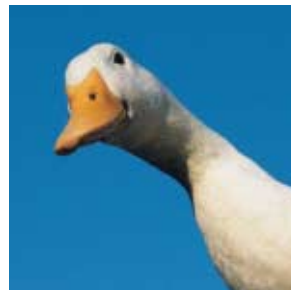
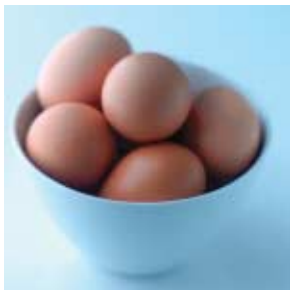


Confinement and biosafety

GUIDE

applicable to seasonal outdoor
breeding operations



CONFINEMENT AND BIOSAFETY GUIDE APPLICABLE TO SEASONAL OUTDOOR BREEDING OPERATIONS

Introduction

Highly pathogenic avian flu is also known as “bird flu”. This very contagious disease is caused by a Type A influenza virus that can affect almost all species of wild and domestic birds. This disease can cause an extremely high mortality in domestic birds and rapidly infect a large number of birds in a given area.

Under certain conditions, some virus strains may be a source of illness for individuals who come into direct contact with infected birds. However, this disease should not be confused with human flu, a common ailment.

One possible mode of transmission of this virus is the contact between domestic birds and wild birds, in particular with their droppings. In light of the results of a recent Canadian survey on the presence of avian flu among wild birds as well as the international situation, it is essential to protect domestic birds from all exposure to wild birds.

With a view to reducing the risks of introduction of highly pathogenic avian flu, the Ministère de l’Agriculture, des Pêcheries et de l’Alimentation (MAPAQ) issued a regulation that aims to separate domestic birds from wild birds. In the event of an epidemic, your breeding operation as well as breeding operations located in a well defined area could be required to perform a mass culling. Clearly, it is better to try to prevent an epidemic rather than have to implement measures to control an outbreak with the heavy consequences that such measures entail.

All custodians or owners of birds should take steps to protect their birds, the industry and the community against this devastating virus.

This document is a practical tool to help you meet the regulatory requirements. It is a “must read” if you keep birds for trade or as a pastime, or if you keep ducks, geese or other types of birds, such as ratites or birds intended for hunting.

How to recognize highly pathogenic avian flu in birds

In general, bird flu has a short incubation period (period between contact with the virus and the appearance of the first clinical signs), namely a few hours to two weeks. This disease is characterized by many clinical signs, notably:

- lack of energy and appetite;
- reduction in egg production and the laying of many eggs with soft shells or no shells;



- swelling of the head, the eyelids, the crest, the caruncles and the shanks;
- coughing, sneezing and nervous signs;
- diarrhea;
- sudden death;
- lack of coordination.

Bird producers who suspect an avian flu infection must immediately contact a veterinarian, the Institut national de santé animale (1 800 463-5023) or a regional office of the Canadian Food Inspection Agency (blue pages of the telephone book).

How can my birds contract avian flu?

It is important to know the virus transmission principles in order to have a good understanding of the biosafety rules that are essential for protecting your breeding operation. Your birds can come into contact with the virus in several ways:

- through direct contact with secretions of infected birds, particularly droppings;
- through contaminated water, clothing and equipment;
- through wild birds which may have a normal appearance (no clinical signs);
- through broken, contaminated eggs, which may infect chicks in the incubator.



Another important point: the virus can survive in manure, water and animal tissue (be careful with the carcasses of dead birds).

HOW CAN I PREVENT THE SPREAD OF THE VIRUS TO COMMERCIAL BIRD BREEDING OPERATIONS OR ITS INTRODUCTION IN MY BREEDING OPERATION?

The protection of bird breeding operations, whatever their size, against avian flu requires strict biosafety measures, both personal and on the farm. These biosafety measures may also help reduce the risk of other diseases such as salmonellosis.

In general, avian flu is spread when infected birds are bought or sold, or when birds come into contact with the droppings of other birds, for example on dirty cages, food, vehicles, shoes and clothing.

One of the main measures for preventing the disease consists of following good hygiene practices. All persons working with birds or who are in charge of taking care of a breeding operation have a responsibility to assume in this respect.

The main risks of transmission of the virus from one region to another are associated with the following situations: sale of birds in markets, movements of wild aquatic birds that have been in contact with birds in chicken yards, people who work in the poultry farming sector or sellers of birds who are wearing dirty clothes or shoes, or who bring contaminated cages to markets or farms.

1. Keep your distances and follow hygiene measures!

Many pathogenic organisms, such as bacteria and viruses, can be introduced into a flock by humans and contaminated equipment. These microscopic organisms are transported on boots, clothing and vehicles which may appear to be clean.



- Allow only those persons who take care of birds to come into contact with them. If visitors want to see birds, make sure that they wash their hands beforehand and that they clean their shoes. Better yet, provide your own boots or disposable plastic boots for your visitors.
- Prohibit anyone who has birds or who has recently been in contact with birds (after having visited another flock or taken part in a bird exhibition, for example) from approaching the flock. Persons who care for the flock (employees and volunteers) should not have birds or take part in events where birds are present, because this would increase the risks of introducing diseases into the flock.
- Limit access to hen houses, and notably the access of farm workers, livestock feed suppliers, veterinarians caring for birds, bird capture teams, sawdust and chip suppliers, farm services personnel, and occasional visitors.
- Keep a register of all visitors who come into contact with birds.
- Provide clothing and shoes intended exclusively for work near birds and leave them at the entrance to the structure or the building
- Wash and disinfect boots and equipment (shovels, rakes, brooms, etc.) which come into contact with birds or their droppings. Regularly clean cages and surfaces that are in contact with feed and water.
- Wash your hands thoroughly with soap and water before and after taking care of birds.
- Follow strict hygiene measures in and around hen houses: scattered food, dirty litter and stagnant water attract wild birds and vermin.



2. Avoid all contact with wild birds

Wild birds may be vectors of the bird flu virus and other pathogens (example: *Salmonella*). Reduce to a minimum the contacts with wild species and their droppings to better protect the flock from these diseases.

- Keep the flock in an enclosed structure where the birds cannot have any contact with wild birds. Cover all openings (doors, windows and ventilation vents) with wire mesh and make sure that this mesh is in good condition.
- Feed and water birds indoors.
- Never give birds surface water, such as the water of a pond, which may have been contaminated by wild bird droppings.
- Keep feed in an air-tight container that is bird- and rodent-proof.
- Keep out of the reach of wild birds all material, for example straw or wood chips, intended for use as bird litter.



3. Avoid bringing diseases back to the farm

The cohabitation of birds of different species or of different origins increases the risks of introducing diseases into the flock. It is preferable to keep only birds of the same age and the same species together.

- If the breeding operation has birds of different ages and/or different species, reduce to a minimum the contacts between the groups by keeping them in separate rooms, particularly in the case of geese and ducks. Hogs should not have direct or indirect contact with your birds.
- When new birds arrive on the farm, make sure that you obtain a complete information sheet on them, notably concerning the diseases that they have had and the vaccinations that they have received. Check with a veterinarian to find out what vaccination methods should be adopted.
- Birds that have been taken to an agricultural fair or a market, or that are added to the flock, must be put under quarantine upon arrival, namely kept away from the rest of the flock for a minimum period of 2 weeks after they return to or arrive on the farm. During this period, be on the look-out for any sign of disease. Clean and disinfect the cages and equipment used for these birds. Use separate protective clothing, shoes and equipment for birds under quarantine and always handle these birds last. If you use the same equipment and same clothing, be sure to clean and disinfect them before and after handling these birds.
- Do not exchange equipment or supplies with other bird breeders. Clean and disinfect, before and after each use, all equipment borrowed or exchanged. Never exchange wooden or cardboard objects because they are porous and cannot be disinfected properly.



4. Be on the look-out for diseases and report them!

Early detection is essential if we are to put a rapid stop to an anticipated epizootic disease.

- If birds show signs of illness, such as: listlessness, unusual egg-laying activities or food-consumption behaviour, sneezing, difficulty breathing, runny nose or eyes, diarrhea or sudden death, call a veterinarian immediately.
- Eliminate dead birds without delay by using an authorized elimination method. Consult a veterinarian beforehand in case he wishes to take samples and have them analyzed by a laboratory.



Adapted from: Canadian Food Inspection Agency: www.inspection.gc.ca and Ministry of Agriculture, Food and Rural Affairs of Ontario (<http://www.omafra.gov.on.ca/french/livestock/birds/facts/biorecs.htm#eviter>)

DISINFECTION

Cleaning and disinfection are key steps in the biosafety field. Disinfectants are ineffective on dirty objects and surfaces. Before applying the disinfectant, it is essential to clean and rub the equipment with soap (detergent) and water, thoroughly rinse off any organic residue and detergent, and then allow the object or surface to dry completely. **Remember that viruses love water, dirt and humidity, and that disinfectants do not work in the presence of dirt (organic matter)!**

Disinfectants must be applied according to the instructions on the label. Respect the contact time indicated, then allow the disinfectant to dry completely before rinsing. If feeders or water bowls are involved, allow them to dry after rinsing before filling them up again. Here are a few examples of disinfectants that can be used in hen houses, on equipment and cages:

Sodium hypochloride (Bleach) liquid; dilute to a concentration of 2-3% active chlorine (equal proportion of water and bleach); not suitable for organic matter; contact: 10-30 minutes.

Calcium hypochloride solid or in powder; dilute to a concentration of 2-3% active chlorine; not suitable for organic matter; contact: 10-30 minutes.

Potassium monopersulphate 21,4 %; dilute to 1%; contact: 10 minutes.

Sodium hydroxyde (caustic soda) 2%; do not use on aluminium or metals; contact: 10 minutes.

Sodium carbonate 4%; contact: 10 minutes (in the presence of organic matter: 30 minutes).

When unsure, consult the manufacturer, as some disinfectants may have unwanted side-effects (corrosion of metal, odour, etc.)

WHAT ARE THE REGULATORY REQUIREMENTS?

In Québec

Highly pathogenic avian flu is a reportable disease under the **Regulation respecting the designation of a contagious disease and an infectious agent as well as the confinement of captive birds** of the Animal Health Protection Act (P-42).

Obligations of the owner or custodian of birds

- Take the necessary steps to prevent his birds from coming into direct or indirect contact with wild birds.
- Confine his birds within a facility erected and laid-out in a manner that prevents any direct or indirect contact with wild birds.
- Refrain from using surface water to clean the rearing premises, buildings or equipment or to water the birds.
- Report any suspected case of bird flu to the Department.



Obligations of the owner or custodian of ostriches, emus or rheas

- Notify MAPAQ in writing at the following address:
Ministère de l'Agriculture, des Pêcheries et de l'Alimentation
Institut national de santé animale
200, chemin Sainte-Foy, 11^e étage
Québec (Québec) G1R 4X6
- Feed and water his birds within covered premises or by means of feeders or water bowls protected in such a manner that wild birds cannot have access to them or soil them;
- Refrain from using surface water to clean the rearing premises, buildings or equipment or to water the birds.
- Notify MAPAQ immediately of any death (except those attributable to slaughter, accident or injury).



What is meant by birds in the regulation?

All birds reared or kept in captivity for the production of meat, eggs for consumption or other commercial products, for restocking supplies of game or for breeding those categories of birds, and includes show fowl.

Examples: hens, chickens, turkeys, ducks, coturnix, guinea fowl, geese, pheasants, Warren hens, ostriches, emus, rheas.

At the Canadian level

In Canada, avian flu is a reportable disease under the **Reportable Diseases Regulations of the Health of Animals Act**. This means that:

1. Any suspected presence of this disease in your breeding operation must be reported to the Canadian Food Inspection Agency (CFIA);
2. Measures to combat or eradicate the disease could be taken immediately (<http://laws.justice.gc.ca/en/H-3.3/fulltoc.html>). They include quarantine, restriction on movements, culling, massive disinfection and confinement.

HOW TO CONFINE BIRDS TO COMPLY WITH THE REGULATION RESPECTING THE DESIGNATION OF A CONTAGIOUS DISEASE AND AN INFECTIOUS AGENT AS WELL AS THE CONFINEMENT OF CAPTIVE BIRDS

The objective of confinement is to make sure that there is no contact between wild birds and domestic birds.

Of course, the best way is to confine your birds inside a **building** with walls and a solid roof. See to it that all building openings are fitted with wire mesh, the openings of which do not exceed 2.5 cm (1 inch) to prevent small wild birds from penetrating the structure. The building may, for example, be an adapted barn or cowshed. However, make sure that the ventilation, brightness level, bird density and litter are adequate to avoid the appearance of other problems (respiratory, behavioural, etc.).

If your birds have access to the exterior, it is important to erect a structure. **The walls** of this structure may be made of fabric, galvanized mesh, netting, etc., provided that the openings do not exceed 2.5 cm (1 inch). If the site is exposed to the wind, it may be necessary to build a windbreak around your facilities.

As for the **roof** of the structure, a closed roof is ideal for preventing your birds from coming into contact with wild bird droppings, but a roof made of netting, fabric or galvanized mesh may be an acceptable and less costly solution, provided that the openings do not exceed 5 cm (2 inches). Hence, an aviary is an acceptable shelter. **However, feeders and water bowls must be covered or be placed indoors to avoid being soiled by wild birds.**



IN SUMMARY

The keys for preventing avian flu:

**Respect
biosafety
rules**

**Monitor the
state of health
of your flock**

**Report any
unusual death
or episode of
disease**

For more information on animal health, food safety or to learn about inspection requirements, consult the Centre québécois d'inspection des aliments et de santé animale:

Telephone: 1 800 463-5023

Web site: www.mapaq.gouv.qc.ca

