



STATE OF WASHINGTON

DEPARTMENT OF AGRICULTURE

P.O. Box 42560 • Olympia, Washington 98504-2560 • (360) 902-1800

Poultry Diseases of Concern at Fairs and Exhibitions
From Dr. Amber Itle, Assistant State Veterinarian

Fair Managers and Poultry Department Superintendents

Please read this important information about several poultry diseases of concern and share with your exhibitors in advance of upcoming fairs and exhibitions. These diseases are highly contagious and can spread rapidly where poultry and other birds gather. Please check the health of birds at entry and during exhibition; encourage exhibitors to continue to monitor their birds for signs of illness after an event and contact you and their veterinarian if their birds become ill after returning home. Maintain records after your events so exhibitors can be contacted easily in the event of a disease outbreak. Thank you for doing your part to safeguard the health of poultry and birds in Washington State!

Introduction

Several contagious poultry diseases can be spread wherever birds gather for exhibition. These include low- and high-pathogenicity avian influenza (LPAI and HPAI), Marek's disease, virulent Newcastle disease (vND), and infectious laryngotracheitis (ILT). Birds transported and exposed to other birds at shows, clinics, fairs, or other settings are at increased risk for these and other diseases. Table 1 lists the causes, means of transmission, signs of illness, prevention methods, zoonotic potential, and relevance to fairs for each of these four important avian diseases.

Effective Cleaning and Disinfection Steps

Thorough cleaning and disinfection are important steps to reduce the risk of infectious diseases. A veterinarian can help select the most appropriate disinfectant. Follow these steps for effective disinfection:

- Remove all visible debris (manure, bedding, dirt, feathers, feed, etc.).
- Thoroughly clean all surfaces with soap and water.
- Rinse well and let dry.
- Apply an appropriate disinfectant at the proper concentration for the recommended contact time.
- Rinse and let dry before using equipment or restocking premises with birds.

Biosecurity Measures for Fair Managers

- Thoroughly clean and disinfect all surfaces, cages, equipment, and feed/water containers before and after an event.
- Do not let birds with questionable health enter a fair or exhibition.
- Whenever possible, use metal vs. wood for facilities to enable better disinfection.
- Discourage exhibitors from going in and out of others' pens, sharing equipment, or contacting others' birds.
- With veterinary guidance, encourage pre-event vaccinations for diseases of concern.
- Provide handwashing stations and hand sanitizers for exhibitors and the public. Instruct exhibitors to wash hands before and after handling birds and between birds.
- Provide as much space between birds as possible.
- Do not let the manure, water, or feed from upper cages fall into lower cages.
- Provide gel hand sanitizer for judges to use between birds.
- Monitor bird health throughout the event and have the fair veterinarian examine birds showing signs of illness; dismiss sick birds promptly if indicated.
- Establish an isolation area for disease suspect cases.
- Do not house young birds with adult birds.
- Instruct exhibitors how to fill water buckets using communal hoses without contaminating each bucket.
- Provide solid-sided pen partitions unless ventilation will be compromised.
- Discourage nose-to-nose contact between birds from different farms.
- Have exhibitors provide their own feed and water containers for each bird.
- Require each exhibitor to bring his/her/their own carpet square to use during classes.
- Ensure effective amount and direction of ventilation.
- Discourage the public from touching exhibited birds.
- Do not allow eating, drinking, smoking, strollers, or pacifiers in barns.
- Control wild birds, flies, and rodents as much as possible.
- Maintain exhibitor records to be able to inform exhibitors about post-event outbreaks.
- Remind exhibitors to keep show birds separate from their home flock for 30 days after returning from a show and do home flock chores first; watch returning birds closely for signs of illness; use separate footwear, clothing, and equipment for the two groups; and wash hands between groups.

What to Do If a Poultry Disease Outbreak Occurs at a Show?

- Contact local veterinarians and/or the State Veterinarian's office at 360-902-1878 or Washington State University's Avian Health and Food Safety Laboratory (1-253-445-4537). To protect animal health and control the outbreak, a decision may be made to quarantine animals at the fairgrounds.
- After emptying infected barns, remove manure and bedding from cages and pens and compost on site if possible. Clean and disinfect all surfaces thoroughly.
- Notify all exhibitors who visited the premise in the 14 days before an outbreak an outbreak has occurred and they should contact their veterinarian for guidance.

Conclusion

The diseases mentioned in this publication are highly contagious and can cause severe poultry illness and death. Prevention steps include enacting effective biosecurity steps daily, monitoring birds closely for signs of illness, possible preventative vaccination, and close contact with knowledgeable veterinarians. Show birds are at even greater risk of infection due to increased stress and pathogen exposure, so fair managers and poultry department superintendents must keep these and other contagious diseases in mind when managing poultry exhibitions.

If you have questions about avian health in Washington State, contact the State Veterinarian's office at 360-902-1878 or avhealth@agr.wa.gov.

Additional Resources

<http://agr.wa.gov/FoodAnimal/AvianHealth/>

<https://tinyurl.com/y8cegflb>

<https://waddl.vetmed.wsu.edu/avian>

<https://tinyurl.com/y4hetnaw>

<http://www.cfsph.iastate.edu/Species/poultry.php>

<https://agr.wa.gov/FoodAnimal/AvianHealth/Docs/CaliforniaBiosecurity.pdf>

<https://www.aphis.usda.gov/aphis/ourfocus/animalhealth/animal-disease-information/avian/defend-the-flock-program>

https://www.aphis.usda.gov/publications/animal_health/fs-vnd.pdf

<https://www.cdc.gov/flu/avianflu/index.htm>

<https://extension.psu.edu/mareks-disease-in-chickens>

CRITICAL ADVICE FOR POULTRY EXHIBITORS

- Only take healthy birds to shows or fairs.
- Quarantine new or returning birds from home flock for 30 days; monitor for signs of illness.
- Perform home flock chores first. Use separate equipment, footwear, and clothing for quarantined birds. Wash hands after handling each bird.
- Isolate sick birds and contact a veterinarian about them.
- Clean and disinfect equipment.
- Vaccinate for relevant diseases.
- Minimize stress for birds at home or away.
- Provide excellent nutrition at all times.
- Emphasize sanitation and keep premises clean.

Revised Code of Washington (RCW) 16.36.082: Infected or exposed animals—Unlawful to transfer or expose other animals.

It is unlawful for any person with an animal having any contagious, communicable, or infectious disease to knowingly stable the animal or allow the animal to be stabled in any barn with other animals without notifying the other owners.

Table 1. Comparison of the disease characteristics of AI, Marek's disease, vND, and ILT in birds.

	LP AI and HP AI	Marek's disease	vND	ILT
Cause	Avian influenza Type A virus strains	Alphaherpes virus	Newcastle disease virus	A herpes virus (natural field strain and vaccine-like strain)
Transmission	Direct or indirect contact with discharges and feces of infected birds; contaminated surfaces, clothing, footwear, and equipment; airborne transmission for short distances. Wild waterfowl carriers and movement of infected poultry moves virus to new areas.	Highly contagious. Virus grows in feather follicle cells and is released into environment. Can live for months in dust and poultry litter; much transmission via dander (sloughed skin cells). Infected birds perpetuate the disease.	Extremely contagious and pathogenic to poultry and birds. Virus spreads through direct contact with discharges from sick birds; contaminated footwear, clothing, equipment, and human hands; and manure. Easily transported in infected birds.	Direct or indirect contact with inapparent carriers, sick or recovered birds, or their discharges. Also contaminated footwear, tools, clothing, manure, and dead birds. Can be airborne for hundreds of feet.
Signs	LP AI: decreased egg production, ruffled feathers. HP AI: sneezing, coughing, eye and nose discharge, swollen sinuses; severe illness and rapid death of most chickens.	Leg, wing, and/or neck paralysis; weight loss; change in eye color or pupil shape; blindness; rough skin; decreased growth rate and egg production; tumors of internal organs, skin, muscle, and nerves; depression; death.	Sudden death, increased flock deaths. Nervous, respiratory, and gastrointestinal system signs: diarrhea, sneezing, coughing, nasal discharge, difficulty breathing, stiffness, tremors, lethargy, twisted neck, swollen eyes and neck, circling,	Mild to severe illness 6 to 14 days after viral exposure. Respiratory distress and general ill health: difficulty breathing, coughing, sneezing, watery eyes, swollen sinuses, nasal discharge, blood-tinged mucus, lethargy, poor appetite, decreased egg production, increased death rates.
Prevention	Effective and comprehensive biosecurity plan. Vaccination under veterinary guidance.	Vaccination of eggs or day-old chicks greatly reduces clinical cases. Keep housing clean and minimize dust through good ventilation. Remove sick birds promptly. Select for resistant birds.	Effective and comprehensive biosecurity plan. Vaccination under veterinary guidance, though vaccinated birds can still become ill during vND outbreak.	Keep a closed flock; do not go to shows; effective biosecurity practices; possible vaccination with tissue culture origin vaccine under veterinary guidance.
Relevance to fairs	Stress can precipitate clinical illness in infected individuals.	Stress can precipitate clinical illness in infected individuals.	Disease easily spread through movement of infected birds. Mingling then	Do not admit poultry for showing if they have been vaccinated with the TCO vaccine in the 30

	Highly contagious, so increased risk whenever birds from multiple premises have contact with each other.	als. To minimize viral air-borne transmission, avoid getting feathers and dust into the air via aggressive sweeping, and/or mist litter with water before sweeping.	dispersal of birds from fairs could easily expand outbreak area.	days before an exhibition.
Human health concern?	Some strains may be transmissible to humans and/or swine.	No.	Conjunctivitis and fever possible.	No.
Notes	Virus carried in and spread by wild water fowl; doesn't harm them, but affects domestic chickens, ducks, and turkeys. Concern about mixing genes from swine, avian, and human influenza viruses to produce highly contagious, highly pathogenic human influenza strain.	Strains affect quail, chickens, and turkeys. All chicken flocks presumed infected.	Previously called exotic Newcastle disease. 2018-2019 outbreaks in CA and UT. Chickens affected more than ducks and geese.	Can also affect pheasants, peafowl, and turkeys.

