

BSE CONTROL: A PROGRESS REPORT

In December of 2003 the first case of BSE in the U.S. was detected in a dairy cow imported from Canada into Washington State. This animal was not born in the United States and was not shown to have contracted BSE in the U.S. However, the impact for the beef cattle industry has been significant. Last month we discussed the U.S. animal identification plan and compared it to the cattle ID system in France. This month we will discuss our country's BSE control progress and compare our program to the BSE program in France.

What has happened in the U.S. since the first BSE case on U.S. soil was announced on December 23, 2003?

Some of us have referred to this single animal as "the cow that stole Christmas". In many ways that is very true. The markets bottomed out, there was widespread media coverage, and uncertainty about the future was rampant. Many things have occurred since last year with respect to BSE.

First, many foreign markets immediately closed to U.S. beef products and live cattle. Very similar to our closure of the Canadian border—this type of closure is expected and has to be considered routine. Most of the countries have re-opened their borders to U.S. beef; however, Japan and South Korea remain closed but could open at any time. These two countries have been the largest importers of U.S. beef and this market share loss has probably cost us close to 3 billion dollars this year. Another way to state this loss is \$150 or more per every U.S. fed steer this past year.

The existing ban on the feeding of ruminant meat and bone meal to ruminants was strengthened and expanded. This was a ban on feeding meat and bone meal from cattle, sheep, or goats back to any of these species. This was expanded to a ban on the feeding of any mammalian meat and bone meal (pigs, cattle, sheep, and goats) to ruminants. This expanded ban is meant to insure that the method of transmitting and amplifying this disease in cattle is eliminated.

Downer cattle were eliminated from the human and animal food chains. The California Cattlemen's Association already had policy to ban downer cattle from entering the human food chain; however, this USDA ban was an important step in strengthening consumer confidence in beef.

The surveillance and diagnostic testing to detect BSE (if it occurs in U.S. cattle) has been greatly expanded. Prior to last December, we were testing about 20,000 cattle each year for BSE. The testing of about 20,000 head per year is the number necessary to detect 1 animal per million that might have BSE. These cattle were in two categories. One category is *clinical cases*—cattle with obvious central nervous system (CNS) signs that might be BSE. It must be remembered that we have many other diseases of cattle that result in CNS disease. Some of the common conditions include grass tetany, Listeriosis, polioencephalomalacia, Hemophilus somnus infections, and rabies. Rabies

occurs in California cattle on a regular basis and is also a disease of major public health concern. The other category is *at risk cattle*—these are cattle that do not have obvious CNS signs, but may be in the early stages of BSE. These are cattle that are sick, weak, and depressed, stumble and perhaps fall (unstable on their feet), or are alert and unable to rise—the so-called “downer cows”. All of these types of cattle would be considered “at risk” for BSE—not just the typical “downer cows”.

The U.S. surveillance program for BSE has been expanded to include testing of 180,000 or more cattle in the 18 months from July 2004 to December 2005. This testing is being done on *clinical cases* and *at risk cattle*. This increases our rate of surveillance by about 6 times and is meant to determine if we have BSE present in our domestic cattle at any level. More than a dozen regional laboratories have recently been certified to perform the rapid diagnostic tests on the brain stem of these animals, including the California Animal Health and Food Safety laboratory in Davis. The confirmation test on any suspect or non-negative cattle is still being done at the USDA lab in Ames, Iowa. So far, we have not had another case of BSE as all the suspects on the rapid tests have been negative on the confirmation test. Obviously, many things have changed in the U.S. with regard to BSE since last year—what has a country such as France had to deal with in terms of BSE?

France is a good example of BSE control as they have the largest cattle herd in continental Europe and they are the largest beef exporter in the European Union. They first diagnosed BSE in their country in 1991. France is about 1.3 times the size of California. France has a human population of 60 million and California has less than 36 million. France has about 20 million cattle and all the cows and calves in California would number less than 6 million. It is obvious that cattle production in France is a major agricultural concern. The average herd size is about 70 cows and the average farm is about 150 acres or slightly less. Many of the cows are dairy cows or dual purpose cattle (milk cows that are later slaughtered for beef). They also have large numbers of beef cattle such as Charolais, Simmental, Maine-Anjou, etc.

Which animals are tested for BSE in France?

They test all cattle that are *clinical cases* (CNS signs) and they test all *at risk cattle*. In addition, they test all cattle slaughtered that are 24 months of age or older. Since most of their beef comes from older animals, this means most all of the cattle destined for beef are tested for BSE at slaughter. This amounts to 500 to more than 1,000 tests of *clinical cases*, more than 270,000 tests of *at risk cattle*, and more than 3 million tests of healthy slaughtered cattle each year.

How are the samples for testing collected?

The brain stem of the slaughtered animals is collected at the slaughter plant (there are 280 plants in France). The *at risk cattle* are usually taken to collection points or designated rendering plants located throughout France. There are 30 collection points and designated rendering plants located in the country. The transportation of these cattle to these spots is paid for by the government in most all cases and the samples for testing

are collected at these locations. Samples from *clinical cases* are collected at the veterinary diagnostic laboratories or at the collection points. All the samples are bar-coded, logged into a central computer data base and transported to the local laboratory for testing.

How is the testing process accomplished?

The French also use the rapid tests that we are just gaining experience with in the U.S. They have been doing this since the assays were developed. If the samples are negative, the negative results are reported back to the slaughter house or local veterinary officials within 12-24 hours of the time the samples were taken. If the sample is non-negative (suspicious) the carcass is destroyed (if at the slaughter plant) and the sample is forwarded to the central reference laboratory as we do here in the U.S. There are 64 department laboratories in France that are approved to use the rapid tests. A department in France is roughly equivalent to a county in California. Remember, we have 1 approved laboratory in California and about a dozen in the entire U.S.

How many BSE cases have been diagnosed in France?

They have diagnosed about 900 cases of BSE in cattle since 1991. About 23% of the BSE has been diagnosed in *clinical cases*, about 47% in *at risk cattle*, and about 30% in healthy slaughtered cattle over 24 months of age. It is apparent that once the disease becomes established in a population of cattle it becomes spread throughout the population. This is an important lesson we need to remember—make sure it does not become established in our cattle in the U.S. France is making excellent progress in eradicating BSE from their cattle.

What is the cost of the BSE Control Program in France?

The cost of the French BSE Control program in 2003 was about 750 Million Euros—this is about \$922 Million. Almost \$1 Billion! Their BSE program accounts for 10% of the entire French Department of Agriculture’s budget. This amount is 57% of the budget for France’s Animal Health & Welfare budget. Most all of the cost is born by the consumers in the form of a “meat tax”. This is an obvious difference versus what would probably occur in the U.S. if BSE became established in our cattle population.

Even though BSE is not in the headlines, it is still very important and we must be concerned with keeping BSE out of the U.S. Hopefully, we will never have a U.S. born and raised animal with BSE. We must all work together through our local, state, and national organizations to make sure that our future is BSE-Free!

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