

# Close Up On BSE

Who could have imagined that the BSE crisis would still be spreading panic and consternation 14 years after it first hit the headlines? The cost so far includes around 180,000 confirmed cases amongst cattle; another 4.7 million adult animals destroyed under the 'Over Thirty Months Scheme', and 1.98 million baby calves trashed under the now defunct 'calf processing scheme'.



Inevitably, the public's main focus has been on the victims of the human version of the disease, variant CJD – 88 deaths as we go to press – with the numbers rising rapidly. The public have also been troubled by the financial cost – more than £4 billion to date.

With BSE now being reported in Spain, Germany and France – and with no fewer than 1100 cases in the UK alone during 2000, the end is still nowhere in sight.

## Thousands destroyed a week

The official remedy, apart from removing 'specified materials' from slaughtered animals, is the precautionary destruction of cattle older than 30 months. Every week in Britain around 30,000 mostly worn-out dairy cows are killed and burned, and their remains added to a 500,000 tonne pile in 13 stores around the country.

As to the human CJD victims, predictions about the ultimate number range from hundreds to more than 136,000.

## Government enquiry

October 26, 2000 was one more milestone in the crisis – the publication of the findings of Lord Phillips' government-commissioned inquiry. Amongst his main findings were:

- BSE developed into a disaster because of intensive farming and the feeding of cow and sheep remains to cows.
- The government did not lie or cover up, but there were delays, excess bureaucracy, poor enforcement and false reassurances over the safety of beef.
- BSE-like diseases may yet arise in other animals, (not surprisingly given that pigs, chickens, sheep and even farmed fish have been exposed to BSE-contaminated feed).
- There is particular concern over sheep. This is because, while officials state (almost certainly incorrectly) that infection within cows is confined mostly to the brain and other central nervous system tissue, in sheep it is known to be dispersed throughout the body. It is, therefore, more likely to be in all cuts of sheep meat.



### Still a danger?

The world-wide export prohibition on British beef has, nonetheless, been lifted on beef that is deboned and comes from animals older than 6 months and younger than 30 months. The public, simultaneously, is being asked to believe that the danger has been all but eliminated, even though:

- The disease develops for a long period in cattle without symptoms and some of these animals will end up in the food chain.
- The mutated prion identified as the causative agent is practically indestructible. Yet token wiping and washing of knives and carcasses in slaughter houses is deemed sufficient precaution. Compare this with moves to dispose of all surgical instruments used for the 85,000 tonsil operations conducted each year in Britain because of CJD-contamination worries. It's a move that could cost £34 million annually, and yet it is beyond all logic to suppose that only tonsils are infected.

### Origins of the disease

As to the origins of the disease in cattle, Phillips concluded that it was not derived from sheep infected with conventional scrapie whose remains ended up in cattle feed. Rather, he points to a 'gene

mutation' in perhaps just one cow whose remains were then recycled through cattle feed.

In fact, several other plausible theories have been advanced, each of them associated with the exploitation, neglect or abuse of animals. They include:

1. The previous most favoured option of scrapie-infected sheep meat winding up in bovine feed.
2. Rather than BSE giving rise to CJD, it happened the other way round. This would have occurred through the practice of inoculating cattle with (infected) human pituitary hormones in order to produce antibodies for use in laboratory tests.
3. Starting in the 1980s, hormones from the pituitary glands of slaughterhouse cattle were injected into 'high quality' cows in order to stimulate them into producing several eggs rather than the usual one. This allows more eggs to be fertilised and artificially transferred to lower value cows, who then bring the calves to term. Some of the hormone extracted from the slaughterhouse cattle was likely to have been contaminated – which led to the spread of BSE through the wide distribution of these chemicals in other cattle.
4. The compulsory use of high doses of organophosphate pesticides on cattle – especially one called Phosmet, which 'captures' copper. At the same time cattle feed was being supplemented with chicken manure from birds dosed with manganese to increase their egg yield. The combination of copper deprivation and high manganese doses caused the deadly prion mutation.
5. The Smarden spill. The manufacture of pest control chemicals methyl bromide and fluoracetamide at the Rentokil factory at Smarden in Kent gave rise to a chemical release and groundwater contamination, reaching a peak in 1963. The remains of cattle who died as a result of chemical poisoning ended up in cattle feed. The BSE epidemic first appeared five miles from the site.

