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### BOVINE SPONGIFORM ENCEPHALOPATHY IN GERMANY Additional information

*Translation of an e-mail received on 7 December 2000 from Prof. Dr Werner Zwingmann, Chief Veterinary Officer, Ministry of Food, Agriculture and Forestry, Bonn:*

**Report date:** 6 December 2000 (information additional to *Disease Information*, **13** [47], 216, dated 1 December 2000).

#### **Background:**

Between 1994 and 1997, a total of six cases of bovine spongiform encephalopathy (BSE) were diagnosed in Germany. All of these animals were imported from the United Kingdom (1 Scottish Highland cow, 2 Galloway cows, 1 Welsh Black cow and 1 Hereford cow) or from Switzerland (1 Simmental cow).

It has never been common practice in Germany to feed ruminants with animal meal. Nonetheless, feeding ruminants with animal meal produced in rendering plants has been prohibited in Germany since 18 March 1994. Carcasses have always been rendered in Germany at 133°C and 3 bar for 20 minutes with a particle size of 50 µm.

#### **Affected animal:**

In a voluntary beef cattle testing programme carried out by a private laboratory in Hamburg, a cow tested positive to a rapid BSE test. The animal is a Red-and-White Holstein cow born on 2 August 1996. It had two offspring, a female born in 1999 and a male born in 2000.

The cow was slaughtered on 22 November 2000 along with three other cows from the herd in a slaughterhouse in Itzehoe in Schleswig-Holstein. The ante-mortem inspection showed no clinical signs suggesting BSE.

The diagnosis was confirmed by additional tests at the National Reference Laboratory for BSE of the Federal Research Centre for Virus Diseases of Animals in Tübingen on 26 November 2000.

#### **Herd:**

The infected cow and her mother were born and reared in a dairy herd in the Rendsburg-Eckernförde district in Schleswig-Holstein.

The herd consisted of a total of 169 bovines (67 cows, 2 breeding bulls, 61 heifers or young cattle and 39 calves) including both Red-and-White Holstein and Black-and-White Holstein cattle, bred exclusively within the herd or purchased from local herds in the region.

The herd was fed with farm-grown crops and complementary feedstuffs (concentrates) from regional feedmills or feed suppliers. This is undergoing further investigation.

No semen, ova or embryos were collected from the herd.

Previous epidemiological maternal cohort studies (2 August 1995 – 2 August 1997) showed that only one animal from these cohorts remains in a herd in the same Rendsburg-Eckernförde district. The herd in question is under restriction and official surveillance. The epidemiological study tracing the whereabouts of all cattle born after the infected animal is still in progress.

***Control measures:***

- The herd was placed under animal health restrictions as soon as BSE was suspected. After the diagnosis was confirmed, the whole herd (169 cattle) was slaughtered and safely destroyed by the National Reference Laboratory. Following slaughter, tissue samples were collected from all carcasses and tested for BSE. All samples tested negative.
- The meat and corresponding offal of cattle slaughtered on the same day in the Itzehoe slaughterhouse were seized and safely destroyed.
- The law prohibiting the use and intra-Community import and export of certain animal feedstuffs came into effect on 2 December 2000. As of this date, feeding animals with protein-containing products and fats from the tissue of warm-blooded land animals and fish as well as compound feedstuffs that contain them is prohibited nationwide. The intra-Community import and export of these feeds is also banned.
- As of 6 December 2000, all slaughtered cattle, as well as water buffalo and bison over 30 months of age, must undergo a rapid BSE test during meat inspections.
- In addition, all cattle dying after the age of 24 months and cattle showing clinical signs for which the presence of BSE cannot be ruled out must undergo a rapid BSE test. This also applies to cows over 24 months of age slaughtered for special reasons as well as male cattle over 30 months of age.

Altogether, 18,994 brains of cattle with CNS<sup>(1)</sup> symptoms were tested in Germany between 1991 and 1999.

(1) CNS: central nervous system.

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**FOOT AND MOUTH DISEASE IN SWAZILAND**  
**Virus SAT 1 in imported animals (Follow-up report No. 1)**

*Extract from an e-mail received on 7 December 2000 from Dr Robert S. Thwala, Director of Veterinary and Livestock Services, Ministry of Agriculture and Cooperatives, Mbabane:*

**End of previous report period:** 29 November 2000 (see *Disease Information*, **13** [47], 217, dated 1 December 2000).

**End of this report period:** 6 December 2000.

**Reminder:** FMD virus SAT 1 was identified in 8 cattle out of 110 imported from South Africa on 23 November 2000. All 110 imported animals were destroyed and buried under veterinary supervision.

All permits issued for cattle imports from the affected farm in South Africa (see *Disease Information*, **13** [48], 221, dated 8 December 2000, and **13** [48], 229, dated 15 December 2000) were traced, and 25 bovines were found to have been slaughtered on 28 November 2000 in the abattoir in the city of Manzini, some 11 km to the east of Matsapha. The carcasses, heads and feet were still intact and showed no lesions on examination.

The abattoir was placed under provisional quarantine while further investigations were being made, including 25 local cattle and 56 sheep which were immediately examined and showed no signs of infection.

Blood and tissue samples from the interdigital areas of the animals at Manzini abattoir were taken on 4 December, with negative results, confirmed by the Onderstepoort Institute for Exotic Diseases (South Africa) on 6 December.

The animals were all slaughtered under veterinary supervision for human consumption and the abattoir will be reopened in due course.

The 25 carcasses of the imported cattle were found to have an average pH of 5.4. These carcasses were released for deboning of the meat, under veterinary supervision, for human consumption, and the bones, heads and feet were incinerated.

**Quarantine zone:**

For the purposes of ensuring extended security against any potential outbreak or spread of the disease beyond the outbreak area, 13 diptank areas, extending over a 15-km radius beyond Manzini from the outbreak area, were placed under quarantine with active monitoring and surveillance:

PLACE	TANK AREA	PLACE	TANK AREA
Matsapha	460	Maholwane	579 A
Logoba	448	Maholwane	579 B
Manzini	449	J.C. Bar	793
Lugebhuta	828	Malunguza	589
Ngabezweni	802	Mzimnene	479
Gcina	577	Lazy Jay	450
Lusushwana	491	Excelsior	490

Out of a total of 7,174 cattle in the quarantine zone, 4,984 cattle have been subjected to a buccal examination and it is planned to complete the remainder by 13 December 2000.

Thirteen roadblocks have been established to conduct thorough searches to prevent any prohibited animals and animal products from being moved out of or into the quarantine zone. The roadblocks are manned by the Police, Army and veterinary personnel on a 24-hour shift basis. Prohibited products are confiscated and destroyed if the owners are unable to retain them back to their origin.

**Surveillance zone:**

Another 10 diptank areas around the quarantine zone were placed under surveillance:

PLACE	TANK AREA	PLACE	TANK AREA
Zombodze	438	Lolala	787
Mtilane	439	Bhidlilili	447
Sigombeni	428	Mzimpofu	456
Thubunga	476	Sihhohweni	429
Moyeni Dairy	564	Hillview	463

The controlled area has thus been extended to more than 23 km beyond Manzini, away from the outbreak area.

To date, no clinical signs of FMD have been found or reported in either the quarantine zone or the surveillance zone.

The rest of the country remains 'FMD-free without vaccination'. Normal trade in animals and animal products outside the 'guard areas' remains unaffected by the Matsapha incident.

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**LUMPY SKIN DISEASE IN MAURITIUS**  
**Follow-up report No. 1**

*Text of a fax received on 8 December 2000 from Dr D. Sibartie, Principal Veterinary Officer, Ministry of Agriculture, Food Technology and Natural Resources, Port Louis:*

**End of previous report period:** 4 October 2000 (see *Disease Information*, **13** [39], 177, dated 6 October 2000).

**End of this report period:** 8 December 2000.

So far, the disease has affected some 175 animals, and deaths have been negligible.

The emergency report indicated that affected animals would be stamped out. In fact, it was recommended that affected animals should be slaughtered.

Almost 100% of the national herd has been vaccinated and no new cases have been recorded for the past two weeks.

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## FOOT AND MOUTH DISEASE IN SOUTH AFRICA Virus SAT 1 (Follow-up report No. 1)

*Text of an e-mail received on 14 December 2000 from Dr Emily Mmamakgaba Mogajane, Chief Director, Agricultural Production, National Department of Agriculture, Pretoria:*

**End of previous report period:** 30 November 2000 (see *Disease Information*, **13** [48], 221, dated 8 December 2000).

**End of this report period:** 11 December 2000.

The foot and mouth disease (FMD) outbreak in a feedlot ("Arendsfontein") in the Middelburg District of Mpumalanga Province, which was reported on 30 November 2000, is still contained on the feedlot where it was detected and has not spread to any other property.

The infected area of the feedlot is 275 hectares (ha) in size, the quarantine area around this is 31,632 ha, with a further surveillance area of 96,911 ha surrounding the feedlot.

### **Updated data on the number of animals in the outbreak:**

<i>species</i>	<i>susceptible</i>	<i>cases</i>	<i>deaths</i>	<i>destroyed</i>	<i>slaughtered</i>
bov	14,308*	740	0	0	0
ovi	2,445*	0	0	0	0
sui	48,720*	0	0	0	0

\* Figures given in the emergency report (30 November 2000) were estimates. The figures stated here are the correct ones.

### **Epidemiology :**

- A. Source of agent / origin of infection:** virus sequencing results show that the virus topotype closely resembles the serotype of SAT 1 virus that occurs in African buffalo in the southern part of the Kruger National Park (KNP), which falls within the FMD infected zone of South Africa. It is suspected that the infection was brought into the feedlot from the Lowveld area. The mode of introduction is still being investigated.
- B. Mode of spread:** suspected contact with infected animal(s) introduced into the feedlot.
- C. Other epidemiological details:** follow-up and trace-back actions carried out immediately revealed no spread of the infection from the feedlot. A total of 3.1 million cattle, 2,073 sheep, 730,393 pigs, 302 goats have been inspected on farms outside the infected farm, with 2,326 serum samples and 23 tissue samples submitted for further testing – all with negative results. The total number of farm visits to date is 466, with 398 herds. The follow-up and trace-back also included visits to abattoirs – all with negative results.

### **Control measures during reporting period:**

#### **A. In the affected area:**

- Control measures at the affected feedlot include strict movement control of animals within the feedlot, disinfection, showering in and out and separate, dedicated work teams for the different areas within the feedlot.
- The emergency vaccination programme instituted at the feedlot, with the aim of minimising virus excretion by the cattle, has been completed. All cattle in the feedlot were vaccinated with a trivalent FMD serotype SAT 1, 2 and 3 vaccine, on 1, 2 or 3 December.

The sheep in the feedlot were vaccinated on 4 December, and the veld cattle on Arendsfontein on 4 and 5 December. All the veld cattle on Arendsfontein have been moved into the feedlot and will ultimately be slaughtered, as will all the cattle in the feedlot. All the cattle (14,308) will be re-vaccinated 14 days later. All 48,720 pigs at the feedlot were vaccinated with oil-adjuvant FMD serotype SAT 1 vaccine. This vaccination began on 8 December and was completed on 9 December.

**B. Around the affected area:**

- Strict movement control has been instituted. A number of farms around Arendfontein farm have been placed under quarantine. Any movement of animals and animal products into, within and out of the control area around this outbreak is under strict veterinary permit control.
- Surveillance of cloven-hoofed animals in the Middelburg District of Mpumalanga is continuing (in the infected, quarantine, surveillance and open areas). So far, all results have been negative for FMD.

**C. In the Lowveld (Lowlands):**

- A number of farms in the Lowveld, from where cattle were sourced to go to the affected feedlot, were placed under immediate quarantine as a precautionary measure and follow-up investigations were instituted. A total of 25 farms were placed under quarantine; 5,454 cattle were inspected, of which 2,054 were mouthed; 662 serum samples and 15 epithelium samples were also taken from these animals. The results of all probang, serum and epithelium samples taken were negative.
- Continuing surveillance is occurring in this area, which entails the inspection and sampling of farms in the areas of White River, Nelspruit and Barberton Districts. The current seven-day inspections in the redline area (enzootic zone) of Nsikazi are being intensified and samples taken of any suspect animals. Inspections of diptanks in the Nkomazi area will continue.

The State Veterinarian in Skukuza, KNP, will start FMD surveillance in impala in the southern part of the KNP bordering the Crocodile River. This is to find out if any FMD infection of impala can be found.

- No movements of cloven-hoofed animals are allowed in the redline area of Nsikazi and the Onderberg or in the surveillance area of the Nelspruit and Nkomazi SV areas. Only meat originating from registered abattoirs will be allowed into the Onderberg area.

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**FOOT AND MOUTH DISEASE IN SOUTH AFRICA  
Virus O (Follow-up report No. 5)**

*Text of an e-mail received on 10 December 2000 from Dr Emily Mmamakgaba Mogajane, Chief Director, Agricultural Production, National Department of Agriculture, Pretoria:*

**End of previous report period:** 25 October 2000 (see <A HREF="http://www.oie.int/eng/info/hebdo/AIS\_77.HTM">Disease Information, 13 [42], 188, dated 27 October 2000</A>).

**End of this report period:** 9 December 2000.

On 8 November 2000, 4 positive serological results, without evidence of clinical signs, were obtained using the liquid phase blocking ELISA (LPBE) test for foot and mouth disease (FMD) virus serotype O (log titres equal to or greater than 1.6).

The test was conducted on 24 sera from cattle at a dipping tank at 29° 38' 46.5'' S – 30° 44' 39.5'' E. The dipping tank is outside the 10-km-radius quarantine zone but within the surrounding 20-km surveillance zone. This was the result of intensive surveillance in the FMD surveillance area in KwaZulu-Natal.

The LPBE tests were repeated and the results were confirmed. No clinical signs of the disease were seen. As the LPBE sometimes gives false-positive results, all such tests are repeated using the virus neutralisation test (VNT).

The VNT on the 4 sera concerned proved negative (log titres equal to or less than 1.3). The VNT was repeated and the results were inconclusive.

The sera were then tested using 3ABC ELISA, which detects antigens produced during virus replication. These results were negative.

A further 108 serum samples were collected on 11 November from cattle at this dipping tank.

Immediate actions had to be taken in the light of the initial LPBE results:

- The area under suspicion made the rationale to continue with a stamping-out policy questionable and it was therefore decided to abandon the stamping-out policy and apply limited vaccination within a radius of 15 km.
- The FMD control area was enlarged to a 40-km-radius zone as a precautionary measure, with strict control on the movement of animals and animal products into, out of and within this control area.

Meanwhile, the LPBE tests performed on the 108 sera from the cattle at the dipping tank in question were negative. For confirmation of these results, the sera (108 samples plus the original 23 serum samples that remained from this dipping tank) were sent to the OIE World Reference Laboratory for FMD (Pirbright, United Kingdom) on 16 November. The Pirbright Laboratory found 18 animals positive, 57 animals weakly positive and 53 animals negative on LPBE. For confirmation, they tested the positive cases using the VNT and found all animals to be negative. They also used the 3ABC ELISA to confirm 28 of the sera as negative. The final results from Pirbright were received on 30 November.

### ***Conclusion***

The conclusion is therefore that these cattle were not infected with FMD. Further intensive sero-surveillance data and clinical inspection indicate that the disease has not spread outside the 30-km new surveillance zone. In view of these results, and the fact that it is now more than 30 days since the last positive FMD case, the Cabinet has decided to reduce the control area to the original 30-km-radius zone.

Vaccination and intensive surveillance around the original epicentre will continue and will cover a radius of about 10 to 15 km.

Intensive sero-surveillance will continue throughout the 30-km-radius control area.

### *Surveillance and vaccination data up to 6 December 2000*

	Total number of animals inspected	Number of animals tested serologically	No. of animals vaccinated
cattle	156,075	7,566	6,003
sheep	2,999	786	720
goats	8,124	902	555
pigs	148,921	1,056	
cloven-hoofed game animals	10	45	

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## NEWCASTLE DISEASE IN ZAMBIA

### EMERGENCY REPORT

*Text of a fax received on 12 December 2000 from Dr M.P.C. Mangani, Deputy Director, Department of Research and Specialist Services, Ministry of Agriculture, Food and Fisheries, Lusaka:*

**Report date:** 9 December 2000.

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

**Date of initial detection of animal health incident:** 3 December 2000.

**Estimated date of first infection:** 23 November 2000.

### Outbreaks:

Location	No. of outbreaks
about 15 km from the business centre of Lusaka (15° 40' S – 28° 20' E)	1

**Description of affected population:** the affected flock comprises 13 week-old birds (8,400 in a pen) in a commercial poultry establishment with 60,000 birds (layers).

### Total number of animals in the outbreak:

<i>susceptible</i>	<i>cases</i>	<i>deaths</i>	<i>destroyed</i>	<i>slaughtered</i>
60,000	2,000	1,800	8,400	0

### Diagnosis:

- A. Laboratory where diagnosis was made:** Central Veterinary Research Institute.  
**B. Diagnostic tests used:** virus isolation.

### Epidemiology:

- A. Source of agent / origin of infection:** La Sota live vaccine was used seven days before the outbreak.  
**B. Mode of spread:** aerosol.

### Control measures:

- the premises have been quarantined;
- movement control inside the country;
- modified stamping-out.

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