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Frequently Asked Questions on Surveillance and Testing for BSE

Prepared by Canadian Cattlemen's Association
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1. What is the purpose of testing for BSE?

Testing for Bovine Spongiform Encephalopathy (BSE, sometimes referred to as “mad cow disease”) is carried out in Canada as part of a surveillance program to determine the prevalence of the disease in Canada's cattle population, and to ensure that regulations to prevent the disease from spreading are working.

BSE testing is not done to ensure food safety. Other more effective food safety regulations, especially the removal at slaughter of parts of a carcass (Specified Risk Material) that could pose a risk if the animal were infected with BSE, ensure the safety of Canada's food supply.

2. How is the test done?

Currently, cattle can only be tested for BSE after they are dead. A sample of brain tissue is taken and chemically treated to reveal the presence of the abnormal prions that cause BSE. It takes between 24 and 36 hours for these rapid test results to be known. Cattle being tested for BSE are not allowed to enter the human food chain until the results from the test are known.

The expanded surveillance program in both Canada and the U.S. is a two-step process. A screening test (rapid test) is the first step in this process. Results from the rapid test will determine if the sample is a presumptive positive, negative, or inconclusive sample. If results indicate it is either a presumptive positive or inconclusive, then a sample of brain tissue is sent to a reference lab for a second test. The reference lab uses a more precise test, immunohistochemistry (IHC), to determine a final diagnosis.

3. What does an “inconclusive” result mean?

An inconclusive result indicates that the sample *has not been confirmed negative*.

4. Why do we get inconclusive results?

Inconclusive results are a normal component of screening tests. Screening tests are designed to be extremely sensitive to detect any sample that could contain abnormal prions. However, the presence of these prions does not indicate that it is infectious BSE material. This is only detectable with the gold standard test, immunohistochemistry. Due to the sensitivity of the test, inconclusive results that later turn out to be negative are expected.

5. Is Canada's surveillance program equivalent to the United States?

Yes. In 2002, Canada tested 3,377 animals. On January 8, 2004 Canada's Minister of Agriculture announced the number of tests to be carried out would increase to 8,000 in 2004 and increase to 30,000 in 2005.

The United States announced its expanded surveillance program in March 2004 of between 201,000 to 268,000 animals being tested over a 12-18 month period beginning in June 2004. Since the U.S. herd size is approximately seven times the size of Canada's, our target of 30,000 is equivalent to the United States' target. While additional cases of BSE can be expected, measures are in place to prevent further transmission of the disease to other cattle. Surveillance is necessary to measure the prevalence of BSE in our national herd, and to ensure that the regulations to prevent the disease from spreading are working.

6. What have Canada's results been?

Canada is on target to exceed our goal for the number of head to be tested for 2004. So far, no positive results have been found. Canada's policy presently is to only announce cases of BSE that have been confirmed by the immunohistochemistry test.