



**International Animal Health Division**

*International Disease Monitoring*

**Qualitative Risk Assessment**



**Ref: VITT 1200/HPAI-USA**

**AVIAN INFLUENZA**

**IN**

**THE UNITED STATES OF AMERICA**  
**(TEXAS)**

**Date approved: 27 February 2004**

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## **1. Summary**

The US authorities reported an outbreak of highly pathogenic avian influenza (H5N2) virus in a small poultry flock in Texas. Infected birds from the index flock were sent to two live bird markets in Texas.

The risk of disease spread within the affected state (Texas) and to other non-affected states is unknown.

The UK has therefore followed the EU and suspended imports of commodities likely to introduce infection from the whole of the USA.

## **2. AVIAN INFLUENZA IN THE UNITED STATES OF AMERICA**

### **2.1. Disease Report**

The US authorities reported an outbreak of a highly pathogenic avian influenza virus in a poultry flock in Gonzales County, Texas (United States Department of Agriculture, 2004). Laboratory tests confirmed the presence of H5N2 virus. The affected flock was depopulated on 21 February 2004. Epidemiological investigation and laboratory testing confirmed that infected birds from this flock were also located in two live bird markets in Texas. These two markets are currently subject to quarantine and depopulation.

State disease control measures have been put in place within a 10 mile radius from the index farm. The live bird markets appear to be located within the quarantine zone.

We do not yet have complete, detailed information on the disease control measures, for example those applied to feed trucks entering or leaving the restricted area.

Outbreaks of highly pathogenic avian influenza caused by H5N2 were recorded in commercial poultry flocks in the United States of America (Pennsylvania, Virginia, New Jersey and Maryland) in 1983/1984 (SCWDS, 1986).

In 1994, a low-pathogenic H5N2 virus isolated from chicken in Mexico was found to be related to an H5N2 virus previously isolated from shorebirds in Delaware Bay, USA, in 1991 (Webster, 1998). The Mexican H5N2 low pathogenic isolate was believed to have spread quickly among chicken during 1992, and mutated into a highly pathogenic strain by the end of 1994. It caused a major outbreak that was not controlled until the end of 1995 (WHO, 2004).

Highly pathogenic H5N2 virus was isolated from outbreaks of avian influenza in Northern Italy that occurred from October 1997 to January 1998. Characterisation of this isolate indicated a relationship to an H5N2 virus responsible for HPAI outbreaks in Pennsylvania in 1980s (Donatelli *et.al.*, 2000).

H5N2 virus has not been associated with infection in non-avian species.

## **3. LEGAL TRADE – RECENT ACTIVITY**

### **3.1. Live birds**

#### **3.1.1. Poultry**

Under EU rules, imports of live poultry are permitted from the United States. An official certificate must accompany the consignment stating that birds come from

an area (a 25km radius) officially free for the past 30 days from avian influenza and Newcastle disease.

Consignments of live poultry are subject to 42 days post-import quarantine and frequent official inspections. All birds dying within 14 days of import are sent for virus isolation testing. The health of the imported birds remains under review until the end of 42-day quarantine and any further abnormal disease or death rate is investigated.

Electronic data indicates that fewer than 20 consignments of live poultry have been imported since January 2003, the last consignment being imported in November 2003.

### **3.1.2. Captive birds**

The importation of captive birds from the United States is permitted subject to 30-days post-import quarantine and compulsory laboratory testing for avian influenza and Newcastle disease. An official certificate must accompany the consignment stating that birds come from an area (a 10km radius) officially free (for the past 30 days) from avian influenza and Newcastle disease.

200 assorted birds have been imported since January 2003.

### **3.1.3. Day old chicks**

Under EU rules, imports are allowed and the conditions are the same as for live poultry (refer to 3.1.1)

Electronic data indicates that one consignment of day-old chicks was imported in February 2004. 140 000 live poultry (believed to be day old chicks) have been imported since January 2003.

Consignments totalling 16 000 chicks, expected in early March, have been stopped.

## **3.2. Hatching eggs**

Under EU rules, imports of hatching eggs are permitted. A quarantine period of 21-day post-hatching applies and is subject to frequent official inspections. It is compulsory that all chicks dying within 14 days post-hatching are sent for virus isolation testing. An Official certificate must accompany the consignment stating that birds come from an area (a 25km radius) officially free for the past 30 days from avian influenza and Newcastle disease.

Electronic data indicates that approximately 200 consignments totalling 2 million hatching eggs have been imported since January 2003. Licences have been issued for 15 consignments since 1 January 2004, none from Texas.

### **3.3. Eggs and egg products**

Under EU rules, eggs and egg products may be imported from the USA.

Egg products are required to be treated to ensure that they are free from salmonella.

Electronic data shows that 300 tonnes of eggs and 20 tonnes of egg products were imported during 2003.

### **3.4. Poultry meat and meat products**

Imports of poultry meat and meat products are not permitted from the United States as there are no EU approved poultry establishments.

### **3.5. Feathers**

Under EU rules, unprocessed and processed (treated with a steam current or by some other method ensuring that no pathogens are transmitted) feathers may be imported from the USA.

Feathers are permitted for import into the UK from the USA, through a border inspection post, provided that they are securely enclosed in packaging and dry, and that the goods are sent directly to the plant of destination or a warehouse.

Customs data shows that 1 tonne of feathers and similar products was imported during 2003.

### **3.6. Game trophies**

Unprocessed game trophies of birds may only be imported from countries that are authorised to export fresh meat of the species concerned. EU rules allow importation of unprocessed game trophies from establishments that are located in areas free from animal disease.

Game trophies that have undergone a complete taxidermy treatment to ensure their preservation at ambient temperature are allowed to be imported without restrictions for reasons of animal health.

There are very limited imports of bird game trophies. The most likely imports are destined for research or scientific / museum collections.

### **3.7. Raw pet food or feed material**

Import of raw pet food is not fully harmonized under EU rules, however, member States may import provided animal health conditions equivalent to those required for fresh meat are met.

Feed material containing animal proteins may be imported for inclusion in pet food and for feed to animals not intended for human consumption. However, these commodities must be subjected to heat-treatment of 133<sup>0</sup>C for minimum of 20 minutes at the pressure of 3 bars.

Electronic data indicates no imports of these commodities from the USA since 2000.

### **3.8. Manure, processed manure and processed manure products**

Unprocessed manure may only be imported from countries permitted to export fresh poultry meat. This includes the USA.

Processed manure and processed manure products must originate from approved establishments and have been heat-treated to at least 70<sup>0</sup>C for at least 60 minutes. This is monitored by microbiological sampling. Imports of processed manure from any country are permitted and must come from approved establishments and be accompanied by a health certificate confirming that treatment to achieve prescribed microbiological standards has been carried out.

There is no record of either of these commodities being imported from the USA in recent years.

### **3.9. Ratites**

#### **3.9.1. Live ratites**

Under EU rules, imports of live ratites are permitted from the United States. An official certificate must accompany the consignment stating that birds come from an area (a 25km radius) officially free for the past 30 days from avian influenza and Newcastle disease.

Consignments of live ratites are subject to 42 days post-import quarantine and frequent official inspections. All ratites dying within the quarantine period are sent for virus isolation testing.

Electronic data indicate no imports of live ratites during 2003 and until 24 February 2004.

### **3.9.2. Ratite Meat**

Imports of ratite meat are permitted from the United States.

Electronic data indicate that 20 tonnes of ratite meat were imported during 2003.

## **4. Illegal trade**

The number of seizures from the USA recorded by Customs is medium to high. However, these seizures mainly relate to products that have been surrendered by passengers.

## **5. Fomites**

The virus is shed in faeces where it can remain viable for long periods. There is potential for indirect virus spread over long distances via faecal contamination on clothing and shoes.

The majority travel between the UK and the USA is by air. The nature of this means of travel ensures that heavy contamination of clothing and shoes is unlikely. Although the volume of passengers is high, the majority of these are either tourists or business people. They are unlikely to have come into close contact with agriculture or to return to the UK contaminated with poultry faeces.

## **6. Migratory birds**

Some migratory birds ([Turnstone](#)) may arrive as far as from Canada and Finland to spend time on the UK coasts (BTO, 2004). These birds may come in contact with birds from so called 'Atlantic Flyway' which includes several primary migratory waterfowl migration routes. The Atlantic Flyway does not extend to Texas.

There are no known migration routes directly from Texas to the UK.

# **7. ASSESSMENT OF THE RISK TO UK ANIMAL HEALTH**

## **7.1. The United States of America**

There is an unknown risk of disease spread within the affected state (Texas) and into neighbouring states in the USA.

The H5N2 virus has demonstrated abilities to spread rapidly in poultry and change from low pathogenic to a highly pathogenic strain.

On 24 February 2004 the UK followed the European Commission in banning the following imports from the USA with effect from 27 January 2004 (one incubation period before disease was detected – the assumed risk period):

- Live birds, including poultry but excluding pet birds accompanying their owners
- Fresh meat of poultry and other species. Heat treated meat may still be imported
- Eggs for human consumption and hatching eggs

## **7.2. Legal trade**

### **7.2.1. Live poultry**

There is now negligible risk from legal trade because it has been banned and any attempted imports would be stopped at the Border Inspection Post (BIP).

There is negligible risk from imports prior to the ban because the last recorded import of live poultry occurred in November 2003. This timeframe is well outside the risk period. It is also likely that inspection and laboratory testing during the specified quarantine period would have detected any diseased poultry and prevented their release into the UK. We have no record of importing live poultry during the risk period.

### **7.2.2. Captive birds**

There is now negligible risk from legal trade because it has been banned and any attempted imports would be stopped at the Border Inspection Post (BIP).

There is a negligible risk from legal trade prior to the ban because inspection and laboratory testing during the quarantine period would have detected any diseased birds and prevented their release into the UK.

### **7.2.3. Hatching eggs and day old chicks**

There is now negligible risk from legal trade because it has been banned and any attempted imports would be stopped at the Border Inspection Post (BIP).

There is a negligible risk from legal trade prior to the ban because inspection and laboratory testing during the post-import quarantine period would have detected any diseased poultry and prevented their release into the UK. The SVS has been sent electronic messages identifying each consignment imported from the USA during the risk period and asking them to ensure that import procedures have been complied with. We have no record of any imports from Texas during the risk period.

#### **7.2.4. Eggs and egg products**

There is now negligible risk from legal trade in eggs because it has been banned and any attempted imports would be stopped at the Border Inspection Post (BIP).

So far, infection has only been confirmed in broiler (meat) birds, not laying hens so the risk from imports during the risk period is also negligible.

It is most likely that any AI virus contaminating an egg would be found on the outside of the shell. Egg products such as powder have the shell removed. Egg products are required to be treated to ensure that they are free from salmonella. Such treatment should inactivate any remaining AI virus. There is therefore negligible risk from this trade.

#### **7.2.5. Poultry meat and meat products (including petfood)**

There is negligible risk from legal trade in meat for human consumption because there are no listed establishments and it has now also been banned on animal health grounds.

Meat for pet food must comply with animal health rules. We have no record of any raw poultry meat for pet food being imported during the risk period.

The infected flock has been destroyed under official control so infected birds would not have entered the commercial pet food chain.

#### **7.2.6. Game trophies**

There is now negligible risk from legal trade in non-processed game trophies because it has been banned by virtue of poultry meat imports now being suspended on animal health grounds. Any attempted imports would be stopped at the Border Inspection Post (BIP).

Imports during the risk period are assumed to be few in number and the virus is unlikely to survive or to come into contact with UK poultry so the risk from this trade is believed to be negligible.

There is a negligible risk from legal trade in processed game trophies because processing would ensure destruction of the virus.

#### **7.2.7. Feathers**

There is a negligible risk from legal trade because processing either before export or after import would destroy the virus. EU by-products rules effectively require imports to go directly for processing.

### **7.2.8. Manure, processed manure and processed manure products**

There is now negligible risk from legal trade in unprocessed manure because it has been banned as a result of the ban on poultry meat and any attempted imports would be stopped at the Border Inspection Post (BIP).

There is no record of recent trade in these products from the USA.

Processed manure and processed manure products may be imported given they meet EU rules, which require heat-treatment that is sufficient to kill the virus. They therefore present negligible risk.

## **7.3. Ratites**

### **7.3.1. Live ratites**

There is now negligible risk from legal trade because it has been banned and any attempted imports would be stopped at the Border Inspection Post (BIP).

There is a negligible risk from legal trade during the risk period because no imports of live ratites occurred during this period. It is also likely that inspection and laboratory testing during the specified quarantine period would have detected any diseased birds and prevented their release into the UK.

### **7.3.2. Ratite meat**

There is now negligible risk from legal trade because it has been banned and any attempted imports would be stopped at the Border Inspection Post (BIP).

Any ratite meat imported during the risk period would have been subject to veterinary certification attesting that it came from healthy birds.

## **7.4. Illegal trade**

As with many disease agents, illegal imports from infected countries give rise to a constant background risk of infection, subject to the survival of infectious agent in the illegally imported product. The risk associated with the illegal personal import of poultry meat appears to be negligible because the post-mortem pH change is sufficient to inactivate the virus. Refrigeration, which may reduce the extent of the pH change, is unlikely to be applied to personal imports and would make detection of illegal commercial imports more likely.

Although the total number of seizures from the USA is medium to high, the proportion of poultry meat and poultry products appears to be low.

### **7.5. Background risk associated with migrating birds**

There is an on-going background risk of the introduction of avian influenza by migrating birds, especially waterfowl. Low pathogenic strains of avian influenza may be endemic in some European bird populations. These strains may mutate spontaneously to HPAI. There is a low (more than negligible) risk to the UK from the large numbers of migratory waterfowl and other birds that over-winter in the UK. There is no proportionate action which can be taken to mitigate this risk.

## **8. Conclusion**

The risk to UK animal health arising from the current outbreak of HPAI in Texas is negligible. There has been limited trade in poultry and poultry products from the USA. Imports to the EU of products which present a credible risk have been banned as a precautionary measure. Existing controls are believed to be effective in mitigating any risk from American products imported during the risk period, even if they were to have been infected.

There is a low background risk of introduction of HPAI to the UK through bird migration which is unchanged as a result of the outbreak in Texas.

Defra and the European Commission continue to monitor the situation in Texas. Further information from the US authorities on control measures and surveillance could change our assessment of import risk.

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