

Bovine Spongiform Encephalopathy (BSE) Post-Canadian Discovery Fact Sheet

1. **BSE is NOT:** Foot and Mouth Disease (FMD); a virus; contagious; or spread via animal to animal contact. **BSE is spread to cattle via consumption of contaminated feed.**
2. **The Canadian Situation:** On Tuesday, May 20, the Canadian Food Inspection Agency announced that one cow in Alberta was positively diagnosed as having BSE or Mad Cow Disease. The 6-8 year old cow in question was condemned and slaughtered in January due to apparent pneumonia and weight loss. The animal did not enter the human food system or ruminant animal feed system. The investigation is on-going and several Canadian herds are now under quarantine and/or depopulation for BSE testing.

The investigation has and will include country of origin and potential feed the cow consumed. Initial assumptions that it was not a UK imported cow, given the destruction of all UK imported cows in Canada after a 1993 case, appear to be borne out as the investigation indicates that the cow was born on one of three farms and had always remained in Canada. However, since the cow is 6-8 years old, it is possible that she may have consumed ruminant-derived protein feed source **BEFORE** Canada implemented its Ruminant Food ban in 1997.

Being an older animal suggests either exposure later in life or a very small exposure prior to the feed ban (for most transmissible spongiform encephalopathies (TSEs), the size of exposure is inversely related to the incubation period). Remember that the normal incubation period is 3-4 years. Older animals represent the major target for U.S. surveillance efforts because BSE has never been identified in young animals (youngest confirmed case is 20 months, very few cases below 30 months of age). Surveillance is also geared toward those animals showing central nervous system disorders and animals unable to stand.

3. **The U.S. Response:** The USDA has extended the BSE exclusion to include Canada since they are no longer able to certify their population as BSE free. As a result, all cow and other ruminant products of risk from Canada are banned from entry into the United States in line with the U.S. BSE exclusion policy in order to protect the U.S. ruminant population.

The event re-emphasizes the continual need for education, for full implementation of the feed ban and for prevention and surveillance activities. The U.S. has had import exclusions since 1989, a feed ban to prevent recycling of potentially infective materials since 1997 and an aggressive surveillance program (U.S. surveillance has increased more than three times in the last year alone). Despite the UK success in controlling their BSE epidemic, we in the U.S. must not become complacent.

4. **Potential Concerns:** Humans can be infected with BSE in the form of vCJD (new variant Creutzfeldt Jakob Disease), although the transmission is rare. While vCJD cases continue to occur in Europe, the numbers have **NOT** come near the worst case scenarios once projected. Total cases of vCJD in the UK are 135 confirmed and probable as of May 6, with ~10 cases in France, Italy and Ireland. There has been one case of vCJD diagnosed in the U.S., a British citizen who moved to the U.S., and one case in Canada, a gentleman who traveled widely in the UK. The BSE agent resides in nerve tissue (primarily brain and spinal cord). No BSE agent has been detected in muscle beef products.

Chronic Wasting Disease (CWD) has been identified in farmed elk in Alberta. However, no link has been identified between CWD and BSE.

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