



January 26, 2001

U.S. Food and Drug Administration  
Dockets Management Branch  
5360 Fishers Lane, Room 1601  
Rockville, MD 20852

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Docket No. 98P-0151/CP1, Slaughter of Downed Animals

ANIMAL  
PROTECTION  
INSTITUTE

Dear Sir/Madam:

On behalf of the Animal Protection Institute, a national non-profit animal advocacy organization with more than 85,000 members, I urge you to grant the petition to prohibit slaughter of downed, non-ambulatory animals ("downers").

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It is impossible to overstate the cruelty that often occurs in the handling of downed animals arriving at a slaughterhouse. From this aspect alone, trucking and handling at slaughterhouses should be prohibited; these animals should be euthanized on the farm, and their carcasses routed to a non-human food use. A USDA/AWIC newsletter points out that, "From a humane standpoint, crippled non-ambulatory cattle on the farm and at livestock markets are a serious problem. Their large size sometimes makes moving them in a humane manner almost impossible . . . Overall, packing plants have improved their animal handling practices, but handling of cripples and downers is still a problem area . . . Dragging cattle by their legs or neck is cruel and should be avoided."<sup>1</sup> The author, well-known livestock expert Dr. Temple Grandin, surveyed slaughter facilities and found a significant number where non-ambulatory animals were being mistreated. The most common problem was conscious animals being dragged without first being stunned. Dr. Grandin asserted, "Crippled animals that are unable to walk represent a *very small percentage* of the total livestock handled, but these animals often suffer greatly." (Emphasis added.) In the United Kingdom, it is illegal to transport non-ambulatory livestock; they must either be treated or slaughtered on farm.<sup>2</sup>

The majority of non-ambulatory cattle are older dairy cows who were allowed to deteriorate due to poor management practices. According to Dr. Grandin, "Many of these dairy cows could have been prevented from becoming downers if they had been transported to market or slaughter before becoming too weak to walk." It is

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1. Grandin, Temple, "Handling of Crippled and Nonambulatory Livestock," Animal Welfare Information Center Bulletin, Fall 1998, Vol. 9, no. 1-2.

2. Ministry of Agriculture, Fisheries and Food, Farm Animal Welfare Council, No. 318.

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likely that the debilitated condition of these animals contributes to bone fractures and other physical injuries that occur prior to or during transport. Prohibiting the meat from these animals from being sold for human consumption would provide a strong incentive for producers to use better judgment and better management to prevent these animals from being injured or going down in the first place. Experts estimate that up to 90% of downer animals may be preventable.

Aside from animals who go down from preventable causes, there are an undetermined number of *sick* downer animals brought to slaughter facilities, where they may enter the human food chain. As a veterinarian, I am extremely concerned about the potential of these animals carrying an unrecognized variant of bovine spongiform encephalopathy (BSE). The "prion" agent of scrapie and other transmissible spongiform encephalopathies (TSEs) is not destroyed by freezing, cooking, rendering or other commonly used processing procedures.<sup>2 3 4</sup> These diseases are transmissible to humans through consumption of meat from infected animals. One reviewer states, "It is generally accepted that the combined weight of all the evidence to date supports the conclusion that the new rare but lethal variant Creutzfeldt-Jacob Disease (vCJD) is the human counterpart of the aetiological agent BSE and that *eating meat from the infected animals is probably to blame* for 24 deaths (23 in the UK and one in France) to date from vCJD."<sup>5</sup> (Emphasis added)

There are a number of TSEs that have existed in the United States for many years: sheep scrapie, chronic wasting disease (CWD) of elk and deer, and transmissible mink encephalopathy (TME). TME has historically been attributed to the feeding of scrapie-infected sheep. However, some researchers have concluded that there is, in fact, an unidentified TSE of cattle in the U.S. that

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<sup>2</sup> Taylor, DM, SL Woodgate, AJ Fleetwood, and RJ Hawthorne, "Effect of rendering procedures on the scrapie agent," 1997, *Veterinary Record*, 141(25):643-9.

<sup>3</sup> Brown, P, RG Rower, EM Green, and DC Gajdusek, "Effect of chemicals, heat, and histopathologic processing on high-infectivity hamster-adapted scrapie," 1982, *Journal of Infectious Diseases*, 145(5):683-7.

<sup>4</sup> Brown, P, PP Liberski, A Wolff, and DC Gajdusek, "Resistance of scrapie infectivity to steam autoclaving after formaldehyde fixation and limited survival after ashing at 360 C: practical and theoretical implications, 1990, *Journal of Infectious Diseases*, 161(3):467-72.

<sup>5</sup> Fishbein, L, "Transmissible spongiform encephalopathies, hypotheses and food safety: an overview," *Sci. Total Environ.* 1998 Jun 30;217(1-2):71-82.

has been here since at least the 1960s.<sup>6 7</sup> In the most recent incident (1985), a fur farm in Wisconsin experienced an outbreak of TME, even though the minks' diet consisted exclusively of downer dairy cows. The experimenters intracerebrally inoculated two healthy Holstein steers with brain tissue from affected mink; both steers developed a fatal spongiform encephalopathy within two years. The researchers concluded that these findings "suggest the presence of an unrecognized BSE-like disease in the United States." Significantly, the two experimental steers "showed no behavioural changes before collapsing in their pens." The authors added, "What if the strain of BSE in American cattle produces more of a 'downer cow syndrome' than 'mad cow syndrome'? This possibility would definitely complicate surveillance programmes for BSE in the United States . . . ." <sup>8</sup>

In 2000, a TSE (presumed to be a form of BSE) was discovered in imported sheep living in Vermont, prompting USDA (*not* FDA) to declare an "extraordinary emergency."

Just two weeks ago (1/10/01), FDA reported that a large number of renderers and livestock feed mills are not following required labeling and product separation procedures intended to reduce the risk of transmission of TSEs. Moreover, there are some 1,593 legal but unlicensed feed mills that handle high-risk feed materials, but do not follow FDA rules, and are therefore outside of FDA's scrutiny. Therefore, it is possible, if not likely, that ruminant tissues are still being fed to ruminant animals. Even if separation of these materials is achieved, a study done in 1985 found that the risk of CJD in humans was significantly correlated with consumption of pork products (smoked pork, roast pork, pork chops, ham, scrapple and hot dogs).<sup>9</sup> Yet tissues from scrapie-infected sheep, as well as CWD-infected deer and elk, are still allowed in swine rations.

Thus, while FDA does have an "active surveillance system" in place, it is clearly impossible to guarantee that there is *not* an unrecognized TSE present *right now* in U.S. food producing animals. USDA's reliance on FDA's poorly enforced and obviously inadequate inspection system to protect U.S. consumers is clearly insupportable.

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<sup>6</sup> Marsh, RF, "Bovine spongiform encephalopathy: a new disease of cattle?", 1993, Archives of Virology, 7(Suppl):255-259.

<sup>7</sup> Marsh, RF and RA Bessen, "Epidemiologic and experimental studies on transmissible mink encephalopathy," 1993, Development of Biological Standardization, 80:111-118.

<sup>8</sup> *Ibid.*

<sup>9</sup> Davanipour, Z, M Alter, E Sobel, DM Asher and DC Gajdusek, "A case-control study of Creutzfeldt-Jakob disease. Dietary risk factors," American Journal of Epidemiology, Sept. 1985, 122(3):443-51.

In addition to the potential for disease transmission through meat, contamination of carcasses with brain tissue by the stunning mechanism at the time of slaughter is also a real risk.<sup>10</sup> The central nervous system of infected animals carries a high titer of infective particles. Stunning has been shown to rapidly introduce CNS material to the bloodstream, thus disseminating it throughout the animal's body.<sup>11</sup> This apparently happens faster than the animal can be exsanguinated. Subsequent removal of CNS tissues may thus be inadequate to prevent infected material from directly contaminating human-edible tissues. This danger to human health could be completely prevented by banning slaughter of downed animals, so that they would instead be euthanized on the farm. Cattle, goats and sheep are susceptible to TSEs, and hogs developed lesions after experimental infection with bovine brain from BSE-infected cattle.<sup>12</sup> While most pigs are slaughtered younger than the typical incubation period for TSEs, it is unknown whether they can carry and/or transmit it. A major cause of downer pigs is poor breeding practices that allow a hereditary hindlimb weakness or the susceptibility to porcine stress syndrome to persist. This is easily preventable by selective breeding to exclude this trait. Older breeding animals at the end of their productive lives also make up a significant proportion of downer pigs.<sup>13</sup> Therefore, all these species should be included in a general ban on slaughter of downed animals.

In 1999, USDA/FSIS denied this petition, relying on its interpretation of federal law, and case law which stated, "There is no requirement in the Federal Meat Inspection Act that any procedures prescribed in the Federal Food, Drug and Cosmetic Act be followed in issuing regulations or taking other actions under the Federal Meat Inspection Act." But there is apparently *no prohibition* on issuing such regulations or taking other such actions. FSIS also emphasized the potential negative fiscal impact on producers that granting the petition would impose. It seems very contradictory that the agency charged with ensuring food safety would refuse to enact a regulation to protect American consumers from a fatal food-borne disease, but instead would vigorously fight to protect the financial interests of cattlemen, sheep ranchers, and hog farmers.

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<sup>10</sup> Anil, M.H., S Love, S Williams, A Shand, JL McKinstry, CR Helps, A Waterman-Pearson, J Seghatchian, and DA Harbour, "Potential contamination of beef carcasses with brain tissue at slaughter," *Vet. Record*, 1999 Oct. 16; 145(16):460-2.

<sup>11</sup> *Ibid*, 461.

<sup>12</sup> Ryder SJ, et al. "The neuropathology of experimental bovine spongiform encephalopathy in the pig," *J. Comp. Pathol.* 2000 Feb-Apr; 122(2-3):131-43.

<sup>13</sup> Grandin, *op cit*.

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In summary, most of the causes of downed animals are preventable. Producers should be encouraged to prevent animals going down, by the economic incentive of prohibiting their more lucrative use for human consumption. Transporting sick and injured animals, and handling of such animals at slaughter facilities, is inhumane and, for some species, unavoidably cruel. Sick or injured animals should be humanely euthanized on the farm rather than transported to slaughter. There may be serious risks to human health from eating meat from an unknown number of these animals, which could be completely prevented by keeping them out of the human food supply. For these reasons, FDA should grant the petition prohibiting the slaughter of downed animals.

Thank you for your consideration.

Sincerely,

A handwritten signature in black ink, appearing to read 'J. Hofve', with a long horizontal line extending to the right.

Jean C. Hofve, DVM  
Companion Animal Program Coordinator  
Animal Protection Institute



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