

Chapter 8 – Department of Agriculture, Food and Rural Development

8.1 BSE Eradication Programme

Background

Bovine Spongiform Encephalopathy (BSE) is a progressive and invariably fatal degeneration of the central nervous system in cattle. It is one of a family of similar diseases, which occurs in humans and in animals known as Transmissible Spongiform Encephalopathies (TSEs) and includes scrapie in sheep and goats and Creutzfeldt-Jacob Disease (CJD) in humans. TSEs may be either infectious or genetically determined, and are also known as '*prion diseases*' as they involve the accumulation of abnormal prion protein in the brain, which is the main component of the agent believed to be responsible for the production and transmission of the disease.

BSE was recognised in the UK for the first time in 1985. After considering possible causative factors it emerged that exposure to the agent of a TSE in feed containing ruminant-derived meat and bone meal was the most likely source of the disease. As BSE was a newly recognised animal TSE and the possibility of transmission to humans was unknown, surveillance programmes for human TSEs were put in place in the UK and in the EU.

The first case of BSE discovered in Ireland was in 1989 and was regarded with the greatest seriousness by the Department of Agriculture, Food and Rural Development (the Department) because of the threat it might pose to the cattle industry. The disease was classified as a notifiable disease under the Diseases of Animals Act 1966 and the feeding of meat and bone meal to cattle was banned. However, the threat to the industry and consumers became much more serious in 1996 when British scientists found evidence that a new disease, variant CJD (vCJD) appeared to be caused by the same agent as was responsible for BSE in cattle. As a result of this, comprehensive additional national controls which provided extra safeguards to consumers of Irish beef at home and abroad were put in place in 1996 and 1997.

The estimated number of cattle in Ireland is 7.5 million, which are contained in approximately 138,000 herds. Beef production is predominantly grass-based, with cattle grazing pasture for most of the year. When housed during winter they are fed primarily on silage and/or hay, supplemented by food compounds, which up until 1990 could contain meat and bone meal. Approximately 1.5 million cattle are slaughtered each year, with nine out of every ten carcasses destined for export.

Objectives and Scope of Audit

The objectives of the audit were to:

- Determine the extent to which the Department has set objectives for managing and eradicating BSE
- Review and evaluate the strategies and procedures put in place to manage and operate the programme to control and/or eradicate the disease, and the degree to which the programme has achieved its objectives
- Ascertain the involvement of the Department in research into the origins and transmission of the disease and the threat it poses to human health

Agriculture, Food and Rural Development

- Review the systems, controls and procedures in place in relation to expenditure incurred on the eradication programme, and ascertain the level and funding of such expenditure.

The strategies, policies and practices adopted by the Department in operating the programme were ascertained and their implementation reviewed during the course of the audit, including the objectives of the programme and the extent to which they are being achieved. A sample of case files was examined to verify that the established controls and procedures were observed. A rendering plant was visited to ascertain the controls in operation in relation to the production of meat and bone meal, and a number of Departmental and independent reports into the operation of the programme were also reviewed.

Audit Findings

Policies and Strategies

The Department's 'Statement of Strategy 2001 – 2004' outlines nine high-level goals, one of which is to

'Ensure the highest standards of food safety, animal health and welfare and plant health'.

Eighteen strategies and appropriate performance indicators are set out to ensure the achievement of this goal, including the following which relate directly to BSE eradication:

Table 26 - Strategies and Indicators relating to BSE Eradication

Strategy	Performance Indicators
Monitor compliance by producers and processors with requirements on feedstuffs, to detect unacceptable practices, residues and other risks, including disease risks	Number of tests carried out, level of non-compliance/unacceptable level of residues and actions taken
Implement and review systems for preventing and dealing with Class A diseases	Organisation International des Epizooties (OIE) status Results of monitoring/surveillance programme
Implement the BSE monitoring and control programme with the aim of eliminating the disease	Incidence of BSE in Cattle herd

The Department indicated during my audit that the aim of the programme is to eliminate BSE from the national herd and that it expects that the number of cases will decline significantly over the next two to three years. However, it also stated that due to the duration of the incubation period and other uncertainties, some cases will continue to be identified beyond that.

Disease Surveillance

Up to June 2000, surveillance was of a passive nature, whereby farmers and veterinarians were obliged by law under the Diseases of Animals Act 1966, to disclose details to the Department of animals showing clinical signs of the disease. In the years prior to 2000 and the approval of the so called 'rapid tests' for BSE, animals showing clinical symptoms, were put down where BSE could not be ruled out, and their brains were subjected to laboratory examination. In 1996, this examination was extended to all adult animals in herds depopulated for BSE as well as the birth cohorts and progeny animals of the BSE infected animal. Birth cohorts are, broadly speaking, animals in or about the same age and in the same herd as the diseased animal at the time of birth.

In July 2000 a targeted active surveillance programme was put in place whereby a proportion of fallen animals (animals which die on farms) and a random sample of slaughtered cattle eligible for human consumption were

tested. In January 2001 testing was extended to cover all cattle over 30 months slaughtered for human consumption, all casualty animals over 24 months (animals which are injured on farms and are considered suitable for slaughter), and a random sample of fallen cattle over 24 months of age using a 'rapid test' approved by the Scientific Steering Committee of the European Commission. Since July 2001 all fallen cattle over 24 months are tested.

The testing regime in force is in accordance with directions issued by the EU on the disease. However the testing regime in place in Ireland since January 2001 exceeds EU requirements in so far as the Department tests all animals over 30 months of age in depopulated herds, birth cohorts and progeny animals.

The purpose of passive and active surveillance for the disease is to further protect consumers of Irish beef at home and abroad by preventing diseased animals getting into the food chain and to provide information on the incidence of the disease in the cattle herd to evaluate the effectiveness of the measures being taken to eradicate it.

Details of the numbers of cattle diagnosed as having the disease are shown in Table 27 below.

Table 27 – BSE Cases in Ireland analysed by Method of Identification

Year	Passive Surveillance		Active Surveillance		Testing of Animals over 30 months of age in herds depopulated for BSE, birth cohorts and progeny animals		Totals	
	Number Tested	Number Positive	Number Tested	Number Positive	Number Tested	Number Positive	Number Tested	Number Positive
1989	25	15	-	-	-	-	25	15
1990	46	14	-	-	-	-	46	14
1991	32	17	-	-	-	-	32	17
1992	30	18	-	-	-	-	30	18
1993	40	16	-	-	-	-	40	16
1994	36	19	-	-	-	-	36	19
1995	35	16	-	-	-	-	35	16
1996	134	73	-	-	3,230	1	3,364	74
1997	188	77	-	-	5,043	3	5,231	80
1998	176	79	-	-	2,557	4	2,733	83
1999	198	91	-	-	3,260	4	3,458	95
2000	354	138	1,747	7	3,305	4	5,406	149
2001	484	123	662,403	119	12,196	4	675,083	246
2002	322*	66	324,944**	143	10,992*	2	336,258	211
Total	2,100	762	989,094	269	40,583	22	1,031,777	1,053

* to end July 2002

** to 24 July 2002

A total of 1,053 (including 22 cohort animals) cases of BSE had been diagnosed up to the end of July 2002. As can be seen the numbers of cattle tested have been steadily increasing over the years as the level of testing was extended. The huge jump in the numbers tested in 2001 is due to the introduction of testing for all animals slaughtered for human consumption over 30 months under the targeted active surveillance programme. The greater number of animals tested in 2001 under the active surveillance programme, in particular the testing of all fallen stock over 24 months of age is responsible for the increase in the number of cases identified in 2001. The figures have continued to increase in the first six months of 2002 but again this is attributed by the Department to the extension of testing to all fallen cattle from 1 July 2001, and that when this factor is taken into account no significant increase in disease levels is indicated in 2002.

The sharp increase in the figures in 1996 is felt by the Department to be due in large part to a greater

Agriculture, Food and Rural Development

awareness of the disease by farmers and veterinarians with the establishment in 1996 of a definite link between it and vCJD in humans and better reporting of suspect cases to the Department.

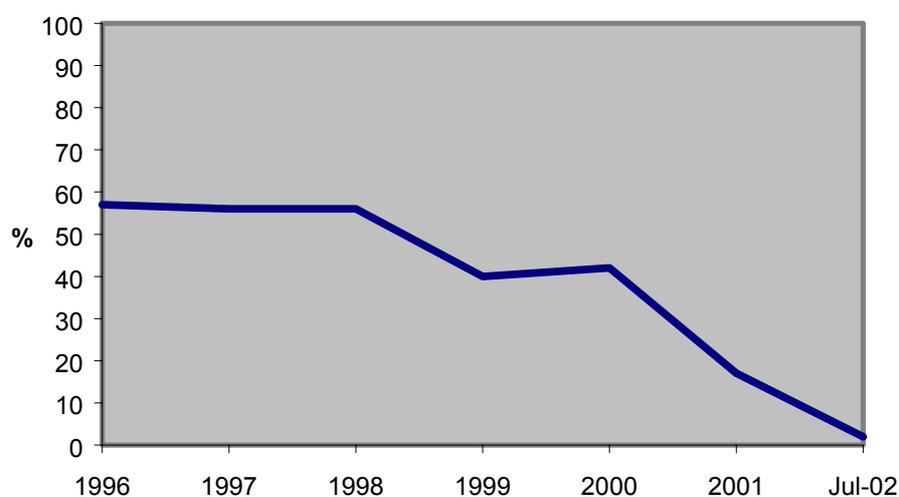
Table 28 shows the age profile of the animals, excluding the 22 cohort animals, diagnosed as having the disease in the years 1989 to 2001.

Table 28 - Age Profile of Detected BSE Cases 1989 to 2001

Age Category	Number	%
0 to 4 Years Old	70	9
5 Years Old	240	29
6 Years Old	292	35
7 Years Old	133	16
8 Years Old	46	6
9 Years Old	17	2
10 Years Old	14	2
> 10 Years Old	10	1
Total	822	100

The percentage of animals aged under 6 years detected as having the disease for the period 1996 to 2002 is shown in Figure 4.

Figure 4 - % of BSE infected animals less than 6 years old



The Department is confident that the trend shown in the graph indicates that the additional controls introduced in 1996/1997 have been effective in preventing the exposure to the infectious BSE agent of animals born after this time. However, as 64% of all BSE cases in Ireland are diagnosed in animals, which are 5 or 6 years of age at the time of diagnosis, the Department does not expect a significant drop in the number of cases identified until 2003 and 2004. However after this time, the Department is confident that as animals born prior to the introduction of the additional controls are slaughtered or die, the number of cases identified will decline towards zero.

The Department feels that its view is reinforced by the fact that to date only 2 cases have been diagnosed in animals born after 1996.

Control Measures

Control measures introduced in Ireland can be broadly divided into two phases, those that preceded the announcement in March 1996 in the UK of a link between BSE in cattle and vCJD in humans and those which were subsequently introduced.

The main control measures put in place by the Department following the discovery of the disease are as follows:

- In 1989 BSE was declared to be a Class A disease under the Diseases of Animals Act, 1966. This imposed obligations on farmers and veterinarians to report animals showing symptoms of the disease and gave legal powers to the Department to restrict cattle movements and sales, and to slaughter animals and depopulate herds in order to contain the disease.
- The feeding of meat and bone meal (which is thought to be the source of the disease) to ruminant animals, either directly or through feedstuffs was banned in 1990. In January 2001, this ban was extended to all animals intended for human consumption.
- Meat and bone meal produced by the seven rendering plants operating in the State is processed to EU standards and securely stored pending disposal, (mostly by incineration) and since 1996 all mills involved in the manufacture of animal feedstuffs are under the supervision of full-time Agricultural Inspectors of the Department. Regular inspections are carried out and the feed is monitored and regularly tested by carrying out a microscopic examination for bone fragments.
- Under the Designated Bovine Offal Order, regulations prohibiting the utilisation of the brain, spinal cord and intestines of bovine animals for human consumption were introduced in early 1996, with the purpose of protecting consumer health on foot of the revelation that BSE and vCJD could be caused by the same agent. The animal tissues defined under the regulations were those in which, on the basis of animal transmission studies, the BSE agent could be found and the exclusion of those tissues is regarded as an essential consumer health protection measure.
- The Specified Risk Material (SRM) is isolated, permanently stained and removed directly to an approved plant, where it is rendered and the resultant products stored pending destruction by incineration.
- In 1989, the import of animals from the UK, other than animals for slaughter under 6 months, was banned, and in March 1996, under EU Regulations, the ban was extended to cover the importation of all cattle and bovine products from the UK. Procedures have been put in place to trace and slaughter animals imported prior to the prohibition. Such slaughtered animals are rendered and excluded from the human and animal food chains.
- In abattoirs and meat plants Departmental veterinary officers carry out visual checks on animals before slaughter for signs of diseases including BSE. These staff also inspect carcasses for SRM removal and the proper staining of such material.
- All cattle slaughtered over 30 months of age are screened for BSE using an EU approved test. Local abattoirs are precluded from slaughtering cattle over 30 months of age since January 2001 and the Food Safety Authority of Ireland (FSAI) carries out audits of the effectiveness of controls at abattoirs and retail outlets.

The following control measures are in place where animals are suspected of or confirmed as having the disease:

- Suspect animals are inspected by a veterinary inspector from the Local District Veterinary Office. Where BSE cannot be ruled out the suspect animal is put down, and a sample of brain tissue is sent for testing. The herd in question is immediately placed under official restriction.

- The carcase of the suspect animal is transported to a designated Department-owned cold storage plant, pending the test result. (Previously the carcasses, except for the head, were buried on the farms of the herdowners, but following public controversy this practice has ceased). Carcasses relating to animals which test negative for BSE are sent for rendering to a plant designated for SRM destruction. There is currently no method of disposal for the carcasses of animals which test positive for BSE, and hence such carcasses are currently being held in indefinite cold storage.
- The remaining animals in the herd are slaughtered and destroyed, and compensation paid to the farmer at full market value. The birth cohorts and progeny of the diseased animal are traced and are also destroyed. The slaughter of animals is carried out at a dedicated meat factory, and the carcasses are then rendered into meat and bone meal at a designated rendering plant. The meat and bone meal derived from the rendering of these carcasses is sent directly abroad for incineration and the tallow by-product is burnt on site in the rendering plant. The collection, transport, slaughter and destruction of the animals take place under the direct control of the local District Veterinary Office.
- When an animal is confirmed positive for BSE, a full epidemiological investigation is carried out on all farms on which the positive animal had been resident throughout its life. The epidemiological investigation includes a review of clinical history and feeding practices on the farm. In addition, birth cohorts and progeny of positive animals are traced, slaughtered at a designated plant and their carcasses are destroyed.
- The infected farm is disinfected with an approved disinfectant and left vacant for at least 30 days.
- In 1998 a computerised monitoring system was introduced which tracks the location of animals in the national herd. Animals presented for slaughter are validated against this system at slaughter and are only allowed into the food chain when they meet certain validation criteria. The system is also used to trace birth cohorts and progeny of BSE cases and to deter illegal imports of cattle.

The purpose of the control programme is to protect human health by maintaining high standards of food safety and animal health and welfare, to safeguard the economically important beef industry, and in the longer term to eradicate the disease from the national herd.

Penalties for breaches of BSE regulations involve fines and/or imprisonment on foot of criminal convictions and loss or reduction of compensation for culled herds. Three prosecutions have been taken by the Department on charges of intent to defraud the Minister for Agriculture, Food and Rural Development. One case resulted in a five year custodial sentence, while the other two resulted in two year sentences. Five cases have been prosecuted involving eighteen offences for breaches of meat and bone meal regulations. A custodial sentence of five months was imposed in one case while fines ranging from €635 to €1,587 were imposed in the others.

Herd Depopulation and Compensation for Slaughter of Animals

When a BSE case is confirmed the herdowner is notified immediately and it is the policy of the Department to slaughter and destroy all of the animals in the affected herd within six weeks of the date of the notification. Birth cohorts of diseased animals are also traced, slaughtered and destroyed. Compensation is paid to the herdowners in respect of the slaughtered animals.

The amount of compensation is determined by Departmental Valuers based on an assessment of the current market value of the animals. Consequential losses, loss of income, out of pocket expenses etc., are not payable. If the herdowner does not agree with the valuation, an independent valuer is appointed to value the animals and this may be higher or lower than the Department's valuation. Should agreement still not be reached an arbitrator is appointed whose decision is binding on both the herdowner and the Department.

Again the arbitrator's valuation may be higher or lower than the Department's or that of the independent valuer.

During the course of the audit a sample of case files were reviewed. It was found that the procedures and controls put in place by the Department relating to testing, notification, herd depopulation, valuations and payment of compensation had been operated in accordance with the official procedures in the cases reviewed.

Between 1989 and 2001, almost €83 million has been paid to herdowners in respect of over 85,000 animals, slaughtered under the eradication programme. Table 29 details the outturn for the five years to 31 December 2001.

Table 29 - Herd Depopulation and Compensation for slaughter of animals 1997 to 2001

Year	No. of Animals in Herds	Amount of Compensation - €	Average cost per animal - €
1997	8,321	7,582,384	911
1998	8,481	6,984,843	824
1999	9,983	8,717,138	873
2000	14,748	13,528,596	917
2001	23,399	21,506,937	919

The Department carried out tests for BSE on all of the above animals over 30 months and Table 30 details the results. All of the BSE positive animals were cohorts of the original confirmed cases. The disease incidence while low was many times greater than the rate in the general cattle population.

Table 30 - Results of Tests on Depopulated Herds and Cohorts

Year	No. of Animals Tested	BSE Positives
1996	3,230	1
1997	5,043	3
1998	2,557	4
1999	3,260	4
2000	3,305	4
2001	12,053	4

Manufacture and Control of Meat and Bone Meal

Meat and Bone Meal is manufactured from the waste product of animal carcasses and from the carcasses of animals considered unfit for human consumption. It was considered to be a good source of protein and for this reason used to be incorporated in animal feed.

From a very early stage following the discovery of BSE in cattle, animal feed containing meat and bone meal was suspected as being the most likely source of the disease. Following the completion of extensive research it is now almost universally accepted among the scientific and medical community that cattle acquire the disease mainly as a result of ingesting the infectious agent thought to be contained in meat and bone meal. Maternal transmission is also theoretically a possible method of transmission, but while there is some statistical support for low levels of maternal transmission, no plausible transmission mechanism has yet been identified. More particularly the infectious agent if present in the animal is thought to be present in the animal's nervous system which comprises mainly the brain and spinal column.

In December 2001 the Scientific Steering Committee (SSC), which advises the European Commission on BSE and other issues published its opinion on the origin of BSE. It stated that

The origin and transmission routes for BSE mainly confirms the standing scientific consensus hypotheses of a prion of unknown origin as the agent for transmitting the disease via feed and cross-contamination of feed mainly, and via maternal transmission to a lesser extent. The SSC considers that not one of the alternative hypotheses about a third transmission route has so far been substantiated by scientific evidence'. (Source: EU Institutions press release 5 December 2001).

It was recognised that in order to eradicate and prevent cattle acquiring the disease, it was essential to prevent the material thought to contain the infectious agent that causes BSE from being fed to cattle. This material was designated as Specified Risk Material (SRM) and includes mainly the spinal column and brain of all bovine carcasses.

SRM is converted into meat and bone meal at three designated rendering plants. This meat and bone meal is classified as high risk by the Department, is banned as an animal feed and must be disposed of by incineration.

Meat and bone meal is also manufactured from low risk material (non-SRM waste from all slaughtered animals) by seven rendering plants. While this is also banned as a farm animal feed it can be used under licence by pet food manufacturers. No licences have been issued to pet food manufacturers in Ireland. Instead they obtain their raw material, which is the low risk carcase material such as trimmings, directly from meat plants and abattoirs.

The following controls are in operation in relation to the manufacture storage and disposal of meat and bone meal:

- Rendering plants are licensed by the Department under the provisions of the Diseases of Animals (BSE) (No. 2) Order, 1996, and in accordance with EU Council Directive 90/677/EEC and EU Commission Decision 94/382/EC. Their manufacturing processes and operations are supervised on a full-time basis by staff of the Department and must operate to standards laid down by the EU with regard to such matters as temperature, pressure and time.
- The storage and movement of meat and bone meal are carried out under the direct supervision of the Department, and as part of the licensing system, rendering plants must keep records of sales for up to 8 years. Officers of the Department inspect these records on a regular basis.
- Sales can only be made to those holding a valid licence to purchase meat and bone meal under the 1996 BSE Order, (e.g. Pet Food Manufacturers and Home compounders) and meat and bone meal can only be moved from a rendering plant on foot of a movement permit approved by an officer of the Department.

The veterinary and inspectorate staff assigned to each meat and bone meal manufacturing plant are required to carry out their work in accordance with detailed, standard, written procedures. As part of this audit these procedures were reviewed and their application was observed on a test basis on-site with satisfactory results.

In 2000 and 2001 rendering plants produced 136,648 and 134,898 tonnes respectively of meat and bone meal and stocks of the material totalling 196,720 tonnes were held at 31 December 2001. A large proportion of the high stocks were due to the market support measure introduced by the EU in 2001, whereby farmers could opt to have their cattle slaughtered and the meat destroyed so that it would not come on to the market, while being guaranteed prices almost equal to full market value.

The current cost to the State of incinerating meat and bone meal abroad ranges from €250 to €320 per tonne. At the time of my audit the Department was negotiating a series of contracts for the disposal of 89,000

tonnes of meat and bone meal mainly by incineration in Germany. The estimated cost of disposing of the stocks of the material held in store at 31 December 2001 is €60m.

Animal Feedstuffs

The ban on the feeding of meat and bone meal to ruminant animals in 1990 had a dramatic effect on the spread of the infection but did not fully address the potential for cross-contamination to ruminant animals, due in particular to the fact that many animal feed manufacturers did not have segregated manufacturing facilities for the production of cattle feed and pig and poultry feed.

Procedures were strengthened by the introduction of the 1996 Order which established a licensing system for the manufacture, purchase and use of meat and bone meal. In effect this confined the use of the material to licensed dedicated monogastric feedmills and specialised pig units where Department Inspectors could conduct checks on its use. These controls greatly reduced the possibility of cross-contamination of ruminant feedstuffs. For analogous reasons, similar provisions were introduced for poultry offal meal in 1997.

The legislation and procedures in Ireland allow no tolerance for the presence of bone fragments in ruminant feedstuffs, and are more stringent than that recommended by the EU Scientific Steering Committee which proposed that only feedstuffs containing a cross-contamination level exceeding 0.5% should be banned.

The EU, in late 2000, following the appearance of BSE in continental Europe, banned the feeding of processed animal proteins to any farmed animals kept for food production. Processed animal proteins cover virtually all products derived from mammals, poultry and fish that can be used in animal feedstuffs and also includes additives, pre-mixtures and compound feeds containing these products. The main products within this category in Ireland are meat and bone meal, poultry offal meal, feather meal and fish meal. Products not covered are animal fats and fish oils. Feedstuffs for pets and mink are excluded from the ban but horse feeds are included.

The EU Commission and the EU Food and Veterinary Office are responsible for prescribing and monitoring controls and standards in relation to animal feedstuffs imported into the EU. The importing of meat and bone meal into the EU is banned. According to the Department no compound feedstuffs are imported into Ireland other than from the UK. Imports from Third Countries are confined to ingredients such as corn gluten and citrus pulp which are subsequently compounded. The Department routinely samples all such imports to ensure that they do not contain any processed animal proteins.

In 2001, 1,231 feedstuff samples were taken. Ten samples tested positive for meat and bone meal, all of which were traced back to one consignment of maize gluten which was imported from the USA.

The Department points to the dramatic decrease in the frequency of positive bone samples since 1996 (from 24% to 0% of samples tested) and also to the improvement in the age profile of animals diagnosed as having BSE, as demonstrating the success of the controls introduced in 1996 in greatly reducing the risk of exposure of cattle to the infectious agent which is thought to cause BSE.

Cost of Eradication Programme

Up to the end of 2001 the cumulative direct costs of the eradication programme amounted to nearly €127 million excluding the Department's administration costs. Table 31 shows an analysis of these costs for the

period 1997 to 2001.

As can be seen there was a substantial increase in costs in 2001 due to the vastly increased level of testing for the disease and increased compensation to farmers due to a greater rate of detection.

2001 was the first full year of a new regime of testing introduced under the Targeted Active Surveillance Programme. The testing of large numbers of carcasses became feasible because of the development of a number of new faster tests for BSE, which took as little as four hours to complete compared to the earlier traditional tests which take about fourteen days, and makes testing on carcasses in abattoirs feasible. The tests are carried out under contract for a fixed fee per test by two private laboratories. There is no recognised test to detect BSE in live animals.

Table 31 – Direct Costs of BSE Eradication Programme 1989-2001

	1989-96	1997	1998	1999	2000	2001	Total
	€'000	€'000	€'000	€'000	€'000	€'000	€'000
Compensation to Farmers and Herdowners	24,404	7,583	6,985	8,717	13,528	21,150	82,367
Haulage Costs	-	229	226	290	367	521	1,633
Factory Slaughter	-	820	623	729	1,116	1,771	5,059
Storage and Disposal of Meat and Bone Meal*	-	336	423	551	669	880	2,859
Rendering Costs*	-	1,827	1,316	1,774	2,289	3,300	10,506
Surveillance Programme (Testing)	-	-	-	-	396	23,295	23,691
Total	24,404	10,795	9,573	12,060	18,366	50,916	126,114
Less Costs recouped from EU							43,806
Net Cost to Exchequer							82,308

*These costs refer to the rendering of and manufacture storage and disposal of meat and bone meal from animals slaughtered through having been in contact with BSE infected animals i.e. depopulated herds and cohorts

70% of compensation costs are recouped from the EU. As at 31 December 2001 a total of €43.8m has been received from the EU, out of total compensation paid of €82.4m. In 2002 the EU agreed to fund a portion of the test fee costs incurred under the active surveillance programme. No contributions towards costs were sought or received from farmers or meat processors.

Industry and Market Support Measures

As stated previously the significance of BSE lies in the threat it poses to human health and to the economically important beef processing industry, by undermining consumer confidence in beef products. The control measures put in place to contain and eradicate BSE have as their twin and complementary objectives the protection of human health and the sustenance of the domestic and foreign markets for Irish beef, in the face of the periodic crises posed by the emergence of the disease.

The discovery of the disease in Ireland led to closure or restricted access to many of the traditional markets for Irish beef particularly non-EU markets such as Egypt, Libya and Russia in the early 1990s.

Furthermore the discovery in Autumn 2000 of BSE in countries which had up to then claimed not to have had it, such as Spain and Germany, resulted in a collapse of consumer confidence and in a significant reduction in beef consumption across the EU during 2001. It led also to the closure of most major third country markets for EU beef generally. Ireland was particularly affected given its dependence on both EU and non-EU markets.

A range of measures was adopted in late 2000 at EU level to increase consumer protection, to restore

consumer confidence in beef and to provide support for the market. These included the banning of meat and bone meal as a farm animal feed, the testing for BSE of all cattle slaughtered over 30 months and fallen animals over 24 months, and the introduction of partly EU funded cattle destruction schemes (Purchase for Destruction and Special Purchase Schemes), whereby farmers could opt to have their cattle slaughtered and the meat destroyed so that it would not come on to the market, while being guaranteed prices almost equal to full market value. The cattle destruction schemes applied for 2001 only.

€312m was paid out to farmers under the cattle destruction schemes by the Department of which €208m was funded by the EU. The costs of slaughtering the animals and destroying the meat by rendering the carcasses and their conversion into meat and bone meal, are estimated to be about €76m. The cost of storing the meat and bone meal in 2001 was €0.9m resulting in total net scheme costs of about €182m to the Exchequer in 2001. Pending the destruction of the meat and bone meal ongoing storage costs will continue to arise.

Prior to its being banned as a farm animal feed, over 90% of meat and bone meal production was exported, mostly to non-EU countries. The imposition of EU temperature, pressure and time standards in relation to the rendering process in 1997 gave rise to significant extra costs to renderers in the form of expenditure on new equipment which could meet the more demanding standards. The difficulties being experienced by renderers were exacerbated by the banning of the feeding of meat and bone meal to all farm animals in January 2001 which transformed the product from having some commercial value to being a waste product having a negative economic value because of the cost of safely disposing of it.

To avert a possible collapse of some if not all rendering operations in the State which would in turn have been likely to bring the beef processing industry to a standstill, the Department supported by Government felt that intervention was essential. Accordingly, in late 2000 it entered into an agreement with renderers and beef processors whereby it agreed to underwrite a large portion of the renderers' costs, including the cost of rendering low risk carcase material such as trimmings and carcasses unfit for human consumption, as well as the costs of storage and disposal of the meat and bone meal. However the costs of rendering the Specified Risk Material continued to be borne by the beef processors. The costs incurred by the Department in funding rendering operations and the storage and destruction of meat and bone meal was €5m and €66m in 2000 and 2001 respectively. These costs can be analysed on an estimated basis as shown in Table 32.

Table 32 - Funding of Rendering Operations

	2000	2001
Rendering	€4.9m	€53.7m
Storage	€0.1m	€1.3m
Disposal	-	€11m

According to the Department the present position in relation to beef markets is as follows:

- While consumption of Irish beef has improved considerably within the EU since its low point following the 2000/2001 crisis, Ireland continues to be without access to some of its important export markets.
- The Egyptian authorities have recently reopened their market to Irish beef from young cattle.
- The Gulf States markets remain closed but efforts are ongoing to have them re-opened by the Department.
- The Russian market is open but adheres to its policy of taking beef only from selected counties.
- The current improved prices for cattle are based to a large extent on increased demand in the UK as a result of Foot and Mouth Disease de-stocking.

Agriculture, Food and Rural Development

The increased number of BSE cases in 2001 and 2002, albeit resulting mainly from increased levels of testing, brings with it further risks of market restrictions in the future.

Table 33 and Table 34 show details of beef exports and sales into Intervention for the years 1995 to 2000 and cattle prices (Table 35) obtained during the same period. Approximately 90% of Irish beef produced is exported.

Table 33 - Beef Export Trade 1995 to 2001⁹

	1995	1996	1997	1998	1999	2000	2001
Live Cattle Exports – '000 head							
UK	18	10	27	5	18	27	50
EU	89	41	23	137	324	311	40
Other Countries	263	139	7	29	74	65	11
Total	370	190	57	171	416	401	101
Processed Beef Exports '000 tonnes (carcase weight)							
UK	100	60	95	85	95	125	210
EU	158	100	90	130	150	135	75
Other Countries	183	265	265	295	309	255	95
Total	440	425	450	510	554	515	340
Cattle Slaughtering at Meat Export Premises – '000 head	1,363	1,508	1,675	1,753	1,950	1,755	1,783

Table 34 - Beef Bought into Intervention (Tonnes Carcase Weight) 1996 to 2001

1996	1997	1998	1999	2000	2001
51,807	54,215	17,364	9,612	0	8,123

In addition, during 2001, 277,860 animals representing a total tonnage of 90,523 were slaughtered under the Purchase for Destruction Scheme, and some 61,000 tonnes of beef, representing an estimated 215,000 animals (mainly in the form of cow beef) was taken in under the Special Purchase Scheme.

Table 35 - Cattle Prices 1996 to 2001¹⁰

	1996 €/kg	1997 €/kg	1998 €/kg	1999 €/kg	2000 €/kg	2001 €/kg
R3 Steers	247.0	230.5	231.5	225.6	248.6	230.8
R3 Heifers	245.9	233.1	229.3	218.5	244.3	233.6
O3 Cows	194.1	188.3	180.3	160.1	183.4	167.5

Committee Enquiries

In April 1996 the Minister for Agriculture, Food and Rural Development established an expert advisory committee with the following terms of reference:

'To report in the first instance on the transmissible spongiform encephalopathy (TSE) situation in ruminants in Ireland, and in particular to establish options in the light of the current state of scientific knowledge for an enhanced programme for the elimination and prevention of the disease in this State.'

The Committee reported in July 1999 and stated that the BSE controls in place were adequate provided that they were stringently implemented as evidenced by independent auditing procedures and total transparency

⁹ An Bord Bia Annual Meat Review and Outlook 2001/02 (2001 figures are estimated).

¹⁰ An Bord Bia, Annual Meat Review and Outlook 2001/02 (2001 figures are estimated).

regarding their enforcement.

However, the Committee did recommend a number of additional procedures to prevent the transmission of the BSE agent, including

- Burial of BSE suspect animals on farms should cease.
- Effective incineration facilities for BSE carcasses should be provided as a matter of priority.
- The mandatory veterinary anti mortem examination, provided for in EU Regulations, should be rigorously implemented at all meat plants and abattoirs. The efficacy of the procedures should be continuously reviewed and externally audited.
- All cattle movements should be controlled and recorded and the records made available for inspection.
- Research within Ireland into BSE and related conditions was considered to be essential in order to develop local expertise in this field. The State should not be solely dependent on research conducted elsewhere.

On farm burial of BSE infected animals ceased in October 2000. Since 1996 BSE and scrapie controls are independently audited on an annual basis and sometimes bi-annually by the Food and Veterinary Office of the European Commission. The Food Safety Authority of Ireland also carries out periodic reviews.

The Scientific Steering Committee of the European Commission carried out a risk-based assessment of BSE controls in 25 countries in May 2000, including Ireland. It assessed Irish controls as being 'optimally stable' from 1 January 1998, stating that all three main stability factors (feeding, rendering, SRM removal) were in place, well controlled, implemented and evidenced, and the procedures should fully prevent propagation of BSE infectivity.

Research

As BSE is a disease which originated in the UK and since the UK has had far more cases than any other country (over 180,000), that country became the logical site of primary research in relation to the origin, transmission and pathogenesis of the disease. Over the years, the UK has undertaken a number of lengthy, complex and very costly experiments, the results of which have been used by the international scientific community in understanding BSE. The Department's approach has been to concentrate resources on a number of projects designed to add to current scientific knowledge taking account of research findings generated elsewhere, and to build epidemiological and practical expertise both at central and local level. Research into BSE in Ireland, under the aegis of the Department, can be divided into four main categories:

- Projects carried out on behalf of the Department under the EU Food Sub-Programme
- TSE projects funded under the EU Food Research Measure
- Projects funded by the Department carried out as part of the Department's involvement in committees such as the BSE Scientific Advisory Committee, the BSE Sub-committee and CJD Committee of the Food Safety Authority of Ireland
- Other Research – collection and monitoring of epidemiological information in relation to each case of BSE including a number of projects undertaken by both laboratory and headquarter staff.

Some of the projects carried out under the above categories were in relation to scrapie disease in sheep, which may act as a possible masking agent for BSE. Because of the hypothetical risk that BSE may occur in sheep, the Department has implemented a control policy with a view to eradicating TSEs in the sheep population as soon as possible.

The Department expended approximately €2.4m since 1997 on TSE related research.

Conclusions

- The Department, based on the opinion of the international scientific community that contaminated animal feed is the prime cause of BSE in cattle, is confident as a result of the measures it has taken to cut off the supply of contaminated feed, that the number of cases will decline substantially within the next 3 to 5 years. However, in terms of complete eradication, it may be the case that, as in other diseases, as yet unidentified factors may have an influence on whether the disease can be fully eradicated and the time span over which this may occur.
- The limited checks carried out on audit would tend to confirm that the surveillance and control measures in place in terms of testing of carcasses, removal of specified risk material, control of meat and bone meal, depopulation of infected herds and the tracing and slaughtering of infected animals cohorts and progeny, are being applied.
- On the assumption that the Department's confidence on the future epidemiology of the disease is well founded, some of the costs of controlling and eliminating the disease, such as compensation for herd depopulations should decrease substantially over the next two to five years. However testing for the disease is likely to continue at a significant level for a longer period in order to reassure consumers and monitor the disease levels. The restrictions in relation to meat and bone meal are also likely to continue and to result in increased rendering costs of waste animal material which will have to be borne by the Exchequer and/or the industry, unless a cheaper method of safe disposal can be found. In this regard the level of Exchequer subsidy for rendering operations and the storage and disposal of meat and bone meal, which cost €66m in 2001, should be kept under review.
- In the event of the subsidising of rendering operations continuing in the longer term it would seem prudent that the subsidy be directed towards the rendering of the high risk SRM rather than, as at present, the low risk carcass material to remove any possible financial incentive which might exist to dispose of it illegally.
- The review indicated that the controls and procedures in place in relation to expenditure incurred on the programme were satisfactory.
- The effort to retain and sustain markets would appear to have had reasonable success. However it would seem that confidence in beef will only be fully restored with the elimination of the disease and the belief by consumers that beef is not a causative factor in vCJD or in any other human disease. In this regard it is likely that resources prudently invested in ensuring the highest standards of safety and quality in beef and in food products generally will yield economic as well as health benefits.

8.2 FEOGA Guarantee Expenditure - Ewe Premium Scheme

Under the Ewe Premium Scheme, farmers holding a Ewe Premium quota are entitled to receive payments on the number of eligible ewes applied for, up to the limit of that quota, subject to their compliance with the terms and conditions of the scheme.

The scheme is operated in Ireland by the Department of Agriculture Food and Rural Development on behalf of the EU, which funds the scheme. The EU determines the rules regarding eligibility, rates and timing of payments, etc. and has also set down control procedures which the Department is obliged to follow to ensure that payments are only made for eligible sheep.

The Department paid €59.08m under the 2001 scheme to 37,692 applicants in respect of 4,066,802 sheep.

All applications for Ewe Premium are subject to administrative controls. In addition a selection of applicants' flocks are physically inspected. Farmers are also obliged to maintain flock registers and details of ewes purchased and sold to provide documentary evidence as to numbers of ewes which they own and these may also be inspected by the Department, particularly if there is doubt following the physical inspections as to the numbers of sheep eligible for payment. The flocks which are physically inspected each year are selected following a risk analysis of the applications for premia. EU rules require that a minimum of 10% of flocks be physically inspected each year.

Farmers are penalised if found to have claimed for more than the eligible number of animals in their possession. A sliding scale is in operation in relation to penalties. For flocks of over 20 ewes the penalties vary from the actual amount over-claimed where the discrepancies are less than 5% to the disallowance of the total premium claimed where the discrepancy is greater than 20%. Slightly different rates of disallowance apply for flocks of under 20 ewes. Applicants found to have made false declarations are excluded from the scheme for one year if found to have done so through serious negligence, and for two years if found to have done so intentionally.

The EU carries out various audits each year on an ongoing basis to ensure that EU schemes including the Ewe Premium Scheme, have been administered by the Department in accordance with EU standards, and if deficiencies are found it may impose penalties on the Department.

Following the discovery of a Foot and Mouth infected animal in the Cooley area of County Louth in March 2001, a cull of all farm animals in the area was undertaken to prevent the spread of the disease. The culling exercise presented an opportunity to the Department to ascertain and verify the number of sheep owned by farmers in the area and to compare these numbers to the numbers on which ewe premia had been claimed. Such an exercise was commenced by the Department in March 2001.

Following the cull, an interim assessment of Ewe Premium applications in Cooley in April 2001 relating to 37,165 sheep, indicated that the number of ewes on which premia had been applied for was 6,625 greater than the total number of ewes culled that were entitled to premia.

The interim assessment indicated that of the 257 farmers who had applied for ewe premia in the Cooley area, 107 had deficits. Of these 51 had deficits of 20% or more accounting for 5,848 of the difference of 6,625, while the remaining 56 had deficits of less than 20% accounting for the remaining 777 difference. These 107 cases were investigated by the Department.

The Accounting Officer supplied me with the following information in relation to the investigation and the administration of the scheme generally:

- Up to the end of July 2002 investigations were completed in 92 cases. 27 were excluded from the scheme for two years, 7 were excluded for one year and 2 had their claim disallowed in full. A further 35 had their claims reduced, while 21 were paid in full. Investigations have not been completed in another 14 cases and one applicant has died and probate is awaited.
- 24 cases are being investigated by the Gardaí and Department officials have provided the Gardaí with statements and are assisting the investigation. The Department has been informed that a file is being prepared by the Gardaí for submission to the Director of Public Prosecutions.
- A detailed breakdown of the 71 cases on whom penalties have been imposed is shown in Table 36.

Table 36 - Cases in which Penalties were imposed

No of applicants	Number of Ewes claimed	Amount claimed €	Penalties Imposed	Penalties as % of amounts claimed	Amount Paid after Penalties €
14	2,992	47,055	1,479	0% to 10%	45,576
12	1,643	25,839	3,329	10% to 20%	22,510
7	603	9,483	2,446	20% to 30%	7,037
2	140	2,056	765	30% to 40%	1,291
2	75	1,180	1,180	100%	Nil
7	511	8,036	8,036	100% - one year exclusion	Nil
27	2,504	39,380	39,380	100% - two year exclusion	Nil
71	8,468	133,029	56,615		76,414

- The Accounting Officer supplied the following details in relation to the level of serious irregularity detected from Departmental checks and inspections carried out in previous years, of cases where the sheep deficits exceeded 20% of the numbers claimed and where the full amounts of the premia claimed were disallowed:

Table 37 - Cases in which Premia were disallowed

	Number of Applicants	One year exclusion	Two year exclusion	Deficit greater than 20% - Full claim disallowed
1999	43,704	80	98	61
2000	41,209	97	101	81
2001	38,630	135	118	72

As to whether there were particular circumstances existing in the Cooley area which might account for the high rate of excess claims, relative to the rates indicated as a result of Departmental inspections, the Accounting Officer stated that Cooley was the only area in Ireland in which mountain commonage land straddles the border.

He went on to state that following the Cooley findings the Department had carried out detailed checks of ewes on commonages in Counties Kerry, Galway, Mayo, Sligo and Kildare. The overall level of non-compliance found following these checks was generally in line with normal inspection findings.

- As to whether, in view of the Cooley findings, he was satisfied that the checks, inspections and penalty regime in place were generally effective in detecting excess claims and were a sufficient deterrent against non-compliance with the scheme rules, the Accounting Officer stated that all applications for premia were subject to administrative controls, and that under EU Regulations a minimum of 10% must be selected for on-farm inspection using risk analysis. The percentage of applications subjected to on-farm inspection in Ireland had, apart from the exceptional situation in 2001, always exceeded the minimum 10% and stood at 14% in 2002. In addition, extensive use was made of risk analysis in selecting cases for on-farm inspection. Well in excess of 70% of on-farm inspections were unannounced except in mountain commonage areas where a maximum of 48 hours notice (as provided for in EU Regulations) was given, because of the difficulty in assembling sheep for inspection in these areas. All controls both administrative and on-farm inspections were carried out during the 100-day retention period.

- The application and retention periods for the scheme were the same on both sides of the border, and where appropriate, simultaneous inspections were carried out.
- The Department was satisfied that the checks, inspections and penalty regime in place were generally effective and that the introduction of individual sheep tagging in 2001 would further enhance compliance. From the experience gained in 2001 in checking supporting documentation, greater emphasis would be put on authenticating supporting documentation in cases where it was believed that the applicant had made an intentional false declaration.
- While the European Commission has been kept informed of the findings in Cooley and of the control arrangements applied generally in 2001, it had not reviewed the findings to date. However a final report would be made to the Commission when processing of all remaining Cooley cases had been completed.
- There had been no negative findings and consequently no financial corrections following European Commission audits on the implementation of the Ewe Premium Scheme in Ireland over the past 5 years.

8.3 Interest Payments under the Prompt Payment of Accounts Act, 1997

The Prompt Payment of Accounts Act, 1997, obliges public bodies to pay their suppliers on time. Invoices must be paid within the period stated in the related contract or, if a contract does not apply, within 45 days. The Act also obliges bodies to pay interest where payments are not made within the time limits specified in the Act.

Penalty interest payments totalling €707,735 were incurred in 2001 by the Department under the Act. The penalties were incurred by most divisions of the Department and were in respect of some 3,469 invoices totalling €73,316,268, which represented approximately 25% of the value of all payments falling within the terms of the Act. The average payment delay in excess of the 45 day statutory limit was 38 days.

I enquired from the Accounting Officer as to the reasons for incurring such a significant amount of penalty interest and if he was satisfied that the payment of the interest could not have been reasonably avoided. I also enquired if the late payments were due in any way to deficiencies in the processing of payments and if so had such deficiencies been corrected, and if he was satisfied as to the ability of the Department to comply with the Act in future.

The Accounting Officer informed me that the following exceptional factors impacted on the Department's payment systems in 2001:

- The outbreak of foot and mouth disease in Co. Louth required the implementation of a wide range of emergency measures. In addition to the exceptional payments directly arising from these measures, many staff members were diverted to control duties relating to the disease outbreak and this unavoidably disrupted the normal processing of payments in many divisions of the Department.
- The introduction at short notice of a number of new and large schemes in 2001, and the reopening of beef intervention in September 2001, due to major difficulties being experienced in the beef market. In particular, the Purchase for Destruction Scheme was introduced in January 2001 with only two weeks notice. It took some time to put adequate staff in place to operate the scheme, which proved to be very complex to operate and consequently presented many difficulties in the timely authorisation of payments. The complexity and scale of the scheme gave rise to the need for detailed veterinary control documents, which generated many queries before payment could be authorised by a limited number of staff. The value of invoices under this scheme amounted to some

€36.6m, with many individual invoices for substantial amounts. Invoices for sums in excess of €300,000 were not uncommon and consequently significant interest penalties were incurred for relatively small delays in processing payments.

- At the start of 2001, a scheme to support the rendering industry was introduced following the ban on the feeding of processed animal proteins to farmed animals. Implementation of this scheme put a strain on an already stretched Department, and it took time to put procedures in place to efficiently process payments, which was also hampered by staff turnover.
- The Department introduced a new accounts system in July, which increased workloads in line divisions and in the Accounts Division. The new system necessitated the production of a separate payment authorisation for each invoice whereas in the old system many invoices could be processed on one such authorisation. The new system also gave rise to delays in processing payments as staff familiarised themselves with it.

The Accounting Officer pointed out that the late interest paid by the Department in 2001 was mostly incurred in the second and third quarters of 2001 while the Department was responding to the difficulties presented by the above events. Efforts had been made to expedite payments and the levels of interest incurred has also been the subject of detailed ongoing management review which has led to a steady reduction in such interest payments.

He stated that the difficulties which resulted in late payment penalties continued at a declining level into the early months of 2002 and had now been largely resolved, and that all Divisions had been advised of the need to ensure strict compliance with the Act.

8.4 Ballaghaderreen Fire Case Settlement

I referred in my Annual Report for 1999 to the Department's involvement in litigation since 1992 arising from a fire, which broke out at a cold store in Ballaghaderreen, Co. Roscommon in January 1992. About seven thousand tonnes of intervention beef with an approximate value of €25.2m, which had been stored there on behalf of the Minister for Agriculture, Food and Rural Development was completely destroyed.

Intervention beef is the property of the EU, but the Department, as the intervention agent in Ireland for the EU, is responsible for its safe custody and is obliged to compensate the EU for any loss, which may occur. Thus, the Minister was obliged to refund €25.2m to the EU in respect of the beef destroyed. The cost of the refund was added to the Department's ongoing borrowings from which it funds all FEOGA expenditure until EU funds are drawn down. Further costs sustained involved clean-up expenses of €1m. The Commission has proposed a further correction of €11.4m to convert the intervention price for carcase weight into boneless yield. This arises from the retrospective application of a regulation introduced in 1993, one year after the fire.

Since 1990 the Department had insured against the risk of financial loss in regard to intervention beef, through a broker based in Ireland. However, following the fire, the principal insurers repudiated liability and initiated legal proceedings to establish that they were not on cover. A complex series of legal issues relating to liability, value and jurisdiction gave rise to 16 independent High Court actions involving over 70 insurers and brokers based in Ireland and abroad.

Without prejudice settlement negotiations between the legal representatives of the Department and of all parties to the litigation commenced in October 2001. In April 2002 a written settlement was concluded by

agreement between all of the parties. Following advice received from the Department's legal counsel and the Attorney General, and consideration by the Government, the Minister decided to accept the settlement, under which:

- The insurers and brokers pay the Minister €21.93m in respect of the destroyed beef.
- All legal actions between all parties will be struck out by joint request.
- All parties to litigation will bear their own costs.

In addition to the compensation paid to the EU and the clean-up costs at the site, the Department has to date incurred loan interest costs of €15.5m. Legal fees amounting to €2.9m had been paid up to July 2002 but this is likely to increase substantially when the final fees have been determined. Negotiations with the EU in relation to the revaluation of the beef have not yet been concluded, but the Department may incur an extra cost of up to €11.4m in this regard.