Bovine Spongiform Encephalopathy (BSE)

BSE, widely known as “Mad Cow Disease”, is a fatal disease of cattle first recognized in the United Kingdom in 1986. Most research suggests an abnormal protein, known as a prion, causes BSE. Scientific evidence shows the same disease agent that causes BSE in cattle also causes the new human disease, variant Creutzfeldt-Jakob disease.

BSE spreads in cattle primarily through animal feed containing processed ruminant products. Cattle infected with BSE take 2 to 8 years before showing signs of disease, which include changes in temperament such as nervousness or aggressiveness, and progressive incoordination.

Policies Preventing BSE Entering the U.S.

Beginning in July 1989, and with modifications over time, the USDA has banned live ruminants and most ruminant products from countries where BSE had been diagnosed.

Policies Preventing BSE Spreading in the U.S.

To prevent transmitting and amplifying BSE, the FDA prohibited protein derived from most mammalian tissues in ruminant feed in August 1997. All feeds containing animal protein prohibited from ruminant feed are required to display the statement, “Do Not Feed to Cattle or Other Ruminants”.

Compliance with the Feed Ban in California

California’s rendering industry processes over one million tons of waste material yearly; the protein product is primarily used in feed for swine, poultry, pets and aquaculture, and as fertilizer. All facilities that manufacture feeds, and all rendering and protein blending firms in California have been inspected for compliance with the ruminant feed ban. No significant deviations from the FDA rule have been found.

BSE Found in the U.S.

On December 23, 2003 the USDA announced that a “presumptive positive” case of BSE had been diagnosed in a Holstein dairy cow from a herd in Mabton, Washington. The world BSE-reference laboratory in England later confirmed the diagnosis.

The infected cow was slaughtered on December 9. The investigation found the cow was born in Alberta Canada, and was one of 81 animals from that herd imported into the U.S. The Mabton herd has now been depopulated and the investigation completed.

Significant New USDA Actions

On December 30, 2003 the USDA announced additional safeguards against BSE:

- Ban downer cattle from the human food chain
- Ban specified risk materials (skull, brain, trigeminal ganglia, eyes, vertebral column, spinal cord and dorsal root ganglia) of cattle over 30 months of age and a portion of the small intestine of cattle of all ages from human food
- Hold cattle tested for BSE at slaughter until confirmed negative for BSE
- Ban dorsal root ganglia, in addition to spinal cord, in products labeled “meat”
- Ban air-injection stunning
- Ban mechanically separated meat in human food
- Implement a national animal identification system.

Significant New FDA Actions

On January 26, 2004 the FDA announced a ban from FDA-regulated human food (including dietary supplements) and cosmetics on:

- Any material from “downer” cattle
- Any material from “dead” cattle
- Specified risk materials
- Mechanically separated beef.

The FDA also announced changes to the animal feed rule:

- Ban mammalian blood and blood products from ruminant feed
- Ban “poultry litter” from ruminant feed
- Ban “plate waste” from ruminant feed
- Require equipment, facilities or production lines to be dedicated to non-ruminant animal feeds if they use protein that is prohibited in ruminant feed.

The FDA also announced a plan to increase inspections of feed mills and renderers for compliance with feed rules.

Surveillance for BSE in California

Surveillance for BSE in the US began in 1990. Brain samples are collected from cattle showing signs consistent with BSE including:

- Cattle reported by owners and veterinarians because they show neurological signs
- Neurological cases that have been submitted to veterinary diagnostic laboratories and public health laboratories
- Cattle condemned at slaughter for neurological reasons
- A sample of non-ambulatory cattle.

California has been collecting samples as part of the National BSE Surveillance Program. Over the last two years, sample collection has increased from 560 samples in 2001 to 1,860 samples in 2002. In 2003, samples from approximately 2,000 California cattle were tested for BSE, and 20,526 cattle were tested nationwide.

For more information, visit Web sites at: www.cdfa.ca.gov or www.aphis.usda.gov/vs