



## BOVINE SPONGIFORM ENCEPHALOPATHY IN A DAIRY COW IN THE US

### Issue

1. On the 25<sup>th</sup> December 2003, a 6.5 year old, single, nonambulatory disabled ('downer')<sup>1</sup> dairy cow in Washington State was confirmed to have bovine spongiform encephalopathy (BSE).

### Background

2. The US Department of Agriculture (USDA) reported the preliminary BSE-positive case on the 23<sup>rd</sup> December 2003. Confirmation of the positive result was provided on the 25<sup>th</sup> December 2003 after analysis completed by the BSE reference laboratory at the Veterinary Laboratory Agency in Weybridge England.
3. The herd from which this animal originated was placed under a state hold order and beef and related products that had been slaughtered from the same abattoir have been recalled. The US Food and Drug Administration (FDA) have reported that all potentially infectious rendered material from the BSE-positive cow have been located. No products from these rendering plants had entered the food chain as of 7<sup>th</sup> January 2004.
4. The BSE-positive animal originated from a herd of 81 cows, which were imported to the US on the 4<sup>th</sup> September 2001. As of 19<sup>th</sup> January 2004, 23 of the 81 cows from Canada have been located.
5. The US and Canadian authorities have confirmed (using DNA evidence) that the animal originated from a farm in Alberta, Canada. The nonambulatory status of the animal was attributed to complications from calving as while in the US the BSE-positive animal gave birth to two live calves:
  - (i) Yearling heifer (located on the same farm as the BSE-positive case).
  - (ii) A bull calf, which was among a group of calves on another location which, was under a state holder order. The bull calf could not be identified and the entire herd was slaughtered on the 6<sup>th</sup> January 2004.
6. The USDA has initiated additional measures to minimise the risk of exposure to BSE in the US.

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<sup>1</sup> See [Annex I](#) for definition

7. These include:

- Immediate ban on the use of downer cattle for human consumption
  - Cattle carcasses will not be marked as 'inspected and passed' until a negative BSE test result is confirmed.
  - Specified risk material<sup>2</sup> will not be allowed into the human food supply from animals aged over 30 months.
  - Brain, spinal cord, trigeminal ganglia, and dorsal root ganglia from cattle aged less than 30 months will be prohibited from entering the food supply as a result of advanced meat recovery.
  - Ban on air-injection stunning
  - Prohibit use of mechanically separated beef in the human food supply.
8. The Animal and Plant Health Inspection service (APHIS) is aiming to introduce a national identification system to cattle and other animals to allow the tracking of livestock through the production process.
9. The USDA have stated that they intend to set up an international panel of scientists to review the US response to the BSE-positive cow and to identify additional risk reduction measures.

## **Conclusion**

10. This is the first reported case of BSE in a cow located in the US. To date the USDA has tested 57,000 cattle targeting animals with neurological signs.
11. Defra have confirmed that UK and EU import rules require third countries to have in place equivalent controls to those in the EU. Owing to the agricultural use of growth hormone in the US a small quantity<sup>3</sup> of beef has been imported into the UK.
12. EU rules currently prohibit the importation of live cattle from the US because of the risk that these cattle may have been fed meat and bone meal and the possible transmission of Bluetongue (an insect born viral disease)

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<sup>2</sup> Skull, brain, trigeminal ganglia, eyes, vertebral column, spinal cord, dorsal root ganglia, tonsils and small intestine. (the last two from animals of all ages).

<sup>3</sup> Defra records show that since 2000 the UK has imported around 80 tonnes of fresh or chilled bovine meat and around 1,800 tonnes of meat and offal preparations through UK ports.

## **Annex I**

### **DEFINITION OF A DOWNER ANIMAL**

1. A 'downer' is an internationally recognised term for an animal which has a metabolic disturbance as a result of calving (i.e. hypocalcemia) and that fails to respond to treatment. Prolonged recumbency can lead to muscle and nerve damage, which may also result from calving or other physical trauma. It is often difficult to determine exactly why the animal has become unhealthy. 'Ambulatory disabled' may be an American expression meaning the animal is unable to walk.
2. In the UK, these animals are considered a subset of casualty animals. Most of these casualties will be animals aged over thirty months (OTM) and will be tested for BSE. Animals aged 24-30 months that are slaughtered at clean abattoirs will also be tested as OTM casualty animals. The carcass of any OTM animals will not be released for use until a negative BSE result has been confirmed. The situation was different in the US case of BSE where the meat was released before receipt of a test result.
3. In the UK, the downer status of casualty animals is made by the certifying vet and subsequent meat inspectors. There is no policy of exclusion from the human food supply of downer animals in the UK.
4. It may be difficult to differentially diagnose downer animals and livestock with BSE, if the farmer is unfamiliar with TSEs in cattle (perhaps the case in the US). In the UK, BSE is detected in many downers presented as OTM casualties, however animals testing negative for BSE can be slaughtered on welfare grounds.