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# 2023 Small Holder Swine and Poultry Seminar Series



## Small Flock Poultry Health and Biosecurity

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# Outline

- Biosecurity for small flocks
- Characteristics of healthy birds
- What to do if your birds are sick
- Manitoba PID Program
- Avian Influenza Risk



# What is Biosecurity?

Procedures you put into place to keep your flock healthy and to protect your flock against disease

- Can be simple and inexpensive
- Must be maintained – be vigilant!



**Keep what's inside the coop in, and what's outside the coop out!**

# Biosecurity – Protect Your Flock

**Protect your flock from wild birds, other animals, rodents – they can bring viruses, bacteria, and other disease causing agents into your flock**

- Keep feed stored in a sealed, waterproof container
- Pick up any feed spills/wasted feed
- Keep your flock's water source clean and away from wild birds
- Do not use contaminated water that may contain wild bird droppings
- Remove standing water which may attract wild birds

# Biosecurity – Protect Your Flock

- Keep your birds in a screened in area
  - Screen doors, windows and vents
  - Keep indoors during wild bird migration season
- Do not allow cats, dogs or other pets in with your flock
- Don't keep birds and pigs together
- Keep grass around your coop or pen mowed to discourage rodents
- Look for signs of rodent droppings/chewed equipment
  - Use bait stations around your coop or barn

# Biosecurity – Keep it Clean

**Viruses, bacteria and parasites can live in organic matter such as litter and soil**

- Clean coops, pens, cages regularly
- Clean feeders and waterers daily
- Remove any dead birds, garbage, unused eggs a.s.a.p.
- Dead birds and manure should be not be stored near flocks
- Wash hands thoroughly before and after handling birds
- Use dedicated footwear and clothing around your flock
- Clean and sanitize tools before sharing with another flock

# Biosecurity – Restrict Visitors

## People can spread bird diseases too!

- As a general rule, do not allow outside access to your flock
- Keep a biosecurity log book
- Do not allow people who have their own birds near your flock
- Clean outside footwear of debris, disinfect before and after entering your flock
  - Or offer boot covers
- Disinfect tires and wheel wells of any vehicles that have been around poultry before entering your property

# Biosecurity – Don't bring it home

- Source chicks from reputable hatcheries/dealers
  - Those that practice disease management/vaccination programs
- Isolate new or returning birds
  - 2-4 weeks separate from flock
  - **\*CFIA recommends not mixing birds during avian influenza risk\***
- Minimize mixing of ages and species of birds
- **Don't share tools and equipment with other poultry flocks – but if you do, clean and sanitize it before it returns!**



# Biosecurity – Cleaning and Disinfecting Tips

## Most disinfectants will not work properly if there is a presence of organic matter.

- Can use a simple, three-step cleaning and disinfection process – should be completed outside or in a well-ventilated room, wearing protective eyewear and gloves.
- 1. Remove **all** organic material/debris from footwear, tools and other equipment with a brush or sponge, using detergent and clean, hot water.
- 2. Scrub again, using a solution of 50 millilitres of household bleach (sodium hypochlorite, 5%-6%) and 4 litres of water. Let stand until the surface is dry.
- 3. Lastly, scrub with hot water and apply disinfectant following the label directions. Allow to completely dry.

# Biosecurity – Examples of Disinfectants

Designed to stop or kill the growth of viruses and bacteria

- Chlorines eg. Concentrated Bleach (Sodium hypochlorite).
  - Household sodium hypochlorite concentration is generally 5-6%. A dilution of 1 part of bleach and 4 parts of water (1/5 solution) should be used.
- Oxidizing agents eg. Virkon
- Aldehydes eg. Synergize
- Quaternary Ammonia eg. Biosentry and 904

**FOLLOW LABEL INSTRUCTIONS INCLUDING WATER TEMPERATURE, MIXING RATES, AND CONTACT TIME.**

# Characteristics of healthy birds

## You know your flock – know what's normal for them

- Erect stance with head and tail elevated
- Bright red comb and wattles (mature birds)
- Filled-out face parts
- Bright and alert eyes
- Clean nostrils
- Smooth, neat, clean feathers
- Filled-out legs
- Joints that are smooth and cool to the touch
- Scales on the legs and feet that are clean and waxy in appearance

# Characteristics of healthy birds

- Powerful movements when struggling to get away
- Weight that is typical for the type and age of the bird
- Color of the skin that is characteristic for the breed and strain of bird, as well as the age and state of production
- In addition, a healthy bird eats and drinks frequently with the usually accompanying waste products (fecal material with white uric acid crystals) and displays no signs of respiratory distress.

# Identifying Sick Birds

**A disease-causing organism can affect more than one system, leading to a variety of different clinical signs**

- Loss of appetite, not drinking
- Depression or weakness, refusal to get or and move easily
- Not growing; smaller than other birds
- Lameness, swelling of feet or joints, warts or scabs
- Sneezing, coughing, raspy breathing (rales), 'snicking' (hacking), gasping
- Watery eyes, nasal discharge, head shaking
- Swelling of face or wattles
- Blueish/purple face or comb
- Diarrhea and/or blood in droppings
- Deformed shell (ridges) or shell-less eggs
- Ruffled feathers, foul odor

# What to do when your birds are sick?

## Early detection can limit the effects of disease!

- Establish a sick pen, with separate feed and water
- Isolate sick birds
- Avoid contact with other flocks
- Consult a veterinarian
- Dispose of dead birds using an approved method – incinerate, burial or compost
- **Wash your hands thoroughly before and after handling sick birds!**

<https://extension.umd.edu/programs/agriculture-food-systems/program-areas/animal-science/poultry/publications>

<http://afs.ca.uky.edu/poultry/poultry-health>

# MB Poultry Flock Avian Influenza Program

## Free veterinary examination of dead birds submitted by small flock owners to the province's veterinary laboratory

- Small flock owners (<1000 birds)
- Chicken, turkey, duck, geese, game bird, and peafowl qualify
- Covers necropsy, histopathology, PCR testing for Avian Influenza A Virus (AIV) and Infectious Laryngotracheitis Virus (ILTV)
- High mortality/large egg production drop in flocks < 2 weeks of age
- Chicks or poults less than 2 weeks of age if you have lost  $\geq 5$  birds per 100 hatched or purchased
- **Submit through your veterinarian**

<https://manitoba.ca/agriculture/animal-health-and-welfare/animal-health/poultry-flock-avian-influenza-program.html>

# Manitoba Premises ID Program

Under the [Animal Premises Identification Regulation](#), all owners and operators of premises with livestock and poultry must complete a premises identification application

- Traceability program that links livestock and poultry to geographic locations for better management of emergencies
- All owners and operators of premises with livestock and poultry must supply basic land information by completing an application
- This information is then entered into a confidential database and a unique national Premises Identification Number is assigned to the contact
- In a crisis, such as a disease outbreak or natural emergency, officials can use the Premises Identification database to quickly identify individuals who may be affected

<https://www.gov.mb.ca/agriculture/food-safety/traceability/premises-identification.html>



# Avian Influenza (AI)

**A contagious viral infection that can affect many species of food-producing birds, such as chickens, turkeys, domestic ducks and geese, quail, pheasants and guinea fowl**

- Classified into low pathogenic (LP) or high pathogenic (HP) strains > severity of illness caused in birds
- Wild birds, particularly geese, ducks and shorebirds, are known to transmit the virus between regions during spring and fall migration
- Wild birds may not show signs of infection, but shed virus in droppings
- Wild birds spread virus through direct or indirect contact

**In Canada, HPAI strains and certain LP (H5 and H7) strains are notifiable under the *Health of Animals Act* and must be reported to Canadian Food Inspection Agency (CFIA)**

# Wild Bird Spring Migration Routes



Over 75% of Canadian wild bird species spend half the year outside of Canada

[Birding.about.com](http://Birding.about.com)

# Avian Influenza (AI)

- AI viruses may survive for several days in feed, water, litter, soil, dead birds, eggs or litter
- AI viruses can be transmitted between flocks via movement of infected birds, or on contaminated equipment, clothing, footwear, vehicles, water and feed
- The incubation period of AI ranges from 2-14 days
- HPAI spreads rapidly within densely populated poultry flocks
- Small flocks are considered at high risk for HPAI infection as they often have access to outdoor pens or free range
  - high probability of contact with wild birds that may be contaminated with HPAI

# HPAI Symptoms in Poultry

**Some or all of the following clinical signs may be evident:**

- a drop in production of eggs, many of which are soft-shelled or shell-less
- diarrhea
- haemorrhages on the hock
- high and sudden mortality rate
- quietness and extreme depression
- swelling of the skin under the eyes
- wattles and combs become swollen and congested

# Avian Influenza Risks to People

- Considered a low risk to people
  - Slightly elevated risk for people who handle sick birds
  - People who are in contact with HPAI positive flocks may consider getting the annual flu shot
- There is no evidence to suggest that eating cooked poultry or eggs could transmit HPAI to humans

# Current AI Situation in Canada

## A highly pathogenic Eurasian strain, H5N1 is currently circulating in North America

- In Canada, as of 03/06/23:
  - 1<sup>st</sup> case Dec. 20<sup>th</sup> 2021 in a small flock in NFL
  - 299 confirmed infected flocks across 9 provinces
  - ~7.14 million birds affected
- In US, as of 05/03/22:
  - 784 confirmed flocks across 47 states
  - ~58.59 million birds affected

**Trade Implications for poultry from affected zones**

# Avian Influenza – H5N1 What we are seeing

- Confirmed positives in wild birds, backyard flocks and commercial chickens and turkeys
- Sensitive species – chickens and turkeys (>90% mortality)
- Possibility of wild bird die-offs, neurological symptoms noted in some species
  - Waterfowl – Snow geese, Canada geese, Ross's goose
  - Shorebirds – herring gulls, tundra swan
  - Corvids – crows, ravens, black-billed magpie
  - Raptors – bald eagles, red-tailed hawks, turkey vulture
  - Others – great-horned owl

# HPAI – Protect your flock

Owners of all poultry and non poultry flocks should take precautions to protect their flocks and prevent the spread of HPAI

- **Install strong biosecurity measures for your flock**
- Flocks should be kept inside as long as possible, at minimum until spring migration is passed
- Trading, sales and exhibitions of live birds between flocks should be stopped until the risk of HPAI is determined to be reduced
- Purchase of chicks from licensed and inspected hatcheries is considered safe
- Small flock and non-commercial flock owners are required to complete an application with Manitoba's [Premises Identification Program](#) - this allows rapid contact should HPAI be found nearby



# HPAI – What if my birds are sick?

**Contact a veterinarian immediately if any increase in sudden death or respiratory signs is seen in a flock or contact local CFIA animal health office:**

## Manitoba – Animal health

Hours of operation: 8:00 am to 4:00 pm

- Brandon: 204-578-6670
- Dauphin: 204-622-4086
- Emerson: 204-373-2346
- Winkler: 204-325-1560
- Winnipeg: 204-259-1400

# HPAI – What if I encounter sick wild birds?

- Do not touch dead birds or other wildlife with your bare hands
- Protective eyewear and masks are recommended as an additional precaution
- Hands should be thoroughly washed before and after with soap and water or alcohol-based hand sanitizer
- If a dead bird has to be handled, gloves should be worn and the dead bird placed in a plastic bag.

Manitobans are asked to contact the **TIP Line (toll-free) at 1-800-782-0076** if they find any of the following:

- clusters of six or more dead wild waterfowl (e.g., ducks, geese) or other water birds;
- any number of dead raptors or avian scavengers (e.g., ravens, crows, gulls); and
- groups of dead birds, such as more than 20 of any species.

# Contacts

## CFIA Animal Health Manitoba Offices

Brandon: 204-578-6670

Dauphin: 204-622-4086

Emerson: 204-373-2346

Winkler: 204-325-1560

Winnipeg: 204-259-1400

## CFIA Avian Influenza Website:

<https://inspection.canada.ca/animal-health/terrestrial-animals/diseases/reportable/avian-influenza/eng/1323990856863/1323991018946>

# Contacts

## Manitoba Agriculture

Chief Veterinary Office 204-945-7663

Email: [chiefveterinaryoffice@gov.mb.ca](mailto:chiefveterinaryoffice@gov.mb.ca)

Poultry Specialist, Amy Johnston 1-844-769-6224

Email: [ARD@gov.mb.ca](mailto:ARD@gov.mb.ca)

## Manitoba Avian Influenza Updates:

<https://www.gov.mb.ca/agriculture/animal-health-and-welfare/animal-health/update-avian-influenza-in-north-america.html>

# Additional Webpage Links

## **Manitoba Agriculture:**

<https://www.gov.mb.ca/agriculture/index.html>

## **Manitoba Premises ID Program:**

<https://www.gov.mb.ca/agriculture/food-safety/traceability/premises-identification.html>

## **CFIA Animal Health:**

<https://inspection.canada.ca/animal-health/eng/1299155513713/1299155693492>

## **Canadian Wildlife Health Cooperative Avian Influenza:**

[http://www.cwhc-rcsf.ca/avian\\_influenza.php](http://www.cwhc-rcsf.ca/avian_influenza.php)

## **USDA Avian Influenza:**

<https://www.aphis.usda.gov/aphis/ourfocus/animalhealth/animal-disease-information/avian/avian-influenza>

# Q & A

