TPA NEWSLETTER

...from the Tennessee Poultry Association

HAPPY HOLIDAYS

In the true spirit of the season, we express our heartfelt thanks for your contributions to our success this past year. Best wishes to you and your family for a joyous holiday season and a happy new year.

KNOW THE WARNING SIGNS OF HPAI:

- Lack of energy and appetite
- Decreased egg production and/or soft-shelled or misshapen eggs
- Swelling of the head, eyelids, comb, wattles, and hocks
- Purple discoloration of the wattles, combs, and legs
- Runny nose, coughing, sneezing
- Stumbling or falling down; Diarrhea
- Sudden death without any clinical signs

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March 2, 2016
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Embassy Suites
Murfreesboro, TN

Spring Scholarship Fundraiser
Golf Tournament
April 21, 2016
Hermitage Golf Course
Nashville, TN

Spring Scholarship Fundraiser
Sporting Clays Shoot
April 21, 2016
Nashville Gun Club
Nashville, TN

2016 Annual Meeting &
Summer Getaway
August 5-6, 2016
DoubleTree Downtown
Nashville, TN

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Tennessee Poultry Association

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Stress and Broiler Health

By Zac Williams Ph.D, Research Instructor / Poultry Specialist
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Everyone has seen advertisements claiming that "a happy chicken is a healthy chicken". While true, a more technically accurate statement would be that a "stress - free chicken is a more resistant to disease chicken", and right now all of our chickens could use a little more disease resistance. Antibiotic - free meat has gained tremendous momentum, with several major fast food chains transitioning to antibiotic - free poultry and meat. This article will focus on managing broilers to be as stress - free as possible, which will reduce chance of disease, reduce performance losses and mortality.

First, let's look at why stress is an important factor in disease resistance. Seyle's General Adaptation Syndrome states that the longer an organism undergoes an outside stressor the weaker that organism becomes. As that organism is forced to deal with stress, energy is diverted from other physiological systems to compensate. As this energy is depleted, organisms are not able to defend themselves. Viruses, parasites and bacteria are opportunistic predators, and weaker organisms have less resistance making them easier targets.

Imagine this scenario, a broiler is in an extremely hot environment. The broiler must expend energy to pant and cool itself. The longer this scenario – continues, the more the broiler becomes fatigued, which creates an opening for disease. Does that scenario sound familiar? It's a scenario seen far too often in broiler houses, but is easily avoidable.

Broilers have a few basic needs to be filled; air, water, feed, shelter and a suitable temperature. Four out of five of those needs are easily provided; air is free, water is available, feed is provided and broiler houses provide ample shelter. Temperature however, can be difficult. All organisms have a target temperature that is comfortable and optimum for their well-being. This temperature range is called the zone of thermal neutrality and simply stated it is the temperature range that an organism is neither hot nor cold. If the temperature strays too far outside of this zone, performance losses and disease can occur.

The zone of thermoneutrality is dependent on breed, age and size. Day old broiler chicks have a target brooding temperature of approximately 90° F (this will vary depending on type of heating system), and as broilers age this temperature decreases approximately 5° F per week. For example, a five pound broiler has a target ambient temperature of 65 to 75° F. Several ways exist to maintain ambient temperature in broiler houses, but the two main ways are ventilation and heaters.

For chicks and cold weather, houses must be heated. Heat should be directed at the floor to reduce heat loss. Careful examination of chick behavior will show if they are hot, cold or at optimum temperature. If the chicks are huddled together under the brooder, then they are too cold. When chicks are as far from the brooder as possible, they are too hot. When chicks are evenly dispersed on the floor and not directly under the brooder then they are comfortable. One other behavior to look for is chicks huddled in one spot away from the brooder. This is most likely caused by a draft. Extra care should also be taken if your house is equipped with forced air or whole room heaters. Chicks are not able to move away from these type of heaters if the room is too hot.

Continued on page 3

TN TECH UNIVERSITY HIRES POULTRY SPECIALIST

TTU would like to formally introduce Dr. Zac Williams as a new faculty member at Tennessee Technological University in Cookeville. He specializes in poultry production and will provide technical service to both the university and the Tennessee poultry industry. Dr. Williams holds Bachelor's and Master's degrees from Mississippi State University and a Ph.D. from Auburn University. His degrees are in poultry science, with an emphasis on live bird management, litter management, ammonia control, and on-farm food safety. Dr. Williams has worked with and served the commercial poultry industry since 2005, providing research and technical information, for Mississippi, Alabama and Delaware.

After receiving his Bachelor's degree in 2005, he worked for a commercial broiler hatchery until starting graduate school. As a graduate student, Dr. Williams spent most of his research efforts on broiler litter management. His work was aimed at better understanding of the bacteria community present in broiler litter. One of his research goals was to reduce *Salmonella* and *Campylobacter* in litter through preexisting management techniques, primarily through the use of litter acidifiers. This research found that *Salmonella* is well suited to survive in broiler litter and can be difficult to eliminate. Current research interests include alternative methods for litter disposal that would produce energy, and development of new litter treatments for *Salmonella* reduction.

Dr. Williams' primary job at Tennessee Tech will be providing technical service and outreach for poultry growers and the poultry industry in Tennessee, and to conduct poultry research. If you have any questions or just want to introduce yourself, you can contact him at zwilliams@tntech.edu or (931) 372-6742. □

Stress and Broiler Health *(continued from page 2)*

As broilers age the air temperature must decrease by approximately 5° F per week of age. Mature broilers produce body heat at a rate of approximately 12 BTU/hour/lb. Current average broiler slaughter weight in the United States is 6.1 lbs. Therefore, a house with 20,000 mature broilers will produce 1,464,000 BTUs per hour, which is roughly the equivalent hourly heat production of 50 pancake brooders or 36 radiant heaters. During warmer months this heat must be removed through proper ventilation.

Research studies have shown that broilers maintained at higher wind speeds will have higher body weights and better feed conversion, compared to broilers maintained at lower wind speeds (Lott et al., 1997). To continue with the previous example of 65 to 75° F target temperature range, a minimum of 500 cubic feet per minute air speed must be achieved. At this speed, wind chill has reduced the effective or felt air temperature to approximately 70° F, which is a comfortable zone for a 4.5 to 5 lb. mature broiler. Today's average broiler of six pounds will need higher wind speeds, possibly up to 750 cubic feet per minute or more. Of course this is just an example of how to maintain correct temperature for broilers, and the actual zone of thermoneutrality will vary greatly depending on bird age and weight.

As a general rule of thumb several behaviors will demonstrate broilers that are not at a comfortable temperature; panting and extended wings means broilers are too hot, broilers huddled together means they are too cold. So remember if broilers are not too hot or cold, they are not expending any excess energy for body temperature regulation, and are able to better resist infections and disease.

Attention must be given to sources of disease. One often overlooked source is water lines. Water lines should provide broilers with good quality water. Like all water lines and pipes, these lines can look fine on the outside but inside there is potential for trouble. Within these waterlines bacteria can attach themselves to pipe surfaces. Once one bacteria has attached it can attract more bacteria and eventually a biofilm will form. Biofilms offer protection and nutrients for bacteria. Inside these biofilms bacteria can rapidly reproduce. Eventually some bacteria will be released from the biofilm and travel throughout the water lines. Some bacteria will form more biofilms and some will come in contact with broilers.

Biofilms can be difficult to remove from water lines. Biofilms are attached to pipes and are surrounded by a protective layer. Simply cleaning water lines with a disinfectant will not remove biofilms. Pipes need to be flushed with high pressure water, cleaned with an antimicrobial and then flushed again. High pressure flushing will remove the biofilms from pipe surfaces, releasing the bacteria into the water, and destroy some of the protective barrier. Then the disinfectant will be more effective at killing. A second flushing with high pressure water will further remove any remaining debris.

Another source of disease is litter. Broiler litter is home to billions of bacterial cells, viruses, and parasites. However, only a small percentage of the microbes are problematic, and most are opportunistic. Good microbes will control the bad microbes. Proper litter management includes, composting or windrowing between flocks. This raises the internal temperature high enough to kill a substantial amount of microbes (Hartel et al., 2000; Macklin et al., 2006).

The combination of temperature and time is important to this process. Higher compost temperature requires less time than lower temperatures to kill microbes. Compost should be maintained between 110 and 150° F, to kill off most harmful microbes. Temperatures of 150° F or higher should be avoided as this will kill off not just harmful microbes but also beneficial bacteria.

Compost temperature monitoring should be performed by taking an internal temperature of the compost pile. If temperature exceeds 150° F, the compost pile can be turned and water added to reduce temperature. A compost piles target temperature should be at least 120° F. At this temperature and higher most harmful bacteria, viruses, fungi, and parasite eggs are killed.

Antibiotics are needed when conditions are not ideal and broilers are stressed. However, increased efforts in the areas of ventilation, water and litter will provide a more ideal environment for broilers and good bacterial, which should help minimize losses.

References and further reading

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For more on poultry ventilation visit http://www.aces.edu/poultryventilation/


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Will antibiotic-free broiler producers be competitive?

September 16, 2015 By Terrence O'Keefe in WattAg.net

Researcher thinks US chicken industry will lose its ability to compete on price in global markets if 'no antibiotics ever' and 'raised without antibiotics' programs become standard practice.

The cascade of foodservice outlet pledges to purchase only chicken from flocks that have been raised without antibiotics that started with Chick-fil-A's is causing a major shift in how broilers are raised in the United States. Dr. Steve Davis, DVM, Colorado Quality Research, said, "In my opinion, it (raised without antibiotics broiler production in the U.S.) won't work without ionophores." The problem, he explained, is that some antibiotic-free husbandry programs being mandated by customers are calling for "no antibiotics ever" and exclude the use of ionophores, a class of coccidiostats that also have antibacterial properties.

Davis told the audience at USPOULTRY's Live Production & Welfare Seminar, in Nashville, "I fear this will make the U.S. broiler industry noncompetitive in the world market." The research that Davis has conducted on necrotic enteritis, which has already become a major health problem in the U.S. broiler industry, has convinced him that prevention of this disease without access to antibiotics will be an even bigger problem for U.S. broiler producers as they move to reduce or eliminate antibiotic use in the future.

Davis speculated that broiler complexes in dry climates, which excludes most of the U.S. broiler belt, would have an advantage in antibiotic-free production because dry air helps keep litter dry and control coccidiosis in flocks and prevent necrotic enteritis from developing. He said that antibiotic-free production in the U.S. may only be feasible in some complexes with increased house cleanouts, perhaps as often as every flock, and houses might need to have concrete floors. Increased downtime between flocks, reduced bird densities in houses, and low-protein vegetarian diets may also be required, according to Davis.

Antibiotic-free broiler production could be an "industry killer" for the U.S., according to Davis, and he questioned if it was sustainable. As a veterinarian, Davis said he finds that *no antibiotics ever* and *raised without antibiotics* growing programs are troubling. They are "not best for the chickens and not best for the chicken companies," he said. □

BIODIESEL: Fueling Broiler Profits in Tennessee

Op-ed by Alan Weber, Senior Advisor, National Biodiesel Board

Seeing the words biodiesel and broiler profits in the same sentence may have raised an eyebrow and hopefully will entice you to read further.

Having been raised on a diversified crop & livestock farm in Central Missouri, the integration of our livestock operation was essential to overall profitability. Grinding feed in Missouri's July humidity or in a foot of winter snow proved that point. Albeit in a different way, the economic link between Tennessee's crop and poultry production remains.

Given the rhetoric surrounding biofuels, it is not uncommon for me to be asked whether or not the growing biodiesel market has been positive for livestock producers such as Tennessee's commercial broiler and breeder industries. The unequivocal answer is "yes." And here is how.

More Biodiesel, More Meal

Diesel users consumed more than 1.7 billion gallons of cleaner-burning biodiesel last year. Soybean oil remains a leading feedstock in the United States for biodiesel production. Oilseed meal, such as soybean meal, is used in livestock and poultry rations as a protein source. Soybean oil and meal are co-products from oilseed crushing that are produced in fixed proportion to one another. Additional demand for one co-product (e.g. biodiesel) will simultaneously result in a greater supply of the other co-product (e.g. meal); leading to downward pressure on price.

Informa Economics has estimated that livestock producers paid $21 per ton less for soybean meal due to increased biodiesel production and use. For Tennessee broiler producers, the annual feed bill for the state last year was $5.5 million less due to biodiesel production.

More Biodiesel, Increased Carcass Values

The connection between soybean oil and biodiesel is well known. But what surprises many people is that approximately one fourth of all animal fats produced in the U.S. now goes into biodiesel. So, not only are animal fats important to the biodiesel industry, but the biodiesel industry is increasingly important to livestock producers.

More demand of animal fats for biodiesel has led to increased value of those fats. While the price of animal fats are not primary drivers in determining the prices paid for fed cattle, market hogs, or poultry, they do affect the profit margins in these industries by increasing what is referred to as the by-product "drop value." Regression analysis conducted by Centrec Consulting Group in September 2014 concluded biodiesel demand increased poultry fat prices by 5.7¢ per pound. Statewide, broiler production in Tennessee saw an additional $1.5 million of revenue injected into the value chain due to the use of animal fats for biodiesel production.

Since animal fats and tallow are used in animal rations (primarily in poultry rations and some beef feeding diets), concern has been expressed about the economic impact of the higher prices on feed costs. While the benefits attributed of increased demand for animal fats and tallow to the livestock industry is somewhat mitigated by the increased cost of the fats and tallow, the increased byproduct value outweighs any potential higher ration costs.

With more than 28 million commercial birds on hand on any given day and processing approximately 6 million birds weekly, the poultry industry is extremely important to the Tennessee economy. A growing biodiesel market in Tennessee can enhance, not detract, from the value poultry brings to Tennessee. Combining the benefits of reduced meal costs with increased revenues due to higher poultry fat prices, a typical broiler operation with four houses and, on average, 5 ½ flocks per year can attribute more than $28,000 of annual revenue to biodiesel's growth.

So the next time you fill up, consider the benefits that America's Advanced Biofuel, biodiesel, offers not only to the environment and U.S. economy, but also to Tennessee's commercial broiler and breeder industries. □

Poultry Industry Cites Continuous Progress on Worker Safety Record, Responds to Oxfam Report

October 26, 2015

National Chicken Council and U.S. Poultry and Egg Association Press Release:

Our employees are our most important asset and their safety is of paramount importance. That's why perhaps more than any other industry, the poultry industry over the last several decades has focused its energies on the prevention of workplace injuries and illnesses, especially musculoskeletal disorders (MSDs) like carpal tunnel syndrome, by recognizing the value of implementing ergonomics and medical intervention principles, and working with the Occupational Safety and Health Administration (OSHA) to develop guidelines that further help protect our workforce.

U.S. chicken producers are proud of the advancements in worker safety that have been made over the last 20-plus years and the ongoing efforts for continued improvement. The incidence of occupational injuries and illnesses within the poultry sector's slaughter and processing workforce has fallen by 80 percent in the last 20 years and continues to decline according to the 2013 Injury and Illness Report released by the Department of Labor's Bureau of Labor Statistics (BLS). In fact, poultry processing's injury and illness rate of 4.5 is on par with *all* manufacturing jobs and is decreasing at a much faster rate. In fact, when comparing apples to apples, which Oxfam neglected to do, poultry processing's rate is much lower than all animal slaughtering and processing, and lower than all food manufacturing in general.

But while the past 20 years has seen a dramatic decrease in the numbers and rates of injury and illnesses occurring in the industry, the poultry industry will continue to seek new and innovative ways to protect our workforce.

It is unfortunate that Oxfam portrays an undeserved negative image of the entire poultry industry despite our outstanding record of improvement in employee health and safety, particularly over the past three decades. As such, the National Chicken Council and U.S. Poultry & Egg Association have addressed some of the facts involving the poultry industry and our approach to worker safety, and have responded to many of the claims, allegations and recommendations brought forth in this report. A copy of the full response can be read by clicking here. □

NEWS FROM AROUND THE COMPLEXES

Hubbard LLC - **Mark Barnes,** CEO of Hubbard LLC, announced that Hubbard has significantly increased their production of alternative colored bird lines in order to meet growing consumer demand. "Today's high-end meat market desires a more naturally raised product," Barnes said. (from Poultry Times)

Tyson Shelbyville - **Brandon Davis,** former plant manager, was promoted to Complex Manager in Center, Texas; **Micah Abernathy,** former shift manager, was promoted to Shelbyville Plant Manager; **Roger Wood,** former Feed Mill Manager, was promoted to Shelbyville Breeder Manager; **Thad Smith,** former Broiler Tech , was promoted to Feed Mill Manager; **John Mountain,** former Breeder Manager, was promoted to Live Production Manager in Snead, AL .

Pilgrim's Chattanooga - Pilgrim's of Chattanooga is pleased to announce the promotion of **James Bradford** to Complex Manager of Operations for the Chattanooga locations. Previously, James held the role of Kill Plant Manager at Chattanooga. He has over 20 years of experience in the poultry industry working in various management roles at Tyson Foods, Koch Foods, and Pilgrim's.

ALLIED MEMBER NEWS

Chore-Time - **Dave Laurenz** has been named Global Director of Marketing. In his new role, Laurenz will be responsible to enhance Chore-Time's global brand position by partnering with Chore-Time's distribution network and its sales, engineering and customer service teams to tailor market-specific offerings.

Chore-Time celebrated a ribbon-cutting ceremony to mark the official opening of its $7.1 million building expansion in Milford, IN.

Cumberland - The new AV Series 80,000 BTU Tube Brooder joins the ALL-STAR lineup of Cumberland/Hired Hand Products. Each tube has its own reflector allowing the upper combustion tubes to concentrate more energy to the perimeter of the heating pattern, while the lower return tubes distribute a lesser radiant energy that result in reduced hot spots and more uniform floor temperatures. Offered in dual or single stage technology to maximize fuel efficiencies. (from Poultry Times)

Marel announces its launch of SensorX SmartSort, a new concept in X-ray bone detection and grading. The SensorX bone detection system now performs weighing using X-ray. The SmartSort is a discharge unit that can be positioned after the SensorX. Together, the SensorX and SmartSort combine X-ray bone detection and grading in one compact solution. (from Poultry Times)

The all new **Meyn** back meat harvesting solution saves on labor and further increases profitability in breast deboning. The solution allows for automatic harvesting of the back meat separately with an undamaged structure, giving it a unique presentation. (from Poultry Times)

Big Dutchman's FLUXX feeding systems offered are for broiler, pullet and breeder production, with a wide selection of sizes and options, each designed to maximize feed conversions, produce a uniform flock, and increase egg production with breeders. The unique design of the FLUXX system provides optimal flooding of pans by distributing feed evenly around the pan in a complete 360-degree circumference. (from Poultry Times)

Smithway - As times have changed so has Smithway. In 2000 Smithway introduced its patented Air Conditioned systems - improving temperature control and biosecurity. Now they have increased their cooling capacity by 30 percent by incorporating a dual compressor system that can work independently or together giving not only added cooling but also a backup system in case of a compressor failure. This and more can be monitored from your desk with their wireless communication system. For more than 30 years, Smithway has been a leader of the flock no matter how big or small your loads may be. (from Poultry Times)

Tennessee Poultry Association

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Contact Tracy at

(931) 225-1123 or info@tnpoultry.org

for more information about member benefits.

TRUCK WEIGHTS - An amendment offered by Rep. Ribble (R-WI) recently failed on the House Floor that would have given states the option to raise the federal gross vehicle weight limit from 80,000 pounds to 91,000 pounds for trucks equipped with six axles. The amendment faced major opposition from railroad companies and transportation safety groups. □

BONUS DEPRECIATION FOR EQUIPMENT

38 U.S. Agricultural organizations have requested immediate action on numerous tax extenders that expired in 2014. Of particular importance is Section 179 small business expensing and the 50% bonus depreciation for new capital assets. If the extenders are not addressed by the end of 2015, farmers may only be allowed to deduct $25,000 under Section 179 on equipment. The extenders would allow for a maximum deduction of $500,000 (when investments exceed $2 million) under Section 179. The Senate Finance Committee has voted to extend all tax extenders including Section 179 and bonus depreciation through 2016. □

Managing Built-Up Litter Between Broiler Flocks

September 29, 2015 By Terrence O'Keefe in WattAgNet.com

How built-up litter is prepared during the downtime between flocks can have a significant impact on the performance of the next flock.

Litter reuse in U.S. has become a common industry practice as high quality affordable bedding materials have become harder to find, phosphorous-based nutrient management plans have been implemented, and well-managed dry built-up litter systems have been shown to not hurt bird performance. Keeping litter dry to control the bacterial activity which results in ammonia production is key to maintaining good bird performance, according to Dr. Casey Ritz, professor, poultry science, University of Georgia. He told the audience at the "Litter management between flocks & grass bedding webinar," part of WATT Global Media's Poultry Grower Webinar Series, sponsored by **Jones Hamilton**, that moisture control in the poultry house is critical both when the birds are growing and in between flocks.

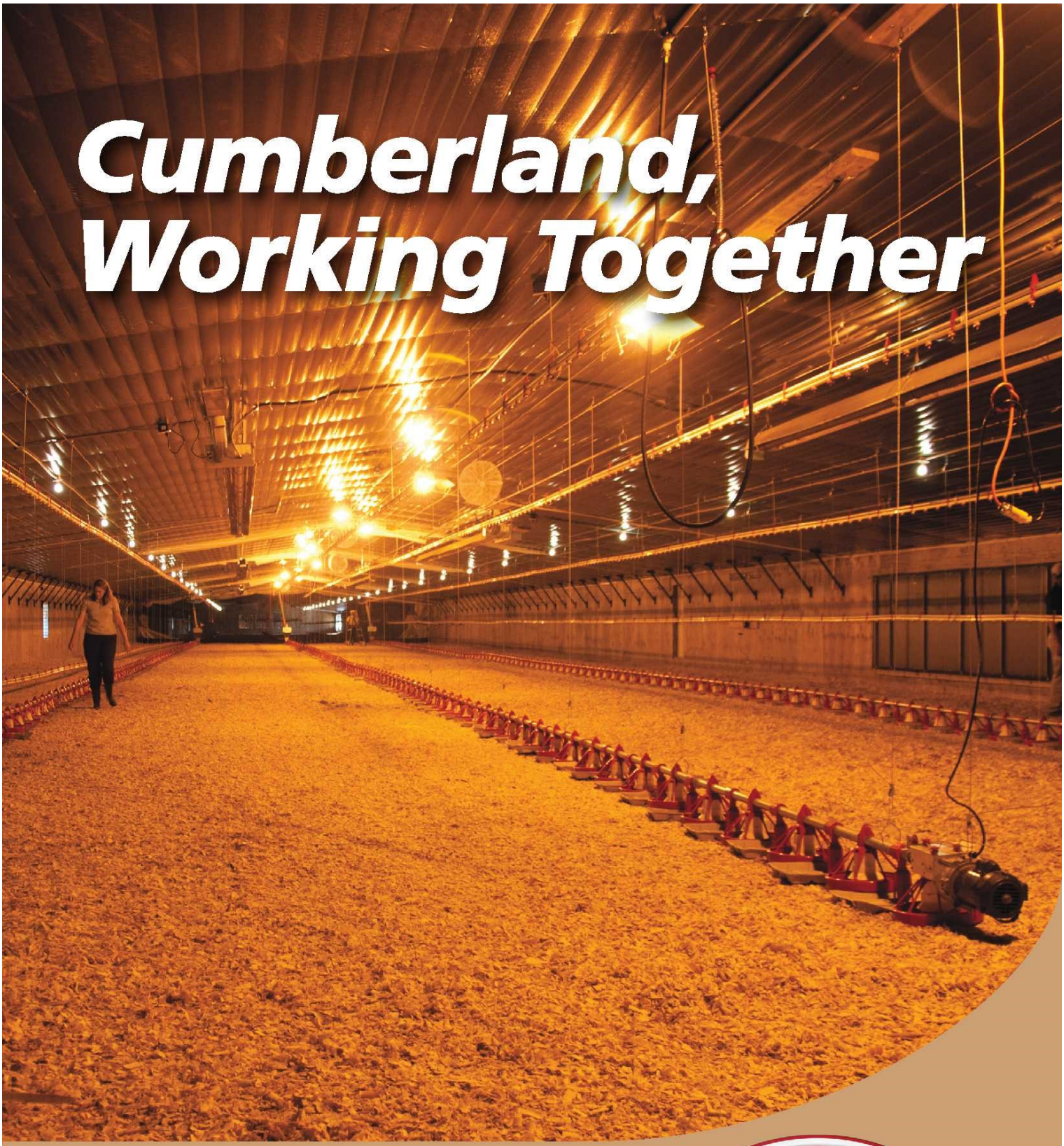
Ritz said the best way to control ammonia production in the poultry house is to properly control moisture. Litter amendments that significantly reduce litter pH result in the greatest reduction in ammonia volatilization. Litter acidifiers inhibit bacterial and enzymatic activities involved in the formation of ammonia. Ritz said, "As a general rule, reducing the rate of ammonia production is economically favorable to increasing the rate of ammonia removal through ventilation." This is particularly true when the chicks are young and are started on built-up litter.

In between flocks, Ritz recommends removing caked litter or windrow composting the litter. He said that caked litter is high in moisture and nitrogen, and can become a major source of ammonia, but some growers do leave the caked litter in the house if they windrow compost.

Fans should be operating to ventilate the house throughout the downtime period. Ritz recommends running ventilation fans as much as possible prior to applying litter treatments. The poultry house should also be ventilated while it is being preheated for the next batch of chicks to remove ammonia. He also recommends using circulation fans in houses to start chicks, and he cautions growers to maintain an adequate depth of litter after caking out or windrow composting.

Farms with disease challenges or poor performance can potentially see very positive results from windrow composting, according to Ritz. It may be difficult for high performing farms to see benefits from windrow composting. "More work and expense for little or no return," he said. Windrow composting is a good "best management tool," Ritz said, but it isn't an ammonia control tool.

To learn more, view videos about ***Ammonia control critical to poultry litter reuse*** and ***Proper ventilation improves poultry litter conditions***. □



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TPA Board Member News

TPA welcomes their newest TPA Board member grower representative, Dale McLerran of Moss, TN of M&M Farms. Dale and his wife, Kim, have 2 hen houses for Cobb-Vantress and he is additionally very involved with the Clay Co. Soil Conservation District.

The newest member to the Executive Committee is Shane Joyner, Live Production Manager from Tyson Foods in Obion Co. Shane is now serving as TPA's secretary/treasurer.

For a list of current officers and board members, please refer to the listing on this page in the column to the left.

BREEDING FOR ALTERNATIVE MARKETS

Nov. 18, 2015 WorldPoultry.net

The demand for differentiation in broiler meat production methods is making its mark in the broiler market. An overview of several alternative markets and insights into how primary breeder organizations are working hard to meet consumer demands can be found here.

PREPARING FOR EXTENDED OUT TIMES

Scott Clawson, Area Economics Specialist, Oklahoma Cooperative Extension Service http://poultrywaste.okstate.edu

Regardless of the driving factor, extended out times for poultry producers can provide some unwanted stress and uncomfortable financial positions. A simple definition of farm liquidity is what cash or assets easily converted to cash are available. While liquidity is talked about and encouraged by those in the financial community, it's often goal still "in progress" at the farm level. The discussion of avian influenza migrating south has certainly sparked the "what if" conversations. This is certainly one of those. "What if" we were out of production for six months?

Address the Farm Mortgage

One of the unflattering issues of poultry house financing is that there is most likely only one way to cover the mortgage payment. And that of course is through the flock settlements received. The dollar amount and term of the loan creates such a sizeable payment that off farm income simply can't cover the debt. This creates a dilemma for the farm finance partnership (grower and lender). The first option is to defer these payments and pick them up at the end of the loan. This simply takes the current principal and interest payments and places them at the end of the loan. The important issue is to discuss this in advance with your lender so that both parties can work a solution that is mutually beneficial.

Track All Expenses for At Least One Month

Before we can plan for how to fill a cash shortage, we need to know what the cash shortage will be. One step in this process is to identify what we are spending. In most cases the motivation from tax season keeps farm expense recording front and center. The bigger variables may be on the personal side of things. Start a log or spreadsheet tracking all expenses for at least a month and begin to look for opportunities for some saving.

Complete a Six Month Projected Cash Flow

Using the expense tracking from above, any off farm or other farm income sources and expected future farm expenses build a six month projected cash flow. Building a cash flow is the easiest of financial documents to prepare. It is just a list of all monthly income and all monthly expenses. If expenses out pace income, then we have a deficit. If the opposite happens, we have a surplus. If we add up the results of each of the next six months, we will have an idea of what the cash void will be. Several tools can help producers build a cash flow. One of which is OSU Factsheet AGEC-751 Developing a Cash Flow Plan. Keep on the lookout for farm expenses that will need to be paid regardless of your production or lack thereof. An example of this is your farm hazard insurance. If you are paying a portion of your premium with every flock settlement then this expense will still need to be covered. If we don't cover it now, it could hurt our future cash flow by us trying to make up ground on the payment when birds are placed later.

Develop a Funding Plan for the Deficit

At this point, we should have a number. This number should tell us what the cash deficit will be in this time period. The easy and ideal way would be to have cash/savings available to fund the deficit. If this is not an option, we need to look for funding. External income from short term off farm income would be another option to pursue. Also, if non-essential equipment has been acquired over the years, it could be liquidated to fund the deficit. Lastly, discussing the development of an operating line of credit to use in this period may be needed. This type of loan will typically have a better interest rate and the terms of repayment can be discussed with your lender. Try to avoid the usage of high interest revolving debt.

The idea of missing six months of production income can be daunting. Keeping open clear lines of communication with your farm team will be important. Your farm team can include your integrator, lender, insurance agent, accountant or others that fit your operation. In addition, it can take years to rebuild a credit score from a short time of financial stress so monitor your score over time. Having a game plan together to overcome prolonged out times, regardless of reason, is one part of your farm management plan that should not be overlooked. □

BUSINESS TIPS FOR GROWERS by Stephanie Dickert, Stewardship for Life

Poultry growers are always talking chicken, so let's talk beans for a bit. You didn't get into poultry for fun. You did it to provide for your family, make some money, and retire someday. So let's discuss the best practices for you to achieve those goals.

Getting Organized

The best thing you can do for your business is be organized. It can be very time consuming and frustrating not to be able to find a copy of a bill or the checkbook to pay the bills. Take the time to set up an **organized workspace**. Create a filing system that you are comfortable with so you will stick to it. It may be as simple as having a tray in which you place all incoming mail and invoices. Pick a day of the week to work through the items in that tray. You may have a second tray for items to be paid. Open the mail weekly and place items that need to be paid in this second tray and only pay bills every other week. It is important to not be handling those items daily. Write on the calendar when items are due and see if you can't pay bills every other week. This will help you to manage your time better and help you know when things are paid.

Don't mix business with personal

Have a bank account for *only* business related items. Have a personal account that you write yourself a "paycheck" from the business and deposit it into that account. Then pay all personal expenses i.e. mortgage, groceries, clothing and anything else that is personal. It sounds like a lot of work but it is the foundation of being successful. It will be easier on you in the long run if you have to go back and look something up.

Farm Classification

Your farm may be classified in one of the following ways. Sole proprietor, LLC (Limited Liability Company) or Corporation. The question comes up all the time, which is best? The answer is the one that best suits your situation. Each classification is specialized to fit a particular business profile, but none of the three is correct for everyone. Not everyone needs to be incorporated. Not everyone should be a sole proprietor. You should seek legal and accounting advice in making the decision as to which is right for you. Here is a brief description of each.

- **Sole Proprietor** – someone who owns an unincorporated business by himself or herself.
  - ◊ A 1040 tax return with a schedule F and state tax return, if required by the state, are filed.
  - ◊ A "paycheck" is not required to pay yourself, you "draw" out of your business.
- **Partnership** – is a relationship existing between two or more persons who join to carry on a business. Each person contributes money, property, labor or skill, and expects to share in the profits and losses of the business.
  - ◊ A 1065 tax return (partnership return) and state return, if required, is filed to report income, expenses, gains, losses etc., from its operations but it (the partnership) does not pay income tax. Instead, it "passes through" any profits or losses to the partners. The partners then include that income on their personal 1040 tax returns.
  - ◊ A "paycheck" is not required to pay yourself, a "draw" is also taken in this type of entity.
- **LLC (limited liability company)** – is a type allowed by state statute. They are popular because they are similar to being incorporated. Owners have personal liability for the debts and actions of the LLC. The LLC is like a partnership in that they "draw" money out instead of issuing a paycheck, and the income passes through to their personal returns to pay taxes or receive losses.
  - ◊ Owners are called members. There is no maximum number of members.
  - ◊ If there is a single member (having one owner) the taxes are reported on the 1040 tax return, and the income will show on the Schedule F.
  - ◊ If there are multiple members a form 1065 return is filed and the profit and/or loss flows to the personal 1040.
- **C Corporation** – This is the entity that stands alone. If the owners pass away, it remains. It is viewed as a tax payer. It can take the same deductions as a sole proprietor but the corporation itself pays taxes on any profit. The shareholders pay tax when the corporation pays dividends. This is where the double taxation comes from. The shareholders are taxed on dividends and on any payroll they receive from the corporation. Shareholders cannot deduct the loss of the corporation.
  - ◊ This entity is required to hold board meetings with its board and keep minutes of these meetings.
- **S Corporation** – this entity passes the income and losses through to the shareholders for tax purposes. So, like the sole proprietor, LLC, and partnership, the income flows to the personal 1040. This entity does not have the double taxation.
  - ◊ This entity is limited to 100 shareholders.
  - ◊ If you are an officer of this entity, you must take a "paycheck" and it must be a reasonable salary for the job that you do for the entity.
  - ◊ This entity is required to hold board meetings with its board and keep minutes of these meetings.

Continued on page 14

BUSINESS TIPS FOR GROWERS (*Continued from page 13)*

So, by now I'm sure you're saying, how do I choose? That is why a good relationship with an attorney and accountant are so important in this process. Let's get down to the nuts and bolts.

Reporting Income on Schedule F

If your farm is a sole proprietor all of your income and expenses will be recorded on a **Schedule F on your 1040 tax return**. When you are trying to figure out where an income or expense item goes, it should be on one of the lines listed on the Schedule F. (see figure 1 below)

Also included is an **actual profit and loss statement** for a farm that illustrates using the line items off the Schedule F. The example is a farm set up as a sole proprietor. The principle will work for any entity type. This will help you see where you are spending money and where the money is coming from.

Again, the most important thing is to be organized. When a deposit goes into the bank, where did it come from? Was it a payment for a flock that just left the farm? Was it square footage for the house space you are paid? *The source dictates where they are recorded on the Schedule F*. If you are a **primary breeder or pullet farm** and **receiving square foot rental space**, it will go on **line 8 under other income**. If you have **sold birds** or eggs, it will go on **line 1**. If you receive a **flock bonus** it will be included on **line 8**. This is because this is not normal operating income and would skew your numbers for what you are actually making on a flock. Your expenses should fall under one of the expenses listed on lines 10-32. One of the most common things is to see a miscellaneous expense account. If you look at the Schedule F *there is not a place to enter any miscellaneous expenses*. What you spend should fall under one of the line items listed. If an expense will not classify as any of those line items, there is a place for "other" and you must specify what the "other" is. Again, the more organized you are, the easier this will be to account for at tax time.

Cost of Preparing Taxes

What determines the cost of having your taxes prepared is **time**. So, if you take your accountant a box of receipts and bank statements, your return is going to be more expensive than someone who takes the accountant a profit and loss report from some type of accounting that you are doing.

SCHEDULE F (Form 1040) — Department of the Treasury, Internal Revenue Service (99)

Profit or Loss From Farming

► Attach to Form 1040, Form 1040NR, Form 1041, Form 1065, or Form 1065-B.
► Information about Schedule F and its separate instructions is at *www.irs.gov/schedulef*.

OMB No. 1545-0074 — 2014 — Attachment Sequence No. 14

Name of proprietor | Social security number (SSN)

A Principal crop or activity | B Enter code from Part IV ► | C Accounting method: ☐ Cash ☐ Accrual | D Employer ID number (EIN), (see instr)

E Did you "materially participate" in the operation of this business during 2014? If "No," see instructions for limit on passive losses ☐ Yes ☐ No
F Did you make any payments in 2014 that would require you to file Form(s) 1099 (see instructions)? ☐ Yes ☐ No
G If "Yes," did you or will you file required Forms 1099? ☐ Yes ☐ No

Part I Farm Income—Cash Method. Complete Parts I and II (Accrual method. Complete Parts II and III, and Part I, line 9.)

1a	Sales of livestock and other resale items (see instructions)	1a				
b	Cost or other basis of livestock or other items reported on line 1a	1b				
c	Subtract line 1b from line 1a				1c	
2	Sales of livestock, produce, grains, and other products you raised				2	
3a	Cooperative distributions (Form(s) 1099-PATR)	3a		3b Taxable amount	3b	
4a	Agricultural program payments (see instructions)	4a		4b Taxable amount	4b	
5a	Commodity Credit Corporation (CCC) loans reported under election				5a	
b	CCC loans forfeited	5b		5c Taxable amount	5c	
6	Crop insurance proceeds and federal crop disaster payments (see instructions)					
a	Amount received in 2014	6a		6b Taxable amount	6b	
c	If election to defer to 2015 is attached, check here ► ☐			6d Amount deferred from 2013	6d	
7	Custom hire (machine work) income				7	
8	Other income, including federal and state gasoline or fuel tax credit or refund (see instructions)				8	
9	**Gross income.** Add amounts in the right column (lines 1c, 2, 3b, 4b, 5a, 5c, 6b, 6d, 7, and 8). If you use the accrual method, enter the amount from Part III, line 50 (see instructions) ►				9	

Part II Farm Expenses—Cash and Accrual Method. Do not include personal or living expenses (see instructions).

10	Car and truck expenses (see instructions). Also attach Form 4562	10		23	Pension and profit-sharing plans	23	
11	Chemicals	11		24	Rent or lease (see instructions):		
12	Conservation expenses (see instructions)	12		a	Vehicles, machinery, equipment	24a	
13	Custom hire (machine work)	13		b	Other (land, animals, etc.)	24b	
14	Depreciation and section 179 expense (see instructions)	14		25	Repairs and maintenance	25	
15	Employee benefit programs other than on line 23	15		26	Seeds and plants	26	
16	Feed	16		27	Storage and warehousing	27	
17	Fertilizers and lime	17		28	Supplies	28	
18	Freight and trucking	18		29	Taxes	29	
19	Gasoline, fuel, and oil	19		30	Utilities	30	
20	Insurance (other than health)	20		31	Veterinary, breeding, and medicine	31	
21	Interest:			32	Other expenses (specify):		
a	Mortgage (paid to banks, etc.)	21a		a		32a	
b	Other	21b		b		32b	
22	Labor hired (less employment credits)	22		c		32c	
				d		32d	
				e		32e	
				f		32f	
33	**Total expenses.** Add lines 10 through 32f. If line 32f is negative, see instructions ►					33	
34	**Net farm profit or (loss).** Subtract line 33 from line 9. If a profit, stop here and see instructions for where to report. If a loss, complete lines 35 and 36.					34	

35 Did you receive an applicable subsidy in 2014? (see instructions) ☐ Yes ☐ No
36 Check the box that describes your investment in this activity and see instructions for where to report your loss.
a ☐ All investment is at risk. b ☐ Some investment is not at risk.

For Paperwork Reduction Act Notice, see the separate instructions. Cat. No. 11346H Schedule F (Form 1040) 2014

Figure 1

Continued on page 15

BUSINESS TIPS FOR GROWERS (*Continued from page 14)*

If you use an Excel document to track expenses, or an accounting software to track your expenses, you will help not only your preparation fees but you will help yourself by being able to see how your business is doing. Are you making a profit? If so, where is the money going that you are making? If you have a loss, what is taking all the money you are making?

Not Using Schedule F?

If you are set up as an LLC or Corporation, your income may not show up on a Schedule F. It may show up on a Schedule C. If that is the case, you will see your flock income, bonus, or your rent (if you are a **primary breeder or pullet**) as **lease or rental income**. That income *should be on the Schedule C and not on a Schedule E*. The Schedule E will not calculate the tax you owe in the correct manner for your business. This can be a little confusing, so again, have a good relationship with your accountant to make sure they understand the type of business you have so the income is classified the correct way.

There is an old saying that it is the little foxes that spoil the hen house. What does that mean? It is the $5.00 here and the $10.00 there that add up over time and impact your bottom line. There's another saying: **PAY YOURSELF FIRST**. This is so important. If you are not paying yourself, putting away something for **retirement**, as well as putting money in an **emergency fund**, it will add up over time. Your **equipment is going to wear out**. Your **buildings are going to need improvements** over time. Plans should be in place for such events. *If you are receiving any type of bonus or incentive, use this to set up your emergency fund and your future expenditures fund.*

Figure 2 below is an actual **profit and loss statement** for a farm that will illustrate using the line items off the Schedule F. This particular farm is set up as a sole proprietor. The principle will work for any entity type. This will help you see where you are spending money and where the money is coming from. Depending on the type of entity that you choose to set up, you may not use the Schedule F. Your income may show up on a Schedule C (which is the form to report the business income). The key to remember is that your income and expenses should be reported on a tax return.

Mary Smith DBA ABC Chicken Farm
Profit & Loss
January through December 2014

	Jan - Dec 14
Ordinary Income/Expense	
Income	
Flock Income	163,081.65
Total Income	163,081.65
Expense	
Car and Truck Expenses	1,710.00
Chemicals Purchased	3,051.00
Insurance Expense	11,616.00
Interest Expense	3,732.00
Miscellaneous Expense	1,151.00
Storage and Warehousing	
Cleaning	2,775.00
Shavings	10,259.98
Total Storage and Warehousing	13,034.98
Telephone Expense	851.00
Utilities	
Electricity	5,959.00
Natural Gas - Propane	12,485.00
Water	2,542.00
Total Utilities	20,986.00
Total Expense	56,131.98
Net Ordinary Income	106,949.67
Net Income	106,949.67

Figure 2

Tracking your income and expenses may not be the most exciting thing. Maybe it isn't something you feel comfortable doing. If that is the case, there are many accounting firms that will partner with you, help you get your accounting organized, and give you good information on how you're doing financially. A business, any type, is about having a relationship with people you trust and understand to help you be the best poultry producer you can be! It is not a difficult process to become a successful business owner. It takes consistency, discipline and a plan. If you have these things, it will put you on the road to achieve the goals and dreams you have set out to achieve. □

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For information and details, contact

Randall Smith

"Our students here at the Auburn University Poultry Unit appreciate the time-saving convenience of our freezers." Mitchell Pate, Director of Poultry Research Unit

"I have been a customer of API Farm Mortality since day one, and have always been pleased with the service." Dorman Grace, poultry producer

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PROPANE UPDATE – November 18, 2015

U.S. propane stocks increased in November with total storage over 105 MBs, compared to 79 MBs in Nov. 2014, and 55 MBs in Nov. 2013. Usage is lower due to warmer weather and lower crop drying demands. The high storage levels and higher production output continue to exert downward pressure on pricing. U.S. exports, however, seem poised for an increase with several planned export facilities scheduled to come on line in the next 6 months. Experts disagree on the extent to which this will alleviate the propane oversupply however, because the difference in U.S. and World propane pricing has narrowed significantly since 2013.

Many propane users have asked about the possibility of taking advantage of historically low pricing into 2017. However, since commodity pricing could go lower than the current futures pricing, the buyer would be advised to consider both the upside and downside risk of fixed pricing for the future.

While overall propane levels are high, average storage levels outside of the Gulf Coast area remain near normal. The possibility of local supply disruptions remain and growers are encouraged to keep storage levels as full as possible throughout the heating season. The southeast states of TN and GA in particular do not produce or store large amounts of propane. Local road conditions of icing or snow, or rail or pipeline disruptions can create supply issues during extreme winter weather.

Spot pricing at Mt. Belvieu was the lowest for the year at $0.334 on June, 2015, and the highest for the year occurred at $0.616 on Mar. 3rd. The latest price on Nov. 16th is at $0.41 USD/gal. Allowing for an average of 41 cents per gallon for tariffs, handling and delivery to most areas this brings the average retail price at this time to just under $0.82/gal. Larger accounts can often negotiate a lower price agreement by as much as 5 cents per gal., or more.

To follow Mount Belvieu, TX spot pricing go to: www.ycharts.com/indicators/mont_belvieu_propane_spot_price . TPA allied member company **Thompson Gas** is ready to assist with propane and tanks at any time.
Call **Robby McKim** at 706-455-8426. □

Pictured - L to R: Rob Brown, Allen Lyle, Tim Taylor, Shane Joyner, Keith Riley

Shooting Hunger – **Tyson OBC** recently finished second place overall out of 20 teams at the *Shooting Hunger* sporting clays fun shoot held at the Nashville Gun Club on Oct. 16th. **Shane Joyner** tied for the high scorer overall, busting all 50 clays only to get eliminated in the shoot-off. Over $17,000 was raised at this event for the Second Harvest Food Bank that will provide for over 68,000 meals for hungry folks right here in Tennessee. This event was hosted by the TN Farm Bureau Federation and Farm Credit Mid-America. □

Senate Vote on Water Rule Falls Short

In MeatingPlace.com on 11/5/2015

A Senate vote came up short on a bill that aimed to block the Environmental Protection Agency's (EPA) "Waters of the United States" rule expanding the agency's jurisdiction to small waterways such as streams that farmers use for drainage and irrigation, thehill.com reported.

The Senate voted 57-41, falling short of the 60 votes needed to move forward on the bill, which would have required the EPA to rewrite the water rule.

An hour later, senators passed, by a 55-43 vote, a resolution that would allow for a simple majority to disapprove of any regulation. But under that tactic, President Obama's signature would be needed to block the rule, which is unlikely to happen, thehill.com article noted.

A federal court has suspended the nationwide implementation of the rule pending multiple legal challenges. □

Court Stops EPA Water Rule

In MeatingPlace.com By Tom Johnston on 10/9/2015

A federal appellate court today suspended nationwide implementation of the Environmental Protection Agency's "Waters of the United States" (WOTUS) rule pending further court review, prompting quick applause from agricultural groups that have called the rule an overreach.

"This is a huge victory for farmers," National Pork Producers Council President Ron Prestage said in a news release. "The court rightfully stopped implementation of this massive federal land grab and confusion across the country until the numerous lawsuits against it can be resolved."

The rule was proposed in April 2014 by the EPA and the U.S. Army Corps of Engineers to clarify their authority under the Clean Water Act over various waters. That jurisdiction had included "navigable" waters and waters with a significant hydrologic connection to navigable waters. The WOTUS rule, which took effect Aug. 28, expanded jurisdiction to include, among other water bodies, upstream waters and intermittent and ephemeral streams such as those that farmers use for drainage and irrigation. It also encompasses lands adjacent to such waters.

The stay issued by the U.S. Court of Appeals for the 6th Circuit follows a U.S. District Court judge's temporary injunction against implementation of the regulation. But that injunction applied only to the 13 states that sued EPA and the Corps of Engineers in the North Dakota-based district court.

The appeals court stated, "A stay temporarily silences the whirlwind of confusion that springs from uncertainty about the requirements of the new Rule and whether they will survive legal testing."

The court further suggested that EPA's WOTUS rule fails to comply with the Supreme Court's instructions in previous Clean Water Act cases and that the agency's actions in the rulemaking process are "facially suspect."

Missouri Cattlemen's Association President Janet Akers said the recent decision adds to "mounting evidence" that the rule is an "overreaching, pervasive invasion of private property rights." □

Vaccination Under Ideal Circumstances

Oct 5, 2015 in World Poultry by Ken Marshall

Proper vaccination is imperative for good chick quality. Getting as much variation out of the equation administering vaccines, under ideal circumstances, is key. Allowing the chick supplier to do as much of the vaccination as possible will be to the customer's advantage.

Probably the biggest advantage of inducing immunity in the hatchery over vaccination in the poultry house is that the hatchery vaccination room is regarded as an environment which is a 100% sterile and the vaccine administers and other personnel are skilled professionals. They will have gone through a shower system and be wearing sterilized clothing and headgear appropriate for this type of work. This is part of their daily routine and they are specialized in what they do, ensuring maximum efficacy.

Ideally, the hatchery vaccination areas should be fitted with separated air conditioning systems where the incoming air is filtered to remove dust particles which can harbor bacteria and any other harmful airborne organisms. This area should be a separate entity adjoining the hatchery and be self-contained regarding shower facilities, ablutions and restroom / eating area. The room has to be 100% clean and sterilized before each day's operation commences. It should also be a no smoking zone.

Varying factors

Vaccination programs vary tremendously, depending on many factors, some of which will depend on the country, influenced by situations related to disease status, geographical and climatic conditions and whether it involves a large company or a small individual producer. Even the type of production and housing system employed can require variations in inoculation programs. However, what program and or vaccine is used, it should comply to the manufacturers guidelines as to when it is and how it should be administered. The hatchery must also not forget to check on the parent's immunization levels by taking blood samples every two months to ensure that their immunity levels are up to required standards. This information should be given to the poultry farm on a regular basis, at least every six to eight weeks.

In ovo

In many areas of the world the in ovo vaccination method is being used. This involves the vaccination of yet to be hatched chicks, in the setters. In ovo vaccines should be administered at eighteen and a half days of age or at transfer to the hatchers. This needs to be carried out between 17.5 days and 19.2 days. Results have shown that 18.5 days is the figure to work with as it gives the optimal coverage and best results. In the above, the egg setting time is calculated as zero hour. One needs to calculate setting time to correspond with hatch day take off time allowing for deliveries that may be going a long distance by road. Many hatcheries start take off in the late afternoon or early evening for delivery early the following morning.

The in ovo technology has been in use in the US for some 20 years now. At present more than 90% of US broilers are in ovo vaccinated. In other parts of the world the technology is primarily used to vaccinate parent stock at this stage, basically due to the high cost of equipment. It is expected that this method will soon become the norm with day old commercial broiler chicks.

Other advantages

It is to the hatcheries' advantage to use in ovo as the equipment used can include a mechanism which senses if the egg has a living or dead embryo inside or is infertile. It is programmed only to vaccinate a living embryo (egg). This saves vaccine, cutting costs and saving money, approximately 10% of the vaccine cost.

Research has shown that with the usage of a twin (dual needle) the system gives effective needle sanitation reducing the risk of contamination after each vaccination and this minimizes the risk of transference from one egg to the next.

Currently there is a combined vaccine for IBD (infectious bursal disease) or Gumboro as it has been commonly known over the years, and ND (Newcastle disease). This application makes sense as it is administered as one dose, cutting out the need for two vaccinations, reducing stress as well as time and administration cost and the price should also be lower. For the chick in ovo vaccination, reduced stress and that's what it's all about in this 35 day growth cycle.

Combining an IBD and ND vaccination in ovo reduces the number of subcutaneous vaccinations required to zero. After hatch a primer for NCD (Newcastle), usually (HB1-strain) can be given in a spray form, at day old and can be combined with a mild IB (infectious bronchitis- H120 strain).

If this is carried out by trained staff using the correct volume of sterile diluent prior to spraying through a spray cabinet calibrated to administer the correct amount per crate of 100 chicks, success is guaranteed.

Number one in in ovo vaccination, is to allow your chicks time to start building up immunity 2.5 to 3 days earlier than normal, with less stress as no subcutaneous vaccinations are given, surely the way forward, even at a price? □

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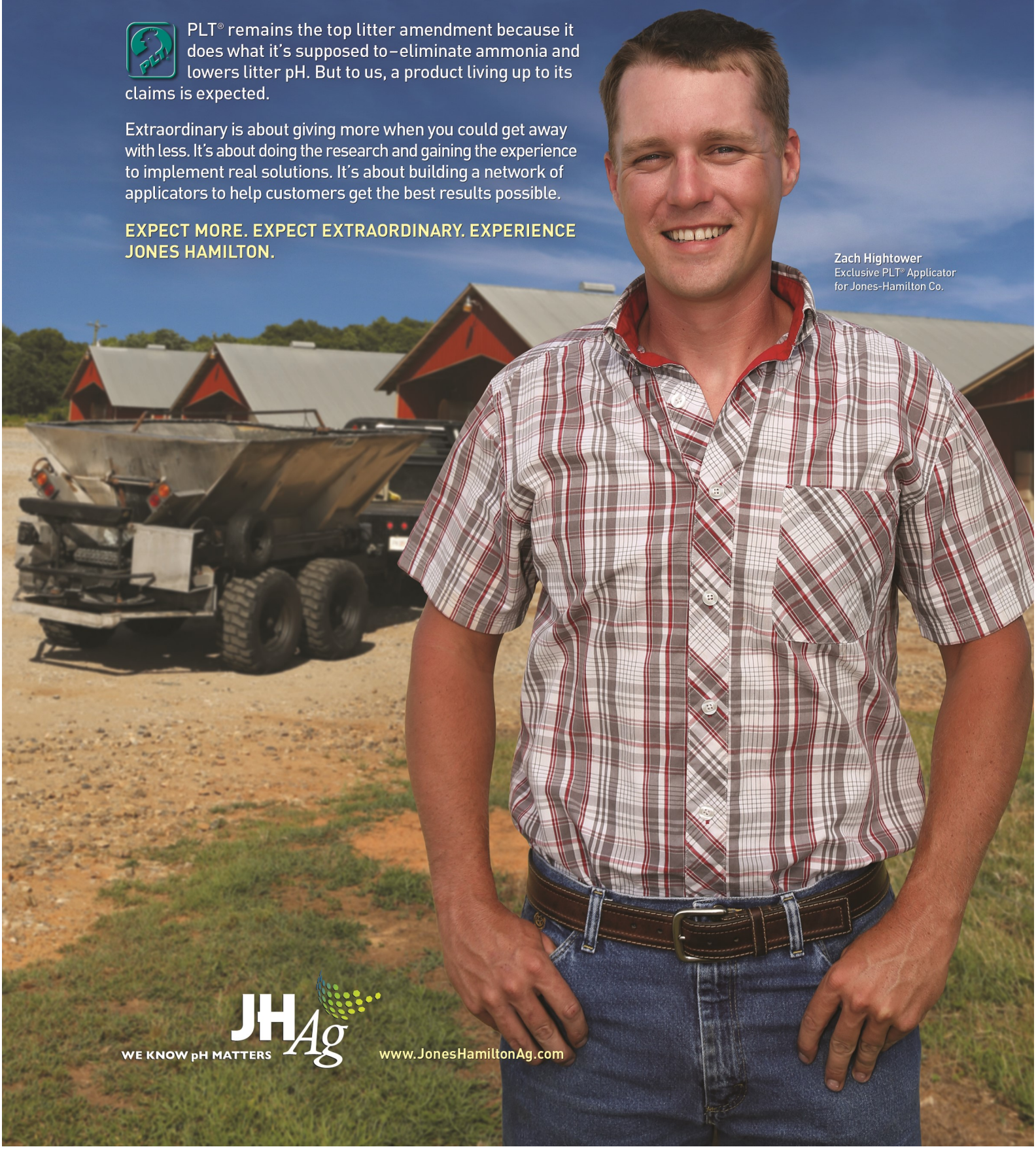

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Effects of Low Doses of Mycotoxins

From: All_About_Feed.net. Nov. 23, 2015 By: Dr. Christina Schwab, Biomin

Consumption of feed that is contaminated with low level of mycotoxins can lead to a series of metabolic, physiologic and immunologic disorders in animals.

'Low dose' usually refers to a value that does not exceed the European FSA or U.S. FDA guidelines, in contrast to 'high dose' that is normally used under laboratory conditions. Low doses of mycotoxins have the greatest impact on the gastrointestinal tract (GIT), leading to a series of negative effects on the digestive and immune systems, which are sometimes followed by different histopathological damages.

The GIT: First Line of Defense

The gastrointestinal tract is not only responsible for the conversion of feed into energy, but also provides roughly 70% of the immune defense thanks to its own innate and adaptive immune system. When mycotoxins are introduced in the organism with feed the first system they encounter is the gastrointestinal tract, regardless of whether they are absorbed or not. If the gastrointestinal tract is compromised, the immune system, gut microflora, and all digestive processes in general are affected. The effects of low concentrations of mycotoxins in the gastrointestinal tract include:

- decreased weight gain
- feed refusal
- lower feed efficiency
- lower digestibility
- immune suppression
- dysbiosis (microbial imbalance in the GIT)

Nutrients digestibility and histopathological damages

Low concentration of mycotoxins have adverse effects on the digestibility of feed mostly due to the damages that these metabolites cause to intestinal cells. Experiments conducted on ducks fed with low doses of aflatoxin (AFLA) showed up to a 13% reduction in the digestibility of proteins. These effects were even higher in the case of synergistic interactions between aflatoxin and ochratoxin A (OTA). Synergistic interactions between deoxynivalenol (DON) and fumonisins (FB) were observed to produce histopathological lesions and high immunosuppression in piglets (see picture 1). Low amounts of DON lead to a reduction in the intestinal viscosity in chickens. Reduced feed digestibility together with pancreatic and liver damages were observed in chickens exposed to low doses of aflatoxin and fumonisin B_1 (FB_1).

Weakened intestinal defense

Consumption of contaminated feed even at low doses has an immunosuppressive function, rendering animals more susceptible to pathogen infections. Examples include coccidiosis and salmonellosis in poultry and pigs. In studies, animals that were fed with low concentrations of DON, T-2 toxin and OTA were generally more susceptible to pathogenic infections. Low concentrations of mycotoxins were also proven to promote infection by reovirus in rodents.

Consequences on gut microflora

The gut microbiota is an essential component of the gastrointestinal tract: it modulates the immune response and plays an active role in the digestive processes. Because mycotoxins show antimicrobial properties, they can play a nefarious role in causing shifts in the gut microbiota population. This is particularly true for ruminants where such a shift could interfere with the fermentative capacity of the rumen. An example is bowel disease, where the bacterial composition of the gut microbiota is shifted from anaerobic to aerobic bacteria.

Conclusion

The gastrointestinal track is the system most affected by low doses of mycotoxins. In fact, chronic cytotoxic effects on the intestinal cells can compromise feed conversion and lead to immunosuppression. As a result, overall animal performances decrease drastically with time, leading to important economic losses. Foodstuff that is naturally contaminated could contain doses that are much higher than the recommendations and guidelines. Correct feed management and the use of a proven mycotoxin deactivating feed additive can protect animals and preserve profits. ◘

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FOOD SAFETY CONCERNS

Everyone reading this knows to handle, store, prepare and cook meat properly to avoid harmful organisms, but are raw vegetables, fruits and nuts safe to consume? Proper washing, handling, storage and preparation is not always the answer for raw produce for it is possible for plants to uptake harmful organisms systemically through their root system that become internalized. Take a look below at some of what has been reported this fall - were these organisms external contaminants or were they internalized from systemic uptake?

Sept. 29: CDC UPDATE: 3 DEATHS, 671 *SALMONELLA* CASES IN 34 STATES LINKED TO CUCUMBERS
http://www.foodsafetynews.com/2015/09/1-death-more-than-300-confirmed-salmonella-cases-in-27-states-linked-to-mexican-cucumbers/#.VhJ_rvlViko

Oct. 4: *SALMONELLA* TEST PROMPTS RECALL OF **MACADAMIA NUTS** AND **TRAIL MIX**
http://www.foodsafetynews.com/2015/10/salmonella-test-prompts-recall-of-macadamia-nuts-trail-mix/#.VhJ98vlViko

Oct. 4: GENERAL MILLS AGAIN RECALLS **FROZEN GREEN BEANS** FOR *LISTERIA* RISK
HTTP://WWW.FOODSAFETYNEWS.COM/2015/10/GENERAL-MILLS-AGAIN-RECALLS-CASCADIAN-FARMS-FROZEN-GREEN-BEANS-FOR-LISTERIA-RISK/#.VHJ-APLVIKO

Oct. 13: DOLE RECALLS SOME BAGGED **SPINACH** FOR POSSIBLE *SALMONELLA* CONTAMINATION
http://www.foodsafetynews.com/2015/10/dole-recalls-some-bagged-spinach-for-possible-salmonella-contamination/#.Vh_37X6rTrc

Oct. 14: CORIANDER POWDER RECALLED FOR POTENTIAL *SALMONELLA* CONTAMINATION
http://www.foodsafetynews.com/2015/10/coriander-powder-distributed-in-texas-recalled-for-potential-salmonella-contamination/#.Vh_oNX6rTrc

Oct. 15: GRANNY SMITH APPLES RECALLED FOR POSSIBLE LISTERIA CONTAMINATION
http://www.foodsafetynews.com/2015/10/granny-smith-apples-recalled-for-possible-listeria-contamination/#.ViQdcX6rTre

To learn more about *how pathogens can get into produce* go to http://www.foodsafetynews.com/2013/01/how-do-pathogens-get-into-produce/. □

6 Ways to Combat Cellulitis in Broilers

Oct 27, 2015, from WorldPoultry.net by Luca Vandi

Cellulitis, a leading cause of carcass condemnation in broilers, represents significant economic losses for poultry producers. Here are several methods to curb its incidence.

Producers can take a number of actions to combat cellulitis on the farm. These measures include promoting feather coverage, monitoring bird density, reinforcing biosecurity, adjusting the timing of vaccinations, updating management practices and ensuring good gut health.

1. Promote feather coverage

The introduction into the market of slow-feathering broiler genetic lines increased the broiler cellulitis problem. Modern broilers have a more prominent abdomen that expose them to more scratches. There are studies showing that feathering at 28 days is the most predisposing factor of broiler cellulitis. So, a good broiler management that supports proper feathering is of great importance. Avoiding an environment that is too hot, especially between 2 and 4 weeks of age, is also helpful to stimulate feathering and thus minimize cellulitis.

2. Monitor bird density

A greater number of birds per pen (higher density) is associated with a higher incidence of scratches which makes birds more vulnerable to cellulitis. This simple relationship (more birds = more scratches = more cellulitis) is very important —especially in farms where bird density is increased without additional feeding and drinking lines which increases competition among birds for feed and water access.

3. Reinforce biosecurity

Poor litter quality is also associated with higher incidence of cellulitis. A wet litter constitutes an ideal environment for bacterial growth. The frequent contact of the bird's abdomen to the wet litter increases the bacterial contamination frequency and thus, through scratches, the transmission of pathogens from the litter to the bird. Wet litter conditions also result in dirty claws with higher bacterial contamination and are more likely to infect any scratches. Consequently, cleaning and disinfection of barns during the withdrawal period are of great importance. Ensuring a withdrawal period of more than 15 days can also help reduce the incidence of cellulitis.

4. Adjust timing of vaccinations

Conducting broiler vaccinations at the hatchery can contribute to a reduction of total broiler carcass condemnation – including broiler cellulitis – at the slaughterhouse (Paniago M., CEVA bulletin, 2009). Results of a trial conducted in southern Brazil showed that earlier application of the IBDV vaccination, at the hatchery instead of on the farm, reduced most causes for carcass condemnation, especially broiler cellulitis.

5. Update management practices

For sure, an improvement at management level in the farms must be considered. Updating equipment and farm design to fit the needs modern broiler strains in terms of ventilation, feeding and water supply is a must.

6. Ensure good gut health

E. coli, the main agent for broiler cellulitis, is an opportunistic pathogen living in the chicken's gut that spreads through the feces onto the litter. A probiotic, or beneficial bacteria, can modulate the gut microflora and reduce the spread of *E. coli* in the environment.

*Read the full article on the **Biomin website*** □

Managing ILT: Traditional CEO vaccines still provide 'best protection'

From Poultry Health Today on October 1, 2015

Infectious laryngotracheitis (ILT) may be a cyclical disease sensitive to heat, but it survives well in cold weather and "we never have a year without it," warns John Glisson, DVM, professor emeritus at the University of Georgia and well-known respiratory disease specialist. "Once you have it in a flock, those birds can shed that virus for the rest of their lives, even though they're healthy."

One other challenge: Infected birds shed the ILT virus for 2 to 3 days before they become sick. "It's silent — you don't see it," he says.

While vectored vaccines offer a wide margin of safety, they don't prevent virus from shedding and spreading, Glisson cautions. "The old-time…chicken embryo-origin vaccines provide the best protection," he adds, as long as they're managed properly.

Click here to watch the video. □

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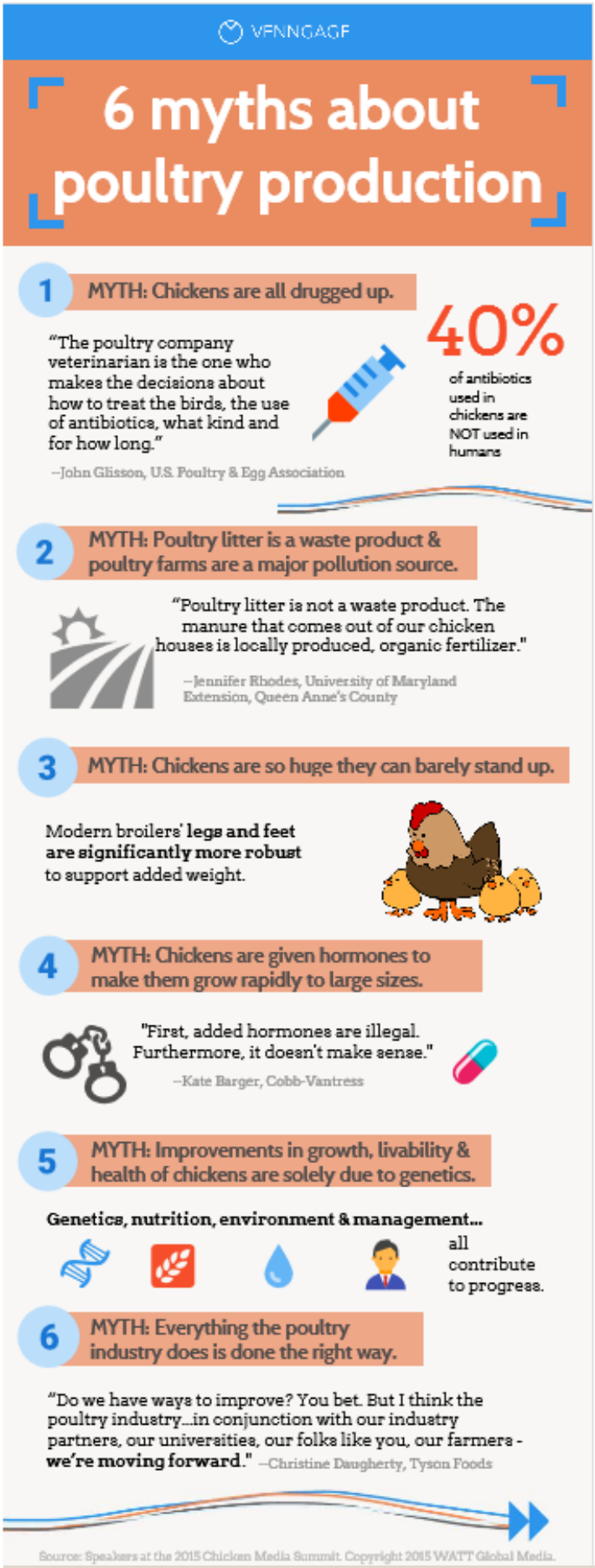

Source: http://www.wattagnet.com/articles/24413-infographic-6-myths-about-poultry-production

Unique Pathogen Detection Ready for Commercial Development

In MeatingPlace.com by Michael Fielding on 10/5/2015

Quality control facilities in the food industry and the federal government can use new automated microfiltration developed by a team of Purdue University researchers to speed up the process of detecting pathogens like salmonella in meat and poultry products.

The method uses miniscule filters to capture small numbers of foodborne pathogens in large volumes of liquid suspensions. The liquid is further processed to remove the water, concentrate the microorganisms and deliver them in a form that is able to be interrogated by existing methods, including PCR, immunoassays and also traditional plating techniques, according to Michael Ladisch, distinguished professor in the Department of Agricultural and Biological Engineering and Weldon School of Biomedical Engineering and director of the Laboratory of Renewable Resources Engineering, led the team that created a method to process food samples much faster than traditional methods.

"The challenge they now face is being able to test more samples more quickly, so that the time between when a food pathogen might be present and when it is detected would be shortened," he said in a news release. "Our technology makes it possible to process the samples more quickly, in hours instead of days."

The technology was developed through a grant from the USDA's Office of Scientific Quality Review, USDA Hatch funds and industrial funding.

"Microfiltration has been around more than 30 years, first used for filtering water and developed over the years for food materials. But the membrane fouls very quickly, which has been an impediment to use," Ladisch added. "We've improved the use and enabled rapid filtration with actual food extracts rather than needing microorganisms to buffer."

Researchers now are looking to scale up the technology from processing two samples at a time to eight and 16 samples and to work with industry, FDA and USDA. "The ultimate goal is to provide our instrument in larger numbers to the food industry and government agencies," Ladisch said.

The Purdue Research Foundation Office of Technology Commercialization has filed for U.S. and international patent protection for the innovation.

Mechanic's Liens

Anyone planning to build new houses or do major retrofits is advised to take measures to make sure that a mechanic's lien is never placed against one's property. For those not aware, a resulting lien can become quite complicated and could result in the property owner having to pay "twice" for materials or services (or possibly even more if legal fees are incurred) in some cases. A resulting lien could additionally prevent a grower from being able to meet obligated contractual timelines with their integrator. Ag lenders are well versed on this topic and can take measures to advise and assist property owners to prevent such liens. Be sure to discuss this with your lender in advance, make sure you are fully protected and always know the risks involved.

Lenders can and should hold back 10 to 20 % of the overall project cost and not pay the contractor until a public notice of completion of project is filed and there is confirmation that there are not any liens on the property. All materials suppliers and subs are then given time to file a lien if they have not been paid by the GC. If no liens are filed, the lender then makes final payment to the GC and birds can be placed. Best advice then is to make sure all growers have this arrangement & understanding with their Lender, and put the responsibility on the lender to manage before making final payment to the GC.

Ag Enhancement Program Cost-Share Funding Update for TN Growers

Nov. 18, 2015 -- Please be letting TPA know what you would like to see requested for inclusion in the 2016-2017 TN Ag Enhancement cost-share program for poultry growers. The TN Dept. of Agriculture recently awarded TAEP cost-share funds at 35% for a maximum $8000 per grower for purchasing grain bins, generators and propane tanks under Application C. Only 41 growers applied for these funds with 33 applications being granted funding in the first round of disbursements. A second round of approvals has been recently mailed out by TDA.

TDA is considering including biosecurity equipment for cost-sharing items such as foot baths and truck washes for on-the-farm use. Other equipment suggestions received thus far include litter windrowing, composting, spreading and handling equipment, and concrete aprons for the front of houses. Please submit your ideas and requests to dbarnett@tnpoultry.org or call (931) 225-1123.

Pre-incubation to Improve Hatchability

Oct 7, 2015 in WorldPoultry.net by Robert Schulte-Drüggelte, Technical Service Department of Lohmann Tierzucht GmbH

Even under optimal conditions, beyond one week of storage the hatchability of eggs will drop 0.5 - 1.5% per day with the percentage increasing as storage extends further. After two weeks of storage, the chick quality will also be impaired. Pre-incubation is one tool to reduce the negative effects of long egg storage.

Pre-Incubation will not and cannot improve hatchability, but helps to maintain it over longer periods of time (see Figure 1 on page 27). Therefore it starts making sense using this technique, if eggs are scheduled for a storage period which leads to a noticeable decline in hatchability. The gains made depend on the local conditions of the flock and the storage. Improper cooling after pre-incubation might cause negligible or even negative improvement.

Learning from mother hen

A hen needs approximately 24 hours to produce an egg. Around 30 minutes after an egg is laid the next follicle is ovulated. The follicle falls into the infundibulum where the fertilization takes place. After that the albumen is added, the egg membranes are formed and the egg shell is composed.

Therefore the eggs arriving at the hatchery contain an embryo representing already 23.5 hours development in the hen's body. However this developmental stage at point of lay is not optimal for long storage. In nature it would be altered by periodical warming of the eggs during the time the hen sits on the nest to produce the next egg of the clutch. In the hatchery it is possible to achieve similar results by incubating the eggs for 3 to 6 hours during the first storage days. This leads to further development of the germinal disk to a stage containing 60000 – 80000 cells. At this stage the embryo is less susceptible to cell death occurring during the storage period.

How does pre-incubation work?

The aim is to apply 3 to 6 hours of incubation during the first days of storage. These hours mean the time the eggs spend in 100° F/37.8°C incubation temperature. In order to bring the eggs to this temperature the eggs need to be heated-up and they also need to cool down afterwards. The different steps of the total pre-incubation procedure are shown underneath.

Continued on page 27

Pre-incubation to Improve Hatchability (*Continued from page 26)*

Pre-incubation steps

Egg storage

The optimal day to pre-incubate the eggs depends on the pick-up frequency and the transport conditions. While treating the eggs soon after lay gives best results one should not forget to give hatching eggs a rest after long transport and/or traying (to do the treatment eggs need to be placed on setter trays). Hatcheries receiving eggs twice a week would usually treat the eggs one or two days after egg reception. This means the egg age during the treatment is 2-5 days. Also in hatcheries receiving the eggs just one time per week, pre-incubation can be applied successfully.

Pre-warming

While pre-warming of the eggs is not necessary when single-stage incubators are used for the treatment, it can facilitate the process. Many hatcheries use the pre-warming or delayed-start function of the incubator to set the eggs at a time which suits the staff.

Heat-up time and pre-incubation

The heat-up time depends on the heating capacity of the incubator and the number of eggs set. If it takes longer than 9 hours to heat-up the eggs the number of eggs should be reduced for the next treatment. The shorter the heat-up time the longer is the recommend pre-incubation time, because the effective time for embryo development during the heating-up phase is shorter. Most hatcheries work successfully with 3-4 hours on incubation temperature. Heat-up time plus pre-incubation time should not exceed 12 hours.

Cool-down

Ideally eggs are cooled down below 25°C before they are moved back in the egg room in order to avoid warming of remaining eggs in the storage room. This cooling can be done in the incubator or in the setter room.

Egg storage

Pre-incubation will do no harm to eggs which are set soon after the treatment. If eggs are scheduled for more than 10 days storage after the treatment it can be beneficial to do a second pre-incubation one week after the first one. If pre-incubated eggs are going to be set, the necessary incubation time is shorter than normal. The usual incubation time can be reduced by approx. 6-8 hours. Rule of thumb: If a hatchery treats all eggs scheduled for long egg storage, it can use the same setting time for all eggs. This makes life easier as usually long stored eggs would need an earlier setting time. □

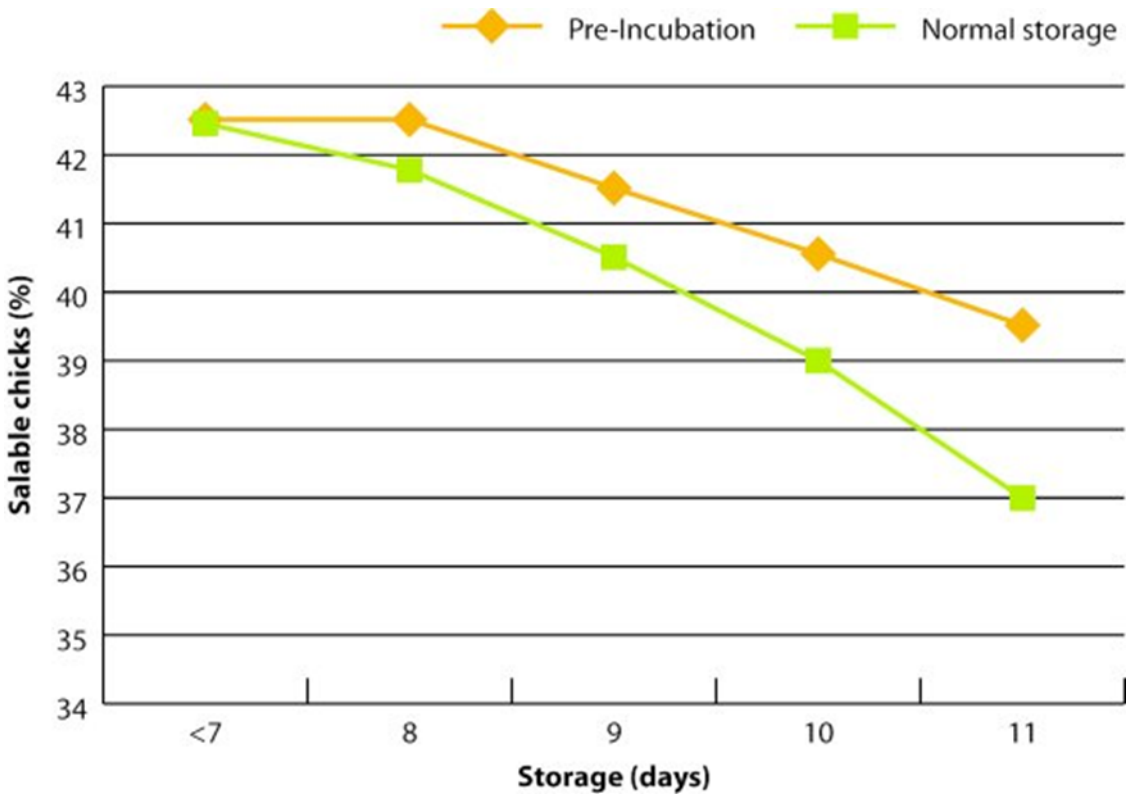

Figure 1 - Hatchability of stored LSL eggs under field condition (Japan).

TRUST THE PROS.

Trust Merck Animal Health's team of experts to deliver a new standard of performance in coccidiosis protection for broilers. Coccivac® B52 "primes" the birds with earlier exposure of an attenuated *E. maxima*, followed by cycling of our standard maxima strain. The result? Less energy expended to develop full immunity and better bird performance.

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COCCIVAC B52

THE SCIENCE OF HEALTHIER ANIMALS.

U.S. Air Force photo/140613-F-EA289-066

MERCK Animal Health

Note: *This information below has been distributed to the County Ag Extension offices in TN and a similar document has been distributed to all practicing veterinarians. In addition, an effort has been made to reach the feed stores and backyard flock owners across the state.*

HIGHLY PATHOGENIC AVIAN INFLUENZA (HPAI) IN POULTRY

What to look for if a poultry producer/owner calls your office:

Highly Pathogenic Avian Influenza is a deadly poultry disease. It can affect all types of chickens, gamebirds and turkeys, plus many other kinds of domestic and wild birds. Birds coming in direct or indirect contact with waterfowl are at the highest risk of contracting the virus.

KNOW THE WARNING SIGNS:

1. Sudden increase in bird deaths without clinical signs
2. Respiratory signs: difficult breathing, coughing, sneezing, nasal discharge (runny nose)
3. Lack of energy and decreased feed consumption
4. Decrease in egg production; soft or thin shelled or misshapen eggs
5. Swelling of the head, eyelids, comb, wattles, and hocks
6. Purple discoloration of the wattles, comb and legs
7. Stumbling or falling down; any paralysis
8. Diarrhea

REPORT ANY SICK BIRDS: If the owners' birds are sick or dying, report it immediately! This is one of the most important things you can do to keep HPAI from spreading. Please do not let sick or dead birds come to your office or to a vet clinic, to help keep possible disease contained.

DISEASE REPORTING PHONE NUMBERS:

State Veterinarian Office: (615) 837-5120

USDA Nashville Office: (615) 781-5310

www.tn.gov/agriculture/article/ag-businesses-birdflu

www.aphis.usda.gov/wps/portal/aphis/ourfocus/animalhealth

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HPAI Disease Response Chart

1. *HPAI suspect reported by Owner, Producer, Veterinarian or County Extension Agent: notify State Veterinarian or USDA Assistant District Director immediately*
2. *Foreign Animal Disease diagnostician investigates*
3. *Confirms symptoms to be consistent with HPAI*
4. *Premises quarantined, samples sent to the appropriate lab*

Three More Broiler Diseases You Can Manage with Vaccination

11/23/2015 in WorldPoultry.net

There's more to broiler vaccination than Marek's, infectious bursal disease, infectious laryngotracheitis and Newcastle disease. According to Kalen Cookson, DVM, MAM, and Lloyd Keck, DVM, ACPV, of Zoetis Inc., vaccines also play major roles in curbing these common diseases in broilers:

INFECTIOUS BRONCHITIS VIRUS

Cold weather sets the stage for infectious bronchitis (IB) outbreaks in broiler flocks. The key to successful control is correctly identifying the circulating virus or viruses. Because the IB virus is constantly mutating, finding the best control measure is like hitting a moving target.

One of the most damaging IB variants is Georgia 08 (GA 08), first identified in the winter of 2007-08. Today, a homologous vaccine helps offer protection from GA 08, but this isn't the only IB strain causing problems for producers. In many cases, a heterologous vaccine program utilizing vaccines with different serotypes offers cross-protection in the field. Keck recommends obtaining PCR analysis to determine the most prevalent IB serotypes in a flock.

The Massachusetts IB vaccine is an original field isolate that can help provide a baseline of protection. After testing for active serotypes in a flock, broiler companies can use it with one or more of Arkansas, Connecticut, GA 98 or GA 08 vaccines to help extend protection. Cookson says, when facing a high field challenge, growers need the best antigenic match possible. This may mean using one, two or a maximum of three serotypes to get the best coverage without overwhelming the bird's immune system. The level of protection achieved against IB depends on farm density, the season, the degree of immune suppression and a farm's ability to field-boost.

E. COLI

E. coli has become more prevalent in broiler operations that have discontinued antibiotics in the hatchery. In addition, cool, wet weather increases the incidence of secondary *E. coli* infections due to respiratory challenges from IBV, ILT and ND. *E. coli* can also occur as a primary disease. As a day-of-age spray, *E. coli* vaccination is gaining acceptance for its ability to help decrease mortality, particularly in large birds, Keck says.

COCCIDIOSIS

Coccidiosis vaccines are often used in poultry raised without antibiotics, as well as in conventional production systems that need to rest in-feed anticoccidials and restore their efficacy. The vaccines tend to be used in summer months, when coccidiosis pressure subsides with increased ventilation. Producers then switch back to ionophores or synthetic anticoccidials.

In the US, broiler operations have the option of administering coccidiosis vaccine in ovo or on day 1 as a hatchery spray. According to Cookson, the choice hinges on company philosophy, production history and management preferences. "The challenge with coccidiosis vaccine is getting good, uniform delivery of the vaccinal oocysts that stimulate the bird's natural immune system," Keck says. "Zoetis research with alternative delivery systems has shown great potential for helping improve vaccine and flock performance." He points out that the first round of coccidial vaccination is a transition period for most growers as birds often face both a field and vaccination challenge. "Because vaccines may initially cause short-term intestinal disruption and loss in performance, they are usually more practical and cost-effective to use in medium to large birds that have more time to make up for lost weight," he says. ◻

Study: E. Coli Can Transfer Antibiotic Resistance to Other Bacteria

BY NEWS DESK | NOVEMBER 21, 2015 in Food Safety News

Scientists have discovered a gene in *E. coli* that makes it resistant to a class of "last-resort" antibiotics known as polymyxins. The gene can also transfer resistance to other epidemic pathogens such as *K. pneumoniae* and *Pseudomonas aeruginosa*.

According to research published in *The Lancet Infectious Diseases*, the mcr-1 gene is widespread in*Enterobacteriaceae* samples from pigs in south China. During routine testing of food animals for antimicrobial resistance in China, the researchers isolated *E. coli* strain SHP45 from a pig on a farm in Shanghai that showed resistance to a polymyxin antibiotic called colistin that could be transferred to another strain. This prompted the researchers to collect bacteria samples from pigs at slaughterhouses across four provinces and from pork and chicken sold in 30 open markets and 27 supermarkets across Guangzhou between 2011 and 2014.

They also analyzed bacteria samples from patients presenting with infections to two hospitals in Guangdong and Zhejiang provinces. The researchers found a high prevalence of the mcr-1 gene in *E. coli* isolates from animal and raw meat samples, and the proportion of positive samples increased from year to year. Mcr-1 was also found in 16 *E. coli* and *K. pneumoniae* isolates taken from 1,322 hospitalized patients.

Study co-author Jianzhong Shen from China Agricultural University in Beijing said that because there is a lower proportion of positive samples for the resistance gene in humans than in animals, it's likely that the resistance originated in animals first. "These are extremely worrying results," said Jian-Hua Lui, study author from South China Agricultural University in Guangzhou, China. "Our results reveal the emergence of the first polymyxin resistance gene that is readily passed between common bacteria such as *Escherichia coli* and *Klesbsiella pneumoniae*, suggesting that the progression from extensive drug resistance to pandrug resistance is inevitable."

The mcr-1 gene is currently confined to China, but it's likely to spread worldwide, the researchers wrote, adding that the use of polymyxins in animals needs to be re-evaluated and mcr-1 needs to be closely monitored in human and veterinary medicine around the world. In a linked comment for the journal, David Paterson and Patrick Harris from the University of Queensland in Brisbane, Australia, wrote that, "The links between agricultural use of colistin, colistin resistance in slaughtered animals, colistin resistance in food, and colistin resistance in human beings are now complete." ◻

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We have 2 sauces:

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8 oz Jar with ½ lb chicken (boneless) serves 1.
12 oz Jar with 1 lb chicken (boneless) serves 2.
16 oz Jar with 2 lb chicken (boneless) serves 4.

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Tangy Simmer with Chicken Quarters

Ingredients:

2 Chicken Quarters
1 Jar 12oz Tangy Simmer
1 Cup frozen corn
½ Cup frozen sweet Peas
1 Tbs Red Bell pepper
½ Tsp Salt
½ Tsp pepper
½ Olive Oil.

Prep: Remove skin from the chicken and season with salt and pepper.

Steps:

1.Put the chicken in the slow cooker cook for 20 minutes
2.Open and add one jar of Tangy simmer and cook for 10 more minutes.
3.In a skillet add ½ Tsp of olive oil and add the corn & peas and red pepper and stir fry for 5-10 minutes add salt and pepper.
4. Serve chicken with corn and peas.

Chicken Tenders With Tangy Simmer

Ingredients:

Panko Crumbs
3 Tbs Olive Oil
Salt & Pepper
3 Chicken Tenders
1 Tbs Cranberries
1Tbs Red Pepper
1 Cup Cooked Rice
2 Tbs Milk

Steps: Add milk to the tenders and soak.
1.Add Oil to a skillet and fry chicken tenders, until done.
2. take cooked rice and add ½ Jar of Tangy Simmer and stir fry in a pan.
3. Add peppers and cranberries.
4. On a serving plate arrange the fried chicken and pour Tangy sauce over it.
5. In a small bowl add cranberries at the bottom of the cup with red bell pepper then add the rice and press it and turn it upside down on to the platter.
6. Arrange chicken tenders and pour the rest of the sauce and serve.

DATES TO REMEMBER

NRCS EQIP COST SHARE DEADLINE
December 18, 2015
ww.nrcs.usda.gov

IPPE
January 26-29, 2016
Atlanta, GA
www.ippexpo.org

REAP GRANT APPLICATION DEADLINE
February 1, 2016
www.rd.usda.gov

TPA CONTROLLER WORKSHOP FOR SERVICE TECHS
March 2, 2016
Lebanon, TN

FOOD SAFETY CONFERENCE
March 8-9, 2016
Hilton Branson Convention Center
Branson, MO

TPA COLLEGE CAREER FAIR
March 24, 2016
Embassy Suites
Murfreesboro, TN

TPA SPRING SCHOLARSHIP FUNDRAISER
April 21, 2016
Hermitage Golf Course
Nashville, TN

Nashville Gun Club
Nashville, TN

TPA SCHOLARSHIP APPLICATION DEADLINE
April 22, 2016

TPA ANNUAL MEETING & SUMMER GETAWAY
August 5-6, 2016
DoubleTree Nashville Downtown

Nearly 80 Percent of Americans Mistakenly Believe Chicken Contains Added Hormones or Steroids

December 1, 2015 - The National Chicken Council (NCC) released new national survey findings on consumers' perceptions about chicken production, revealing that nearly 80 percent of Americans mistakenly believe that chicken contains added hormones or steroids, when in fact no chicken sold or raised in the U.S. is given hormones or steroids.

To view the entire article, go to https://click.publicaster.com/ViewInBrowser.aspx?pubids=8412%7c825%7c61955%7c796&digest=I0hJh%2bCTunLW6SZU53kT1Q&sysid=1 □

Final Ethanol Volumes Could Raise Feed Costs

By Michael Fielding on 12/1/2015 from the Meatingplace.com

The final Renewal Fuel Standard (RFS) required volume obligations for 2014, 2015 and 2016 will be set at higher levels than proposed by the agency in May, the U.S. Environmental Protection Agency (EPA) announced Monday (Nov. 30, 2015), essentially requiring that more ethanol will be blended into the nation's gasoline supplies, which could raise feed costs in the process.

Refiners will be required to blend 18.11 billion gallons of renewable fuels in 2016 – a 4 percent increase from the EPA's proposal of 17.4 billion gallons earlier this year.

The National Chicken Council (NCC) blasted the announcement, claiming that the EPA has set the mandate retroactively, after twice increasing the initial proposed volume levels.

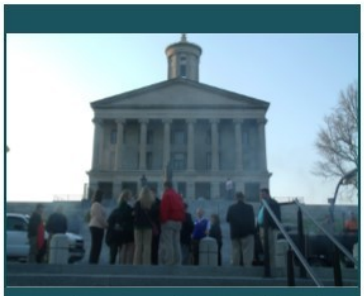
"By increasing the mandated volume of ethanol beyond the blend wall for next year, and retroactively increasing the mandates for 2014 and 2015, more corn from feed and food will be diverted into fuel production, resulting in increased costs for poultry and livestock producers," NCC President Mike Brown said in a news release. "It's ironic that while U.S. ethanol is competitive in the global export market, the ethanol industry continues to rely on expanding the RFS mandates domestically."

The first proposed volume was issued in November 2013 at 13 billion gallons. A revised proposal was issued in May 2015, raising the implied corn ethanol volume to 13.25 billion gallons. Monday's announcement sets the 2014 compliance volume at 13.61 billion gallons. In setting the 2015 volume so late in the year, the agency effectively set this year's standard retroactively at 650 million gallons more than the 13.4 billion gallon volume initially proposed in May, Brown added.

Earlier this year the NCC supported EPA's proposed actions to adjust the biofuels targets for 2014, 2015 and 2016 to reflect the practical limits imposed by the blend wall. NCC has long held that corn used for ethanol has created an uneven playing field for chicken producers. Since the RFS was enacted in 2007, chicken producers have faced more than $50 billion higher in feed costs due to the RFS.

To view the entire article, go to http://www.meatingplace.com/Industry/News/Details/62945 □

Why join TPA? What does the TN Poultry Association do for me?



TPA is your advocate for the poultry industry in TN and works hard behind the scenes in Nashville when regulatory and policy issues are concerned.

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TPA has been very proactive in HPAI preparedness and prevention efforts. http://www.allinallgone.com/tennessee-poultry-association/

In 2015, TPA awarded eight scholarships for a total of $11,000 to TPA grower member families and students in TN pursuing poultry -related careers.

Tennessee Poultry Association

TPA promotional and educational programs and efforts are ongoing.

Fall 2015

TPA NEWSLETTER

...from the Tennessee Poultry Association

HPAI: ARE WE READY?

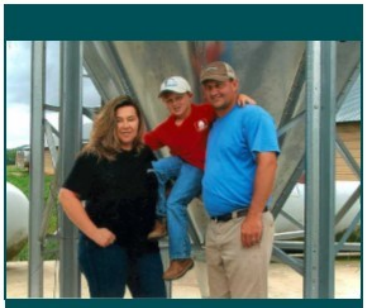
2015 Annual Meeting Highlights

KNOW THE WARNING SIGNS OF HPAI:

INSIDE THIS ISSUE

TPA's Poultry Company Members Include:

Avagen · K · Hubbard · Tyson · Pilgrim's · Cobb · Koch Foods



TPA Farm Family of the Year Newton Farms, Ardmore, TN

Please call TPA today to further discuss what TPA does for the poultry industry and growers in TN.

931-225-1123 www.tnpoultry.org info@tnpoultry.org

TPA GREATLY APPRECIATES OUR ALLIED MEMBERS

A & P Leasing, LLC Kiln-dried pine shavings Jordan Bailey (931) 738-5065	**Gainco, Inc.** Scott Seabrook (404) 414-2149	**Nordic Logistics & Warehousing** Don Schoenl (770) 871-2821
Alltech, Inc. Kevin McBride (229) 225-1212	**Goggin Warehousing** Keith Bellenfant (931) 225-1206	**Prime Equipment Group** Alexander Libin (614) 633-9981
American Proteins, Inc. Mark Ham (770) 886-2250	**Green Earth Solar, LLC** Trevor Casey (865) 660-5400	**Smithway Inc.** Rocky Smith (828) 628-1756
Americold Ben Medearis (404) 402-9205	**Griffin Industries, LLC** Terry Paschall (731) 599-4816	**Southwestern Sales Co.** Ricky Gaines (479) 366-2023
Animal Health International Jeff Sims (256) 504-2588 Larry Singleton (817) 913-3468	**International Paper** Eddie Creekmore (423) 883-7003 Jeff Ewing (423) 280-2492	**Sunbelt Rentals, Inc.** Bart Smith (205) 602-2485
Bemis North America Wes Baden (501) 821-6359 Pam Wools PMWools@Bemis.com	**Jones-Hamilton Co.** Ed Jemison (423) 400-3755 Clint Lauderdale (256) 620-1175	**Swallows Insurance Agency** Gabe Colwell or Greg McDonald (931) 526-4025
Big Dutchman Jeff Ratledge (616) 283-4527	**K Supply Co., Inc.** David Walker (256) 894-0034	**TN Farm Bureau Federation** www.tnfarmbureau.com
Biomin USA Joe Sanders (210) 342-9555	**Lee Energy Solutions** Wes Cumbie (334) 707-8427	**Tennessee Farmers Co-op** Paul Davis 615-793-8412
ChemTrade Logistics Kerry Preslar (770) 530-9820	**Lhoist NA** Barry Collins (931) 368-9057	**TN Soybean Promotion Council** Parks Wells (731) 668-2850
Chick Master Lou Sharp (678) 341-9047	**LiphaTech** Ryan Haley (501) 691-3182	**Thompson Gas** Robby McKim (706) 455-8426 James Watson (706) 851-4378
Chore-Time Poultry Brent Escoe (706) 338-8570	**Live Oak Bank** Jody Murphey (678) 977-4274	**Tri-Form Poly (Ecodrum)** Byron Irwin (701) 446-6139
Cumberland Poultry/Hired Hand Brian Johnson (217) 820-3530 Gary Sadler (225) 531-2461	**Marel Stork Poultry Processing** Dwight Curl (913) 888-9124	**Univar** Donnie Powers (205) 641-1157
D & F Equipment Greg Cagle 256-528-7842	**Marvel Technologies, USA** Jack Wheeler (615) 642-3729 Tom Ellsworth (615) 812-5175	**UT - Extension** Robert Burns (865) 974-7112
Elanco Animal Health Jesse Rodriguez (256) 506-2623	**Merck Animal Health** Paul Burke (615) 804-3564	**Vincit Group, The** Eric Killen (423) 504-1974
EnSave, Inc. Amelia Gulkis (802) 434-1826	**Merial Select, Inc.** Mike Johnson (678) 644-8463 Brandon Bess (336) 214-9258	**Weeden Environments** Reggie Saucier (479) 841-8140
Farm Credit Mid-America Matt Neal (615) 332-4775	**Meyn America, LLC** Russ Williams (770) 530-5778	**Zoetis** Chris Dyer (770) 335-5552

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Congratulations to TPA President Chynette Todd (and daughter Aubrey) on her recent marriage to Andy Todd. We wish you all the very best!!!!

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Controller Workshop for Service Techs
March 2, 2015
Ward Agricultural Center, Lebanon, TN

Tennessee Poultry Association