NSW GOVERNMENT Department of Primary Industries

primefact

Recognising exotic diseases of birds

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Animal Biosecurity and Welfare, NSW DPI

Exotic diseases are infectious diseases that are not normally present in Australia.

Serious exotic diseases are declared as prohibited matted under schedule two of the *Biosecurity Act 2015*. This means that there is a legal obligation to immediately notify authorities if you know or suspect that an animal has one of these diseases. If you see clinical signs or deaths in animals that may be due to an exotic disease, immediately phone:

- your Local Land Services (LLS) on 1300 795 299; or
- a NSW Department of Primary Industries (DPI) veterinarian or authorised officer; or
- the animal biosecurity emergency hotline 1800 675 888 (monitored 24 hours a day, 365 days a year).

Indicators of potential exotic diseases of birds

Below is a list of symptoms that could indicate an exotic disease of birds:

- a sudden increase in deaths
- a sudden decline in feed and/or water consumption
- unusually quiet birds
- unusually depressed birds
- any decline in egg production from normal to cessation or the sudden appearance of eggs without shells or pale shell eggs
- any birds with swollen heads/combs/wattles
- any birds with flaccid pale combs or very dark combs and wattles
- any birds with nervous signs e.g. head shaking, head and neck tremors, loss of balance, circling, convulsive somersaulting, wing and leg paralysis
- abnormal position of head and neck in a reasonable % of birds
- respiratory disease e.g. breathing difficulties, coughing, sneezing
- watery diarrhoea
- purplish patches on the legs and unfeathered skin

If you notice any unusual signs in your birds you should discuss with your private veterinarian, a LLS district veterinarian or a NSW DPI veterinarian.

Highly pathogenic avian influenza (HPAI)

HPAI is an infectious disease of birds caused by an influenza virus, which can on rare occasions also cause disease in humans. HPAI can infect a very wide range of birds including chickens, turkeys, quails, guinea fowl, partridges, pheasants, emus, ostriches, and a large number of aviary and wild birds, especially waterfowl such as ducks, geese and swans.

The HPAI virus is not the same as the human influenza virus that normally causes seasonal influenza (‘flu’) in humans, particularly in winter.

Birds may die shortly after acquiring the infection with no obvious signs or they may show a variety of symptoms including coughing, sneezing, depression, decreased egg production, and a sudden decline in feed and water consumption. Individual birds may exhibit nervous signs e.g. tremors of head and neck and unusual positions of head and neck.

Figure 1 – Bird with a swollen head, combs and wattles

Image credit: USDA

Newcastle disease (ND)

Virulent ND is a highly contagious viral disease of domestic poultry, cage and aviary birds, and wild birds. In poultry, virulent ND usually causes a rapidly fatal condition characterised by gastrointestinal, respiratory and/or nervous signs. In other avian species, the disease produced by virulent ND viruses ranges clinically from inapparent to a rapidly fatal condition.

An outbreak of virulent ND in chickens may be so severe that almost all birds of an affected flock die within 72 hours without noticeable signs, often causing a suspicion of poisoning. In adult layers, a marked drop in egg production may be the first sign, followed in 24-48 hours by deaths, which can reach 100%.

Australia is free of virulent ND, but this has not always been the case. Between 1998-2002, sectors of the Australian poultry industry were affected by virulent ND virus. The virus mutated from a local strain that had been circulating for many years without causing signficant disease.

Figure 2 – Bird with twisted neck

Image credit: Rod Reece, NSW DPI

Figure 3 – Birds with signs of paralysis

Image credit: Rod Reece, NSW DPI

Fowl typhoid (*Salmonella* Gallinarum)

Fowl typhoid (FT) is a septicaemic disease affecting primarily chickens and turkeys, but other birds such as quail, pheasants, ducks, peacocks, and guinea fowl are also susceptible.

FT can be transmitted through the egg by transovarian infection.

Mortality in young chicks and poults can vary from few to many, but mainly occur in the second week post-hatch. Affected young birds are listless, inactive and have greenish diarrhoea; adults may show negligible clinical signs or a drop in egg production, or may present with a 'sick bird' like appearance i.e. ruffled feathers, weight loss. Hatchability is poor and chick survival is low.

Duck virus hepatitis (DVH)

DVH is a highly fatal, rapidly spreading infection of young ducklings characterised primarily by hepatitis (inflammation of the liver).

Clinically, ducklings affected by DVH may die rapidly after a short period (hours) of vague clinical signs that may include opsithotonus (head thrown back).

Duck virus enteritis ('duck plague')

Duck virus enteritis (DVE) is an acute, contagious infection of ducks, geese and swans characterised by blood vessel damage, tissue haemorrhages, lesions of lymphoid organs and degenerative changes in the functional tissue of organs.

DVE affects all ages of birds.

In the early stages of a flock infection clinically affected birds die suddenly; as the disease progresses through the flock birds may show thirst, photophobia (extreme sensitivity to light), ataxia, nasal discharge, and watery diarrhoea. There may be fine tremors in birds that are handled. Egg production falls dramatically.

Infectious bursal disease (very virulent and exotic antigenic variant forms)

Infectious bursal disease is an acute, highly contagious viral infection of young chickens with lymphoid tissue. The cloacal bursa is the virus's primary target.

One of the earliest signs of infection in a flock is the tendency for some birds to pick at their own vents. Other clinical signs include soiled vent feathers, whitish or watery diarrhoea, depression, trembling, severe prostration, and finally death.

Turkey rhinotracheitis (avian metapneumovirus)

Turkey rhinotracheitis is one of the diseases that may result from avian metapneumovirus (aMPV) infection. A genetically similar metapneumovirus is associated with upper respiratory disease in humans.

Occupational exposure to turkeys can be a risk factor for infection with aMPV in humans.

Clinical signs in young poults include rales, sneezing, nasal discharge, foamy conjunctivitis, swollen infraorbital sinuses, and submandibular oedema. Coughing and head shaking are also frequently observed, particularly in older poults.

More information

For further information on exotic and notifiable diseases, refer to:

- http://www.dpi.nsw.gov.au/agriculture/livestock/health/general/notifiable-animal-diseases-nsw
- For biosecurity general enquiries, phone 1800 680 244.
- For updates go to www.dpi.nsw.gov.au/factsheets

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