

Emergency Management and Information Network

Pennsylvania Department of Agriculture

Bureau of Animal Health and Diagnostic Services

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BSE Talking Points

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Background

- BSE, widely known as "mad cow disease," is a chronic, degenerative neurological disease affecting the central nervous system of cattle. BSE was first diagnosed in 1986 in Great Britain.
- BSE belongs to a family of diseases known as transmissible spongiform encephalopathies (TSE's). Chronic wasting disease, scrapie, transmissible mink encephalopathy, and variant Creutzfeldt-Jakob disease (vCJD) are all members of the TSE family.
- The human form of BSE is known as variant Creutzfeldt-Jakob Disease (vCJD). Approximately 135 people worldwide have been infected with variant CJD, and research is being done to determine modes of transmission.
- **BSE is not a contagious disease that spreads naturally between animals.** The infectious agent is introduced when BSE-infected tissue or tissue products are added to animal feed and fed to cattle.
- BSE-affected animals may display changes in temperament, such as nervousness or aggression; abnormal posture; incoordination and difficulty in rising; decreased milk production; or loss of body condition despite continued appetite. There is no treatment, and infected cattle die.
- The incubation period ranges from 2 to 8 years. Following the onset of clinical signs, the infected animal's condition deteriorates until it dies or is destroyed. This usually takes from 2 weeks to 6 months. Most cases in Great Britain have occurred in dairy cows between 3 and 6 years of age.

Recent Case in Washington State

- BSE had never been found in the United States until positive test results were reported from a single cow in Washington State on December 23, 2003. This recent case involves a 6.5 year-old Holstein cow, which was identified as a downer cow on antemortem inspection at the time of slaughter, and was tested for BSE as part of USDA's targeted surveillance program.
- The cow was traced to a dairy farm in South Central Washington State, but originated on a farm in Alberta, Canada. DNA testing is underway to confirm the birth farm.
- The age of the cow is important, since the cow was born before the feed ban went into effect in Canada (and in the U.S.). Therefore, it is probable that she was infected through consumption of feed containing infective ruminant products.
- The cow was purchased and brought to the U.S. in October 2001.
- The cow was sold to slaughter on December 9, 2003 at Vern's Moses Lake Meats in Washington State after a preliminary diagnosis of obturator paralysis was made following onset of post-calving paralysis.
- Samples were taken from the cow on December 9 and were sent to the National Veterinary Services Laboratory in Ames, Iowa for testing. Preliminary positive histology and immunohistochemistry test results were reported on December 22.
- Immunohistochemistry is considered to be the gold standard for BSE diagnosis. Samples were sent to the U.K. for confirmation of the diagnosis.

- On the morning of December 25, the BSE world reference lab in Weybridge, England, confirmed USDA's preliminary diagnosis of BSE.
- The affected cow produced 3 offspring, which have been traced. One was stillborn, one is a heifer in the index herd, and one is a 30-day-old bull calf in a herd of approximately 450 other bull calves. All herds associated with these animals are under quarantine pending further investigation.
- Maternal transmission is still being studied; it has not been completely ruled out, but is not thought to be sufficient to maintain BSE in a herd if it does occur.
- Through close coordination with the Government of Canada, U.S. officials have now determined that the affected animal likely entered the United States as part of a group of 82 dairy cattle that were imported through Eastport, ID, from Canada in 2001.
- USDA is working to trace the whereabouts of all of the other 81 animals from the shipment in question. It must be emphasized that there is nothing to suggest that any of the other animals in the group were affected with BSE.
- Most, if not all, of them are likely still alive. Because of the records that are kept on dairy cattle, USDA is confident that the whereabouts of all of them will be traced within the next several days. It is important to note that there is no scientific evidence to suggest that milk or other dairy products carry the agent that causes BSE.
- FSIS has imposed a class II recall on products from 20 carcasses that went through the slaughter plant on the same day as the affected cow.

Prevention and Containment Plans

- The United States remains diligent in its BSE surveillance and prevention efforts.
- Since 1989, the U.S. government has taken a series of preventive actions to protect against this animal disease. This includes USDA prohibitions on the import of live ruminants, such as cattle, sheep, goats, and most ruminant products from countries that have been or are considered to be at risk for having BSE.
- For the last 14 years, USDA's Animal and Plant Health Inspection Service (APHIS) has had an active surveillance program in place in the United States to ensure detection and swift response in the event that an introduction of BSE were to occur.
- USDA's Food Safety and Inspection Service (FSIS) inspects all cattle presented for slaughter in the United States for signs of central nervous system impairment. All animals exhibiting neurological signs during this inspection are condemned, and the meat is not permitted for use as human food. The brains from these animals are submitted to USDA's National Veterinary Services Laboratories for analysis. (The cow implicated in the recent case was not considered to be showing signs consistent with neurological disease, but was originally diagnosed with a traumatic injury as a result of a difficult calving).
- In fiscal year 2002, USDA tested 19,990 cattle for BSE using a targeted surveillance approach designed to test the highest risk animals, including downer animals (animals that are non-ambulatory at slaughter), animals that die on the farm, older animals and animals exhibiting signs of neurological distress. This is significantly higher than the standards set by the Office International des Epizooties (OIE), the standard setting organization for animal health for 162 member nations. Under the international standard, a BSE-free country like the United States would be required to test only 433 head of cattle per year. The USDA is now testing 41 times that amount.
- FSIS also actively conducts tests of U.S. ground beef to ensure no high-risk products are present.
- In 1997, FDA promulgated regulations, known as the "animal feed rule," to prohibit the recycling of the high-risk material in the U.S. The feed rule was implemented to prevent the introduction or spread of BSE to the U.S., and also prohibits feeding most material from mammals to cattle or other ruminant animals to further enhance BSE prevention efforts. The Canadian Food Inspection Agency also implemented a ruminant-to-ruminant feed ban in 1997.
- The FDA and the state regulatory agencies have increased the number of inspections of renderers, animal feed manufacturers, feed mills, and other firms responsible for keeping prohibited mammalian

protein out of cattle and other ruminant feed. FDA has dedicated more resources to these animal feed inspections and has upgraded its tracking system and database to ensure effective and timely follow-up.

- Since the animal feed rule became effective in August 1997, FDA has conducted more than 19,000 inspections of firms in the feed industry, and it continues to annually inspect 100 percent of the firms that actually handle prohibited material.

- In 2001, a risk assessment done by Harvard University showed the risk of BSE occurring in the United States as extremely low. The report also determined that early protection systems put into place by the USDA and Department of Health and Human Services (HHS) have been largely responsible for keeping BSE out of the U.S. and would prevent it from spreading if it ever did enter the country. USDA is working with Harvard to update the U.S. risk assessment based upon the current situation.

Additional Safeguards (announced by USDA Secretary Ann Veneman 12/30/03)

- This incident has stressed the importance and urgency of implementing a National Animal Identification program in the United States, and has led to acceleration of the development of the program.

- Effectively immediately, USDA will ban all non-ambulatory, disabled cattle from the human food chain.

- USDA Food Safety and Inspection Service inspectors will no longer mark cattle tested for BSE as "inspected and passed" until confirmation is received that the animals have, in fact, tested negative for BSE. Carcasses will be held pending test results.

- Effective immediately upon publication in the Federal Register, USDA will enhance its regulations by declaring as specified risk materials skull, brain, trigeminal ganglia, eyes, vertebral column, spinal cord, and dorsal root ganglia of cattle over 30 months of age, and the distal ileum of cattle of all ages, thus prohibiting their use in the human food supply. Tonsils from all cattle are already considered inedible and therefore do not enter the food supply.

- Regarding Advance Meat Recovery (AMR), FSIS has previously had regulations in place that prohibit spinal cord from being included in products labeled as meat. The prohibition has been expanded to include dorsal root ganglia, clusters of nerve cells connected to the spinal cord along the vertebral column, in addition to spinal cord tissue.

- To ensure that portions of the brain are not dislocated into the tissues of the carcass as a consequence of humanely stunning cattle during the slaughter process, FSIS is issuing a regulation to ban the practice of air-injection stunning.

- USDA will prohibit use of mechanically separated meat in human food.

Consumer Safety Issues

- FDA and USDA are recommending no changes in what Americans eat. Both agencies continue to recommend a balanced and varied diet.

- The USDA will keep the public informed regarding the on-going investigation.

- Information about BSE, variant CJD and CJD is available on multiple websites including USDA, the Department of Health and Human Services, FDA, Center for Disease Control and Prevention, and the National Institutes of Health.

Contacts for More Information About BSE

- The following link is to USDA's BSE webpage.

[APHIS | Hot Issues](http://www.aphis.usda.gov/lpa/issues/bse/bse.html) (<http://www.aphis.usda.gov/lpa/issues/bse/bse.html>).

- The following link is to the State of Washington's BSE webpage.

<http://agr.wa.gov/FoodAnimal/AnimalFeed/BSE.htm>.

- For USDA Congressional inquiries, please contact Christopher Smith in the Office of Congressional Relations at (202) 720-7095. In addition, you may visit the APHIS BSE website at

<http://www.aphis.usda.gov/lpa/issues/bse/bse.html> or the FSIS BSE website at <http://www.fsis.usda.gov/oa/topics/bse.htm>

- For questions regarding human health, Creutzfeldt-Jakob disease, overseas travel and BSE risk, contact the Centers for Disease Control and Prevention at (404) 639-7292. In addition, you may visit the CDC website at: http://www.cdc.gov/ncidod/diseases/submenus/sub_bse.htm
- For questions regarding science and research contact the National Institutes of Health at (301) 496-5751. In addition, you may visit the NIH website at: <http://www.nih.gov/>
- For questions regarding food, feed, drugs, cosmetics, or biological products Food and Drug Administration at (301) 443-1130. In addition, you may visit the FDA website at: <http://www.fda.gov/oc/opacom/hottopics/bse.html>