

BSE Inquiry Report

The

BSE

Inquiry

Volume 10

**Economic Impact and
International Trade**

Volume 10

Economic Impact and International Trade

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The BSE Inquiry Terms of Reference

To establish and review the history of the emergence and identification of BSE and new variant CJD in the United Kingdom, and of the action taken in response to it up to 20 March 1996; to reach conclusions on the adequacy of that response, taking into account the state of knowledge at the time; and to report on these matters to the Minister of Agriculture, Fisheries and Food, the Secretary of State for Health and the Secretaries of State for Scotland, Wales and Northern Ireland.

The Members of the Committee

Lord Phillips of Worth Matravers, Master of the Rolls
Mrs June Bridgeman CB
Professor Malcolm Ferguson-Smith MBChB, FRCPath, FRCP(Glasg.), FMedSci,
FRSE, FRS

The Volumes of the Report

- 1 Findings and Conclusions
- 2 Science
- 3 The Early Years, 1986–88
- 4 The Southwood Working Party, 1988–89
- 5 Animal Health, 1989–96
- 6 Human Health, 1989–96
- 7 Medicines and Cosmetics
- 8 Variant CJD
- 9 Wales, Scotland and Northern Ireland
- 10 Economic Impact and International Trade
- 11 Scientists after Southwood
- 12 Livestock Farming
- 13 Industry Processes and Controls
- 14 Responsibilities for Human and Animal Health
- 15 Government and Public Administration
- 16 Reference Material

A note on the footnotes

During the course of its deliberations, the BSE Inquiry published many thousands of documents, along with transcripts of its oral hearings. These formed the evidence on which the Inquiry based its chronological accounts, discussions and conclusions. When footnotes refer to these sources, they are coded according to the Inquiry's filing system, which can be consulted by the public in two ways:

- either through the Public Record Office, which has a copy of all the evidence in electronic form on a series of CD-ROMs; or
- on the BSE website (www.bseinquiry.gov.uk).

YB codes: eg, YB88/12.22/4.1

YB refers to Year Books. These are documents collected in chronological order, year by year. They come from a variety of sources, but many of them are letters, memoranda and minutes of departmental meetings. For example, the one mentioned above refers to a document dated 22 December 1988 (YB88/12.22), which is the fourth document filed for that day and, specifically, its first page (4.1).

S codes (written witness statements): eg, S387 Tomlinson para. 6

A witness statement is written evidence supplied to the Inquiry. In the example above, the 'S' classifies the evidence as a witness statement, and it is number 387, paragraph 6. 'Tomlinson' shows that it was written by Sir Bernard Tomlinson. When people have sent in more than one witness statement, these statements are classified S387, S387A, etc.

T codes (transcripts of oral hearings): eg, T40 pp. 121–2

A number of witnesses gave oral evidence to the Inquiry, and the 'T' references indicate transcripts of the relevant hearings. The example above refers to day 40 of the oral hearings, pages 121–2.

IBD codes: eg, IBD1 tab 2 para. 5.3.5

These are Initial Background Documents – a selection of published material that was supplied by the Ministry of Agriculture, Fisheries and Food at the start of the Inquiry. The example refers to the first file, or 'bundle', of such background documents, and to the second document in that bundle. In this case, it is the Report of the Southwood Working Party on Bovine Spongiform Encephalopathy, paragraph 5.3.5.

M codes: eg, M29 tab 3

These are further bulky documents from a variety of sources ('M' stands for 'Materials'). They have been filed in series of bundles in the same way as the Initial Background Documents and the other series of bundles described below.

L codes: eg, L3 tab 6

These refer to legislation (ie, Statutory Instruments – Regulations, Orders, etc – and Acts), which is generally available in published form. For convenience the legislation most frequently referred to at hearings was filed in a series of L bundles.

DM codes: eg, DM01

Documents from the Ministry of Agriculture, Fisheries and Food (MAFF)

DH codes: eg, DH01

Documents from the Department of Health

DW codes: eg, DW01

Documents from the Welsh Office

DS codes: eg, DS01

Documents from the Scottish Office

DN codes: eg, DN01

Documents from Northern Ireland Departments

DO codes: eg, DO01

Documents from other Departments

SEAC codes: eg, SEAC1

Documents relating to the Spongiform Encephalopathy Advisory Committee

FEG codes: eg, FEG1

Documents relating to the Lamming Committee (the Expert Group on Animal Feedingstuffs)

Tyrrell codes: eg, Tyrrell1

Documents relating to the Consultative Committee on Research into Spongiform Encephalopathies chaired by Dr David Tyrrell

1. Introduction

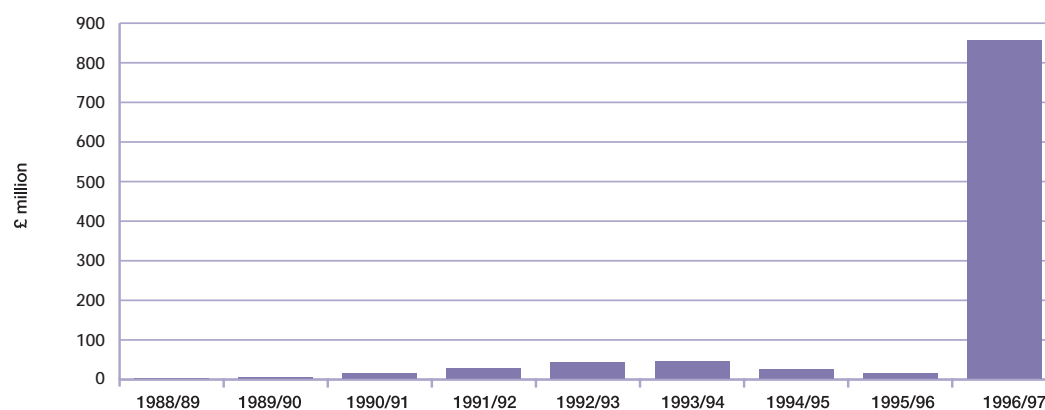
Scope of this economic survey

1.1 In April 2000 the Government estimated that the total net cost of the BSE crisis to the Exchequer will be £3.7 billion by the end of the 2001/02 financial year.¹ How much of that £3.7 billion was incurred during the period with which the Inquiry is concerned? This volume seeks to answer that question by examining the economic impact of BSE up to 20 March 1996, the cut-off point in the Inquiry's terms of reference. We look at the impact on the public and private sectors respectively, and assess where the economic consequences finally fell. A major economic concern was the loss of export markets, and accordingly this volume describes the framework regulating international trade and the BSE-related measures which affected exports.

1.2 Economic concerns naturally had an influence on both government and industry in their response to BSE. The main sector of the economy affected by the disease was the beef and cattle sector. Before 20 March 1996 this sector represented 0.5 per cent of Gross Domestic Product.² It included thousands of small and medium-sized businesses and employed an estimated 130,000 people.³

1.3 With hindsight, however, it is clear that BSE had a relatively marginal economic impact in the UK during the period to 20 March 1996. The main impact occurred in the years that followed. This is demonstrated in Figure 1.1 which, by way of example, shows the dramatic rise in expenditure on compensation after the adoption, in April 1996, of the scheme to slaughter cattle over 30 months old.⁴

Figure 1.1: BSE compensation scheme expenditure, 1988/89–1996/97, at cash prices



Source: MAFF (DM01 tab 26) and the National Audit Office (M11 tab 28 p. 60)
Note: The 1996/97 figure only includes the Over Thirty Months Scheme (OTMS) expenditure, which was the only compensation scheme directly related to BSE at the time.

¹ Total expenditure is estimated to be £4.2 billion, of which other European Union Member States will have contributed £487 million, or 11.6 per cent: House of Commons *Hansard*, 13 April 2000 (M7A tab 36)
² M11 tab 2 (DTZ Pleda Consulting, *Economic Impact of BSE on the UK Economy*, Manchester, 1998: Executive Summary, para. 4)
³ M11 tab 2 (*Economic Impact of BSE on the UK Economy*: Executive Summary, para. 4)
⁴ The BSE compensation schemes in the years prior to the introduction of the Over Thirty Months Scheme (1988 to April 1996) are discussed in further detail in paragraphs 2.48ff

1.4 Likewise, the complete collapse of the beef and cattle export market, at one point worth £720 million a year, came in the aftermath of the European Commission Decision of 27 March 1996, which banned the export of UK beef and cattle.⁵

1.5 Thus the economic impact of BSE before 20 March 1996 pales in comparison to what happened after that date. It is nevertheless right to recognise that the public expenditure and financial impact attributable to BSE before 20 March 1996 was not insignificant.

1.6 Chapter 2 of this volume examines the impact on public sector expenditure through an analysis of the costs incurred by the Ministry of Agriculture, Fisheries and Food (MAFF), the Department of Health (DH) and other government bodies in responding to the emergence of BSE. It discusses compensation schemes introduced by the Government; research expenditure on BSE and related diseases by the UK Government, the Wellcome Trust and the European Union; and other BSE-related expenses.

1.7 Chapter 3 focuses on the impact of BSE on the private sector and begins with an overall analysis of the beef and cattle industry followed by separate consideration of each sector.

1.8 Chapter 4 addresses the question of who, ultimately, bore the economic cost of BSE during the period under consideration in this Report. The financial impact on the families of vCJD patients, however, is not addressed here, but in vol. 8: *Variant CJD*.

1.9 In Chapter 5 we discuss the role of beef and cattle exports in the UK economy as well as the regulatory framework governing this trade, both under UK law and with reference to international institutions. We go on to consider in Chapters 6 and 7 how BSE actually impacted on UK trade, both within and outside the European Union (EU).⁶

Terminology

1.10 Throughout this volume expenditure is shown in ‘cash terms’ (or ‘cash prices’), except where otherwise stated. This means that the levels of expenditure have not been adjusted for inflation, and are the actual amounts spent on or allocated to particular programmes or schemes at the time. Where expenditure is shown in ‘real terms’, it means it has been adjusted for inflation, and represents the real purchasing power available from that expenditure taking into account general price rises.

⁵ L4 tab 7 (Commission Decision 96/239/EC of 27 March 1996). See Table 5.1

⁶ The European Union (EU) came into existence on 1 November 1993 as a result of the Maastricht Treaty. It incorporated but did not replace the European Community. Throughout the volumes of this Report, the term EU is generally used for consistency's sake (even if sometimes chronologically incorrect), except where specific reference is made to the functions conferred by the European Community Treaty or to its legal effect

2. Impact on the public sector

Introduction

2.1 This chapter sets out total government expenditure on activities relating to BSE from 1986 to 1996. Public expenditure arose in three main areas: research on BSE and related diseases, compensation payments and departmental running costs. We consider each of these areas in turn. The expenditure was incurred by a number of different Government Departments, although the main weight of public expenditure fell on MAFF and its Agencies. Figure 2.1 shows expenditure by UK Government Departments and Research Councils, the EU and the Wellcome Trust in funding research on BSE and related diseases.⁷ Figure 2.2 and 2.3 show the UK government bodies involved in compensation payments, and those incurring BSE-related running and other costs.

⁷ The Wellcome Trust has been included in this figure. While we recognise that it is not a public body, we have included the Trust in the public sector section because it was a major funder of research carried out by universities and other public bodies

Figure 2.1: Funding for TSE research, 1986–96 cash prices

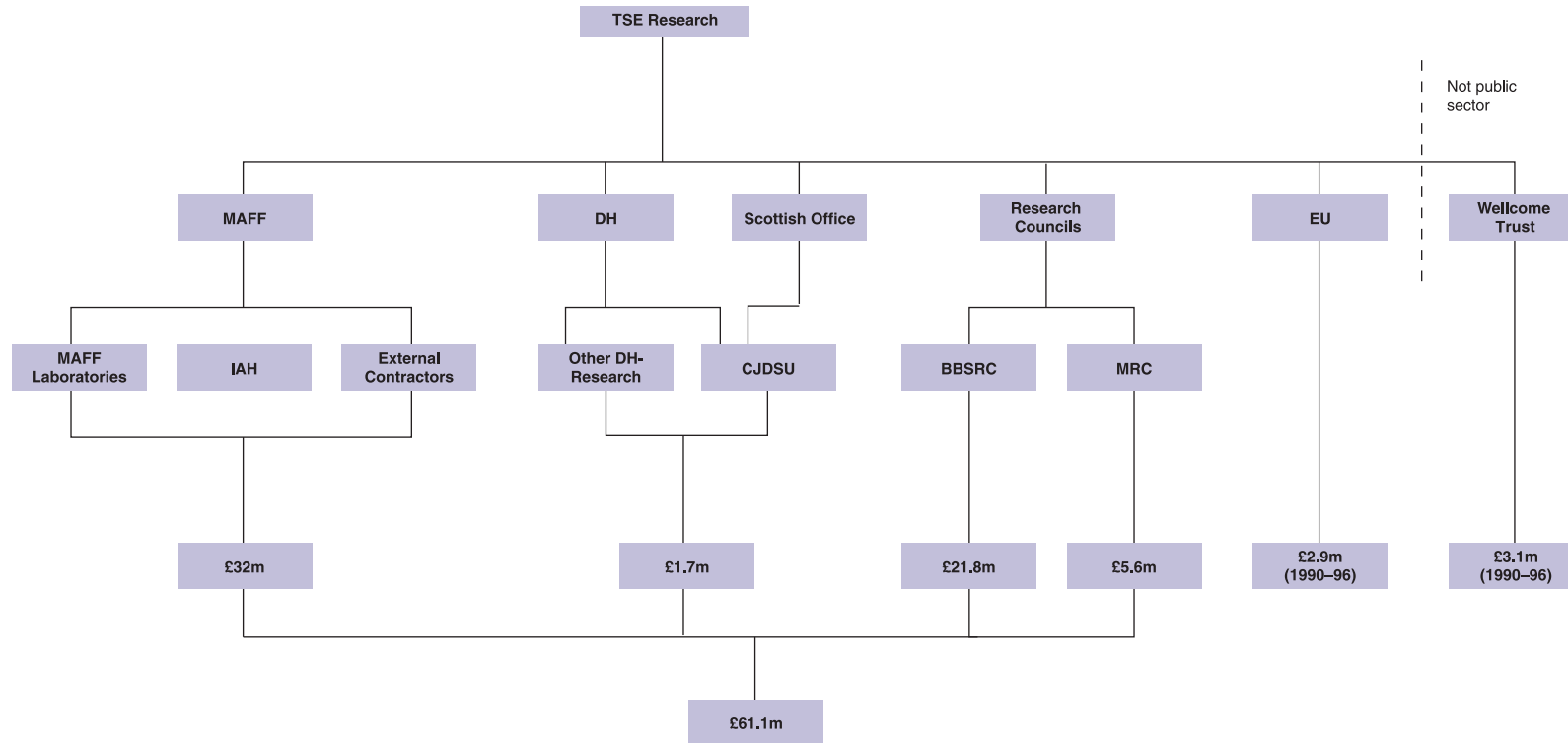


Figure 2.2: Funding for BSE compensation schemes, 1986–96 cash prices

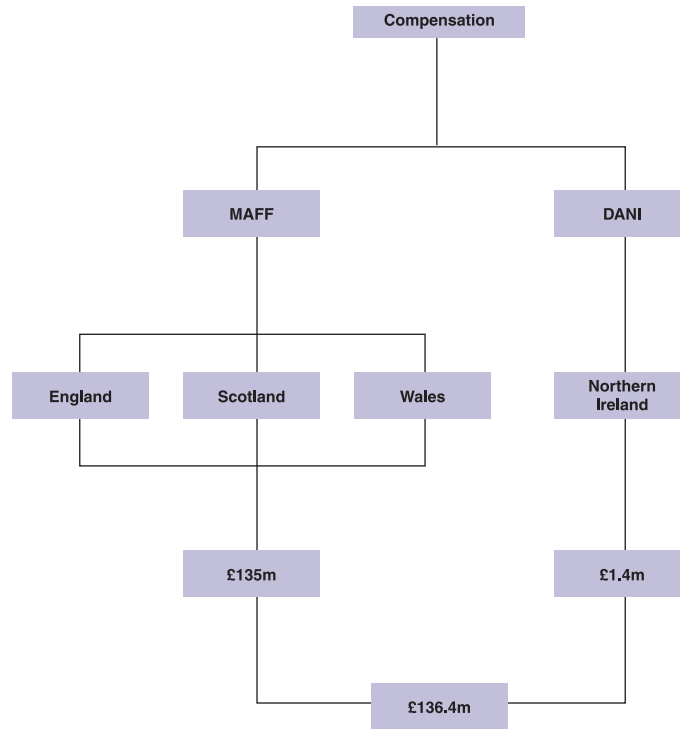
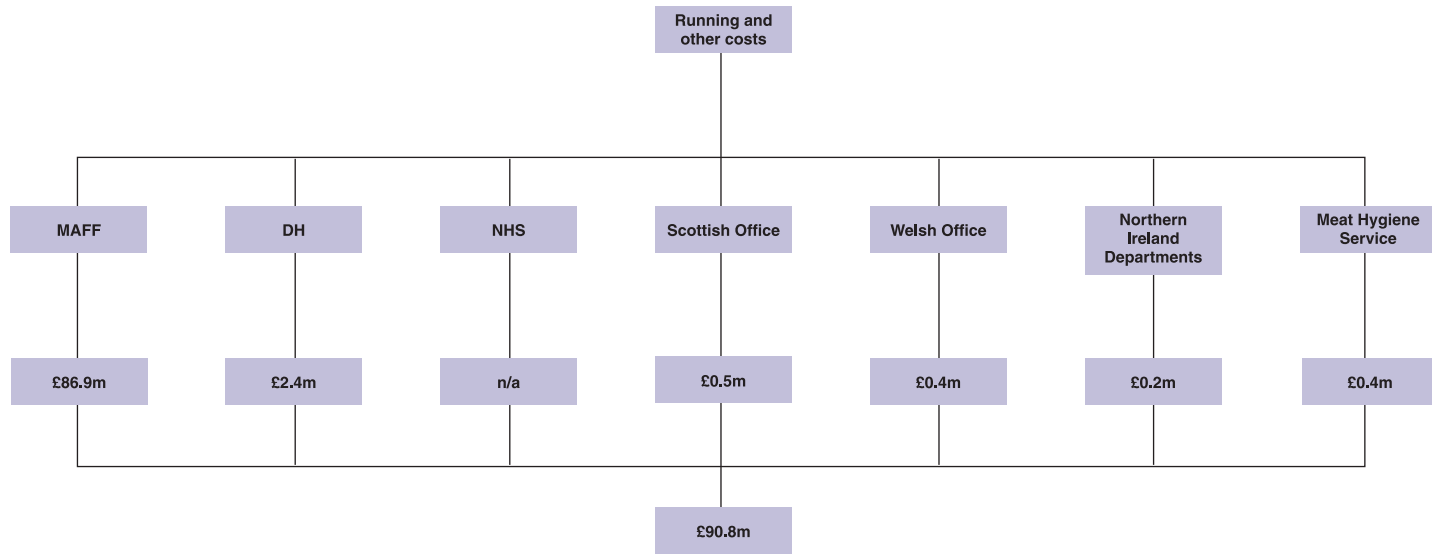


Figure 2.3: Public sector BSE-related running and other cost, 1986–96, cash prices



2.2 In addition to this public expenditure on BSE-related activities, BSE may have indirectly created additional costs for the public sector through the loss of taxation revenue and increased social security payments.

2.3 Lost taxation revenue is the tax revenue that is not raised because businesses are not as profitable as they otherwise might have been had BSE never emerged. Calculating such lost revenue is a highly complex and speculative venture, particularly in the light of pre-existing market trends, currency fluctuations and myriad other economic events in the period under examination. The Inquiry has not attempted such a calculation but recognises that lost tax revenues do represent another dimension of the economic impact on the public sector.

2.4 There may also have been increased costs associated with social security payments if economic difficulties caused by BSE led to a loss of employment, and to a subsequent increase in unemployment and unemployment benefit payments. This is also a complex calculation to make as it requires very detailed knowledge of the changes in employment associated with BSE and the subsequent labour market destinations of the people affected. The Inquiry has not attempted such a calculation, but it does recognise that this is a further area of potential increased costs.

Part 1: Research

2.5 Concerns about BSE led to research into the new disease and other transmissible spongiform encephalopathies (TSEs).⁸ These included scrapie in sheep and CJD in humans. We describe below the funding of research on BSE and other TSEs between 1 April 1986 and 20 March 1996 by UK Government Departments, the Research Councils, the EU and the Wellcome Trust.

MAFF expenditure

2.6 The Central Veterinary Laboratory (CVL) in Weybridge, Surrey, identified BSE in November 1986. From then on the CVL was responsible for many of the early epidemiological studies into BSE, and from 1987 had a dedicated BSE/TSE research programme in operation. The Consultative Committee on Research into Spongiform Encephalopathies (the Tyrrell Committee) was established in 1989. Its recommendations were published in 1990.⁹ Ministers decided that all projects designated as high priority by the Tyrrell Committee should be put in hand and that almost all these projects should be funded by MAFF. Additional funds were not allocated to MAFF for this purpose; instead, existing funds in MAFF's research budget had to be directed away from other areas to BSE research.¹⁰

2.7 The establishment and expansion of the BSE/TSE research programme was set against a background of reductions in research spending resulting from overall downward pressure on public expenditure.¹¹ Table 2.1 shows total MAFF research

⁸ For further information on BSE-related research and development, please refer to vol. 2: *Science*

⁹ A further discussion of these recommendations can be found in vol. 11: *Scientists after Southwood*

¹⁰ YB89/10.02/3.1. See vol. 2: *Science*, Chapter 6

¹¹ DM01 tab 5 p. 9

and development (R&D) expenditure¹² and the proportion of those funds designated for BSE/TSE research during 1986–96.

Table 2.1: MAFF expenditure on BSE/TSE research, 1986–96, at cash prices

Year	Total MAFF R&D	BSE/TSE research	BSE/TSE research
	£'000	£'000	%
1986/87	113,400	0	0.00%
1987/88	108,400	200	0.18%
1988/89	109,200	900	0.82%
1989/90	106,300	1,000	0.94%
1990/91	110,900	2,300	2.07%
1991/92	113,000	4,200	3.72%
1992/93	122,600	5,700	4.65%
1993/94	125,600	6,200	4.93%
1994/95	126,400	5,800	4.59%
1995/96	129,500	5,600	4.32%
Total	1,165,300	31,900	

Source: MAFF Chief Scientist's Group (M32 tab 13)

2.8 MAFF's BSE/TSE research programme was mainly undertaken at the MAFF laboratories or at the Biotechnology and Biological Sciences Research Council's institutes,¹³ although some of the work was carried out by external contractors. An account of MAFF's research and the projects undertaken can be found in vol. 2: *Science*.

2.9 The research carried out by MAFF fell into four main areas: epidemiology, diagnosis, transmission and pathogenesis. In the period between 1992/93 and 1995/96, these programmes cost £6.3 million, £4.4 million, £6.9 million and £5.7 million respectively – £23.3 million in all.¹⁴

2.10 Some of the important projects within these programmes are described below:

- i. **Epidemiology.** The epidemiology study began in June 1987 to gain basic descriptive epidemiological data, including breeding data, and to develop or eliminate aetiological hypotheses for the disease. It also aimed to monitor the incidence within herds and nationally.¹⁵ The study included a survey of practices in rendering plants; an investigation of feed compounders in relation to their geographical location; an investigation of specific risk factors associated with the British Isles; a case control study of calf feeding practices; and an analysis of the offspring of bulls used for artificial insemination. From April 1992 to 1996, the epidemiology study cost £2,234,398;¹⁶ no data are available for the cost of the project between June 1987 and April 1992.¹⁷ Another important study was the investigation of the occurrence and incidence of maternal transmission, costing £336,874 from April 1992 to 1996 (no figures available prior to April 1992).¹⁸

¹² When measured in real terms there was an overall decline in MAFF funds allocated to research and development, even though these cash figures suggest an increase

¹³ The Biotechnology and Biological Sciences Research Council (BBSRC) succeeded the Agricultural and Food Research Council (AFRC) in 1994. References in this volume to the BBSRC include its predecessor

¹⁴ M32 tab 13 table 3. Available figures before 1992/93 are not broken down into the four categories

¹⁵ YB87/10.22/1.1

¹⁶ M32 tab 11 p. 1

¹⁷ At that time the whole research programme was organised differently. A more detailed system of commissioning, costing and recording individual project costs was established in 1992, with the introduction of both a database within the Chief Scientist's Group which allowed all projects to be recorded, and the introduction of the ROAME principles for monitoring and evaluating research

¹⁸ See footnote 17

- ii. **Diagnosis.** Experiments were designed firstly to study the clinical features of the disease with particular emphasis on methods of early diagnosis of BSE, and secondly to facilitate better and cheaper post-mortem diagnosis. The programme also aimed to develop methods for ante-mortem diagnosis. Major studies included the identification of BSE- and scrapie-affected animals by detection of a urinary metabolite (£294,000¹⁹ between April 1992 and March 1995 – figures for April 1991 to April 1992 unavailable²⁰); and biochemical approaches to the differential diagnosis of BSE in the live animal (£187,000²¹ between November 1992 and March 1995).
- iii. **Pathogenesis.** Major studies included the identification of infectivity in cattle tissue (starting in April 1990, and costing £498,275²² between then and March 1996); the pathogenesis of experimental BSE in cattle (starting in April 1992 and costing £1,996,000²³ by 1996); and the attack rate experiment, which started in April 1992 and had cost £745,229²⁴ by 1996.
- iv. **Transmission.** Major studies included the investigation of the comparative efficiencies of the bioassay of BSE infectivity in cattle and mice, costing £722,663²⁵ between April 1992, when the study started, and 1996. Embryo transfer studies began in October 1989, and cost £821,784²⁶ between April 1992 and 1996 (figures since the start of the project are unavailable).²⁷

Department of Health

2.11 The total R&D budget for the Department of Health rose from £15 million in 1988 to £27 million in 1996.²⁸ This budget was small compared with MAFF's R&D budget (see Table 2.1 above), because DH did not fund basic biomedical research relating to human health. This was the function of the Medical Research Council, which obtained funds for this purpose from the Science Vote, an approval of expenditure by Parliament. However, DH had its own 'Policy Research Programme' to identify and fund applied research to provide a scientific basis for policy formulation and evaluation.²⁹ It also funded the national Creutzfeldt-Jakob Disease Surveillance Unit in Edinburgh (see below).

2.12 Following the recommendations of the Tyrrell Committee in 1989 (see vol. 11: *Scientists after Southwood*), a CJD surveillance project was undertaken. The Committee's Report separated the project into two parts:

- surveillance of Creutzfeldt-Jakob Disease (CJD) cases; and
- monitoring of groups with high exposure to bovine tissues.³⁰

¹⁹ M32 tab 11 p. 3

²⁰ See footnote 17

²¹ M32 tab 11 p. 4

²² M32 tab 11 pp. 1 and 6

²³ M32 tab 11 p. 3

²⁴ M32 tab 11 pp. 3 and 7

²⁵ M32 tab 11 pp. 3 and 6

²⁶ M32 tab 11 p. 1

²⁷ See footnote 17

²⁸ DH01 tab 5 p. 2

²⁹ DH01 tab 5 p. 2

³⁰ IBD1 tab 4 p. 11; DH01 tab 5 p. 3

The second part of the project was rated as low priority and, in the event, such monitoring was never undertaken, as it was considered that an analysis of the occupations of CJD cases would suffice to identify any correlation between exposure to bovine tissues and incidence of CJD.³¹

Creutzfeldt-Jakob Disease Surveillance Unit (CJDSU)

2.13 The CJDSU was formally established on 1 May 1990 to monitor the incidence and epidemiology of CJD cases, with a view to detecting any changes in the pattern of the disease, and to provide neuropathological validation of any clinical diagnosis. It was to build on the epidemiological work already carried out and originally funded by the Medical Research Council.³² Between 1992 and 1995 the Unit was also involved in investigating possible occupational links with CJD arising from the deaths of three dairy farmers.³³

2.14 DH and the Scottish Office Department of Health jointly funded the Unit, with DH contributing approximately 90 per cent of the funding.³⁴ The total level of DH funding for the CJDSU over the period 1990–96 was approximately £1.2 million.³⁵

Funding of other BSE/CJD research

2.15 Over the period 1993 to April 1996 DH incurred expenditure on three discrete CJD-related research projects:

- *Strain Characterisation of CJD Agent by Transmission to Mice.* Studies began in 1994 at the Institute for Animal Health (IAH) and were based on six cases of CJD. Additional funding was provided from mid-1995 onwards for studies using tissue from young patients with CJD. Total funding (including these additional funds) for this project before April 1996 is estimated at £113,500.³⁶
- *Prion Diseases Group Molecular Genetic Studies.* Funding was provided to St Mary's Hospital in London to carry out molecular genetic studies of the human prion protein. Total funding for this project before April 1996 is estimated as £280,400.³⁷
- *Scrapie Inactivation Study.* Funding was provided to the IAH for research into the potential for iatrogenic transmission of CJD through instruments used in ophthalmic and neurosurgery. Total funding for this project before April 1996 is estimated as £340,000.³⁸

2.16 These projects all began before 1 April 1996, but in some cases were not completed by that date. Total expenditure until April 1996 on these three projects is estimated to be £733,900.³⁹

³¹ See vol. 2: *Science*

³² DH01 tab 5 p. 3

³³ DH01 tab 5 p. 5. See vol. 8: *Variant CJD*

³⁴ M32 tab 9 Annex 4

³⁵ DH01 tab 27

³⁶ DH01 tab 5 p. 5 Annex C

³⁷ DH01 tab 5 p. 6 Annex C

³⁸ DH01 tab 5 p. 6 Annex C

³⁹ DH01 tab 5 Annex C

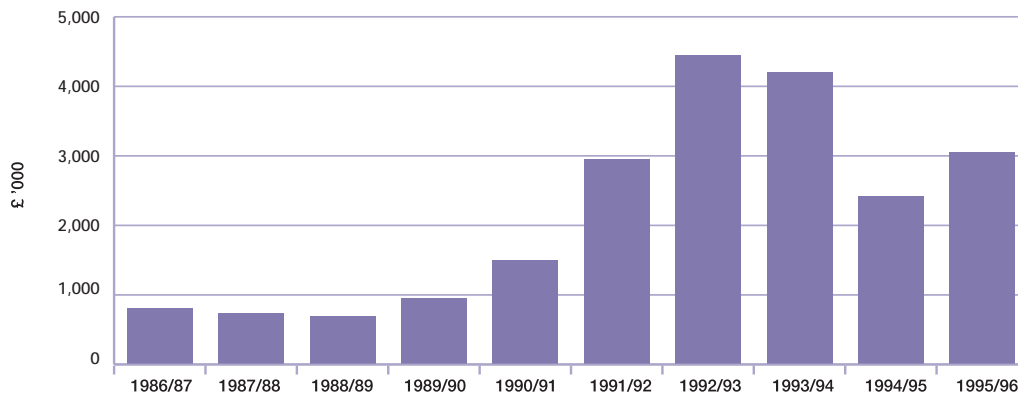
Research Councils

2.17 The Research Councils are non-departmental public bodies, established under the Science and Technology Act 1965. They receive a grant from the Science Budget administered by the Office of Science and Technology (OST). The Research Councils that have had responsibility for BSE-related research are the Biotechnology and Biological Sciences Research Council (BBSRC), the Agricultural and Food Research Council (AFRC, a body which was succeeded by the BBSRC) and the Medical Research Council (MRC).⁴⁰

Biotechnology and Biological Sciences Research Council (BBSRC)

2.18 The AFRC was succeeded by the BBSRC in 1994 and, for convenience, references in this volume to the BBSRC include its predecessor. This Research Council had the main responsibility for research related to BSE and scrapie. Total expenditure on TSE research over the period 1986–96 was almost £22 million.⁴¹ Figure 2.4 provides an annual breakdown of the funding levels. Funding grew significantly after 1989/90 and peaked in 1992/93.

Figure 2.4: BBSRC expenditure on TSE research, 1986–96, at cash prices



Source: M32 tab 13

2.19 The BBSRC TSE research programme consisted of three distinct elements:

- research funded within the BBSRC core programme, which included 70 per cent of core funding of the Neuropathogenesis Unit (NPU) in Edinburgh;⁴²
- research funded under the Biology of the Spongiform Encephalopathies Programme (BSEP);⁴³ and
- research funded at the Institute for Animal Health (IAH) by other sponsors such as MAFF and the Medical Research Council (MRC).⁴⁴

2.20 In 1989, because of widespread concerns about BSE and in order to implement recommendations by the Tyrrell Committee, the BBSRC was awarded additional

⁴⁰ DO01 tab 1 pp. 10–12

⁴¹ M32 tab 13

⁴² The NPU was jointly funded by the BBSRC and the MRC (see below); it was part of the BBSRC's Institute for Animal Health

⁴³ The BSEP did not begin until 1991

⁴⁴ YB95/7.31/3.1

Science Budget funds for research on TSEs.⁴⁵ Part of this allocation was added to the core budget of the IAH in 1990/91.⁴⁶

2.21 Further funds from this allocation were used to set up a new coordinated programme of research to investigate the Biology of the Spongiform Encephalopathies (BSEP I). The programme received £2 million in 1991/92 and £3.5 million in 1992/93. It also received funding from the MRC (see paragraph 2.26 below).

2.22 The aim of BSEP was to develop a fundamental understanding of the molecular and cellular biology of the TSEs. It was to build on the existing work already done by the NPU and to complement work funded by MAFF. Funds were allocated in two phases, from April 1991 and from January 1992, and were available over a three-year period. They were allocated on a competitive basis to higher education institutes and the former AFRC institutes.⁴⁷

2.23 The BBSRC was awarded a further £1.3 million per annum over four years in 1994/95 to fund a second phase of projects (BSEP II). The funds were allocated on a similar competitive basis, available to higher education institutes and former AFRC institutes, and were available over the four-year period.⁴⁸

Medical Research Council (MRC)

2.24 The MRC was the main non-departmental public body through which biomedical research was funded. It was responsible for providing an independent source of expertise and advice on all aspects of research relevant to human health.⁴⁹ A concordat existed between DH and the MRC to ensure that the two bodies worked together effectively.⁵⁰

2.25 The MRC had a focused portfolio of TSE/CJD research. This was principally carried out at the Neuropathogenesis Unit (NPU). The MRC provided 30 per cent of the NPU's core Research Council income. Its contribution amounted to around £300,000 in 1986/87 and rose to about £600,000 in 1994/95.⁵¹

2.26 The MRC also funded a small number of other TSE/CJD-related projects. For example, in 1994 a 'strategic supplement of £274,000' was awarded to the CJDSU over a three-year period for CJD-related transmission studies. The MRC also partly funded the first phase of BSEP, contributing £500,000 over a three-year period.⁵²

2.27 Total expenditure over the period 1986–96 was approximately £5.6 million. The annual breakdown can be seen in Figure 2.5 below.

⁴⁵ This extra funding is described in Chapter 6 of vol 2: *Science*

⁴⁶ YB95/1.27/1.1

⁴⁷ YB95/1.27/1.1

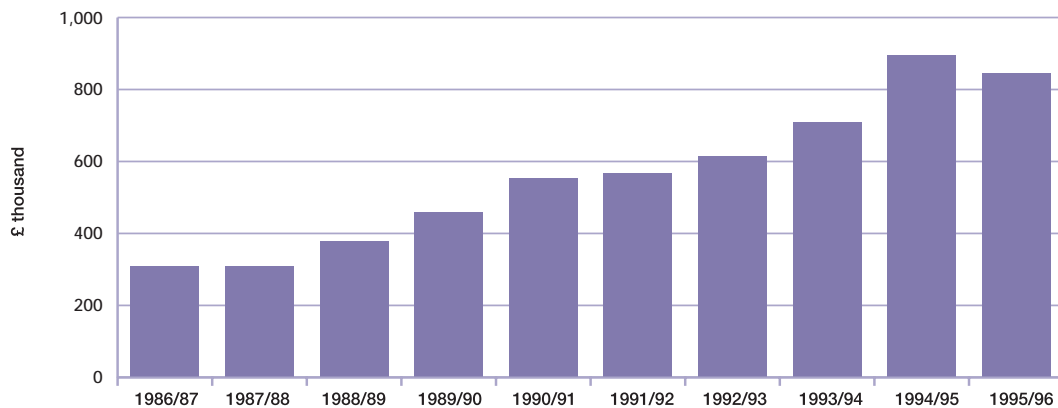
⁴⁸ YB95/1.27/1.2

⁴⁹ S53 Radda para. 3

⁵⁰ DH01 tab 5 p. 2

⁵¹ YB95/12.00/1.4

⁵² YB95/12.00/1.4

Figure 2.5: MRC expenditure on TSE/CJD research, 1986–96, at cash prices

Source: M32 tab 13

Scottish Office

2.28 As noted above in paragraph 2.14, the Scottish Office provided funding during 1990–96 for the core costs of the CJD Surveillance Unit (CJDSU) based in Edinburgh. The Scottish Office contributions each year were determined after negotiations with the Department of Health in England. A pro rata contribution towards the core costs was not always sought by DH, which was responsible for the majority of funding. Over the period 1990–96 the Scottish Office provided £59,000.⁵³

Wellcome Trust

2.29 The Wellcome Trust was founded in 1936, and the will of Sir Henry Wellcome required the Trust to support, primarily, research in the medical sciences.⁵⁴ While it is not a public body, it is included here as a major funder of research carried out by public bodies, such as universities.

2.30 Between July 1990 and March 1996, the Trust granted about £3.1 million to various TSE-related research projects.⁵⁵ These funds were mostly granted to universities. One of the Trust's main outlets for TSE research was the funding of Professor John Collinge and his group at the Imperial College School of Medicine at St Mary's Hospital in London. Approximately £2 million was provided for this purpose.⁵⁶

European Union

2.31 All contributions by the European Union before 1996 were by way of grants that funded relevant research. During 1990–96 the EU spent about 4 million ECUs

⁵³ DS01 tab 9

⁵⁴ M11 tab 7 p. 1

⁵⁵ M11 tab 9

⁵⁶ M11 tab 9

(£2.9 million)⁵⁷ on TSE research.⁵⁸ The research programme on TSEs was organised at two levels:

- clinical research and surveillance of human TSEs; and
- basic biology of human and animal TSEs.⁵⁹

2.32 Over the period 1990–91 the EU was involved in the organisation and financing of several BSE-related initiatives and workshops. These included two seminars and two diagnostic workshops.⁶⁰

2.33 Research funding in the EU was allocated under ‘Framework Programmes’, which generally ran for four years. Under the Third Framework Programme (1990–94) four TSE-related projects were financed. These were:

- the surveillance of CJD in the EU;
- the study of the neuropathology, epidemiology and molecular genetics of human prion disease;
- the study of molecular neuropathogenesis and related neurodegenerative diseases; and
- the study of the characterisation of the BSE infectious agent.⁶¹

2.34 The UK was involved with some of these projects. For example, Dr (now Professor) Robert Will of the University of Edinburgh was the coordinator for the CJD surveillance project.⁶²

2.35 The Fourth Framework Programme (1994–98) ensured research on prion diseases continued, and three additional projects were funded. One of these used animal models to address the issue of inter-species transmission and to assess the effectiveness of the species barrier in limiting the transmission of BSE to humans.⁶³

Summary of BSE/TSE-related research expenditure

2.36 Figure 2.6 summarises the expenditure by various bodies on BSE/TSE-related research.⁶⁴ As can be seen, MAFF accounted for 46 per cent of total research expenditure during 1986–96.

⁵⁷ ECUs have been converted into £s using an average exchange rate for the period 1986–96. This was developed using the European Commission market exchange rate for £s against ECUs that had been supplied by MAFF, and taking the average over the period. The average rate used is £0.732707 to one ECU

⁵⁸ YB96/4.24/2.1

⁵⁹ DM01 tab 6 p. 1

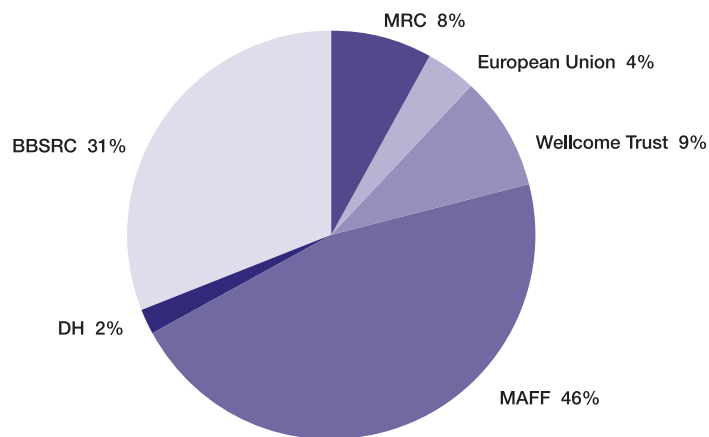
⁶⁰ DM01 tab 6

⁶¹ DM01 tab 6 Annex 2

⁶² DM01 tab 6 Annex 2

⁶³ DM01 tab 6

⁶⁴ The sources for the information in this figure are as follows: MAFF (M32 tab 13); DH (DH01 tab 27); BBSRC and MRC (M32 tab 13); Wellcome Trust (M11 tab 9); and European Union (YB96/4.24/2.1)

Figure 2.6: BSE-related research expenditure, 1986–96

Part 2: Compensation schemes

2.37 Compensation schemes were designed to reimburse farmers for the losses they incurred when animals were slaughtered as suspected BSE cases. These payments were determined by reference to the ‘sound market value’ of the animal – that is, its value if it had not been sick. Payments in England, Scotland and Wales were funded by MAFF as described below. Separate arrangements were put in place in Northern Ireland and are described later in this chapter.

Ministry of Agriculture, Fisheries and Food (MAFF)

2.38 Between 1988 and 1996 three successive schemes were developed to compensate farmers in England, Scotland and Wales. These schemes were funded by MAFF. We summarise them below. Further details are given in Chapter 2 of vol. 6: *Human Health, 1989–96*

2.39 Under the first scheme, which was in effect from August 1988 to February 1990, compensation was paid to a farmer for an animal affected with, or suspected of having, BSE at an amount equal to 50 per cent of the market value of the animal or of an adjusted average market price for all cattle sold in the month two months before the animal in question was slaughtered, whichever was less. For an animal that turned out, on post-mortem examination, not to be infected with BSE, compensation was 100 per cent of the above.⁶⁵

2.40 Under the second scheme, which took effect from 14 February 1990, compensation for an animal affected with BSE was paid at an amount equal to 100 per cent of either the market value of the animal or of the average market price for all cattle sold in the month two months before the animal in question was slaughtered, whichever was less.

⁶⁵ L2 tab 1B (The Bovine Spongiform Encephalopathy Compensation Order 1988, article 3); the adjusted average market price was 125 per cent of the average price of a bovine animal across a selection of national markets

For an animal subsequently confirmed as not affected with BSE, compensation was an amount equal to either the market value of the animal or 125 per cent of the average market price for all cattle sold in the month two months before the animal in question was slaughtered, whichever was less.⁶⁶

2.41 The third scheme was introduced from 1 April 1994. The main change was replacement of the average price with an ‘indicative’ market price. This was essentially a weighted average that distinguished between cattle less than seven years old when valued for slaughter as BSE suspects, and those aged seven years or more when valued. It was calculated using data in Great Britain relating to the month occurring two months before the date on which the market value was determined.⁶⁷

2.42 Total expenditure on compensation payments for 1986–96 is shown in Figure 2.7 below. As can be seen, payments tracked the curve of the epidemic, growing significantly from 1988 and reaching peak levels in 1993/94 (a year after the peak of the epidemic in England and Wales). Between 1994 and 1996 payments fell substantially. Total expenditure on compensation and *ex gratia* payments⁶⁸ over the entire period from 1988 to 1996 was £135 million.⁶⁹

Department of Agriculture for Northern Ireland

2.43 Compensation was first paid to farmers in November 1988, when the first recorded and confirmed case of BSE occurred. From that time until 20 March 1996 the total amount of compensation paid to farmers was £1.4 million. The compensation schemes applicable in Northern Ireland are set out in an annex to Chapter 2 of vol. 6: *Human Health, 1989–96*.

Part 3: Running costs and other expenditure

2.44 Running costs are the everyday fixed operational overheads of a Government Department and include such things as rent, utilities, wages and equipment costs. In assessing the impact of an event on a Department, it is not uncommon to attribute to its costs a percentage of the Department’s total running costs based upon what portion of that Department’s time was devoted to responding to the event. The charge simply reflects the fact that the Department has marshalled a portion of its resources to respond to it. The funds would have been spent by the Department, albeit on different matters, even if the event had never occurred.

2.45 Running costs are also charged to an event if a Department actually increases its outlays to respond to it. These additional outlays might be incurred as a result of hiring additional staff or leasing additional space. The expenditure would not have been incurred if the event had not happened.

⁶⁶ L2 tab 4A (The Bovine Spongiform Encephalopathy Compensation Order 1990, article 3); the average price was based on the returns for sales of commercial grade Friesian cows and heifers in milk and in calf (rather than on returns for bovine animals generally)

⁶⁷ L2 tab 9A (The Bovine Spongiform Encephalopathy Order 1994, article 3)

⁶⁸ An *ex gratia* payment was considered where the owner of an animal suspected of being affected was not eligible for compensation in the following circumstances: the animal died whilst under movement restriction; the case was reported at a slaughterhouse; or the case was diagnosed as the result of a private submission of samples for testing following a negative clinical diagnosis. (DM01 tab 26)

⁶⁹ This figure is for all of Great Britain (DM01 tab 26)

2.46 In considering the economic impact of BSE on various Government Departments, we have included both running costs which are attributable to the reallocation of existing departmental resources to respond to the crisis, and ‘new money’ that was specifically allocated as a result of the emergence of BSE. During a period of shrinking departmental budgets, most Departments responded by shifting resources to address the crisis rather than by obtaining additional funding.

2.47 The problem which arises in trying to reconstruct running costs after the event is that any such figure is invariably the product of a great deal of guesswork, particularly when the running costs are not ‘new money’. The figures in the following paragraphs were provided by the various Departments themselves. Although there is no reason to believe that they are inaccurate, it should be borne in mind that they are estimates and not precise calculations.

Ministry of Agriculture, Fisheries and Food (MAFF)

Running costs

2.48 MAFF has estimated its running costs incurred in responding to the emergence of BSE from 1988 to 1996 to be £35.2 million. This figure includes BSE-related work undertaken by headquarters staff, the State Veterinary Service and the Chief Scientists Group.⁷⁰ It does not include running costs incurred by the CVL, which are dealt with in the next paragraph. MAFF’s work included administering BSE compensation schemes. It also included the monitoring of BSE-related legislation and the servicing of expert committees, such as the Spongiform Encephalopathy Advisory Committee (SEAC).

Diagnosis and surveillance

2.49 MAFF provided the Central Veterinary Laboratory (CVL)⁷¹ and the Veterinary Investigation Centres (VICs) around Great Britain with funding for the diagnostic and surveillance work it was required to perform under the BSE Order 1988 and subsequent legislation.⁷² The Orders required veterinary inspectors who suspected BSE to perform tests upon or take samples from any animal or carcass on the premises for identification purposes.⁷³ The payments MAFF made to cover CVL costs are shown in Figure 2.7 below. As can be seen, they grew significantly from 1988, and particularly between 1991 and 1993. Expenditure on diagnosis and surveillance totalled approximately £7.7 million over the period.⁷⁴

Carriage, valuation and disposal of carcasses

2.50 MAFF was also responsible in Great Britain for funding the carriage, valuation and disposal of BSE suspected carcasses, as required by the Bovine Spongiform Encephalopathy Order 1988, the Bovine Spongiform Encephalopathy Compensation Order 1988,⁷⁵ and their successors. MAFF’s State Veterinary

⁷⁰ DM01 tab 26 attachment 1; for expenditure by the Meat Hygiene Service (a MAFF agency) see para. 2.65 below

⁷¹ It later became part of the Veterinary Laboratories Agency, in 1995

⁷² L2 tab 1 (The Bovine Spongiform Encephalopathy Order 1988, article 5)

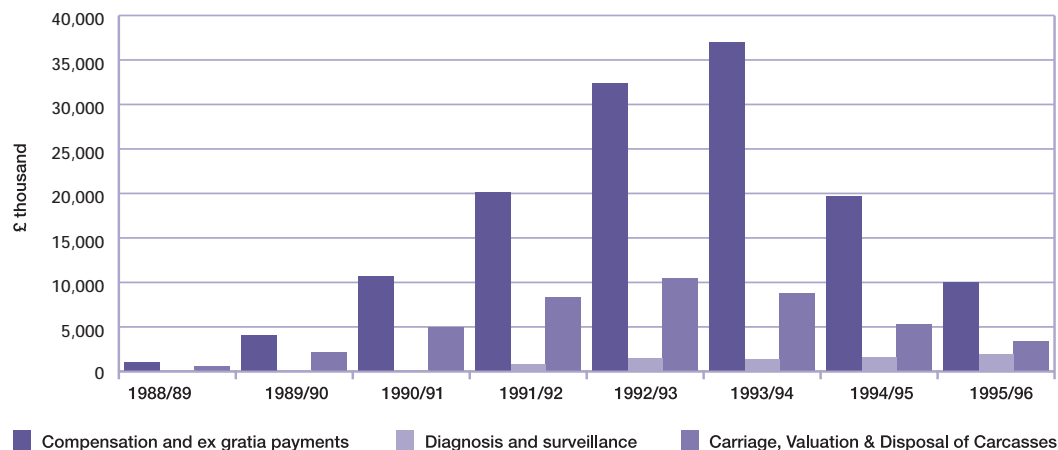
⁷³ ‘Premises’ includes land with or without buildings but does not include any part of any premises used for the temporary detention of animals such as a market, sale-yard, fairground, slaughterhouse lair or place of exhibition (L2 tab 4B)

⁷⁴ DM01 tab 26

⁷⁵ L2 tab 1B (article 3 (3))

Service was responsible for arranging the removal of suspected cattle or carcasses from a property, valuing them, and the subsequent incineration of carcasses. Figure 2.7 below shows the expenditure pattern, which reflects the number of reported suspect cases. Total expenditure over the whole period was approximately £44 million.

Figure 2.7: Selected MAFF expenditure on BSE-related costs, 1986–96, at cash prices



Source: MAFF (DM01 tab 26)

Department of Health

Running costs

2.51 The cost of DH staff time spent on BSE/CJD-related activities during 1988–96 was approximately £820,000.⁷⁶ This amount included staff salaries, accommodation and common services, and covered the servicing of SEAC. The estimate was based on the civil service graded pay structure and the percentage of staff time devoted to BSE/TSE-related activities. Estimates of the time dedicated to such activities were derived from witness statements, enquiries to individuals within Departments at the time and by comparison with other individuals who occupied the same post at a later or earlier date.⁷⁷

2.52 It was estimated that the running costs of the Medicines Control Agency (MCA)⁷⁸ attributable to BSE/TSE during 1989–96 totalled approximately £1.7 million. The amount reflects the fact that the MCA dealt with the issue on a product-by-product basis, as well as servicing a number of relevant expert committees throughout the period.⁷⁹

National Health Service

2.53 The costs of caring for vCJD patients can vary considerably. Moreover, no overall data are available. In answer to a question in the House of Lords in January

⁷⁶ This estimate does not include the time of staff employed in the Medicines Control Agency/DH Medicines Division (see next paragraph)

⁷⁷ DH01 tab 25

⁷⁸ This was formerly the DH Medicines Division, but became a separate Agency in July 1991

⁷⁹ DH01 tab 26

1998 about the overall costs to the NHS arising from CJD each year, Baroness Jay (Leader of the House of Lords) replied: 'There is no reliable information available.'⁸⁰ Furthermore, during the relevant period the families tended to take on most of the care of the patients in their homes.⁸¹

2.54 Recently DH's Economics and Operational Research Division based an estimate of the cost of caring for vCJD patients on information given in witness statements to the Inquiry. It concluded that the care costs may have ranged from under £6,500 to over £40,000, depending on the type of care received by a specific patient. The average cost per patient was about £20,000. However, the number of patients considered was quite small and some aspects of care were not included in the estimate.⁸²

2.55 Thus, while we recognise that there were costs incurred by the National Health Service towards the end of the period under consideration in caring for those with vCJD, these costs are too uncertain to be quantified.

Scottish Office

2.56 The estimated running costs outlined below are those of the Scottish Office Agriculture and Health Departments and the Solicitor's Office. They include the cost of Scottish Office officials who supported MAFF's State Veterinary Service professional and technical staff based in Scotland. Both staff and accommodation costs have been taken into account. These estimates are based on job descriptions at the time, recollections by people within the Department, advice from finance and accommodation divisions, and papers on file.⁸³

2.57 Over the period 1989–96 Scottish Office estimated running costs associated with BSE activities totalled £461,000. Annual expenditure was highest in 1992/93 and 1993/94 at £104,000 and £106,000 respectively.⁸⁴

Welsh Office

2.58 The Welsh Office had some running costs associated with BSE activities during 1986–96. These costs were difficult to estimate as no new posts were created for BSE work in the animal and public health fields. However, based on the grades of staff dealing with BSE, estimates of the average percentage of time spent on it, and the average staff costs for each grade over the ten-year period, a 'very rough estimate' was developed.⁸⁵ Over the period 1986–96 the Welsh Office estimated running costs associated with BSE activities to be between £350,000 and £400,000.⁸⁶

⁸⁰ House of Lords *Hansard*, 27 January 1998, Written Answers 27 (M7A tab 37)

⁸¹ S235 Provision of Care Report

⁸² DH01 tab 25

⁸³ DS01 tab 9

⁸⁴ DS01 tab 9

⁸⁵ DW01 tab 6

⁸⁶ DW01 tab 6

Northern Ireland Departments

2.59 The Northern Ireland Departments funded BSE-related activities in the following areas: diagnosis and surveillance; carriage, valuation and disposal; and the associated running costs of these activities.⁸⁷

2.60 Veterinary staff in Northern Ireland were required to perform a number of tasks associated with diagnosis and surveillance of BSE. These tasks were regarded as a part of their daily duties and as a result it has not been possible to estimate the costs associated with such activities.

2.61 Over the period 1986–96 carriage costs for BSE-affected cattle were approximately £23,000. This was for the transportation of 989 cattle. There were additional costs for the carriage of 1,160 carcasses. However, no estimate of these is available. Valuation costs are also not available, since the work was undertaken as a part of daily duties by existing staff. Disposal costs were estimated to be £172,000, reflecting a charge of £80 for each animal.

2.62 An estimate of running costs associated with BSE-related activities is not available, because the additional work was subsumed in daily duties, in most cases without extra resources being employed. Consequently the Department of Agriculture for Northern Ireland (DANI) has not been able to estimate the proportion of running costs devoted specifically to BSE-related activities.⁸⁸

Local authorities

2.63 Local authorities had various roles under BSE legislation, including the inspection of animals and meat in slaughterhouses, and the enforcement of animal health and welfare provisions on farms, in markets and in transit.⁸⁹

2.64 No additional funding provided through the Revenue Support Grant system was identified at the time as relating to BSE.⁹⁰ We have been unable to quantify the costs incurred by local authorities in the period in question.

2.65 The Meat Hygiene Service (MHS) was launched on 1 April 1995 as an Executive Agency of MAFF and took over the meat inspection duties of some 300 local authorities. It was not established specifically to deal with BSE problems but did incur costs enforcing Specified Bovine Offal (SBO) controls. The MHS Annual Report for 1995/96 estimates that SBO controls cost the Service £434,000 in that year.⁹¹

Summary: impact on the public sector

2.66 Total government expenditure on activities relating to BSE and other TSEs over the period 1986–96 was approximately £288 million.⁹² The annex to this

⁸⁷ DN01 tab 13

⁸⁸ DN01 tab 13

⁸⁹ S176 Ashley paras. 18–22

⁹⁰ S176 Ashley

⁹¹ M22A tab 3 pp. 4 and 31

⁹² This figure includes estimated expenditures on running costs incurred in relation to the response to BSE as calculated by the individual Departments concerned

chapter gives a detailed breakdown of this expenditure. As can be seen, just over £250 million of the total was MAFF expenditure, with £135 million⁹³ being spent on compensation schemes. Expenditure rose with the spread of BSE, peaking in 1993/94 at approximately £66 million. Table 2.2 below summarises the impact of BSE on the UK public sector.

Table 2.2: Summary of UK public sector impact, £ million

	Research	Compensation	Other expenditure	Total
MAFF	31.9	135.0	86.9	253.8
DH	1.7		2.5	4.2
BBSRC	21.8			21.8
MRC	5.6			5.6
SO			0.5	0.5
WO			0.4	0.4
NI		1.4	0.2	1.6
Meat Hygiene Service			0.4	0.4
Total	61.0	136.4	90.9	288.3

All figures taken from the Annex to Chapter 2 below.

⁹³ This compensation figure is a Great Britain figure only (not UK)

Annex to Chapter 2: Total BSE/TSE-related government expenditure, 1986–97, £'000, in cash terms

	1986/87	1987/88	1988/89	1989/90	1990/91	1991/92	1992/93	1993/94	1994/95	1995/96	Total
BSE/TSE research											
MAFF	n/a	200	900	1,000	2,300	4,200	5,700	6,200	5,800	5,600	31,900
DH*	n/a	n/a	n/a	n/a	234	181	148	225	387	502	1,677
BBSRC	805	742	702	950	1,500	2,950	4,450	4,200	2,420	3,050	21,769
MRC	310	310	378	458	553	567	615	710	895	845	5,641
Total research	1,115	1,252	1,980	2,408	4,610	7,916	10,913	11,335	9,520	9,997	61,046
Other expenditures											
MAFF											
Compensation schemes**	n/a	n/a	1,067	4,028	10,663	20,126	32,364	37,002	19,719	10,064	135,033
Diagnosis and surveillance	n/a	n/a	154	177	182	802	1,470	1,377	1,635	1,945	7,742
Carriage, valuation, and disposal of carcasses	n/a	n/a	560	2,131	4,990	8,358	10,513	8,772	5,280	3,440	44,044
Estimated expenditure on running costs	n/a	n/a	1,700	2,600	3,100	4,600	5,100	7,500	5,900	4,700	35,200
DH											
Cost of staff time	n/a	n/a	51	59	89	109	111	118	155	128	820
The Medicines Control Agency	n/a	n/a	n/a	137	304	184	185	198	209	430	1,647
Scottish Office	n/a	n/a	n/a	30	38	51	104	106	68	64	461
Welsh Office	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	350
Northern Ireland Depts	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	1,640
Meat Hygiene Service	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	434	434
Local authorities	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Total other expenditure	n/a	n/a	3,532	9,162	19,343	34,212	49,847	55,073	32,948	21,205	227,371
Total government expenditure	1,115	1,252	5,512	11,570	23,976	42,146	60,760	66,408	42,486	30,768	288,417

Source: M32 tab 13, DM01 tab 26, DH01 tabs 25, 26 and 27, DO01 tab 1 table 2, Scottish Office, DW01 tab 6, DN01 tab 13

* This figure includes expenditure by DH and the Scottish Office on the CJDU

** This is a Great Britain figure

3. Impact on the private sector

Assessing the impact on the private sector

3.1 During 1986–96 there was a decline in beef production and consumption in the UK. It is unclear to what extent BSE contributed to this decline, as a variety of factors probably gave rise to an overall downward trend in consumption.

3.2 One approach to assessing the impact of BSE on the private sector is to examine the following areas:

- the fall in beef production;
- the rise in production of substitute products;
- the increases in real resource costs of production; and
- the transitional adjustment costs.⁹⁴

3.3 Part 1 examines market trends and movements in the light of the fall in beef production and consumption and the concurrent rise in production and consumption of substitute products.

3.4 Part 2 examines the increases in real resource costs of production and the transitional adjustment costs by focusing on individual sectors of the beef industry.

Part 1: The Market

Introduction: the role of agriculture in the economy

3.5 Dairy and beef farming are important sectors of UK agriculture. Over the past 20 years, the output of finished beef cattle has varied between 15 and 18 per cent of total UK agricultural output, to which it has consistently been the third most important contributor. In 1995 the value of output of finished cattle and calves amounted to £2.6 billion.⁹⁵ The output of dairy cows has varied between 19 and 22 per cent of total UK agricultural output over the past 20 years, ranking behind only field crops as the prime contributor to agricultural output.

3.6 A regional analysis shows that the beef industry is of greater importance to the economies of Scotland and Northern Ireland than to the UK as a whole. In 1995, for both countries, the industry accounted for about 27 per cent of gross agricultural output.⁹⁶

⁹⁴ This was the approach taken by DTZ Pineda Consulting in a report commissioned by HM Treasury and MAFF in examining the impact of BSE in the period after 1996. We feel their approach was useful and have adopted it here (M11 tab 2)

⁹⁵ M44 tab 4 p. 9

⁹⁶ M44 tab 4 p. 9

Beef production

3.7 Statistics about the production of meat cannot be equated with the consumption of meat in the UK. Production of a particular meat may increase while consumption declines, if the surplus is exported. Likewise production can decline but consumption can increase, with the difference being made up by imports. So, when examining the economic condition of the beef and veal industry, it is necessary to look at both production and consumption, but it is important to keep the two concepts separate.

3.8 Over the period 1986–96 beef came from three main sources:

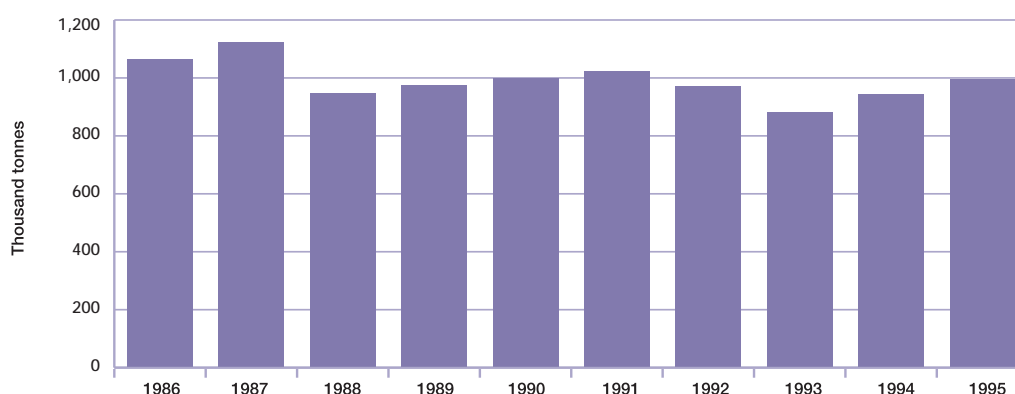
- calves from the dairy herd;
- cull cows (cows that had been utilised for milk production); and
- specialist beef herds.

3.9 In 1995, for example, 41 per cent of beef was from calves from the dairy herd finished as beef cattle, 22 per cent was from cull cows and 36 per cent from specialist beef herds. Adult bulls and imported cattle made up the remainder.⁹⁷

3.10 Over the first half of the 1980s the volume of beef production generally averaged between 1.0 and 1.2 million tonnes per annum. From the mid-1980s volumes began to decline as the introduction of EU milk quotas led to contractions in the dairy herd, which in turn reduced the supply of calves for beef. The growth in live calf exports further exacerbated the decline. It is unclear whether BSE was a further factor.

3.11 As can be seen in Figure 3.1,⁹⁸ production levels have generally been below 1 million tonnes per annum since 1988 and were as low as 860,000 tonnes in 1993.⁹⁹

Figure 3.1: UK volume of beef and veal production, 1986–95



Source: MAFF (M15B)

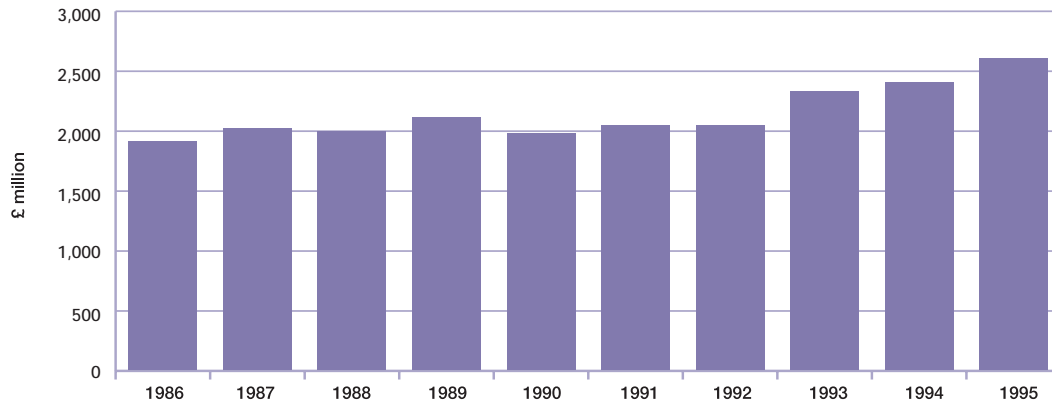
⁹⁷ M11 tab 2 p. 8 (Report by DTZ Pieda Consulting: *The Impact of BSE on the UK Economy*)

⁹⁸ Figure 3.1 has been produced from the MAFF Annual Reviews of Agriculture in M15B. The figures used are collated from several of the Reports, and the ways in which they were produced may have varied. They do not include meat offal or trade in preserved or manufactured meat products. Boneless meat has been converted to bone-in weights. (M15B tab 3 p. 37; tab 7 p. 47; tab 10 p. 66)

⁹⁹ M44 tab 4 p. 8 (Report of the Meat and Livestock Commission: *Economic Overview of the UK Beef Industry*, June 1998)

3.12 The value of beef (which includes subsidies paid to producers) rose slightly during 1986–95. Figure 3.2¹⁰⁰ illustrates the movements in the value of production over the period. This measure combines the two factors of volume and price. Since the volume of production fell over the same period, it suggests that the price for livestock increased.

Figure 3.2: UK value of beef and veal production, 1986–95, at cash prices



Source: MAFF (M15B)

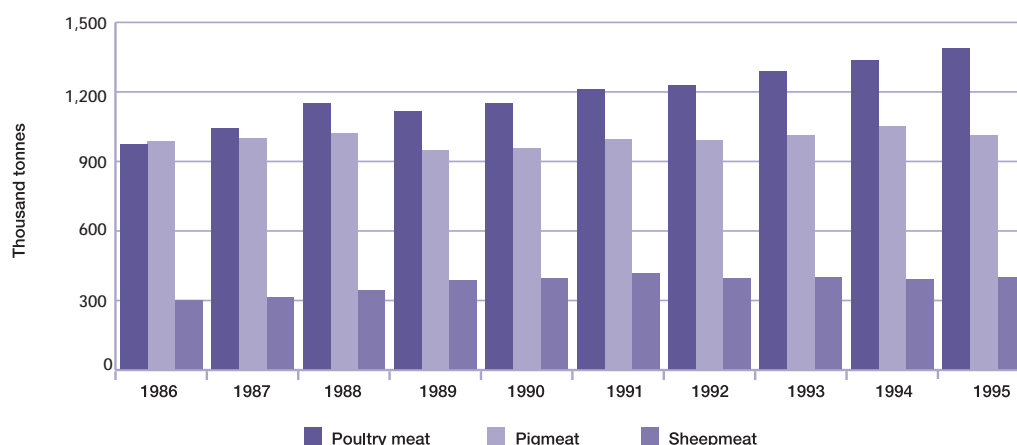
3.13 However, firstly, the majority of the increase in the cash value of production was associated with increased subsidy, such as the suckler calf premium and beef special premium. And secondly, the rise in value holds good only when measured in cash terms. When measured in real terms, value declined. As is examined in more detail in Chapter 4, both the market price for cattle and the retail price of beef lagged behind the Retail Price Index for all items.

Production of substitute meat products

3.14 From 1986 to 1995 there was a significant increase in the volume of poultry meat production. As can be seen in Figure 3.3,¹⁰¹ production increased from 937,000 tonnes in 1986 to 1,389,000 tonnes in 1995. This represented an increase of approximately 50 per cent in production over the entire period. Year-on-year growth averaged 4 per cent.

¹⁰⁰ Figure 3.2 has been produced from the MAFF Annual Reviews of Agriculture in M15B. The figures used are collated from several of the Reports, and the ways in which they were produced may have varied. (M15B tab 3 p. 37; tab 7 p. 47; tab 10 p. 65)

¹⁰¹ Figure 3.3 has been produced from the MAFF Annual Reviews of Agriculture in M15B. The figures used are collated from several of the Reports, and the ways in which they were produced may have varied. For pigmeat and sheepmeat, the figures do not include meat offal or trade in preserved or manufactured meat products. For sheepmeat, boneless meat has been converted to bone-in weights. (M15B tab 3 pp. 38–40; tab 7 pp. 48–50; tab 10 pp. 67–9)

Figure 3.3: UK production of other meat products, 1986–96

Source: MAFF (M15)

3.15 There were a number of explanations for this increase. One of the main reasons was that there were no quotas or subsidies for poultry production under the Common Agricultural Policy (CAP), and therefore the producers could respond quickly to the increased demand by raising production rather than increasing the price. Furthermore, consumption of white meat rose as it was affected by consumer lifestyle choices and dietary concerns (see paragraph 3.21).

3.16 Pigmeat production over the same period was relatively constant, hovering around 1 million tonnes a year. Sheepmeat production did, however, experience steady growth before flattening out. As can be seen in Figure 3.3 above, production increased by 30 per cent from 301,000 tonnes in 1986 to 400,000 tonnes in 1995, with a peak of 418,000 tonnes in 1991. As with poultry, the production of sheepmeat was not regulated by the CAP, at least up until 1992, and as demand for the product grew, production increased accordingly.

3.17 Despite the increased production of sheepmeat and poultry meat during the period, the UK was, and remained, a net importer of both. In beef and pigmeat, during this period, the UK vacillated between being a net importer to a net exporter from year to year.¹⁰²

Meat consumption and substitution between products

3.18 In 1988 consumption of all meat products peaked at 3.834 million tonnes. As can be seen in Table 3.1,¹⁰³ consumption was steady over the period 1986–95, though with significant variations among the various meats consumed. In 1995 about 97 per cent of UK consumers ate meat in an increasing variety of forms.¹⁰⁴

¹⁰² M15B (MAFF Annual Reviews of Agriculture)

¹⁰³ Table 3.1 has been produced from the MLC Yearbooks. The relevant extracts from the Yearbooks can be found in M44A tab 9. The figures used are collated from several of the Yearbooks, so the way that they were produced may have varied

¹⁰⁴ M11 tab 2 p. 4 (Report by DTZ Pieda Consulting)

Table 3.1: UK consumption of meat products, 1986–95

Year	Beef and veal	Mutton and lamb	Pork	Bacon and ham	Poultry	All meat products
	000 tonnes	000 tonnes	000 tonnes	000 tonnes	000 tonnes	000 tonnes
1986	1,134	381	728	459	978	3,680
1987	1,153	376	772	451	1,017	3,769
1988	1,104	383	803	450	1,094	3,834
1989	1,063	411	759	448	1,061	3,742
1990	1,003	429	772	434	1,105	3,743
1991	1,014	424	775	424	1,133	3,770
1992	999	378	772	395	1,199	3,743
1993	903	338	807	404	1,167	3,619
1994	920	343	801	415	1,252	3,731
1995	895	359	758	422	1,298	3,732

Source: MLC Yearbooks (M44A tab 9)

3.19 Over the period 1986–95, the share of beef and veal within total meat consumption declined from approximately 31 per cent in 1986 to 24 per cent in 1995, being mostly replaced by poultry which increased its share from 27 to 34 per cent. Per capita beef consumption also declined by about 35 per cent, or 6.7 kg per person per year.¹⁰⁵

3.20 The decline in beef consumption in the UK market was mirrored, but to a lesser degree, by a decline in the EU markets. Beef consumption in the 12 Member States of the EU¹⁰⁶ fell by 2.2 kg per person during the same period.¹⁰⁷ Consumption also declined in the United States, and by 1995 had fallen by approximately 25 per cent from the peak levels of 1976–77. As with the UK, the main loss in market share was to poultry and, to a limited extent, pigmeat.¹⁰⁸

Factors contributing to the decline in beef consumption

3.21 Many factors other than BSE may have contributed to the decline in beef consumption and to its substitution with other products during the period 1986–96, not least the gradual erosion of beef's position in a competitive market by the relatively cheaper prices for pork and poultry. There were also substantial changes in the socio-economic environment which had an impact, including:¹⁰⁹

- reductions in the average size of the family unit and the growth of single-person households, leading to fewer traditional family meals based on large amounts of meat;
- growth in the trend towards shopping in large supermarkets that offer the consumer a vast array of attractive products and meal solutions (which tend to incorporate relatively cheaper meats, particularly poultry, in the product);
- growing awareness and interest among consumers in healthy eating and concerns about food safety, the environment and the welfare of animals. The image of beef, perceived as a more fatty and less healthy meat by consumers, has suffered;

¹⁰⁵ M44A tab 8

¹⁰⁶ There were not 15 Member States in 1986 as there are now

¹⁰⁷ M11 tab 2 p. 5 (Report by DTZ Pieda Consulting)

¹⁰⁸ M44 tab 4 p. 22

¹⁰⁹ M11 tab 2 p. 5 (Report by DTZ Pieda Consulting)

- changing work patterns that have resulted in the growth of full-time employment among women. With less time for meal preparation, some of the more traditional cuts of beef, such as the roast, have suffered; and
- shifting leisure patterns with less time being spent on formal meals.¹¹⁰

3.22 It is not possible to quantify the extent to which BSE may have had an impact on beef consumption during this period. The basic factors that contributed to the long-term decline in UK beef consumption also apply to other EU countries and the United States.¹¹¹ The EU had its own health scares, linked particularly to the use of hormone growth-promoters in beef and veal, which may have had some impact on the consumption of beef as well.¹¹²

The impact of the media on consumption

3.23 The coverage of BSE in the media, and developing consumer awareness, may have affected consumer demand on several occasions. In May 1990 a spongiform encephalopathy was discovered in a cat. This discovery was the subject of intense media interest and seems to have had an impact on the market.¹¹³

3.24 Mr Stephen Wentworth of MAFF's Meat and Livestock Group, minuted the Parliamentary Secretary, Mr David Curry, on 22 May 1990 briefing him on the state of the beef market and the need for market support measures. He wrote:

The adverse publicity concerning beef and BSE has affected demand both at retail level and at livestock markets. At retail level the impact is varied. The greatest effects seem to be in the South East and Midlands with some retailers reporting reductions in sales by one third to one quarter. However, circumstances clearly vary considerably from retailer to retailer and shop to shop. There are some who report business much as usual. The situation is also complicated by the number of public holidays at this time of year, the warm weather and the impact of high interest rates all of which tend to reduce demand.¹¹⁴

3.25 Figure 3.4 shows the weekly price of clean cattle (ie, cattle that have not been used for breeding) from May to July 1990. As can be seen, there was a small decline in the price in May, although this might not have been as a result of the feline encephalopathy case, since cattle prices tend to fluctuate for a number of reasons.

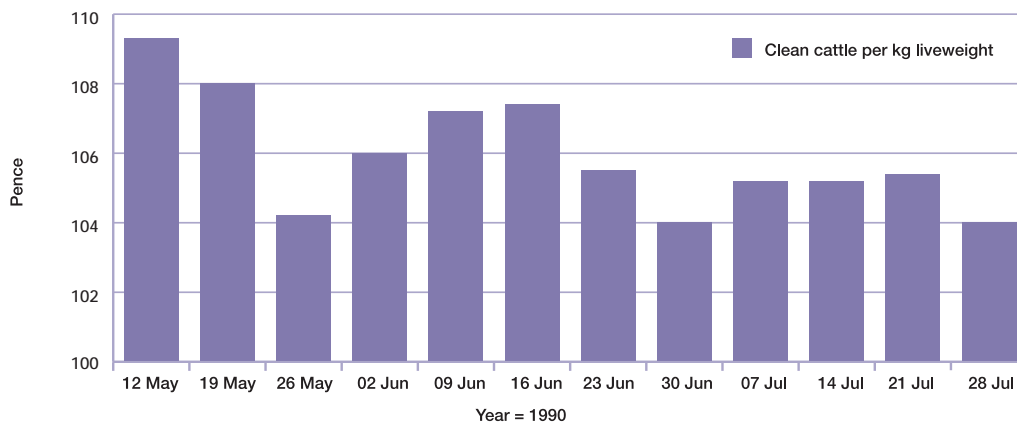
¹¹⁰ M11 tab 2 p. 5 (Report by DTZ Pidea Consulting)

¹¹¹ M44 tab 4 p. 22 (Report of the Meat and Livestock Commission)

¹¹² M11 tab 2 p. 5 (Report by DTZ Pidea Consulting)

¹¹³ YB90/5.22/3.1-3.5 & M11 tab 2 p. 2

¹¹⁴ YB90/5.22/3.1

Figure 3.4: UK prices of clean cattle

Source: MLC

Note: clean cattle are cattle that have not been used for breeding.

3.26 In November and December 1995 there were a number of television programmes which exposed gaps in the integrity of the control of the bans on specified bovine material entering the animal feed chain. This resulted in heightened consumer concern and may have depressed consumption of beef before Christmas 1995 and in early 1996.¹¹⁵

3.27 Studies by Michael Burton and Trevor Young, at the University of Manchester, suggested that publicity surrounding BSE was responsible for a 4.8 per cent decline in the demand for beef over the period 1990–93.¹¹⁶ As with any macroeconomic study, they were not able to hold constant other factors that may also have affected demand, such as increased concern about cholesterol or the use of growth hormones in cattle, which also generated adverse publicity about beef. While the conclusions reached in their studies may well be correct, we view the results only as evidence supporting the general proposition that BSE had an adverse impact on the demand for beef, rather than as a precise quantification of that impact.

Part 2: Impact of BSE on the beef and cattle industry by sector

3.28 It is very difficult to assess the impact of BSE on the beef and cattle industry as a whole during 1986–96. There was a continuing process of consolidation, privatisation,¹¹⁷ integration and rationalisation within the various sectors of the entire industry during this time, which makes it hard to attribute economic effects specifically to BSE. The existence of intervention buying, support prices, milk quotas and compensation schemes also blunted or distorted the impact of BSE and obscured the picture. Lastly, as discussed above, the general decline in demand for beef further clouded the view of the economic impact of BSE on the industry.

3.29 In this section we will examine the various sectors of the beef and cattle industry to see where the costs or losses that are clearly attributable to BSE first

¹¹⁵ M11 tab 2 p. 2 (Report by DTZ Pineda Consulting)

¹¹⁶ 'The impact of BSE on the demand for beef and other meats in Great Britain', *Applied Economics*, vol. 28, 1996, pp. 687–93, and 'Measuring meat consumers' response to the perceived risks of BSE in Great Britain', *Risk Decision and Policy*, vol. 2, no. 1, April 1997

¹¹⁷ Many communities had small slaughterhouses that were operated or supported by local authorities. For reasons unrelated to BSE, most of these slaughterhouses were closed or sold to private operators during this period

arose. Chapter 4 will attempt to answer the question of where these additional costs or losses finally came to rest.

3.30 The key sectors discussed in this section are:

- i. farmers;
- ii. meat processing industries – slaughterhouses, head boners, mechanically recovered meat (MRM) producers, meat packers, butchers and related trades;
- iii. renderers;
- iv. knackers;
- v. feed manufacturers; and
- vi. peripheral industries.

Background

3.31 We do not attempt here to explain in detail the operation and economics of the various sectors, or their interrelationships, but only to look at the impact of BSE on them. Volumes 12 and 13 of this Report give a much fuller account of these industries.

3.32 Volume 12: *Livestock Farming* examines various aspects of farming in the UK, with particular attention to cattle and dairy farming. It includes discussion of subsidies, intervention buying, agricultural practices, and marketing and feeding practices which, taken together, provide a background for understanding the economics of farming.

3.33 Volume 13: *Industry Processes and Controls* examines in detail the operation of slaughterhouses, head boners, MRM producers, knackers, renderers, and animal feed and pet food manufacturers.

3.34 A succession UK Regulations and Orders, as well as EU Directives and Decisions, had immediate and serious economic consequences for the various sectors of this industry, and their implementation was often a watershed economic event. We allude to this legislation throughout but for a full explanation of these Statutory Instruments, we primarily refer the reader to vol. 3: *The Early Years, 1986–88*, vol. 5: *Animal Health, 1989–96*, and vol. 6: *Human Health, 1989–96*.

Farmers

3.35 For farmers, the illness and death of individual animals was the most direct and immediate economic loss attributable to BSE. Until 8 August 1988, there was no compensation scheme, and the loss of the animal was borne entirely by the individual farmer.

3.36 We do not have figures for the number of farmers who suffered such a loss before the introduction of a compensation scheme. However, as at 5 August 1988 there were 767 confirmed cases of BSE,¹¹⁸ and this figure provides the basis for

calculating the minimum loss. Given that £575¹¹⁹ was the average market price per head of cattle during this period, it would seem that the minimum loss for farmers collectively was £441,000 before the introduction of the compensation scheme on 8 August 1988.¹²⁰

3.37 However, these losses would have been spread among 621 different herds.¹²¹ That translates into a loss per farm of only about £710.

Compensation schemes

3.38 The Government introduced a compensation scheme in August 1988 (see paragraph 2.39). Farmers who gave evidence to the Inquiry considered the compensation – broadly amounting to 50 per cent of the value of the animal when healthy – was adequate,¹²² although farmers in Wales almost immediately pressed for 100 per cent compensation for all cattle slaughtered because of BSE.¹²³

3.39 Mr Jim Harrison, a farmer from West Sussex, said in his statement to the Inquiry that he sent a letter to the Minister complimenting him on the level of payment for suspects, and that he thought it was on the generous side of fair. However, he also gave a few instances where valuations of cattle were a problem. Anyone sending in cows for export, for example, might not be as satisfied. Indeed, dissatisfaction eventually increased both over the basis and timing of the valuations and over the level of compensation.¹²⁴

3.40 Although occasional disagreements over the valuation of animals did occur early on,¹²⁵ losses were still quite low at this point and were so sporadic that they were no larger than the occasional losses that farmers always experienced from disease and accidents. It was still considered to be a part of the normal cost of operating a farm.¹²⁶

3.41 Had there been substantial losses within individual herds during this period, farmers would have suffered from being compensated at only 50 per cent of the value of the animal. However, the deaths due to BSE in the period from 8 August 1988 to 14 February 1990, when compensation was increased to 100 per cent, tended to be spread very broadly and thinly, with only a few affected animals within a herd.

3.42 About 10,700 head of cattle were lost to BSE between August 1988 and February 1990.¹²⁷ Taking the average market price for cattle during this period of £645,¹²⁸ a compensation rate of only 50 per cent (ie, £322.50 per cow) instead of 100 per cent suggests that farmers collectively had to bear a loss of £3,450,750. Since, by the end of 1990, 6,378 herds had suffered a loss, individual farmers with

¹¹⁹ YB88/6.23/2.4

¹²⁰ This is an estimated figure based solely on averages. The price of cattle in the market fluctuated during this period. Weight, age and breed also affect market price. The averages, of necessity, understate the value of some animals and overstate the value of others. In this instance, the value of dairy cows is probably overstated and the value of speciality beef cattle is probably understated

¹²¹ The number of farms affected is as of 5 August 1988 (YB88/8.11/1.1)

¹²² T57 pp. 40–6

¹²³ See vol. 9: *Wales, Scotland and Northern Ireland*

¹²⁴ S133 Harrison para. 9

¹²⁵ S133 Harrison para. 15

¹²⁶ T57 p. 37

¹²⁷ The figure of 10,700 is a revised one for confirmed cases in the UK, rather than a contemporary figure

¹²⁸ YB90/2.5/2.3. On 14 February 1990

an infected herd can be estimated to have lost an average of 1.68 head of cattle. This would translate into an average loss of about £542.

3.43 The growing number of deaths attributed to BSE, and public concern that suspects might not always be notified because the compensation was too low, led the Government to increase the basic compensation level to 100 per cent of the market value of the animal.¹²⁹ Although there seems to have been a small measure of dissatisfaction with this scheme as well, with some farmers being slightly over-compensated and others under-compensated, any resultant losses at individual farm level cannot be readily quantified.

3.44 In summary, it appears that, collectively, farmers could have suffered uncompensated losses of about £4 million due to the death of infected cattle up to February 1990.

Limitations on the sale of milk

3.45 In December 1988 an Order was made prohibiting the use of milk from suspect cattle for any purpose other than feeding to the cow's own calf.¹³⁰ Farmers would thus have lost the value of the milk produced by the affected cows. However, there was a relatively short period between the date on which an animal was suspected of having BSE and the date on which it was slaughtered, so that the amount of milk produced by such an animal would have been relatively small. Therefore it does not appear that this loss was other than marginal and temporary.

The market price of cattle

3.46 A second way in which BSE hurt farmers was its impact on the market price of cattle. As was discussed in some detail in Part 1 of this chapter, it is impossible to quantify the role that BSE played in the long-term decline of the demand for beef. There were certainly some points at which public pronouncements about BSE and sharp declines in market prices were closely linked in time.

3.47 The export of beef from the UK is discussed in Chapter 6. We mention here that in 1990 the European Union imposed Commission Decision 90/261, which required that all bone-in beef exported by the UK to Member States be 'fresh bovine meat derived from bovines which are not from holdings in which BSE has been confirmed in the previous two years'.¹³¹ In July 1994 the requirement was increased to six years.¹³² It was inevitable that in many cases these measures would mean that cattle which came from a BSE-affected farm 'suffered a loss in value when they were put through the market'.¹³³

3.48 The impact of BSE on the market price of cattle would have been felt both by specialist beef farmers and by dairy farmers. For farmers raising cattle for beef, the market price of the finished animal is the main determinant of profit or loss. So while they may have benefited from the declining cost in purchasing calves for their herds, the declining value of cattle for slaughter had a significant, if difficult to quantify, impact on them.

¹²⁹ L2 tab 4A (The Bovine Spongiform Encephalopathy Compensation Order 1990)

¹³⁰ L2 tab 3 (The Bovine Spongiform Encephalopathy (No. 2) Order 1988, article 9)

¹³¹ L17 tab 7, article 2A

¹³² L17 tab 9 (Commission Decision of 27 July 1994 (94/474/EC), article 4)

¹³³ M45 tab 6

3.49 The primary value of a dairy cow is in the milk that it produces and only secondarily its slaughter value at the end of its productive life. Milk prices, because of quotas and price supports, did not react to the emergence of BSE. There does not seem to have been a serious public concern about BSE and milk safety. However, dairy farmers routinely sell their surplus calves either for export to countries where there is a high demand for veal or to specialist beef farmers. The declining price of calves would thus have had a significant impact on dairy farmers.

Increased operating costs

3.50 Farmers faced marginally higher costs for concentrated cattle feed after the ruminant feed ban in July 1988.¹³⁴ This was because slightly more expensive protein concentrates replaced the meat and bone meal (MBM) that had been used for this purpose before that date.

3.51 However, the impact was minimal. MBM in concentrated cattle feed was seldom more than 5 per cent of a given mix, and the concentrated feeds themselves were only a small part of the animal's diet. Furthermore, the market price of MBM and other protein concentrates, such as soyabeans, was so close that even before the emergence of BSE, feedmills would use them interchangeably depending on the current market price.

3.52 Before the introduction of the BSE compensation schemes from 1988, increased veterinary costs would have been incurred by farmers when they called out veterinarians to diagnose and attempt to treat animals suffering from the disease. After the introduction of compensation, diagnosis was included in the scheme.

3.53 Before the emergence of BSE, knackers would pay farmers a small amount for their fallen cattle.¹³⁵ After the introduction of a voluntary ban on SBO in animal feed,¹³⁶ knackers began to charge farmers to remove the fallen animal. Farmers either paid the additional fee or disposed of the carcass by burial on the farm.¹³⁷

3.54 Lastly, in response to BSE, farmers were required to keep breeding and movement records for all cattle.¹³⁸ Although farmers had generally kept such records beforehand, the new legislation required them to keep more detailed records for a longer period of time. This would have imposed a small, unquantifiable, additional operating cost on farmers.

Summary: the effect on farmers

3.55 It is difficult to isolate the overall economic effect BSE had on farmers up to 1996, but on the whole they were mostly cushioned from any direct impact by the compensation schemes.

¹³⁴ Introduced as a result of the Bovine Spongiform Encephalopathy Order 1988 (L2 tab 1); see vol. 3: *The Early Years, 1986–96*

¹³⁵ Fallen cattle would include seriously ill or injured animals that had to be destroyed as well as animals that had died as a result of illness or accident on the farm

¹³⁶ The Bovine Offal (Prohibition) Regulations 1989 banned the sale, supply or use of Specified Bovine Offal (SBO) for human consumption. This led the UK Agricultural Supply Trade Association (UKASTA) to introduce a voluntary ban on SBO in animal feed. In September 1990 the Bovine Spongiform Encephalopathy (No. 2) Amendment Order 1990 banned the sale, supply or use of SBO in animal feed (L2 tabs 3B and 5)

¹³⁷ S137 Rudman paras 18–19

¹³⁸ L2 tab 4B (Bovine Animals (Identification, Marking and Breeding Records) Order 1990); L2 tab 11B (Bovine Animals (Records, Identification and Movement) Order 1995)

The meat processing industries

3.56 The meat processing industries incurred additional costs, during 1986–96, as a result of BSE. These included increased processing costs, greater disposal costs and a loss of market for particular products. The following sections address the meat processing industries in turn and examine the individual costs that arose in each. Chapter 4 looks at who actually bore these costs in the end.

Slaughterhouses

3.57 Processing costs. After the introduction of the ban on human consumption of Specified Bovine Offal (SBO) in 1989, slaughterhouses incurred additional handling costs in order to comply with the Regulations. In practice, the slaughterhouse had to remove the SBO from the carcass, separate it from any other material going for human, and later animal, consumption and dispose of it according to the Regulations. Compliance with these Regulations required staff training in the new procedures and increased labour costs for the additional handling.

3.58 Once SBO had been severed from the carcass, it could not be stored in the same room as meat fit for human consumption, unless it had been stained or sterilised. Compliance with these procedures would have resulted in extra costs for slaughterhouses.

3.59 Loss of markets. After the introduction of the voluntary ban on SBO in animal feed, parts of the carcass that once had re-sale value for slaughterhouses increasingly became waste items that they had to pay to have disposed. Mr Brian Rogers, in evidence to the Inquiry on behalf of the United Kingdom Renderers' Association, said:

The abattoirs [took] material from a pile where they would be paid £20 a ton for it, and put it in a pile where they would be charged £50–£70 a ton [to have it removed].¹³⁹

3.60 There was also a lost market for the disposal by slaughterhouses of bovine heads to head boners, who would remove the head meat. The impact of the SBO Regulations on this market is described in paragraphs 3.68–3.72 below.

3.61 Increased disposal costs. Slaughterhouses were faced with increased disposal costs as a result of the SBO bans. The Regulations provided that SBO material had to be removed in a sealed vehicle or in an impervious container, which was kept locked and sealed at all times and clearly labelled.¹⁴⁰ As noted above, the slaughterhouses were forced to pay for the disposal of materials that they had previously sold.

3.62 An amendment to the SBO Order in late 1995 prohibited the use of the spinal column in the manufacture of mechanically recovered meat (MRM).¹⁴¹ MAFF estimated that this modification of the Order was likely to cost slaughterhouses an additional £1 million per year in additional disposal costs.¹⁴²

¹³⁹ T60 p. 94 – Mr Brian Rogers of UKRA

¹⁴⁰ L2 tab 3B article 11

¹⁴¹ L2 tab 15A

¹⁴² YB95/12.8/1.12

3.63 The Meat and Livestock Commission and MAFF surveys of cost. Both the Meat and Livestock Commission (MLC) and MAFF have estimated the additional costs for slaughterhouses as a result of BSE. In 1995 the MLC conducted a survey of eight cattle slaughterhouses in England and Scotland. The sample was chosen to reflect slaughterhouses of different sizes, and accounted for about 20 per cent of throughput in Great Britain.

3.64 The results of the survey formed an estimate of the added cost of BSE to the by-products operations of slaughterhouses since 1988.¹⁴³ They produced an overall estimate of £7 per animal. On the basis of the number of animals expected to be slaughtered in 1995, the financial loss to the industry was estimated to be approximately £23.1 million for that year. It was expected that this cost would continue for as long as the BSE legislative measures were in place.

3.65 The division of the £7 cost by the MLC was as follows:

- loss in value of SBO products – £3.50 per beast;
- loss in value of non-SBO products – 50 pence per beast;
- removal costs of SBO – £2.50 per beast; and
- staining and additional labour costs – 50 pence per beast.¹⁴⁴

3.66 MAFF also assessed the added costs of BSE to the by-product operations of slaughterhouses. This was done in the context of a cost compliance assessment for the Specified Bovine Offal Order 1995. MAFF found that the recurring costs to a medium-sized abattoir (8,000 cattle a year) of complying with the Order would be £28,525 a year. This was equivalent to £3.56 for each animal. A division of the costs identified by MAFF was as follows:

- loss of value of head bones – 10 pence per beast;
- removal costs of heads – 46 pence per beast;
- removal costs of SBO – £2.40; and
- cost of staining SBO – 50 pence.¹⁴⁵

3.67 These estimates differ because the MLC survey assesses a broader range of costs including loss of value for SBO other than heads and the loss of value of non-SBO.

Head boners

3.68 Before the introduction of the human SBO ban, head boners had purchased heads from slaughterhouses and removed the head meat. The recovered meat was sold for inclusion in economy meat products. The brain was generally not recovered, and the heads, usually containing the brain, were sold on to renderers (see vol. 13: *Industry Processes and Controls* for further details).

¹⁴³ YB95/9.00/4.1–4.6

¹⁴⁴ YB95/9.00/4.6

¹⁴⁵ YB95/9.00/4.3

3.69 When the 1989 Regulations designated the brain as SBO, head boners were faced with two, more costly, alternatives. They could, after the head meat was removed, send the intact head to the renderers as they previously had done. However, since these heads contained SBO, the head boners had to pay the renderers to take the heads rather than selling them to the renderers as had previously been the practice.

3.70 Alternatively, the head boners could open the head and remove the brain.¹⁴⁶ The head could then be sold to the renderer as before. However, the head boners would still have to pay the renderers to take the brains, which were SBO, and they incurred additional labour costs in splitting the skulls and removing the brains. This alternative was removed by the 1995 SBO Order, which obliged head boners to treat the main portion of the skull (after removal of head meat) as SBO.¹⁴⁷

3.71 Before the 1989 Regulations, head boners received about £25 per tonne from renderers for the heads after the head meat had been removed. After the introduction of the Regulations, renderers were charging up to £80 per tonne for the removal of SBO.¹⁴⁸

3.72 After the 1989 SBO Regulations came into force, the demand for head meat started to decline. There were suspicions that blood from around the brain could infect head meat and many people became wary of using the meat at all.

Mechanically recovered meat (MRM) producers

3.73 The manufacture of MRM is a mechanised process of recovering the residual meat from bones after the saleable cuts have been removed from the carcass. Bovine MRM used to be included in a range of processed meat products for human consumption.

3.74 The human SBO ban in 1989 had little effect on MRM producers, since only the spinal cord (which was to be removed at the slaughterhouse), and not the spinal column, was classified as SBO.

3.75 A damaging setback for the producers of MRM occurred in 1995. The SBO ban was modified and the new legislation prohibited the use of the whole bovine vertebral column in MRM. One of the concerns leading to this decision was that spinal cord was not always fully removed from the vertebrae and could therefore contaminate MRM. The vertebral column was very important in the production of MRM, as it was the source of about 80 per cent of the mechanically recoverable meat from bovine waste. Indeed, it was so essential to economic production that a report prepared for MAFF in 1997 concluded that the ban on the use of vertebral column effectively brought an end to the production of MRM from cattle.¹⁴⁹

3.76 MAFF prepared a compliance cost assessment of the impact of this ban on MRM producers when it was introduced. It estimated that:

¹⁴⁶ Volume 6: *Human Health, 1989–96* describes MAFF guidance and the eventual legislative requirement that brain removal should occur only after harvesting head meat

¹⁴⁷ Specified Bovine Offal Order 1995 (L2 tab 13)

¹⁴⁸ IB1 tab 7 p. 117 (House of Commons Agriculture Committee Fifth Report)

¹⁴⁹ IB 5 tab 17 p. 12 (The Leatherhead Report: *Audit of Bovine and Ovine Slaughter and By-Products Sector*)

... a typical production level [of a single processing plant] would appear to be around 450 tonnes per annum. The product has an average sale value of around 80p per kilogram, putting the value of the typical production [at] around £360,000 per annum.¹⁵⁰

3.77 The assessment concluded that, for the whole MRM industry, the lost sales could total about £4 million per annum.¹⁵¹ On this basis the lost sales between the end of 1995 and 20 March 1996 may have been £1 million.

3.78 Some producers of MRM were more dependent on bovine materials than others, but we have no evidence to indicate to what extent. In the industry as a whole only 5 per cent of MRM was derived from bovine material, so the impact on MRM manufacturers from the loss of cattle production was limited. Most MRM production was from poultry sources.¹⁵² It can therefore be seen that although part of the industry suffered as a result of BSE, it remained viable.

Meat-packers/butchers

3.79 Those involved in converting the dressed carcasses produced by the slaughterhouse into retail cuts of meat are a diverse group. Some meat-packers are independent but others are owned by supermarket chains. In some instances, slaughterhouses are also engaged in the value-adding process of meat-cutting. Some meat-packers tend to specialise while others handle a variety of meats. The high street butcher may run a one-man operation while a large meat-packer may employ hundreds of people in a number of processing plants. Because this group is so diverse, it makes it more difficult, in some respects, to generalise about it.

3.80 Meat-packers, as a group, did not incur additional costs as a result of BSE. The SBO ban required the slaughterhouse to remove the SBO material before transfer of the carcass to meat-packers, so they incurred neither the additional handling costs nor the disposal costs that had so deeply affected other related industries.

3.81 Substitution of products. Meat-packing operations specialising in beef would have felt the impact of declining demand for their product, and some of the drop in that demand, as previously noted, was probably due to BSE. But most meat-packers and virtually all butchers deal with a variety of meats, and overall consumer demand for meat increased during the time that the demand for beef decreased.¹⁵³ The consumers' decision to substitute other meats for beef more than offset the decline in demand and buffered meat-packers and butchers, as a whole, from any adverse impact of BSE.

Renderers

Processing costs

3.82 Rendering is the process of crushing and heating the waste from animal carcasses to extract tallow. When the tallow is removed, a high-protein solid, known as greaves, remains. As a result of further processing, greaves are shaped into

¹⁵⁰ YB95/12.8/1.11

¹⁵¹ YB95/12.8/1.11-1.12

¹⁵² YB95/11.27/7.2

¹⁵³ See Table 3.1 in Part 1 of this chapter

powder meal or pellets and incorporated into animal feed as ‘meat and bone meal’ (MBM).

3.83 After the introduction of the animal feed SBO ban in 1990, renderers were faced with new handling costs, because they could no longer include SBO when producing MBM for consumption by animals.¹⁵⁴ In fact these extra handling costs began to arise after the introduction of the 1989 ban on SBO for human consumption, because the UK Agricultural Supply Trade Association (UKASTA) introduced a voluntary ban on SBO in animal feed in November 1989. As a result, most renderers were forced to start treating SBO separately at this stage.¹⁵⁵ The voluntary ban became compulsory in September 1990.¹⁵⁶

3.84 In order to make the ban effective, renderers had to prevent SBO (and material derived from it) from contaminating other material before, during and after the rendering process. A code of good practice was eventually introduced, and this was strengthened by the SBO Order 1995.

3.85 Restrictions on the use of SBO in the production of MBM were extended when the incorporation of SBO-derived MBM in feedstuffs for export to EU Member States, and later for export to third countries, and the incorporation of SBO in MBM for fertiliser were successively banned in 1990 and 1991.¹⁵⁷

3.86 During the period 1989–95, a number of different approaches were taken to the separation of SBO, including dedicated SBO processing plants, dedicated SBO and non-SBO processing lines within a single plant, and separate batching of SBO and non-SBO wastes. This last approach, required under the code of good practice, imposed extra costs because of the need to purge the system with non-SBO materials.¹⁵⁸ The 1995 Order required that SBO could only be rendered on a separate line dedicated to that purpose.

3.87 In January 1993 the Animal By-Products Order 1992¹⁵⁹ came into effect, implementing Council Directive 90/667/EEC.¹⁶⁰ The Order required that if by-products fell within any of a list of categories of material suspected of presenting serious health risks to animals or man and if the by-products were disposed of by rendering, they had to be subjected to a temperature of at least 133°C for 20 minutes at a pressure of 3 bar (that is, 2.961 atmospheres), or to any of the various rendering systems specified in Commission Decision 92/562/EEC (a).¹⁶¹ The resultant product had to be free of heat-resistant pathogenic bacteria spores and salmonella. During the period to 20 March 1996 SBO was within these categories.

3.88 The operational changes in respect of handling SBO material and implementing the Animal By-Products Order 1992 will have given rise to additional labour costs, and one-off costs of planning and retraining, as well as the extra transportation and storage costs inherent in maintaining the segregation of materials both before and after processing.

¹⁵⁴ S37C Foxcroft para. 4.8

¹⁵⁵ S33B Rogers para. 4.5

¹⁵⁶ L2 tab 5

¹⁵⁷ Bovine Spongiform Encephalopathy (No. 2) Amendment Order 1990 (L2 tab 5: Export to EC Member States), Export of Goods (Control) (Amendment No. 7) Order 1991 (L2 tab 6: Export to non-Member States), and Bovine Spongiform Encephalopathy Order 1991 (L2 tab 7: restriction on use in fertilisers achieved via licensing requirements for disposal of SBO-derived MBM)

¹⁵⁸ S33B Rogers para. 4.6

¹⁵⁹ L1 tab 10

¹⁶⁰ L4 tab 1

¹⁶¹ L4 tab 2

3.89 Some consideration was given to refitting plants so that the rendering process would inactivate the BSE agent. However, the temperatures thought likely to achieve this would have destroyed much of the nutritional value of the resultant MBM and would also have discoloured the tallow. One of the leading renderers, Prosper De Mulder, incurred costs funding research into possible inactivation procedures.

Loss of the meat and bone meal (MBM) market

3.90 The ruminant feed ban had a relatively limited effect on demand for MBM, since only some 10 to 15 per cent of production had been sold for incorporation into ruminant feed.¹⁶²

Disposal costs

3.91 As a result of the restrictions described above, the greaves (or MBM) generated by the rendering of SBO materials were no longer a saleable commodity but an undesirable waste product.

Knackers

Disposal costs

3.92 Knackers collected dead or diseased animals from farms. Once such animals reached the knacker's yard they could not be used for human consumption. Knackers processed the carcass, selling the meat to kennels, for example, or as pet food,¹⁶³ and the hides to tanners. The remaining wastes went to renderers.

3.93 Before the SBO Regulations, knackers would pay farmers for fallen stock,¹⁶⁴ and then receive payment for the processed carcasses and residual waste. After the voluntary and eventual legislative ban on SBO in animal feed, renderers began charging knackers for accepting SBO and knacker waste generally. The legislative ban was originally confined to SBO from animals 'slaughtered' in the UK, and thus did not apply to fallen stock. This oversight was corrected in 1991.¹⁶⁵ It is unclear whether it was exploited to any significant degree.

3.94 The 1992 Animal By-Products Order required knackers to dispose of certain classes of potentially hazardous animal by-products by rendering in approved premises, incineration or burial.¹⁶⁶ As a result of this Order, knackers were faced with higher disposal costs.

Processing costs

3.95 From 15 August 1995 SBO at knacker's yards had to be stained blue (a different colour from that normally used by knackers), kept free from contact with

¹⁶² S33B Rogers para. 2.7

¹⁶³ In 1991 an estimate that each knacker sold an average of half a ton a week was described as 'possibly on the high side' (see vol. 13: *Industry Processes and Controls*, which deals with the supply of knacker meat to retailers and members of the public for pet food)

¹⁶⁴ T34 p. 132

¹⁶⁵ L2 tab 7, article 4, 'definition: specified bovine offal.'

¹⁶⁶ L1 tab 10 (Animal By-Products Order 1992, article 5)

other animal material, and disposed of in accordance with the SBO Order 1995.¹⁶⁷ Extra costs, similar to those illustrated for slaughterhouses above, would have been incurred by much smaller operations that were less able to meet them.

Loss of market

3.96 The main loss of market for knackers came with the introduction of the voluntary ban on SBO in animal feed. As renderers began to treat knacker waste generally as SBO, from March 1990 they started charging knackers instead of paying them for its removal from the knacker's yards.¹⁶⁸ In MAFF's summaries of returns on the disposal of carcasses and waste from knacker's yards and hunt kennels in 1991, reports were noted of renderers charging between £40 and £200 per tonne of knacker waste, depending on the renderer and whether it was SBO or not.¹⁶⁹ Volume 13: *Industry Processes and Controls* describes how this led knackers to introduce charges for the removal of cattle carcasses from farms, which in turn caused a decrease in throughput with reports of knackers closing down.

3.97 Several knackers also sold meat from fallen stock for use by other industries. It is suspected, but not confirmed, that most of these sales were to pet food manufacturers. However, both Pedigree Masterfoods and Spillers Petfoods, two of the largest pet food manufacturers in the country, said in submissions to the Inquiry that they only used raw materials derived from carcasses passed as fit for human consumption, and therefore did not source their raw materials from knackers. Pedigree Masterfoods said that it had maintained this policy since the 1970s, while Spillers Petfoods had never purchased raw materials from knackers.¹⁷⁰ Although it is unknown how much knacker material entered the pet food market, with the introduction of the various BSE-related Regulations and Orders, that market appears to have dried up.

Feed manufacturers

Loss of raw material

3.98 The financial impact of BSE on animal feed manufacturers came early on with the introduction of the ruminant feed ban in 1988. Manufacturers that had previously used MBM in compound feeds for cattle and sheep had to substitute other sources of concentrated protein in their mix. They were free to continue to use MBM in pig and chicken feed.

3.99 MBM was included at rates of 2 to 5 per cent in compound feeds, and at higher rates in protein supplements. An important factor affecting the amount of MBM in animal feed was its price in comparison with alternatives such as soyabean. One of the major compounders described the economic effect on the industry of the ruminant feed ban as follows:

The use of MBM in Bibby ruminant compounds, not ruminant protein concentrates, was typically 2%. It is difficult to say 10 years hence precisely what the ruminant MBM ban cost the industry. In raw material cost terms,

¹⁶⁷ L2 tab 13

¹⁶⁸ YB90/2.13/5.1

¹⁶⁹ YB91/8.23/1.1

¹⁷⁰ S163 Malin para 17 & S168 Plant para. 3

one can estimate the impact by assuming that MBM was always some £25 per tonne cheaper than soya bean meal. Hence, as they have virtually the same protein content, the cost effect for this reason alone is 2% of £25, ie, 50 pence per tonne. However, this ignores the higher UDP [undegraded protein] and mineral content of MBM. Thus we recall costs increasing by some 50 pence in lower specification feeds and up to £1.50 in higher specification feeds. The timing of the ban in relation to the seasonality of ruminant feeding was helpful, to an extent, in recovering these costs in that Bibby would have been launching new products and issuing new price lists in late summer in advance of its winter dairy sales campaign. This price review would have accommodated many of the price differences. Moreover as all compounders had to remove MBM the effect was universal, ie, a level playing field.

With regard to protein concentrates, within which the inclusion level of MBM was much higher, the cost penalties would have been more significant. However, feed suppliers would have attempted to minimise these through re-formulation so making use of alternative protein sources and, again, the level playing field arguments applied.¹⁷¹

3.100 The same compounder described the impact of the voluntary ban on SBO in animal feed:

On 15 November 1989 Bibby wrote to all of its MBM suppliers stating that MBM supplies must *not* contain any SBO material or fallen animals as from 1 December 1989 . . . MBM supplies were audited by Bibby staff and action taken if appropriate, eg, removal from the approved supplier list if SBOs were not adequately segregated. In addition, MBM suppliers were asked to confirm abattoir audits especially with regard to removal of SBOs. The economic impact was insignificant and was probably lost amongst the usual market fluctuations in price. There was no market disadvantage to this action as it was universal amongst UKASTA members.¹⁷²

3.101 The ruminant feed ban was extended on 29 March 1996 to prohibit the use of all mammalian meat and bone meal in feed for *all* farm animals.¹⁷³ The consequential impact on feed manufacturers was much more substantial than any of the BSE measures taken during the period covered by the Inquiry's terms of reference.

Processing costs

3.102 The precautions taken against cross-contamination of feedstuffs in feedmills are described in vol. 13: *Industry Processes and Controls*. These and other measures increasing the cost of production began to be introduced in 1994 onwards as concerns grew about cross-contamination and progress was made with development of an ELISA test for ruminant protein.

¹⁷¹ S154 Raine and Marsden paras 23 and 24

¹⁷² S154 Raine and Marsden paras 42–4

¹⁷³ The Bovine Spongiform Encephalopathy (Amendment) Order 1996 (L2 tab 17)

Peripheral industries

3.103 Many other businesses have some tangential relationship to the beef and cattle industry, including pet food manufacturers, grocery retailers, tanners and leather goods manufacturers, pharmaceutical producers, auctioneers, specialist hauliers, waste disposal site operators, veterinarians and meat inspectors.

3.104 One peripheral industry that was substantially affected by BSE was gelatine manufacture.¹⁷⁴ As news of the disease spread, customers began insisting on gelatine derived from bovine by-products of non-UK origin. In order to meet this requirement, manufacturers were forced to import their raw materials from countries not affected by BSE. Since there is a global market for gelatine, the manufacturers were unable to pass on these additional importation costs to their customers. The major UK manufacturer of gelatine, Croda Colloids, estimated its additional annual costs to be in excess of £500,000 per year during 1991–95. The impact after March 1996 was much more severe but is outside the scope of the report.¹⁷⁵

3.105 However, with isolated exceptions, none of the actors in these industries suffered any serious economic impact as the result of the emergence of BSE. Some businesses, such as pharmaceutical manufacturers, looked to foreign suppliers for raw materials (such as tallow and gelatine) with virtually no disruption. Other industries related to the beef and cattle industry, such as retailers, offset the drop in beef sales with increased sales of other meats. Some, such as pet food manufacturers, anticipated restrictions and shifted to using alternative protein sources even before they were required to do so by government regulation.

3.106 Some sectors actually gained from the emergence of BSE. Research projects employed scientists, and new Regulations resulted in a greater role for meat inspectors and veterinarians.

Summary: effects of BSE on the private sector

3.107 While Chapter 4 attempts to ascertain where the main economic impact finally fell, Table 3.2 has been constructed as an overview of the economic implications for each of the private sector industries affected by BSE. In many instances it has not been possible to quantify the effects. In these cases we have identified the likelihood of additional costs, without giving a figure. Where we have been able to isolate an amount, many of these figures are estimates.

Table 3.2: Summary of effects of BSE on the private sector, 1986–96, cash prices

Sector	Effect
Farmers	
– uncompensated losses	£4.0 million
– limitations of sale of milk from suspect cattle	marginal, temporary
– market prices – dairy cattle	milk prices unaffected, reduced price for calves
– market prices – beef cattle	unquantified, significant impact
– increased operating costs	some, not significant
Meat processing industries:	
Slaughterhouses	
– processing costs	handling and storage costs
– loss of markets	loss of market for re-sale of part of carcass
– increased disposal costs	£3.50–£7 per animal
Head boners	
– increased disposal costs	previously received £25 per tonne, now paying £80 per tonne
– loss of market	decline from 1989 onwards
Mechanically recovered meat producers	
– loss of market	lost sales of approximately £1.0 million from end-1995 to 20 March 1996
Meat packers/butchers	
– additional costs	no additional costs
– loss of markets	substituted other meats to offset reduced beef demand
Renderers	
– additional processing costs	labour, storage and processing costs
– loss of market	loss of MBM in animal feed market
– disposal costs	previous saleable material now a waste
Knackers	
– disposal costs	increased costs
– processing costs	similar to slaughterhouses
– loss of market	previous saleable material now a waste
Animal feed manufacturers	
– loss of raw material	use of higher cost materials
– processing costs	some additional costs
Peripheral industries:	
Gelatine manufacturers	
– loss of raw material	£0.5 million per annum, 1991–95
Grocery retailers	} no serious economic effect
Tanners and leather goods	
Pharmaceutical producers	
Auctioneers	
Specialist hauliers	
Waste disposal sites	
Vets	
Meat inspectors	

4. Where did the economic consequences of BSE finally fall?

4.1 There remains the question of who ultimately suffered the economic consequences of the BSE epidemic. We know that the taxpayer bore the cost of the BSE-related expenses in the public sector.

4.2 When we turn our attention to the private sector, we know through our discussion in the previous chapter that the actors in every commercial sector of the beef and cattle industry were faced with additional costs to bring their businesses into compliance with new government Regulations made in response to the emergence of BSE. Furthermore, some businesses lost some of their product line or had to pay to dispose of by-products that they once used to sell to others.

4.3 However, depending on the circumstances, additional costs might be passed back to a supplier by way of insisting on lower prices for inputs, or passed forward to buyers by way of higher prices for outputs. In other instances, a business might be forced to absorb the costs out of existing profits.

4.4 Ultimately, the question is not where the additional expenses arose but where they settled. This question becomes far more difficult to answer because a large number of factors, other than BSE, may have impacted on the financial health of the various segments of this industry.

4.5 These other factors included privatisation of smaller slaughterhouses previously operated by local authorities, and consolidation within farming, slaughtering, rendering, meat-packing and retailing. Consolidation went so far as to produce monopoly conditions in the rendering industry.¹⁷⁶ This period also saw significant moves towards vertical integration among slaughterhouses, meat-packing houses and large food retailers and the decline of the high street butcher.

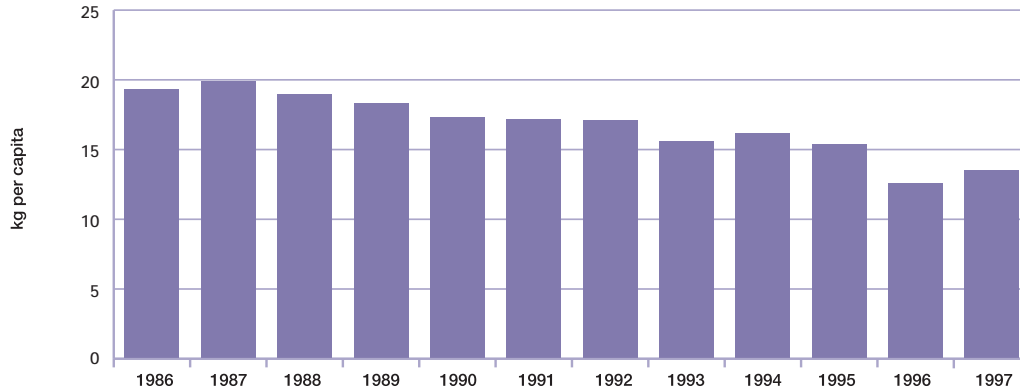
4.6 Factors largely external to the industry impacted on it as well. EU Directives, price supports and subsidies, quotas, compensation schemes and changes in consumer preferences also make it difficult to attribute specific economic events to BSE.

Consumers

4.7 Perhaps the most significant of these other factors was the diminishing demand for beef. As Figure 4.1 below shows, per capita consumption of beef declined steadily throughout the period under examination, although it is impossible to determine to what extent BSE contributed to this decline. Likewise the retail price

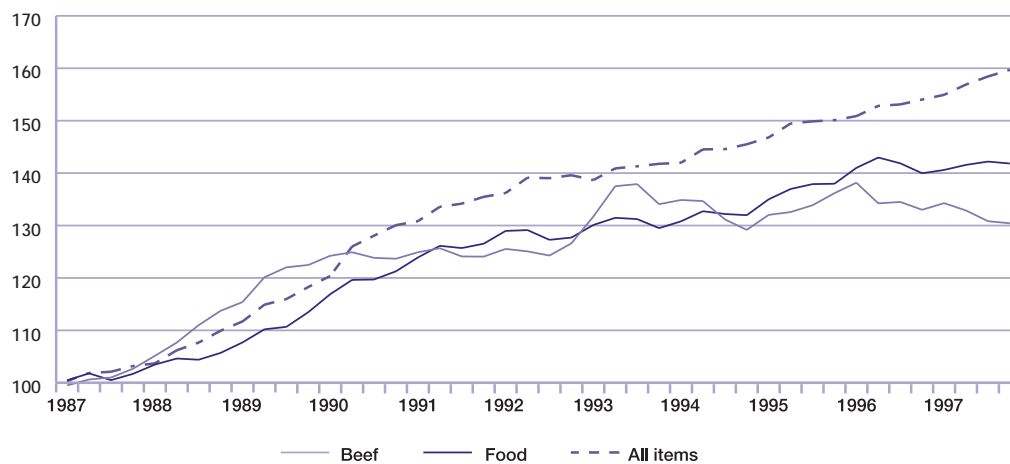
for beef, when measured in real prices rather than cash prices,¹⁷⁷ declined during the period. As Figure 4.2 below shows, beef prices, expressed in cash terms, increased more slowly than the Retail Price Index (RPI) for all items.

Figure 4.1: UK beef consumption per head, 1986–97



Source: MLC Yearbooks (M44A tab 8)

Figure 4.2: The RPI for beef, food and all items, 1987–97



Source: Office for National Statistics

This chart is based on quarterly figures and all indexes are based to 100 in January 1987.

4.8 Since the decline in demand for beef cannot be assuredly attributed, in whole or part, to BSE, neither can the relative decline in retail beef prices be credited to it. However, it does appear that we can safely conclude that the increased costs associated with BSE in the beef and cattle industry were not passed on to consumers.

4.9 Having concluded that consumers did not absorb the increased costs of production due to BSE, these costs must have been absorbed by one or more of the commercial actors in the chain of production.

¹⁷⁷ Real prices take inflation into consideration so that costs and purchasing power in different years can be compared. Cash prices are not adjusted for inflation. Thus, when looking at the price of beef, in cash terms the price rose but in real terms the price of beef was declining

Farmers

4.10 We know that farmers were largely cushioned from the direct impact of BSE – the death of cattle due to the disease – by the various compensation schemes.

4.11 However, farmers also incurred some increased costs which were not offset by compensation. Feed prices increased marginally when more expensive protein sources were used in compound feeds instead of MBM.¹⁷⁸ Farmers were no longer able to sell fallen cattle to knackers and instead either had to pay the knacker to remove the fallen cattle or incur extra labour expense in burying the animal on the farm.¹⁷⁹ We know, too, that a two-tier market emerged in which farmers whose herds had been affected by BSE sometimes obtained less than the price paid for cattle from BSE-free herds. Although none of these additional costs was substantial, all of them can be attributed to BSE.

4.12 The question then is, was the farmer able to pass these additional costs on by way of demanding a higher price for cattle in the market? As Figure 4.3 below demonstrates, the price for cattle did not even track the retail price for beef. In other words, the price that the farmer was receiving for cattle in the market declined when compared with both the overall cost of living and the price of beef in shops.

Figure 4.3a: The RPI for beef, 1987–97

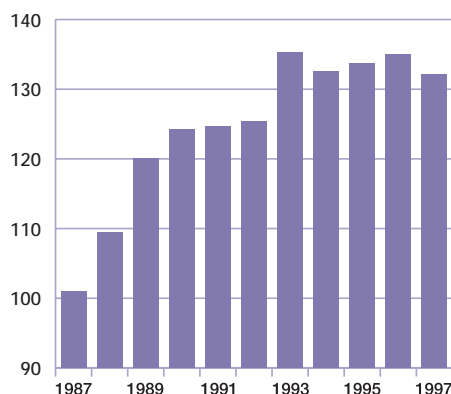
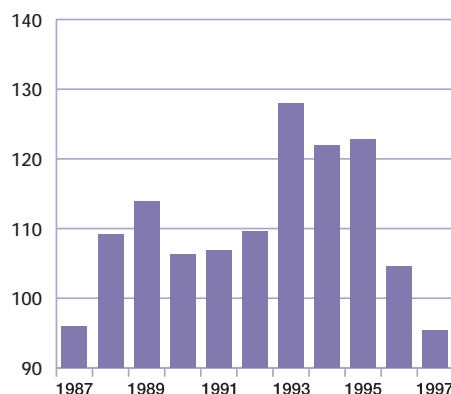


Figure 4.3b: The market price for cattle, 1987–97



Source: Office for National Statistics and MAFF (M15B tab 4 p. 39, tab 8 p. 52, tab 10 p. 65)
The retail price index for beef is based at 100 in 1987.
The market price of cattle is in pence per kilogram liveweight: all clean cattle.

4.13 What seems certain when looking at these figures is that farmers were not able to pass on their additional costs to the slaughterhouses by commanding higher prices for cattle. What is less clear is why the market price of cattle dropped relative to the Retail Price Index. This may simply be a function of the drop in demand for beef that may have been due to general market trends, or in reaction to BSE, or both. It would be expected that, even in the absence of BSE, a significant drop in the demand for beef would result in a drop in the price that farmers received for their cattle, at least until supply adjusted to demand.¹⁸⁰

4.14 The decrease in the market price of cattle may also indicate that slaughterhouses were passing their additional BSE-related costs back to farmers, by buying at lower prices, rather than absorbing the increased costs or passing them on

¹⁷⁸ T61 pp. 33–4

¹⁷⁹ S137 Rudman paras 18–19

¹⁸⁰ This ignores the Intervention Buying mechanism of the EU. There was no intervention buying during the period in question although it may have had a psychological impact on the cattle market

to consumers. To the extent that the price of cattle failed to keep pace even with the Retail Price Index for beef, it would lend support to the view that at least some, if not all, of the additional BSE-related costs incurred by slaughterhouses were being passed back to the farmers.

Slaughterhouses and meat-packers

4.15 We discussed in Chapter 3 how slaughterhouses incurred certain quantifiable additional costs when the SBO ban was introduced, as a result of the special handling required for SBO materials. They also incurred certain quantifiable losses through having to pay, after the introduction of the ban, for the disposal of certain waste by-products that they had previously been able to sell to renderers, head boners and MRM producers. These additional expenses were clearly attributable to BSE.

4.16 It is also clear that slaughterhouses would have felt the impact of the decline in demand for beef. Since the fixed costs of slaughterhouses are high relative to their unit costs, a decline in volume of throughput would have had a significant impact, and probably accelerated the ongoing trend towards consolidation in the industry. However, for reasons previously discussed, it is less than obvious that the decline in demand for beef can necessarily be attributed to BSE.

4.17 Since, in cash terms, the price of cattle was rising more slowly than the retail price of beef, it would appear that the slaughterhouses were able to pass back to the farmers some, if not all, of the costs that they incurred in responding to BSE, by buying at lower prices.

Renderers

4.18 BSE had a dramatic impact on renderers. The SBO bans affected their operations and costs by separating their processes into SBO and non-SBO batching. The various feed bans incrementally reduced and, ultimately, virtually eliminated their MBM product line, which they had been selling to feedmills.

4.19 It appears, however, that to a large extent this industry was able to reinvent itself. Before BSE, renderers would purchase otherwise unusable slaughter by-products from slaughterhouses, head boners, knackers and butchers, and would produce and sell tallow and MBM. Ten years on they had become waste disposal firms that charged slaughterhouses and knackers for removing animal wastes from their premises, while retaining their market for tallow.

4.20 It thus appears that, transitional costs aside, renderers were able to transfer their increased running costs and the losses which they suffered from the elimination of their MBM product line to slaughterhouses and other generators of animal waste.

Businesses which were severely affected

4.21 Knackers were less able to adapt to the changes which occurred after the SBO bans. As with slaughterhouses, much of what knackers had formerly sold to renderers or kennels they now had to pay to have removed from their premises. Although it appears that they attempted to pass these increased costs and losses back to farmers, they were largely unsuccessful in doing so. Many farmers turned to alternative disposal methods such as on-farm burial.¹⁸¹

4.22 With the introduction of the human SBO ban in 1989, head boners were put in a difficult position. They were paying slaughterhouses for heads and, in a labour-intensive operation, removing low-value meat scraps and then having to pay renderers to take away the useless remainder. BSE also seems to have affected the demand for the meat that they produced.

4.23 The reduction in demand for head meat and the increase in slaughterhouses performing their own head-boning had a detrimental impact on the business of specialist head-boning plants, and this was made worse by the further restrictions introduced in 1995.

Businesses which were largely unaffected

4.24 There were a number of businesses that had some connection with the beef and cattle industry but which the BSE epidemic affected little or not at all.

4.25 The pet food industry was already using very little in the way of beef products. Very early on it switched to alternative protein sources with no significant impact on its processing costs.

4.26 Both the medical and cosmetics industries had been using small amounts of beef by-products in their own products. They switched to foreign suppliers. This change of source for these commodities resulted in no appreciable increased costs.¹⁸²

4.27 After the imposition of the ruminant feed ban, feedmills and compounders could no longer market feed containing MBM. However, before the ban was imposed they were given some opportunity to run down their inventory, and they were able to incorporate their remaining stocks into feed for non-ruminants.

4.28 It also appears that feedmills were able to pass on the additional costs to farmers when they were required to switch from MBM to alternative concentrated protein sources.

Businesses which benefited

4.29 There may have been some sectors and parts of the economy that actually benefited from the BSE epidemic.¹⁸³ There is evidence of growing demand for poultry and to a lesser extent pigmeat over the period 1986–96. In so far as this demand was boosted by a fall in demand for beef brought about by BSE consumer concerns, then there will have been a positive substitution effect in these sectors – particularly for farmers. However, we are unable to quantify to what extent there were any substitution effects in other related sectors and businesses.

4.30 The growth in additional requirements for quality systems and inspection may have led to some positive economic benefits among firms supplying such services. However, we are unable to quantify these effects.

Summary

4.31 It would appear that the main effect of BSE during this period was to accelerate existing trends. The demand for beef had been declining throughout the developed world. BSE may have contributed to the rate of decline but it certainly did not cause it.

4.32 Long before BSE emerged, there was overcapacity in the slaughtering and rendering industries, and rationalisation and consolidation was overdue. The emergence of BSE may have brought forward the date but the changes in these industries cannot fairly be attributed to BSE.

4.33 The heightened inspection and health standards which were introduced in this period in the UK may, at first blush, seem attributable to BSE. But here, too, long-term trends towards improvements in meat hygiene practices meant that most of these heightened standards (and their associated administrative costs) would eventually have been introduced even in the absence of the disease.

4.34 In summary, the economic impact of BSE during the period to 20 March 1996 was not insignificant. There were real costs associated with it, especially for farmers and slaughterhouse-related industries, but these were minor in relation to the economy of the UK as a whole and each of the industry sectors. The taxpayer, through additional public expenditure costs of £288 million (in cash terms), faced perhaps the most significant economic cost of BSE over this period. Otherwise, BSE accelerated rather than caused the changes in the beef and cattle industries. The real crunch for this economic sector came after 20 March 1996, which is beyond the Inquiry's terms of reference.

¹⁸³ See DTZ Piedad Consulting report, M11 tab 2 Section 6 p. 15 for a discussion of substitution effects

5. The framework for the export of cattle, beef and cattle-derived products

Introduction

5.1 In the remainder of this volume we consider the impact of BSE on the export from the UK of products falling within the following categories:

- i. live cattle;
- ii. beef;
- iii. bovine semen and embryos;
- iv. MBM and feedstuffs containing MBM;
- v. tallow and gelatine, as products potentially derived in whole or in part from bovine by-products; and
- vi. medicines and cosmetics potentially containing products of bovine origin.

These categories are dealt with in Chapters 6 and 7; in this chapter we give an overview of the volume of relevant UK exports, the regulation of exports under UK law, EU law and international obligations.

Volume of relevant UK exports

5.2 Trade is vitally important to the UK economy. Between 1986 and 1996, exports of goods and services constituted between 20 and 30 per cent of UK Gross Domestic Product (GDP).¹⁸⁴ Beef and veal exports,¹⁸⁵ as a proportion of GDP, never rose above 0.1 per cent in the period.¹⁸⁶

5.3 Between 1986 and 1996, UK beef and live cattle exports more than doubled in value, reaching £720 million at their peak in 1995, as shown in Figure 5.1 below.¹⁸⁷ However, the overall volume of exports in that period increased by less than 70 per cent (Figure 5.2).

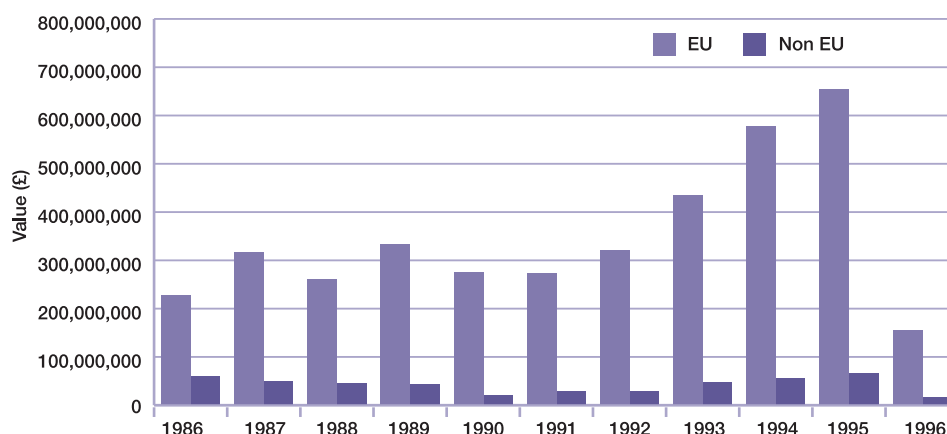
¹⁸⁴ M11F tab 17

¹⁸⁵ When discussing export figures, this volume classifies beef and veal together, because the trade statistics do not differentiate between the two meats

¹⁸⁶ M11F tabs 8 and 10 and M11F tab 17

¹⁸⁷ M11F tab 10

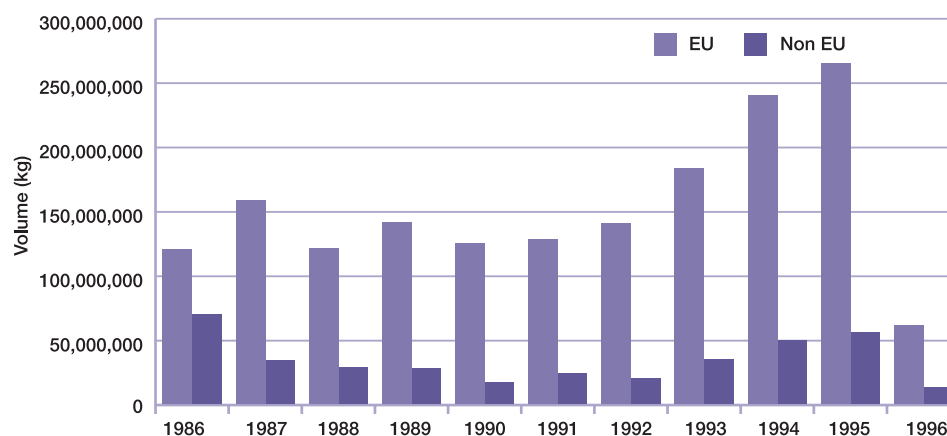
Figure 5.1: UK beef and live cattle exports, 1986–96, by value



Source: HM Customs and Excise (M11G tab 5)

Note: This graph represents the total exports of live cattle, bone-in beef and bone-out beef, prepared or preserved meat of bovine origin and edible offal of bovine origin

Figure 5.2: UK beef and live cattle exports, 1986–96, by volume



Source: HM Customs and Excise (M11G tab 5)

Note: This graph represents the total exports of live cattle, bone-in beef and bone-out beef, prepared or preserved meat of bovine origin and edible offal of bovine origin

5.4 Between 1986 and 1996, total slaughter of UK cattle decreased slightly,¹⁸⁸ but domestic consumption of beef and veal also fell for a variety of reasons that are discussed in detail in Chapter 3.¹⁸⁹ New markets for UK beef were found abroad.

5.5 The proportion of UK beef and live cattle exported to the European Union fluctuated between about 80 and over 90 per cent, by value, of the total. Beef and live cattle exported to France made up about half of the value of all beef and live cattle exports, and there were also substantial exports to the Netherlands.

5.6 On 27 March 1996 the European Commission prohibited all UK exports of beef and cattle, and their by-products, to all other EU Member States and the rest of the world.¹⁹⁰ What had become a beef export market worth almost £600 million per year collapsed, leading to severe economic difficulties for those dependent on it.

¹⁸⁸ IBD5 tab 17 p. 3

¹⁸⁹ Table 3.1 illustrates the decline in beef and veal consumption in the UK

¹⁹⁰ Commission Decision 96/239/EC OJ No L 78/48 of 28.3.96 (L4 tab 7)

Regulation of exports under UK law

5.7 Exports are legally controlled by the terms of the Import, Export and Customs Powers (Defence) Act 1939, as amended by the Import and Export Act 1990. Under these Acts, the Department of Trade and Industry (DTI) has broad powers to prohibit or regulate, or exempt from regulation, the export from the UK of any types of goods.

The European Union

The framework for exports to the EU

5.8 The Treaty of Rome, establishing the European Economic Community (EEC), provided for the establishment of a Common Agricultural Policy among the Member States (the CAP).¹⁹¹ A fundamental feature of the CAP was the free movement of animals and agricultural products within the Community. In order to achieve this, differences in the health requirements of Member States which hindered intra-Community trade needed to be eliminated, and this was done progressively for different commodities. By 1986 the CAP included live cattle, beef, and bovine semen and embryos. Products not covered by the CAP were animal feed, MBM, tallow (and products containing tallow) and gelatine (and products containing gelatine).

5.9 Among the first acts of the Community was the adoption of Directives providing for common health standards throughout the Community for animals and meat intended for export to other Member States.¹⁹² Relevant Directives sought to ensure that these products would not be a source of contagious disease. Meat for export was required to come from officially approved slaughterhouses satisfying certain conditions.

5.10 These Directives were amended on a number of occasions to strengthen the provisions governing intra-Community trade. Directives were adopted in 1972¹⁹³ authorising a Member State, 'where there is an outbreak of an epizootic disease' in another Member State, to prohibit temporarily the introduction of animals or meat from that Member State. These Directives enabled the European Commission to adopt measures to ensure coordination of action among Member States. They were in force on 1 January 1973, when the UK's accession to the European Community took effect. In 1982 Member States were required to notify the Commission within 24 hours of the outbreak in its territory of certain animal diseases.¹⁹⁴ In 1983 Community control measures were introduced to ensure that common health standards were uniformly applied in all Member States.¹⁹⁵

5.11 Following the introduction of the Single European Act in 1987,¹⁹⁶ Directives were adopted 'with a view to the completion of the internal market' in animals and

¹⁹¹ The objectives of the CAP are increasing agricultural productivity, market stability, assurance of supplies and ensuring that the supplies reach customers at reasonable prices (Article 39)

¹⁹² Council Directives 64/432/EEC OJ No L 011 p. 1977 (L18 tab 6) and Council Directive 64/433/EEC OJ No L 121 29.7.1964 p. 2012 (L18 tab 13)

¹⁹³ Council Directives 72/461/EEC OJ No L 302 31.12.72 pp. 24–7 (L18 tab 10) and Council Directive 72/462/EEC OJ No L 302 21.12.72 pp. 24

¹⁹⁴ Council Directive 82/894/EEC (L18 tab 15)

¹⁹⁵ Council Directive 83/90/EEC OJ No L 59.3.83 p. 10

animal products.¹⁹⁷ Their ultimate aim was to ensure that veterinary checks should be carried out at the place of dispatch only and not at the Community's internal borders. This involved strengthening the regime for checking animals and livestock products at the place of dispatch, and making provision for protective measures to be taken promptly by the Member State of dispatch and, if necessary, the Commission to deal with outbreaks of disease threatening animal or human health. Responsibility was placed on Member States to ensure that animals and products intended for intra-Community trade conformed to Community rules. Each Member State was required to notify other Member States and the Commission of any outbreak in its territory of an epizootic disease or a contagious or infectious animal disease likely to constitute a serious hazard to animals or human health, and to implement any control or precautionary measures provided for in Community rules. In all such cases the Commission was required to act quickly, making on-the-spot visits and, in cooperation with the Standing Veterinary Committee (see below), reviewing the situation and adopting any measures considered necessary in addition to those already taken by the Member State concerned. It is under these powers that the various measures were adopted by the Commission restricting and ultimately banning the export of cattle and meat from the UK on account of BSE.¹⁹⁸

5.12 Thus, in relation to particular categories of product, export to the EU was governed by Community legislation as follows:

- i. **Live cattle:** Council Directive 64/432/EEC of 26 June 1964 set down the health requirements for intra-Community trade in bovine animals for breeding, production or slaughter. The Directive required that all bovine animals intended for export 'show no sign of clinical disease on the day of loading'. Further, it required that the animal intended for export come from a holding within an area in which there had been no incidence of specified disease in swine or bovine animals within the 30 days prior to loading. The Directive also described the requirements for transport of animals between states and required that animals be segregated into 'animals for breeding or production and animals for slaughter'.¹⁹⁹
- ii. **Beef:** Council Directive 64/433/EEC was introduced to standardise the health requirements relating to the production of meat in slaughterhouses and during storage and transportation.²⁰⁰ The specific requirements for veterinary certification of fresh meat exports to EU countries were contained in the Fresh Meat Export (Hygiene and Inspection) Regulations 1981. These Regulations required that meat for export be examined and passed as fit for human consumption in accordance with the criteria they set out. The requirements for export certification were different from, and more onerous than, the requirements for domestic production. Both domestic and export Regulations are discussed in detail in vol. 14: *Responsibilities for Human and Animal Health*.
- iii. **Bovine embryos and semen:** Council Directive 88/407/EEC of 14 June 1988 laid down the animal health requirements applicable to intra-Community trade in deep-frozen semen from domestic bovine animals. The Directive laid down

¹⁹⁶ This required the Community to adopt measures with the aim of establishing the internal market by 31 December 1992. The internal market is defined as 'an area without internal frontiers in which the free movement of goods, persons, services and capital is ensured in accordance with the provisions of this Treaty'

¹⁹⁷ Council Directives 89/662/EEC OJ No L 395 of 30.12.89 p. 13 (L18 tab 11) and Council Directive 90/425/EEC

¹⁹⁸ With the exception of Commission Decisions 89/469/EEC and 90/59, which were adopted by the Commission under the more limited powers then available under Council Directive 64/432 as amended

¹⁹⁹ L18 tab 6

²⁰⁰ L18 tab 13

standards for the health of the donor animals and for the means of collection and processing of all semen intended for export. Similarly, Council Directive 89/556/EEC of 25 September 1989 defined the animal health conditions governing intra-Community trade in fresh and frozen bovine embryos.

- iv. **MBM and feedstuffs containing MBM:** At the time of the emergence of BSE there were no specific standards of production which had to be met in order to export MBM to other Member States. The domestic standards for the production of MBM are discussed in vol. 14: *Responsibilities for Human and Animal Health*.

Domestic production and sale of animal feed was regulated under the Agriculture Act 1970. Part IV of the Act dealt with the composition and description of finished feed compounds for sale in the UK. The Act incorporated the requirements laid down in Council Directive 70/524/EEC concerning the use of 'additives' in feedstuffs (and amendments to that legislation introduced over time). As a result, there were no additional requirements which needed to be met for the export of compound feed to other EU countries.

UK Permanent Representation to the European Union

5.13 The UK Permanent Representation to the European Union (UKRep) played a significant role in the export issues that arose with the emergence of BSE. The Permanent Representative is the UK's ambassador to the EU and serves on the Committee of Permanent Representatives (COREPER – see below).

5.14 The Permanent Representative is always a senior government official from the Foreign and Commonwealth Office. He or she heads an office comprising officials from a range of Government Departments specialising in different policy areas.

5.15 A senior official from MAFF has the role of Agriculture 'Minister' and sits on the Special Committee on Agriculture (SCA). The SCA handles proposals made within the framework of the CAP, namely policy on the organisation and management of agricultural markets.

5.16 It is, however, the Deputy Permanent Representative who represents the Government on the Committee, called COREPER I, which discusses animal health matters and the harmonisation of agriculture legislation.

5.17 Staff in UKRep report to the Permanent Representative but are in active communication with officials in their Whitehall Departments.

Organisational structure and decision-making

5.18 Although the functions of the EU are carried out by five bodies (the European Parliament, the Council of the European Union, the Commission, the Court of Justice and the Court of Auditors), only the Commission and the Council, and

certain of their advisory committees, had a significant direct bearing on the EU's interactions with the UK about BSE.²⁰¹

The European Commission

5.19 The European Commission is the executive arm of the European Union and, as such, has responsibility for ensuring that the provisions of the EC Treaty and measures taken pursuant to it are applied. It also has the power to take enforcement proceedings against Member States in the Court of Justice. Further, the Commission has the sole right to initiate legislative proposals for consideration by the Council and Parliament.

5.20 Although the Commissioners are nominated by their respective national governments, they are required to act in the general interests of the Union and are not to take instructions from their national government.²⁰² Each Commissioner holds a portfolio for a particular area, much like a member of the UK Cabinet.²⁰³

5.21 Extensive powers have been conferred on the Commission by the Council to take decisions providing for the detailed implementation of legislation adopted by the Council.²⁰⁴ Many of the measures taken in response to BSE were adopted in this fashion.

The Council and the Committee of Permanent Representatives

5.22 The Council of the European Union is the principal legislative and decision-making body of the EU. It adopts legislation on the basis of proposals submitted to it by the Commission.²⁰⁵ It is made up of ministerial representatives of the Governments of Member States who have the authority to bind their own Government. The composition of the Council varies according to the business under discussion. Thus, for example, the UK Agriculture Minister represents the UK Government in Council meetings at which agricultural issues are under consideration. These Council meetings are called The European Community Council of Agriculture Ministers (the Agriculture Council). As now, it was expected during 1989–96 that Council members would act on behalf of their own Government's interests and members would be subject to instructions from their respective Governments.

5.23 The Council is assisted in its work by a Committee of Permanent Representatives (COREPER), which consists of the Member States' Permanent Representatives to the European Union. This committee was responsible for preparing the work of the Council and carrying out tasks assigned to it by the Council. A proposal on which COREPER is able to reach full agreement normally comes before the Council for formal approval only.

²⁰¹ The European Parliament exercises only limited powers. Its most important powers include the right to be consulted on all legislation and the right to accept or reject the EU budget

²⁰² Damian Chalmers, *European Union Law*, Volume One, Dartmouth Pub., Aldershot, 1988, p. 88

²⁰³ Damian Chalmers, *European Union Law*, Volume One, Dartmouth Pub., Aldershot, 1988, p. 87

²⁰⁴ Article 145 and 155 of the EC Treaty

²⁰⁵ Depending on the nature of the legislative proposal, decisions may be taken by simple majority, qualified majority or by a unanimous vote

Standing Veterinary Committee

5.24 The Standing Veterinary Committee (SVC) comprised representatives from each of the Member States. These representatives are typically senior civil service staff members from the Agriculture Department of their home country. The actual representative at a given meeting varies depending on the topic under discussion and/or the relative importance of the issues involved. As in the case of the Council, it is expected that the SVC representatives will express the views of their individual Governments.

5.25 The SVC has an important role in exercising the Commission's powers to deal with outbreaks of animal diseases that pose a threat to animal and human health.²⁰⁶ From 11 December 1989 the procedure was:

- i. the Commission would submit a draft of a proposed measure to the SVC;
- ii. the SVC would deliver an opinion on the draft. Qualified majority voting would apply for the purpose of deciding on the opinion;
- iii. if the opinion was in favour of the proposed measure, the Commission would adopt it;
- iv. if the opinion was unfavourable, or no opinion was delivered, the Commission would submit its proposed measure to the Council;
- v. the Council, acting by qualified majority voting, might then adopt the proposed measure;
- vi. if the Council did not adopt the proposed measure within three months, the Commission might then adopt it, unless in the meantime the Council had rejected the proposed measure by a simple majority;
- vii. the same procedure applied for the adoption of interim protection measures except that if the proposed measure had to be referred to the Council, the period for it to act was 15 days instead of three months.²⁰⁷

Scientific Veterinary Committee

5.26 The Scientific Veterinary Committee (ScVC) is an independent committee established by Commission Decision 81/651/EEC. Its function is to advise the Commission and the Standing Veterinary Committee on all scientific and technical problems concerning animal health, veterinary public health and animal welfare. It can also draw the attention of the Commission to any animal health, veterinary public health and animal welfare problems. Members of the ScVC are nominated by the Commission from highly qualified scientists specialising in the area covered by the Committee. In practice, the Commission invites Member States to nominate suitable representatives.

5.27 British scientists who attended the ScVC varied during 1989–96. They included Dr Richard Kimberlin, an independent TSE consultant, and Mr Raymond Bradley, the head of the Pathology Department at the Central Veterinary Laboratory.

²⁰⁶ Council Decision 68/361/EEC

²⁰⁷ Council Directive 89/662/EEC, Article 18, OJ No L 395/13 of 13.12.89 (L18 tab 11)

5.28 Working groups or subcommittees of the ScVC were formed from time to time in order to address specific issues. In 1990 Mr Bradley was invited by the European Commission to chair a BSE 'Sub-Group' of the ScVC in order to update the Committee on the relevant scientific developments.

International obligations

5.29 The rules of international trade are established by a number of mechanisms including custom, the agreement of the parties, commercial associations, national law, bilateral agreements between countries and multinational agreements. To a greater or lesser extent, each of these mechanisms gives rise to legally enforceable rights and obligations.

5.30 What should be noted here, however, is that by default, international law places the burden on the importing country to prohibit or regulate the importation of particular goods. There is no general international regime which dictates which goods may or may not be traded. When there has been an attempt to regulate or prohibit international trade in a particular commodity, it has been done in a piecemeal fashion. Examples of this approach include the regulation of the trade in fissionable material,²⁰⁸ narcotics²⁰⁹ and endangered species.²¹⁰ No international treaty was specifically directed to trade in MBM, animal feed, cattle or cattle-derived products.

²⁰⁸ Treaty on the Non-Proliferation of Nuclear Weapons: see C Grossman, 'Supervision within the International Atomic Energy Agency' in P van Dijk, Ed., *Supervisory Mechanisms in International Organisations*, TMC Asser Instituut, the Hague, 1984

²⁰⁹ See S K Chatterjee, *Legal Aspects of International Drug Control*, Martinus Nijhoff Pub., The Hague, 1981

²¹⁰ See David Favre, *International Trade in Endangered Species*, Martinus Nijhoff Pub., Dordrecht, 1989

6. The export of live cattle, beef, and bovine semen and embryos

6.1 In this chapter we will examine the impact of BSE on the export from the UK of live cattle, beef and other cattle-related products.

Live cattle

Exports to EU Member States

6.2 In January 1988 the British Embassy in Portugal reported to MAFF that it had learned of the reluctance on the part of at least one local farmer to purchase British dairy cattle because of fears about BSE.²¹¹ Later, in July 1988, the Dutch delegation to the Standing Veterinary Committee expressed concern about importing cattle from Great Britain. The British delegation offered an assurance that the UK would not export to the Netherlands any bovine animal from a herd in which BSE had been officially confirmed.²¹² This led to the establishment of a bilateral agreement intended to ensure that no animals from herds in which BSE had been confirmed were exported from the UK to the Netherlands. Similar arrangements were later introduced for exports to Germany, the Republic of Ireland and Denmark.

6.3 The first EU legislation passed directly in response to BSE was Commission Decision 89/469/EEC.²¹³ It was agreed at a meeting of the SVC on 18 and 19 July 1989 and adopted on 28 July. The Decision banned the export from the UK of live cattle born before 18 July 1988²¹⁴ or born to dams in which BSE was suspected or officially confirmed. In reporting the Decision to Ministers, Mr Alan Lawrence of MAFF's Animal Health Division said:

This is a more satisfactory outcome than might have been; on the second day [of the SVC meeting] a number of Member States seemed inclined towards a ban on cattle from herds in which BSE has occurred which, incidentally, four Member States (Germany, Netherlands, ROI and Denmark) currently require under bilateral arrangements. However, the UK, with support from the Commission, managed to persuade them that there was no veterinary logic in this approach.²¹⁵

One other potentially serious problem emerged. The Minister's announcement about a ban on the use of specific bovine offal has clearly had a major impact on the Community's interest in BSE. This being so, a number

²¹¹ YB88/1.7/2.1

²¹² YB88/7.29/9.1–9.2

²¹³ Commission Decision 89/469/EEC Article 1 (L18 tab 14)

²¹⁴ The date of the imposition of the ruminant feed ban. Since it was believed that the vector for the disease was ruminant-based cattle feed, cattle born after the date of the ban were expected to be free of the disease

²¹⁵ YB89/07.20/7.1

of Member States, including Germany, indicated that if we go ahead as planned they will take action to avoid ‘political problems’. The difficulty is to avoid this. Live cattle will continue to be exported from the UK under the new Commission decision. When these animals are slaughtered in other Member States the offals *will* be available for human consumption, unlike in the UK where such material is banned. Thus the Community reaction could be to stop *all* cattle exports from this country . . .²¹⁶

6.4 Responding to this concern in October 1989 Mr John Cowan, Head of the Beef Division in MAFF, provided a briefing to Mr David Curry, the Parliamentary Secretary, assessing the consequences for the UK beef and dairy industries of a total ban on the export of live cattle from the UK.²¹⁷ The briefing noted that there was likely to be a difficulty in identifying animals originating in the UK which were slaughtered at abattoirs in mainland Europe. Given the perceived risk from the offal of such livestock, it was thought that the EU might prohibit all UK exports of live cattle and calves.

6.5 The briefing identified three categories of UK exports which would be affected by such a prohibition: live cattle for slaughter, breeding cattle and calves. In each case, Mr Cowan’s paper argued that ‘the broad thrust’ of the effect on UK exports would be to divert livestock exports to the UK market, thereby increasing supply and tending to depress prices for calves, cattle and meat.

6.6 In the case of the export of live cattle for slaughter, the paper concluded that the economic impact of an export ban on the industry as a whole would be small. In 1988 approximately 10,000 head of cattle – more than twice the number in each of the previous two years – had been exported at a value of £5 million. The paper concluded that this was ‘equivalent to some 3,000 tonnes of beef, which could easily be absorbed on the home market’.

6.7 Similarly, exports of purebred breeding cattle were approximately 7,000 head in 1988, with a value of £5.5 million. Exports to third countries (ie, outside the EU) accounted for £1 million of the total. The paper concluded:

While it is possible that the third country trade could continue, or possibly expand, it seems certain that UK prices for pure-bred cattle would fall. The impact would be borne by a small number of specialist breeders and UK buyers would benefit from cheaper breeding stock and the economic impact on the industry as a whole would be small.

6.8 The impact of a ban on the export of calves was considered to be far more substantial, with an overall decrease of returns to producers of about £120 million. The greatest projected losses were forecast for the dairy and suckler herds.²¹⁸ It was estimated that dairy enterprises would suffer a loss in the region of £68 million, and the suckler herds approximately £35 million. However, in proportionate terms the loss to the dairy sector would be less significant, representing only 3–4 per cent of gross profit margin per cow, and it was suggested that in practice this would probably be more than offset by expected growth in returns from milk sales. By

²¹⁶ YB89/7.20/7.2

²¹⁷ YB89/10.17/1.1–1.6

²¹⁸ For a description of suckler and dairy herds, see vol. 12: *Livestock Farming*

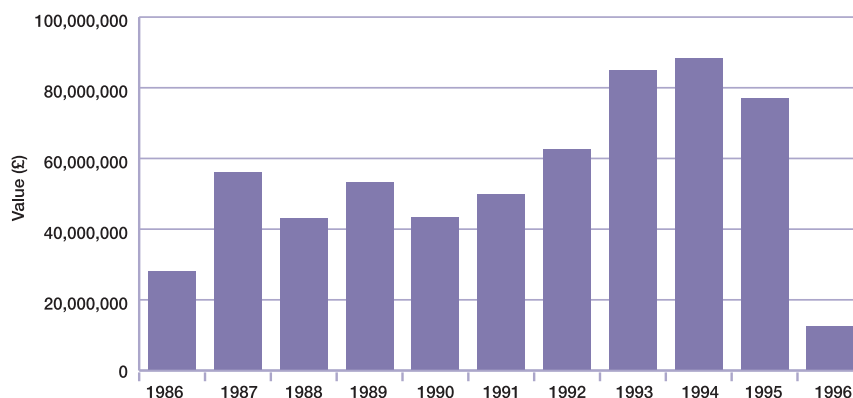
contrast, suckler cow producers were expected to experience a reduction of 10–15 per cent in gross margins.²¹⁹

6.9 In the event a total ban on the export of cattle from the UK was not imposed by the EU until after March 1996. However, the scope of the ban introduced in July 1989 was increased as a result of the adoption on 7 February 1990 of Decision 90/59/EEC,²²⁰ amending Decision 89/469/EEC.²²¹ The Decision banned the export of ‘live cattle other than those aged under 6 months and bearing a special mark’ and ‘live cattle born to females in which bovine spongiform encephalopathy is suspected or is officially confirmed’.²²² It also required that the importing Member State ensure that all imported animals were slaughtered before reaching the age of six months. This Decision came into force on 1 March 1990.

6.10 Decision 90/59/EEC does not appear to have had any significant overall impact on exports of live cattle from the UK after its introduction in March 1990. As MAFF noted in a press release, had the same Decision been in place in 1988, when the UK exported 266,000 live cattle, 94 per cent (249,000) would have met the new, under-six-month, export criterion.²²³ In large part this was due to the fact that the vast majority of the live cattle exports were young calves destined for veal production in the Netherlands and France.²²⁴ However, the requirement that importing Member States ensure that all imported animals were slaughtered before reaching the age of six months will have ended the export to the EU of UK cattle for breeding.

6.11 Overall, however, the impact of EU action to restrict the export of cattle from the UK appears to have been limited in the period up to March 1996. Figure 6.1 below shows that the value of live cattle exports to EU countries actually rose pretty steadily between 1988 and 1995.

Figure 6.1: Exports of live cattle to the EU, 1986–96



Source: HM Customs and Excise (M11G tab 5)

²¹⁹ YB89/10.17/1.1–1.6

²²⁰ Commission Decision 90/59/EEC OJ L 41/23 of 15.2.90 (L18 tab 12)

²²¹ The preamble to the legislation explains why the Commission rather than the Council acted: ‘Whereas the measures provided for in this Decision are not in accordance with the opinion of the Standing Veterinary Committee; whereas the Commission has therefore proposed these measures to Council on 22 January in accordance with Article 13 of Directive 64/432/EEC the Council being required to adopt measures within 15 days; whereas however the Council has not acted within the required time limit; whereas the Council has not decided against the proposed measures by simple majority within the same time limits; whereas these measures should now be adopted by the Commission, HAS ADOPTED THIS DECISION’

²²² Commission Decision 90/59/EEC OJ L 41/23 of 15.2.90, Article 1 (L18 tab 12)

²²³ YB90/01.24/11.2

²²⁴ YB89/10.17/1.3

Exports to non-EU countries

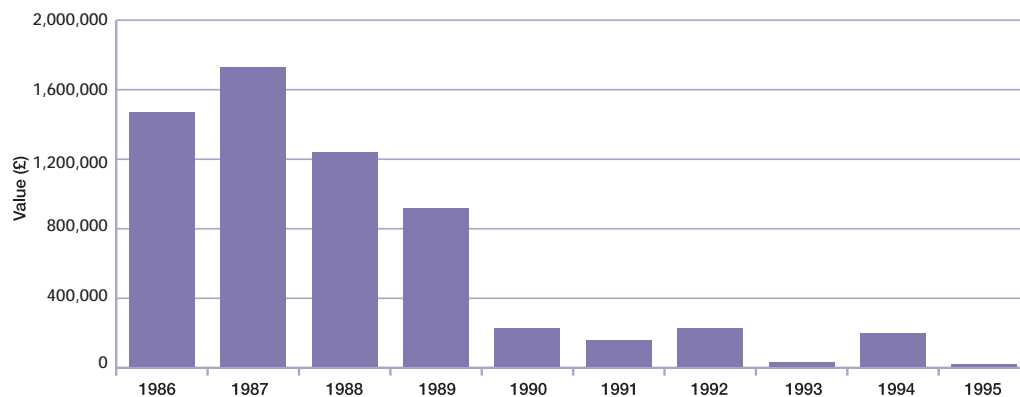
6.12 Israel was the first country to take action, in the light of BSE, to prevent imports from the UK. Ministers were informed in June 1988 that:

[Israel has] stopped imports of live cattle from this country. Unfortunately they have also stopped imports from other Member States, on the basis that cattle can move from here to the rest of the Community. This may trigger possible Community discussion on the subject. In addition the Australian and Northern Irish authorities are showing some concern about trade in cattle and the Netherlands on the export of meat and bone meal.²²⁵

6.13 By July 1988 Australia had suspended all imports of live cattle, semen and embryos and it was reported that ‘it looked increasingly as though other countries would follow suit’.²²⁶ In July 1989 Sir Richard Southwood was informed that New Zealand, Sweden and the USA had joined Israel and Australia in imposing a ban on all imports from the UK of live cattle. In addition, Japan, Morocco, Canada and South Africa had all introduced requirements that live cattle imported from the UK be from herds certified as free of BSE.²²⁷

6.14 The overall impact of the closure of these export markets for live cattle was small. In 1986, 1987 and 1988 exports of live cattle to non-EU countries did not exceed 5 per cent of the total value. As the various bans on exports implemented by the countries mentioned above began to come into force, the small market for the export of cattle to non-EU countries gradually disappeared. As shown in Figure 6.2 below, the value of exports to non-EU countries was approximately £1.7 million in 1987, but had fallen to £21,000 by 1995. However, as we have noted, exports to EU countries steadily increased after 1989. Overall this increase will have more than offset the loss caused by the closure of markets further afield. The impact on those who produced breeding stock for export will nevertheless have been significant.

Figure 6.2: Exports of live cattle to non-EU countries, 1986–95



Source: HM Customs and Excise

²²⁵ YB88/6.23/2.3

²²⁶ YB88/7.14/2.1

²²⁷ YB89/7.27/4.1

Beef

Exports to EU Member States

6.15 A number of the measures introduced by the EU in response to BSE up to March 1996 were designed to restrict the export of beef from the UK. The first of these was Commission Decision 90/261/EEC.²²⁸ This Decision required that exports of bone-in beef from the UK carry additional certification that the meat in question did not come from cattle from holdings in which BSE had been confirmed within the previous two years. In addition, all bone-out (boneless) beef was required to carry certification that all ‘obvious nervous and lymphatic tissue’ had been removed.

6.16 In May 1990 the number of herds affected with BSE had risen to 7,102.²²⁹ This represented approximately 6 per cent of the total holdings of beef and dairy cattle at that time. As a consequence of Decision 90/261/EEC, none of the affected holdings was permitted to provide bone-in fresh meat for the EU export market. This would have had a significant impact on BSE-affected holdings that had previously exploited this market.

6.17 Overall it appears that Decision 90/261/EEC did have a detrimental effect on exports of UK beef to the EU. Total exports of bone-in beef and bone-out beef were significantly lower in 1990 and 1991 than they had been in 1989. However, as shown in Figure 6.3 and 6.4, exports in both categories eventually recovered so that in 1994 they were more than double their value in 1989.

6.18 On 27 July 1994 Commission Decision 94/474/EEC introduced further restrictions on UK exports of bone-in beef. It required that export bone-in beef come only from cattle certified not to have been on holdings where BSE had been confirmed in the preceding six years. For bone-out beef it required the removal of adherent tissues including obvious nervous or lymphatic tissues.²³⁰

6.19 Decision 94/474/EEC was relaxed a few months later in respect of bone-in beef. Commission Decision 94/794, adopted on 14 December 1994, provided a new exemption so as to exclude from the ban beef from cattle born after 1 January 1992. On 18 July 1995 Commission Decision 95/287 was introduced. The exemption of cattle born before 1 January 1992 was modified so that it applied to beef from cattle less than 30 months old at the time of slaughter.

6.20 By 1994 BSE had affected 28,819 farms²³¹ out of a total 112,600²³² holdings in the UK – roughly 25 per cent of UK herds. However, it appears that neither the changes in July 1994 nor those in December and the following July had any measurable impact on the volume of bone-in beef exports. As can be seen in Figure 6.3 below, bone-in beef exports to the EU in 1994 were substantially up on those in 1993 and this upward trend continued in 1995.

²²⁸ OJ L 146/29 of 9.6.90 (L18 tab 8)

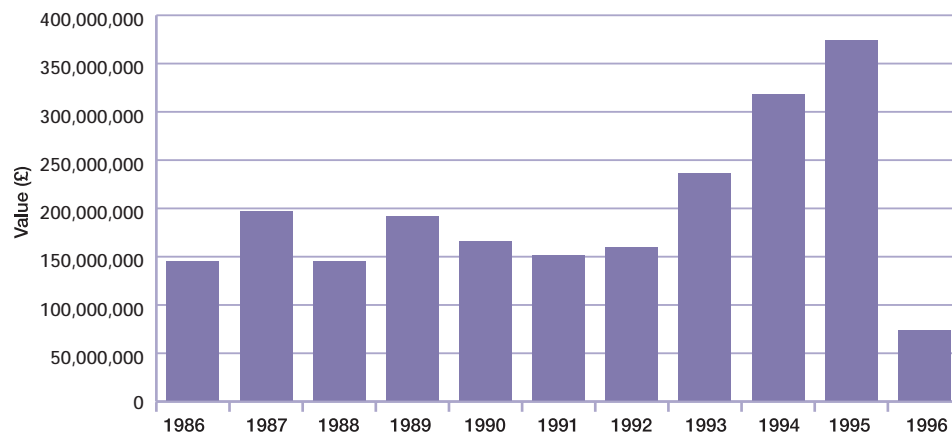
²²⁹ M28 tab 1 p. 5 (this is a contemporary figure, rather than a revised one)

²³⁰ L4A tab 3

²³¹ M28 tab 7 para. 3 (contemporary figure)

²³² M15B tab 7 p. 13

Figure 6.3: Exports of bone-in beef to the EU, 1986–96



Source: HM Customs and Excise

6.21 The other feature of Decision 94/474/EEC, which provoked substantial export concern and controversy at the time, was the requirement that all adherent tissue including that which might conceal nervous or lymphatic tissues be removed from cuts of bone-out beef. The Commission’s interpretation of this provision was that it required the removal of all external fat from the meat. Had that interpretation prevailed, the market value of the beef would have been substantially diminished.²³³ MAFF’s interpretation was that it required removing only those tissues which would prevent a Member State from checking that all obvious lymphatic tissue had been removed.²³⁴ This interpretation was communicated to State Veterinary Staff field staff and to the CVOs of Member States.²³⁵

6.22 The Commission’s interpretation might have caused problems for the beef trade, especially in relation to intervention stocks. However, no Member State insisted on the interpretation being applied and the trade in bone-less beef continued without interruption.²³⁶ The cutting procedures used in UK abattoirs and plants were specifically endorsed by the ScVC in November 1994,²³⁷ and the issue was resolved by Commission Decision 95/287/EC. This specified in detail the lymphatic tissue which had to be removed and did not require the removal of surface fat from the meat.²³⁸

6.23 Again, the new requirements governing the export of bone-out beef appear to have had no adverse impact on the level of exports. The statistics set out in Figure 6.4 show that bone-out beef exports to EU countries more than doubled in 1994, compared with 1993, and continued to rise in 1995.

²³³ YB94/8.5/3.1–3.3

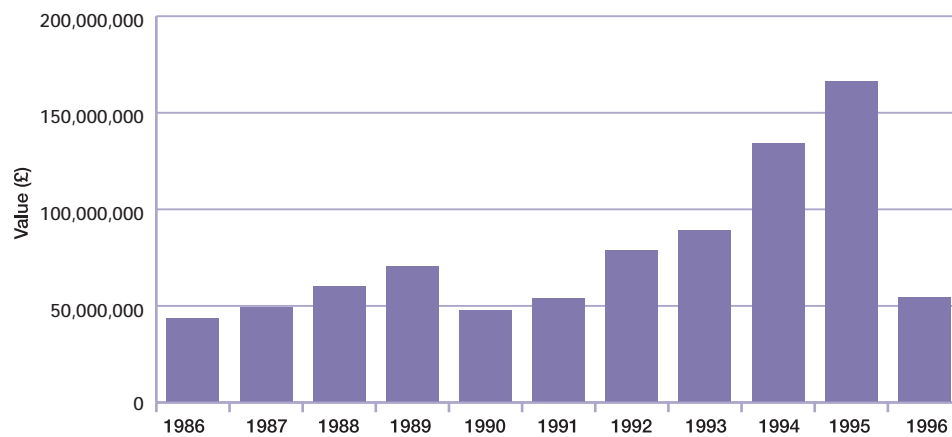
²³⁴ YB94/8.29/1.1

²³⁵ YB94/7.25/4.1–4.2

²³⁶ YB94/11.9/2.2

²³⁷ YB94/11.4/8.1–8.4

²³⁸ L4A tab 6, article 2

Figure 6.4: Exports of bone-out beef to the EU, 1986–96

Source: HM Customs and Excise

Exports to non-EU countries

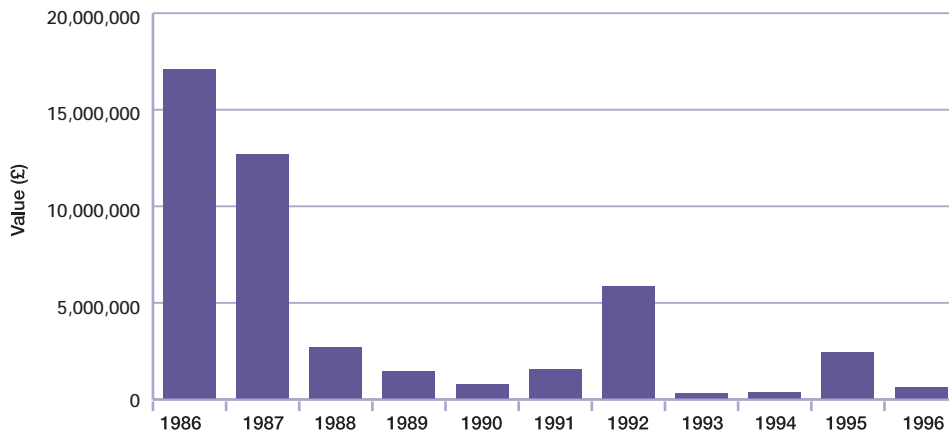
6.24 By February 1991 the following countries had imposed a ban on UK beef exports: Algeria, Bahrain, Brazil, China, Iran, Iraq, Jordan, Morocco, Saudi Arabia, Syria, Tunisia, Turkey, United Arab Emirates, the USSR, Egypt and Canada.²³⁹

6.25 Other non-EU countries imposed certification conditions on UK beef exports. Cyprus, Hong Kong and the Ivory Coast required certification that the bovine meat was not from holdings in which BSE had been confirmed in the previous three years, and that during the cutting process for bone-in beef, obvious nervous and lymphatic tissues had been removed. Austria prohibited frozen and chilled meat which was not free from bones and obvious lymph and nerve tissues. Mexico and Malta also imposed restrictions concerning nervous and lymphatic tissue, and required certification that the bovine meat was not from holdings where there had been a suspect or confirmed case of BSE.²⁴⁰

6.26 Some of the non-EU countries that had placed bans on imports began to relax the restrictions by 1993. In 1986 Brazil and Egypt had been the largest importers of bone-out beef from the UK. Such imports were banned entirely in 1991. After 1993, however, they started importing again from the UK, albeit at significantly lower levels than previously.

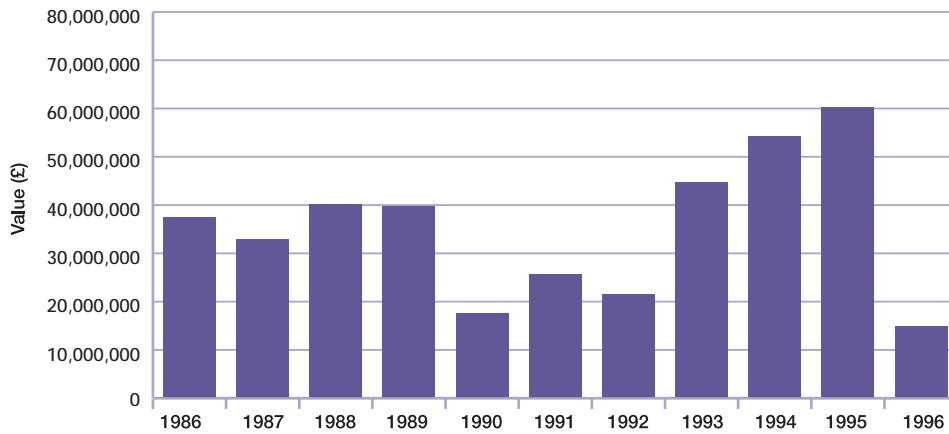
6.27 Figure 6.5 and 6.6 below show that, even before the emergence of BSE, exports of bone-in beef to non-EU countries were small. In 1987 the UK exported approximately 15,000 tonnes of bone-in beef to non-EU countries. After the emergence of BSE, this market almost entirely disappeared. The level of exports of bone-out beef to non-EU countries appears already to have been falling before the emergence of BSE. There was a considerable drop in exports between 1986 and 1987 and exports fell further in 1988, the first year in which BSE was likely to have had an impact. However, exports began to recover in 1993 and by 1995 had reached 1986 levels.

Figure 6.5: Exports of bone-in beef to non-EU countries, 1986–96



Source: HM Customs and Excise

Figure 6.6: Exports of bone-out beef to non-EU countries, 1986–96



Source: HM Customs and Excise

Bovine semen and embryos

Exports to EU Member States

6.28 The Scientific Veterinary Committee Sub-Group, chaired by Mr Raymond Bradley, met in Brussels on 17 January 1992.²⁴¹ It considered the risks from trade in certain products including semen and embryos. Given that in transmission studies to susceptible mice no detectable infectivity was found in semen from a BSE-affected bull, the Sub-Group concluded that additional guarantees were not required for trade in bovine semen as there was ‘negligible’ risk.

6.29 However, they concluded that safeguards were necessary for trade in bovine embryos. The Sub-Group’s report stated:

Maternal transmission occurs in sheep with scrapie. At the present time, and with current knowledge of BSE, we cannot be sure that maternal transmission will not occur at all. However, the epidemiological data

²⁴¹ YB92/02.17/4.1; see para. 5.29 above

suggests that it is most unlikely to occur at more than a trivial level. Taking into account the information reported for sheep embryos . . . and despite there being no evidence to positively demonstrate infectivity in bovine embryos, as a precautionary measure the recommendations below provide extra safeguards to reduce any hypothetical risks from bovine embryo transfer to a negligible level and bring embryos under the same regulations (other than age) as govern trade in live calves . . .

The risk of transmitting disease via the embryo may be slightly more than negligible. To reduce this slight risk to negligible it is recommended that trade in embryos from countries with a high annual incidence of BSE should be restricted to those derived from:

female donors born after the introduction of a prohibition on the feeding of ruminant protein to cattle and which are not the progeny of affected females.²⁴²

6.30 This led to Commission Decision 92/290/EEC of 14 May 1992 which required that the UK should not send to other Member States embryos of ‘the domestic bovine species’:

- i. derived from females in which, at the time of sending, BSE was suspected or confirmed; or
- ii. derived from females born before 18 July 1988.

6.31 In addition to the measures specifically relating to exports from the UK, the Decision likewise banned the trade between *any* Member States of bovine embryos derived from females in which, at the time of sending, BSE was suspected or confirmed.

6.32 Article 3 of the Decision required that the embryos leaving the UK must be certified as complying with the Decision. In Great Britain MAFF checked the BSE status of the female donor and her grandmother via the central database before certifying her as an eligible donor. The decision required the Government to make full use of such records to guarantee the identification of donors and embryos.²⁴³

6.33 Figure 6.7 below shows that exports of bovine semen to EU countries fluctuated quite considerably over the period for which we have records. There were no measures adopted by the EU to restrict UK exports of bovine semen before March 1996. The value of exports of bovine semen grew steadily between 1986 and 1990 before falling to negligible levels in 1993. However, the level of exports in 1994 and 1995 was considerably higher than at any time between 1986 and 1996.

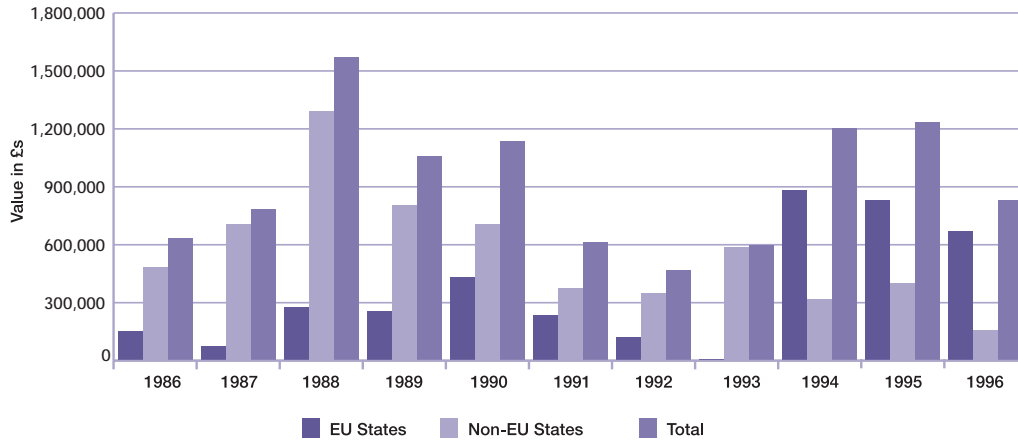
6.34 The Inquiry has been unable to obtain figures for exports of bovine embryos in the years prior to 1993. This is because before then export data on bovine embryos were recorded as ‘Animal products not elsewhere specified’. It was only in 1993 that embryos received their own commodity classification for the purposes of HM Customs and Excise records.

²⁴² YB 92.01.17/6.1–18

²⁴³ L18 tab 22. See vol. 2: *Science* for discussion on the Embryo Transfer experiment and infectivity of embryos from BSE-affected cows

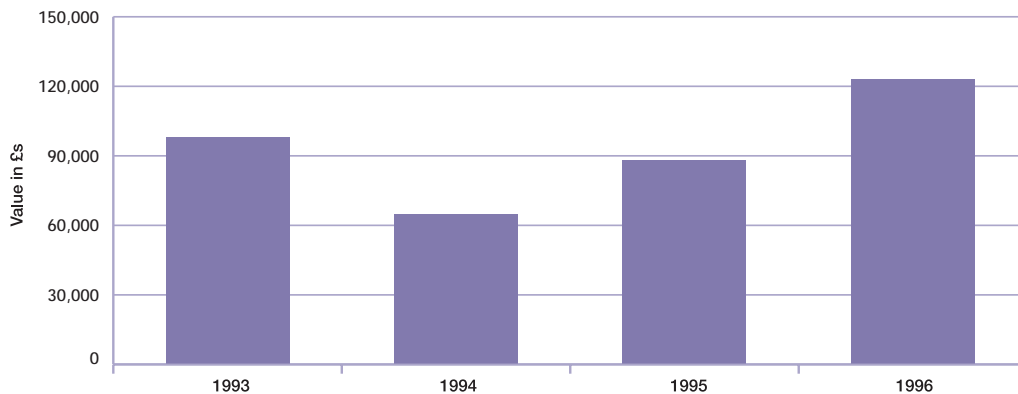
6.35 The statistics that we do have for bovine embryos indicate that there were no particularly significant exports to EU Member States in the years 1993–96. Figure 6.8 below shows the total exports of embryos during that period.

Figure 6.7: Bovine semen exports, 1986–96



Source: HM Customs and Excise (M11G tab 4)

Figure 6.8: Bovine embryo exports, 1993–96



Source: HM Customs and Excise (M11G tab 3)

Exports to non-EU countries

6.36 As we have seen, Australia had suspended all imports of live cattle, semen and embryos by July 1988. By July 1989 a similar embargo had been introduced by New Zealand. The United States had introduced a requirement that all bovine semen and embryos imported from the UK should come from BSE-free herds and that the dam and sire of the donor should not be confirmed BSE cases. South Africa had imposed a similar restriction in respect of embryos. Sweden had introduced an embargo on importation of bovine semen from the UK.

6.37 Exports of bovine semen to non-EU countries declined steadily after peaking in 1988, as Figure 6.7 shows.

7. Exports of MBM and compound feed, gelatine, tallow and medicines

7.1 In this chapter we examine the impact of BSE on exports from the UK of MBM and animal feed containing MBM, gelatine, tallow and medicines. Chapter 6 of vol. 3: *The Early Years, 1986–89* includes our discussion of the consideration given to UK exports of MBM in the early years of BSE.

MBM and compound feed

Introduction

7.2 The evidence received by the Inquiry about the export from the UK of MBM and animal feed containing MBM suggests that the market for such products was small in the period before the emergence of BSE. Although exports of MBM to EU countries were rising steadily in the period from 1979 to 1988, total exports of MBM in 1988 were still less than 15,000 tonnes.²⁴⁴ This represented less than 4 per cent of the UK production of MBM in that year, based on MAFF estimates that annual production of MBM in the UK was about 400,000 tonnes.²⁴⁵

7.3 The Inquiry sought evidence from witnesses representing the feed industry about the extent of exports of MBM and compound feeds containing MBM. Mr Robert Peck of the Grain and Feed Trade Association (GAFTA) told the Inquiry

. . . Prosper De Mulder had the lion's share of UK produced meat and bonemeal exports, being the biggest producer. We, at rare times, exported cargos or truckloads of meat and bonemeal. By and large there was a deficit in the UK of meat and bonemeal. It was only on rare occasions that there was sufficient to warrant the additional cost to make it attractive to a third country outside of the UK.²⁴⁶

7.4 Mr Paul Foxcroft, on behalf of Prosper De Mulder Ltd, the largest rendering company in the UK, said the following in one of his statements:

PDM did export MBM to Europe and other countries (mainly Indonesia, Thailand and Sri Lanka) after the emergence of BSE.

The MBM was for use in poultry or pig feeds and post-September 1990 was produced from non-SBO raw materials.

²⁴⁴ See Figure 7.1 below

²⁴⁵ YB90/12.18/3.5

²⁴⁶ T61 pp. 55–6

The quantities exported represented a small proportion of PDM's total MBM sales (approx. 5%) and were at prices compatible with those on the home market.²⁴⁷

7.5 Mr David Goldwater of GAFTA explained that MBM exports 'would primarily go to manufacturers of concentrates who would use the meat and bonemeal in that particular end ration, and most of those concentrates would then be re-exported from either Belgium, Holland or France to the Middle East or North Africa'.

7.6 As regards the export of compound feed, Dr Brian Cooke, a nutritionist employed by Dalgety Agriculture Ltd told the Inquiry: 'There is really very little export of compound feeds, if any. In the ruminants area any export is usually in the specialist broiler area or something like that, not in cattle feed.'²⁴⁸

7.7 Mr David Goldwater, when asked about trade in compound feedstuffs containing animal protein, told the Inquiry: 'There would be the odd container load of finished feed that might go to one of the African countries or to the Middle East but absolutely no quantity at all. It would be minuscule in the context of the total feed trade.'²⁴⁹

Export to EU Member States

7.8 In Chapter 3 we discuss the impact of the introduction of the ruminant feed ban on the domestic rendering and feed manufacturing industries. The ruminant feed ban prohibited the inclusion of ruminant protein in ruminant rations. The practical effect of the ban was to exclude the use of any MBM in ruminant rations, since renderers were generally unable to guarantee that MBM produced by them was completely free of ruminant protein.

7.9 As already mentioned, MAFF estimated that UK production of MBM was approximately 400,000 tonnes per annum. Of this it was estimated that about 12 per cent of the domestically produced MBM had gone into ruminant feed before the introduction of the ban.²⁵⁰ After the imposition of the ban renderers would therefore have needed to find new markets for a significant proportion of their production. In evidence Mr James Reed, Director-General of the UK Agricultural Supply Trade Association (UKASTA), was asked if any companies might have continued to produce ruminant feed containing MBM for the export market. He stated:

I do not think it would have been worthwhile to any company to do that, because the export trade simply was not big enough in any compound feedingstuff.²⁵¹

7.10 Dr Cooke's and Mr Goldwater's comments have been noted above.

7.11 Although it appears that MBM would not have been included in compound feed for ruminants for the export market, there was a marked increase in exports of

²⁴⁷ S37C Foxcroft paras 9.1–9.3

²⁴⁸ T61 p. 28

²⁴⁹ T61 pp. 54–5

²⁵⁰ T60 p. 56

²⁵¹ T61 p. 28

MBM from the UK in 1989.²⁵² In July 1989 Mr Lawrence, from the Animal Health Division of MAFF, wrote:

The rendering industry has survived the July 1988 prohibition [the ruminant feed ban], in part because they have been able to fill the gap in the market through exports. In 1988 exports to other Member States were worth £2.2 million. In the first quarter of 1989 it was £1.9 million . . .²⁵³

7.12 In spring 1989 concern about UK exports of MBM began to be expressed within the EU. Nevertheless the Commission at that stage saw no need for direct intervention and no justification for restrictive trade measures.

7.13 On 22 June 1989 Mr G Legras, Director-General of the Agriculture Directorate (DG VI) of the European Commission, sent a telex to the UK Government requesting an assurance that ruminant products would not be used in ruminant feed for either domestic use or export.²⁵⁴ A reply approved by MAFF on 6 July stating that:

Since BSE was first identified in this country additional health guarantees have been agreed for exports to a number of Member States. It would not have been appropriate to ban exports of such material as its use continues to be permitted in pig and poultry feed.²⁵⁵

7.14 Mr Lawrence attended the Standing Veterinary Committee in Brussels on 18–19 July. In a minute to Mr Robert Lawson, Head of Animal Health Division at MAFF, he reported that the Commission was expecting the UK to take action to ban the export of MBM containing ruminant material. He pointed out that if the UK did impose a ban on the export of MBM containing ruminant material, the measure would effectively end MBM exports as virtually all rendering plants used ruminant waste.²⁵⁶

7.15 On 21 July Mr Lawson updated the MAFF Minister, Mr John MacGregor, on the developments at the Standing Veterinary Committee including the calls for a ban on export of ruminant MBM from the UK. He said there was a possibility of individual Member States imposing unilateral import bans of ruminant-based MBM, and reported that Germany had already imposed such a ban. He advised that ‘. . . there is no advantage to us in cutting off all our export opportunities’.²⁵⁷

7.16 On 23 July 1989 Mr John Gummer took over from Mr MacGregor as Minister for Agriculture, Fisheries and Food. He received a briefing from Mr Lawson on 25 July which included an update on the issue of export of MBM. Mr Lawson told Mr Gummer:

There has been criticism about the fact we continue to permit the export of meat and bone meal even though it is banned from use in ruminants in this country. However it has been emphasised that importing countries have been made fully aware about BSE and its probable cause and it is, therefore, up to them to decide whether to import and under what conditions.

²⁵² See Figure 7.1 below

²⁵³ YB89/07.03/5.2

²⁵⁴ YB89/06.22/14.1

²⁵⁵ YB89/7.6/1.2

²⁵⁶ YB89/7.20/7.2

²⁵⁷ YB89/7.21/4.1 para. 4

7.17 He added that ‘the material can still be used for feeding to pigs and poultry in this country and exports may be going for the same use’.²⁵⁸ Mr Gummer told the Inquiry that he felt an export ban should be opposed and a Community-wide arrangement banning the feeding of ruminant protein to ruminants be sought.²⁵⁹

7.18 On 1 August the Netherlands banned the feeding of ruminant protein to ruminants. France banned the feeding of ruminant protein to cattle on 13 August.

7.19 The European Commission proposed a ruminant feed ban in September 1989,²⁶⁰ which was supported by the UK, the Netherlands and France but opposed by other Member States. Germany and Denmark felt that they should not have to adopt such measures as they did not have scrapie or BSE.²⁶¹

7.20 As a consequence, UK exports of MBM to EU states continued to be permitted and no ban on the feeding of such material to ruminants was imposed by the EU. However, the introduction of unilateral bans by individual Member States, together with the effect of the raised profile of the issue within the EU, inevitably had a strong influence on UK exports of MBM in 1990. By 1991, exports to the EU had fallen to almost negligible levels.²⁶²

7.21 In December 1990 MAFF described recent developments in the market for material processed from animal waste as follows:

- there is no market at all for material derived from specified [bovine] offal;
- demand is slack for all animal protein because of caution over the implications of BSE, particularly material derived from fallen animals (following advice from UKASTA that their members should avoid its use);
- the international market for both tallow and meat and bone meal is depressed.²⁶³

7.22 MAFF estimated that since 1988 the price of MBM had fallen from over £200 per tonne to about £120 per tonne of material with no bovine or fallen animal content, and £90 per tonne for material containing no specified offal.

²⁵⁸ YB89/07.25/5.5

²⁵⁹ S311 Gummer para. 33

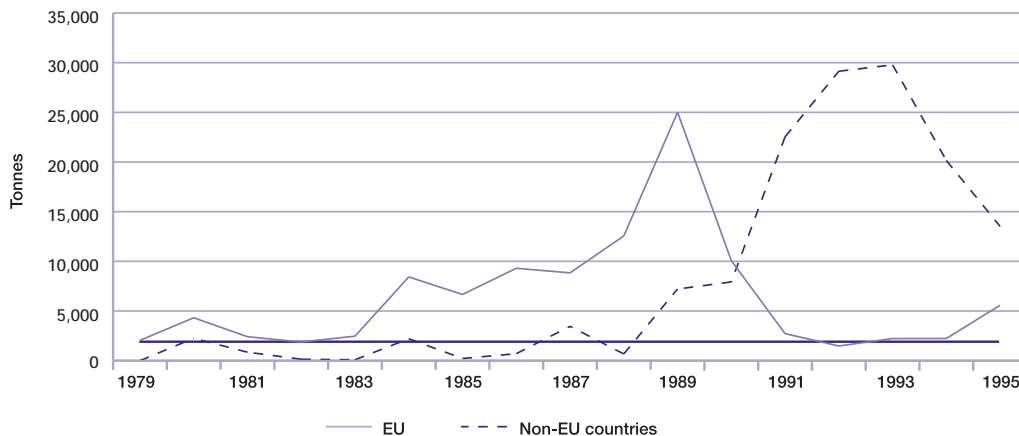
²⁶⁰ YB89/9.6/9.1

²⁶¹ YB89/09.19/7.3

²⁶² See Figure 7.1 below

²⁶³ YB90/12.18/3.5

Figure 7.1: UK exports of flours, meats and pellets of meat or meat offal, unfit for human consumption (greaves), 1979–95



Source: HM Customs and Excise

Export of MBM to non-EU countries

7.23 As Figure 7.1 above demonstrates, the loss of EU markets for MBM after 1991 was compensated for by increased exports to non-EU countries. The extent to which the UK Government made efforts to ensure that all importing countries were aware of the potential for MBM from the UK to contain the BSE agent, is discussed in vol. 3: *The Early Years, 1986–88*.

Exports of gelatine

7.24 In February 1992 the EU's Scientific Veterinary Committee Sub-Group on BSE assessed gelatine and concluded that the risk from trading it for 'consumption or for use in cosmetics' was negligible, regardless of the tissue source.²⁶⁴ This conclusion was accepted by the EU. However, when Commission Decision 94/381/EC was adopted on 27 June 1994, prohibiting the feeding of protein derived from mammalian tissues to ruminant species, one of its effects was to ban the inclusion of gelatine in ruminant rations, since gelatine would contain protein.²⁶⁵

7.25 The Scientific Veterinary Committee reviewed the situation late in 1994 and concluded once again that the risk from trading gelatine was negligible. It therefore recommended that gelatine be excluded from the prohibition on feeding mammalian protein to ruminants.²⁶⁶ This advice was accepted by the EU, and Commission Decision 95/60 excepted gelatine from the general prohibition.²⁶⁷

7.26 Figure 7.2 below shows that, in the period from 1986 to 1996, exports of gelatine from the UK rose considerably.²⁶⁸ It thus appears that any impact BSE may have had on such exports was minimal.

²⁶⁴ SEAC19 tab 1 Appendix 3; YB92/1.17/6.11

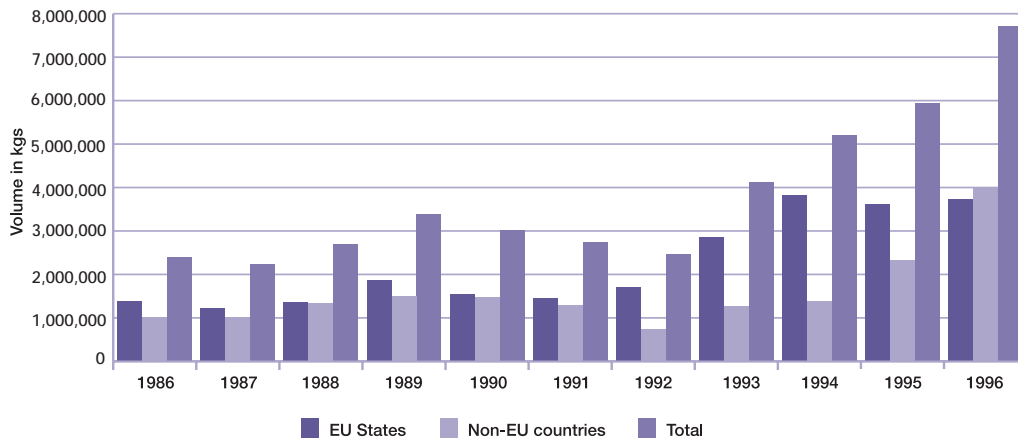
²⁶⁵ L4 tab 1

²⁶⁶ YB95/03.15/4.4

²⁶⁷ L4A tab 5

²⁶⁸ The data contained within this chapter was collected by HM Customs and Excise. The commodity codes used to record the quantities of exports of gelatine and related products over this period changed. As a result we can not be entirely confident that the figures given in each year are absolutely consistent with those of the previous year

Figure 7.2: UK gelatine exports, 1986–96



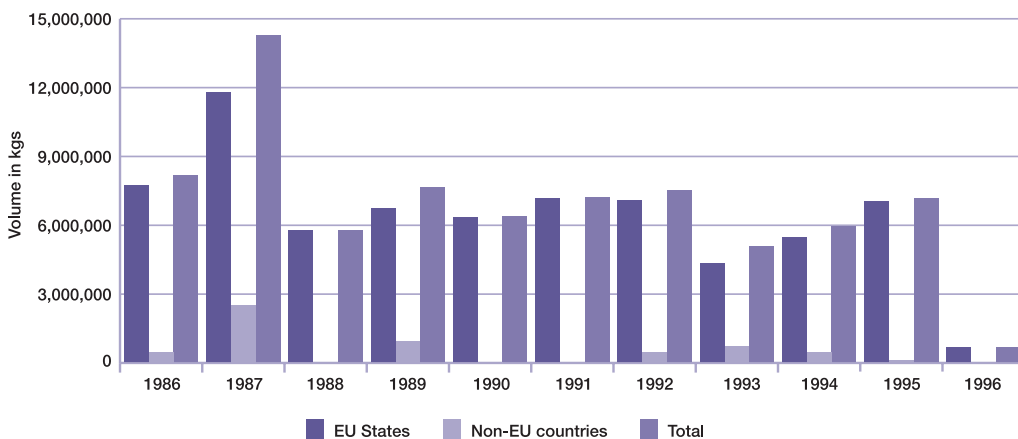
Source: HM Customs and Excise (M11G tab 2)

Tallow

7.27 During November 1991 the French authorities imposed restrictions on imports of tallow from the UK because of their concern that the protein contained in tallow represented a risk of carrying the BSE agent. However, by 28 November the restrictions were withdrawn pending further scientific consideration, and they were not subsequently reinstated.²⁶⁹

7.28 There is no evidence to suggest that other importing countries raised concerns, in the period prior to March 1996, about the safety of tallow derived from bovine carcasses. Although Figure 7.3 below shows some fluctuation in the export figures for tallow, it is difficult to draw any firm conclusions from the data.

Figure 7.3: UK tallow exports, 1986–96



Source: HM Customs and Excise (M11G tab 1)

Medicines

7.29 In 1989 guidelines were introduced in the UK to address the potential for BSE to be transmitted to humans via medicines. The guidelines recommended that all products licensed under the Medicines Act 1968 for human or veterinary use, which were administered parenterally or to the eye or to open wounds, should in general conform with the guidance if they contained material from a bovine source, or if bovine material had been used during their manufacture. Most significantly, the guidelines provided for the following:

Tissues excluded

No brain or neural tissue, spleen, thymus and other lymphoid tissue, placental tissue or cell cultures of bovine origin should be used in manufacture.

Cattle source for all other tissues

Bovine material should come from animals, taken from a closed herd in the female line since 1980, in which no animal has been clinically suspected of having BSE, and which has not been fed rations containing ruminant derived protein during that period.²⁷⁰

7.30 At a Scientific Veterinary Committee Meeting held on 13 March 1990 it was agreed that a Commission Decision would be passed which would ban the export from the UK of certain tissues and organs derived from bovine animals born before 18 July 1988 ‘for uses other than human consumption’.²⁷¹ In a minute of 29 March, discussing the implementation of the Decision, Mr Lawson explained that:

The reference to ‘uses other than human consumption’ may look rather odd. In fact it was the closest we could get to making it clear that this relates to materials for pharmaceutical use.²⁷²

7.31 On 15 March 1990, in a memorandum concerning the SVC meeting two days earlier, Mr Lawrence discussed the issue of implementation of the proposed Decision. He said:

Presumably, in the short term at least, it will have to be done by administrative means, ie an instruction to OVS/EHOs . . . We can stop issuing veterinary certificates under the Meat Hygiene Export Order but that may not be sufficient. One possibility might be an Order under Section 11 of the Animal Health Act. On the face of it this seems to be appropriate. Perhaps Mr Yavash will be good enough to advise on this.²⁷³

7.32 This led to considerable debate within MAFF about the best way to implement the Commission Decision in UK law.

²⁷⁰ YB89/2.23/6.7

²⁷¹ YB90/03.15/4.1

²⁷² YB90/3.29/14.2

²⁷³ YB90/3.15/4.1–4.2

7.33 On 19 March 1990 all Divisional Veterinary Officers were telexed by MAFF with instructions to withdraw certain export certificates relating to the export of bovine material for pharmaceutical use, as a way of implementing the Decision.²⁷⁴

7.34 The Commission Decision (90/200/EEC) was adopted formally on 9 April 1990. Ms Bronwen Jones of MAFF's Meat Hygiene Division minuted Mrs Elizabeth Attridge, Head of the Animal Health and Veterinary Group, on 6 August about UK implementation of the Commission's Decision, saying:

The amendment of the Bovine Offal (Prohibition) Regulations would certainly provide an opportunity to do so . . . the fact that the export ban in the Decision of 9 April goes beyond offal for human consumption means that we would have to prohibit its export for pharmaceutical uses etc. This could give rise to criticism that we were not taking the same precautions in relation to pharmaceutical products in the UK. Moreover a ban on pharmaceutical uses may not be able to be effected in legislation made under the Food Act and separate Regulations would, it seems to me, raise the profile of the issue considerably . . .

Given these difficult issues and the fact that as far as I am aware, neither the Commission nor any importing Member State has complained, I would recommend that we continue with administrative measures which we have in place, rather than attempt to put them in Regulations. Although there are some aspects of the two Decisions on which we could legislate with no difficulties, I think that to be selective in what we include in Regulations would only arouse suspicion and provoke criticisms.²⁷⁵

7.35 However, a year later, with the introduction of the Export of Goods (Control) (Amendment) (No. 7) Order 1991, which came into effect on 10 July, implementation of the Decision no longer remained purely administrative. The 1991 Order required that all exports of SBO and protein derived from it be under a specified licence issued by the Department of Trade and Industry. This gave legal force to the measures already in place.²⁷⁶

7.36 In 1992 the EU Committee for Proprietary Medicinal Products (CPMP) adopted guidelines for 'minimising the risk of transmitting agents causing spongiform encephalopathy via medicinal products'.²⁷⁷ The CPMP guidelines applied to:

. . . all [human] medicinal products which contain active ingredients and/or excipients derived from bovines, as well as medicinal products for which the production process involves bovine materials.

7.37 They also covered:

. . . the use of such materials in procedures which are indirectly associated with the manufacturing process, for example, in test media used in the validation of plant and equipment to avoid cross-contamination.²⁷⁸

²⁷⁴ YB90/3.19/1.1

²⁷⁵ YB90/8.6/1.1

²⁷⁶ YB91/7.22/1.1; L2 tab 6

²⁷⁷ DH01 tab 6 p. 13

²⁷⁸ YB91/12.11/3.4

7.38 All products were to be considered on a case-by-case basis taking into account: the selection and processing of source materials; the age and geographic origin of the individual source animal; the intended use of the product; its stipulated dose and route of administration; the production process; and quality control.²⁷⁹

7.39 The main focus of the guidelines was the sourcing of bovine material used in manufacture. Sourcing was allowed from countries ‘which have not reported cases of BSE, if they have an effective veterinary service capable of detecting a low incidence of disease and if BSE is reportable’. Additionally, it was recommended that the risk of BSE infection arising from factors including the feeding of SBO material to the animals in question should be avoided.²⁸⁰ Materials could also be sourced from countries with a ‘low incidence’ of BSE if a number of precautionary measures were taken, including destroying all affected carcasses, and not using any progeny of affected animals.²⁸¹

7.40 Manufacturers throughout the EU were required to comply with the new provisions. However, Dr John Purves, of the Medicines Control Agency, told the Inquiry that the practical assessment of licence applications went on as before because ‘the [CPMP] guidelines incorporated the principles of the CSM/VPC guidelines’.²⁸² Corresponding guidelines for veterinary medicines were introduced by the Committee for Veterinary Medicinal Products (CVMP) in May 1993.²⁸³ It is unlikely, therefore, that the CPMP and CVMP guidelines caused any further disruption to UK medicines manufacturers who were already complying with the CSM/VPC guidelines.

7.41 On 28 February 1994 the German Federal Health Office (BGA) issued safety standards for human and animal medicinal products to minimise the risk of BSE/scrapie transmission.²⁸⁴ Dr Purves told the Inquiry that the ‘new German safety standards had been issued unilaterally without prior discussion at the CPMP and appeared to go further than the existing European Guidelines’.²⁸⁵

7.42 In a minute to Mr John Sloggem of the Medicines Control Agency (MCA) and Mr Thomas Eddy at MAFF on 18 May 1994, Mr Charles Lister of DH’s Health Aspects of Environment and Food Division, interpreting the German guidelines, noted that they did not accept any UK-sourced bovine material. This was in contrast to the current European guidelines, which said that materials could be sourced from animals under six months old and from established and monitored herds whose feeding and breeding history was documented.²⁸⁶

7.43 In September 1994 a CPMP meeting was held at which the German guidelines were discussed extensively. Dr David Jefferys of the MCA, who attended the meeting, reported that:

The German delegates sought to present this as supplementary, national advice and clarification to the existing CPMP Guideline. The Commission was not prepared to accept this explanation and argued that if clarification or additions were required to agreed guidelines then these should be discussed

²⁷⁹ YB92/1.09/3.4

²⁸⁰ YB91/12.11/3.5

²⁸¹ YB91/12.11/3.5

²⁸² S535 Purves para. 193. CSM = Committee on Safety of Medicines; VPC = Veterinary Products Committee (both UK bodies)

²⁸³ M74 tab 4B

²⁸⁴ YB94/5.23/3.1–3.2

²⁸⁵ S535 Purves para. 208

²⁸⁶ YB94/5.18/8.1–8.2

within the CPMG and its Working Parties after which a revised Guideline could be issued. They did not accept that a Member State could issue its own supplementary Guideline . . . The Germans appeared to back off . . . saying that they had only made minor additions to the existing Guideline. They reluctantly agreed that their concerns should be discussed with the relevant CPMP Working Parties and would regard their documents as only being a provisional view from the Federal Republic in carrying forward the debate.²⁸⁷

7.44 The German guidelines continued to be discussed at CPMP meetings in December 1994. Although no agreement was reached between the UK and Germany on the issue of revising the European guideline, the CPMP confirmed that the current guideline would remain in force until such time as it was modified through the ongoing discussions.²⁸⁸

7.45 In January 1995 Germany was still refusing to change its position on its guidelines. Dr Purves told the Inquiry:

The effect of that was that in practice pharmaceutical companies in the UK chose to attempt to comply with the German guidelines by changing the source of materials to avoid all UK bovine material, even that certified as being from BSE free herds.²⁸⁹

7.46 Mr Sloggem agreed that ‘the German guidelines remained a barrier to trade because in practice companies in the UK chose to attempt to comply with them by changing their sourcing arrangements to avoid UK sourcing’.²⁹⁰

7.47 On 29 September 1995 Mrs Isabelle Izzard of DH’s Pharmaceutical Industry branch minuted colleagues and Dr Purves and Mr Sloggem at the MCA. She reported that there had been no further developments on the question of the German guidelines since the matter had been referred to the CPMP. Mrs Izzard also reported that she had attended a recent meeting with the European Oleochemicals and Allied Products Group (APAG) at which APAG had reported that their member companies were encountering problems because of the German guidelines. Purchasers were requiring assurances that products did not contain any material derived from UK cattle. Mrs Izzard sought comments on three options that she outlined:

. . . for the UK representatives on CPMP to raise the matter with the Committee again; for the DoH to approach the Commission again through UKREP; for the DOH to take the matter up with the German Health Ministry.²⁹¹

7.48 Mr Lister replied on 4 October 1995 indicating that the matter would be pursued further at the European level:

Now that the APAG have alerted us to the commercial disadvantage caused to their UK members by the German guidelines, there is good justification for pursuing this issue further on the grounds that:

²⁸⁷ YB94/09.19/3.1–3.2

²⁸⁸ YB92/12.21/8.1

²⁸⁹ S535 Purves para. 241

²⁹⁰ S454 Sloggem para. 107

²⁹¹ YB95/9.29/16.1

- the German guidelines are a substantive restriction on trade;
- there is no public health justification for rules which go further than the CPMP guidelines.

I have discussed with MAFF colleagues the options outlined in your minute for taking this issue forward. I think it is clear that the matter should be raised again within the CPMP. Subject to Mr Brown's view, we would also be happy for DH to approach the Commission once more through UKREP. However, we would not support a direct approach to the German health Ministry for bilateral discussions. It would be more appropriate to keep the issue on an EU basis, as with previous approaches, eg on beef. This is an issue on which MAFF feel strongly.

7.49 On 17 January 1996 Mr Sloggem sent a minute to Dr Purves about the revision of the CPMP guidelines and the still outstanding position of Germany's compliance.²⁹² Dr Purves replied in a handwritten note on 20 January to indicate that it was Mrs Izzard from the Pharmaceutical Industry branch who was to take the matter forward and advise the German authorities that their position was a restraint of trade to be taken up with the European Commission.²⁹³ However, these efforts were overtaken by the announcement in March 1996 of a connection between BSE and vCJD.

7.50 Although the UK pharmaceutical industry was clearly inconvenienced by this long-running disagreement with Germany, the general economic impact on the sector up to March 1996, as we say in Chapter 4, was limited. Volume 7: *Medicines and Cosmetics* gives a full account of how the UK addressed the risk of the BSE agent being transmissible to humans via these potential pathways of infection.

Glossary

For fuller explanations of some of these terms, and of others elsewhere in the Report, see the main Glossary in vol. 16: *Reference Material* (or via an electronic link in the website or CD-ROM versions).

AFRC	Agricultural and Food Research Council (became the BBSRC in 1994)
Ante-mortem	Before slaughter
BBSRC	Biotechnology and Biological Sciences Research Council
BSE	Bovine Spongiform Encephalopathy
BSEP	Biology of the Spongiform Encephalopathies Programme
CAP	The EU's Common Agricultural Policy
Cash terms (or prices)	Levels of expenditure have not been adjusted for inflation
CJD	Creutzfeldt-Jakob Disease
CJDSU	The national Creutzfeldt-Jakob Disease Surveillance Unit
Clean cattle	Cattle which have not been used for breeding
COREPER	Committee of Permanent Representatives to the European Union
CPMP	The EU's Committee for Proprietary Medicinal Products
CSM	Committee on Safety of Medicines
CVL	Central Veterinary Laboratory
CVMP	The EU's Committee for Veterinary Medicinal Products
Dam	The female parent of an animal
DANI	Department of Agriculture for Northern Ireland
DH (or DoH)	Department of Health
DTI	Department of Trade and Industry
EC	European Community (see EU)
ECU	European Currency Unit
EHO	Environmental Health Officer
Epizootic	Of a disease: temporarily prevalent and widespread in an animal population
Excipient	An inactive substance that serves as the vehicle or medium for a drug or other active substance

EU	European Union, which came into existence on 1 November 1993 as a result of the Maastricht Treaty. The EU incorporated but did not replace the European Community. Here the term EU is generally used for consistency's sake (even if sometimes chronologically incorrect), except where specific reference is made to the functions conferred by the European Community Treaty or to its legal effect
GAFTA	Grain and Feed Trade Association
GDP	Gross Domestic Product
Greaves	A high-protein solid which is left following the extraction of tallow from animal by-products during the rendering process. With further processing this becomes meat and bone meal (MBM)
Human SBO ban	The ban on SBO for human consumption
IAH	Institute for Animal Health
MAFF	Ministry of Agriculture, Fisheries and Food
MBM	Meat and bone meal
MCA	Medicines Control Agency
MHS	Meat Hygiene Service
MLC	Meat and Livestock Commission
MRC	Medical Research Council
MRM	Mechanically recovered meat
NHS	National Health Service
NPU	Neuropathogenesis Unit
OVS	Official Veterinary Surgeon
Parenteral	By any other route than by the mouth or by the bowel
R&D	Research and development
Real terms	Levels of expenditure have been adjusted for inflation
Research Councils	Non-departmental public bodies that fund research, established under the Science and Technology Act 1965 and by Royal Charter
RPI	Retail Price Index
Ruminant feed ban	From 18 July 1988 onwards this banned the use of MBM (unless derived from non-ruminants) in feed for ruminants (mainly cattle and sheep). The precise terms of the ban are set out in the Bovine Spongiform Encephalopathy Order 1988
SBO	Specified Bovine Offal: brain, spinal cord, spleen, thymus, tonsils and intestines
SCA	The EU's Special Committee on Agriculture
SEAC	Spongiform Encephalopathy Advisory Committee
ScVC	The EU's Scientific Veterinary Committee
SVC	The EU's Standing Veterinary Committee

TSEs	Transmissible spongiform encephalopathies
Tyrrell Committee	The Consultative Committee on Research into Spongiform Encephalopathies
UK	United Kingdom of Great Britain (England, Wales and Scotland) and Northern Ireland
UKASTA	UK Agricultural Trade Supply Association
UKRA	UK Renderers' Association
UKRep	UK Permanent Representation/Representative to the European Union
vCJD	New variant CJD
VIC	Veterinary Investigation Centre
VPC	Veterinary Products Committee

Who's who

For fuller descriptions of many of the following people, see the main Who's who in vol. 16: *Reference Material* (or via an electronic link in the website and CD-ROM versions).

Mrs Elizabeth Attridge	MAFF Under Secretary responsible for the Animal Health and Veterinary Group
Mr Raymond Bradley	Head of the Pathology Department, Central Veterinary Laboratory
Michael Burton	University of Manchester
Professor John Collinge	Professor of Molecular Neurogenetics, Imperial College School of Medicine
Dr Brian Cooke	Chief Scientist, Dalgety Agriculture Ltd
Mr John Cowan	MAFF Head of Beef Division
Mr David Curry MP	MAFF Parliamentary Secretary (Commons), 1989–92, and Minister of State, 1992–93
Mr Thomas Eddy	MAFF Head of Animal Health (Disease Control) Division
Mr Paul Foxcroft	Sales Director, Prosper De Mulder
Mr David Goldwater	Grain and Feed Trade Association
Mr John Gummer MP	Minister of Agriculture, Fisheries and Food, 1989–93
Mr Jim Harrison	Farmer
Mrs Isabelle Izzard	DH Pharmaceutical Industry branch
Baroness Jay	Leader of the House of Lords
Dr David Jefferys	Head of Licensing Division, Medicines Control Agency
Ms Bronwen Jones	MAFF Meat Hygiene Division
Dr Richard Kimberlin	Independent TSE consultant
Mr Alan Lawrence	MAFF Animal Health Division
Mr G Legras	Director-General of the European Commission's Agriculture Directorate
Mr Charles Lister	DH Health Aspects of Environment and Food Division
Mr Robert Lawson	MAFF Head of Animal Health Division
Mr John MacGregor MP	Minister of Agriculture, Fisheries and Food, 1987–89
Mr Robert Peck	Grain and Feed Trade Association
Dr John Purves	Unit Manager, Biological Unit, Medicines Control Agency

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Mr James Reed	Director-General of the UK Agricultural Supply Association
Mr Brian Rogers	Chair, UK Renderers' Association
Mr John Sloggem	Pharmaceutical Officer, Medicines Control Agency
Mr Stephen Wentworth	MAFF Under Secretary, Meat and Livestock Group
Mr John Wilesmith	Head of the Epidemiology Department, Central Veterinary Laboratory
Dr (now Professor) Robert Will	Director of the national CJD Surveillance Unit
Mr A Yavash	MAFF Legal Department
Trevor Young	University of Manchester

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