BSE: TESTING - WHAT IT CAN AND CANNOT ACCOMPLISH

Overview

Much discussion has occurred about the value of testing 100 percent of cattle for BSE. While testing certain subpopulations of cattle is useful in surveillance of animal diseases, testing all cattle for BSE does not make scientific, economic or practical sense. Why? BSE occurs in older cattle and the vast majority of U.S. cattle are processed years before BSE could ever be contracted.

While testing young animals may sound reassuring, such a costly and ineffective endeavor is much like testing young children for Alzheimer’s Disease. Targeting the testing towards older, higher risk cattle populations is the most effective strategy. The most important fact to remember is that beef has never been associated with a BSE-related illness, regardless of its country of origin or the age of the animal.

What is the role of testing?

Targeted surveillance testing of cattle for BSE is one of the firewalls the U.S. Department of Agriculture (USDA) has deployed to monitor the effectiveness of its BSE prevention strategies. The USDA administers tests to animals that 1) show symptoms of a neurological disorder, 2) are non-ambulatory, which could indicate a potential illness or 3) are old enough to have developed the disease (greater than 30 months of age).

The U.S. system will detect BSE with a high degree of certainty if it is present in U.S. herds. This is a scientifically based approach. It makes no sense to test a category of cattle that will always test negative.

What are the limits of BSE testing?

Animals that develop BSE typically are exposed through contaminated feed at a young age. In 1997, FDA imposed a feed ban which prohibits the feeding of ruminant-derived proteins to ruminants. Strict regulations are in place in the United States to prevent such contamination and compliance is at nearly 100 percent, according to the USDA.

The disease cannot be detected in infected animals until they are of advanced age when the infective agent begins to accumulate in the brain and neurological tissues - tissues that are removed from cattle and do not enter the food supply.

The majority of cattle (over 80 percent) slaughtered in the United States are under 30 months of age.

Can testing identify animals with BSE?

Absolutely. However, the test is only able to detect the disease three to six months prior to clinical onset. When you couple these technical limitations with the fact that BSE occurs in cattle that are nearly three times the median age of those processed in the United States, it becomes clear that testing young cattle is scientifically indefensible. As Dr. Will Hueston, a veterinarian and member of the International BSE Review Teams for both Canada and United States recently stated, “...recommending the testing of young animals [for BSE] would be veterinary malpractice—and is no different than human doctors billing Medicare for unneeded tests and procedures.”

What is the primary safeguard for humans if it’s not testing?

Scientists and public health experts agree that the most effective method for protecting the public health is removing potentially infective materials - the so-called “specified risk materials (SRMs).” This is done effectively in the United States with continuous oversight from federal inspectors, who are in packing plants during every minute of operation. By law all cattle destined for human consumption must have the SRMs removed.

Is the removal of SRMs standard practice in other countries?

According to rules governed by the World Organization for Animal Health (OIE), all countries that have had a case of BSE must remove cattle SRMs before beef can be exported to other countries.

What is the cost of testing?

Cost is a major issue: Each test would cost about $20-$30 for the test kits alone. Costs would likely more than double once labor and shipping are included. Swiss government officials have estimated their cost is...
$60 per head. It is likely that universal, mandatory testing of all cattle slaughtered in the United States would cost in excess of more than $1 billion per year. This cost would be borne by both the industry and consumers.

What can testing accomplish?

Testing is a valuable tool that allows the federal government to monitor the health of the U.S. herd and gauge the success of our strategies for preventing BSE. Since June 2004, more than 800,000 animals have been tested as part of USDA’s surveillance program, which exceeds international animal health guidelines.

Are there simple ways to detect BSE?

In 2010, research in sheep suggests that it may be as simple as shining a special light into the eyes of cattle to detect BSE. Eye tissue in infected sheep had a characteristic glow and fluoresced more than in uninfected sheep. It is thought that prions, or abnormal proteins linked to a variety of brain diseases, may change the chemistry of the retina.

Final Thoughts

One hundred percent testing of all cattle for BSE is a waste of resources that could be better spent where they can truly have a public impact. Because BSE occurs in older cattle, some experts have said that such testing is actually misleading to consumers. The results will always be negative and provide no added food safety assurance.

HELPFUL LINKS

North American Meat Institute
http://www.meatinstitute.org

World Organization for Animal Health
http://www.oie.int