
Suspect exotic disease investigations

The following is a summary of the suspect exotic disease investigations carried out by Ministry of Agriculture and Fisheries staff during July, August and September 1990.

Suspect foot and mouth disease

- Six calves aged eight to ten weeks in a mob of 125 had been ill-thrifty for four weeks. Five of these calves had mouth erosions on the hard palate and underside of tongue and two also had foot lesions. There were no vesicles present in the mouth or on the feet of these calves. The farm had a previous history of BVD and the foot lesions were considered to be an interdigital dermatitis due to continuous wet conditions on the property. A clinical diagnosis of BVD was made. BVD virus was isolated from one calf and a high BVD titre was present in the second calf.
- A single heifer in a mob of 27 had been ill, but afebrile, for three days. She had a bilateral conjunctivitis and ulcerative lesions in the mouth, nares and on the tongue. Three of the teats had 2.5 cm diameter vesicular lesions containing clotted fibrin. The front fetlocks were swollen and the skin at the back of all pasterns was inflamed. The in-contact animals appeared normal. The diagnosis is unknown but a contact dermatitis of plant origin was suspected.
- One clinically normal but thin pig on a hobby farm had approximately ten chronic ulcers on the tip and sides of the tongue and three ulcers on the lower gum beneath the incisor teeth. The skin above the snout, on the tips of the ears and around the coronets of all four feet was encrusted. It had been fed mainly household scraps. Ingestion of irritant material and trauma were thought to have caused the lesions.
- A beef farmer reported that a yearling beast had a lesion on its tongue. On examination the animal was clinically normal but had a single chronic ulcer

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on the tip of its tongue. There was no sign of disease in the in-contact animals. The diagnosis was trauma with secondary infection.

Suspect bovine spongiform encephalopathy

- An eight-year-old dairy cow developed progressive hindleg paralysis over a three week period and was euthanatised. Although the clinical signs were suggestive of a posterior spinal lesion only the brain was submitted for examination. There were no significant histopathological findings.
- An adult Hereford cow was reported as being anxious and occasionally aggressive. A serum sample confirmed a diagnosis of hypomagnesaemia.

mia. Blood lead and thiamine values were normal. There was no significant findings in the sections of fixed brain examined.

Suspect bluetongue infection

- An elephant that arrived in Auckland in May from Myanmar (formerly Burma), via the Netherlands and the United Kingdom, gave a weak positive serological result to bluetongue. It had tested negative for bluetongue prior to leaving Myanmar and once while in transit. Further serological tests carried out at the Central Animal Health Laboratory and at the Australian Animal Health Laboratory, Geelong, showed the bluetongue reaction was non-specific and was due to a cross reaction with epizootic haemorrhagic disease (EHD) virus antibody. EHD virus, like bluetongue, is an insect-borne orbivirus but it had not been associated with clinical disease in sheep or cattle.

Attempts to detect a viraemia by inoculation of blood from the elephant into eggs and sheep were unsuccessful. It is probable the elephant was infected with EHD in Myanmar before being shipped to Europe for quarantine.

Suspect San Miguel sealion virus infection

- A vesicular skin condition was investigated in a 17-year-old dolphin which had been in captivity for 12 years. Over a two week period the dolphin had ceased regular eating and had lost 8.5 kg. Her PVC was low and BUN levels were high. Several drugs including phenylbutazone were administered prior to, and once the skin vesicles had appeared. The vesicles varied in size from 0.5 to 2 cm diameter and contained a straw coloured fluid. This material was submitted to

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the World Foot and Mouth Disease Reference Laboratory, Pirbright. No viruses were isolated. The dolphin died three days after the first vesicle was noted. Necropsy findings indicated that renal failure due to a nephritis was the cause of death. *Staphylococcus aureus* was isolated from the renal lesions.

Suspect arthropod-borne infection

- Five calves born to heifers were delivered weak or stillborn. The farmer blamed accidental father x daughter mating for the problem. Two which were born alive showed nervous signs associated with congenital internal hydrocephalus. Because of the remote possibility of an arthropod-borne infection, sera from four heifers were checked out for Akabane disease, bluetongue, EHD and Palyam virus antibodies with negative results.
- Two heifers on another property gave birth to deformed calves with bent stiff front and back legs and stiff necks. Similar cases have been recorded from the same area for over 20 years. A common denominator was the grazing of *Poa aquatica* on a river bank in the late summer and autumn. The differential diagnosis included the arthropod-borne infections, so sera from the two heifers were tested for Akabane disease, bluetongue, EHD and Palyam virus antibodies. All tests were negative.

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