

Poultry Practices

Spring
2020

A newsletter for poultry
producers and poultry
litter applicators

PWME Class Update

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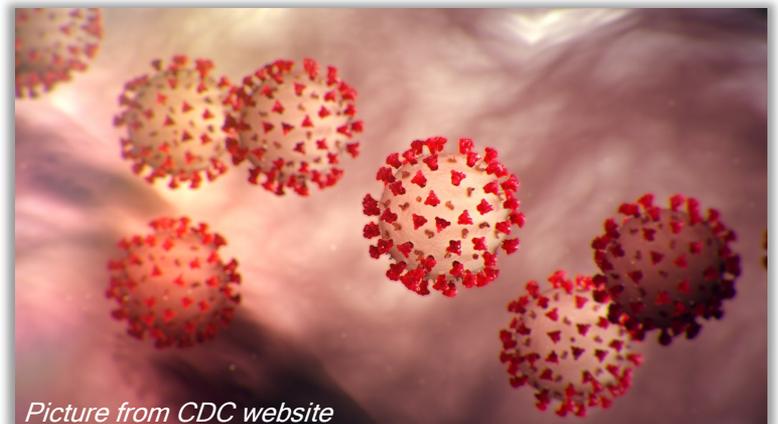
Poultry Waste Management Education Class Update

Rachel Allen

Program Assistant

Oklahoma State University

Life as we know it has been disrupted due to COVID-19 and one of these disruptions has been the cancellation of our spring PWME classes. Some of you were required to have your Initial 9 class (required to be completed within 1 year of registering with ODAFF) this spring but due to these unforeseen circumstances ODAFF has agreed to extend the deadline for you as long as you attend one this fall.



Picture from CDC website

We are currently working on tentatively scheduling our fall PWME classes so be on the lookout for the schedules to arrive from ODAFF sometime in July along with your yearly reporting paperwork. You will also find them listed on our website extension.okstate.edu/poultrywaste. The website will be the easiest and fastest way to see any updates to any of the fall classes.

If you have any questions regarding the status of your education requirements you may contact Rachel Allen by email at rachel.allen@okstate.edu or ODAFF at 405-522-4892. Please remember, OSU Extension is here to help in any way we can. You can still reach out to your local county Extension office for assistance.

Biosecurity for Poultry Producers

Barry Whitworth, DVM

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On April 9th, 2019, the OIE which is also called the World Organization for Animal Health reported that 1,583 turkeys died from High Path Avian Influenza (HPAI) in a flock located in Chesterfield County, South Carolina. Another 32,577 birds in the flock were depopulated and disposed of properly. The virus appears to have mutated from a Low Path Avian Influenza (LPAI) strain that was present in other flocks in the area. According to the United States Department of Agriculture Animal Plant and Health Inspection Service, the strain of HPAI was H7N3. This is the first case HPAI in the United States since 2017.

In the 2014-2015 HPAI outbreak in which over 50 million chickens and turkeys died or were depopulated, one of the greatest concerns and a probable contributing factor to the spread of HPAI was the lack of effective farm biosecurity measures (USDA, 2016). If commercial or backyard poultry producers do not have a biosecurity protocol, they need to develop one, and if they have one they should review it.

What is biosecurity? “Bio” is life and “security” is protection. Biosecurity is the development and implementation of management procedures to reduce or prevent unwanted threats from entering a flock. The protocol is designed to reduce or prevent the spread of these threats through the flock if a pathogen does enter the flock. Lastly, a biosecurity plan is designed to prevent the threat from infecting neighboring poultry operations.

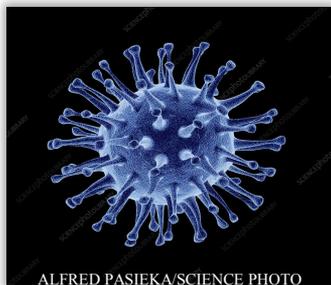
Biosecurity can be broken down into four basic areas which include traffic, isolation, sanitation, and husbandry.

Poultry producers must attempt to control traffic on their operation. Poultry operations should have a perimeter buffer area (PBA). The PBA could be a fence or road that surrounds the poultry facility. All entry points need to be clearly marked with “Do Not Enter” signs. Vehicles should definitely not enter this area. In the 2014-2015 HPAI outbreak, poultry operations that allowed trash trucks close to barns were more likely to be infected with HPAI (USDA, 2015). The PBA reduces contamination around the poultry buildings. It is the first line of defense by limiting what enters the area.



Inside the PBA, a line of separation (LOS) needs to be established. The LOS isolates the birds from possible sources of infections. The LOS is usually the walls of the poultry building plus the entry point. No person should cross this line without following proper biosecurity protocols. Producers should provide visitors with clean coveralls and disposable shoe covers. Visitors should wash hands before and after visiting the facility. All visitors should dip their shoes in a disinfectant solution when entering and exiting the facility. Also, no other animals wild or domestic should cross the LOS. The poultry building should be maintained to prevent wild birds from entering. Poultry producers need to practice good rodent control. All equipment must be cleaned and disinfected before entering the poultry house.

Sanitation is one of the most important parts of a biosecurity plan. All equipment, feeders, waterers and



buildings that require cleaning and disinfecting need to be thoroughly cleaned. First, all fecal material and dirt should be physically removed. Disinfectants will not work if organic material is still present on the surface of items that need sanitizing. Disinfectants must be applied and allowed sufficient contact time to work properly. Also, foot baths will not work if boots are covered in mud and manure. The boots must be cleaned before dipping in the foot bath. Foot baths need to be properly maintained. The baths should be replenished daily.

Poultry producers must also practice good animal husbandry. Flocks need to be observed several times per day. Producers need to collect and dispose of dead birds frequently. Producers should know the clinical signs of a sick bird and any unusual increases in sick or dead birds should be reported to proper authorities.

The National Poultry Improvement Plan (NPIP) has guidelines for a biosecurity protocol. Commercial and backyard poultry producers should examine the **NPIP 14** standards of the biosecurity protocol. Any areas that do not meet the standards need to be addressed. The NPIP biosecurity audit form can be found at <http://www.poultryimprovement.org/documents/AuditForm-2018BiosecurityPrinciples.pdf>.

Avian Influenza is a major threat to the US poultry industry. It is the responsibility of all commercial and backyard poultry producers to do everything in their power to protect this industry.

References

United States Department of Agriculture. Final Report for the 2014-2015 Outbreak of Highly Pathogenic Avian Influenza (HPAI) in the United States. August 11, 2016.

United States Department of Agriculture. Epidemiologic and Other Analyses of HPAI-Affected Poultry Flocks. September 9, 2015.

ODAFF Names Teena Gunter as Director for AEMS Division

If her name sounds familiar that's because she worked with the poultry and CAFO programs in the early days before moving on to ODAFF's General Counsel Division. Although she is maintaining her position as General Counsel, she is excited to "return home" to the programs that started her career with at ODAFF.

Teena received a Master of Laws from the University of Arkansas in Agricultural Law, and she loves working for ODAFF. She says that "Agriculture has so much variety and I am never bored working with producers!" She hopes that you will find her to be reasonable, fair, and approachable when you reach out. She appreciates the hard work you put in each and every day to contribute to the food security of Oklahomans and the world!



She doesn't expect the program to change from the regulatory side much in the coming year and intends to maintain the status quo for the time being, but she's always looking for ways to make the poultry and applicator programs better.

Welcome Teena!

Biosecurity and Footbaths

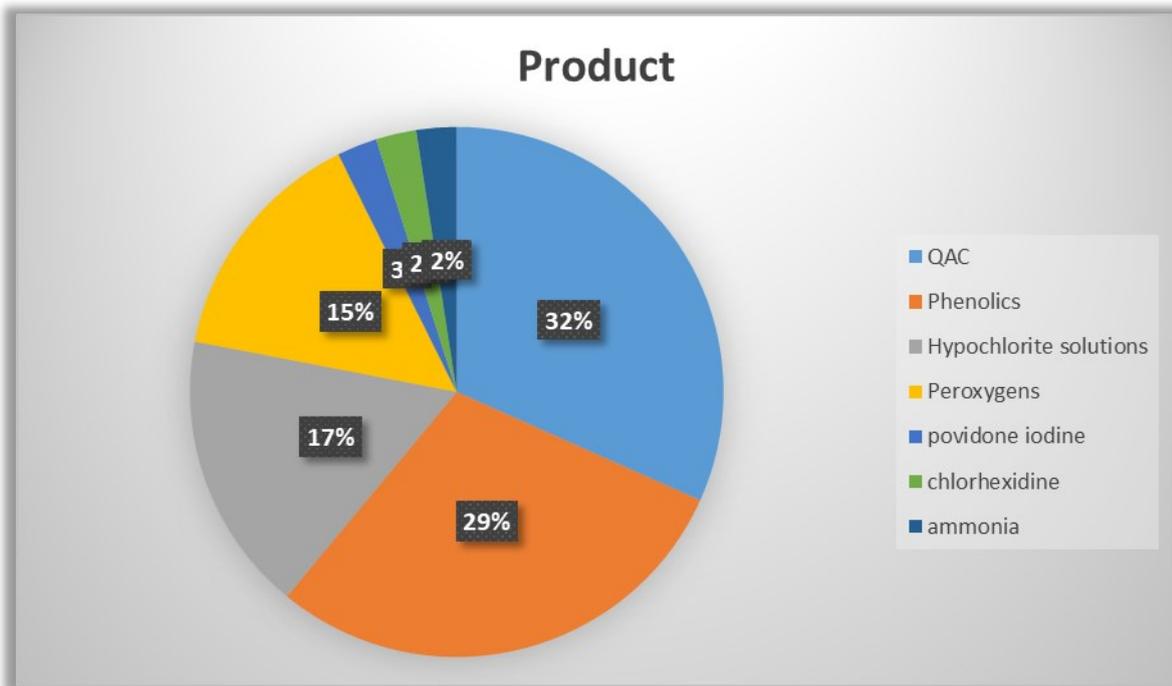
Brian Freking

Area Livestock Specialist
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One key component to a biosecurity program is to minimize trafficking and distribution of potential pathogens by movement of personnel through a farm or facility. One such tool is a footbath. In my experience as a poultry technician this was a practice we considered job priority one. I have always felt like it was my job to not be a reason that potential disease causing organism were transmitted by human interactions.

You might question whether disinfectant products actually work? In an evaluation of the efficacy of disinfectants footbaths used in veterinary teaching hospitals (VTH) in the US and Canada, which we might consider an entity focused on preserving cleanliness, it was found that 96.7% (30 out of 31) reportedly used footbaths. The disinfectants most commonly reported of those using footbaths are listed in chart 1.

Chart 1 Disinfectant Products



The respondent from the VTH that didn't use footbaths reported that decision was attributable to a perceived lack of efficiency; instead, personnel from this hospital used disposable shoe covers when entering areas of high-risk patients.

Results from one (Morley et al.) product efficacy study suggested that the peroxygen disinfectant had superior decontamination effects on rubber boots compared to QAC disinfectants when applied to footbaths. Comparison of only these two products showed a 75% advantage reduction in adjusted mean bacterial concentration. Typically, reduction of bacterial concentrations of at least $3 \times \log_{10}$ is considered the minimum needed to consider surface disinfectants effective which neither of these products achieved.

To achieve maximal decontamination, it is typically recommended that surfaces be scrubbed with a detergent, rinsed, and treated with an appropriate disinfectant, allowing a minimum of 15 to 30 minutes of contact time. You can easily see why this is probably difficult to achieve under many circumstances.

The common use of phenolic compounds is likely attributable to their broad spectrum activity and retention activity in the presence of organic material. Quaternary ammonia compounds (QAC) are considered less reactive but also more likely to be inactivated by the presence of organic material.

Hypochlorite (bleach) solutions have activity against some of the more hardy microbes, such as bacterial spores, but organic material rapidly binds and inactivates chlorine in dilute solutions.

This evaluation suggest that footwear hygiene can be improved through appropriate use of disinfectant footbaths, but should not be relied on as the only method of controlling the trafficking of infectious agents. General cleanliness of footwear should always be emphasized but other options might be considered as well in updating your biosecurity plan. Consider the following in reviewing your plan.

Please
Use
Footbath

Materials for a Footbath (McCrea et al., 2008)

- Long handle scrub brush
- "Fake grass" or a synthetic bristled doormat
- Hose for mixing new batches of disinfectants
- Tray with short sides (ex. litter pan). Depending on the location and/or type of disinfectant used, you may want to have a lid for the tray to prevent contamination or inactivation of the disinfectant.

Setting Up a Footbath

It may be a good idea to set the footbath up on a solid surface, such as concrete, bricks, or cement blocks to prevent mud around the footbath area. A solid surface can be swept or washed down to eliminate the buildup of dirt that can pollute your footbath. Mud quickly pollutes your footbath, making it useless in providing protection. Location is the most important key in setting up your footbath. Select a location where everyone who comes onto your farm must pass through.

- Place container in selected location.
- Cut mat to fit inside the container.
- Mix disinfectant according to label and add to container.
- Hang long handled brush within reach.
- Post [footbath directions](#) at eye level explaining how to use footbath.

Maintaining a Footbath

Make sure to maintain a "clean" footbath. Footbaths should be changed and cleaned periodically. How often you clean your footbath depends on how much foot traffic you have on your farm. On average, footbaths require weekly cleaning. The empty container and mat should be scrubbed with a brush and rinsed thoroughly. Next, add fresh disinfectant and place the mat back into the container. Do not empty the footbath in an area where the footbath is used so that a dry area around the footbath can be maintained (USDA, 2002; McCrea et al., 2008). Don't forget to post directions near footbaths instructing users how to correctly wash footwear.

References

- McCrea, B.A., and Bradley, F.A. 2008 Footbaths for Animal Facilities: Easier than you think. University of California-Division of Agriculture and National Resources. Publication 8281.
- Morley, P.S, DVM, N Morris, D.R. Hyatt, D.C. Van Metre. Evaluation of the efficacy of disinfectant footbaths as used in veterinary hospitals. JAVMA, Vol 226, No.12 June 15, 2005.
- USDA. 2002. Biosecurity Footbaths for Exotic Newcastle Disease Information for Bird Owners. California Department of Food and Agriculture. [www.cdfa.ca.gov/ahfss/Animal Health/pdfs/Footbaths owner Dec02.pdf](http://www.cdfa.ca.gov/ahfss/Animal%20Health/pdfs/Footbaths%20owner%20Dec02.pdf)
<https://www.youtube.com/watch?v=QBDGMqEz2cg>

OSU Poultry Research Center

The Poultry Research Station currently houses considerable research capability for supporting both basic and applied research. Overall, the center contains 172 floor pens (132 in remodeled buildings) that may be used for applied broiler, layer, turkey and breeder studies. Additional facilities include a poultry processing laboratory; computer laboratory; sample handling laboratory; two large scale environmental chambers (1,680 bird capacity) and 84 calorimetry-environmental chambers. Poultry research has focused on energetic, environmental distress and growth modeling research. The large scale environmental chamber may be used to generate specific cycling ambient temperature-relative humidity environments for applied-basic experiments.

The 84 open-circuit respiratory units equipped for real-time physiological monitoring are divided between 3 chamber rooms for poultry and a new complex for swine. The units are used in basic thermobalance studies for the determination of bird heat production, evaporative cooling, nonevaporated cooling, respiration rate, apparent respiration efficiency, body temperature, bird heat content, protein and fat deposition pattern, electrocardiogram, blood pressure, and numerous metabolic variables determine in blood samples obtained via indwelling catheters.



Body temperature, heart rate, electrocardiogram, and blood pressure observations are made using a radio telemetry system with data recording every 1.5 minutes for all birds. This is a one-of-a-kind facility. Similarly, 24 environmental chambers have recently been added to accommodate pigs, up to 40 kg.

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Poultry Producers Please Help Us With this Survey

The purpose of this survey is to gather more input on pest management practices within the poultry industry. Data from the survey will help garner funding for poultry projects specifically on biosecurity aspects associated with certain pests such as house flies and darkling beetles and to apply for federal grants that incorporates stakeholder input. Specifically, this survey will help direct our extension programming efforts in the future.

When you scan the QR code it will open a survey concerning pest management practices. You can also go to this link <https://tinyurl.com/yc6dgsg2> and complete the survey. We would greatly appreciate any input you as a grower could provide by filling out this survey. When testing the survey it took participants approximately 5-8 minutes to complete. Data from this survey will be held confidential without any unique identifiers. Thank you for your time!



Springtime Soil Sampling

Hailin Zhang, Ph.D

*Director Soil, Water and Forage Analytical Lab
Oklahoma State University*

Soil testing is the best guide to the wise and efficient use of fertilizers and animal manure. The first step in soil testing is the collection of a representative sample. Soil properties vary a lot in a field. The soil sample must accurately represent the whole field where manure or other fertilizers are going to be applied. A minimum of 15-20 sub-samples collected randomly is needed to make a composite sample for a field. The sampling depth in Oklahoma is six inches. For details on soil sampling, refer to our Factsheet PS-2207 “How to Get a Good Soil Sample” at extension.okstate.edu.



Sample bags, soil probes and other assistance are available at the local OSU County Extension Office. Soil samples should be submitted through your County Extension office and then the office will send your samples to OSU Soil, Water and Forage Analytical Laboratory in Stillwater, OK.

More information on agricultural testing and interpretation is available at extension.okstate.edu/ under “Programs and Services”.

CARES Act and Agriculture

JJ Jones

*Area Ag Economics Specialist
Oklahoma State University*

The Covid-19 pandemic has had a profound effect on the U.S. economy. So much that congress has passed a stimulus bill to help people and businesses make it through these uncharted times. This bill, Coronavirus Aid, Relief, and Economic Security Act or CARES Act was funded at \$2 trillion and while there has been a lot of information about how this act will help individuals and businesses, there has not been a lot of information about how it will help agriculture. Below are some of the high points of what the CARES act means to ag.

Recovery Rebate

The recovery rebate is a direct payment to all individuals that had an adjusted gross income (AGI) of less than \$75,000 or couples filing jointly of less than \$150,000. The AGI amount from your 2019 taxes will be used to determine eligibility. If you have not filed your 2019 taxes your 2018 filings will be used. Individuals will receive \$1,200 and couples will receive \$2,400 as a tax credit. Couples with children under 17 will receive an additional \$500 per child. Nothing needs to be done for this rebate. Individuals can go to www.irs.gov to check on the status of their rebate.

Small Business Administration Programs

Two programs under the Small Business Administration (SBA) have been funded to help businesses make it through the Covid-19 pandemic. They are the Paycheck Protection Plan (PPP or 7A) and the Economic Injury Disaster Loan (EIDL or 7B).

The EIDL program is not available to traditional agriculture businesses, but there are some exceptions. For example, greenhouses and agri-tourism business do qualify for EIDL. If a business qualifies for EIDL, they can apply for a loan of up to \$2 million. The first \$10,000 will be considered a grant and not have to be paid back. The remainder will be amortized for up to 30 years at 3.75% interest. The remainder of this loan will not be forgiven and will have to be paid back. Allowed expenses of the EIDL funding include accounts payable, operating expense and material costs, rent, interest on fixed debts, sick leave and payroll. Disallowed expenses include business expansion, payment of cash dividends or bonuses and paying owners or officers unless directly related to services performed. Businesses wanting to use the EIDL loan must apply directly with the SBA.

The PPP program is funding to help maintain employees by paying businesses payrolls. The number of employees is limited to 500. If a business does not have employees and the owner is self-employed, they may still be eligible for the PPP. The PPP program allows business owners to apply for 250% of their average monthly payroll costs for 2019. These funds can then be used for payroll, utilities, rent or lease, and interest on loans. The PPP is considered a two year loan with payments deferred for 6 months. If 75% of the funds obtained are used for payroll during those six months, then the loan will be forgiven. If less than 75% of the funds are used for payroll, there will be a reduction in the amount that will be forgiven and the portion that is not forgiven will be amortized over 18 months at 1% interest. To apply for the PPP program producers must use an SBA accredited lending institution. Producers also need to be wary of scams of individuals stating they are from SBA accredited banks.

There is a YouTube video covering in greater detail the PPP and EIDL programs. It can be found at https://youtu.be/mwWrpop_Ee4.

USDA Coronavirus Food Assistance Program

On April 17, Secretary Sonny Perdue announced the Coronavirus Food Assistance Program (CFAP). The CFAP will take several actions to assist farmers and ranchers. The announcement stated that \$16 billion in direct payments to farmers and ranchers would be available. Of that \$16 billion, \$9.6 billion would go to livestock, \$3.9 billion for row crops, \$2.1 billion for specialty crops and \$500 million for other crops. Sign up for these payments should begin the first of May with payments being distributed at the end of May. Producers should check with their local Farm Service Agency office for further details.



Unless otherwise noted, photos are courtesy Todd Johnson, OSU

EXTENSION

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