

**WORLD OSTRICH ASSOCIATION**

**UNDERSTANDING AND CONTROLLING AVIAN  
INFLUENZA RISKS IN OSTRICH**



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**Introduction**

There are many good web sites containing information on Avian Influenza and offering guidelines on measures to be taken to protect commercial and backyard poultry flocks. These guidelines are designed to help Ostrich producers apply the information as it relates to Ostrich. The guidelines are updated as new information becomes available.

**How does disease spread?**

Avian Influenza (AI) is spread in direct bird to bird contact through secretions and faecal material. Transmission can also be on the clothing, contaminated feed, water, equipment, boots etc. Transmission can also be in the wind is when faecal material is in dust and blown in the wind. The maximum distance the AI virus is expected to travel is ½ kilometre. To summarise:

- ❖ movement of poultry, people, vehicles and equipment between and within farms
- ❖ the introduction of birds of low or unknown health status
- ❖ contact with neighbours flocks
- ❖ using shared farm equipment and vehicles, which have not been effectively cleansed and disinfected
- ❖ contact with vermin and wild birds
- ❖ birds drinking from contaminated water sources
- ❖ birds eating contaminated food
- ❖ unsatisfactory cleansing and disinfection of vehicles, sheds, feeding troughs and other equipment

**Biosecurity**

The first line of defence is to set up good biosecurity measures that minimise s transmission of disease. These should be in place on any commercial farm as a norm and not only when there is increased risk.

**Biosecurity Measures:**

- ❖ Feed and water birds indoors/under cover to avoid contamination by wild birds and other animals. [See end of section]
- ❖ Make sure your premises are tidy and clean. Spilled feed, litter and standing water attract birds and vermin
- ❖ If possible keep your birds separate from wild birds, waterfowl, pets and other animals.
- ❖ Control vermin.
- ❖ Make sure your clothes, footwear and hands are clean before and after contact with the birds. Any essential visitors should do the same.
- ❖ Avoid sharing equipment. If you have to share, make sure it is cleansed and disinfected before and after use
- ❖ Buy feed from a mill or supplier that operates to the good codes of practice in your country.
- ❖ Ensure your feed store is free of vermin and there is no access for wild birds
- ❖ Supply clean, fresh drinking water
- ❖ Ensure there is no standing water that birds may drink
- ❖ Be vigilant when purchasing new stock. Use reputable sources.
- ❖ Isolate new birds and birds you may have taken off the premises for a show or similar event.

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- ❖ Look out for signs of disease
- ❖ If you suspect disease, act quickly and consult your vet. Bird Flu and Newcastle Disease are notifiable diseases.

The greatest risk of transmission is through the feed and water when birds are outside. Ostrich are reared outdoors and therefore increased vigilance is required. Pen design should be such that the feed and water can be undercover and protected as best as possible from wild bird access. This will have added benefits of protecting the food from bad weather and sunlight.

#### **Actions now and planning ahead**

Even if you already practice good biosecurity, these steps are encouraged:

- ❖ Have feed and water undercover away from wild birds
- ❖ Draw up plan for practical steps to be taken to reduce the risk of disease occurring or spreading
- ❖ The plan should include an isolation period for all new stock and regular sampling procedures for certain diseases, including avian influenza.
- ❖ Make sure all records are up to date to ensure full traceability at all times
- ❖ Train staff to maintain strict standards of hygiene and biosecurity at all times.
- ❖ If staff have birds at home, make sure they operate the highest standards of biosecurity at home as well as at work.

#### **How to stop disease and keep your farm clean**

- ❖ **Don't bring infection onto your farm or spread it around your farm, on your clothes, footwear or hands.** Clean overalls and footwear must be worn when entering poultry farms. Protective clothing and footwear should be removed and either cleansed and disinfected, laundered or disposed of after use.
- ❖ **Strictly limit and control access to flocks.** If possible the site should be fenced and controlled at every entry point. Visitors and their vehicles should be limited and as far as possible kept away from the breeder pens, rearing pens and feedlots.
- ❖ **Have pressure washers, brushes, hoses, water and an approved disinfectant available.** Make sure they are used by visitors to clean vehicles, equipment and boots before entry and on leaving.
- ❖ **Clean and disinfect all vehicles after each journey.** If possible, do not use the same vehicles for transporting birds, feed, manure or other waste.
- ❖ **Regularly clean all crates, containers and other equipment before and after use.** Do not move any equipment into different buildings without cleaning and disinfecting that piece of equipment first. This also applies to any injecting and dosing equipment.
- ❖ **Keep farm access routes, parking areas, yards, areas around buildings and storage areas clean and tidy and well maintained.** This helps avoid wild birds and animals being attracted onto the site and entering the buildings.
- ❖ **Minimise contact between the ostriches and wild birds.** The wild birds carry disease. Prevent accumulation of standing water and remove spilled feed that could attract wild birds. Maintain buildings to ensure the wild birds do not nest or roost in them.
- ❖ **Keep wild birds, dogs, cats, rodents or other livestock out of buildings, feed stores and pens.**
- ❖ **Have an active rodent and pest control system in place.** Be vigilant for evidence of vermin. Monitor vermin activity by baiting and trapping.

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- ❖ **Supply only clean fresh drinking water to birds.** Water lines, drinkers and troughs must be flushed through and cleaned regularly. Minimise standing water in pens – these are high risk areas. Take every precaution to minimise exposure of water troughs to wild birds.
- ❖ **Feed bins, hoppers and feeding equipment must be cleaned and maintained regularly.** Feed silos and containers must be sealed to prevent animals and wild birds contaminating the feed.
- ❖ **Damaged eggs, dead birds, litter and manure may carry disease.** Dispose of them promptly and properly.
- ❖ **At depopulation at the end of a chick rearing cycle, thoroughly clean buildings and all equipment, including ducting, drains and fans if present.** Thoroughly clean the buildings – removing all litter, surplus feed and equipment. Disinfect the premises and all equipment and carry out rodent and other pest control. Cleaning equipment and protective clothing should also be cleansed and disinfected. Thoroughly clean outside runs, washing and disinfecting concrete runs. Scraping and clearing feedlot areas. If dry, sprinkle with water before scraping to minimise dust particles in the air blowing to neighbouring feedlots.
- ❖ **Minimise movement between production groups** – Breeders, Chick Rearing, Growout
- ❖ **Water runoff and wind.** When laying out the farm, watch for drainage from one area to another. For example, do not allow runoff from grower pens to come into contact with the baby chick rearing area. Watch for the prevailing wind. Ensure adequate protection to minimise risk of birds being exposed and therefore under stress from the wind. Also minimise risk of baby chicks being down wind from older birds.
- ❖ **Soil Contamination** - Soil contamination is a major area for contamination build-up. Pens should be left clear for a minimum of 30 days between batches to allow the sun time to kill the bacteria build up. Dusting with lime will help that process.

#### Buying new stock

- ❖ Always make sure you know the health status of any birds you are buying.
- ❖ Get your vet to test breeders if buying breeders, chicks or eggs
- ❖ Incoming stock should be isolated from the rest of the flock – discuss this with your vet and agree a testing and monitoring program
- ❖ Only place new stock in facilities which you know have been cleansed and disinfected
- ❖ Keep isolation buildings and pens as near as possible to farm entrance and separate from other buildings and pens.
- ❖ Use separate equipment when handling isolated stock. If you have enough staff on your farm, allocate some of them to deal only with isolated stock. If not, make sure you handle isolated stock last. Always wash and change into clean overalls and boots before going back to the main flock buildings and feedlots.

#### Vaccination

- ❖ Check with own country regulations. It is important to know that vaccination on a general scale is relatively new. There is limited work yet done on ostrich.
- ❖ Vaccination is allowed in the EU with the exception of the UK and Germany. In these two countries only vaccination of birds in zoos is allowed or where it can be proven the birds are rare, valuable or there are other special circumstances.

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- ❖ Vaccination is a good means of control in slowing down spread through vaccinated rings around Infected Premises, as well as reducing shedding of the virus.
- ❖ Meat and eggs from vaccinated birds is accepted under certain circumstances in the EU. Check with the authorities of the markets you service.
- ❖ Each bird requires 2 doses by injection.
- ❖ Good immunity achieved in chicken in 2 weeks, with up to 3 weeks to develop full immunity. No data yet available for Ostrich.
- ❖ Vaccination does not stop birds becoming infected and spreading the virus - follow procedures recommended by vaccination company
- ❖ Companies producing vaccine are:
  - Fort Dodge Animal Health  
Contact: Richard Currie +44 1392 876622
  - Merial  
Contact: Peter Cargill +44 1279 775858
  - Intervet  
Contact: Tibor Cresep +353 1 4511544

The above contacts will provide the contact in specific countries.

**Websites**

There are a number of websites with excellent information about Avian Influenza.

<http://www.defra.gov.uk/animalh/diseases/notifiable/disease/ai/index.htm>

<http://www.aphis.usda.gov/vs/birdbiosecurity/newsroomold.html>

<http://www.nal.usda.gov/awic/aflu/Avian%20Influenza.htm>