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PESTE DES PETITS RUMINANTS IN MALI

(Date of previous outbreak of peste des petits ruminants in Mali reported to the OIE: August 2003).

Extract from the monthly report of Mali for November 2004, received from Dr Soumana Diallo, Head, Risk Prevention and Animal and Plant Protection Division, Ministry of Rural Development, Bamako:

<i>Location</i>	<i>No. of outbreaks in November 2004</i>
Koulikoro region, Niamana district	1

Total number of animals in the outbreak:

<i>species</i>	<i>susceptible</i>	<i>cases</i>	<i>deaths</i>	<i>destroyed</i>	<i>slaughtered</i>
ovi	300	150	150	0	0

Note by the OIE Animal Health Information Department: The Delegate of Mali to the OIE has been requested to provide further information on the outbreak.

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

Information received on 10 and 15 December 2004 from Dr Emily Mmamakgaba Mogajane, Assistant Director General, National Regulatory Services, National Department of Agriculture, Pretoria:

End of previous report period: 22 October 2004 (see *Disease Information*, **17** [44], 319, dated 29 October 2004).

End of this report period: 15 December 2004.

I. Eastern Cape Province

a) Updated information on the outbreak in The Blue Crane Route Municipality area:

As reported on 6 August 2004, an outbreak of avian influenza was detected in ostriches in The Blue Crane Route Municipality area at the beginning of August 2004 (see *Disease Information*, **17** [33], 231, dated 13 August 2004). The disease was first found on two ostrich farms around Bedford and Somerset-East. As a result of a strengthened surveillance programme, three other farms within the same locality were found to be positive. The virus was identified and confirmed as highly pathogenic avian influenza (HPAI) H5N2 virus by the Onderstepoort Veterinary Institute and later confirmed by the OIE Reference Laboratory for HPAI in Weybridge, United Kingdom.

Restocking of one farm commenced on 1 November 2004. All the necessary biosecurity measures are now in place at this farm and the birds for restocking have already been identified from flocks that were tested twice in the preceding three months and found to be negative for avian influenza. The 1,000 sentinel birds (40-70 kg) will remain under quarantine for 6 weeks, whereafter they will undergo three consecutive bleedings on days 1, 15 and 29 and 10% of traceable samples will be taken. Introduction of ostriches on a wider scale will be discouraged until all the results on this farm are negative. A strict restocking protocol would then be followed to the letter and strict biosecurity measures would have to be adhered to.

b) Updated information on the outbreak in the Grahamstown Municipality area (about 160 km from The Blue Crane Route Municipality):

A total of 6,357 ostriches were culled on the three positive farms (see details in previous reports), and 1,584 ostrich eggs were destroyed.

Adjacent to these farms there is a game farm ('Boskeydel') which has 50 wild ostriches. One set of swabs was found to be positive on PCR⁽¹⁾. A decision was taken to slaughter out all birds on the farm. A professional hunter will assist in capturing the birds. A decision to cull in this game farm was based on the fact that farms culled earlier on are close to this game farm and this could serve as a new source of infection in the future.

c) Information on an outbreak in Camdeboo Municipality (previously known as Graaff Reinet Municipality):

Samples collected from ostriches at an ostrich farm tested positive and culling is planned to take place during the week commencing 6 December 2004.

The farm called 'Dalham' is situated approximately 180 km north-west of The Blue Crane Municipality. There are two ostrich farms within a 3-km radius, namely 'Wonderdal' and 'Roodebloem', which will also be culled.

Based on the results of tracing back and forward it would appear that this infection could have been introduced on 22 July 2004 when the farmer was off-loading birds in groups of 25 while suspected infected birds from a farmer in The Blue Crane Route Municipality were standing at the abattoir. The truck that was off-loading the birds, was not disinfected before leaving the abattoir.

d) Information on an outbreak in Ikwezi Municipality:

Jansenville town is a town within the Ikwezi Municipality about 150 km west of The Blue Crane Route Municipality.

Following the outbreak in The Blue Crane Route Municipality, first tests were conducted on 'Klipfontein' farm in Jansenville on 10 August. Serology gave negative results whereas PCR gave suspicious results. Following that, cloacal swabs were taken from 'Klipfontein' farm and the PCR results were found to be positive for avian influenza virus. Additional samples were taken and

positive results were obtained on 2 November 2004, leading to a decision that culling should commence on this farm.

Following the results of the first tests, 'Klipfontein' farm was put under quarantine. After the decision to cull, the government started negotiations with the owner of the farm. Culling will commence during the week of 6 December 2004.

II. Western Cape Province

On 13 August 2004, following the outbreak in the Eastern Cape Province, the National Directorate of Animal Health issued an instruction to all Provinces to conduct a national serological survey on avian influenza.

During this countrywide survey, a number of suspicious serological results were found in ostriches from 38 farms in the Western Cape Province. Thus far all attempts at virus isolation or identification by PCR have been unsuccessful.

All suspect farms have been put under quarantine. No movement is allowed from, to or through any of these farms. A discussion is currently under way with the Western Cape Province to finalise control measures.

A total of 1,490 ostrich samples and 680 chicken samples from the Western Cape Province were submitted for PCR tests and all samples tested negative. Ninety-three ostrich samples and 19 chicken samples were submitted for virus isolation but no virus was isolated.

Epidemiology: it must be emphasised that the infected farms in the Grahamstown, Camdeboo and Ikwezi municipalities are not primary outbreaks, but the infection has been discovered through performing backward- and forward tracing of movements of ostriches from the infected farms in the Eastern Cape Province. It is also important to note that these three municipalities are in the western region of the Eastern Cape Province.

Control measures:

- A slaughter-out policy has been applied in the Eastern Cape province. The method of slaughter is electric stunning and use of a captive bolt. The place where animals are being buried is covered with lime and the South African National Defence Force patrols the area for at least four days to ensure that it is well secured. Compensation has been paid to farmers whose animals have been destroyed as a result of these disease control measures.
- The Department of Agriculture has voluntarily stopped exports of potentially infectious and contagious poultry and poultry products from South Africa until the outbreak has been dealt with successfully. This precautionary measure has been taken to safeguard the international credibility of South Africa's agricultural industry. South Africa received a number of enquiries on those animals and animal products exported before the outbreak. Most poultry and poultry products exported from South Africa, were exported long before the outbreak. Should there be any requests for additional information, please do not hesitate to contact the Delegate of South Africa to the OIE.
- Countrywide surveillance is continuing.

In the Eastern Cape Province: 352 ostrich farms were visited and 9,611 ostrich samples collected and tested; the survey included 86 chicken farms and 2,994 chicken samples were collected and tested.

In the Western Cape Province: 396 ostrich farms were visited and 13,264 ostrich samples collected and tested; 340 chicken farms were visited and 4,016 chicken samples collected and tested; weekly farm inspections are being done.

In the rest of South Africa: 260 ostrich farms were visited and 962 ostrich samples collected and tested; 1,101 chicken farms were visited and 11,789 chicken samples were collected and tested.

(1) PCR: polymerase chain reaction

**AVIAN INFLUENZA IN HONG KONG, SPECIAL ADMINISTRATIVE REGION
OF THE PEOPLE'S REPUBLIC OF CHINA
in a wild bird**

EMERGENCY REPORT

Information received on 13 December 2004 from the Director of the Agriculture, Fisheries and Conservation Department (AFCD), Hong Kong:

Date of the report: 13 December 2004.

Nature of diagnosis: post-mortem and laboratory.

Date of initial detection of animal health incident: 3 December 2004.

Estimated date of primary infection: between 27 November and 1 December 2004.

Outbreaks:

Location	No. of outbreaks
New Territories, ecological mitigation area of the Lok Ma Chau Spur Line Project	1

Description of affected population: a grey heron (*Ardea cinerea*) (migratory bird).

Total number of animals in the outbreak:

species	susceptible	cases	deaths	destroyed	slaughtered
fau	...	1	1	0	0

Diagnosis: on 3 December 2004, the bird was observed to be sick. It was found dead the following day. Follow-up submission for post-mortem and virological examination was undertaken on 8 December. Sampling was carried out on 9 December.

A. Laboratory where diagnosis was made: Tai Lung Veterinary Laboratory, AFCD.

B. Diagnostic tests used:

- viral culture: chick embryo inoculation with haemagglutination inhibition testing using specific reference sera from CVL⁽¹⁾ Weybridge, United Kingdom (OIE Reference Laboratory for avian influenza);
- for H5 genome: viral genome detection by real-time RT-PCR⁽²⁾ tests using H5 specific primer sets from the Southeast Poultry Research Laboratory, Atlanta, Georgia, United States of America;
- for N1 genome: conventional RT-PCR⁽²⁾ following procedures from the Department of Microbiology, Hong Kong University (HKU);

Immunoperoxidase tests using monoclonal antibody for influenza A nucleoprotein and H5 haemagglutinin were positive on cryostat sections of lung and brain tissue.

Chicken embryos were killed within 48 hours and genetic sequencing of the haemagglutinin cleavage site will be conducted at HKU.

C. Causal agent: avian influenza virus subtype H5N1.

Epidemiological details:

- The grey heron is an abundant winter visitor to Hong Kong but not a resident species. About 1,200 grey herons were recorded in the Deep Bay area of Hong Kong in a survey conducted in the winter of 2003-04.
- Grey herons are found in a range of habitats such as marshes, tidal mudflats, estuaries, rice fields and flood plains. They feed mainly on fish but also eat amphibians, molluscs, crustaceans, aquatic insects, snakes and small rodents.
- No spread has been detected. All poultry farms within 5 km of where the heron was found have been checked and no unusual mortality or illness detected.
- Local poultry farms are routinely under a constant monitoring and surveillance programme involving serological and virological testing and have individual farm biosecurity plans which include bird proofing of all sheds. All chicken farms are routinely vaccinated with inactivated H5N2 vaccine and

each batch of chickens has 60 unvaccinated individually identified sentinels monitored throughout the production life of the batch.

- Extensive virus culture and surveillance is conducted in wholesale and retail poultry markets and in bird parks and wild bird populations throughout Hong Kong. Since January 2004, 1,325 dead birds and 14,200 environmental swabs from wholesale and retail bird markets have been tested and no evidence of H5N1 has been detected. In addition, more than 6,900 samples from wild birds, 4,500 captive birds in parks and 5,100 pet birds have been tested by AFCD and HKU as part of the avian influenza surveillance programme. The only cases of H5N1 infection detected in 2004 were the peregrine falcon reported on 19 January (see *Disease Information*, **17** [5], 18, dated 30 January 2004), the grey heron reported on 3 November (see *Disease Information*, **17** [45], 332, dated 5 November 2004) and this grey heron, all migratory wild birds.

(1) CVL : *Central Veterinary Laboratory*.

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

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BLUETONGUE IN MOROCCO Follow-up report No. 6

Translation of information received on 15 December 2004 from Dr Hamid Benazzou, Head, Animal Health Division, Ministry of Agriculture and Rural Development, Rabat:

End of previous report period: 26 November 2004 (see *Disease Information*, **17** [49], 368, dated 3 December 2004).

End of this report period: 9 December 2004.

New outbreaks:

Location	No. of outbreaks
Taza province, Tazarine rural district	7

Description of affected population in the new outbreaks: sheep.

Total number of animals in the new outbreaks:

<i>species</i>	<i>susceptible</i>	<i>cases</i>	<i>deaths</i>	<i>destroyed</i>	<i>slaughtered</i>
ovi	579	21	3	0	0

Control measures:

- quarantine;
- external antiparasitic treatment of the affected flocks;
- strengthening of epidemiological surveillance of the disease at the national level;
- increasing the awareness of farmers and local authorities;
- movement control inside the country.

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BONAMIA OSTREAE IN CANADA
Additional information

EMERGENCY REPORT (CONTD) - SEE *DISEASE INFORMATION*, **17** (50), 376, DATED 10 DECEMBER 2004

Information received on 15 December 2004 from Dr Brian Evans, Executive Director, Canadian Food Inspection Agency, Ottawa:

Date of the report: 14 December 2004.

The parasite detection is unassociated with a disease outbreak. Deaths of 3- to 4-year-old oysters over the past two years at the site were associated with severe algal bloom; thus, the exact correlation between these deaths and *Bonamia ostreae* infestation is not clear.

Description of affected population: European flat oysters (*Ostrea edulis*).

Location of the affected population: Malaspina Inlet, on the west coast of mainland British Columbia, north-west of Vancouver. European oysters on the Atlantic coast remain free of *Bonamia ostreae*.

Diagnosis:

The Fisheries and Oceans Canada Shellfish Health Laboratory in Nanaimo, British Columbia, observed microcells in tissue samples from European flat oysters during a research experiment.

Confirmation was based on analysis of PCR⁽¹⁾ assays, gene sequencing and restriction digest (RFLP) results by the OIE Reference Laboratory for bonamiosis.

Epidemiology:

A. Source of agent / origin of infestation: the source of the infestation is unknown. Historical histological material of European oysters from British Columbia is being examined at the Shellfish Health Laboratory in Nanaimo.

B. Other epidemiological details:

- The total production of European oysters accounts for less than 1% of British Columbia's oyster production.
- There are no transfers of live oysters between the Pacific and Atlantic coasts of Canada.

Control measures:

Plans to control the disease will be formulated when the extent of infestation in the few British Columbia sites growing European oysters has been determined.

No transfers of live oysters from the affected site occur, except for direct human consumption.

Industry and provincial authorities have been informed and are assisting in the surveillance programme.

(1) PCR: polymerase chain reaction

HIGHLY PATHOGENIC AVIAN INFLUENZA IN THAILAND
Follow-up report No. 36

Information received on 16 December 2004 from Dr Yukol Limlamthong, Director General, Department of Livestock Development, Ministry of Agriculture and Cooperatives, Bangkok:

End of previous report period: 9 December 2004 (see *Disease Information*, **17** [50], 376, dated 10 December 2004).

End of this report period: 16 December 2004.

New outbreaks:

Location	No. of outbreaks
Bangkok province, Nongjork district	1
NakhonSawan province, Kao Liao district	1
NakhonSawan province, Tha Tako district	1
Phichit province, Muang district	9
PhitsanuLok province, Bang Krathum district	4
PhitsanuLok province, Muang district	2
PhitsanuLok province, Nakhon Thai district	1
PhitsanuLok province, Phrom Piram district	3
PhitsanuLok province, Wang Thong district	1
PhitsanuLok province, Wat Bot district	1
SaraBuri province, Phra Phutthabat district	1
Uthai Thani province, Nong Chang district	1
Uthai Thani province, Nong Khayang district	1
Total	27

Description of affected population in the new outbreaks: local poultry, laying ducks, laying hens, broilers, quails, fighting cocks and pet birds.

Total number of animals in the new outbreaks:

<i>species</i>	<i>susceptible</i>	<i>cases</i>	<i>deaths</i>	<i>destroyed</i>	<i>slaughtered</i>
avi	# 24,446	# 1,203	# 1,203	# 23,243	0

Incomplete total

Control measures:

- screening;
- quarantine;
- stamping-out policy;
- zoning;
- movement control inside the country.

Vaccination remains prohibited.

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BLUETONGUE IN PORTUGAL
Follow-up report No. 2

Translation of information received on 16 December 2004 from Dr Carlos Agrela Pinheiro, Director General of Veterinary Services, Ministry of Agriculture, Rural Development and Fisheries, Lisbon:

End of previous report period: 26 November 2004 (see *Disease Information*, **17** [49], 367, dated 3 December 2004).

End of this report period: 15 December 2004.

New outbreak:

Location	No. of outbreaks
region of Beira Interior, Castelo Branco district, Idanha-a-Nova municipality (approximately 80 km from the border with Spain)	1 farm

Total number of animals in the new outbreak:

<i>Outbreak reference No.</i>	<i>species</i>	<i>susceptible</i>	<i>cases</i>	<i>deaths</i>	<i>destroyed</i>	<i>slaughtered</i>
07/2004	bov + o/c	781	1*	1*	0	...

* sheep

Diagnosis: the case was laboratory confirmed on 13 December 2004 (the virus genome was identified by RT-PCR⁽¹⁾) and the affected farm ("Herdade do Couto da Várzea") was informed the same day.

Source of agent / origin of infection: epidemiological investigations are being carried out to identify the source of contamination.

Control measures during reporting period:

- quarantine;
- ban on the movement of animals of susceptible species in the area surrounding the infected farm;
- a restriction zone has been set up;
- insect traps are being used to monitor for the presence of vectors.

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

VENEZUELAN EQUINE ENCEPHALOMYELITIS IN BELIZE

EMERGENCY REPORT

Information received on 16 December 2004 from Dr Victor Gongora, Director of Animal Health, Ministry of Agriculture and Fisheries, Belmopan:

Date of the report: 16 December 2004.

Nature of diagnosis: clinical and laboratory.

Date of initial detection of animal health incident: 14 October 2004.

Estimated date of primary infection: 7 October 2004.

Outbreaks:

Location	No. of outbreaks
Orange Walk district (in the northern part of the country)	1

Description of affected population: horses of either sex from 8 months to 11 years of age. Clinically affected horses show one or more of the following: circling, head tilt, intention tremor, ataxia, lethargy, bruxism, lip paresis.

Total number of animals in the outbreak:

species	susceptible	cases	deaths	destroyed	slaughtered
equ	3,000	8	2	0	0

Diagnosis:

A. Laboratory where diagnosis was made: National Veterinary Services Laboratory, Ames, Iowa, United States of America.

B. Diagnostic tests used:

- IgM-capture enzyme-linked immunosorbent assay (ELISA) – 10 December 2004 – Positive reactions at a dilution of 1:400.
- Virus neutralisation – 10 December 2004 – Positive reactions at dilutions of 1:100 and 1:10.
- Complement fixation test – 10 December 2004 – Positive reactions at dilutions of 1:16 and 1:8.

Epidemiology:

A. Source of agent / origin of infection: reservoir in nearby jungle.

B. Mode of spread: movement of horses within the community; mosquitoes.

C. Other epidemiological details: the affected community lies in swampy forested areas along the New River. The religious belief of the community does not allow ownership of motor vehicles hence all families own horses to move around. In 1996, this community suffered a similar outbreak.

Control measures:

- control of arthropods;
- screening (surveillance);
- vaccination;
- movement control inside the country.

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