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DISEASE INFORMATION

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Contents

FOOT AND MOUTH DISEASE IN THE REPUBLIC OF KOREA
Follow-up report No. 4

Information received on 28 June 2002 from Dr Hee-Woo Lee, Director, Animal Health Division, Ministry of Agriculture and Forestry (MAF), Seoul:

End of previous report period: 14 June 2002 (see *Disease Information*, **15** [25], 100, dated 21 June 2002).
End of this report period: 28 June 2002.

New outbreak:

Location			No. of outbreaks	Species code	No. of susceptible animals	No. of cases	No. of deaths	No. of animals destroyed
Province	District	Locality						
Kyonggi	Anseong	Iljuk	1	sui	3,575	6	2	3,573

Diagnosis:

A. ***Laboratory where diagnosis was confirmed:*** National Veterinary Research and Quarantine Service, Anyang, Kyonggi province.
B. ***Diagnostic methods used:*** clinical inspection; serological and virological testing.
C. ***Causal agent:*** foot and mouth disease virus serotype O.

Epidemiology: the affected holding is about 700 m away from the last affected pig holding.

A. ***Source of agent / origin of infection:*** under investigation.
B. ***Mode of spread:*** under investigation.

Control measures during reporting period:

- movement control, cleaning and disinfection were maintained;
- all the pigs and cattle in the affected farm were destroyed on 24 June 2002;
- pre-emptive slaughter of 2,684 pigs and 63 dairy cattle from 3 livestock farms within a 500-m radius of the infected farm was carried out;

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- in addition, pre-emptive slaughter will be extended to all domestic pigs within a 3-km radius.
- screening;
- vaccination remains prohibited;
- zoning.

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AVIAN INFLUENZA IN CHILE
Follow-up report No. 3

Translation of information received on 29 June 2002 from Dr Hernan Rojas Olavarria, Director, Department of Animal Protection, Department of Agriculture and Animal Production (SAG), Ministry of Agriculture, Santiago:

End of previous report period: 17 June 2002 (see *Disease Information*, **15** [25], 103, dated 21 June 2002).
End of this report period: 28 June 2002.

a. Avian influenza situation in the Province of San Antonio, Fifth Region (Valparaiso)

Outbreak No. 1 is being disinfected after having been depopulated.

To date, in outbreak No. 2, the non-depopulated sectors are under daily surveillance, with no increased mortality and negative serology up to now. Cloacal and tracheal swabs have been collected to isolate the virus in embryonated eggs.

In the perifocal areas (10-km radius), weekly sampling has been established for commercial establishments and fortnightly sampling for backyard poultry. There are 17 industrial establishments and approximately 150 owners of backyard poultry. Positive serology for avian influenza has been demonstrated in only three of these industrial establishments, one of which belongs to the same company that owns the establishments designated as the outbreaks. No virus isolates have been obtained to date. No positive serology for avian influenza has been detected in backyard poultry in the perifocal areas, nor in the rest of the free area.

Strict biosecurity and quarantine measures are being maintained in establishments in the perifocal areas.

b. Avian influenza situation nationwide

A massive nationwide serological sampling operation was conducted during the month following detection of infection by the avian influenza virus, to detect any possible spread of the disease. More than 48,845 serological samples were collected from broiler and layer grandparent flocks, broiler fattening units and layer units, ostrich, emu, duck, goose and pheasant farms, aviary birds, backyard poultry, zoo birds and wild and migratory birds. The results show that a total of 358 commercial poultry establishments were sampled (100% of country's avian establishments), 284 backyard poultry holdings and four wild bird sites.

The results indicate positive serology for avian influenza in 21 establishments, belonging to five poultry enterprises, in the central area of the country (Fifth and Sixth Regions and Metropolitan Region). Only two of the 21 establishments with serological evidence (outbreaks 1 and 2) also presented raised mortality compatible with avian influenza.

Both the production parameters and mortality in the remaining 19 establishments are normal for the different production lineages and stages. All of the suspect establishments are under strict quarantine. Avian influenza virus was isolated from some of the suspect establishments and typed by the OIE Reference Laboratory in Ames, Iowa (United States of America), as serotype H7N3. The establishments from which the virus was isolated still have normal mortality rates and their production parameters are within the norms defined for their genetic lineage.

The hypothesis that the positive serological results originated from the use of biological products contaminated with the avian influenza virus antigen is still not conclusive and continues to be investigated.

The development of an RT-PCR(1) test in the SAG Central Laboratory is proceeding, in order to increase the laboratory's diagnostic capacity to deal with this emergency situation.

c. Viral isolation and typing

Virus isolates obtained from the suspect establishments by the SAG Central Laboratory and sent to the Ames Reference Laboratory were typed as H7N3. Preliminary results of tests carried out by the SAG Central Laboratory to measure the pathogenicity index would appear to indicate that some of these isolates behave like a highly pathogenic strain. The samples were sent to the Ames Reference Laboratory, which reported difficulty in obtaining the sequencing information and suggested that there might be a combination of two different H7N3 genotypes present. Due to the unusual sequence, it is still not possible to predict the potential virulence of the isolate. The laboratory hopes to finish characterising the isolates soon.

The indications emerging from the SAG Central Laboratory's pathogenicity test do not bear any relation to what is being observed in the field. While raised mortality has been observed in only two establishments (outbreaks 1 and 2), other pathologies and a process of poisoning concomitant with the detection of avian influenza were also detected in those establishments. This means that the raised mortality observed cannot be attributed entirely to the active strain of avian influenza virus.

In accordance with the above-mentioned indications, it can be concluded that the avian influenza episode in Chile is now under control, since the disease continues to be limited to one area of the country, where all the necessary prevention and control measures are being applied.

(1) RT-PCR: reverse transcriptase – polymerase chain reaction.

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AVIAN INFLUENZA IN CHILE
Follow-up report No. 4

Translation of information received on 1 July 2002 from Dr Hernan Rojas Olavarria, Director, Department of Animal Protection, Department of Agriculture and Animal Production (SAG), Ministry of Agriculture, Santiago:

End of previous report period: 28 June 2002 (see *Disease Information*, **15** [27], 114, dated 5 July 2002).
End of this report period: 1 July 2002.

The report was received from the OIE Reference Laboratory in Ames (United States of America), characterising virus isolates received by Ames on 22 June 2002. After completing the said characterisation it concluded that the isolates (five) sent to the Ames laboratory correspond to serotype H7N3 and that they are highly pathogenic, as shown by the results of the pathogenicity index test in inoculated birds, 100% of which died on the fourth day following inoculation.

The Ames Laboratory reported that the amino acid sequence of the cleavage site was highly unusual, saying it was not possible to predict the pathogenicity of the isolates based on the amino acid sequence. However, there appeared to be an insertion of 10 amino acids at the cleavage site in the low pathogenic H7N3 virus that was initially isolated in Chile. This insertion is probably responsible for increasing the virulence of the latest isolates. Finally, two different amino acid profiles were detected in the latter isolates.

Furthermore, on 1 July 2002, the OIE Reference Laboratory in Weybridge (VLA), United Kingdom, also reported that it had carried out the pathogenicity test on the isolates from Chile, saying that the index

obtained in one of the isolates was 2.96 and in the other 3.00 and concluding that they were highly pathogenic. They will be processing the three remaining isolates this week.

The situation nationwide notified in follow-up report No. 3, concerning the measures adopted and their evolution, leads us to conclude that the episode is under control.

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BLUETONGUE IN ARGENTINA
Serotyping of the virus isolated from cattle in northern Argentina

Translation of information received on 1 July 2002 from Dr Bernardo Gabriel Cané, President, National Agrifood Health and Quality Service (SENASA), Secretariat for Agriculture, Livestock, Fisheries and Food, Buenos Aires:

End of previous report period: 11 October 2001 (see *Disease Information*, **14** [41], 243, dated 12 October 2001).
End of this report period: 28 May 2002.

This information relates to the studies for identifying the bluetongue virus, which were carried out at the Institute for Animal Health (IAH), Pirbright, United Kingdom (OIE Reference Laboratory for bluetongue), based on specimens isolated from cattle in northern Argentina during a monitoring programme to study the incidence and seasonality of the infection, conducted during active bluetongue surveillance in the country.

According to information transmitted by the INTA (*National Institute of Agricultural Technology*) via the SENASA central laboratory, "The four bluetongue virus strains isolated in the country and sent to IAH for serotyping were analysed by means of the micro-seroneutralisation technique, making use of 13 reference serotypes identified as predominant in Central and Southern America, and the RT-PCR(1) technique with primers from segment 2 of the bluetongue virus genome specific to serotype 4.

The results indicate that the four samples are of serotype 4 of the bluetongue virus".

(1) RT-PCR: reverse transcriptase – polymerase chain reaction.

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CLASSICAL SWINE FEVER IN ROMANIA

(***Date of previous reported outbreak:*** April 2002).

EMERGENCY REPORT

Information received on 4 July 2002 from Dr Gabriel Predoi, Director General, National Sanitary Veterinary Agency, Ministry of Agriculture, Food and Forests, Bucharest:

Report date: 3 July 2002.

Nature of diagnosis: clinical, post-mortem and laboratory.
Date of initial detection of animal health incident: 2 July 2002.
Estimated date of first infection: 22 June 2002.

Outbreak:

Location	No. of outbreaks
Oradea, Bihor county (in the western part of the country)	1

Description of affected population: smallholding (10 piglets).

Total number of animals in the outbreak:

species	***susceptible***	***cases***	***deaths***	***destroyed***	***slaughtered***
sui	10	10	8	2	0

Diagnosis:

- ***A. Laboratory where diagnosis was made:*** Institute for Diagnosis and Animal Health, Bucharest.
- ***B. Diagnostic tests used:*** direct fluorescent antibody test (FAT).
- ***C. Causal agent:*** identification and isolation in progress.

Epidemiology:

- ***A. Source of agent / origin of infection:*** investigations are under way.
- ***B. Mode of spread:*** investigations are under way.
- ***C. Other epidemiological details:*** this outbreak is in an area where vaccination is prohibited.

Control measures:

- destruction by burial of all the animals;
- setting up of a 3-km-radius protection zone around the outbreak and a 10-km-radius surveillance zone around the outbreak.

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