1. Introduction

1.1 Background to the Project

1.1.1 The primary aim of the project is to assess the impact of policy change in the beef sector on the nature conservation value of Sites of Special Scientific Interest (SSSIs) and other significant conservation areas. Direct grazing by beef cattle or farming practices associated with beef enterprises are important management tools on SSSIs. At present, these are particularly vulnerable to change under the combined influence of the continuing influence of the 1992 CAP reforms, changing markets for beef and the BSE crisis. However, relatively little is known about the relationship between beef production, agricultural policy and the continued nature conservation interest of SSSIs. There is a need to investigate existing agricultural policy structures to examine the extent to which their design includes nature conservation goals at two differing levels:

- at a basic level, agricultural policy change should not challenge environmental objectives;
- at a more important and sophisticated level, agricultural policy should generate positive conservation outcomes as central components rather than as 'bolted on' measures, peripheral to other goals in the farm sector.

1.1.2 To generate such policy recommendations and identify specific mechanisms, the project has sought also to provide a more strategic and radical outlook on the environmental impacts of beef grazing than that undertaken by the Entec for EN (Entec 1996).

1.2 Research objectives

1.2.1 The four key objectives of the project as set out in the original brief are as follows:

- To assess the general importance and impact of beef production on the natural environment in England and to identify (as far as possible) where, both spatially and under what circumstances, the management of beef cattle are providing positive, neutral or negative biodiversity outcomes, with particular reference to SSSIs and other sites of conservation importance;
- to identify, as far as possible, the relationship between biodiversity outcomes and the current CAP beef regime;
- to explore possible mechanisms for the integration of environmental objectives more closely into the regime, with particular emphasis on the generation of positive biodiversity outcomes as an explicit rationale behind the policy design;
- to identify the internal and external pressures for further reform of the beef regime and the compatibility and defensibility of recommended mechanisms with such pressures.

1.2.2 In fulfilling these objectives, there were two further key requirements of the project:

- that it should be informed by the research already underway on the beef sector in the CAP and the Countryside Project;
- that a survey of a sample of SSSIs and other sites of nature conservation interest should be undertaken.

1.3 Research methods

1.3.1 Because this study draws primarily on *two* distinct and entirely separate surveys, the research methods relevant to each survey are discussed in the relevant chapters and supporting appendices. The farmer survey undertaken for the CAP and the Countryside Project is dealt with in Chapter 3 and the survey of SSSIs in Chapter 4.

1.4 Report structure

1.4.1 Given the wide ranging nature of this project, it is important to clarify at the outset how the report has been structured and what areas of data are drawn upon. Chapter 2 is an overview chapter, not based on any primary data gathering. It is a brief chapter setting out some of the key issues with regard to the role of beef production in maintaining or damaging the natural environment. Chapter 3 provides an outline of current beef policies and recent general trends in the beef sector. Chapter 4 is based on the CAP and the Countryside Project and reports on the findings of the farmer survey and some of the implications for nature conservation management. Chapter 5 presents the findings from our survey of SSSIs. Chapter 6 seeks to pull together the various strands from the previous chapters through an examination of the current policy context and its implications for nature conservation. Chapter 7 turns to a consideration of the future of the beef regime and considers policy scenarios that might meet EN's objectives for biodiversity on its own sites of special significance (primarily SSSIs and NNRs) and in the wider countryside. Conclusions and recommendations are presented in Chapter 8.

2. Beef production and the natural environment

2.1 Introduction

2.1.1 This chapter provides a brief commentary on the significance of beef grazing to the conservation resource of England. It is not intended to give a comprehensive review of the ecological impact of grazing animals on grassland habitats. Rather its purpose is to highlight the key environmental issues raised by the changing nature of beef production in England, with an emphasis on how the traditional importance of beef production systems within low intensity agriculture have been threatened by new productivist forms of agriculture. More detailed analysis of the precise relationship between current beef production systems and biodiversity is dealt with in Chapter 6.

2.2 Traditional beef systems

2.2.1 Beef farming has long been associated with environmentally benign forms of agricultural land management. Many of the cherished habitats and landscapes of England are dependent upon grazing for their ecological and amenity value. These include some sites of the utmost importance for nature conservation such as SSSIs and NNRs. Areas of low intensity farming form a unique farmland biotope and in the British Isles such biotopes are invariably based on grazing regimes with beef cattle, traditionally, pivotal to the farming system (Bignal and McCracken 1996a, 1996b).

2.2.2 But even away from such designated sites there are many areas of value in the wider countryside where beef grazing is, or has been, an important element within a traditional mixed farming system. On lowland mixed farms where pastures have long since been agriculturally improved, there may be small remnant sites of floristic interest, for example on steep banks or in low-lying wet areas. Moreover the mixed pattern of land use on such farms means that other features of wildlife and landscape significance, such as hedgerows, are likely to have been maintained. The place of beef cattle on mixed farms in the lowlands has been crucial to the maintenance of important remnant habitats and the overall appearance of the countryside.

2.2.3 As Entec (1996, p.8) make clear, there "are no readily available figures for the extent of such areas where beef cattle are a traditional and necessary part of the management system". Instead, there is a reliance in the literature upon general observations about the specific relationship between cattle and environment. The crux of the difficulty is that few farm systems are solely reliant on beef enterprises. In lowland areas, beef herds are established as a secondary enterprise in predominantly arable and dairy systems. In upland areas, beef cattle typically exist alongside sheep. Consequently, it is difficult to identify with certainty the environmental impact of cattle *per se*, but it is generally accepted that they form an important element in nearly all low intensity agricultural systems with a high nature conservation value in Britain.

2.3 Productivist agriculture and the post-War development of intensive beef production

2.3.1 Up until the Second World War, a very high proportion of beef enterprises were associated with low intensity agriculture. Northern and western Britain were dominated by mixed farming systems based around cattle and sheep. Even away from unenclosed hill lands there were considerable areas of rough grazing and permanent pasture which had rarely, if ever, been fertilized and were often undrained. Local breeds of cattle were particularly well adapted to these species rich pastures and in many localities formed the lynch-pin of the local farming economy. For example, the Culm Grasslands of west and north Devon, now confined to remnant sites, were widespread and provided pasture for the hardy Red Devon cattle used for both milk and the production of hardy stores. Only in the arable east did anything approaching intensive beef production operate in the first half of this century and here the emphasis was on the purchase of stores from the west country or the midlands

for fattening on arable by-products and grass. But even here there was relatively little emphasis on intensive grassland management.

2.3.2 The system of mutual dependency between east and west, and with it a long tradition of mixed farming, began to break down in the post-war period as successive Governments' policies served to encourage regional specialisation[1]. In the east farmers focused on arable production with a reduction in the grassland area, particularly between 1955 and 1965 (Saunders and Moxey 1994). Cattle numbers declined in most of the eastern counties while they increased dramatically in many western counties where a greater emphasis on dairy production and cattle fattening went hand in hand with grassland intensification. For example, the number of cattle under one year tripled in Dorset between 1945 and 1990 and more than doubled in Cornwall, Devon, Somerset and Wiltshire (Saunders and Moxey 1994). It is true that store cattle and, more especially, sheep are still sold from upland areas to the lowlands[2].

2.3.3 There are a range of problems associated with the intensification of livestock agriculture in general and the issues are well known and have been subject to exhaustive documentation in recent decades. Fuelled by a long period of expansionist agricultural policies since 1939, intensification had a twofold impact on the place of beef cattle within traditional farming systems. On the one hand, the increasing emphasis on arable production in many regions of the lowlands in the post-war period led to impoverished wildlife habitat and landscape as the area devoted to arable crops increased at the expense of permanent and temporary grassland. At the same time, livestock numbers have been maintained and, for long periods, increased through ever more intensive management of grassland, whether for sheep, dairy or beef production. The application of fertilizers and drainage systems to permanent pastures has damaged the ecological importance of many grassland sites within lowland England in the post-war period. The Countryside Survey (CS90) undertaken by the Institute of Terrestrial Ecology and the Institute of Freshwater Ecology has become the major tool for analysing landscape and ecological change in Britain, revealing that between 1978 and 1990 there was a 13% loss of species richness in semi-improved grasslands, 14% in woodlands and an 11% loss in upland grass (Barr *et al* 1986, 1993).

2.3.4 In addition to the issues associated with landscape and wildlife on farms is the increasing concern with natural resource protection in agriculture, particularly the risks of water pollution associated with intensive farming (Howarth 1992, Royal Commission on Environmental Pollution 1992). Again this is an area where there has been mounting concern in recent years. In the arable sector, intensification of production means an increased dependence on inputs of chemical fertilizers and pesticides (Ward *et al* 1993). In livestock farming areas, modern grassland management techniques can give rise to similar concerns over diffuse pollution. But with regard to livestock production, more attention has been paid, hitherto, to pollution incidents (spot pollution) arising from silage effluent or slurry pollution (Lowe *et al* 1992, NRA/MAFF 1990).

2.3.5 Nonetheless, in many respects beef farming has remained one of the least intensive sectors of modern agricultural production. Moreover, the majority of beef enterprises are found on farms characterized by other enterprises chiefly arable, dairy or sheep. Thus, it is impossible to single out beef production for particular criticism. Beef farming has been caught up in the general trends associated with intensification of agriculture but has hardly been at the forefront of these processes. Indeed, in some respects beef has remained a rather traditional sector with intensive beef systems such as bull beef, barley beef and veal production failing to make the impact in British agriculture that was once expected (see Chapter 4).

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[1]For overviews of post-war agricultural policy see: Lowe *et al* 1986, Winter 1996.

[2]Even this trade has been affected in recent years by both the BSE crisis and the rules governing the Sheep Annual Premium Scheme: Winter and Gaskell *et al* 1997.

2.3.6 It is true to say that most beef systems are found on farms with relatively low ecological significance as a consequence of grassland 'improvement' over many years. But on the other hand, beef production has rarely been the direct cause of this decline in ecological value. With the current state of the beef market, it is highly unlikely that it will provide a direct stimulus for changes of this nature in the foreseeable future. This should not, however, lead conservationists to be sanguine on this point. Some of the problems associated with a declining beef sector for the management of habitats are dealt with in the following two sections, but in addition it is important to point out that there may also be direct threats to habitats as a result of changes in farming systems precipitated by the beef crisis. There is evidence of an expansion of arable cropping into grassland areas, including the loss of important permanent pastures as a direct result of the problems facing the beef sector combined with the current attractions of arable cropping [3]

2.3.7 In the uplands, the loss of beef cattle combined with increasing sheep numbers, has led to a particular set of problems, loosely and in some ways rather inappropriately referred to as overgrazing. Beef cattle play a pivotal role in traditional upland management systems in preventing the spread of bracken and coarse grasses such as Molinia to the detriment of heather and the finer grasses. Sheep on their own, as more selective grazers and less heavy tramplers, are less effective management tools in this respect. Thus overgrazing by sheep can lead to degraded vegetation and soils in some sites and infestation by bracken or coarse grasses elsewhere. In addition to the concern over the deteriorating quality of some upland moors, there has recently been work on the nature of upland farming as a whole with more emphasis on enclosed areas and the farming system in its entirety. Bignal and McCracken (1996a) suggest that low-intensity farmland forms a distinct biotope particularly vulnerable to changes in types of stock, mixed cropping patterns, upland management techniques and so forth.

2.4 Post-productivism

2.4.1 Few would deny that the expansionist policy framework which underpinned the changes described above has now changed irrevocably. The hallmark of the CAP reform process of the 1990s has been to place limits on agricultural expansion through market reform, quotas and a degree of modulation. Many commentators have seized upon these changes, and the policy debate in the 1980s which preceded them, to claim that agricultural policy and the agricultural industry itself has entered into a period of profound change, often characterized as post-productivism (Lowe *et al* 1993, Shucksmith 1993). The transition to post-productivism has been characterized as involving shifts from intensification to extensification, from concentration to dispersion and from specialisation to diversification (Bowler and Ilbery 1996).

2.4.2 In many respects these changes are policy driven and to some extent are a feature of policy rhetoric rather than of real changes on the ground. Certainly, a feature of the 1992 reforms has been the emphasis on extensification, which hitherto has been more a semantic device than a real trend in livestock production systems (Winter and Gaskell 1997). Nonetheless, the transition towards a post-productivist agriculture appears to have begun and with it the attendant risks that some farmers and farming systems will be marginalized leading to a neglect of conservation management or that others will respond to difficulties by intensification. The key chapters in the remainder of this report seek to examine different aspects of these issues and to consider the risks and opportunities for nature conservation arising from the changes as they particularly affect the beef sector.

[3] For example, flax and potato production have been highly attractive in recent times and these crops can be grown on land not eligible for Arable Area Payments. However, there is also some evidence of cereal expansion on non-eligible land: Winter and Gaskell *et al* 1997; Lovelace 1997.

2.5 Conclusions

2.5.1 This chapter has sought to summarise some of the key issues surrounding the importance of beef farming to the protection of the natural environment. It is clearly the case that in many instances beef cattle are important agents in the maintenance of ecologically important habitats, but that traditional patterns of production have been transformed by post-war productivist policies.

3. The current CAP beef regime

3.1 Introduction

3.1.1 This chapter has two main functions. First, it provides an overview of the beef regime policies. Secondly, it examines the impact of the 1992 CAP reforms on the beef sector drawing on general contextual information. The responses of farmers, as shown in the CAP and the Countryside Project farmer survey, are dealt with in the next chapter.

3.2 Résumé of current policies in the beef sector

3.2.1 Prior to the 1992 MacSharry reforms, the beef regime relied on price support and intervention buying measures together with the payment of the Beef Variable Premium (BVPS) on finished animals. The BVPS ended in April 1989 and was replaced by the Beef Premium Scheme (BPS). Under the BPS, an annual ceiling of 90 male animals per holding was introduced. The CAP reforms of 1992 produced four main policy impacts in the beef sector.

i. Prices paid to farmers for transferring beef into intervention stores were cut by 15% over three years from 1993/94, with ceilings introduced progressively on intervention purchases from 1993/94 to 1997/98.

ii. A new scheme was introduced for beef producers to offset the costs incurred through falling intervention prices, known as the Beef Special Premium Scheme (BSPS) which replaced the BPS. It is funded by the European Union (EU) and gives direct support for beef producers. The BSPS operates according to four restrictions. First, it pays premiums only on male animals (steers)[4]. Secondly claims are further limited to 90 eligible cattle per holding. Thirdly, a regional ceiling operates in England and Wales if claims exceed 940,380 head, whereupon amounts paid to all producers are reduced in proportion to the excess claims. Fourthly, entitlement is limited by stocking density rules. The stocking density limit has fallen progressively from 3.5 LUs per hectare of forage area in 1993, to 3.0 LUs in 1994, 2.5 LUs in 1995 and 2.0 LUs in 1996[5].

iii. The Suckler Cow Premium Scheme (SCPS) entitlement previously paid to farmers rearing animals from a beef breed for meat was made conditional on possession of a producer quota. Quotas were based on the number of animals receiving SCPS payments in 1992 minus a 1% siphon to form a national reserve. Most farmers (small producers excepted) have to 'use' at least 70% of their quota entitlement or suffer its withdrawal. As with BSPS, entitlement depends on compliance with stocking density rules. The amount of SCPS premium received also varies geographically according to a holding's 'ring-fence designation'. In England two ring fences apply: English Less Favoured Area (LFA) and Great Britain non-LFA. Farmers in the LFAs qualify for additional suckler cow payments through the Hill Livestock Compensatory Allowances (HLCA) Scheme to support extensive livestock farming in the hills and uplands.

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[4] Payments were originally paid twice - at 10 months and 20 months. From January 1997, this was changed to a single payment between 8 and 21 months old.

[5] The calculation of stocking densities is complex and requires a submission under IACS (unless a farmer is exempt from the stocking density rules because of claiming less than 15 LUs in total on the holding). The following stock have to be taken into consideration in calculating stocking rates: dairy cows, breeding ewes on which Sheep Annual Premium has been claimed, male cattle on which Beef Special Premium has been claimed, aged under two years on date of claim, male cattle on which Beef Special Premium has been claimed, aged over two years on date of claim, suckler cows on which Suckler Cow Premium has been claimed (including replacement in-calf heifers).

iv. An Extensification Premium has been made available to producers with a stocking density of less than 1.4 LUs per hectare of forage area. This is payable on both the BSPS and SCPS. Once again, regional ceilings on premium claimed apply.

3.2.2 In summary, these measures were designed to:

- safeguard farmers' incomes whilst reducing the budgetary costs of CAP;
- encourage extensification as a crude environmental concession;
- reduce beef production in dairy herds as a contribution towards reducing beef mountains in the light of restrictions on exports imposed by the GATT agreement on trade, and as a method of controlling BSE;
- maintain seasonal equilibrium in the beef market.

3.3 Impact of CAP '92 Measures

3.3.1 Beef intervention prices were reduced by 6.2% at the beginning of July 1993, by 5.3% by July 1994 and a further 5.6% by July 1995[6] and these reductions were reflected in market prices as shown in Figures 3.1 and 3.2. EU production of beef and veal fell by 4.3% between 1993 and 1994 following an even steeper fall between 1992 and 1993 (Figure 3.3) only to rise again by 2.7% between 1994 and 1995[7]. Although levels of production were still a little above consumption levels during this period, exports meant that intervention stocks sank to negligible levels. However, these trends have to be seen in the context of declining levels of beef consumption in Europe. EU per capita consumption has fallen from 23 kg in 1988 to 18 kg in 1996 and intervention stocks are now growing again, especially in the aftermath of the BSE crisis. An additional factor prompting an increase in the UK beef cattle numbers has been the decline in live calf exports leading to a further, though shorter-term, increase in numbers of beef animals in Britain.

3.3.2 Within the UK, beef production has been at or above 100% of home consumption since the early 1980s. In 1995, the UK was 112% self-sufficient in beef and the sector accounted for 15% of the UK agriculture gross output. Production trends within the beef sector during the period since 1980 are shown in Figure 3.4 which gives general trends in livestock numbers showing significant increases in the size of the beef herd throughout Great Britain but particularly in England. The sharper increase in England is a result primarily of the difference between upland and lowland systems. The increase in beef production since the mid 1980s has taken place primarily on lowland farms, seeking to diversify farming activity. Dairy farms, particularly in the aftermath of the imposition of milk quotas in 1984, were inclined to set up beef enterprises alongside dairy herds[8]. By contrast, the relative profitability of sheep and hill cow enterprises has meant a decline in the number of upland beef systems and an increase in sheep numbers. As England has a higher proportion of lowland than either Scotland or Wales, its beef numbers increased more rapidly than elsewhere in GB.

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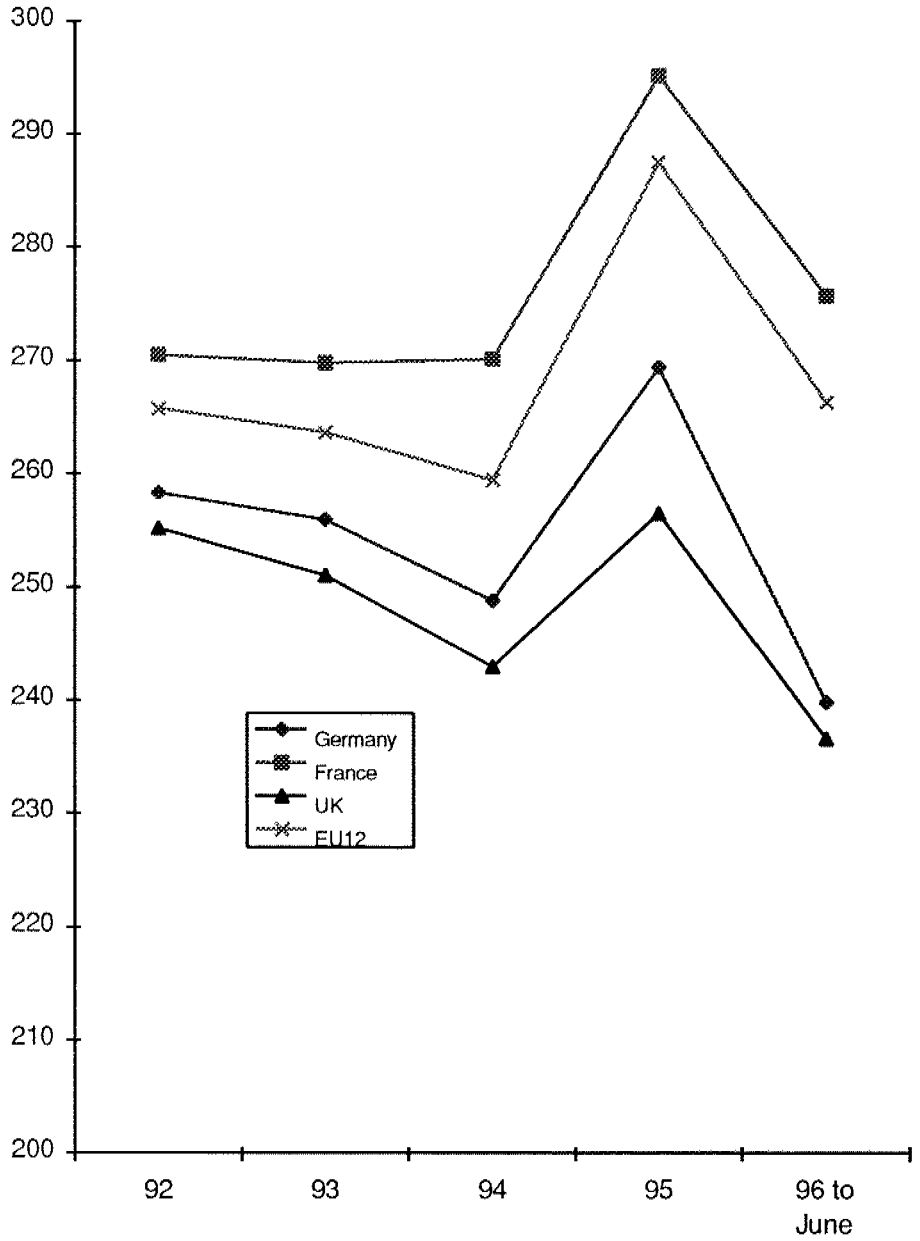
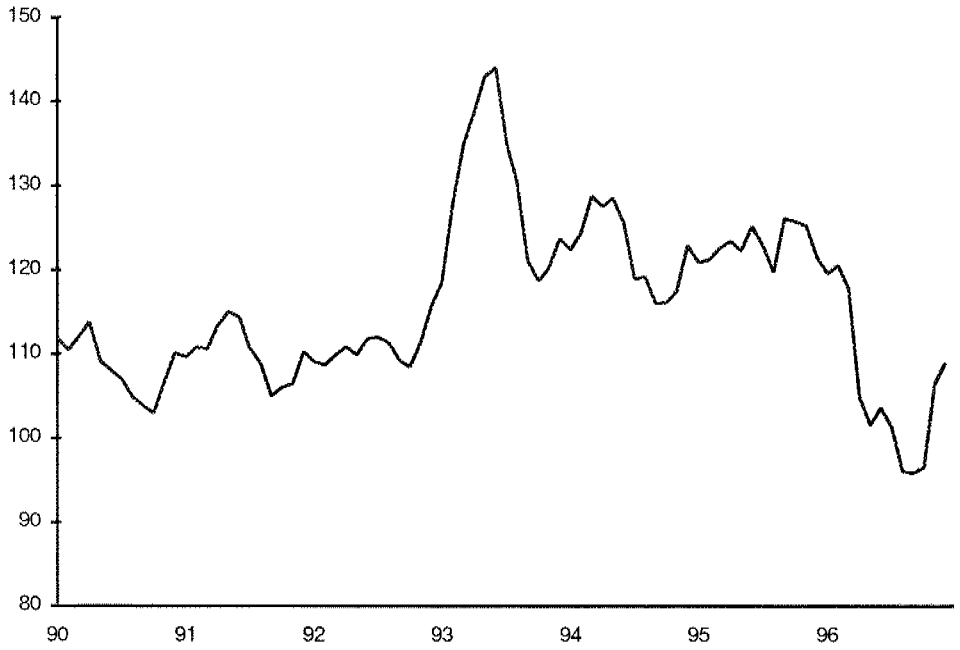
[6] See: European Commission 1996.p4.
[7] ibid. p102.
[8] It should also be noted that the decline in the number of dairy producers during this period is also a factor in the increase in beef production. A farmer who chooses to leave milk production is very likely to turn to beef production as some of the capital items required for beef and dairying are easily transferable (e.g. slurry systems, silage making equipment, etc). Many farmers who quit dairying do so in order to have a simpler less labour demanding farm system; in that context, beef is often perceived as the best alternative to milk production; see Winter 1986 for a discussion of this theme.

Figure 3.1 Average Market Prices for Male Bovines
(ECU/100kg)



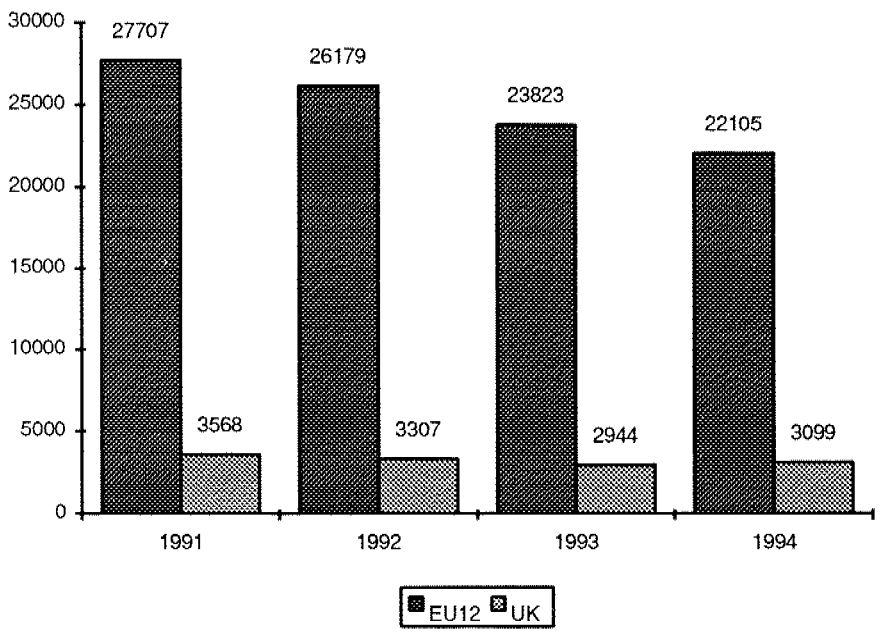
Source: European Commission 1996 and Eurostats.

Figure 3.2 UK Finished Cattle Prices 1990-1996
Monthly Averages (p/kg/lw)



Source: MLC

Figure 3.3 Adult Bovine animals slaughtered
('ooo head)



Source: European Commission 1996. T.296

3.3.3 The European Commission has formally examined the operation of the SCPS in a report assessing the extent to which the sheep and beef regime policies have achieved their objective of stabilising production levels since 1992 (Commission of the European Communities 1996). The report concludes that the quota policy has brought an effective stabilisation of Community sheepmeat production, at around 1.15m tonnes/year, a result which would not have been achievable under the stabiliser mechanism operating previously for the same purpose. However, in the beef sector, there has not been the same degree of curtailment in production, with production levels recovering again after 1994, through a growth in the EU suckler cow herd, despite suckler cow quota. Thus the current state of the suckler cow premium quotas is failing to exert the necessary control on production. This apparent anomaly is explained by two factors:

- the increase in the total claims in 1992 witnessed in all member states (except Greece) who took the option of fixing 1992 as the reference year (i.e. the same year as the introduction of the quotas themselves), as producers responded to the fact that premium rights were now in limited supply. As a consequence premium claims rose by 1.3 million (15%) between 1991 and 1992, which added an equivalent number of rights to the EU total, creating a situation where there was enough quota available across the Union to sustain an increase in suckler cow numbers of 9% between 1992 and 1995.

- the raising of the milk ceiling from 60,000 to 120,000 litres per holding in the mixed suckler/dairy cow enterprises resulted in 821,160 extra rights being created.

3.3.4 Furthermore, as one million rights across the EU remain unused and the support mechanisms in the beef sector may allow producers to keep more stock than they have quota for, complete stabilization of the EU suckler cow herd, and the Community budget which supports it, is not likely to occur in the near future according to the report.

3.3.5 The report also refers to the contrasting ways in which national reserves have been operated by different member states. For example, the UK is cited as administering particularly low national reserves of ewe and suckler cow quota (1% of the total rights), with consequent high levels of demand and administrative difficulties. The UK is effectively chided for creating problems of this nature:

In general terms, the management of the national reserves has not posed insurmountable complications for national administrations, given the important extent to which decision-making was delegated to Member States in this area. However, in the United Kingdom, there has been a significant problem with some producers in both sectors of the so-called 'developers' priority category who, owing to the insufficient number of rights available in the 1993 national reserve, were not initially allocated all the rights they requested. Following a judgement in a national court, the UK authorities decided to reallocate part of the national reserve for this category of producers which has caused a delay in closing definitively the allocation exercise for 1993 and subsequent years. (Commission of the European Communities 1996: p8).

3.3.6 Another area of concern highlighted by the Commission is that of 'ring-fencing' of premium rights which limits the transfer of rights within a member state and the possible negative consequences for the natural environment of the way in which this policy has been administered in some instances:

due to the different criteria which have been used to establish Sensitive Zones in each Member State, a practical consequence of this provision is that rights may not be transferred between all zones or all Member States of the Union. The Commission is aware that, in certain instances, it has been suggested that the 'ring-fencing' of quota within a Member State is beginning to exert a negative impact on the rural environment, by accumulating rights within their boundaries, which is an undesirable consequence of this provision. Therefore, the Commission draws Member States' attention to this topic, with a view to finding a better balance between the socio-economic objectives

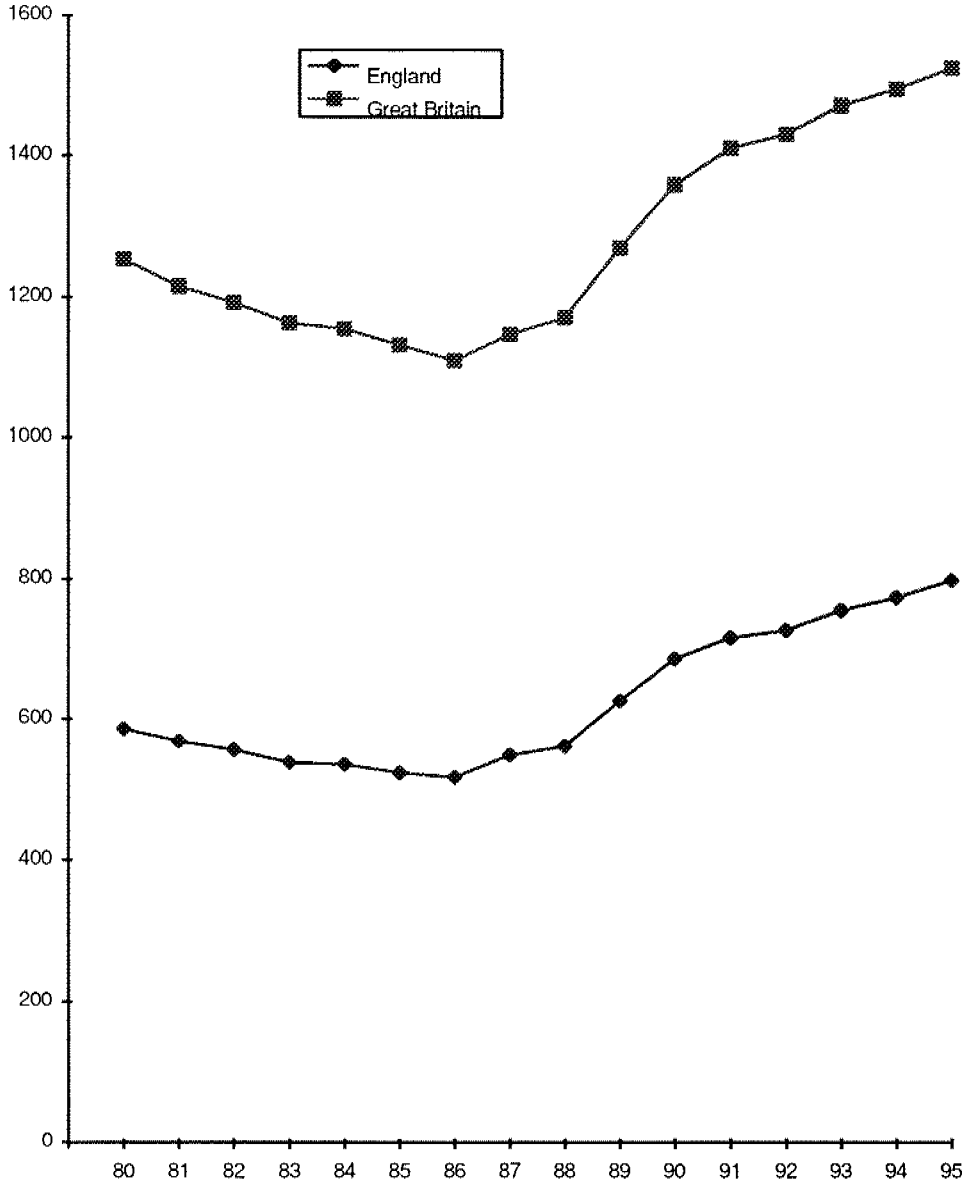
of this provision and certain objective criteria of environmental protection. (Commission of the European Communities 1996: p12).

3.3.7 The report does not cover the BSPS, but it is quite clear that this measure is also not particularly strong in terms of the potential to curtail production levels. Here the implication of stocking rules requires careful consideration. If these had been set at a sufficiently low level cattle numbers and production levels might have been stemmed. In fact the stocking levels are sufficiently high for most farmers to have adapted reasonably well to the impact of the reforms as demonstrated by Gaskell and Winter (1996; see also Winter and Gaskell *et al* 1997) and later in this chapter.

3.3.8 As a consequence, whereas the structural surpluses of most other commodities have been dealt with by the '92 reforms (eg milk, cereals, and sheepmeat), beef continues to present problems to the Commission at a time when consumption (even before the BSE crisis) was continuing to decline. Some of the crude trends in stock numbers are shown in Figures 3.4, 3.5 and 3.6 which demonstrate the sharp increase in beef cattle numbers in England and GB from the mid 1980s by comparison with the trends for sheep and dairy cows.

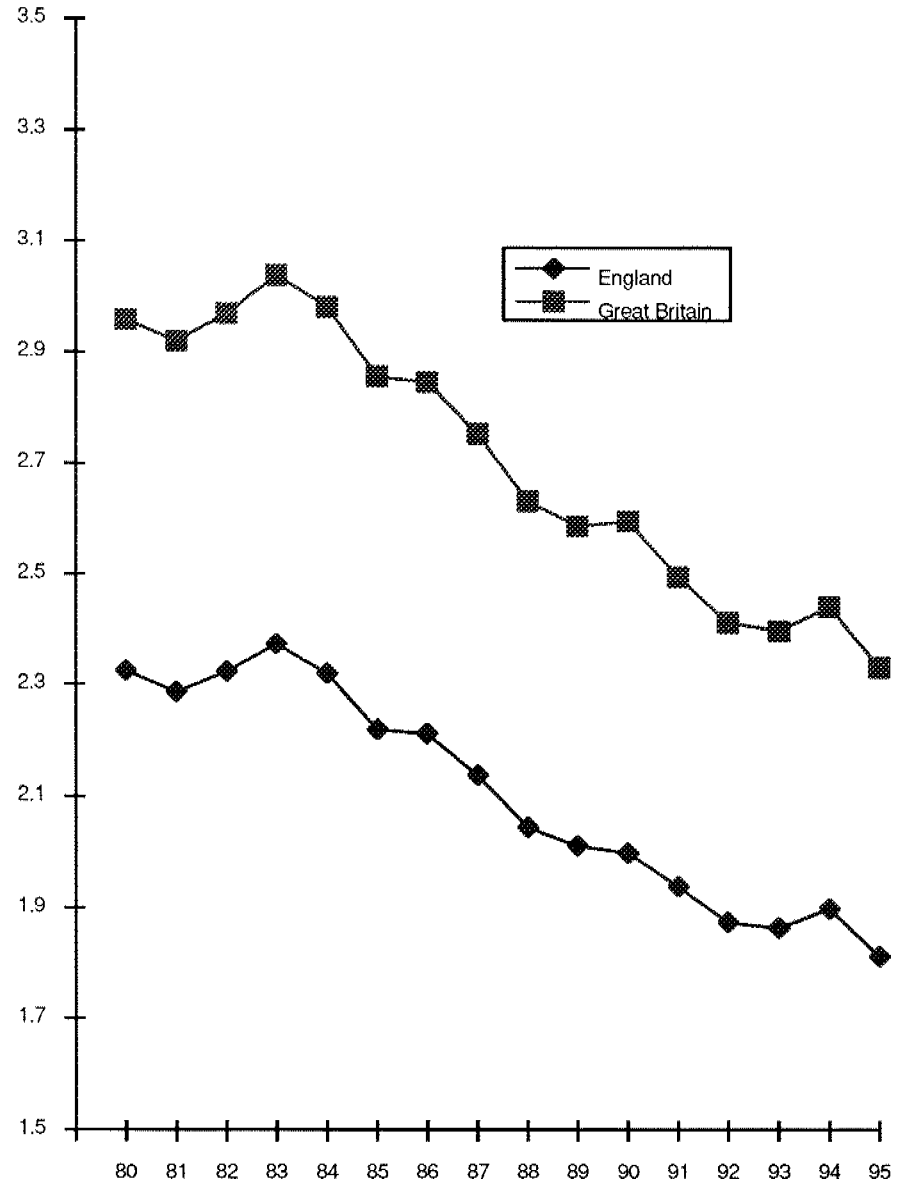
3.3.9 Figure 3.7 and 3.8 show the average net farm income for lowland and LFA cattle and sheep producers in England. Incomes in England recovered from the low base in 1991/92 as the level of cattle output rose and costs remained static. Incomes rose in 1992/93 with higher prices for fat and store cattle contributing to a higher output. There were further increases in income in 1993/94 as beef and sheep output increased, encouraged by the direct livestock subsidies. In 1994/95, average net farm incomes fell by 32% in the lowland sector in England as a result of lower beef prices, a fall in the rate of sheep annual premium and a 7% increase in feed costs.

Figure 3.4 Beef Herd 1980-1995 ('000 head)



Source: Annual Agricultural Census

Figure 3.5 Total Dairy Herd (million head)

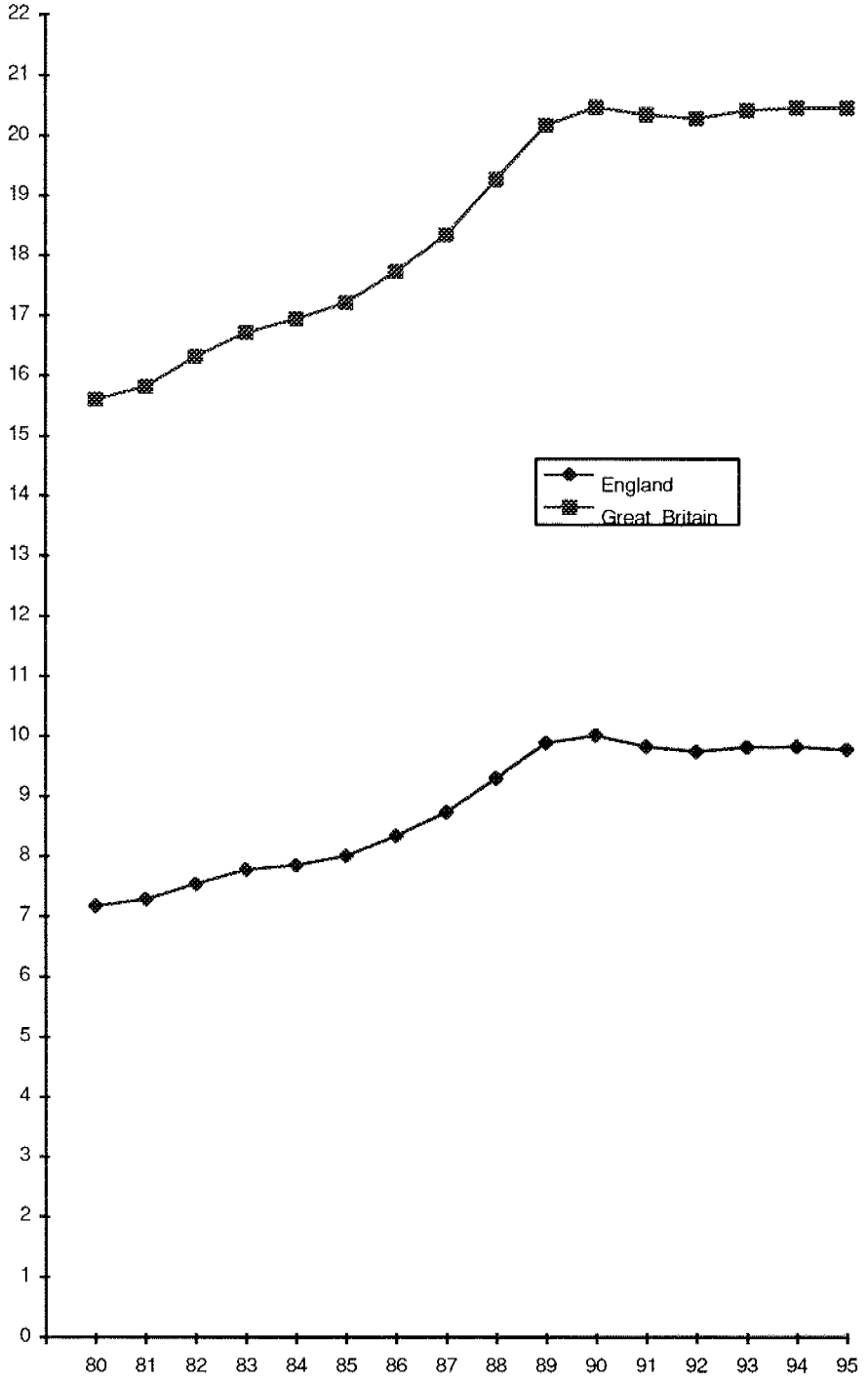


Source: UK Dairy Facts & Figures (annual)[9] and June Census

Nb. Figures refer to cows and heifers in milk and cows in calf but not in milk on June 4 each year.

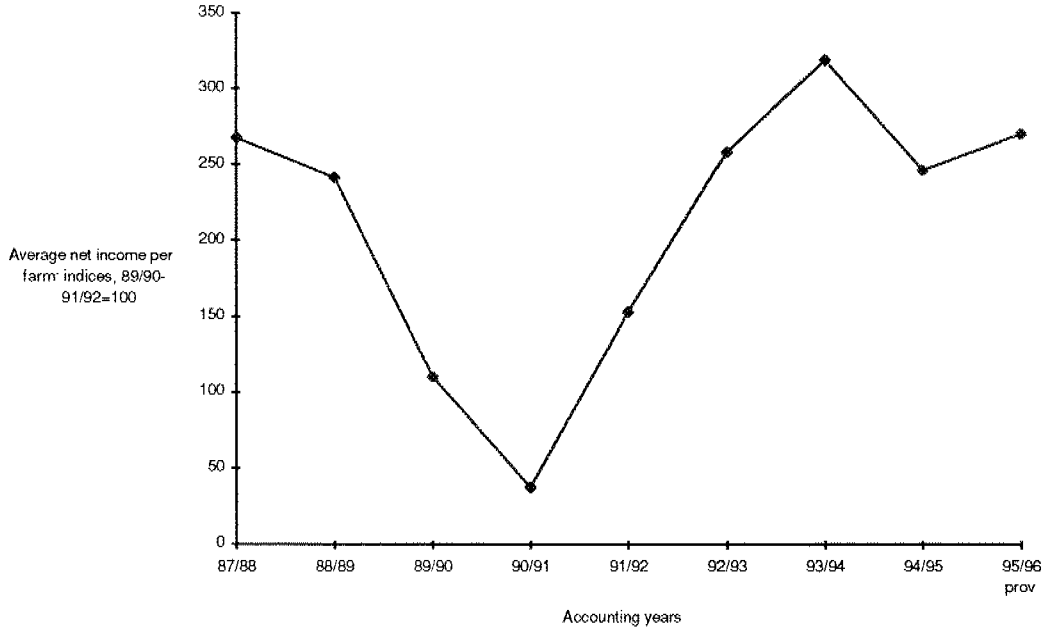
[9]Now published by the National Dairy Council.

Figure 3.6 Sheep 1 year and over (millions)



Source: Annual Agricultural Census

Figure 3.7 Cattle and Sheep (lowland):
Net Farm Incomes in England
Current Prices



Source: Farm Incomes in the United Kingdom

3.3.10 The following key conclusions from this section may be drawn:

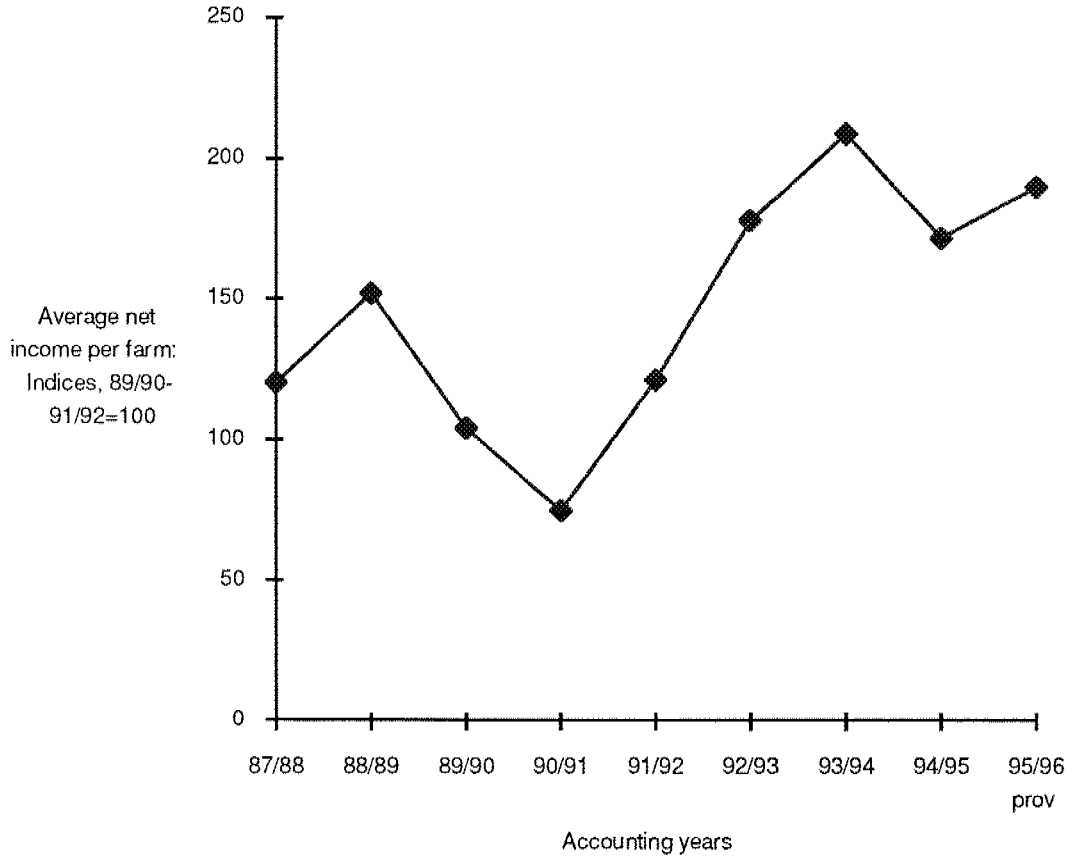
- The decline in dairy cows associated with the impact of milk quotas and farmers' management response to quotas clearly led to a switch towards beef production in the mid to late 1980s in England, accelerating rapidly as decisions taken in 85/86 impacted on production levels in 89/90.

- The stabilisation of sheep numbers from 89/90 (*before* the imposition of ewe quota) in response to the reversal of the trend towards increased profitability of sheep which had been so strong from the early 80s. This also led to a switch towards beef production in the lowlands.

- The '92 reforms have been insufficient to stem the trend towards increasing beef cattle numbers.

- There is a marked contrast between the experience of the lowlands, where beef production has increased in importance, and the uplands where the relative profitability is still in favour of sheep and where beef cattle in a number of areas have been declining in importance despite the relative weakness of the supply control mechanisms in the beef sector.

Figure 3.8 Cattle and Sheep (LFA):
Net Farm Income in England
Current Prices



Source: Farm Incomes in the United Kingdom

3.4 The BSE crisis

3.4.1 Finally in this preliminary overview of developments in the beef sector, it is important to mention the impact of the BSE crisis. The announcement in the House of Commons in March 1996 that there might be a link between BSE and the human equivalent CJD served to escalate concern about the problems of the beef sector. A number of measures aimed *both* at dealing with the disease itself and dealing with the continuing structural problems in the sector have been taken and these are summarised in Table 3.1 below. These short-term measures remain to be developed into a coherent policy network which simultaneously retains beef production as a viable farming enterprise option for farmers and ensures that consumers experience minimal exposure to BSE. The likely impact of BSE on the numbers of cattle and the systems under which beef cattle are kept are potentially far reaching[10].

[10] Although it should be noted that consumption levels of beef in the EU which slumped by 30-40% in the immediate aftermath of the crisis in March/April had returned to just 10-15% below early March levels by October: Agra Europe No 171, October 11th.

Table 3.1 Summary of BSE Special Policy Measures taken after March 20th 1996

30 month plus cattle slaughter scheme	£550 million (70% funded by the EU) to compensate for the removal of cattle from the food chain. Payment of 85.6p/kg liveweight (lw) and 171.2p/kg deadweight (dw) is paid for each cull animal (reduced from the 21 October to 75p per kg lw and 150p per kg for cows and 127 per kg for other animals dw). By mid-October nearly 630,000 animals had been slaughtered under the scheme in the UK.
Top-up payments for steers and heifers	Top up payments for steers and heifers - £80 million for steers and heifers over 30 months of age slaughtered under the scheme. From 18 June the payment is 15p/kg lw and 30p/kg dw. Payments to cease from 2 November.
Additional premia payments	An additional 23 ECU (£19.70) on BSP and 27 ECU (£23.13) on SCP payments to be paid this year only (budget = £81 million).
Beef marketing payment scheme (Beef (Marketing Payments) Regulations 1996 (SI No. 2005))	A one-off payment, flat rate headage payment of £66.76 for adult clean cattle marketed between 20 March and 30 June for slaughter for human consumption. More than 29,000 claims were made in the UK covering some 450,000 animals. (budget = £29 million).
Bringing forward of BSP Payments	In August the European Commission authorised Member States to bring forward the payment of the major part of the existing beef premiums, in order to offer producers immediate relief - by using credits from the 1996 budget - and to avoid overstepping the agricultural budget in 1997 when the sector's recovery plan (still under discussion) is implemented.
Mature Beef Assurance Scheme	This allows animals of 30-42 months to be slaughtered for human consumption provided they are from specialist beef herds never exposed to the risk of BSE. Cattle under this scheme will have been reared mainly on grass. A fee of £35 is payable to join the scheme, plus £3.35 for each registered animal. It is estimated that fewer than 1,000 herds are eligible to join.
Calf processing aid scheme	An EU scheme to destroy very young male calves of specified dairy breeds. A compensation payment of £103.47 is paid for each calf. By mid October almost 270,000 calves had been slaughtered under the scheme in the UK. From late August the maximum eligible age was raised from 10 to 20 days, leading to an increased uptake[1], now running at around 18,000 per week.
Intervention purchases	Opening up of intervention from the beginning of April. From mid-April to mid-October, more than 350,000 tonnes of beef were purchased into intervention in the EU, nearly 30,000 tonnes of which was in GB. The annual ceiling on intervention to be raised to 460,000 tonnes in the EU this year (includes new measures for light young steers weighing min 300 kg from September).
Aid scheme to dispose of stocks	£80 million to abattoirs and cutting plants to dispose of unassailable stocks (approximately 32,000 tonnes in GB).
Emergency aid to the slaughtering industry	£30 million in compensation for abattoirs which continue to kill cattle. Payment of £8.75 for every adult bovine slaughtered during 1995/96
Aid to the rendering industry	£118 million direct aid to the rendering industry to ensure the effective maintenance of the rendering industry.