

Information for Veterinarians

Avian influenza, a livestock epidemic

Already in January 2004, the World Health Organisation (WHO) confirmed the occurrence of influenza virus strains capable of affecting the health of animals and - in further consequence - also that of human beings. What we are in actual fact dealing with is a form of Fowl Plague, commonly known as "Avian Influenza". Originally, it occurred primarily in the Asian region, however, individual cases have been reported in Europe and, only just recently, also in Austria.

PLEASE NOTE: The threat posed to human beings lies primarily in a possible mutation of the Fowl Plague virus. It is currently not possible for anyone to tell in advance whether or not or when such a mutation would take place.

The Classic Fowl Plague, also known as Highly Pathogenic Avian Influenza (HPAI) is caused by Influenza-A viruses belonging to the subtype H5 or H7. It occurs in chickens, turkeys and in many other free-living birds. Ducks, geese, pigeons and other wild birds either rarely contract the disease or fail to show any symptoms, however they may be significant for spreading the pathogen.

Clinical and pathological signs in poultry:

- Incubation period from a few hours up to three days
- Mass disease with severe respiratory signs
- High mortality, first day ~ 50–80%, 2nd – 3rd day ~ 100%
- Greenish-watery diarrhoea
- Haemorrhages in the serous membranes, ovaries, other inner organs, tips of combs, legs
- Necrotic inflammation of the pancreas
- Tracheitis, sinusitis, oedema of the head
- Marked drop in egg production
- Depression, high temperature
- Reduced intake of water and feed

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NOTE: In poultry there are a great number of viral and bacterial diseases that exhibit similar symptoms (e.g. New Castle Disease, Pneumovirus, the acute form of ILT, Avian Pasteurellosis; problems can also be caused by ventilation problems in holding, feed or water, etc.)

Transmission from animal to animal

HPAI is highly contagious for poultry. The virus is spread through the animals' feces and other body secretions (saliva and tear fluid) whereby particularly high amounts of virus are excreted in the feces. The transmission occurs either directly or through contact with contaminated material such as feces, transportation containers, tools, egg boxes, footwear, clothes or vehicles. In extremely dusty environments airborne transmission may also occur.

Viability:

In general, the virus has a rather low viability outside, except when it is in feces or in a humid environment. Examples:

- 30 days in water at 0°C
- 30-35 days at 4°C in feces
- 7 days at 20°C
- 18 days in feather dust at henhouse temperatures

Transmission to human beings

Principally, Avian Influenza is only spread from animal to animal. While it is basically possible for a human being to contract the disease from an animal, this happens very rarely and only in places where animals and human beings are in very close contact, for example, in Asia where humans and animals live together closely in very small areas. As yet there has been no evidence of this virus being passed directly from one infected person to another person. The disease is dangerous for humans, but it is only lethal if treated too late or not at all.

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Prevention and Protection from Fowl Plague in Austria

Due to the deaths of several wild birds caused by Fowl Plague in Austria in mid-February, the Federal Ministry of Health and Women has decreed a set of precautionary measures to prevent the Fowl Plague from entering the flocks of domestic poultry.

Note: The cases of Fowl Plague that have occurred so far in Austria have exclusively been detected in wild birds. So far, no domestic poultry has contracted the disease.

The most important measure is the currently imposed **nationwide ban on free-range farming**, in other words, all poultry must be kept indoors in holdings or poultry compartments (official veterinarians may grant exceptions in individual justified cases, e.g. emu holdings for animal protection purposes). Additionally, the following applies across Austria:

- All poultry holdings must be registered with the district administration authority.
- Ducks and geese must be separated from other poultry.
- The holding of animal shows, animal exhibitions, animal markets, animal stock exchanges, etc. are to be monitored by official veterinarians and must be reported to the relevant bodies. The authority is entitled to prohibit the event.
- Any wild bird found dead must be reported to the official veterinarian at the relevant district administration authority.
- **In addition, the following tightened criteria for reporting a suspected outbreak of Fowl Plague in flocks of domestic poultry apply:**

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| <ul style="list-style-type: none">- sudden death of a larger number of animals (more than 3% a week)- massive drop in egg production (more than 5% drop for at least two days)- sudden drop of water or feed intake by more than 20%- respiratory signs- Oedema or haemorrhage of head, neck, comb or legs |
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NOTE: If an outbreak of Fowl Plague is suspected, all contact to poultry flocks that is not absolutely necessary is to be avoided. The relevant official veterinarian at the relevant district administration authority must be informed immediately.

The official veterinarian will then take samples from the flock and send them in to the national reference laboratory, Austrian Agency for Health and Food Safety (AGES), Institute for Veterinary Tests in Mödling for clarification.

Besides these rules that apply for the whole of Austria, special protection and surveillance zones were established around each of the areas where infected wild birds were found. Here, special measures are in place exceeding the general measures, for example, specific disinfection and cleaning regulations, bans on movement of poultry and poultry products (dispatch outside of these zones), etc. (For further details on the regulations and to obtain an updated list of the areas affected, please refer to www.bmgf.gv.at).

Should the "Avian Influenza" still be detected in domestic poultry despite all these precautionary measures, further regulations will enter into force in the context of a crisis plan developed for such an event. These regulations include the establishment of crisis centres, the closing off of the infected farm, the culling of affected poultry, etc. (For further details, please refer to the "Avian Influenza and Newcastle Disease Crisis Plan" at www.bmgf.gv.at).

Excursion: Avian Influenza Vaccination:

At present, the prophylactic vaccination of poultry flocks against the H5N1 virus is forbidden in Austria. The following reasons speak against the vaccination:

- The vaccine is only effective against one specific influenza strain; even with the vaccination an infection can be spread with a different strain
- Birds may shed virulent virus
- Disease awareness is lowered (lack of hygiene if farmers rely exclusively on vaccination)
- Cost of vaccine and cost of veterinarian
- Disadvantages in trade: vaccinated poultry and products of vaccinated animals will find no buyers or have difficulty finding them.

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According to the current provisions, a so-called “emergency vaccination” can only be carried out as a supplementary measure to the control measures following the outbreak of the epidemic. In case the epidemic takes a devastating course, the current situation in Austria would have to be reassessed. Decisions would have to be made taking into account the contagiousness of the virus strain, the poultry farm density and not least the efficiency of the measures to be taken. The Federal Ministry of Health and Women is responsible for the decisions, which require the approval of the EU.

Recommendations to Prevent Transmission to Human Beings

When dealing with birds suspected of being infected, the following hygienic measures should be strictly observed:

- Tight-fitting mouth protection (mouth-nose mask, FFP3 with valve)
- Eye protection (including side protection)
- Protective clothing (disposable gown with long sleeves and elastic cuffs, disposable overall; forced-air ventilated protective clothing is only necessary in the case of aerosol-producing activities)
- Gloves that cover cuffs
- Headgear (hair must be fully covered)
- Adequate boots capable of being disinfected (e.g. rubber boots)
- Hygienic hand disinfection with alcohol-based disinfection means after removing gloves and mask (all disinfection means included in the expert list of the ÖGHMP (Austrian Association for Hygiene, Microbiology and Preventive Medicine) are suitable).

Additionally, veterinarians are recommended to have a vaccination against human Influenza viruses in advance (with the currently recommended vaccine) in order to avoid double infections with the human Influenza and Fowl Plague virus.

As of: February 2006



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For further information, you can get in touch with the **Info Hotline** of the Austrian Agency for Health and Food Safety (AGES) by calling **050 555 666**.

Legal note:

No liability is assumed for the completeness of this paper.

Further information can be obtained at www.ages.at and at www.bmgf.gv.at where the Austrian Pandemic Plan and the "Classic Fowl Plague and Newcastle Disease 2000 Crisis Plan" are available for download.