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### NEWCASTLE DISEASE IN AUSTRALIA Follow-up report

#### FOLLOW-UP REPORT No. 3

*Summary of two faxes received on 23 and 26 November 1998 from Dr Gardner Murray, Chief Veterinary Officer, Department of Primary Industries and Energy, Canberra:*

**End of previous report period:** 8 October 1998 (see *Disease Information*, **11** [40], 144, dated 9 October 1998).

**End of this report period:** 26 November 1998.

**Characterisation of the causative agent:** gene sequencing shows that:

- the virus on the three affected properties was the same, although there were very minor and unimportant nucleotide sequence differences between viruses on the different properties;
- the outbreak virus was very closely related on analysis of the haemagglutinin-neuraminidase (HN) and fusion (F) protein genes to a known endemic lentogenic strain of the virus, and it probably arose by mutation from this strain or another closely related but as yet unidentified Australian virus.

In addition to gene sequencing outcomes, epidemiological evidence shows that, while highly pathogenic, the virus demonstrates low transmissibility.

**Surveillance:** the authorities have visited more than 100 poultry farms twice to sample birds, and more than 14,000 blood samples and 13,000 swabs have been collected. The extensive passive surveillance programme previously mentioned remains in place.

**Control measures during reporting period:**

- Preliminary disinfection has been completed on the two Sydney farms. National funding arrangements to deal with disinfection are being implemented. The Government of the State of New South Wales (NSW) has used its powers under the NSW Exotic Diseases Act to issue legal orders and require the owners to contribute to clean-up and decontamination costs.

Disinfection programmes appropriate to the circumstances of each farm are being employed on these two farms, and they will remain as infected premises until the programmes are completed. The Australian authorities have assessed that these programmes, together with ongoing biosecurity of the two infected premises, will produce an effective outcome to eliminate the virus from these previously infected farms.

Based on the negative second round of surveillance results, the restricted and control areas were revised on 20 November. There has been a reduction in the size of the infected and surveillance zones in respect of these two poultry farms:

- the restricted area/infected zone is now confined to the boundaries of the infected farms,
- the control area/surveillance zone is now a 1-km-radius zone surrounding each infected premises. Movement controls outside of the revised control areas have been lifted.

- Disinfection has been completed at Farm 3 at Rylstone, and the respective control and restricted areas have been lifted. This area should now be considered a Newcastle disease free zone.
- A property approximately 20 km to the south-west of the first infected farm was quarantined as a precaution, pending full clarification of anomalous laboratory results. The property has now been released from quarantine since laboratory results have been clarified to show that the farm is not infected with virulent Newcastle disease virus.

There is no evidence of infection with virulent Newcastle disease virus elsewhere in Australia. Therefore no restrictions have been placed on the movement of poultry or poultry products within Australia, except from the control area around the infected farms. The rest of Australia should thus continue to be recognised as a virulent Newcastle disease-free zone.

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### **BLUETONGUE IN GREECE Confirmation of diagnosis**

EMERGENCY REPORT (CONTD) (see *Disease Information*, **11** [46], 161, dated 20 November 1998)

*Text of a fax received on 23 November 1998 from Dr Vasilios Stylos, Director of Animal Health, Ministry of Agriculture, Athens:*

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

**Date of initial detection of animal health incident:** 29 October 1998.

<i>Location of the outbreaks</i>
Island of Rhodes, Dodecanese prefecture (south-eastern Aegean Sea, between 35° and 36° N)
Island of Kos, Dodecanese prefecture (south-eastern Aegean Sea)

#### **Background - Surveillance for bluetongue:**

The last occurrence of bluetongue in Greece was recorded in the island of Lesbos, eastern Aegean Sea, in 1979.

The main vector of bluetongue (*Culicoides imicola*) is present all year round in several Greek islands of the eastern Aegean Sea, including the island of Rhodes, but not in mainland Greece.

In view of the risk of incursion, routine sero-surveillance for bluetongue has been carried out in all Greek islands of the eastern Aegean Sea since the early '90s within the framework of the *Brucella melitensis* eradication programme.

The results of sero-surveillance for bluetongue obtained in the period May-October 1998 were the following:

- Island of Rhodes: 1,560 samples, all negative;
- Island of Kos: 324 samples, all negative.

It is concluded, therefore, that until October 1998 there was no suspicion of bluetongue in either island.

#### **Events leading to suspicion and confirmation:**

##### **1) Serological findings**

On 29 October 1998, two blood samples collected from sheep in Rhodes tested positive for bluetongue by ELISA, raising suspicion of disease.

From 3 to 10 November 1998, targeted serological surveillance was carried out in Rhodes and Kos with the following results:

- 112 blood samples out of 189 tested positive for bluetongue in both AGID<sup>(1)</sup> and ELISA<sup>(2)</sup>,
- positive samples were collected from nine sheep flocks in four villages in Rhodes and one sheep flock in one village in Kos.

## 2) *Virological findings*

A cytopathic effect has been observed in BHK<sup>(3)</sup> and VERO<sup>(4)</sup> cells. Virus isolation, identification and typing is still in progress, but preliminary results indicate bluetongue virus (BTV) type 4.

## 3) *Pathological findings*

On 3 November 1998, pathological findings compatible with bluetongue infection were observed in one sheep in Rhodes.

## 4) *Clinical findings*

From 10 to 13 November 1998, an intensive clinical inspection for bluetongue was carried out in Rhodes and Kos, with the following results:

- In Rhodes, typical signs of active bluetongue infection were observed in 21 sheep flocks from seven villages, while strong suspicions were raised in two more villages.
- In Kos, similar clinical signs were observed in two sheep flocks in one village.

Overall mortality, so far, was approximately 14%.

## 5) *Epidemiological findings*

In September-October 1998 high temperatures (> 20° C) and humidity (80%) were recorded in Rhodes, while the prevailing winds were blowing from the north-northeast.

All known infected villages in Rhodes are concentrated in the northern-northeastern part of the island. The spatial distribution of infection appears to support the hypothesis that the bluetongue incursion was due to an invasion of infected wind-borne vectors from the north-northeast. Two scenarios are possible:

- mass initial invasion of infected vectors causing a large number of primary infections in many animals/flocks/villages, or
- low-level and localised initial infection with subsequent short-distance spread by indigenous vectors, after they had become infected.

The situation may be clarified in the light of large-scale serological surveillance and an entomological survey currently in progress.

**Control measures:** the following measures are being applied in Rhodes and Kos with a view to controlling and eventually eradicating the disease:

### 1) *Emergency disease control measures, applicable in the first instance:*

- Suspension of movements of all susceptible animal species into and out of the entire Dodecanese prefecture (18 islands in all).
- Slaughter and destruction of all animals infected or suspected of being infected, on the basis of clinical signs.
- Spraying, with an approved insecticide, of all susceptible animals and likely habitats of vectors.
- Census and clinical surveillance of all susceptible animals in the Dodecanese prefecture and other islands of the eastern Aegean Sea.

### 2) *Disease eradication measures, applicable in the second instance:*

- Two-stage serological surveillance, as follows:
  - a) Stage A: sampling of 100% of susceptible animals present in the infected villages in Rhodes and Kos.
  - b) Stage B: sampling of 100% of cattle and goats and of 10% of sheep (random sample) in 100% of sheep flocks present in non-infected villages in Rhodes and Kos.
  - c) In the event of positive findings during Stage B, a screening scheme as in Stage A will be implemented.
- Slaughter and destruction of seropositive animals.
- Continuation of spraying with insecticide.
- Continuation of clinical surveillance.
- Emergency vaccination is NOT contemplated.

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(1) AGID: agar gel immunodiffusion.

(2) ELISA: enzyme-linked immunosorbent assay.

(3) BHK: baby hamster kidney.

(4) VERO: African green monkey kidney.

**CLASSICAL SWINE FEVER IN ARGENTINA**  
**Follow-up report**

FOLLOW-UP REPORT NO. 2

*Translation of a communication received on 23 November 1998 from Dr Luis O. Barcos, President of the National Department of Agrarian Health (SENASA), Ministry of Economy, Public Works and Services, Buenos Aires:*

**End of previous report period:** 30 September 1998 (see *Disease Information*, **11** [45], 158, dated 13 November 1998).

**End of this report period:** 16 November 1998.

**New outbreaks:**

Location	No. of outbreaks
Corral de Bustos	1
Guatimozin, Córdoba province	1

**Description of affected population in the new outbreaks:**

- Outbreak in Corral de Bustos: signs of pneumonia; death of piglets.
- Outbreak in Guatimozin: family-run holding. Death of four piglets born to the same sow.

**Total number of animals in the new outbreaks:**

<i>susceptible</i>	<i>cases</i>	<i>deaths</i>	<i>destroyed</i>	<i>slaughtered</i>
305	14	14	0	0

**Diagnosis:**

- A. Laboratory where diagnosis was made:** SENASA Directorate of Laboratory.
- B. Diagnostic tests used:** cryostat sections and direct and indirect immunofluorescence.
- C. Causal agent:** not isolated.

**Epidemiology:** vaccination in March 1998 and booster vaccination in November 1998.

**Control measures during reporting period:** control programme covering the whole country. The infected holdings have been placed under quarantine.

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## INFECTIOUS HAEMATOPOIETIC NECROSIS IN FRANCE

### EMERGENCY REPORT

Translation of a fax received on 26 November 1998 from Dr Monique Eloit, Deputy Head of the Department of Food Quality and Animal and Plant Health Actions, Ministry of Agriculture, Fisheries and Food, Paris:

**Nature of diagnosis:** laboratory.

**Date of initial detection of animal health incident:** 19 October 1998.

**Estimated date of first infection:** 9 October 1998.

<i>Location</i>	<i>No. of outbreaks</i>
Oise department, Picardy region	1

**Description of affected population:** 15- to 20-g trout.

**Total number of animals in the outbreak:**

<i>susceptible</i>	<i>cases</i>	<i>deaths</i>	<i>destroyed</i>	<i>slaughtered</i>
300,000	110,000	110,000	0	0

### **Diagnosis:**

**A. Laboratory where diagnosis was made:** Agricultural and Veterinary Laboratory of Seine-Maritime Department, Rouen.

**B. Diagnostic tests used:** isolation by cell culture and identification by neutralisation.

### **Epidemiology:**

**A. Source of agent / origin of infection:** unknown; investigations are under way.

**B. Mode of spread:** unknown.

**Control measures during reporting period:** infected holding placed under quarantine; tracing back and tracing forward; ban on the movement of fish in an area around the outbreak.

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