

Europe increases precautions against BSE transmission

Within weeks of the release of the report by the Phillips inquiry into the bovine spongiform encephalopathy (BSE) crisis in the UK, concern about the zoonotic disease is spreading across Europe.

Several countries have increased efforts to make certain that the general public is not eating BSE-infected meat, and scientists in the UK are recalculating the potential size of the variant Creutzfeldt-Jakob disease (vCJD) epidemic following the death of an elderly man. The British government is also awaiting a "comprehensive assessment" of "BSE-related issues in vaccines" following the revelation that the company, Medeva, distributed a polio vaccine made using bovine material sourced in the UK in the manufacturing process until as recently as September—a practice that was believed to have stopped in 1989.

The Phillips report (<http://www.bseinquiry.gov.uk/>) is the first official document to state that BSE is not scrapie, that it is caused by feeding cattle infected with BSE to other cattle and that it gives rise to CJD in humans. It details the failings of the agricultural and meat-producing communities, and the government bodies responsible for their oversight, that lead to BSE transmission to the human population.

European governments are now taking stock of the bad practices outlined in the report. The European Commission is asking for 100,000 cattle in Ireland to be tested for BSE in response to a fresh outbreak of the disease in France where the government has been asked to ban the consumption of cattle born before July 1996. Italy has called for an emergency summit of the European Union's veterinary committee, and Switzerland and Poland have introduced bans on beef consumption and importation. Britain is to test pigs and poultry for BSE contamination.

The Phillips report also reveals that, in the face of a threat to public health, it is particularly difficult to control the distribution of medicines in the UK. The complexity of the licensing system means

that ensuring that UK bovine material was not used in the manufacture of medicines would have been an "administrative nightmare," writes the report. Instead of being subject to new regulation, companies were trusted to comply with guidelines requesting that they use supplies from alternative countries. Even then, the report concludes, "systematic records of the action taken in response to BSE in respect of individual medical products are lacking." Vaccines manufactured using UK-bovine material were phased out over a 5-year period, ending in 1993.

The report also states that there was a need "to establish all the pathways by which bovine products...might come into contact with humans..." However,

"...no coordinated or comprehensive consideration was given to the various routes by which BSE might infect human beings..." The lack of interdepartmental cooperation between the Ministry of Agriculture Food and Fisheries and the Department of Health in coordinating the response to the zoonotic threat is also criticized, as is the failure to appoint a research "supremo" to oversee scientific matters related to BSE/CJD.

Until now, the disease—one of four forms of CJD—was characterized by its incidence in a young age group, but the death of a 74-year-old man has pushed predictions of the size of the British CJD epidemic back into the hundreds of thousands of cases.

Karen Birmingham, London

US monitors TSE in livestock

US scientists and government officials have been paying close attention to the bovine spongiform encephalopathy (BSE) crisis in Britain. "It has enormous ramifications for the US with respect to potentially dangerous diseases spreading into the public," says Michael Scott, associate professor of pathology at the University of California, San Francisco. While there have been no confirmed cases of BSE in the United States to date, chronic wasting disease of deer and elk and scrapie of sheep and goats—which like BSE belong to the family of transmissible spongiform encephalopathies (TSEs)—may be a source of concern.

A sign that the US government is not taking any risks was its order to seize and destroy three flocks of

sheep in Vermont for fear that they might be infected either with BSE or a variant of the scrapie agent. Hoping for a swift resolution, the US Department of Agriculture (USDA)'s Animal and Plant Inspection Service (APHIS) offered a generous \$2.4 million in compensation to the flock owners, in addition to buying the 376 sheep at market value.

APHIS had been monitoring the sheep, originally imported from Belgium and the Netherlands, since 1998 out of con-

cern that they might have been exposed to feed contaminated with BSE. In July of this year, four sheep were found to have what, according to APHIS, appears to be an atypical TSE. APHIS was able to immediately obtain one flock of sheep related to the infected animals, but the owners of the remaining two flocks are fighting the government's order to seize their sheep. They argue that the sheep may have been infected with the relatively common scrapie agent, which is not considered a human health threat.

At USDA's request, the state of Vermont had imposed quarantine on the three flocks, prohibiting their slaughter for human consumption or sale for breeding purposes. Prior to the quarantine, however, about 2,200 pounds of meat from the offspring of the imported sheep were sold to local shops.

Brain tissue from the infected sheep is currently being analyzed by Richard Rubenstein at the Institute for Basic Research in Developmental Disabilities on Staten Island, NY, to determine which type of TSE agent caused the infection, but it will be an estimated two to three years before the results will be available.

The owners of the remaining two flocks have until the end of November to accept USDA's offer of compensation. If the offer is not accepted, USDA is determined to continue the battle in the courts.

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