay.

The key to achieving the peace of mind that security cameras can bring is to make sure that you choose a quality system and installer. The first thing to look for in a good system for poultry operations is equipment that can stand up to the harsh environment inside a poultry tunnel. The camera needs to be rated as water and weatherproof (IP67 or IP68 rated), and can withstand wash-downs and anything else that they may encounter in such an environment. *(continued on next page)*

DATES TO REMEMBER

SHOOTING HUNGER
June 7, 2018
Carroll Co. Shooting Sports Park

TPA ANNUAL MEETING & SUMMER GETAWAY REGISTRATION/ DOUBLETREE RESERVATION DEADLINE
July 2, 2018

HATCHERY-BREEDER CLINIC
July 10-11, 2018
Sheraton Grand, Nashville

ART CONTEST SUBMISSION DEADLINE
July 30, 2018

TPA ANNUAL MEETING & SUMMER GETAWAY
August 3 & 4, 2018
DoubleTree Nashville Downtown

SHOOTING HUNGER
September 27, 2018
Nashville Gun Club

Security Cameras in Poultry Operations

(continued from previous page)

Next, make sure the company has been in business for at least 5 years, and that they can give you the names of other Poultry Operations that are using their equipment.

In this day of technological marvels, most security camera systems, if you have an Internet or Hot Spot connection, let you see your operation from your phone, tablet or computer – no matter where you are in the world, but make sure and ask anyway. This capability should not cost anything extra.

Lastly, make sure that the equipment not only comes with a good warranty, but also has Technical Assistance built in, so that if you need advice or run into any type of difficulty, the company will be there to help you understand how to review archived footage and transfer it off to give to the authorities if you have a theft or other occurrence.

Security Cameras can help you in numerous ways. Just make sure that you are dealing with a manufacturer or a dealer that is reputable.

Howard Holt is an AgriBusiness Design Engineer with FarmCameras.com, a division of The Rugged Group in Texas. For more information, call Howard at 866-255-0035 or visit FarmCameras.com. □

Blockchain technology *is a collective database of records (from hatchery to supermarket, for example) that is basically overseen and maintained across a computer network by everyone involved along the way.*

Blockchain Technology: Traceability is good, but should be obvious

Apr 4, 2018 op-ed by Fabian Brockotter from PoultryWorld.net

Wherever you go in the world today, when it comes to innovation there is only one magic concept out there. Blockchain technology. It is not an easy technology to fully grasp for most people, but it sure is promising, so it seems.

'Chicken without secrets'

What is a great application for blockchain technology is tracking and tracing. So it is brought into practice by Belgium supermarket chain Carrefour. It has launched the 'first chicken without secrets' using blockchain, called Belchick'n. Carrefour uses the technology to fully control and show the whole supply chain of its chicken meat, starting at the hatchery and ending on the supermarket shelves.

With a QR-code on the packaged meat, consumers can access all the steps his or her chicken has encountered. On top of that every link in the supply chain can add valuable information to the product, such as origin, disease treatments, feed and of course process steps.

Traceability

Traceability of poultry meat is good, actually it should be obvious that the industry has that under control. I trust that blockchain technology is useful to further improve supply chain management for the industry. However, the added value for the consumer is limited.

Is a QR code useful for consumers?

Marketing traceability has limited value and a high negative impact when things go wrong. For the consumer it is all about trust. They don't care how many steps there are and how much time there is between the farm and the supermarket, they just trust that it is all okay, and for a reasonable price as well. For the consumer it would make far more sense to replace the QR-code of the Belchick'n by the name and address of the farmer which produced the chicken. Including an invitation to come and visit the farm. If you trust the farmer, you will trust the product, all the rest is taken for granted and must be up to standard anyway. □

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Tyson Foods Sets 2 Million Acre Land Stewardship Target

Tyson Foods, Inc. has committed to support improved environmental practices on two million acres of corn by the end of 2020. It is the largest-ever land stewardship commitment by a U.S. protein company and supports Tyson Foods' recently announced goal of reducing greenhouse gas (GHG) emissions 30 percent by 2030. The two million acre commitment, which was announced as part of the release of Tyson Foods' newest sustainability report, will encourage grain farmers to adopt more efficient fertilizer practices, and take additional measures to reduce water runoff and soil loss.

Click here for full article ◘

GAO Gives USDA Approval to Ditch Organic Livestock Rule

The Government Accountability Office says the Department of Agriculture complied with rulemaking procedures during its withdrawal of The Organic Livestock and Poultry Practices final rule. The office reviewed the USDA Agricultural Marketing Service's process to withdraw the rule after many groups, including the Humane Society of the United States, filed lawsuits claiming USDA did not follow proper rulemaking procedures. The lawsuits allege USDA repeatedly delayed the rule, which effectively repealed it, and did so without public comment, according to meat industry publication *Meatingplace*. ◘

Controlled Atmosphere Stunning Processes

To learn more about controlled atmosphere stunning (CAS) processes and an overview of reinforced fundamentals for optimal conventional stunning techniques there is a great article in WattAgNet.com at

http://www.wattpoultryusa-digital.com/201804/index.php?utm_source=KnowledgeMarketing&utm_medium=email&utm_content=Watt+Poultry+USA+Digital+Edition&utm_campaign=USA_1804#/48 ◘

ALLIED MEMBER NEWS

BioSafe Systems is proud to announce the promotion of **Dean Allen** from Regional Sales Manager to Market Segment Manager for the Meat, Poultry, and Seafood (MPS) division. Dean has been with BioSafe Systems since April 2017. His new responsibilities will include implementing national strategies for animal health and intervention sales. **William Varner** joins the Meat, Poultry, and Seafood (MPS) team as Technical Sales Representative. William will be responsible for generating Animal Health distribution and sales opportunities in the Mid-Atlantic, including TN. Will has a degree in Poultry Science from NC State.

Chore-Time has reinvented its E-Z START® Feeder with new outlet drop tubes that stow completely out of the way when not in use. This innovation helps get birds off to a good start and maximizes productivity by allowing growing birds unobstructed access to all angles of the grow-out feeding system. It also simplifies assembly and repair, since the new drop tubes contain just two parts that snap together without tools or hardware.

Darling Ingredients Inc., an NCC allied leader company, announced the sale of the company's industrial residual business, Terra Renewal Services (TRS), to American Residuals Group LLC. The transaction is valued at approximately $80 million in cash. Darling also announced that is has acquired substantially all of the assets of Kruger Commodities, Inc. including protein conversion facilities in Hamilton, MI and Tama, IA along with a protein blending operation and used cooking oil collection business in Omaha, NE to support their low carbon fuel initiative at Diamond Green Diesel.

Latest Meat MythCrusher Video Debunks Grilling, Cancer Myth

In the latest video of the "Meat MythCrusher" series, Travis O'Quinn, Ph.D., associate professor of Animal Sciences at Kansas State Univ., talks about claims that grilling meat poses a cancer risk. O'Quinn discusses that there is a possibility for compounds like heterocyclic amines (HCAs) and polycyclic aromatic hydrocarbons (PAHs) to form while grilling meat, however, the levels are much lower than those that have been shown to be risky and simple steps can reduce their formation.

Click here for full article □

USDA Confirms Virulent Newcastle Disease in Backyard Exhibition Birds in California, Not a Food Safety Concern

WASHINGTON, May 18, 2018 - The United States Department of Agriculture's (USDA) Animal and Plant Health Inspection Service (APHIS) confirmed the presence of virulent Newcastle disease in a small flock of backyard exhibition chickens in Los Angeles County, California. It is important to note that the presence of the disease is not a food safety concern. This is the first case of virulent Newcastle disease, previously referred to as exotic Newcastle disease, in the U.S. since 2003.

No human cases of Newcastle disease have ever occurred from eating poultry products. Properly cooked poultry products are safe to eat. In very rare instances people working directly with sick birds can become infected. Symptoms are usually very mild, and limited to conjunctivitis and/or influenza-like symptoms. Infection is easily prevented by using standard personal protective equipment.

APHIS is working closely with the California Department of Food and Agriculture to respond to the finding. Federal and State partners are also conducting additional surveillance and testing in the area.

It is essential that all bird owners follow good biosecurity practices to help protect their birds from infectious diseases. These include simple steps like washing hands and scrubbing boots before and after entering a poultry area; cleaning and disinfecting tires and equipment before moving them off the property; and isolating any birds returning from shows for 30 days before placing them with the rest of the flock.

In addition to practicing good biosecurity, all bird owners should report sick birds or unusual bird deaths to State/Federal officials, either through their state veterinarian or through USDA's toll-free number at 1-866-536-7593. Additional information on biosecurity for backyard flocks can be found at Biosecurity for Birds website.

Additional background

Virulent Newcastle disease is a contagious and fatal viral disease affecting the respiratory, nervous and digestive systems of birds and poultry. The disease is so virulent that many birds and poultry die without showing any clinical signs. A death rate of almost 100 percent can occur in unvaccinated poultry flocks. Virulent Newcastle disease can infect and cause death even in vaccinated poultry.

Clinical signs of virulent Newcastle disease include: sudden death and increased death loss in the flock; sneezing; gasping for air; nasal discharge; coughing; greenish, watery diarrhea; decreased activity; tremors; drooping wings; twisting of the head and neck; circling; complete stiffness; and swelling around the eyes and neck. Images of some of these signs are available here. □

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REFERENCES
1 Data on file.
2 Data on file.

PREVENTION WORKS
Shaping the future of poultry health

The Use of Vision Grading of Broiler Carcasses to Predict Presence of Woody Breast Characteristics

Published Feb. 2018 by USPOULTRY

Institution: University of Arkansas Principal Investigator: Casey Owens, Ph.D.

An emerging problem in the broiler industry is a condition referred to as woody breast (WB). WB is a condition in which hard fibers are found in the breast meat, causing the texture to be tough and chewy. The incidence can be up to 30 percent for moderate and severe cases, especially in heavy broilers. WB can cause alterations in meat quality such as loss of water holding capacity and hardened texture alterations that result in downgrades and even condemnations. Furthermore, this condition can cause potential problems with processing methods such as deboning, portioning and tumble marination. This leads to great economic losses for the poultry industry and potentially a loss in consumer acceptance of poultry in the marketplace.

On-line process control is a developing area for poultry processing because it can allow processors to have more real-time process control. Vision grading systems are used in the industry to help sort product before cut-up processes to maximize profitability of cuts. Data collected using vision grading include body dimensions and identification of missing parts. The use of a non-destructive and non-contact vision grading technology could provide a powerful real-time tool to assess woody breast in carcasses. Therefore, the objective of this study was to determine if image analysis can be used to identify broiler carcasses with breast meat exhibiting woody breast characteristics.

Images of 1,203 male broiler carcasses from three commercial strains and five ages (6, 7, 8, 9 and 10 weeks of age) were captured prior to evisceration. Whole breast fillets were scored for WB severity based on tactile evaluation. Broiler carcass images were processed and analyzed using ImageJ software. Various parameters for carcass conformation were measured. Correlations between WB scores (deboned fillets) and carcass measurements were evaluated. M4 (angle at keel), M9 (the ratio width at tail end to 20 percent fillet length) and M3 (tail/caudal width) had the highest correlations to WB score. Predictive models were developed using the features of carcass width (upper/cranial end) and area of lower tail (caudal) keel tip region along with the angle of the keel tip region; the sensitivity rates for predicting either mild or moderate/severe categories were very high. This resulted in less than 2 percent of the fillets being misclassified into either severe when it was actually normal or normal when it was actually severe. Though the overall misclassification rate was approximately 32 percent, fillets were more likely to be misclassified by one category (e.g., severe to mild) than by two (e.g., severe to normal). The data shows a statistically significant result with a strong relationship between the variables.

This study provides a strong proof of concept that carcass conformation/shape features can be used to predict woody breast in deboned fillets. Though more development is needed to implement this system, it is achievable and potentially possible, using existing commercial vision grading systems. Data collection would have to be automated and final predictive models developed based on the measurements that the automated system (vision graders) can collect. Data obtained by a processor could not only lead to decisions made in the processing plant, but it can aid in determining factors in live production (flock characteristics, flock performance, environment, etc.) that contribute to WB incidence. □

Research Provides Possibility to Automate Grading of Woody Breast Fillets

USPOULTRY and the USPOULTRY Foundation announce the completion of a funded research project at the University of Arkansas in Fayetteville, Ark., in which research demonstrated the possibility to automate grading of woody breast fillets. The research is made in part by an endowing Foundation gift from George's Inc. 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 □

Scientist creates faster way to fingerprint foodborne pathogens

APRIL 23, 2018 BY **NEWS DESK** IN FOODSAFETYNEWS.COM

University of Georgia food scientist Xiangyu Deng has created a system that can identify subtypes of foodborne pathogens in a fraction of the time taken by traditional methods.

Quick detection and pathogen fingerprinting can save lives by helping to identify foodborne illness outbreaks and their victims, thereby making it easier to contain outbreaks.

"In outbreaks, time is very important. When a pathogen is detected in food, we then have to determine its subtype, or fingerprint," Deng said in a university publication. "We need to shorten this process to the least amount of time possible."

Deng is an assistant professor of food microbiology at the UGA Center for Food Safety in Griffin. His work was featured in the February issue of *Applied and Environmental Microbiology*, a leading journal in the field. *(continued on next page)*

Scientist creates faster way to fingerprint foodborne pathogens *(continued from previous page)*

Detecting and subtyping a pathogen are separate processes now, but Deng has combined the two steps with "metagenomics analysis."

"To prevent a pathogen from spreading, you have to first identify it by studying its DNA signatures," Deng said. "Sometimes you only have a few cells of the pathogen in a food sample, just a tiny fraction of the resident microbial populations on the food.

"You could sequence the entire sample to identify the pathogen inside it, but that would not give you enough pathogen DNA signal for identification."

Traditionally, the pathogen is separated from the food sample by growing cultures, which takes 24 to 48 hours.

To shorten the culture process, researchers in his lab apply tiny magnetic beads coated with antibodies that pull the pathogen cells out. Then they amplify the DNA of the captured pathogen cells so they have enough DNA to sequence.

"Using a new, very small sequencing tool that's about the size of a USB drive, we can sequence while capturing the data in real time," Deng said.

The small sequencer generates enough data for pathogen detection and subtyping in about 90 minutes, he said.

Deng tested the process on raw chicken breast, lettuce and black peppercorn samples that had been treated with salmonella. He also tested it on chicken parts collected at retail that were contaminated with different serotypes of salmonella. In one case, a small amount of salmonella *was detected and subtyped* from lettuce samples *within 24 hours*. *Using standard methods*, that *would generally take two weeks*, the scientist said.

The Centers for Disease Control and Prevention estimates that 1 million foodborne illnesses and 380 deaths in the U.S. each year are linked to nontyphoidal salmonella.

Identifying pathogenic bacteria before a food product is released into the market can reduce the number of people who get food poisoning, said Francisco Diez, director of the food safety center and an expert on enterohemorrhagic E. coli.

"Our center conducts cutting-edge research to ultimately protect the consumer," he said. "The kind of scientific investigations the center conducts can be applied to solve contamination issues for the food industry."

To learn more about the food safety center, visit www.ugacfs.org. □

Broiler respiratory tracts: a route for Salmonella?

May 4, 2018 by Dianna Bourassa in **WattAgNet.com**

Dust inside the growout house should be considered as a potential Salmonella transmission route.

Salmonella is a persistent food safety risk the poultry industry is trying to control in every step from hatching to processing. One potential infection route worth considering is the airborne route. *Salmonella* can be spread throughout the litter in a broiler house by several mechanisms.

To learn more go to https://www.wattagnet.com/articles/34008-broiler-respiratory-tracts-a-route-for-salmonella?utm_source=KnowledgeMarketing&utm_medium=email&utm_content=Poultry%20Update&utm_campaign=18_05_15_Poultry%20Update_Tuesday&eid=186562392&bid=2103107 □

Scientists Find European Infectious Bronchitis Vaccine Does Not Protect Against U.S. Strains

USPOULTRY and the USPOULTRY Foundation announce the completion of a funded research project at the University of Delaware in Newark, Del., in which researchers found that European infectious bronchitis vaccine does not protect against U.S. strains. The research is part of the Association's comprehensive research program encompassing all phases of poultry and egg production and processing.

Click here for full article □

Vaccination Protects Broilers from IBV Despite Exposure to Moderate Ammonia Levels

Properly vaccinated commercial broilers are protected from an infectious bronchitis virus (IBV) challenge despite exposure to moderate ammonia levels, according to a study that surprised researchers. Ammonia remains a persistent problem for the broiler industry because higher levels coincide with an increase in airsacculitis and condemnations, especially in winter when ventilation tends to be less than ideal, Emily Aston, DVM, of the University of Georgia, told Poultry Health Today.

Click here for full article □

2 types of activists challenge animal agriculture

ON MAY 8, 2018 BY ROY GRABER IN WATTAGNET.COM

Pragmatists are willing to have a dialogue with livestock and poultry producers, but hardliners are not

When it comes to dealing with animal rights or environmental activists, those involved in livestock and poultry production must first identify what category the activist fits into, based on the passion of their beliefs.

Speaking during the 2018 Animal Agriculture Alliance Stakeholders Summit in Arlington, Virginia, on May 4, Bryan Humphreys, executive director of the Ohio Pork Council, described two types of activists: hardliners and pragmatists.

Hardliners

Some activists are so convinced animal agriculture is bad that they are unwilling to listen to other people's viewpoints, Humphreys said.

"Negotiation is not an option. Discussion and education is not an option," he said.

For example, in Ohio, many of the hardliners are pointing fingers at animal agriculture and blaming the industry for algae bloom problems in Lake Erie, according to Humphreys.

"We have the hardliners around the lake. [They believe] there is no option but the shutting down of animal agriculture and that we are the problem in Lake Erie, and if we shut down all livestock production, that the lake will magically become better and the algae bloom will go away. The reality is that's not true."

The agriculture industry acknowledges that it is a factor, as studies have shown that livestock production is responsible for about 8-12 percent of the total phosphorus going into Lake Erie, Humphreys said, but the hardliners are not willing to listen to reason or accept the data that shows the problem is also attributable to factors other than agriculture.

Pragmatists

It does no good for those in animal agriculture to try to have a discussion with the hardliners, but conversations with pragmatists can have productive results, Humphreys said.

Groups and individuals that are activists truly want to see some change, but they are open to incremental change. They believe in working with the industry and working for the betterment of everybody. In the pragmatist's mind, consulting with others to come to a solution "will get them further, faster," said Humphreys.

"Pragmatists are those who are sitting down with us and having conversations about what we can do to improve in animal agriculture and are learning about the things that we already do," he said.

"It gives us a chance to explain what we believe in."

In some discussions, pre-existing common ground is revealed.

Humphreys said there are instances when the pragmatists make a suggestion on what the industry can do to improve certain environmental or welfare-related situations, only to be advised that most of Ohio's producers are already doing what has been suggested. □

VFD Audits: Start with the Feed Distributor

When state or federal authorities conduct an audit for compliance with veterinary feed directive (VFD) rules, they'll begin at the feed distributor, working back as needed to the veterinarians who filed VFD orders and the producers who purchased the medicated feeds.

Click here for full article □

Daily National Grain Market Summary

May 26, 2018 from USPOULTRY Wire

Compared to yesterday, cash bids for corn, wheat, and soybeans were lower, while sorghum was not quoted today. Early Thursday, USDA said last week's export sales and shipments of corn totaled 33.6 and 57.8 million bushels respectively, a neutral showing for the week that has total corn shipments down 12 percent in 2017-18 from a year ago as of May 17. Soybean shipments totaled 33.2 million bushels for the week, a bearish combination that has total shipments now down 11 percent in 2017-18 from a year ago. Last week's export sales and shipments of old-crop wheat totaled 4.1 and 13.3 million bushels, another bearish showing for the week.

*Corn was 1 1/4 to 7 cents lower.
*Sorghum was not quoted.
*Soybeans were a 1/2 to 3 1/2 cents lower.
*Wheat was 3/4 to 12 1/4 cents lower.

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Poultry Slaughter Report

Released May 25, 2018, by NASS/USDA

Ready-to-Cook Weight Up 8 Percent from Last Year.

Poultry certified wholesome during April 2018 (RTC weight) totaled 3.99 billion pounds, up 8 percent from the amount certified in April 2017. The March 2018 revised certified total at 4.03 billion pounds, was down 3 percent from March 2017. The March revision represented an increase of 5.02 million pounds from last month's preliminary pounds certified.

The preliminary total live weight of all federally inspected poultry during April 2018 was 5.27 billion pounds, up 8 percent from 4.89 billion pounds a year ago. Young chickens inspected totaled 4.59 billion pounds, up 7 percent from April 2017. Mature chickens, at 65.5 million pounds, were up 6 percent from the previous year. Turkey inspections totaled 602 million pounds, up 11 percent from a year ago. Ducks totaled 15.7 million pounds, up 11 percent from last year.

Young chickens slaughtered during April 2018 **averaged 6.27 pounds per bird**, up 1 percent from April 2017. The average live weight of mature chickens was 6.23 pounds per bird, up 7 percent from a year ago. Turkeys slaughtered during April 2018 averaged 31.5 pounds per bird, up slightly from April 2017.

Ante-mortem condemnations during April 2018 totaled 12.2 million pounds. Condemnations were 0.23 percent of the live weight inspected, as compared with 0.24 percent a year earlier. Post-mortem condemnations, at 36.8 million pounds, were 0.91 percent of quantities inspected, as compared with 0.98 percent a year earlier. □

PROPANE SPOT PRICING:

As of May 21, 2018 Mont Belvieu Propane Spot Price has gradually climbed this spring from the low for the year at $0.735 (March 4th and then again on April 5th) to a current rate of $0.94/gal. which is a 40.66% increase. The value one year ago on May 21, 2017 was $0.67. The high for this calendar year occurred Jan. 2nd and then again May 17th at ~$0.98/gal.

Allowing for an average of $0.41 per gallon for tariffs, handling and delivery to most areas, the average current retail price is roughly $1.35/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 □

What is the media saying about fake meats?

Apr 27, 2018 op-ed by Amanda Radke in BeefMagazine.com

As the industry fights labeling claims made by plant-based and test tube-created fake meat products, here is what the mainstream media thinks about these alternative meat foods.

Despite the loud and proud rantings of the meatless movement, just 7.3 million of the 325 million people in the United States follow a vegetarian or vegan lifestyle; however, an additional 22.8 million people follow a "vegetarian-inclined diet."

Consumers may be basing their dietary choices on misconceptions they believe about the animal agricultural industry. Going meatless could stem from standing on some ethical high ground, or perhaps they believe eating tofu and lettuce will somehow save the planet, or they may have been duped that a high-carbohydrate diet-ladened with plant-based alternatives to animal proteins is truly a healthier option.

READ: **Stick to facts about environmental stake of going "meatless"**

Regardless, whatever the reason a person decides to forego an entire food group, it's important for beef producers to recognize that this societal shift has fast-tracked the popularity of alternative food choices such as almond milk, veggie burgers, faux bacon and sausage and plant-based "meat-like" (very processed) food products.

On the dairy side, as producers struggle to make ends meet, competition from non-dairy milk products is a real challenge. In fact, according to market researcher, Mintel, "New research reveals that non-dairy milk sales have seen steady growth over the past five years, growing an impressive 61% since 2012, and are estimated to reach $2.11 billion in 2017."

Could the beef industry be headed for the same challenge? Not if the U.S. Cattlemen's Association and the National Cattlemen's Beef Association have their way. In Washington, D.C., they've been fighting to create awareness about the issue of faux meats marketing themselves alongside beef products, and heated discussions about labeling are currently making headlines in the mainstream media.

The argument is valid, in my opinion. After all, you can't milk an almond, and there's no meat in pea protein powders. Why do we continue to confuse our consumers with distracting marketing claims?

READ: **We need to label fake meats**

Take, for example, how out of control food labels have gotten in the grocery store today. Eggs are labeled as gluten free. Water is labeled as non-GMO. From organic to natural to grass-fed to cage-free to pasture-raised to antibiotic- and hormone-free, there are so many marketing claims for consumers to wade through, and unfortunately, these companies only get richer as consumers pay more and more to alleviate guilt, fear and confusion based on these labels.

Now marketers want to take advantage of consumers who want to go meatless. By calling something that is not meat or dairy an alternative meat or dairy product, it implies they are one and the same, and they clearly are not.

Yes, absolutely, we should be clearly labeling and defining these products to show exactly what they are instead of placing them alongside a ribeye in the meat case and trying to sell them as a safer, more nutritious, guilt-free alternative product.

I don't want my meat grown in a garden or in a test tube in a laboratory, but do our consumers and the media feel the same way?

I've rounded up the latest headlines on the topic to help give you an idea of what folks are saying about this issue.

Check them out below:

Feedstuffs: **Cattle industry keeps pressure on 'fake meat' labeling**

Forbes: **The battle begins at the FDA as agriculture evolves: Milk from a cow vs. milk from plants**

Quartz Media: **U.S. ranchers want to use the federal government as a proxy to fight high-tech meat companies**

WNAX: **USDA extends comment period for fake meat**

The Wall Street Journal: **'Clean meat' could make livestock obsolete**

The Guardian: **The French force vegetarian food producers to mince their words**

The Chicago Tribune: **The losing war against fake meat**

The opinions of Amanda Radke are not necessarily those of beefmagazine.com or Farm Progress. □

WHAT DO YOU WANT TO READ ABOUT?

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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Can Poultry Survive the Rise of Alternative Proteins?

Will the rise of alternative proteins spell the end for poultry and other animal protein producers, or will it offer opportunities to premiumize product? Like it or not, mass production and mass consumption of alternative proteins would appear to be drawing ever closer. According to research carried out on behalf of industry association Beef + Lamb New Zealand (B+LNZ), although alternative proteins many only currently be manufactured in small volumes, large scale production of burger patties and mince, for example, ***is likely to be a reality within five years***.

Click here for full article ◻

Row brewing over definition of lab-grown meat products

May 3, 2018 by Tony McDougal in PoultryWorld.net

Cultured meat company Memphis Meats, which has attracted financial support from poultry giants Tyson Foods and Cargill, has called on the US Department of Agriculture (USDA) to deny a meat definition petition submitted by the US Cattlemen's Association.

Memphis Meats has told USDA's Food Safety and Inspection Service that their cultured products "meet the statutory and regulatory definition for "meat" and "beef" products and can therefore be labelled as such."

Their response follows a petition lodged in February by the US Cattleman's Association, which called on the agency to limit the use of beef to "product from cattle born, raised and harvested in the traditional manner… rather than coming from alternative sources" such as plant-based or lab-grown methods.

Memphis Meats has said the company will make it abundantly clear that animals were not raised or slaughtered to produce the meat in question but has added it will undertake extensive consumer labelling exercises to see how it can best communicate this.

The definition of meat debate

The meat definition is becoming an increasingly lively one in both the US and in Europe. Members of the Missouri House of Representatives voted to outlaw companies selling lab-grown meat products or meat substitute from labelling them as "meat".

A farmer politician in France managed to get a law passed that bans vegetarian companies from calling their products 'sausages', 'mince' or 'bacon'.

Need for alternative protein products

The row comes at a time when there is growing demand for alternative protein products. The Impossible Burger, an entirely plant-based patty is now served in more than 1,000 restaurants in the US. The Guardian reported this week that food tech companies are harnessing techniques first developed for biomedical uses.

The DNA for hemeprotein, found in the roots of soy plants and used in the Impossible Burger, is encoded by genetic modification into a yeast, which is then brewed. The protein, identical to the soy original, is then separated and no GM material ends up in the burger.

Creating egg proteins

The same yeast fermentation technique is being used by other companies to make egg proteins that are identical to the originals. Clara Foods, based in San Francisco, is targeting the egg white, which foams, gels and binds in a range of recipes.

The company has produced animal-free egg white in the lab and is now working on scaling up and putting products on sale by the end of next year.

Arturo Elizondo, Clara Foods chief executive, told the paper: "I looked into how incredibly unsustainable animal agriculture is – it really blew my mind. There are more chicken in the US than people, each confined to the area of a piece of paper and never seeing daylight." ◻

"Lab-Grown Dog Food Is First Step to a Clean Meat Empire"

March 15, 2018 by Grace Rubenstein in Neodotlife

Ryan Bethencourt and Ron Shigeta, the minds behind the biotech accelerator IndieBio, are about to launch a line of slaughter-free pet food with a company they call Wild Earth. First, they're hitting the $30 billion pet-food market with dog kibble made with protein manufactured by living cells. That product comes out this spring.

Next, in a year or two, they intend to produce cat food made with real mouse meat but no actual mice. The meat will be grown by propagating mouse muscle cells in the lab. Cats may lap it up, but the idea concerns some inventors who want finicky humans to stay hungry for lab-grown meat, too.

To continue reading go to: https://medium.com/neodotlife/wild-earth-lab-grown-pet-food-bb8a19dfaf5a ◻

5 more Newcastle disease cases confirmed in California

May 30, 2018 By Roy Graber in WattAgNet.com

All newer cases of virulent Newcastle disease were found in backyard birds in San Bernardino County

The United States Department of Agriculture's (USDA) Animal and Plant Health Inspection Service confirmed five cases of virulent Newcastle disease in backyard birds in San Bernardino County, California.

For more information go to: https://www.wattagnet.com/articles/34597-more-newcastle-disease-cases-confirmed-in-california?v=preview

Mexico reports new avian flu outbreak

APRIL 29, 2018 INFO FROM WATTAGNET.COM
BY JACKIE LINDEN

H7N3 variant discovered in Mexico

Veterinary authorities in Mexico and Taiwan have confirmed new outbreaks of highly pathogenic avian influenza (HPAI) in their respective commercial poultry sectors, while a low-pathogenic virus has been detected in another French duck flock.

A further two outbreaks of HPAI caused by the H7N3 virus variant in poultry have been confirmed by Mexico's agriculture ministry to the World Organization for Animal Health (OIE), bringing the country's total to four outbreaks since mid-February of this year.

Suspicious symptoms and high mortality were observed in a flock of 60 fighting birds soon after taking part in a competition in the central state of Guanajuato earlier this month. Thirty-five of the birds died, and the rest were destroyed. Around the same time, the virus was detected in a backyard flock of 2,604 birds kept under organic conditions in the neighboring state of Queretaro. More than half the birds died, and the rest were destroyed. The affected premises is just seven kilometers from one of the previous outbreaks.

Tennessee Poultry Association

Rep. Rosa DeLauro asks GAO for study on lab-grown meat

Congresswoman says questions about how lab-grown meat should be regulated need to be answered.

APRIL 2, 2018 IN WATTAGNET.COM

U.S. Rep. Rosa DeLauro, D-Connecticut, has sent a letter to the United States Government Accountability Office (GAO) requesting an examination of the regulatory framework surrounding cell-cultured foods.

Cell-cultured foods, also known as laboratory-grown meat, are food products derived from laboratory-grown cells rather than traditional livestock.

"Recent innovations in cell-cultured foods have caught the attention of producers, marketers, and venture capitalists alike. Over the past few years, some of the largest food companies in the United States have started to invest in cell-cultured technologies," DeLauro wrote in the letter dated March 28. "While not yet commercially available, the potential introduction of this new type of product into the nation's food supply and economy raises many important questions."

"To date, it remains unclear exactly how cell-cultured food products should be regulated," continued DeLauro. "More information is needed for Congress to address this emerging sector in the United States and to ensure it is properly overseen by the relevant executive agencies once these products are commercially available."

DeLauro serves as Ranking Member of the Appropriations Subcommittee responsible for funding the Departments of Labor, Health and Human Services, and Education, and is a senior Democrat on the Agriculture Appropriations Subcommittee. □

Tyson breaks ground on new Tennessee poultry plant

MAY 30, 2018 IN WATTAGNET.COM

Company also announces $500,000 donation, plans for a community steering committee

Leaders of Tyson Foods, along with local and state officials broke ground today at the future site of the company's new chicken processing plant in Humboldt, the largest city in Gibson County in western Tennessee. The approximately $300 million project is expected to create more than 1,500 local jobs once the new complex begins operations, currently expected to be in late 2019. Tyson Foods also announced it is providing Gibson County with a $500,000 community grant along with plans for a local steering committee to decide how the money will be used. The steering committee will be comprised of community leaders and Tyson Foods team members.

"Today is truly a great day for West Tennessee and our thriving poultry industry as we officially welcome Tyson Foods to Gibson County. The company's decision to bring 1,500 new jobs will have an incredible impact on the local economy," said U.S. Rep. David Kustoff. "I thank Tyson Foods president and CEO, Tom Hayes, and the entire Tyson Foods team for continuing to invest in the great citizens and communities of West Tennessee."

The plant will be located within the Gibson County Industrial Park and will produce pre-packaged trays of fresh chicken for retail grocery stores nationwide. It is expected to process 1.25 million birds per week, increasing Tyson Foods' overall production capacity by the same amount. The payroll and payments to farmers from the new operation, along with its purchase of grain and utilities, is expected to generate an annual economic benefit to the state of Tennessee of approximately $150 million.

Click here for full article □

Pictured above L-R: Andrew Blair, Shelbyville Complex Mgr; Marshall Miller, Shelbyville Live Prod Mgr; Kingsley Brock, Gibson Co Dir of Econ Dev; LaShonda Cook, Obion Co HR Mgr; Michael Freer, Humboldt Complex Engineer; Tiffany Cathey, Obion Co Training Mgr; Megan Reece, Humboldt Complex Administrator; Tom Sanders, Humboldt Plant Mgr; Tom McCue, Humboldt Complex Mgr; Shane Joyner, Obion Co Live Prod Mgr; Vanessa Presson, Humboldt Complex HR Mgr; Keith Riley, Obion Co Complex Mgr; Mike Rau, Humboldt Complex Safety Mgr; David Corvin, Humboldt Live Prod Mgr

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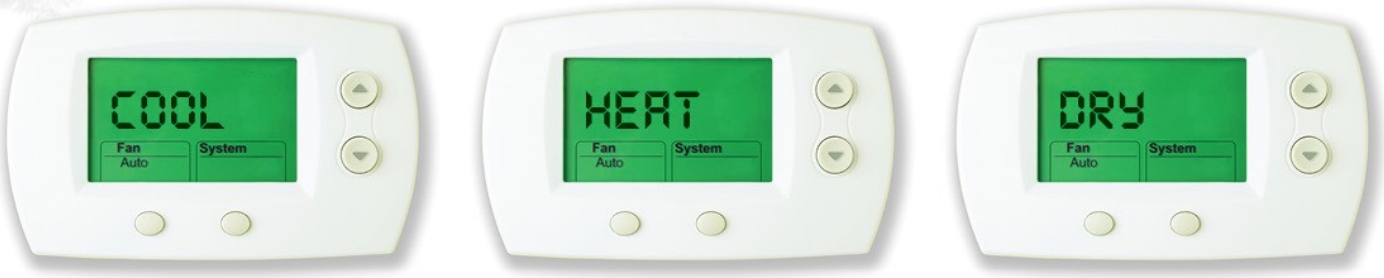

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Should White Castle plant-based burgers be concerning?

FROM APRIL 25, 2018 ARTICLE BY ROY GRABER IN WATTAGNET.COM

As the plant-based protein industry continues to grow, it seemed like it was only a matter of time before meatless protein products hit the masses through the quick service restaurant (QSR) channel.

Iconic burger chain White Castle has decided to test the marketplace with the introduction of a slider made from Impossible Foods' plant-based burger product, and that may just be the start of a trend that other QSRs could follow.

White Castle testing select markets

Earlier in April, White Castle began to test its meatless slider at select markets in New York, New Jersey and in the Chicago area. This will involve about 140 restaurants. The chain, according to a report on the Quartz website, will expand the operation to all 380 of its locations if the meatless burger proves to be popular.

Affordability of meatless burger

David Lee, the chief operating officer of Impossible Foods, told Fast Company the company's intent has long been to make its products available everywhere, and at an affordable price. He stated that the company is now producing at a level of scale that it can provide the Impossible Burger at a price it deems reasonable.

White Castle is reportedly selling the Impossible Slider for $1.99.

Cause for concern?

Should people in the meat and poultry industry be concerned about what White Castle is doing?

A lot of that will depend on whether the launch of the product in select markets will be successful enough to make them available chain-wide. If it does do well, it would seem other companies will try to copy that success formula.

It is also worth noting that plant-based proteins have the support of animal rights groups, which have a history of trying to persuade restaurant chains to adopt to their agendas. Just look at how many companies have committed to selling only cage-free eggs and chicken from broilers raised according to Global Animal Partnership standards.

There is a good chance that the most die-hard vegans who have chosen that type of diet due to animal welfare reasons, will not flock to White Castle because they still sell beef, which is against their beliefs. This could hinder the success of the chain's meatless burger test.

And those who try the Impossible Slider may still eat meat and poultry. Like Maple Leaf Foods CEO Michael H. McCain said when explaining the meat and poultry company's venture into plant based proteins, "There's a significant consumer trend to not eat less meat, but to increase protein consumption in a more balanced way. … It's really about consumers' choice, not one or the other, it's typically both and finding the balance for both."

And Sally Grimes, president of Tyson Foods' Prepared Foods division, not too long ago said, "Over half of us are actively trying to add more protein into our diets, and protein has risen to the top of all desired health attributes in food."

If you keep what Grimes and McCain said in mind and are an optimist, you aren't poised to miss too much sleep about White Castle's experiment.

The situation will be well worth watching, and should also serve as a reminder to those in the poultry industry to do all they can to promote its healthy, safe, flavorful and versatile products.

Roy Graber is a staff reporter at WATT Global Media. Contact Graber via email at rgraber@wattglobal.com. □

"So, have the burger. Just make sure you walk to the restaurant."

From March 23, 2018 MeatingPlace.com by Julie Larson Bricher, titled *Study links human diet, greenhouse gas emissions*

"Individuals who lower their caloric intake and animal-based food consumption may have an aggregate impact on reducing greenhouse gases (GHGs), according to researchers at the University of Michigan and Tulane University." To read this full story go to http://www.meatingplace.com/Industry/News/Details/78728 but the best part is the following excerpt at the end of the article:

What about cars? According to the Environmental Protection Agency, livestock, the commodity group most criticized in the present study, is responsible for 3.8 percent of all GHG emissions. U.S. livestock production has a far lower carbon footprint than the U.S. transportation sector's footprint of 27 percent and the energy sector's footprint of 31 percent.

"In short, what we eat matters environmentally to some degree, but it pales compared to what we drive or how we use energy. So, have the burger. Just make sure you walk to the restaurant," said Frank Mitloehner, professor and air quality extension specialist for the Department of Animal Science at the University of California-Davis. □

USDA Rejects Animal Rights Group Petition on Poultry

On March 23, 2018, in Animal Welfare, USDA

The U.S. Department of Agriculture has rejected a petition from [a California-based animal rights activist group], which requested that USDA include poultry in the federal Humane Methods of Slaughter Act.

"Chicken companies already have strong moral and financial motivation to ensure chickens are handled properly," said NCC spokesman Tom Super. "Each chicken represents an investment by the processor, and mishandling chickens is not in a processor's financial interest. Any abuse is not tolerated by the industry nor FSIS. This whole process is routinely audited internally, by customers and by independent third parties and monitored on a continuous basis by FSIS inspectors".

Chicken slaughter is already regulated by USDA's Food Safety and Inspection Service under the Good Commercial Practices regulations of the federal Poultry Products Inspection Act. These regulations address poultry slaughter, and government inspectors are present for the slaughter process in every poultry processing plant. As with species subject to the Humane Methods of Slaughter Act, all chickens are stunned and rendered senseless to pain before slaughter.

"The Humane Methods of Slaughter Act was written specifically for cattle and other "red meat" species – very large animals that must be handled in a certain way, Super continued. "It wasn't designed to accommodate chicken. In fact, trying to shoehorn chicken harvesting into the Humane Methods of Slaughter Act could significantly compromise chicken welfare. It's a square peg – round hole situation."

Carmen Rottenberg, Acting Deputy Under Secretary in the Office of Food Safety, said in a letter announcing USDA's decision, that poultry is already protected by other regulations that protect birds during the slaughter process. She noted that under the Poultry Products Inspection Act and other regulations, live poultry must be handled in a manner that is "consistent with good commercial practices, which means they should be treated humanely."

[This animal rights activist group] said it plans to "pursue all available legal options" to overturn USDA's decision. ◘

The End of Livestock Production?

April 25, 2018 op-ed by Greg Henderson in Drovers.com

If you're busy planting corn or calving cows this week, rejoice. The end of those chores is near. That's because scientists, entrepreneurs, and activists are building an animal-free food system. So says Jacy Reese, Research Director at Sentience Institute, one of those "think tanks" where some educated folks go to dream up silly stuff.

Reese is promoting his new book, "The End of Animal Farming," which describes why building an animal-free food system is "one of the most important social movements of our time."

In a recent TEDx Talk, Reese cites what he sees as the problems with animal agriculture – the cost, environmental damage and the suffering of animals "trapped in this system."

TED is a non-profit launched in 1984 to spread ideas through short, powerful talks – from science to business to global issues. In his 13-minute talk – viewed 49,000 times, Reese said, "The most powerful tool we have is innovation: the amazing thing is, we don't have to give up meat, dairy or eggs to end animal farming."

He refers to the fact lab-grown meat and plant-based products can replace the animal products now in production.

"Think about it - what's meat? It's fat, protein, water, and trace minerals. All of these ingredients are readily available in the plant kingdom, they are just not assembled in the traditional architecture of meat."

Such meat-free ideas are in direct conflict with those of Allan Savory, whose stunning TED Talk a few years ago challenged conventional thinking about animal agriculture. In his talk, "How to fight desertification and reverse climate change," Savory says managed grazing of livestock can "protect grasslands and even reclaim degraded land that was once desert."

Savory is a soft-spoken Zimbabwean biologist, farmer and environmentalist who has spent a lifetime studying and practicing techniques that combat desertification around the globe. His work through the Savory Institute, which he founded, determined that livestock are a solution to climate change and an effective means by which to fight hunger, poverty and violence across much of the Third World. Savory's TED Talk video has been viewed more than 4.5 million times. ◘

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Biosecurity and surveillance in times of avian influenza

APRIL 4, 2018 BY **A. GREGORIO ROSALES** IN POULTRYWORLD.NET

During recent years, one challenge has been outbreaks of highly pathogenic avian influenza (HPAI), which have caused great economic losses due to mortality, reduced performance, costs associated with eradication/control procedures, and long-term disruptions in trade.

Avian influenza causing volatility

According to a report from Rabobank (*RaboResearch/Poultry Quarterly Q1 2018/December 2017*), the outlook for the global poultry industry is promising. However, one of the main concerns is the continuing volatility caused by avian influenza (AI), which is driving changes in business and control strategies.

Growing consumer demand and resulting shortages of poultry meat and eggs will continue to benefit leading operations with high biosecurity standards, as well as bolster the imports from producers in AI-free regions or countries. Furthermore, it emphasises the need for countries to accept World Organization for Animal Health (OIE) principles such as regionalisation, compartmentalisation and science-based surveillance programmes for safe trade in poultry and poultry products.

Development and recognition of primary breeder compartments in particular will help ensure the supply of critical genetic stock for producers around the world. For further information on the concept of compartmentalisation, please refer to– Compartmentalisation – Ensuring Security of Supply.

Photo: Aviagen

Biosecurity—a flock health and business investment

Biosecurity is a comprehensive set of policies and practices to prevent the introduction and spread of disease-causing organisms. It serves as the first and main barrier of protection against all disease, and provides the foundation for flock health, animal welfare, optimum performance, and sustainable production (*Figure 1*).

Figure 1 – Biosecurity provides a foundation for attaining critical goals.

(continued on next page)

Biosecurity and surveillance in times of avian influenza *(continued from previous page)*

Modern poultry production has evolved into a complex business process, and flock health is the main driver for optimizing production and ensuring profitability, competitiveness and sustainability. Biosecurity helps preserve flock health, and producers realize it is not only the right thing to do, but also makes good business sense.

Risk management and biosecurity

Risk management starts by identifying factors that can introduce diseases. An action plan comprised of suitable biosecurity practices will help eliminate the risk, and specific 'critical control points' must be measured to monitor effectiveness and progress (*Figure 2*).

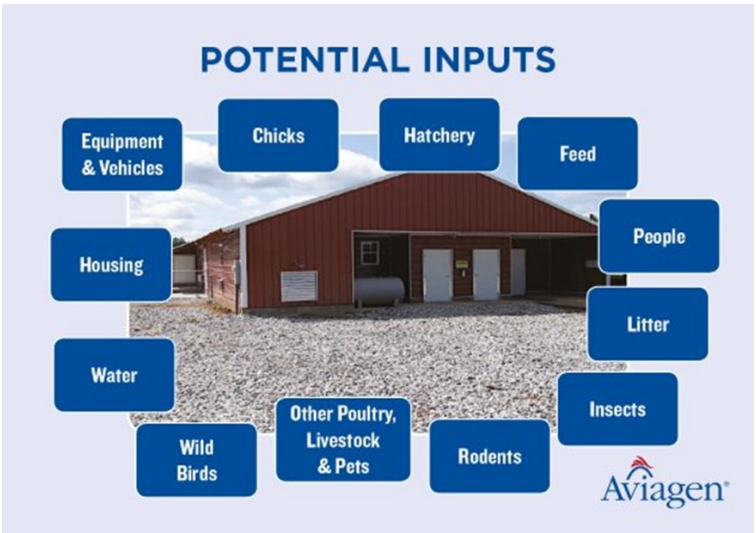
Figure 2 – Management of risk and biosecurity.

Risk assessment helps identify gaps and modify protocols, training, and management. Adjustments should depend on risks posed by outbreaks in neighbouring farms or regions. It is most important that the biosecurity programme addresses isolation (avoiding or limiting contact with other birds), traffic control (considering everything that could introduce diseases besides vehicles), and sanitation (cleaning and disinfecting facilities, material and equipment).

Make a successful biosecurity plan

The National Poultry Improvement Plan (NPIP) of the US Department of Agriculture (USDA) provides a good example of minimum biosecurity principles and audit guidelines (http://www.poultryimprovement.org – Programme Standards, Biosecurity Principles) which have been developed with co-operation between industry, and national and state regulatory agencies. *Figure 3* shows the potential risks most commonly covered by best practices in a farm-based biosecurity programme.

Figure 3 – Potential inputs for the introduction of disease agents into a typical poultry farm.



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Biosecurity and surveillance in times of avian influenza *(continued from previous page)*

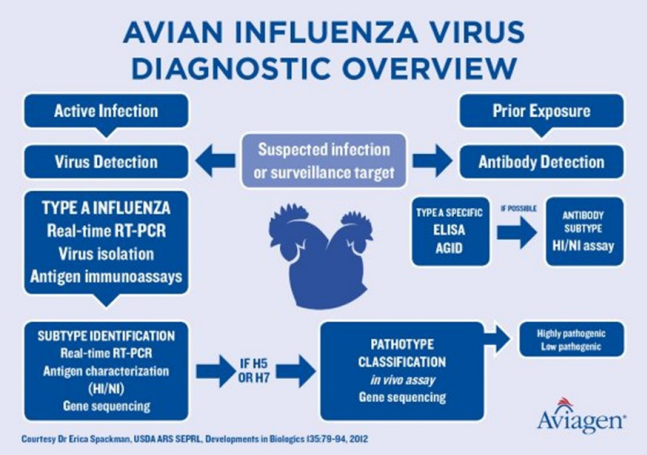
Building a successful biosecurity plan requires commitment and a sense of shared responsibility achieved through training, teamwork, communication and feedback. Biosecurity must be mandatory and make sense. It must guide daily work activities for all levels of the operation, and be regularly reviewed and improved on. For the biosecurity programme to be successful, each operation must build a plan based on well-known principles, adapted to its own unique circumstances, resources, and objectives.

Surveillance and monitoring

Surveillance involves continuous observation to determine the absence or presence of low or highly pathogenic avian influenza (LPAI and HPAI). Official animal health agencies generally use a combination of active and passive surveillance methods, and producers voluntarily or by mandate participate in these efforts. Passive surveillance is typically conducted if birds show increased mortality, respiratory signs, and egg production drops. Passive surveillance involves conducting on-site flock evaluations, identifying signs of disease, reporting to company veterinarians, conducting post-mortem examinations, and submitting samples to a laboratory for diagnosis.

Active surveillance means performing routine and systematic monitoring to verify flock status. Whether or not operations participate in official surveillance programme, it is critical to have a monitoring programme and laboratory resources that can rapidly and accurately detect infections with HPAI, or LPAI viruses with potential to mutate into HPAI (such as serotypes H5 and H7). Moreover, a biosecurity programme must be supported by laboratory monitoring procedures that can routinely and systematically be assessed to ensure a negative disease status, detect recent infections, and generate prompt actions to prevent the spread of disease. *Figure 4* provides further detail on current diagnostic methods for AI.

Figure 4 – Current methods to detect and confirm infections caused by AI.



Maintaining a strong biosecurity culture and performing regular surveillance and monitoring are vital to ensure efficient, animal welfare compliant, and sustainable poultry production. □

Avian influenza viruses can persist in footbaths and manure

March 13, 2018 from PoultryHealthToday.com

Growers shouldn't assume the disinfectants they use in footbaths are effective against avian influenza (AI), indicates a study from the University of California–Davis.

Researchers conducted a survey about biosecurity practices in California and then used the information to design experiments to test the effectiveness of footbath disinfectants against AI. They also evaluated the longevity of AI viruses under different conditions.

"Surprisingly," they say, quaternary ammonia and quaternary ammonia plus glutaraldehyde-based footbaths did not eliminate highly pathogenic H5N8 or low-pathogenic H6N2 particles on boots. However, a chlorine-based granulated disinfectant was able to destroy the virus, say Rüdiger Hauck and colleagues.

To evaluate the longevity of AI viruses in litter and feces, they seeded different bedding samples from commercial layer, broiler and turkey production units with the same two AI viruses.

Live H5N8 particles in layer feces remained for at least 96 hours, compared to less than 60 hours in broiler and turkey bedding. However, H6N2 low-pathogenic viruses persisted less than 24 hours in all the different substrates.

This knowledge may help producers determine effective litter treatments to destroy AI viruses in the bedding material, the investigators write in the March 2017 issue of *Avian Diseases*. □

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Poultry Engineering, Economics & Management
Newsletter of the
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Critical Information for Improved Bird Performance Through Better House and Ventilation System Design, Operation and Management
Produced in cooperation with the U.S. Poultry & Egg and Alabama Poultry & Egg Associations
Issue No. 92, April 2018

Evaporative Cooling vs. Dry Floors: A Balancing Act

By Jess Campbell, Jeremiah Davis, Dennis Brothers, Jim Donald & Gene Simpson, National Poultry Technology Center, Auburn University

We are often asked the question, "During hot weather flocks, how can I prevent wet litter in the front of my tunnel ventilated houses using evaporative cooling?" Realistically, we have to understand that a good tunnel house using evaporative cooling just doesn't allow the air to dry the litter as well in the front of the house, so you can't totally prevent some build-up of moisture in the litter. The good news is there are steps you can take to manage the problem. However, keeping litter moisture to a minimum and making good use of evaporative cooling for best flock performance is definitely a balancing act.

For many growers it probably isn't just the cool cells wetting the litter, but a combination of factors that can create a serious front-house moisture problem. This newsletter outlines five practical tips to help growers and companies successfully address all those factors, starting with litter preparation, and including drinker maintenance, ventilation during brooding, bird migration, and finally cool cell operation.

TIP 1. LITTER PREPARATION. The old Mike Eckman and Jim Donald saying, "So goes the litter, so goes the flock," is just as true today as it was 25 years ago. Pre-flock litter condition sets the stage for the growth process. Starting even the best flock of chicks on poor litter will end up in unsatisfactory results.

Step 1: Remove all cake. All existing cake must be removed from the house, especially the front of the house where tunnel doors, corners, posts, and end walls make it hard to do so. Don't accept what is left because it will work against you during the next flock. Caked litter is already saturated and can't hold additional moisture. Get it out of the house.

Step 2: Get adequate litter depth. Thin litter and moisture problems go hand in hand. About 70-80% of what goes through the water meter ends up in the house and the litter. Two to three inches of litter is simply not enough to do the job of holding moisture until it can be ventilated out of the house. Thin litter can only hold so much moisture and once it is saturated it is done and the floor slicks over. Starting the flock with thin litter in the front, especially under drinkers and along sidewalls, will only cause problems later.


WET LITTER UNDER DRINKERS

Keeping litter adjacent to cool cells from getting too wet requires proper litter preparation between flocks, getting adequate litter depth and cake removal so it will absorb water and bird load for the duration of the flock. Proper ventilation, during and between flocks, is also extremely important in preventing front house floors from getting slicked over during the next flock.

Step 3: Ventilate between flocks. The only way moisture is removed from litter inside the house is by ventilation. Insufficient ventilation means little to no moisture removal and leaving the endwall doors open might not be enough to do the job. Some growers find it helpful to run a tunnel (or other fans) during the day to help dry litter between flocks. Other growers ventilate through perimeter inlets on time and temperature between flocks. Wetter litter requires more attention to detail and extra effort to remove moisture. New shavings can have excess moisture that needs to be removed prior to placing the next flock. Don't wait until day 1 to ventilate the house. Be proactive and get the moisture out of the house before chicks are placed and heaters are turned on. Notice: If you close the house up, it must be ventilated or the in-house conditions may very well corrode the equipment inside the house, causing shortened equipment life.

Think about this: In a typical 40x500 foot house growing 9 pound chickens there is often 100,000 gallons of water that enters each house. There are three places this water goes: birds, air, and litter. Once the flock is gone, the litter is holding what is left over and the only way to get it out is with a decaking machine, cleaning it out, or ventilating it out. Cake and moisture that isn't removed will magnify problems for the next flock.

TIP 2. DRINKER MAINTENANCE. We are often asked, "How can I tell if my drinkers need replacing?" Nipple drinker replacement depends mainly on water quality, maintenance, and output. Ideally, we only want water to pass through the nipple drinkers when a bird activates the trigger. To keep the system from becoming fouled, establish a routine maintenance and cleaning program. Once a layer of biofilm or mineral buildup has been established in water lines and drinkers it is extremely difficult to correct the problem. Don't expect to clean the system with one single effort with a chemical cleaner. There is a difference between a fouled system and one that is worn out. Take time to randomly inspect drinkers and make sure the system is clean and properly functioning. If your farm has poor water quality this should be done more frequently.

Step 1: Clean the lines. Make sure to clean lines with a manufacturer approved drinker line cleaner and follow the directions carefully. All lines must be flushed first, then all lines charged with the cleaning solution, drinkers activated, lines thoroughly flushed and drinkers inspected. While flushing the system, make sure flush end hoses are not kinked. We recommend activating drinkers again after flushing out the cleaner solution with fresh water.

Step 2: Monitor dark period water leakage. Find out how much water is passing through the water meter at night when lights are off. In a solid wall or dark-out curtain house there should be very little to no bird activity on the drinker lines. This is a great opportunity to get an idea of just how much water is wasted in the house that is not associated with bird activation. Having more than about 8-10 gallons wasted each hour of dark time is a clear sign there are leaks down line or that it is time for new drinkers.

Step 3: Field test a new set of drinkers. Replace one full line of drinkers with a company suggested drinker to see how they compare to existing drinkers. Do this on a line used during brooding to get the full effect. Many growers are surprised at how much water existing drinkers are wasting. Monitor their performance during one flock and then see the difference. You can't out-manage worn drinkers.

Think about this: If 100,000 gallons of water goes into the house in a 63-day old flock just for the birds, a 10% leakage factor would be 10,000 more gallons of water into the litter. That is a lot of added water the litter has to absorb during a growth cycle.

The drinkers in picture above have been exposed to water high in iron and manganese that causes them to stick shut or leak. The next picture shows the sediment left over after we caught the cleaning solution from the drinker lines into a garbage can when we flushed them and poured the water off. Poor water quality often requires more frequent inspection and cleaning to keep drinkers functioning properly.

TIP 3. VENTILATION DURING BROODING. Moisture removal during brooding is important in winter and in summer, too. If you are front-half brooding then there are birds in that section a minimum of 60 days each year and the water to go with it. Stay on top of removing moisture with adequate ventilation, even with litter amendments.

Step 1: Monitor relative humidity (RH). In-house RH should be monitored to keep moisture inside managed between 50 and 65%. A simple and inexpensive temperature and relative humidity sensor can be purchased locally and is more accurate than human estimates.

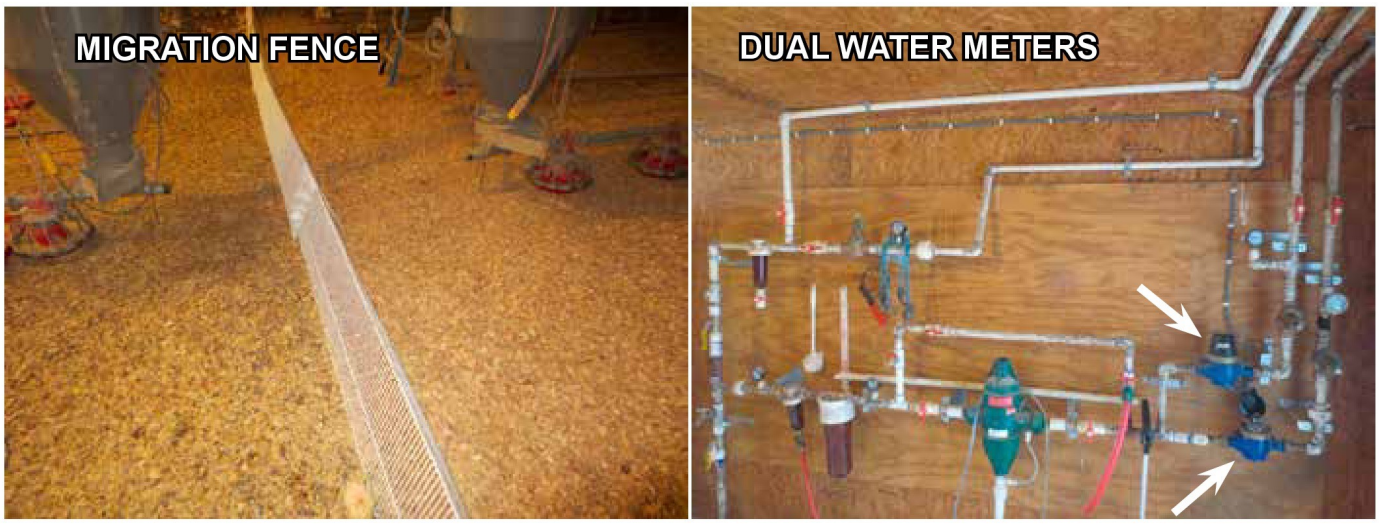
Step 2: Use stir fans. One of the benefits of using stirring fans during brooding is to help remove moisture from the house during the ventilation run cycles, so it is still important to use them in warmer weather too. Moisture evaporating from the litter creates a gradient with higher humidity in the very thin layer of air right next to the litter. The higher humidity of this thin layer reduces the drying effect of the air. Stir fans circulate air from the ceiling down to the litter, stripping away this thin layer and exposing the litter to the warmer, dryer air, which increases the moisture uptake from the litter.

TIP 4. BIRD MIGRATION MANAGEMENT. Don't forget that uniform feeder, drinker, and litter availability is one of the most important basic fundamental rules of growing a healthy, uniform flock. We don't expect perfect uniformity, but we must manage bird migration and strive to keep the flock as uniform as possible. During tunnel ventilation, birds begin to migrate toward the tunnel inlet end of the house and this causes several challenges. Feed and water availability is compromised, as well as the moisture load placed on the litter in the front of the house. Bird migration during tunnel causes non-uniformity of the flock, therefore poorer performance on the farm and problems resulting in processing downgrades.

Step 1: Install migration fences. Most companies have either required or suggested procedures for installing and managing migration fences. Some find it best to place and maintain bird separation from day one. Others call for a certain number installed before a prescribed day-of-age after turnout. This is an extremely important litter management tool. Whatever the protocol is, follow it and maintain it throughout the grow-out.

Step 2: Monitor dual water meters. Many growers and companies have already been using two water meters in each house to manage bird uniformity from front-to-back. If you have not done this it can be a relatively simple and useful tool to have. The procedure involves splitting the house water system into two halves with two separate water meters, and moving the birds so as to equalize the amount of water passing through each meter. Many growers have success keeping and maintaining the difference between front-to-back house meters within about 100 gallons per day throughout the growout.

Think about this: If birds are placed at an average 1.0 density and migration causes a conservative estimated 0.90 in the front 100 feet then there are about 444 more chickens in that area. This doesn't seem like a problem when the birds are small but when they get 7 weeks and older they really take up a lot of space. We essentially have a 10% greater bird load in the front 100 feet of the house and the litter may not be able to handle it.



Migration fences similar to the one above can be installed to keep bird migration in check so that the equipment and litter can handle the bird and moisture load while maintaining flock uniformity. This is a useful bird management tool, especially when houses are in tunnel mode. Photo at right shows a water panel with dual water meters (blue meters at bottom right of picture) installed to help the grower manage the number of birds between the front and back of the house using water consumption. Many growers are able to keep the meter readings within about 100 gallons of each other per day during the growout.

TIP 5. EVAPORATIVE COOLING (EC) SYSTEM OPERATION. Good litter preparation, drinker servicing, adequate ventilation, and managing bird migration are all important factors of growing chickens that must be taken seriously. Proper management of these set the stage for the successful use of evaporative cooling, making sure litter is ready and not wet before you start. There is no one correct EC program that will fully handle all of the variables that must be managed to provide the best possible environment for the birds. The ever-changing variables of bird age, bird size, density, outside temperature, outside relative humidity, house size, windspeed inside the house, breed of bird, etc., make it impossible to prescribe a one size fits all program. However, there are some tips to follow to help manage EC systems across the Broiler Belt:

Step 1: Don't use EC at night. EC operation is typically programmed into the controller to operate after about 9:00 am and turned off before about 8:00 pm (or before dark) each day when needed. Although weather patterns create some exceptions, for the most part this prevents the pads from running when the humidity is high at night further reducing moisture uptake from the litter in the front of the house.

Step 2: Keep EC operation within its zone of temperature/humidity effectiveness. EC is most efficient and effective when outside air temperature is well above 80°F and RH is well below 80%, for example, when air is 95°F and RH at 50%. High humidity indicates high moisture in litter.

Step 3: Try to maintain bird comfort with wind-chill before going to EC. Turning on EC too aggressively after transition into tunnel ventilation mode often causes the house to transition totally out of tunnel mode unnecessarily. One rough rule of thumb for middle-aged birds in narrow houses is to have the equivalent number of tunnel fans running to bird age in weeks + 1 fan. Example: 4-week old birds might have 5 fans running before starting EC. Toward the end of the flock with larger birds, we suggest at least 80% of the tunnel fans running (90-100% running if wet litter is an issue) before starting EC. Remember these are starting points, carefully watch bird activity and behavior to fine tune number of tunnel fans used with EC. See Newsletter #67 on Tunnel Ventilating Younger Birds for details on young birds.

Step 4: Don't hold additional tunnel fans back if birds are heavily panting and EC is in full operation. Panting means birds are under stress and require additional airflow by increasing the number of tunnel fans running (if available) to bring them closer to their comfort zone.

As always, consult with your live production management team for more specific guidelines using EC programs and controller setups customized for your operation.

BOTTOM LINE: A good tunnel house using EC will eventually result in damp litter in the tunnel inlet end of the house. That is the trade-off we get using evaporative cooling. We are trading in-house moisture control for temperature reduction. The idea is to take the necessary steps to start the flock off with and maintain uniform dry litter as long as possible. Then when EC is used extensively, the litter is in the best shape to handle it. We hope these 5 practical tips will help you successfully achieve your goals this summer by improving litter preparation, drinker maintenance, ventilation, bird migration and EC management. Good luck this summer!

Special thanks to Isaac Singletary and Gary Roper for their contribution to this subject.

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Marel, Inc. Don Stone (479) 857-8180	**Space-Ray** Trevor Houston (910) 990-9492
Marvel Technologies, USA Tom Ellsworth (615) 642-3729	**Sunbelt Rentals, Inc.** Bart Smith (205) 602-2485
Merck Animal Health Paul Burke (615) 805-3564	**Suncoast Pine Shavings** Joe Williams (850) 363-8899
Meyn America, LLC Eric Nolten (770) 316-0056	**Swallows Insurance Agency** Gabe Colwell or Greg McDonald (931) 526-4025
NatureForm Hatchery Technologies Robert Bowen (601) 480-4781	**TN Farm Bureau Federation** www.tnfarmbureau.com (931) 388-7872
Nunley Farm, Inc. John Nunley (256) 468-2338	**Tennessee Farmers Co-op** Ryan King (931) 981-2053
Nutra Blend Randy Holliman (615) 218-1420	**Tennessee Solar Solutions** Ginny Kincer (423) 298-1688
Paq-Mule Innovations, LLC Benny Brown (606) 688-2793	**Thompson Gas** Robby McKim (706) 455-8426 James Watson (706) 851-4378
POSS Design Unlimited Mark Ridge (614) 738-8042	**UT - Extension** Robert Burns (865) 974-7112
Premier Georgia Printing & Labels Steve Free (770) 287-1337	**Valco** Brian Phillips (601) 850-3844
Prime Equipment Group Jody Howell (770) 530-1895	**Viand Group** Maggie Smith (931) 607-4176
Quality Incentive Company Peter Krstovic (404) 431-0792	**Vincit Group** Eric Killen (423) 504-1974
Reliable Poultry Kendall Proctor (479) 601-2676	**Weeden Environments** Robbie Myers 479-549-7691
River Valley AgCredit Eric Smith (423) 745-0323	**Westan Insurance Group** Portis Tanner (731) 885-5453
Silver Bullet Water Treatment Ashley Crider (479) 715--9864	**Wildlife Prevention & Repair** Clint Cary 731-415-6043
Silvercote Jordan Helms (864) 315-7225	**Zoetis** George Perigo (706) 669-9847
SKOV A/S Reggie Saucier (479) 857-5357	

Tennessee
Poultry Association

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NEWS FROM AROUND THE COMPLEXES

Hubbard LLC/Aviagen Production Complexes announced the following changes. **Nate Collett** has been promoted to Assistant Production Manager for TN & Alabama complexes. **Hannah Crouch** has been hired as a poultry specialist for the TN Complex. She is a recent graduate of TN Tech. **Jose Rodriguez** has transferred from Pedigree special projects manager at Aviagen/ Crossville to poultry specialist for TN Complex.

Terry Price has joined **Koch Foods Morristown** as the new HR Manager.

Tyson Foods Inc. has entered into an agreement to sell its Sara Lee Frozen Bakery and Van's businesses to a private equity firm as the company continues to focus on protein.

Tyson Foods Shelbyville is pleased to announce the promotion of **Will Hightower** as Plant Manager. Will has been working with Tyson Foods for six years. He is from Lebanon, TN, and attended the University of TN Knoxville, where he obtained a degree in Animal Science. **Brent Osborne** is Shelbyville's new HR Complex Manager. Brent has been with Tyson Foods a little over 9 years. He is from Richmond, KY and attended Eastern Kentucky University. Brent spent 12 years in KY Army National Guard and was also a firefighter for the city of Richmond Fire Department. **Micah Abernathy** has been promoted to Division Operations Manager. He has been working with Tyson Foods Shelbyville seven years, and was the plant manager three years before accepting the new role.

Tyson Foods Humboldt has announced the following new employees for their facility. **Michael Freer** is the complex engineer. Michael spent 11 years at Riceland Foods before joining Tyson's corporate engineering group. He was previously the plant manager at the Clarksville, AR facility, and most recently was a member of the Manufacturing Services team. Michael has a Master's Degree in Agricultural Engineering. **Megan Reece** is the complex administrator. Megan is a Humboldt native and worked as the Office Manager for the local cable and internet company for the last 10 years. **Tom Sanders** will be the plant manager. Tom has been with Tyson Foods for nine years. He has held multiple management positions at the Shelbyville Complex and the last three years as the Plant Manager at Tyson Foods in Robards, KY. **Vanessa Presson** will be the complex HR manager. She has been in HR for nearly 15 years in the automotive industry and most recently for Delta Faucet. Vanessa has a bachelor's degree from UT. **Mike Rau** will be serving as the complex Safety Manager. Mike is a former Marine of 22 years, and after spending 9 years as a government contractor, joined Tyson 3 years ago as the Safety Manager at the Albertville, AL plant. See groundbreaking photos and announcement on page 33.

Tyson Foods OBC recently recognized **Perry Draper** for 35 years of service. Perry spent 15 years at the Nashville, AR facility and has worked the last 20 years at the Union City plant.

Michael Freer | Megan Reece | Tom Sanders | Vanessa Presson | Mike Rau | Perry Draper

TPA ANNUAL MEETING & SUMMER GETAWAY REGISTRATION FORM

Register online at www.tnpoultry.org

"Party Heard 'Round the World"

August 3-4, 2018

DoubleTree by Hilton Hotel Nashville Downtown

Name _____

Company _____

Address _____ City _____ State _____ Zip _____

Cell Phone _____ Email _____

Guest Names 1) _____ 2) _____

3) _____ 4) _____

SPONSORSHIP, AUCTION, MEMBERSHIP

☐ Diamond Sponsorship	$ 5000.00
☐ Platinum Sponsorship	$ 2500.00
☐ Gold Sponsorship	$ 1000.00
☐ Silver Sponsorship	$ 750.00
☐ Bronze Sponsorship	$ 500.00
☐ Auction Cash Donation	$ _____
☐ *TPA Allied Membership Renewal*	$ 750.00

TOTAL COMMITMENT

____ Number planning to attend the **Annual Meeting and speaker program at 1:00 PM on Friday, August 3rd** (No registration fee)

____ Number planning to attend the **Friday evening reception and silent auction @ 5:30** (No registration fee)

____ I would like to contribute the following auction items:

_____

____ I will bring the items with me. ____ I will ship the items to TPA .

____ I am donating $ _____ to purchase auction items.

REGISTRATION DEADLINE: July 2, 2018

- **Register online at www.tnpoultry.org or**
- **SEND ALL REGISTRATION FORMS & PAYMENT TO: TPA, PO Box 1525, Shelbyville, TN 37162-1525 or tracy@tnpoultry.org**
- **Please make checks payable to TPA or call Tracy at 270-363-2078 to pay by credit card**
- **Hotel reservations may be made online at**

http://doubletree.hilton.com/en/dt/groups/personalized/B/BNADUDT-TNP-20180801/index.jhtml?WT.mc_id=POG

or by calling 800-222-8733 using group code TNP

TPA special room rate available until 7 pm July 3, 2018

GOLF TOURNAMENT

Sat., August 4th, 8 a.m. @ Pine Creek Golf Course, Mt. Juliet, TN

(Please complete a separate registration form for each golfer)

Golfer Entry @ $ *135.00* $ _____
(Includes green fee, cart, lunch, 1 mulligan, 1 red tee)

Golfer's T-shirt Size _____

Golfer's Handicap or Average Score (required)

Sponsor a Golf Hole x _____ @ $ *200.00* $ _____

SPORTING CLAYS SHOOT

Sat., August 4th, 9 a.m. @ Nashville Gun Club, Nashville, TN

(Please complete a separate form for each shooter)

Shooter Entry @ $ *135.00* $ _____
(Includes fees, shells, 5 extra shots, snacks, lunch)

Shooter's T-shirt Size _____

Gauge of shotgun you will be using (required)

Sponsor a Shooting Station *x* _____ @ $ *200.00* $ _____

GENERAL JACKSON CRUISE

Sat., August 4th, 10:30 a.m. - 3:15 p.m.

(Please complete a separate form for each participant)

Attendee Registration @ $ *150.00* $ _____
(Includes cruise, transportation, lunch)

Attendee's T-shirt Size _____

SATURDAY NIGHT DINNER & ENTERTAINMENT

August 4th, reception @ 5:00 p.m., dinner @ 5:30 p.m.

Dinner Tickets ****Reservations required***
(Includes entertainment) x ____ @ $*200.00* $_____

CONFERENCE REGISTRATION FEE

Individual @ $ *35.00* $ _____

Couple @ $ *50.00* $ _____

GRAND TOTAL from both columns $
NO REFUNDS

TPA RAFFLE

At the 2018 TPA Annual Meeting Banquet
August 4, 2018

1st prize winner will receive:
Choice of 2 guns *or* $2500 cash

2nd prize winner will receive:
Choice of the remaining gun *or* $1250 cash

Benelli Super Black Eagle 3 semi-automatic 12 ga. shotgun

Kimber Micro 9 Stainless handgun

Browning X-Bolt Hunter .270 bolt action rifle with walnut stock

Tickets are $20 each

All proceeds from the raffle benefit Tennessee Poultry Association.
You do not have to be present to win.

Tickets may be purchased from TPA board members or by calling (931) 225-1123
tracy@tnpoultry.org

Tennessee Poultry Association

Youth Art Contest Entry Rules

TPA welcomes participation in our third annual art contest for youth. All entries will be displayed and judged during the TPA Annual Meeting & Convention this August 3-4 in Nashville at the DoubleTree.

Subject: All art must be poultry-related, i.e. of a chicken or chickens, and/or of a poultry live operation.

Who is eligible: Family members (children, grandchildren, nieces/nephews, step-children, etc.) of TPA grower members, TPA poultry complex employees, or affiliated TPA allied company members are eligible to submit entries. There will be three age categories: 9 and under, 10-14, 15-18 (age as of August 1, 2018).

Awards: Each group will have 1st, 2nd, and 3rd place winners that will be awarded ribbons and will be eligible to receive cash prizes of $50, $20 & $10, respectively for each age division. There will also be an overall Best of Show entry awarded, which will subsequently be auctioned off during the TPA fundraiser on Aug. 4 in lieu of the cash prize. All proceeds from the sale of the winning art piece will be awarded to the artist as a scholarship.

Media: Art will need to be submitted on 8½ by 11 inch rigid canvas, sketch or cardstock paper

* Framed entries **will not** be accepted, but all entries must be suitable for framing
* Drawings and paintings are the only types of media that can be entered; there will not be separate categories
  - Drawings include: pencil, charcoal, colored pencil, ink, markers, etc.
  - Paintings include: acrylic, oils, tempera, watercolors, etc.

Entry: All entries must be received at the TPA Office **by July 30, 2018**.
Mailing Address: TN Poultry Association, 1404 N Main Street, Shelbyville, TN 37160

Include: Please complete and submit the attached form to provide the artist's name, age, address, phone number, name of relative and their poultry company or farm affiliation. Artwork will not be returned unless the attached form and requested information is submitted.

Judging: All entries will be judged by a panel of industry representatives during the TPA Annual Meeting on August 3rd.

Information:

- The art will stay on display through the evening TPA banquet on August 4th.
- Photo rights of all artwork become property of TPA for use on social media and for promotional efforts.
- TPA is not responsible for lost or damaged entries.
- TPA will auction off the Best of Show winner. It will not be returned to the artist. Please allow two weeks for remaining entries and ribbons to be mailed.
- Contact tracy@tnpoultry.org or 931-225-1123 for more information.

Tennessee Poultry Association

Entry #_____
[9&U] | [10-14] | [15-18]
(for office use only)

TPA Art Contest Entry Form

Name: _____

Age: _____ Contact Phone Number: _____
(As of August 1, 2018)

Family member's name: _____

Relationship: _____ Hometown & State: _____

Employer: _____

Or grows for: _____

TPA will contact and award the 1st through 3rd place and the Best of Show winners. The Best of Show winner will receive a scholarship check for the sale of their art piece.

Contestants who would like to have their art work returned and have ribbons and checks sent to them after the entries are judged should provide a complete physical mailing address:

_____

_____

_____
City State Zip Code

TPA is <u>not responsible</u> for the condition of artwork or for any losses or damages.

Please include this entry form along with your entry to be received by TPA no later than July 30, 2018.

Please send all entries to:

TN Poultry Association
1404 N. Main St.
Shelbyville, TN 37160

For more information contact tracy@tnpoultry.org or 931-225-1123