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Newcastle disease in Australia: additional information

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NEWCASTLE DISEASE IN AUSTRALIA
Additional information

Extract from an e-mail received on 13 April 1999 from Dr Gardner Murray, Chief Veterinary Officer, Department of Primary Industries and Energy, Canberra:

End of previous report period: 7 April 1999 (see *Disease Information*, 12 [13], 46, dated 9 April 1999).

End of this report period: 13 April 1999.

Further diagnostic findings:

- Intracerebral pathogenicity index (ICPI) is 1.6.
- Chorio-allantoic membrane (CAM) antigen localisation test was positive.

New South Wales (NSW) Agriculture will finalise the decontamination of the Mangrove Mountain farm on 13 April 1999. A second disinfection will then be done in 14 days' time, as required in the Australian Veterinary Emergency Plan (AUSVETPLAN) for Newcastle disease.

Surveillance and sampling activities are continuing within the restricted zones. Outside the proclaimed movement restricted area, farmers are providing production and mortality figures to NSW Agriculture as an additional monitoring requirement.

Origin of virus:

Genetic sequencing studies at the CSIRO⁽¹⁾ Australian Animal Health Laboratory in Geelong indicate that the Mangrove Mountain virus is closely related to the virus that caused the 1998 outbreak in western Sydney (see *Disease Information*, 11 [47], 165, dated 27 November 1998). However, it is detectably different by minor nucleotide sequence changes in the F⁽²⁾ and the HN⁽³⁾ protein genes.

Both of these virulent viruses are significantly different from endemic Australian low virulence strains. Scientific advice is that they appear to have evolved as mutations from these lentogenic strains.

(1) CSIRO: Commonwealth Scientific and Industrial Research Organisation.

(2) F: fusion.

(3) HN: haemagglutinin-neuraminidase.

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