



Testimony of James Hodges
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And
House Committee on Agriculture
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Thank you for inviting me to testify at this joint hearing on the U.S. Department of Agriculture's Bovine Spongiform Encephalopathy (BSE) Surveillance Program. I am honored to be a part of this distinguished panel.

BSE has garnered considerable attention since the first indigenous cases of BSE in North America were diagnosed in Alberta, Canada on May 20, 2003 and Washington State on December 23, 2003. A review of some basic facts is necessary in order to understand the purpose and adequacy of any BSE surveillance program.

Comparisons have been drawn between the U.S. and Europe with respect to the risk of BSE and its animal and human health consequences. The U.S. remains a very low risk country in comparison to many countries around the world. Despite speculation to the contrary, the facts show that our risk level is many orders of magnitude lower than Europe's.

More than 180,000 cases of BSE have been diagnosed in cattle since the disease was first discovered in the United Kingdom in 1986. And more than 95 percent of the cases worldwide have occurred in the U.K. At the height of the epidemic in 1992 more than a 1,000 cases per week were being diagnosed. In 1992 alone, more than 36,000 cases were diagnosed. And that's only the diagnosed cases. Experts have estimated that between 3 and 4 million cases of BSE actually occurred. That's compared to two cases of BSE in North America, both of which were determined to be of Canadian origin.

Fortunately, the number of BSE cases in the U.K. has declined every year since 1992. The epidemic appears to be drawing to a close with approximately 1,200 BSE cases being diagnosed worldwide last year.

Unfortunately, British citizens were exposed to massive doses of the infective agent during the early years of the epidemic. Even given this massive exposure, slightly more than 150 human illnesses in the world have been attributed to the BSE agent. The number of variant Creutzfeldt-Jakob disease (vCJD) illnesses has declined for four consecutive years and only one case of vCJD was reported last year.

Bottom line: Potential human exposure to the BSE infective agent in the U.S. is exceedingly small compared to the massive human exposure that occurred in the U.K. The U.S. is not Europe. We will not experience the animal disease epidemic or the number of human illnesses that occurred in the U.K. because we took preventive steps to protect both human and animal health. For more than 15 years, we have learned and adopted interventions based on the U.K.'s experience.

Even though the public health risk from BSE in the U.S. is exceedingly small, considerable debate has ensued regarding how best to protect the public. The first objective is to prevent the introduction and spread of the disease in the cattle population. If the disease does not enter and reside in the cattle population, then a significant level of human health protection is achieved.

To that end, firewalls have been constructed to protect the U.S. cattle herds. Import restrictions on countries that have BSE were first put in place in 1989. In 1990, the U.S. was the first country in the world to implement an animal disease surveillance program when the disease was not known to exist in this country. And a precautionary ruminant-to-ruminant feed ban was implemented in 1997 to prevent the amplification and spread of the disease in our cattle herds. Those firewalls have been significantly strengthened since December 23, 2003 when a case of BSE was diagnosed in Washington State.

Most importantly, for consumer health protection, all slaughter facilities in the U.S. must now remove potentially infectious material, the so-called specified risk materials or SRMs, from the food supply. Experts from around the world agree that removing SRM from the food supply is the most effective means to protect public health.

Only SRMs have been shown to be vectors of the infective agent, beef muscle has not. In the event additional BSE cases are diagnosed in North America, effective SRM removal prevents human exposure to the infective agent. Without exposure there is no human illness.

As an added precaution, animals most likely to harbor the disease--clinical suspects and non-ambulatory or downer animals--are prevented from entering the food supply.

I provide this background to highlight the point that an effective surveillance program is a necessary component of an effective animal disease prevention program, but it is not a food safety program. Testing cannot guarantee that BSE is not present in the animal, nor can testing protect public health. Removal of SRM protects public health.

Existing BSE testing methods have limitations. All of the laboratory methods currently used can only detect the disease a maximum of six months prior to clinical onset of the disease where visible signs of the disease can be observed.

BSE has an extremely long incubation period before clinical signs can be observed. The youngest case diagnosed last year in Europe occurred in an animal that was 50 months of age. The disease could not have been detected with existing testing methods until the animal was almost four years old. Testing young animals is scientifically indefensible. In fact, one leading BSE expert said that testing young animals constitutes veterinary malpractice.

Given the average age of clinical onset is 4 to 7 years and the limits of testing methods, you can readily see why the USDA surveillance program is appropriately focused on the cattle population that is most likely to exhibit the disease. To illustrate, 2002 data from the European Union shows that approximately 1 in 4 animals that show clinical signs of a central nervous system disorder, test positive. In the emergency slaughter and fallen stock category, or what we would term dead and downer, approximately 1 in 1,000 tested positive. For older, normal appearing animals, approximately 1 in 30,000 tested positive.

It should be noted that a higher level of infectivity is present in the European cattle population when compared to the U.S. herds. We would expect cattle in Europe to be diagnosed at a younger average age than in the U.S. since the age of clinical

onset is inversely proportional to the infective dose. So you can see that testing young animals under 30 months of age--which make up more than 80 percent of our domestic slaughter--provides no reliable information for determining the prevalence of BSE in the cattle population or for enhancing our animal disease surveillance program.

Let me make clear, however, that the industry supports a robust animal disease surveillance program. If the disease is present in the U.S. we want to know it and we want to know its prevalence. That's a very important way we can effectively determine if our BSE prevention measures are working properly.

You might ask, "Why don't we test all older animals over 30 months of age as is done in most of Europe?" The answer is very simple. Europe's decision was not made based solely on the scientific evidence. Europe, and even more so Japan, over reacted to a severe loss of consumer confidence in its government institutions to protect them from harm. Large scale testing was implemented to regain consumer's confidence and to provide cover for the politicians. In contrast, U.S. consumers have maintained a high level of confidence in U.S. beef safety.

From a scientific perspective, the appropriate level of animal disease surveillance is a matter of how much confidence you need or want in the data. Or stated differently, how much sampling error are you willing to tolerate. At the projected sampling rate of approximately 270,000 animals in the high-risk cattle populations, we would be able to detect the disease if it exists in more than one in 10 million animals in the target population with a 99 percent confidence level. That's a high degree of statistical confidence that greatly exceeds recommended world animal health standards.

In closing, I would like to emphasize three points. First, the risk of BSE in U.S. cattle is very low and the risk to human health from BSE is even lower. This fact has been confirmed by numerous risk assessments. Secondly, sound scientific principles and reliable data must underpin all of our preventive control measures. To do otherwise endangers the credibility of all our institutions. Finally, a robust animal disease surveillance program is an integral part of our BSE preventative control measures but it is not a food safety program. .

Thank you for inviting me to present the meat industry's views on BSE testing and surveillance.