# Examining the BSE Threat

## CHANCE FOR U.S. OUTBREAK LOW, BUT USDA SAYS CONTINUED VIGILANCE NECESSARY

While a recent Harvard University assessment of the risk of BSE (bovine spongiform encephalopathy) occurring in the United States reaffirms that the chance is extremely low, experts caution that the threat is still very real.

According to the three-year study, which the U.S. Department of Agriculture (USDA) commissioned and the Harvard Center for Risk Analysis conducted, early protection systems are largely responsible for keeping BSE out of the United States and would prevent it from spreading if it did enter. BSE and its human form, variant Creutzfeldt-Jakob Disease, have not been detected here.

Researchers conducting the study

used a computer simulation model based on the timing of the United Kingdom's initial outbreak and spread of BSE to predict the spread of the disease in the United States, should it ever be detected.

"With the government programs already in place, even accounting for imperfect compliance, the disease in the cattle herd would quickly die out, and the potential for people to be exposed to infected cattle parts that could transmit the disease is very low," said Dr. George Gray, deputy director, Harvard Center for Risk Analysis, and director of the project (617-432-4497).



Still, officials outlined actions to strengthen prevention programs and reduce the risk even more.

## USDA Steps Up Prevention

Secretary of Agriculture Ann

M. Veneman says USDA will take the following steps to strengthen its BSE prevention, saying, "We cannot let down our guard or reduce our vigilance."

• Have a team of outside experts review the study to ensure scientific integrity.

• More than double the number of BSE tests conducted this fiscal year more than 12,500 cattle samples targeted in 2002 (up from 5,000 in 2001).



• Outline possible additional preventive regulatory actions, including: prohibiting use of central nervous system tissue in boneless beef products, including meat from advanced meat recovery (AMR) systems; and prohibiting use of vertebral column from certain cattle, including downed animals, in production of meat from AMR systems.

• Issue a proposed rule to prohibit use of air injection stunning devices to immobilize cattle during slaughter. (Stuns using air injection to the cattle's heads could send infected brain tissue to other areas of the body.)

• Consider more options for disposing of dead stock on farms and ranches.

#### **Current Prevention Measures**

In 1989, USDA banned imports of live ruminants and most ruminant products from the United Kingdom and other countries with BSE. The ban was extended to all of Europe in 1997.

Many scientists call BSE the "silent killer," because of its long incubation period—three to five years between exposure and symptoms of disease. It is believed to spread from cow to calf and through infected meat and bone meal used in animal feed.

"Only 0.1g of infected brain matter will infect feed," Will Hueston, director, Center for Animal Health and Food Safety, University of Minnesota, Minneapolis, told attendees at the National Grain and Feed Association (NGFA) Feed Industry Council Meeting Dec. 2-3 in Indianapolis, IN.

Recent research from the European Union's Scientific Steering Committee confirms these disease transmission routes, finding no evidence of a third way for BSE to spread.

To ward off this silent killer, the U.S. Department of Health and Human Services (HHS) prohibits the use of most mammalian protein in ruminant animal feed, and the Food and Drug Administration (FDA) conducts ongoing feed mill inspections. Only 3% to 10% firms have been out of compliance in 10,018 firms inspected thus far.

### **Recent Developments**

The FDA's current BSE rule is now

under review, but approval could take months, Dan McChesney, director, Office of Surveillance and Compliance, Center for Veterinary Medicine, FDA, Washington, DC, told NGFA Feed Industry Council attendees. "The first time we accomplished [approval] in 13 months, but it will take longer this time, because USDA has other priorities," he said, referring to bioterrorism concerns from the Sept. 11 attacks.

Still, BSE continues to spread



Most recently, in response to Japan's outbreak, beef industry groups urged USDA in a letter to include a "BSE-free" statement on all export certificates on shipments of U.S. beef bound for Japan.

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