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AVIAN INFLUENZA IN THE PHILIPPINES INVALIDATION OF THE DIAGNOSIS OF INFECTION BY VIRUS SUBTYPE H5 (FINAL REPORT)

Information received on 22 August 2005 from Dr José Q. Molina, Director, Bureau of Animal Industry, Department of Agriculture, Quezon City:

End of previous report period: 20 July 2005 (see *Disease Information*, **18** [29], 211, dated 22 July 2005).

End of this report period: 4 August 2005.

Diagnosis (updated information):

<i>Laboratory where diagnostic tests were performed</i>	<i>Diagnostic tests used</i>	<i>Date</i>	<i>Results</i>
Australian Animal Health Laboratory (OIE Reference Laboratory for avian influenza)	haemagglutination inhibition test	15 July 2005	positive for virus subtype H9N2
	real-time quantitative PCR ⁽¹⁾	14-15 July 2005	negative for virus subtype H5
	virus isolation	26 July 2005	

(1) PCR: polymerase chain reaction

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ANTHRAX IN KAZAKHSTAN

(**Date of previous outbreak of anthrax in Kazakhstan reported to the OIE:** June 2004).

IMMEDIATE NOTIFICATION REPORT AND FINAL REPORT

Translation of information received on 2 September 2005 from Dr Asilbek A. Kozhumratov, Director, Veterinary Control Department, Ministry of Agriculture, Astana:

Report date: 2 September 2005.

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

Date of first confirmation of the event: 28 August 2005.

Date of start of the event: 23 August 2005.

Nature of diagnosis: clinical and laboratory.

Details of outbreak:

First administrative division (region)	Lower administrative division (district)	Type of epidemiological unit	Name of the location	Species	Number of animals in the outbreak				
					susceptible	cases	deaths	destroyed	slaughtered
West Kazakhstan	Zhanibek	farm	Talov	bov	144	...	9	0	0

Diagnosis: high temperature, convulsions, respiratory distress, blood-tinged foamy discharge from nose and mouth.

Laboratory where diagnostic tests were performed	Diagnostic tests used	Date	Results
West Kazakhstan regional laboratory of the National Veterinary Laboratory	- bacteriology; - inoculation test; - bacterioscopy.	25-28 August 2005	positive

Source of outbreak or origin of infection: soil-borne infection (previously infected site).

Control measures undertaken:

- quarantine;
- booster vaccination of susceptible animals in the outbreak and the infected zone;
- implementation of disinfection measures in the outbreak and the infected zone;
- regular surveillance of animals in the outbreak and the infected zone;
- movement control inside the country;
- zoning.

Vaccination in response to the outbreak:

First administrative division	Species	Total number of animals vaccinated	Details of the vaccine
West Kazakhstan region	bov	2,000	liquid live vaccine against anthrax strain 55
	o/c	3,000	
	equ	170	

Treatment of affected animals: no.

ANTHRAX IN TURKMENISTAN

(**Date of previous outbreak of anthrax in Turkmenistan reported to the OIE:** September 2003).

IMMEDIATE NOTIFICATION REPORT

Translation of information received on 2 September 2005 from Dr Murad G. Gochmuradov, Director of the Turkmenistan Veterinary Union, Ashgabat:

Report date: 2 September 2005.

In Ak-Su, Ak-Bugdaye district, Akhal region (90 km north-east of Ashgabat), 12 animals from a 1,000-head flock of small ruminants fell sick and died from anthrax between 30 August and 1 September 2005.

Their cadavers were destroyed by incineration. Control measures against anthrax are being applied. The flock has been placed under quarantine since 31 August 2005.

The diagnosis was confirmed by the central veterinary laboratory.

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STREPTOCOCCUS SUIS IN THE PEOPLE'S REPUBLIC OF CHINA **Follow-up report No. 1**

Information received on 5 September 2005 from Mr Jia Youling, Director General, Veterinary Bureau, Ministry of Agriculture, Beijing:

End of previous report period: 5 August 2005 (see *Disease Information*, **18** [31], 245, dated 5 August 2005).

End of this report period: 30 August 2005.

1. General situation

A total of 647 pigs have died as a result of *Streptococcus suis* infection in Sichuan province. The deaths occurred in 149 villages of 88 municipalities in 21 counties of the following 8 regions:

- Chengdu,
- Deyang,
- Luzhou,
- Mianyang,
- Nanchong,
- Neijiang,
- Zigong,
- Ziyang.

The epizootic began in late June 2005, reached a peak around 20 July, and then declined sharply.

No new cases have occurred since 6 August 2005.

This epizootic was caused by *Streptococcus suis* type 2. The LD₅₀ (dose lethal to 50% of the animals) of the bacterial strain isolated in Sichuan was determined using the new laboratory animal model, zebra fish (pure breeding line), and the virulence genes of the bacterium were also tested.

The results of the tests showed that the virulence of the isolate is not significantly different from that of isolates obtained from other places in the past, and no evidence of genetic variation has been found.

The main characteristics of the epizootic were as follows:

1.1. Spatial distribution

The outbreak areas were mainly centralised in the historical endemic areas of *S. suis* infection in Ziyang, Neijiang and other places. The outbreaks occurred sporadically, and did not occur densely over a large region. Infected points were far apart and had no direct epidemiological relationship. There is therefore little likelihood of transmission having occurred between them.

1.2. Temporal distribution

The disease was first recognised on 24 June 2005, and mainly occurred in July. During this period the weather was hot, humid and rainy. The season when the epizootic occurred was the same as in the past. This shows that the occurrence of *S. suis* infection in pigs is specific to a particular season.

1.3. Herd distribution

All outbreaks occurred in remote rural areas with poor economic conditions, and only in small backyard farms, where animal health conditions are poor, and pigpens are dimly lit, damp and inadequately ventilated.

No outbreaks were reported in intensive farms and large-scale premises with better sanitary conditions.

The morbidity observed in pigs within each affected group was low.

2. Control measures

The recent *S. suis* epizootic was effectively controlled by applying all of the following measures:

- preventive treatment of pigs in the same herd as infected and dead animals using highly sensitive antimicrobials, and improvement of resistance to the disease by adding preventive medicine to animal feed;
- regular disinfection of swine holdings in infected places and zones, livestock markets and designated slaughterhouses, aimed at improving sanitary conditions;
- destruction of cadavers of dead pigs by deep burial;
- stepping up of inspection and quarantine, and movement control of animals and animal products;
- development and production of vaccine, and emergency vaccination of pigs in high-risk areas aimed at improving their level of immunity.

3. Vaccination

Pigs have been vaccinated with *Streptococcus suis* type 2 vaccine.

In the regions of Ziyang, Neijiang and Zigong, where highest morbidity was found, vaccination was performed in all counties; in the other five regions, vaccination was performed only in the infected counties and in the zones at risk adjacent to infected zones.

No vaccination was performed in pigs for slaughter within twenty days, one-month-old piglets, pregnant sows or weak pigs.

To date, about 14 million pigs have been vaccinated, and the vaccination cover is up to 90%.

Testing of vaccinated pigs with indirect ELISA showed that 70% of pigs had a significant serum antibody titre 14 days after vaccination.

The application of vaccine in the field has demonstrated that *Streptococcus suis* type 2 inactivated vaccine is effective, safe and has few side-effects.

**FOOT AND MOUTH DISEASE IN BOTSWANA
Follow-up report No. 1 (confirmation of diagnosis)**

Information received on 5 September 2005 from Dr Musa Fanikiso, Director of Animal Health and Production, Ministry of Agriculture, Gaborone:

End of previous report period: 15 August 2005 (see *Disease Information*, **18** [33], 261, dated 19 August 2005).

End of this report period: 5 September 2005.

Precise identification of agent: foot and mouth disease (FMD) virus serotype SAT2.

Date of first confirmation of the event: 11 August 2005.

Date of start of the event: 28 July 2005.

Nature of diagnosis: clinical and laboratory.

Details of outbreak (updated data):

Date of start of the event	Species	Number of animals in the outbreak				
		susceptible	cases	deaths	destroyed	slaughtered
28 July 2005	bov	approx. 1,300	123*	0	0	0

* animals showing clinical signs

Description of affected population:

Pandamatenga extension area has about 1,300 cattle of which 800 are in the communal area and 500 in fenced farms. Extensive surveillance has shown that the disease is restricted only to communal herds, with almost all holdings/kraals affected. In the communal cattle rearing system, cattle share watering points, grazing and even diseases.

There is no disease in the fenced farms.

The disease has affected no other species except cattle.

Diagnosis:

Laboratories where diagnostic tests were performed	Species examined	Diagnostic tests used	Date	Results
- Botswana Vaccine Institute	bov	solid-phase blocking ELISA ⁽¹⁾	2 Sept. 2005	positive for SAT2
- Pirbright Laboratory (United Kingdom) (OIE Reference Laboratory for FMD)		virus isolation and characterisation	pending	pending

Source of outbreak or origin of infection: inconclusive (contact with infected animals at grazing/watering, contact with wild animals).

Control measures undertaken:

- control of wildlife reservoirs;
- quarantine;
- movement control inside the country;
- screening;
- zoning;
- vaccination (see details below);
- disinfection of infected premises.

The outbreak control strategy adopted now involves intensive vaccination complemented by blockade (quarantine), movement restriction, surveillance and public education.

The public awareness campaign was started by the Assistant Minister of Agriculture addressing meetings in several villages in Kasane district.

Kasane district has been sub-zoned into infected (1,300 cattle), surveillance (1,500 cattle) and free (13,000) zones for the purposes of controlling the outbreak. The zones are separated by physical

boundaries in the form of veterinary fences, electrified farm fences and big game and forest reserves in the district. Exit points from the infected zone are manned by veterinary and police officials who decontaminate people and vehicles as well as search for any prohibited material. Veterinary and Botswana Defence Force officials patrol the perimeter of the infected zone to ensure that animals are not moved out. Extensive surveillance in the rest of the district has not revealed the presence of disease, indicating that the disease is still confined to the infected zone only.

A long-term surveillance programme composed of visual and clinical inspections, sero-surveillance and probang sampling has been drawn up to monitor the situation.

Vaccination in response to the outbreak: primary vaccination was given about two weeks ago and now a booster vaccination is being administered.

Location	Species	Total number of animals vaccinated	Details of the vaccine
Kasane district	bov	- primary vaccination: 16,172; - booster vaccination: 16,244. These figures represent 100% vaccination coverage.	trivalent SAT1/SAT2/SAT3 vaccine

Treatment of affected animals: no.

Other details/comments:

- The farmers have been very cooperative and this facilitates vaccination and surveillance.
- The outbreak is in an FMD controlled area; therefore, the occurrence of an outbreak in this area does not affect the FMD status and beef trade of Botswana. Cattle in this area occasionally mix with African buffalo and are routinely vaccinated with a trivalent SAT1/SAT2/SAT3 FMD vaccine three times a year. Cattle (all livestock) in the area are, and have always been, isolated from others in the rest of the country by big game reserves in the north-west of Botswana and veterinary fences. Animals and their products have never been allowed out of the area, and are only used in the area (i.e. these animals and their products are not used either for national or for international trade).

(1) ELISA: enzyme-linked immunosorbent assay

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HIGHLY PATHOGENIC AVIAN INFLUENZA IN THAILAND
Follow-up report No. 67

Information received on 9 September 2005 from Dr Yukol Limlamthong, Director General, Department of Livestock Development, Ministry of Agriculture and Cooperatives, Bangkok:

End of previous report period: 1 September 2005 (see *Disease Information*, **18** [35], 289, dated 2 September 2005).

End of this report period: 8 September 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 divisions	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
Kampaengphet	TungTong, SaiTongWattana	village	village No. 1	30 Aug. 2005	avi	92	67	67	25	0
Saraburi	PoneTong, NongKae	village	village No. 1	30 Aug. 2005	avi	30	30	18	12	0
Saraburi	NongKop, NongSaeng	village	village No. 1	1 Sept. 2005	avi	15	15	12	3	0
Saraburi	PoneTong, NongKae	village	village No. 4	5 Sept. 2005	avi	48	12	12	36	0

Description of affected population in the new outbreaks: native chickens raised in backyards or free ranging with minimal biosecurity.

Diagnosis:

Laboratories 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.

There was one more province, i.e. Saraburi, affected during this week.

In this third wave to date, there have been 33 confirmed outbreaks in 5 provinces, since the second wave of HPAI re-occurrence that occurred from 3 July 2004 - 12 April 2005:

Affected province	No. of outbreaks
Ayudhaya	1
Chainat	1
Kampaengphet	9
Saraburi	3
Suphanburi	19

The five 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	25
quail	3
fighting cocks	2
laying hens	1
laying ducks	1
broilers	1

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