

Bovine Spongiform Encephalopathy (BSE)

Advisory notes for farmers



I lywodraeth Cynulliad Cymru
Welsh Assembly Government



SCOTTISH EXECUTIVE



defra

Department for Environment
Food and Rural Affairs

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Introduction

Bovine Spongiform Encephalopathy (BSE) was first confirmed in 1986 in the UK and was made a notifiable disease in June 1988. The UK epidemic peaked at over 37,000 cases in 1992 and there have been over 183,000 cases to date. The number of new cases is currently at the lowest level since recording started in 1988 with 225 UK cases in 2005. A major BSE testing programme, required by EU law, has been in place since 2001, generating important information on the epidemic. Domestic feed controls, considered effective from 1 August 1996, banned the feeding of mammalian meat and bone meal to farmed animals. Since 2001, EU controls have banned the feeding of animal proteins (with minor exceptions) to farmed livestock. These controls prevent cattle from being exposed to BSE. Due to the long incubation period of BSE, we expect continued cases in cattle born before the 1996 feed ban. We also predict a number of BSE cases in cattle born after July 1996.

In March 1996, scientists linked BSE to a new (variant) form of Creutzfeldt-Jakob Disease (CJD) a progressive, fatal, brain disease of humans. The BSE crisis has also had a serious impact on the livestock industry. Everything possible should be done to ensure the eventual eradication of BSE in cattle. **Although the disease is declining rapidly, it is essential that all animals showing signs of BSE are reported and that feed stores are cleaned out regularly to remove potentially contaminated feed.**



What you must do if you suspect BSE

How to recognise BSE

Most cattle with BSE show a gradual development of signs over a period of several weeks, or even months, although some can deteriorate very rapidly.

Most BSE cases will show at least one of the following signs – **apprehension, hypersensitivity to touch or sound, weakness of the legs** – although some of these signs may also be seen in other diseases. BSE should be considered in any animal, usually over 24 months old, which shows changes in behaviour or signs of nervous disease, where other causes cannot be identified. If you have any doubt you should consult your veterinary surgeon.

Mild signs may go unnoticed but stress can bring on signs in some animals, particularly when they are brought in before calving, have calved, or if they are transported.

Summary of possible signs of BSE

- change in behaviour
- apprehension or nervousness (flighty)
- repeated, exaggerated reactions to touch or sound
- weakness or high stepping of the legs, particularly the hind legs
- reluctance to cross concrete or drains/turn corners/enter yards/go through doorways/permit milking
- (occasionally) aggressive to cattle and humans
- manic kicking when milked
- head shy, with head held low
- difficulty in rising, progressing to recumbency (downer cows)
- tremors under the skin
- loss of body condition, weight or milk yield
- excessive nose licking

There is much more detailed information about the clinical signs of BSE on the Veterinary Laboratories Agency (VLA) website at <http://www.defra.gov.uk/corporate/vla/science/documents/science-bse-res.pdf>.

You can purchase a DVD on the clinical signs of BSE from the VLA. Further details are available at <http://www.defra.gov.uk/corporate/vla/comserv/comserv-bse-dvd.htm>

You are legally obliged to report any animal that you suspect of being affected with BSE to the Divisional Veterinary Manager (DVM) at your local State Veterinary Service (SVS) Animal Health Divisional Office (AHDO). This applies to cattle in your possession or under your control at farms, markets, slaughterhouses or other places. If, however, you are unsure, you may wish to take advice from your private veterinary surgeon who will contact the DVM if they suspect BSE.

What you must do if you suspect BSE

Don't delay! Early reporting:

- allows more thorough clinical examination
- improves your chances of compensation
- reduces the stress on the animal
- reduces the risk of injury to handlers
- may help to detect new strains of BSE
- safeguards public and animal health by removing potentially infected animals at an early stage

If in doubt, telephone the SVS. There is no charge. The SVS would rather visit for a false alarm than not be called out.

Death before examination

If you report a suspected BSE case and it dies or requires urgent slaughter on welfare grounds before a SVS Veterinary Officer (VO) can examine it you should advise the DVM.



What the State Veterinary Service will do

After receiving a report of a suspected BSE case, a VO will visit and examine the animal as soon as possible. The subsequent action depends upon the outcome of the VO's examination:

Negative BSE diagnosis

If the VO decides that your animal is not a BSE suspect, they will not restrict its movement. You should then contact your private veterinary surgeon to discuss an alternative diagnosis, treatment or possible slaughter. If you retain the animal and remain concerned that it is affected with BSE because of further developments in its symptoms, you must again report your suspicions to the DVM.

Sometimes, when the VO does not suspect BSE, they may advise you that your animal requires immediate euthanasia on welfare grounds because it is suffering from another disease. You will not be paid compensation for the animal. You must notify the death of animals over 24 months of age to the TSE Surveillance Helpline (0800 525 890) which will arrange for free collection and BSE testing as fallen stock. You are responsible for making your own arrangements to dispose of carcasses from cattle aged 24 months or under, in accordance with the Animal By-Products Regulations.

Animals placed under observation

In some cases the VO may decide that it is necessary to keep your animal under observation, to determine whether or not it is a BSE suspect. If so, they will restrict the movement of the animal from the farm. The VO will periodically visit the animal during the observation period. You remain responsible for the welfare of the animal. If at any time the VO is able to rule out BSE, they will lift the movement restrictions.

Death while under observation

If your animal dies or has to be slaughtered for welfare reasons, while it is restricted during the observation period, you must report its death to the DVM immediately:

- If the DVM suspects that your animal was affected with BSE, they will seize its carcass. The SVS will arrange BSE testing and disposal of the carcass.
- If the DVM does not suspect that your animal was affected with BSE they will lift the movement restrictions. However, legally you are still required to notify the death of animals over 24 months of age to the TSE Surveillance Helpline (0800 525 890) which will arrange for free collection and BSE testing. You are responsible for making your own arrangements to dispose of carcasses from cattle aged 24 months or under, in accordance with the Animal By-Products Regulations.

BSE suspected

If the VO decides that your animal is a BSE suspect, they will restrict the movement of the animal or its carcass and issue a notice of intention to slaughter (Form C).

What the State Veterinary Service will do

Form C also requires that:

- milk from the BSE suspect must not be sold or supplied for human consumption, or fed to any animal other than its own calf; and
- BSE suspects which calve while awaiting slaughter must be isolated from other cattle whilst calving and for 72 hours afterwards. The SVS must approve the isolation accommodation beforehand. If calving has to be assisted, you are advised to wear suitable protective clothing including arm length gloves and face protection to avoid splashing of eyes and mouth. The placenta (afterbirth or “cleansings”) must be disposed of in accordance with the Animal By-Products Regulations. The soiled bedding must be disposed of by incineration. The isolation accommodation must be disinfected with chlorine based disinfectant diluted to give 2% (20,000 ppm) available chlorine. You are advised to wear suitable protective clothing and avoid direct handling of the placenta and soiled bedding.

Following the issue of a notice of intention to slaughter, the VO will determine the compensation payable before the animal is slaughtered. The VO will try to arrange for the BSE suspect to be transported live to the VLA where it will be slaughtered as soon as possible. The VLA collects samples for vital research. In some cases, the VO will sedate the BSE suspect and kill it by lethal injection on the farm. The SVS will then arrange for the collection, testing and disposal of the carcass.

If a BSE suspect dies or has to be slaughtered for welfare reasons (other than by the SVS), you must report its death to the DVM immediately.

Offspring, cohort and whole herd restrictions

Once the VO suspects an animal (or its carcass) is affected with BSE, they will identify and restrict the movement of:

- all the **offspring** of a female BSE suspect, born within 2 years before, or any time after, the first signs of BSE appear; and
- all the cohorts of a BSE suspect.

Cohorts are cattle which were either:

- born in the same herd as a BSE case, up to a year before or after its birth; or
- reared with a BSE case when both were up to a year old.

Cohorts might have consumed the same feed as the BSE case during the first year of their lives. Feed contaminated with the BSE agent is the most important source of BSE infection for cattle. Experts believe that the majority of BSE cases were infected during the first year of their lives.

The VO will confiscate the passports of the restricted animals. In some cases the SVS will restrict the movement of whole herds if they suspect that they contain the offspring or cohorts of a BSE suspect.

If any offspring, cohorts or other cattle under BSE movement restrictions die or have to be slaughtered for welfare reasons, you must report their deaths to the DVM immediately.

Offspring cull

EU law requires the culling of all offspring of female BSE cases born within 2 years before, or any time after, the first signs of BSE appear, as soon as possible.

If BSE is confirmed in the dam, the SVS will issue a notice of intention to slaughter the offspring. Following the issue of a notice of intention to slaughter, the VO will determine the compensation payable before the offspring are slaughtered. The VO will sedate the offspring and kill them by lethal injection on farm. The SVS will arrange for the collection and disposal of the carcasses.

Cohort cull

EU law also requires the culling of the cohorts (defined above) of BSE cases as soon as possible. The UK culls all cohorts born after 31 July 1996.

If BSE is confirmed in an animal, the SVS will issue a notice of intention to slaughter its cohorts. Following the issue of a notice of intention to slaughter, the VO will determine the compensation payable before the cohorts are slaughtered. The SVS will usually arrange for cohorts to be slaughtered in an Older Cattle Disposal Scheme abattoir. However, if a cohort animal is unfit to be transported, the VO will sedate it and kill it by lethal injection on the farm. These animals will be collected as fallen stock.

Compensation

Defra will only pay compensation in the following cases:

- i. Where the SVS issue a notice of intention to slaughter, and then kill a BSE suspect, or the offspring, or the cohort of a confirmed BSE case;
- ii. Where the SVS issue a notice of intention to slaughter a BSE suspect, or the offspring, or the cohort of a confirmed BSE case, but the animal dies (or is killed for other reasons) after the SVS have valued it; or
- iii. Where the SVS restrict the movement of an animal for BSE control purposes and it has to be slaughtered for welfare reasons because it has suffered an accident. To qualify for compensation, these cattle must be accompanied by a private veterinary certificate¹ confirming that they would otherwise have been fit for human consumption.

¹ The September 2005 BCVA publication "Guidance for Veterinary Surgeons and Farmers on the Slaughter of Cattle which are Injured or Showing Signs of Abnormalities" provides more details on emergency slaughter.

What the State Veterinary Service will do

How the compensation² is calculated:

For (i) and (ii) above, the compensation payable is the average price paid for that age and category of animal:

- For a pedigree animal, in the last six months
- For other animals, in the last month

The category of the animal will be decided by its age on the date the notice of intention to slaughter was issued. The compensation payable will be taken from the published table for the month of slaughter. Defra publishes monthly compensation tables on the Defra website at <http://www.defra.gov.uk/news/2006/index.htm>.

For (iii) above, the compensation payable is the value of the carcase.



² There are currently (October 2006) different compensation arrangements for BSE suspects and cohorts of BSE cases slaughtered in Scotland. Please contact your DVM for further details.

BSE testing – active surveillance

In addition to the testing of reported BSE suspects, EU law also requires the UK to test:

- all cattle aged over 30 months slaughtered for human consumption;
- emergency slaughtered cattle and cattle with abnormalities detected at pre-slaughter inspection, aged over 24 months;
- all fallen stock aged over 24 months;
- all cattle born between 1 August 1995 and 31 July 1996 slaughtered under the Older Cattle Disposal Scheme;
- cohorts of BSE cases

BSE tests can only be carried out on a brain sample collected soon after the animal has died or has been slaughtered. **It is a legal requirement to notify all fallen stock³ aged over 24 months to the TSE Surveillance Helpline (telephone: 0800 525 890) within 24 hours of the animal's death, or of its carcass coming under your control.**

Most cases of BSE are now detected through the testing programme described above. If your animal receives a positive result on a BSE test on the brain sample, the SVS will arrange to visit your farm. The SVS will also identify and restrict potential offspring and cohorts as described above. If BSE is confirmed following additional tests on the brain sample, the offspring and cohorts will be slaughtered and compensation paid for these.

Over Thirty Month cattle

Over Thirty Month cattle which were neither born nor reared in the UK before 1 August 1996 may be sent for slaughter for human consumption in specially approved licensed slaughterhouses where they will be tested for BSE. Details of slaughterhouses approved to slaughter OTM cattle for human consumption are available at <http://www.defra.gov.uk/animalh/bse/otm/review/guidance-otm.htm>

It is illegal to send cattle for slaughter for human consumption if they were born or reared in the UK before 1 August 1996.

Older Cattle Disposal Scheme (OCDS)

The OCDS started on 23 January 2006 and will end on 31 December 2008. The OCDS is only open to cattle born or reared in the UK **before 1 August 1996**. This includes cattle that have to be slaughtered for welfare reasons because they have suffered an accident. To qualify for compensation, emergency slaughtered cattle must be accompanied by a private veterinary certificate⁴ confirming that they would otherwise have been fit for human consumption.

³ Note that **anthrax** may be responsible for sudden unexpected deaths in cattle. Anthrax is a notifiable disease and any suspicion must be reported to the DVM. For further details see <http://www.defra.gov.uk/animalh/diseases/notifiable/disease/anthrax.htm>

⁴ The September 2005 BCVA publication "Guidance for Veterinary Surgeons and Farmers on the Slaughter of Cattle which are Injured or Showing Signs of Abnormalities" provides more details on emergency slaughter.

Other requirements

The fixed compensation rate will decrease by 10% at the start of both 2007 and 2008 so it may be in your interest to enter eligible animals without delay. Please see <http://www.defra.gov.uk/farm/livestock/schemes/ocds.htm> for further details.

Cattle identification and record keeping

When the SVS investigate a reported BSE suspect, they will need access to your farm register (i.e. breeding and movement records) and other management records (e.g. feed history). Suspect animals include those reported on-farm and those reported from the testing of cattle at abattoirs and fallen stock disposal sites. **Compliance with the statutory cattle identification and record keeping requirements is vital for the correct identification of offspring and cohort animals.**

The **Cattle Keepers' Handbook** (PB10594) provides full details of the legal requirements for the tagging of cattle, cattle passports and the recording of births, deaths and movements. It is available from the British Cattle Movement Service (General Helpline 0845 050 1234 or Welsh Language Helpline 0845 050 3456) or can be downloaded directly via http://www.rpa.gov.uk/rpa/index.nsf/vContentByTaxonomy/BCMS**Publications%20and%20Guidance**Cattle%20Keeper's%20Handbook**?OpenDocument



Feed controls

The BSE epidemic resulted from the feeding of cattle with mammalian meat and bone meal (MMBM) derived from cattle infected with BSE. Experiments have shown that as little as one thousandth of a gram of BSE-infected brain material is sufficient to infect a calf. Effective feed controls are key to the eradication of BSE.

With certain exceptions, it is illegal to feed animal proteins to farmed animals, and there are strict controls on the storage and use of pet food and fishmeal on farms. There are authorisation and registration requirements to produce feed containing the following ingredients, or for farmers to use or store feed containing them:

- Fish meal
- Blood products
- Blood meal (only to be fed to farmed fish)
- Dicalcium Phosphate or Tricalcium Phosphate

Feed mills, on-farm mixers or mobile mixers who wish to use the above ingredients to produce feed for non-ruminants such as pigs, poultry or farmed fish **require authorisation**.

Farmers who do not manufacture feed, but wish to use or store non-ruminant feedingstuffs containing the above ingredients, on farms where ruminant animals (such as cattle, goats or sheep) are also kept, **require registration**.

Further information on feed controls is available from your local DVM or at <http://www.defra.gov.uk/animalh/bse/controls-eradication/feed-ban.html>

There have been over 150 BSE cases born in the UK after the 1996 feed ban. Some of these cases are believed to be due to persistence of contaminated feed produced before 1 August 1996, for example where feed stores have not been cleaned out properly. Other cases maybe due to contaminated feed imported after this date. There is evidence that traces of contaminated feed might have persisted in feed stores for several years before infecting young cattle. **It is essential that you clean out your cattle feed stores thoroughly on a regular basis.**

Health and safety

The Advisory Committee on Dangerous Pathogens has produced Occupational Guidance on BSE. This is available at www.hse.gov.uk/aboutus/meetings/acdp/200606/acdp83p6.pdf

The Health and Safety Executive has published guidance on handling carcasses of animals affected with BSE and on handling and housing cattle. These are available at <http://www.hse.gov.uk/pubns/indg85.htm>
<http://www.hse.gov.uk/pubns/ais35.pdf>

Further information

- If you have further questions not already covered by this leaflet, please discuss them your DVM. Contact details can be found on the SVS website at http://www.svs.gov.uk/contact/ahdo_locations.htm
- For more information about Defra's work, please contact the Defra Helpline on 08459 33 55 77

Useful BSE websites

Department for Environment, Food and Rural Affairs

<http://www.defra.gov.uk/animalh/bse/index.html>

Welsh Assembly Government Department for Environment, Planning and Countryside

http://new.wales.gov.uk/topics/environmentcountryside/ahw/disease_surveillance_control/bse_cattle/?lang=en [English]

http://new.wales.gov.uk/topics/environmentcountryside/ahw/disease_surveillance_control/bse_cattle/?lang=we [Welsh]

Scottish Executive Environment and Rural Affairs Department

<http://www.scotland.gov.uk/Topics/Agriculture/animal-welfare/Diseases/SpecificDisease/BSE/Introduction>

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