

TIMELY TOPICS

OSU EXTENSION - NORTHEAST DISTRICT
November 2023 – Volume 43 – Issue 11



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Avian Influenza Update

Barry Whitworth, DVM, Senior Extension Specialist, Department of Animal and Food Sciences

High Path Avian Influenza (HPAI) continues to be a problem in commercial and backyard poultry in the United States (US) with over 60 million birds affected. Since the start of the outbreak in 2022, 879 flocks (347 commercial and 532 backyard flocks) have been confirmed with HPAI in the US. Many wild birds and mammals have been affected as well. Five backyard flocks and one commercial flock have been confirmed with HPAI during this outbreak in Oklahoma. The latest was detected in a backyard flock in Carter County on October 16, 2023. For a complete listing of domestic birds, wild birds, and mammals affected by HPAI visit *2022-2023 Detection of High Path Avian Influenza* website at <https://www.aphis.usda.gov/aphis/ourfocus/animalhealth/animal-disease-information/avian/avian-influenza/2022-hpai>.

Avian influenza (AI) is a highly contagious viral disease. The virus is classified as either Low Path Avian Influenza (LPAI) or HPAI depending on the virulence. This virus infects many food producing birds such as chickens and turkeys while it commonly resides in migratory waterfowl and many other wild birds. Most often ducks, geese, and wild birds harbor the virus in the intestinal tract without having any clinical signs of the disease. The virus is shed in the feces and respiratory secretions from infected birds. Poultry can be infected with the virus when they come in direct contact with infected birds or consume feed that is contaminated with the virus. The virus can be spread indirectly through objects like shoes, clothes, or equipment contaminated with the virus.

Clinical signs of the disease vary depending on the severity of the virus and the organ system affected. LPAI usually results in no clinical signs or only mild problems. However, HPAI has many different clinical signs. Death with no symptoms is a common finding. Respiratory problems such as coughing, sneezing, watery eyes, and nasal discharges may be seen. Depression resulting in loss of appetite and decrease consumption of water may occur. Egg production may be impacted with a decrease in production and/or softshell or misshapen eggs. A bird's comb, wattle, head, eyelids, and hocks may swell. Combs and wattles may turn purple. Nervous system disorders including tremors, incoordination, and unusual positions of the head may be seen. Diarrhea has been reported in some cases. For more information about clinical signs visit *Defend the Flock-Signs of Illness* at <https://www.aphis.usda.gov/aphis/ourfocus/animalhealth/animal-disease-information/avian/defend-the-flock-program/outbreak-illness/outbreak-illness>.

For commercial and backyard poultry flocks, the best defense against HPAI is a sound biosecurity program. Biosecurity is the development and implementation of management procedures intended to reduce or prevent unwanted threats from entering a flock. The protocol is designed to reduce or prevent the spread of unwanted threats through the flock and eliminate any unwanted pathogens that may enter the flock. Lastly, a biosecurity plan is designed to prevent threats from infecting neighboring poultry operations. Biosecurity can be broken down into four basic areas which include traffic, isolation, sanitation, and husbandry.

The first line of defense should be limiting the traffic that enters the area. Poultry operations should have a perimeter buffer area (PBA). For backyard poultry operations, this could be a fence. In commercial operations this may be a fence or road that surrounds the facility. All entry points need to be clearly marked with "Do Not Enter" signs. In a study by the

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United States Department of Agriculture (USDA) evaluating factors associated with introduction of HPAI in layer farms in the US, the presence of a gate was found to be protective against the introduction of the virus. Gates with signage may encourage people to follow biosecurity protocols.

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 their 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.

Sanitation is one of the most important parts of a biosecurity plan. All equipment, feeders, waterers, and buildings need to be cleaned and disinfected regularly. First, all fecal material and dirt should be physically removed. Next, disinfectants must be applied and allowed sufficient contact time to work properly. Foot baths need to be properly maintained. The property outside the poultry house should be kept mowed and cleaned. Failure to keep the grass cut and/or to promptly clean up feed spills is associated with HPAI.

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. Producer should know the clinical signs of a sick bird. Any unusual increases in sick or dead birds should be reported to proper authorities. Backyard producers have several options. They can contact their veterinarian or Oklahoma State University County Extension office. They can also contact the Oklahoma State Veterinarian at 405-522-6141.

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>. Additional sources for backyard poultry producers can be found at the USDA *Defend the Flock* website at [healthybirds.aphis.usda.gov](https://www.aphis.usda.gov/healthybirds), *Protect Your Poultry From Avian Influenza* at https://www.aphis.usda.gov/publications/animal_health/bro-protect-poultry-from-ai.pdf or Oklahoma State University fact sheet *Small Flock Biosecurity for Prevention of Avian Influenza* ANSI-8301.

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

Reference

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2022: a case-control study. *Frontiers in veterinary science*, 10, 1229008.

Home Grown – November Tips

Laura Payne, Horticulture Educator, Payne County

November is here but gardening chores continue. Here are a few tips that you should be doing this month.

Lawn & Turf

- Fertilize cool-season grasses like fescue with 1 pound nitrogen per 1000 sq. ft.
- Continue to mow fescue at 2 inches, if needed, and water during dry conditions.
- Control broadleaf winter weeds.
- Keep falling leaves off fescue to avoid damage to the foliage.

Tree & Shrub

- Prune deciduous trees in the early part of winter. Prune only for structural and safety purposes.
- Wrap young, thin-barked trees with a commercial protective material to prevent winter sunscald.
- Apply dormant oil for scale infested trees and shrubs before temperatures fall below 40 degrees Fahrenheit. Follow all directions on the label of any pesticide.
- Continue to plant balled & burlap and containerized trees.
- Watch for arborvitae aphids, which tolerate cooler temperatures in evergreen shrubs.

Flowers

- Tulips and daffodils can still be successfully planted through the middle of November.
- Leave foliage on asparagus, mums, and other perennials to help insulate crowns from harsh winter conditions.
- Bulbs like hyacinth, narcissus and tulip can be potted in containers for indoor forcing.

Miscellaneous

- Leftover garden seeds can be stored in an airtight container in the refrigerator or freezer until the next planting season. Discard seeds over 3 years old.
- Gather and shred leaves and add to compost pile, use as mulch, or till into garden plots.
- Clean and store garden and landscape tools. Coat with a light application of oil to prevent rusting.
- Drain fuel tanks, irrigation lines, and hoses. Bring garden hoses indoors.

Fruits & Nuts

- Delay pruning fruit trees until next February or March before bud break.
- Harvest pecans and walnuts immediately to eliminate deterioration of the kernel.

For more information on this or any other horticultural topic, you can contact your local OSU Extension Office.

'Tis the Season

Scott Clawson, Area Ag Economics Specialist

Cooler weather, leaves turning colors, and pumpkin spice everything are signs that “I have to buy something, or I will have to pay taxes” season is getting started. In all seriousness, it can be a tough decision. The cost of asset replacement is significant and seems to be growing. The added advantage of the purchase benefiting our tax situation can be the subtle nudge it takes for us to sign the dotted line.

So, why is this even an option?

Depreciation. Depreciation is simply the decline in value of an asset due to its use. Think of the adage that a vehicle loses \$10,000 in value as soon as it leaves the lot. Generally, this is just the difference between what we paid for an

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asset and what it is worth now. The IRS, within their specific rules, allows us to claim depreciation as an expense. This additional expense created from purchasing an asset can reduce our taxable income.

What are the inherent issues with this?

Owning an asset is costly. First, depreciable assets... depreciate. This is a cost to the farm or ranch. If I had kept \$25,000 in a CD versus buying a piece of equipment, then after two years I would have \$25,000 plus interest accrued. The equipment, generally speaking, would be worth less than its purchase price. This highlights two costs (depreciation and interest) that outside of our taxes tend to be set aside. Are these costs that will occur for multiple years greater than the possible annual tax bill that the operation is facing?

When could this be a good or bad option?

We all know that depreciable assets don't last forever and that good business ventures will require some asset investment. If a replacement or new asset purchase was already in the works as a part of the business plan, then taking some additional tax benefits is likely a good move. If we are purchasing an asset to negate a tax burden, then we will likely be behind in the long run when we look at the total cost of the asset. Michigan State University Extension has a partial budgeting worksheet¹ that can be very helpful in this process. It looks at the positive (increased revenues, decreased costs) and negative (decreased revenues, increased costs) of the asset purchase. This lets us look at the decision in terms of the annual net loss/gain.

Depreciation use is important as well as we navigate a bullish cattle market. Assuming we buy a qualified asset and utilize the Bonus Depreciation deduction which will allow us to deduct 80% of the qualified asset in 2023, then that asset has 20% of the depreciable amount which can be taken in subsequent years. Will a \$3+ weaned calf market put you in this situation again next year? If so, we may be starting a cycle that will repeat itself annually. Should this be the case, it may be better to use a slower write-off depreciation method to preserve part of the deduction for future years.

Purchasing assets for a new venture or to replace worn-out equipment is a tough decision at today's prices. Making sure that we are prepared for all the factors that go with it is essential. If your motivation is tax based, make sure the benefit pencils out. If we were already in the market for that piece of equipment and some tax benefits would help, then that is the icing on the cake. For assistance on these farm business management topics, contact your local OSU Extension office.

¹ <https://www.canr.msu.edu/resources/partial-budget-worksheet>

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Farm Management Resources

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The e-Farm Management website catalogs resources to help inform producers about farm financial management and production, marketing, and risk management topics. This site shows videos, tools, and publications for farmers and ranchers to hone their farm management skills.

One example is the Dealing with Financial Stress video. This video explains how to diagnose a farm business problem and lists different types of business problems. The video also includes information on short and long-term financial stress and ways to address these types of stress. Lastly, it shows how to calculate how many owners a farm may support.

To view this video and find additional information on Dealing with Financial Stress, visit:

<https://extension.okstate.edu/programs/farm-management-and-finance/e-farm-management-training/evaluating-farm-financial-performance-using-farm-financial-ratios/> .

More information on this and other farm management topics may be found: 1) by contacting your nearest Extension Educator 2) on the e-farm management website (<https://extension.okstate.edu/programs/farm-management-and-finance/e-farm-management-training/index.html>) or 3) on the OSU Ag Econ YouTube Channel (<https://www.youtube.com/user/OkStateAgEcon>) .

