

1989 abattoir ban on specified bovine offals. The feed ban should have cut off the main source of new BSE cases, and even if new cases arose, the offal ban should have stopped humans from eating infected material.

Even the government now acknowledges that neither ban was implemented properly. What Tyrrell claimed at the inquiry, however, was that, at the time, the government lulled his committee into a false sense of security by giving it an overly reassuring picture about the effectiveness of the measures that had been taken. "The assumption was that the offal ban was now in place," he argued.

Tyrrell thus defended the conclusion of an emergency meeting of his committee in May 1990 that: "The view was that the present risk, which could not be said to be zero, was not greater than the risks of everyday life, and thus beef could be said to be 'safe.'" The meeting had been held to help Sir Donald Acheson, then the government's chief medical officer, to prepare a statement for a press conference to respond to growing public concern over the risks of BSE.

According to Tyrrell, SEAC became aware only in November 1995, six years after the specified bovine offals ban came into force, for example, that spinal cord was being left on carcasses. The minutes of the meeting recall that one member of SEAC was "appalled at this information". Similarly, the failure of the feed ban went unnoticed by government scientists until 1993, Tyrrell claimed, when they "began to be increasingly worried that cases were continuing to occur in animals born well after the ban should have been in full operation". In fact, almost half of the new cases occurring then were in animals born after the ban came into force.

"We did not have the expertise to follow through scientific conclusions which had practical implications," Tyrrell admitted to the inquiry. "Our view was that we knew little of the details of animal husbandry and modern abattoir practice, nor did we know about the regulations and the control and management systems in place."

His admission concurs with concerns already voiced in 1991 by Fred Brown, a researcher at the Plum Island Animal Disease Center in New York, and a member of SEAC. Brown had then advised the government that a more substantial coordinating body than SEAC was needed. In a letter the same year to Keith Meldrum, the then UK chief veterinary officer, Brown warned in particular: "I think you are expecting too much if you think a group of people meeting every two months or so can coordinate the work on BSE."

Brown also complained to government ministries about "the lack of coordination of research on the disease and its causative agent in the UK", and asserted that SEAC received "no information regarding the research work being conducted on such important topics as diagnosis and the nature of the agent". Tyrrell

Political initiatives contributed to crisis

[PARIS] Enthusiasm for public spending cuts and deregulation under Margaret Thatcher's leadership seems to have contributed directly to the BSE crisis, evidence heard by the public inquiry into the handling of the crisis has confirmed. This conclusion backs up a long-held suspicion (see *Nature* **384**, 9; 1996).

Richard Southwood, head of an influential working party set up by the UK government in 1988 to recommend ways of handling the BSE outbreak, told the inquiry, for example, that Derek Andrews, then permanent secretary at the Ministry of Agriculture, Fisheries and Food (MAFF), had told him he hoped the committee's proposals "would not lead to an increase in public expenditure".

Southwood says the request did not influence the committee's work. But he added that it gave an idea of the political climate at the time. He says: "I'm sure it influenced [the government's handling of the BSE crisis]."

Similarly, David Tyrrell, chairman of the UK government's Spongiform Encephalopathy Advisory Committee (SEAC) until 1995, pointed out to the inquiry that general cutbacks in the veterinary service resulted in a neglect of the BSE problem as a whole and, in particular, that the lack of inspectors hindered enforcement of the feed and specified bovine offal bans.



Anderson: criticized a 'culture of secrecy' at MAFF.

Government cuts in science also curtailed research on BSE, argued Tyrrell, pointing out that MAFF's Central Veterinary Laboratory in Weybridge was at the time under intense budgetary pressure. And, in 1988, a visiting group had recommended that scrapie research at the Neuropathogenesis Unit in Edinburgh – itself faced with closure – be discontinued, he said.

Tyrrell added that the director of the UK Institute of Animal Health at Compton had also rejected a recommendation that it stop scrapie research, and that fortunately he decided to start BSE research programmes without waiting for earmarked funds, by transferring money from pig research.

Fred Brown, another member of SEAC, complains that MAFF concentrated BSE research at its Central Veterinary Laboratory, which had little previous experience of transmissible spongiform encephalopathies, and "tended to ignore" the more experienced Neuropathogenesis Unit. Roy Anderson, professor of zoology at the University of Oxford and a prominent expert on the epidemiology of

BSE (see *Nature* **383**, 209; 1996), told the inquiry that scientific understanding of BSE had been delayed by the reluctance of MAFF to provide outside researchers with access to data – a tendency attributed to a 'culture of secrecy' at MAFF, and its failure to dedicate sufficient staff to analysing and distributing data (see *Nature* **383**, 467; 1996).

The BSE crisis emerged at a time when the Conservative government was also keen to deregulate industry. Implicit criticism of this policy came from George Lamming, emeritus professor of biological studies at the University of Nottingham and chair of an expert working group on animal feedstuffs set up in 1991, who told how the government rejected his group's recommendation in 1992 that an independent committee be created to ensure that the feed industry was complying with the ban on feeding animal protein to cattle. Lamming told the inquiry that he was "extremely disappointed" with the government's reaction.

In an internal memo dated 28 July 1993, Brian Dickinson, then head of MAFF's Food Safety Group, wrote that such a group would "add to the pressures for regulation when we are trying to go the other way", and recommended lobbying the Department of Health, adding that "DH officials have been strongly in favour of the setting up of the committee". **D.B.**

conceded: "Perhaps I should have been more receptive to [Brown's] idea."

Brown told the inquiry: "I felt that the problem was so big that it needed a coordinator to take hold of the whole thing. This was not accepted." Implicitly criticising Tyrrell's leadership, Brown also wrote that there was an "urgent need for the appointment of a coordinator who really knows the field".

Stephen Dealler, a scientist who repeatedly tried to alert the public to the potential risks of BSE, alleged that SEAC ignored his advice that many more infected cattle were going into the human food chain than was officially

recognized, and his doubts about the sensitivity and appropriateness of the mice assays used to evaluate infectivity in tissues.

Dealler complains that the setting of the BSE agenda was excessively concentrated in the hands of a few individuals within SEAC and the Central Veterinary Laboratory (see *Nature* **384**, 201; 1996). He adds that the lack of public health experts on SEAC was belatedly corrected, for example, when John Pattison as chairman recruited new members with expertise in this area. □

● The proceedings of the inquiry are accessible on: <http://www.bse.org.uk>