

What is BSE?

Bovine Spongiform Encephalopathy (BSE) is a **fatal neurological disease of cattle** first recognized in the United Kingdom (U.K.) in 1986. It is a transmissible spongiform encephalopathy similar to scrapie in sheep and goats, chronic wasting disease in deer and elk, and spontaneous Creutzfeldt-Jakob disease (CJD) in humans.



The human disease variant CJD (vCJD) was first diagnosed in 1996. Scientific evidence supports that vCJD is caused by the same agent that causes BSE, and that the disease agent may be transmitted through consumption of products contaminated with the infectious agent.

Three cases of BSE have been detected in the U.S.: in December 2003 a dairy cow that was born in Canada was detected in Washington State; in June 2005 a beef cow from Texas; in March 2006 a cow from Alabama.

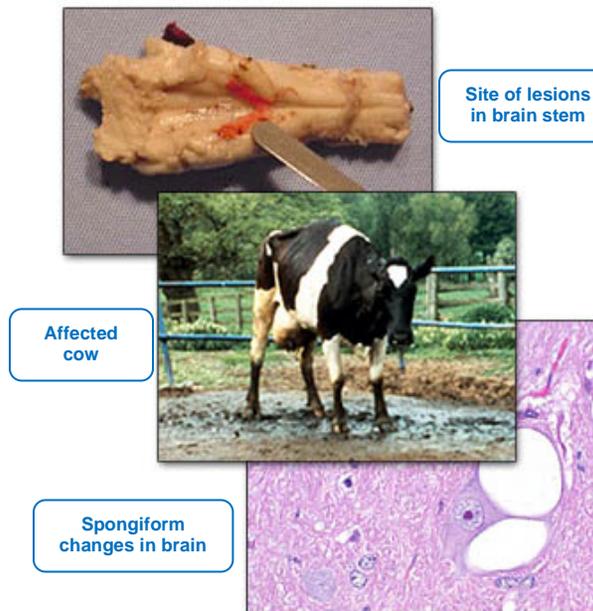
Signs of BSE

BSE has an incubation period of two to eight years. Signs begin with changes in temperament, such as nervousness or aggression. Cattle become progressively uncoordinated, losing condition despite continued appetite. Affected cattle die two weeks to six months after the first signs; there is no treatment.

Cattle producers are the front line of defense in preventing BSE by ensuring that feed containing rendered mammalian tissues are NOT fed to ruminants.

Cause of BSE

The agent causing BSE is an unusual transmissible agent known as a prion. It is a modified form of a normal protein that causes no detectable immune or inflammatory response. Prions are smaller than most viruses, very resistant to heat, ultraviolet light, radiation, and disinfectants.



Spread of BSE

There is increasing evidence that there are different strains of BSE: the typical strain that caused the UK outbreak and atypical strains that arise spontaneously. Both U.S.-born BSE cases were atypical. Typical BSE, and possibly atypical BSE, spread among cattle principally through feed containing meat and bone meal made of rendered ruminant products from infected animals. In 1997 the U.S. and Canada banned these products in ruminant feed to prevent BSE transmission.

Preventing the Entry of BSE

In July 1989, the United States Department of Agriculture (USDA) banned importation of live ruminants and most ruminant products from BSE affected countries, and in December 2000, banned the importation of all rendered animal products from Europe, regardless of species.

Surveillance in the U.S.

BSE surveillance began in 1990. It consists of examining brain tissue from cattle showing neurological signs and targeting samples of high-risk cattle. Approximately 40,000 animals are examined each year in the U.S.

Feed Bans

In April 2009 the Food and Drug Administration (FDA) established an enhanced BSE-related feed ban in the U.S. that harmonized feed control measures in the U.S. with those in Canada. In addition, FDA continues to enforce its August 1997 ban on the use of protein derived from mammalian tissues (with certain exceptions including milk, blood, porcine and equine products) in ruminant feed. Feed manufacturers are required to label all feed that contains prohibited materials with this statement: "Do not feed to cattle or other ruminants".



Please call the appropriate numbers listed on this brochure if you have knowledge of the illegal importation of animals, or animal products, or the feeding of prohibited materials.

Protecting Consumers

The following are banned from human food:

- Non-ambulatory disabled cattle (downers)
- Specified risk materials - the skull, brain, eyes, trigeminal ganglia, vertebral column, spinal cord, and dorsal root ganglia from cattle over 30 months old
- The small intestine (distal ileum) and tonsils from all cattle
- Mechanically separated beef
- Any material from cattle not inspected and passed for human consumption.

What Should Producers Do?

- Comply with the feed bans - **Do not feed products containing prohibited materials to ruminants.** Be diligent that commodities do not contain any prohibited materials (e.g., salvaged pet foods)
- **Keep copies of all feed records** – invoices and labels – for at least two years, and have them available for inspection. Farm inspections help ensure prohibited materials are not being fed to ruminants. Regulatory action can be taken under the Federal Food, Drug and Cosmetic Act for non-compliance
- **Establish an individual animal identification plan for your herd**
- **Maintain accurate records** when animals enter and leave your herd
- **Report cattle with neurological signs to your veterinarian**
- Humanely euthanize non-ambulatory cattle; guidelines are available from CDFA
- Dispose of carcasses appropriately, such as with a licensed renderer or other approved disposal options

California Department of Food and Agriculture

For animal BSE questions, call
Animal Health Branch

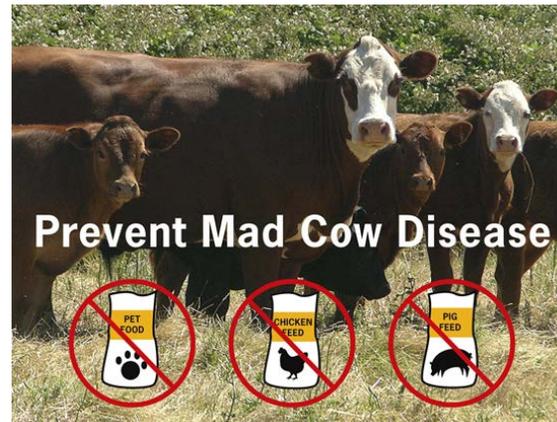
Headquarters	(916) 654-1447
Redding District	(530) 225-2140
Modesto District	(209) 491-9350
Tulare District	(559) 685-3500
Ontario District	(909) 947-4462

For animal feed questions, call
Feed, Fertilizer, Livestock Drugs and Egg Regulatory Services Branch

Headquarters	(916) 445-0444
Fresno	(559) 452-9687
Ontario	(909) 930-9689
El Centro	(760) 356-4673

For reporting illegal animal movement, call
USDA-APHIS Veterinary Services

Sacramento	(916) 854-3900
Toll Free	(877) 741-3690



Developed by the State of California, Department of Food and Agriculture, Animal Health and Food Safety Services, Animal Health Branch, 1220 N Street, Room A-107, Sacramento, CA 95814. www.cdfa.ca.gov.

Additional formats are available upon request.

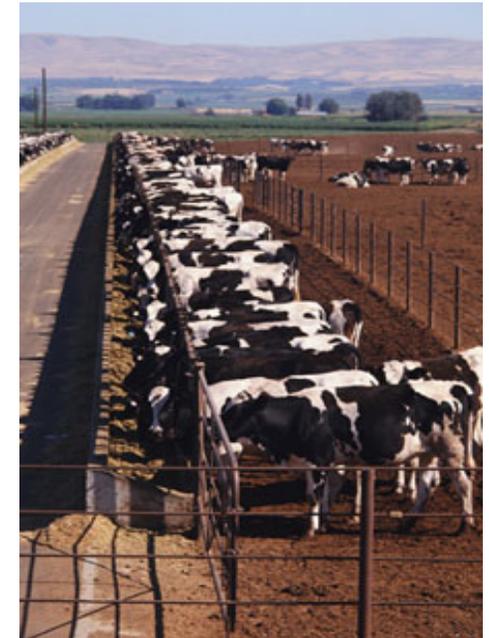
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CALIFORNIA DEPARTMENT OF
FOOD & AGRICULTURE

Animal Health and Food Safety Services
Animal Health Branch

Bovine **Spongiform** **Encephalopathy** *“Mad Cow Disease”*



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