

Dairy Cow in California Diagnosed with BSE Today - What is known about Bovine Spongiform Encephalopathy or BSE?

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The announcement of a dairy cow in California being diagnosed with Bovine Spongiform Encephalopathy (BSE), sometimes known as ‘mad cow disease’, should not be cause for alarm. In the announcement on Tuesday by Dr. John Clifford, USDA-APHIS Chief Veterinarian, he noted that as a result of animal disease surveillance measures in place throughout the food processing system, the cow did not enter the food supply and is being held at a rendering facility. There is no risk to humans as a result of today’s announcement.

Here are answers to common questions concerning BSE:

What is BSE?

A. BSE is a slow progressive disease of cattle that affects their nervous system. The acronym, BSE, stands for Bovine Spongiform Encephalopathy. It is also called “mad-cow disease” although that’s not a very accurate description of the disease. The preference is to refer to this disease as BSE.

What causes BSE?

A. BSE is caused by prions. These are abnormal, very small proteins that affect the nervous tissue and are quite different from bacteria and viruses.

Why are we concerned about BSE?

A. There is evidence that BSE may cause a disease in humans called variant Creutzfeldt-Jakob Disease (vCJD). This disease is a fatal, degenerative neurological disease in humans. Prions are also a concern because they are very hard to destroy. They do not evoke an inflammatory response or an immune response in the body and normal sterilization methods have little effect on them.

Where did BSE come from?

A. BSE was first reported in the United Kingdom in 1986. It has been reported in many European countries and was reported in Canada on May 20, 2003. BSE was reported in the United States on Dec. 23, 2003, in a Holstein dairy cow from a Washington state dairy farm. This cow was imported from Canada in 2001.

How is BSE spread?

A. BSE is spread by ingestion of the BSE prions. The prions are found in an infected animal’s nervous tissue, as a precaution nervous tissue of all ruminants (cows and sheep) has been removed and destroyed during the harvest process for over 10 years to stop the spread of BSE. It does not spread by direct contact, air, manure, urine, semen or milk.

Beef Safety from BSE

The world's leading scientists, medical professionals and government officials agree that BSE is not a public or animal health risk in the United States:

- In 2007, the World Organization for Animal Health (OIE) classified the United States as a controlled risk country in regard to BSE, meaning U.S. regulatory controls are effective and fresh beef and products from cattle of all ages is safe.
- The modeling experts at Harvard's Center for Risk Analysis reported in 2003 that a detailed analysis shows the food safety measures in place reduce an already very small potential for human exposure to BSE infectivity.
- The results of a 2005 study published in the journal Lancet also provided scientific evidence about the effectiveness of current measures to protect against BSE. According to the study's lead researcher, "Our results provide reassurance that BSE screening procedures combined with CNS (central nervous system – brain and spinal tissue) removal are effective measures to protect the human food chain."

Interlocking Safeguards

For more than 20 years the U.S. Department of Agriculture (USDA) has been developing and implementing a robust system of safeguards to ensure a BSE-free food supply.

Tissues that could potentially carry BSE in an animal – including the brain and spinal cord – must be removed from cattle prior to processing, and therefore are not allowed into the food supply. This step along with other safeguards ensures BSE has no affect on public health.

The United States began an active BSE surveillance program in 1990 and, since its inception; more than 1 million cattle at greatest risk for BSE have been tested. USDA's ongoing BSE surveillance program tests approximately 40,000 high-risk cattle annually. This program is rigorous and exceeds international guidelines by 10 times.

Impact on Markets

Perhaps the biggest impact of today's news will be on beef and meat markets. In today's world of instantaneous news transmission, and uncertainty that always surrounds markets – whether it is stock markets, bond markets or livestock markets – there have already been immediate reactions to prices from the announcement of the BSE cow in California.

Bloomberg news service reported that "Cattle [markets] tumbled the most in 11 months in Chicago, and feeder-cattle prices fell by the exchange limit as a case of mad-cow disease was reported in the U.S. Corn, used in livestock feed, also slumped."

The reaction to the news of a BSE-positive cow will play out in the coming days; however, it is likely that this will turn out to be a minor blip on the markets as we look back in a month or two.

We must all remember that we live in a country with the most plentiful and safe food supply in the world. Safeguards are in place to protect our food supply and continue to assure that food from animals is of the highest quality and safe to consume.

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Sources: Facts about Bovine Spongiform Encephalopathy (BSE). Larry Baumann, Extension Veterinarian, University of Wisconsin – River Falls/Extension on-line at: <http://www.uwex.edu/ces/ag/issues/bse/facts.html>. News Alert Email from Colorado Livestock Association titled “BSE confirmed in central CA dairy cow” received Tue 4/24/2012 2:15 PM. BSE Facts – Your comprehensive source for BSE facts on-line at: <http://www.bseinfo.org/aboutbse.aspx>. Bloomberg news service on-line at: <http://www.bloomberg.com/news/2012-04-24/cattle-tumble-most-in-11-months-as-mad-cow-disease-found-in-u-s-.html>