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HIGHLY PATHOGENIC AVIAN INFLUENZA IN ROMANIA Follow-up report No. 2

Information received on 14 October 2005 from Dr Gabriel Predoi, Director General, National Sanitary Veterinary and Food Safety Authority, Bucharest:

End of previous report period: 13 October 2005 (see *Disease Information*, **18** [41], 334, dated 14 October 2005).

End of this report period: 14 October 2005.

Precise identification of agent: [see Follow-up report No. 3].

Date of first confirmation of the event: 7 October 2005.

Date of start of the event: 4 October 2005.

Nature of diagnosis: clinical, post-mortem and laboratory.

Details of new outbreaks:

First administrative division (County)	Lower administrative division (district)	Type of epidemiological unit	Name of the location (village)	Date of start of the outbreak	Species	Number of animals in the outbreaks				
						susceptible	cases	deaths	destroyed	slaughtered
Tulcea	Maliuc	village	Maliuc	7 Oct. 2005	fau	537*	137	137	0	0
Tulcea	Maliuc	farm	Vultururu	...	avi	48	18	18	30	0

* swans

Description of affected population in the new outbreaks:

- Outbreak in Maliuc village: 537 swans;
- Outbreak in Vulturu village: 46 hens and 2 turkey hens (backyard flock).

Source of outbreaks: contact with migratory birds.

Control measures

A. Undertaken:

- stamping out applied to poultry;
- quarantine;
- movement control inside the country;
- screening;
- zoning;
- disinfection of infected premises/establishment.

B. To be undertaken: control of wildlife reservoirs.

Vaccination prohibited: no.

Other details/comments:

- Surveillance studies on wild migratory water birds have been started.
- All notifications and suspect samples have been investigated.

(1) SPF: specific pathogen free

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**HIGHLY PATHOGENIC AVIAN INFLUENZA IN ROMANIA
Follow-up report No. 3**

Information received on 19 and 20 October 2005 from Dr Gabriel Predoi, Director General, National Sanitary Veterinary and Food Safety Authority, Bucharest:

End of previous report period: 14 October 2005 (see *Disease Information*, **18** [42], 355, dated 21 October 2005).

End of this report period: 20 October 2005.

Precise identification of agent: highly pathogenic avian influenza virus subtype H5N1 (see details below).

Date of first confirmation of the event: 7 October 2005.

Date of start of the event: 4 October 2005.

Diagnosis (updated information):

Laboratories where diagnostic tests were performed	Outbreak	Birds examined	Diagnostic tests used	Date	Results
Institute for Diagnostics and Animal Health (National Reference Laboratory)	village of Ceamurlia-de-Jos	3 ducks and 2 laying hens	- ELISA ⁽¹⁾ ; - agar gel immunodiffusion.	7 Oct. 2005	positive for ducks
	villages of Maliuc and Vulturu	1 swan and 1 hen	inoculation of SPF ⁽¹⁾ embryonated chicken eggs	10 Oct. 2005	positive (virus type H5) for both birds
VLA Weybridge (United Kingdom) (OIE Reference Laboratory)	village of Ceamurlia-de-Jos	1 allantoic fluid sample from chicken and 1 allantoic fluid sample from duck	virological examination	16 Oct. 2005	influenza A virus subtype H5N1 ^(a)
	villages of Maliuc and Vulturu	Sample 1: allantoic fluid from a swan (ex tracheal swab). Sample 2: allantoic fluid from a chicken (ex tracheal swab).	virological examination	16 Oct. 2005	influenza A virus subtype H5N1 ^(b)

(a) The haemagglutinin (HA) and neuraminidase (NA) genes of the influenza A virus subtype H5N1 isolated from the duck are 100% identical to those of the virus from the chicken. Molecular phylogeny indicates that the NA gene of both viruses is identical to that of the H5N1 highly pathogenic avian influenza virus strain A/turkey/Turkey/1/05 and therefore, as for the HA gene, is closely related to viruses detected recently in Central Asia.

(b) The haemagglutinating agents received (both samples 1 and 2) have been confirmed as influenza A subtype H5N1. Both viruses contain multiple basic amino acids at the cleavage site (PQGERRRKRGRLF) of the haemagglutinin gene and therefore contain a sequence consistent with highly pathogenic avian influenza. Molecular phylogeny indicates that the HA gene of samples 1 and 2 is most similar to that of A/grebe/Novosibirsk/05 (99.2% identity) and identity between samples 1 and 2 is 99.8%. The results indicate a direct relationship with viruses detected elsewhere in Romania, Turkey and Central Asia.

Other details/comments:

- In the Maliuc and Vulturu outbreaks, stamping-out activities have been completed; a total of 3,562 domestic poultry were killed and their carcasses destroyed.
- The outbreak in Ceamurlia-de-Jos was eradicated. A total of 18,626 domestic poultry were killed and their carcasses incinerated, and disinfection was carried out. Measures have been taken to protect the human population.

Final report: no.

(1) ELISA: enzyme-linked immunosorbent assay

FOOT AND MOUTH DISEASE IN BRAZIL Follow-up report No. 2

Translation of information received on 16 and 18 October 2005 from Dr Jorge Caetano Junior, Director, Department of Animal Protection (DDA), Ministry of Agriculture, Livestock and Food Supply, Brasília:

End of previous report period: 13 October 2005 (see *Disease Information*, **18** [41], 341, dated 14 October 2005).

End of this report period: 17 October 2005.

Precise identification of agent: foot and mouth disease (FMD) virus serotype O.

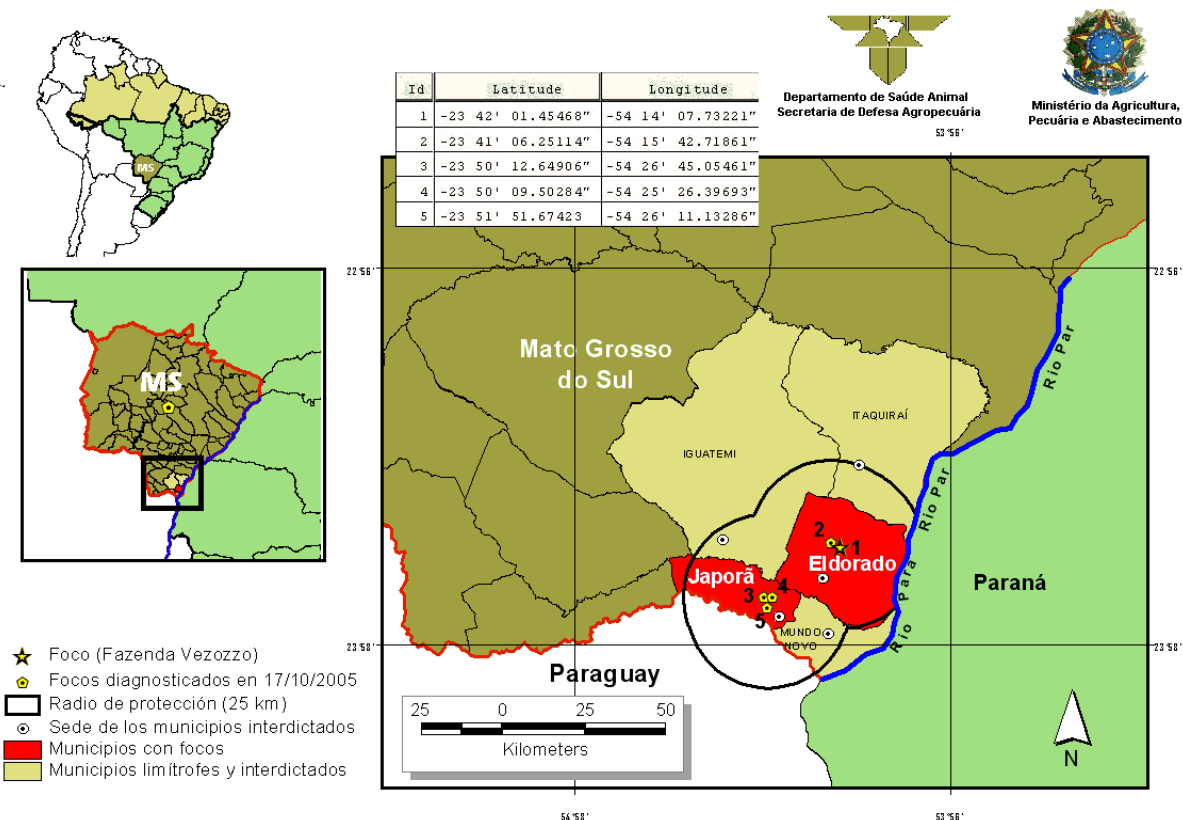
Date of first confirmation of the event: 8 October 2005.

Date of start of the event: 26 September 2005.

Nature of diagnosis: clinical and laboratory.

Details of new outbreaks:

First administrative division (State)	Lower administrative division (municipality)	Type of epidemiological unit	Date of start of the outbreak	Species	Number of animals in the outbreaks				
					susceptible	cases	deaths	destroyed	slaughtered
Mato Grosso do Sul	Eldorado	farm	5 Oct. 2005	bov	3,548	65	0	0	0
				ovi	166	0	0	0	0
				cap	34	0	0	0	0
				sui	2	0	0	0	0
Mato Grosso do Sul	Japorã	farm	5 Oct. 2005	bov	182	20	0	0	0
Mato Grosso do Sul	Japorã	farm	5 Oct. 2005	bov	132	4	0	0	0
Mato Grosso do Sul	Japorã	farm	5 Oct. 2005	bov	783	31	0	0	0



Description of affected population: fattening cattle reared on pasture. There have been no reports of suspected cases in species other than bovines.

In Eldorado district, FMD was confirmed in a farm located 3 km from the index outbreak. The animals showing clinical signs are 55 cattle aged between 4 and 12 months and 10 cattle aged between 12 and 14 months.

In Japorã district, the disease was confirmed in three farms:

- The first farm comprises 182 cattle, out of which 20 cases were reported (19 animals aged between 12 and 24 months and one animal aged over 24 months).
- The second farm comprises 132 cattle, out of which 4 cases were reported (3 animals aged between 12 and 24 months and one animal aged between 12 and 36 months).
- The third farm comprises 783 cattle, out of which 31 have shown clinical signs (15 animals aged between 12 and 24 months, 11 animals aged between 24 and 36 months and 5 animals aged over 36 months).

Diagnosis:

Laboratory where diagnostic tests were performed	Species examined	Diagnostic tests used	Date	Results
National Agricultural Defence Laboratory (LANAGRO-PA), Belém, Pará	bov	indirect sandwich ELISA ⁽¹⁾ (using epithelium)	8 Oct. 2005	positive

The Pan-American Foot-and-Mouth-Disease Center (PANAFTOSA⁽²⁾) carried out the biomolecular characterisation and phylogenetic analysis of the isolated virus, using the 'neighbour-joining' method to compare all the nucleotides in the region coding for VP1 protein to those of different strains of virus type O. This comparison showed a homology of 90-94% between this isolate and the isolates obtained during the FMD outbreaks due to virus type O that occurred in South American countries between 2000 and 2003. The virus isolated is not, therefore, an antigenic variant exotic for South America. It was also established that it differs from the vaccine virus (strain O1 Campos/Bra 58).

PANAFTOSA also carried out studies to compare the immunological status of the present isolate to that of the reference strain O1 Campos/Bra 58 (used for vaccine production), using the test of the expected percentage of protection (EPP). This value was determined to be 98% for animals that received a first vaccination and 99% for animals that received a booster vaccination after 30 days.

Source of outbreaks: unknown or inconclusive (investigations in progress).

Control measures:

- Stamping out (in progress).
- Disinfection of infected premises.
- The municipalities of Eldorado, Iguatemi, Itaquiraí, Japorã and Mundo Novo remain under quarantine. Twelve checkpoints were set up to prevent any movement of FMD-susceptible animals or their products/by-products originating from these districts to national or international markets.
- In Eldorado district, 532 holdings comprising a total of 79,639 cattle, 2,205 sheep and goats and 1,696 pigs have been inspected.
- In Japorã district, 222 holdings comprising a total of 13,994 cattle, 228 sheep and goats and 319 pigs have been inspected.
- A new 25-km safety zone has been set up around the new outbreaks. It does not exceed the five municipalities mentioned above.

Other details/comments:

There are many smallholdings in Japorã. Epidemiological surveillance is being carried out throughout the region.

There are two more suspect farms in the region; samples were submitted to LANAGRO-PA on 17 October 2005.

(1) ELISA: enzyme-linked immunosorbent assay

(2) PANAFTOSA: Pan American Foot-and-Mouth Disease Center, Rio de Janeiro, Brazil

FOOT AND MOUTH DISEASE IN BRAZIL
Follow-up report No. 3

Translation of information received on 21 October 2005 from Dr Jorge Caetano Junior, Director, Department of Animal Protection (DDA), Ministry of Agriculture, Livestock and Food Supply, Brasilia:

End of previous report period: 17 October 2005 (see *Disease Information*, **18** [42], 358, dated 21 October 2005).

End of this report period: 20 October 2005.

Precise identification of agent: foot and mouth disease (FMD) virus serotype O.

Date of first confirmation of the event: 8 October 2005.

Date of start of the event: 26 September 2005.

Nature of diagnosis: clinical and laboratory.

Details of new outbreaks:

First administrative division (State)	Lower administrative division (municipality)	Type of epidemiological unit	Date of start of the outbreak	Species	Number of animals in the outbreaks				
					susceptible	cases	deaths	destroyed	slaughtered
Mato Grosso do Sul	Japorã	farm	13 Oct. 2005	bov	253	16	0	0	0
Mato Grosso do Sul	Japorã	farm	12 Oct. 2005	bov	52	12	0	0	0
Mato Grosso do Sul	Japorã	farm	17 Oct. 2005	bov	16	2	0	0	0
Mato Grosso do Sul	Japorã	farm	17 Oct. 2005	bov	142	20	0	0	0
Mato Grosso do Sul	Mundo Novo	farm	16 Oct. 2005	bov	777	5	0	0	0

Description of affected population: fattening cattle reared on pasture. There have been no reports of suspected cases in species other than bovines.

In Japorã district, surveillance activities led to the detection of four new outbreaks, on the basis of a clinico-epidemiological diagnosis:

- The first farm has 253 cattle, 16 of which (1 animal aged less than 4 months, 9 animals aged between 12 and 24 months and 6 animals aged over 24 months) were sick.
- The second farm has 52 animals, 12 of which (7 aged between 12 and 24 months, 5 aged between 24 and 26 months) showed clinical signs of foot and mouth disease.
- The third farm has 16 cattle (2 sick: one animal aged less than 4 months and one animal aged over 24 months).
- The fourth farm has 142 cattle, 20 of which (all aged between 12 and 24 months) presented clinical signs.

In Mundo Novo district, an outbreak was detected on the basis of a clinico-epidemiological diagnosis in a large herd of beef cattle totalling 777 animals. Five of these animals (aged over 24 months) presented clinical signs. The affected farm is very close to Japorã district.

Source of outbreaks: unknown or inconclusive (investigations in progress).

Control measures:

- Stamping out (in progress). Weather conditions (heavy rain) are hampering the culling and destruction of animals in the outbreaks.
- Disinfection of infected premises.
- To date, 924 farms with a total population of 122,578 cattle, 3,230 sheep and goats and 2,713 pigs have been inspected in the zone where a movement ban is in force.
- The municipalities of Eldorado, Iguatemi, Itaquiraí, Japorã and Mundo Novo remain under quarantine. Twelve checkpoints were set up to prevent any movement of FMD-susceptible animals or their products/by-products originating from these districts to national or international markets.

- The 25-km-radius safety zone around the new outbreaks lies completely within the boundary of the aforementioned five districts.

The control measures in the region involve the use of material and human resources from the State and Federal governments, with assistance from the public forces at fixed checkpoints and mobile teams.

Final report: no.

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VESICULAR STOMATITIS IN THE UNITED STATES OF AMERICA
Follow-up report No. 21

Information received on 17 October 2005 from Dr Peter Fernandez, Associate Administrator, Animal and Plant Health Inspection Service (APHIS), United States Department of Agriculture (USDA), Washington, DC:

End of previous report period: 9 October 2005 (see *Disease Information*, **18** [41], 349, dated 14 October 2005).

End of this report period: 16 October 2005.

Precise identification of agent: vesicular stomatitis virus type New Jersey.

Date of first confirmation of the event: 27 April 2005.

Date of start of the event: 16 April 2005.

New outbreaks:

First administrative division (State)	Lower administrative division (County)	Type of epidemiological unit	Name of the location	Date of start of the outbreak	Species	Number of animals in the outbreaks				
						susceptible	cases	deaths	destroyed	slaughtered
Wyoming	Big Horn	f	Lovell	9 Oct 2005	equ	2	2	0	0	0
Wyoming	Carbon	f	Encampment	4 Oct 2005	equ	5	1	0	0	0
Wyoming	Fremont	f	Riverton	29 Oct 2005	equ	3	1	0	0	0
Wyoming	Goshen	f	Torrington	29 Sep 2005	bov	100	1	0	0	0
Wyoming	Goshen	f	Torrington	30 Sep 2005	bov	37	2	0	0	0

f = farm

Diagnosis:

Laboratories where diagnosis was made	Species examined	Diagnostic tests used	Dates	Results
National Veterinary Services Laboratories, Ames, Iowa	equ	virus isolation	12 October 2005	positive (virus type New Jersey)
	equ	complement fixation test	14 October 2005	positive
Foreign Animal Disease Diagnostic Laboratory, Plum Island, New York	bov	virus isolation	12 October 2005	positive (virus type New Jersey)
	bov	complement fixation test	14 October 2005	positive

Source of outbreaks or origin of infection: unknown or inconclusive (vectors?).

Control measures undertaken:

- control of arthropods;
- quarantine;
- on-going surveillance activities are being performed by APHIS Veterinary Services and Arizona⁽¹⁾, Colorado, Idaho, Montana, Nebraska, New Mexico⁽¹⁾, Texas⁽¹⁾, Utah and Wyoming State Departments of Agriculture personnel.

Treatment of affected animals: no.

Vaccination prohibited: yes.

Final report: no.

(1) Note: no new vesicular stomatitis-positive premises have been reported in Texas since May 2005, in Arizona since June 2005 and in New Mexico since August 2005.

**KOI HERPESVIRUS DISEASE IN SINGAPORE
Follow-up report No. 1 (final report)**

Information received on 18 October 2005 from Dr Chua Sin Bin, Director, Veterinary Public Health and Food Supply Division, Agri-food and Veterinary Authority of Singapore:

End of previous report period: 23 September 2005 (see *Disease Information*, **18** [39], 319, dated 30 September 2005).

End of this report period: 18 October 2005.

The affected fish were traced to a trial batch of 30 fish imported from a new source in Malaysia. The entire batch was submitted to the laboratory for PCR⁽¹⁾ testing for koi herpesvirus.

Although the imported fish were isolated, a follow-up investigation was conducted at the affected importer premises. All koi carp at the importer's premises were sampled for laboratory testing. The results of the PCR testing were negative. Quarantine on the movement of koi carp was imposed on the affected importer.

Based on official import data, all fish importers that imported koi carp from Malaysia after August 2005 were traced. These importers were inspected and koi carp were collected for PCR testing. All the samples from these importers tested negative.

Singapore remains free from koi herpesvirus infection.

(1) PCR: polymerase chain reaction

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**AMERICAN FOULBROOD IN NORWAY
Follow-up report No. 1**

Information received on 18 October 2005 from Dr Keren Bar-Yaacov, Chief Veterinary Officer, Norwegian Food Safety Authority, Brumunddal:

End of previous report period: 7 October 2005 (see *Disease Information*, **18** [41], 335, dated 14 October 2005).

End of this report period: 18 October 2005.

Precise identification of agent: *Paenibacillus larvae* subsp. *larvae*.

Date of first confirmation of the event: 29 September 2005.

Date of start of the event: 12 September 2005.

Nature of diagnosis: clinical and laboratory.

Details of outbreaks:

First administrative division	Lower administrative division	Type of epidemiological unit	Name of the location	Date of start of the outbreak	Species	Number of animals in the outbreaks				
						susceptible	cases	deaths	destroyed	slaughtered
Oppland	Gran	apiary	Hennungeveien	14 Oct 2005	api	12*	12*	...

* hives

Diagnosis:

Laboratory where diagnostic tests were performed	Diagnostic tests used	Date	Results
Veterinærinstituttet, Oslo	- genetic examination of larvae; - culture.	14 Oct. 2005	positive

Source of outbreaks: introduction of new animals/animal products.

Control measure undertaken: stamping out (destruction of all 12 hives on 18 October 2005).

Final report: no.

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HIGHLY PATHOGENIC AVIAN INFLUENZA IN RUSSIA
Follow-up report No. 4

Information received on 18 and 19 October 2005 from Dr Evgueny A. Nepoklonov, Head of the Main Veterinary Department, Ministry of Agriculture and Food, Moscow:

End of previous report period: 5 October 2005 (see *Disease Information*, **18** [41], 336, dated 14 October 2005).

End of this report period: 19 October 2005.

Precise identification of agent: influenza A virus subtype H5N1.

Date of first confirmation of the event: 23 July 2005.

Date of start of the event: 18 July 2005.

Nature of diagnosis: clinical and laboratory.

Details of new outbreak:

First administrative division (region)	Lower administrative division (district)	Type of epidemiological unit	Name of the location	Date of start of the outbreak	Species	Number of animals in the outbreak				
						susceptible	cases	deaths	destroyed	slaughtered
Tula	Efremov	village	Jandovka village	14 Oct. 2005	avi	approx. 3,000	approx. 3,000	...

Diagnosis:

Laboratory where diagnostic tests were performed	Diagnostic tests used	Date	Results
Federal Centre for Animal Health (ARRIAH), Vladimir (national reference laboratory for avian influenza)	PCR ⁽¹⁾	19 Oct. 2005	positive for virus subtype H5N1
	sequencing of HA cleavage site	ongoing	pending

The reasons for suspicion were the clinical signs, the presence of a lake on the territory of the affected village, and the presence of migratory birds (unidentified ducks, probably mallard) during the week before the outbreak.

Control measures applied:

- stamping out applied to all birds within the affected village;
- quarantine (all transport of poultry, poultry products, feed, etc. is prohibited; restriction measures are being applied to the affected village);
- disinfection of backyards and roads in the village.

Other details/comments: the mortality rate within the infected backyard farms was estimated as follows:

- ducks: > 4%;
- muscovy ducks: > 44%;
- chickens: > 51%;
- geese: > 75%;
- turkeys: 100%.

It should be noted that these are minimum values as they do not take into account the sick birds that had already been destroyed.

(1) PCR: polymerase chain reaction

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FOOT AND MOUTH DISEASE IN MONGOLIA Follow-up report No. 2

Information received on 19 October 2005 from Dr Doloojin Orgil, Director, Department of Veterinary Services, Ministry of Food and Agriculture, Ulaanbaatar:

End of previous report period: 26 August 2005 (see *Disease Information*, **18** [34], 282, dated 26 August 2005).

End of this report period: 18 October 2005.

Precise identification of agent: foot and mouth disease virus serotype Asia1.

Date of first confirmation of the event: 17 August 2005.

No new outbreaks have been reported.

Total number of animals in the outbreak (updated data):

species	susceptible	cases	deaths	destroyed	slaughtered
bov	511	182	0	182	0
ovi	2,100	28	0	28	0
cap	2,438	21	0	21	0
cml	97	0	0	0	0

Control measures:

- quarantine;
- partial stamping out;
- movement control;
- zoning;
- disinfection;
- vaccination against FMD virus serotype Asia1.

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NEWCASTLE DISEASE IN THE FORMER YUGOSLAV REPUBLIC OF MACEDONIA

IMMEDIATE NOTIFICATION REPORT

Information received on 19 October 2005 from Dr Sloboden Cokrevski, Chief Veterinary Officer, Ministry of Agriculture, Forestry and Water Economy, Skopje:

Report date: 19 October 2005.

Reason for immediate notification: re-occurrence of a listed disease in a country following a report declaring the outbreak(s) ended.

Date of first confirmation of the event: 18 October 2005.

Date of start of the event: 14 October 2005.

Nature of diagnosis: clinical, post-mortem and laboratory.

Details of outbreak:

First administrative division	Lower administrative division	Type of epidemiological unit	Name of the location	Species	Number of animals in the outbreak				
					susceptible	cases	deaths	destroyed	slaughtered
Bitola	Mogila	village	Mogila	avi	15,000	...	450	5,500*	0

* killing and destruction of the entire village flock is in progress

Description of affected population: poultry raised extensively in the village.

Diagnosis:

Laboratory where diagnostic tests were performed	Diagnostic test used	Date	Results
Faculty of Veterinary Medicine, Veterinary Institute, Skopje	serological test for Newcastle disease virus antibody detection	18 Oct. 2005	positive

Source of outbreak or origin of infection: unknown or inconclusive.

Control measures undertaken:

- orders were given for the entire poultry flock in the village to be destroyed; killing and destruction of all poultry in the village will continue during the next few days;
- quarantine;
- movement control inside the country;
- screening;
- vaccination against Newcastle disease has been made compulsory throughout the country;
- disinfection of infected premises/establishments.

Other details/comments:

As part of the response to the increased danger of avian influenza (AI) outbreaks, and in view of the time period that poses the greater risk of AI virus being introduced by migratory birds, as well as for differential diagnosis purposes, all sera were tested with an antibody test kit for AI type A, strains H7N2, H1N7, H7N3, H13N6, H5N9, H11N6, H3N8, H9N2, H5N2, H4N8, H10N7, H2N2, H8N4, H14N5, H6N5 and H12N5. One serum gave a positive result to the serological test.

Immediate control measures were applied in the field, in accordance with draft European Union Council Directive No. CNS/2005/0062 replacing Council Directive No. 92/40/EEC.

Samples will be sent to the OIE Reference Laboratory for avian influenza, VLA Weybridge, United Kingdom, for confirmation. In the meantime, the control measures imposed remain in force.

**HIGHLY PATHOGENIC AVIAN INFLUENZA IN THE PEOPLE'S REPUBLIC OF CHINA
Follow-up report No. 3**

Information received on 19 October 2005 from Mr Jia Youling, Director General, Veterinary Bureau, Ministry of Agriculture, Beijing:

End of previous report period: 10 August 2005 (see *Disease Information*, **18** [32], 259, dated 12 August 2005).

End of this report period: 19 October 2005.

Precise identification of agent: highly pathogenic avian influenza virus subtype H5.

Date of first confirmation of the event: 7 June 2005.

Nature of diagnosis: clinical, post-mortem and laboratory.

Details of new outbreak:

First administrative division	Lower administrative division	Type of epidemiological unit	Name of the location	Date of start of the outbreak	Species	Number of animals in the outbreak				
						susceptible	cases	deaths	destroyed	slaughtered
Inner Mongolia	Huhehot municipality	village	Tengjiaying	14 Oct. 2005	avi	6,000	2,600	2,600	3,400	0

Description of affected population in the new outbreak: chickens and ducks.

Diagnosis:

Laboratory where diagnostic tests were performed	Diagnostic tests used	Date	Results
Harbin Veterinary Research Institute, Chinese Academy of Agricultural Sciences, Harbin (national reference laboratory for avian influenza)	- haemagglutination inhibition test; - RT-PCR ⁽¹⁾ .	19 Oct. 2005	positive
	intravenous pathogenicity index (IVPI) test	19 Oct. 2005	positive (high pathogenicity)

Source of new outbreak: contact with wild animals. Migrating birds often pass or congregate at a lake close to where the HPAI outbreak occurred.

Control measures undertaken:

- stamping out applied to the entire affected flock; killing and destruction of 87,700 birds outside the outbreak;
- quarantine;
- movement control inside the country;
- screening;
- zoning;
- vaccination;
- disinfection of infected premises/establishment(s);
- dipping/spraying.

Vaccination in response to the outbreak:

First administrative division	Total number of birds vaccinated	Details of the vaccine
Inner Mongolia	166,177	monovalent inactivated vaccine against subtype H5N2

Final report: no.

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

PIGEON DEATH INVESTIGATION IN NEPAL

IMMEDIATE NOTIFICATION REPORT

Information received on 20 October 2005 from Dr Dhan Raj Ratala, Program Director, Directorate of Animal Health, Department of Livestock Services, Ministry of Agriculture and Co-operatives, Kathmandu:

Report date: 20 October 2005.

Reason for immediate notification: an emerging disease with significant morbidity or mortality, or zoonotic potential.

Precise identification of agent: no agent has been identified yet.

Date of start of the event: 14 October 2005.

Details of outbreak:

First administrative division (district)	Lower administrative division (village)	Type of epidemiological unit	Name of the location	Species	Number of animals in the outbreak				
					susceptible	cases	deaths	destroyed	slaughtered
Gorkha	Manakamana	village	Manakamana temple	avi	2,500	400	100	0	0

Description of affected population: morbidity and mortality were reported in a local market among pigeons aged 3-4 weeks which were brought from tropical districts. No cases were reported among local pigeons.

Diagnosis: no post-mortem lesions are seen in dead birds; weakness and death are the only clinical evidence.

The following tests were done for avian influenza virus subtypes H5 and all the results were negative.

Laboratory where diagnostic tests were performed	Samples examined	Diagnostic tests used	Date	Results
Central Veterinary Laboratory, Kathmandu	25 cloacal swabs and 17 sera	- haemagglutination test and haemagglutination inhibition test (using serum samples); - rapid test for influenza A (using faecal samples); - avian influenza virus antigen test.	20 Oct. 2005	negative

Source of outbreak or origin of infection: Manakamana temple is located in a mountain district of Western Nepal. Cold conditions and feeding coarse feed may be responsible for mortality.

Control measures undertaken:

- safe disposal of dead birds;
- screening;
- disinfection of infected areas.

Treatment of affected animals: no.

Final report: no.

HIGHLY PATHOGENIC AVIAN INFLUENZA IN THAILAND
Follow-up report No. 73

Information received on 21 October 2005 from Dr Yukol Limlamthong, Director General, Department of Livestock Development (DLD), Ministry of Agriculture and Cooperatives, Bangkok:

End of previous report period: 13 October 2005 (see *Disease Information*, **18** [41], 352, dated 14 October 2005).

End of this report period: 20 October 2005.

Date of first confirmation of the event: 23 January 2004.

Nature of diagnosis: clinical, post-mortem and laboratory.

Details of new outbreaks:

First administrative division (province)	Lower administrative division	Type of epidemiological unit	Name of the location	Date of start of the outbreak	Species	Number of animals in the outbreaks				
						susceptible	cases	deaths	destroyed	slaughtered
KamphaengPhet	KlongSomBoon, KlongKlung	village	village No. 4	7 Oct. 2005	avi	120	55	55	65	0
KamphaengPhet	NongMaiKong, SaiNgam	village	village No. 7	6 Oct. 2005	avi	30	10	10	20	0
KamphaengPhet	RaHan, BuengSaMakkee	village	village No. 7	7 Oct. 2005	avi	6	5	5	1	0
KamphaengPhet	SaiNgam, SaiNgam	village	village No. 4	12 Oct. 2005	avi	6	1	1	5	0
KamphaengPhet	WangChaOn, BuengSaMakkee	village	village No. 11	10 Oct. 2005	avi	45	20	20	25	0
KamphaengPhet	WangSai, KlongKlung	village	village No. 12	6 Oct. 2005	avi	33	5	4	29	0

Description of affected population in the new outbreaks: the cases involved native poultry, except in the outbreak in village No. 4 in SaiNgam district, where they involved fighting cocks.

Diagnosis:

Laboratory where diagnosis was made	Diagnostic tests used	Results
National Institute of Animal Health and Regional Veterinary Research and Development Centres, DLD	- agar-gel precipitation test; - haemagglutination test; - pathogen isolation by egg inoculation; - intracerebral pathogenicity index test.	positive

Source of new outbreaks: unknown or inconclusive.

Control measures undertaken:

- stamping out;
- quarantine;
- movement control inside the country;
- screening;
- zoning;
- disinfection of infected premises/establishments.

Vaccination prohibited: yes.

Other details/comments:

Thailand has been conducting the current nationwide surveillance since 1 July 2005.

In this third wave to date, there have been 59 confirmed outbreaks in 7 provinces, since the second wave of HPAI re-occurrence that occurred from 3 July 2004 to 12 April 2005:

Affected province	No. of outbreaks
Ayudhaya	1
Chainat	1
KamphaengPhet	25
KanchanaBuri	4
NakhonPathom	3
Saraburi	5
SuphanBuri	20

The seven affected provinces are in the Central Poultry Zone of Thailand (see details and map in *Disease Information*, **18** [35], 290-291, dated 2 September 2005).

All cases involved either free-range poultry or poultry raised in farms with traditional husbandry practices with poor sanitation and insufficient biosecurity.

Affected population	No. of outbreaks
native poultry	43
quail	5
broilers	4
fighting cocks	4
laying ducks	2
laying hens	1

Final report: no.

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MISCELLANEOUS: HIGHLY PATHOGENIC AVIAN INFLUENZA VIRUS DETECTED IN BIRDS SMUGGLED INTO TAIPEI CHINA

Information received on 21 October 2005 from Dr Tien-Jye Chang, Dean, Department of Veterinary Medicine, National Chung Hsing University, Taipei:

Report date: 21 October 2005.

Precise identification of agent: highly pathogenic avian influenza (HPAI) virus subtype H5N1.

Date of first confirmation of the event: 19 October 2005.

Date of start of the event: 14 October 2005.

Clinical disease: no.

Nature of diagnosis: laboratory.

The Taipei China Coast Guard authority intercepted a Panama-registered cargo boat from China (People's Republic of) on 14 October 2005 and found smuggled birds, mice and turtles.

All the smuggled animals were destroyed on 15 October 2005 and 46 samples collected from the 1,037 birds present were sent for laboratory examination.

Diagnosis:

Laboratory where diagnostic tests were performed	Species examined	Diagnostic tests used	Date	Results
Animal Health Research Institute (AHRI)	avi	RT-PCR ⁽¹⁾	19 Oct. 2005	positive for HPAI (subtype H5N1)
		virus isolation	20 Oct. 2005	positive for HPAI (subtype H5N1)
		DNA sequencing	20 Oct. 2005	RERRRKR*GLF

Source of outbreak or origin of infection: smuggled birds.

Control measures undertaken:

- stamping out;
- disinfection.

Vaccination prohibited: yes.

Final report: yes.

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

MISCELLANEOUS: THE EPIDEMIOLOGICAL SURVEILLANCE PROGRAMME IN LEBANON FOR AVIAN INFLUENZA

Translation of information received on 19 October 2005 from Dr Mansour Kassab, Director of Animal Resources, Ministry of Agriculture, Beirut:

Report date: 18 October 2005.

First phase:

From the first wave of avian influenza in January 2004, a decree was issued banning the importation of live poultry and any products capable of spreading influenza from countries known to have the disease. The list of these countries was periodically updated.

On 15 July 2004 the Minister of Agriculture authorised the use of a vaccine against influenza strain H9N2.

An epidemiological surveillance plan for the disease was launched. Up to 31 August 2005, 4,500 blood samples (out of a planned total of 8,000 samples) were collected in all regions, notably targeting non-industrial flocks and including some samples from wild birds. The samples were analysed at the laboratory of the Institute of Agronomic Research and any suspect samples were sent to the laboratory at the American University of Beirut for confirmation.

The results of the haemagglutination inhibition test indicated the presence only of serotype H9. Samples were sent to the OIE Reference Laboratory for avian influenza in Weybridge (United Kingdom), and the results confirmed the presence of the strain H9N2.

Second phase:

On 19 September 2005, following calls for vigilance from epidemiologists and international organisations (OIE, WHO⁽¹⁾), the standing committee responsible for animal health met and issued the following recommendations:

- 1) Launch a programme to inform farmers and the general public.
- 2) Ban the raising of backyard chickens within a 2.5-km radius around large-scale commercial poultry farms, especially in wetlands and marshland regions.
- 3) Emphasise to managers of industrial poultry production units the need to ensure that fencing is secure and in good condition, so as to prevent any contact between wild migratory birds and industrial poultry.
- 4) Free-range poultry raised in small flocks must be confined until further notice, likewise to avoid any contact with migratory wild birds.
- 5) Issue a reminder to comply with the rules on biosecurity, notably:
 - a) If possible prohibit visits between production units, otherwise reduce them to the strict minimum.
 - b) Ensure that disinfection procedures and the principal of 'all-in all-out' are complied with.
 - c) Vaccinate all staff working in poultry production establishments against human influenza.
- 6) Survey and monitor bird migration, in conjunction with ornithological societies.
- 7) Issue a reminder, and emphasise, the decree banning hunting.
- 8) Ban the construction of ponds to attract wild birds for hunting purposes.
- 9) Ban the importation of ornamental birds from all infected countries or countries suspected of being infected.
- 10) Place pig farms under surveillance and ban the feeding of poultry by-products to pigs.
- 11) Require local authorities to keep poultry abattoirs under close control so as to ensure that they dispose of the waste correctly and safely.

- 12) Request the Council of Ministers to grant the Directorate of Animal Resources an emergency fund to enable the appropriate action to be taken (USD 50,000).
- 13) Ascertain laboratory requirements so that they can meet the needs of the current situation.
- 14) Establish contact with the Syrian veterinary authorities to coordinate actions.
- 15) Ask the customs authorities to strengthen the measures needed to stop smuggling.

At the field level, 12 teams (veterinarians, animal husbandry specialists, veterinary technicians) have been set up to collect samples and implement the Committee's recommendations.

A telephone number was made available for members of the public to provide information or make reports. Over a thousand calls were received within the space of five days.

Type of samples collected

Blood	173
Live or dead animals	61
Tracheal swabs	4
Total	238

Geographical origin of the samples

North Lebanon	7 (2 blood samples, 5 animals)
Mount Lebanon	86 (60 blood samples, 26 animals)
Bekaa	58 (48 blood samples, 6 animals, 4 swabs)
South Lebanon	85 (63 blood samples, 22 animals)
Beirut	2 (2 birds)
Total	238

The blood samples were tested by ELISA⁽²⁾ at the laboratory of the Institute of Agronomic Research in Fanar; samples giving a positive reaction were then sent to the laboratory of the American University of Beirut for typing using the haemagglutination inhibition test. The results received to date, confirm the presence of a mildly pathogenic H9N2 strain.

(1) WHO: World Health Organization

(2) ELISA: enzyme-linked immunosorbent assay

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