

EXECUTIVE NOTE

THE TRANSMISSIBLE SPONGIFORM ENCEPHALOPATHIES (SCOTLAND) REGULATIONS 2010 SSI/2010/177

The Scottish ministers make the above Regulations in exercise of the powers conferred by section 2(2) of, and paragraph 1A of Schedule 2 to, the European Communities Act 1972(a) and all other powers enabling them to do so.

Policy Objectives

The purpose of the instrument is to amend arrangements for administering and enforcing Council Regulation (EC) No. 999/2001 (the ‘EU TSE Regulation’) which lays down rules for the prevention, control and eradication of certain transmissible spongiform encephalopathies (‘TSEs’) such as bovine spongiform encephalopathy (‘BSE’) in cattle and scrapie in sheep and goats.

There have been a number of amendments to the EU TSE Regulation since the 2006 Regulations come into force. The amendments reflect the declining prevalence of BSE in cattle, new scientific advice and technological advances. The 2010 Regulations would amend the 2006 Regulations as follows:

- Creation of an offence requiring the sampling for BSE of, and the removal of specified risk material from, eligible cattle which are slaughtered at places of slaughter other than slaughterhouses (i.e. home slaughter). Failure to comply with these provisions is an offence.
- An option for the slaughterhouse operators to submit samples for BSE testing to laboratories approved in other Member States, in accordance with Directive 2006/123/EC (the ‘EU Services Directive’).
- Removal of the requirement for abattoirs that do not handle cattle requiring BSE testing to have an approved Required Method of Operation .
- The addition of a new schedule to address Community obligations in relation to the suspicion of TSE in non-bovine, non-ovine and non caprine animals (specifically required in relation to deer).
- New powers for the Scottish Ministers to issue a direction to operators of animal by-product disposal plants to select and sample fallen sheep, goats and deer for TSE testing. Failure to comply with such a direction would be a new offence.
- The following new provisions, which are required in line with Commission Regulation No. 103/2009, concerning the use of milk products from sheep and goat holdings where TSE is suspected or confirmed:

- New powers for inspectors to serve a notice to prohibit the movement of sheep or goat milk or milk products from a holding on which a TSE is suspected in sheep or goats, while permitting its use within the holding of origin.
 - Creation of an offence for using sheep or goat milk or milk products from a holding on which classical scrapie is confirmed, produced prior to the removal of all goats and genetically susceptible sheep, as feed for ruminants (except on the holding of origin) or for exporting them, or for failing to comply with the other requirements laid down in these paragraphs regarding their storage and transportation.
 - New powers for inspectors to serve a notice to destroy sheep or goat milk or milk products produced between the dates of official suspicion and killing, on a holding on which BSE cannot be excluded after testing a sheep or goat. The Scottish Government will pay compensation as set out in Schedule 4.
- Amendment requiring farmers to identify sheep and goats on holdings on which atypical scrapie is confirmed, as directed by the Scottish Ministers.
 - Amendment administering the derogation in the EU TSE Regulation allowing Member States to delay the killing of sheep flocks and goat herds in which classical scrapie has been confirmed, by enabling farmers to apply in writing to the Scottish Ministers setting out the reasons for the application.
 - Amendment permitting the feeding of fishmeal to unweaned ruminants in reconstituted milk replacer in line with Commission Regulation (EC) No. 956/2008, whilst maintaining the existing ban on feeding fishmeal to adult ruminants.
 - Amendment permitting the Scottish Ministers to permit the feeding to farmed animals, of feed materials of plant origin and feed containing such products, in which insignificant amounts of bone fragments of environmental origin had been detected, on the basis of a favourable risk assessment, in line with Commission Regulation (EC) No. 163/2009.
 - Amendment permitting the export of pet food containing processed animal proteins of ruminant origin provided that it is produced and labelled in accordance with the Animal by-Products Regulations, in line with Commission Regulation (EC) No. 956/2008.
 - Other minor amendments.

Consultation

A formal public consultation was carried out between 29 December 2009 and 26 January 2010. The consultation was sent to 175 organisations and private individuals, including industry stakeholders and consumer organisations. We received 7 responses to the consultation

While the Government remains committed to the principle of table valuations for animals killed to control TSEs, it has decided not to proceed with the proposals for standard valuations for sheep and goats described in the consultation, at this time. The Government intends to continue to develop proposals for a compensation system for sheep and goats which is more closely linked to market data.

Financial Effects

The Regulations will have no additional financial impact on industry. The Regulatory Impact Assessment (RIA) formed part of the public consultation and the finalised RIA is attached which includes the option chosen by industry in the consultation exercise.

Scottish Government
Rural and Environment Directorate
4 May 2010

The Transmissible Spongiform Encephalopathies (Scotland) Regulations 2010

Regulatory Impact Assessment

Title of proposal

The Transmissible Spongiform Encephalopathies (Scotland) Regulations 2010.

The Council Regulation

Regulation (EC) No.999/2001 requires Member States to implement rules for the prevention control and eradication of transmissible spongiform encephalopathies (TSE). These rules are currently administered and enforced by the TSE (Scotland) Regulations 2006. There have been a number of amendments to the EU Regulation in line with the TSE Roadmap and the Government are amending the TSE (Scotland) Regulations accordingly. Other changes are included e.g. to reduce administrative procedures in abattoirs and to enable a sample of 10.000 fallen sheep and 500 goats to be selected at animal by-products (ABP) premises if a decision is taken to drop the current free collection and disposal service.

Purpose and intended effect

Objectives

The Scottish Government's policy objective is to have TSE controls which maintain consumer and animal health protection, are based on sound science, are proportionate to the known risk and are practical and enforceable. The TSE (Scotland) Regulations 2010 include:

- provisions which would update the administrative requirements for abattoirs to reflect previous changes to BSE testing;
- amendments to the Compulsory Scrapie Flock Scheme (CSFS) which will provide scrapie controls in the UK that are flexible, meet the degree of risk involved, and place UK sheep and goat farmers on the same footing as their competitors in Member States;
- introduce new controls on milk from sheep flocks and goat herds in which TSE was suspected or conformed;
- introduce more proportionate feed controls; and

While the Government remains committed to the principle of table valuations for animals killed to control TSEs, it has decided not to proceed with the proposals for standard valuations for sheep and goats described in the consultation, at this time. The Government intends to continue to develop proposals for a compensation system linked more closely to market data, with the simultaneous requirement for a separate impact assessment for such a system.

Background

Transmissible spongiform encephalopathies (TSEs) are fatal brain diseases which include classical and atypical scrapie in sheep and goats and bovine spongiform encephalopathy (BSE) in cattle. Exposure to BSE through the consumption of infected meat is believed to be the primary cause of variant Creutzfeldt-Jakob Disease (vCJD) in humans. There had been 167 human deaths from definite or probable vCJD in the UK to 1 February 2010.

The Transmissible Spongiform Encephalopathies (Scotland) Regulations 2006 came into force on 24 November 2006. They provide the necessary powers to administer and enforce the provisions of Regulation (EC) No.999/2001 laying down rules for the prevention, control and eradication of certain transmissible spongiform encephalopathies (the EU TSE Regulation).

There have been a number of amendments to the EU TSE Regulation since the 2006 Regulations came into force. The Scottish Government and the FSA have also reviewed the Schedules to ensure that they are appropriate and that any lessons learned are incorporated.

Rationale of government intervention

There have been a number of amendments to the EU Regulation in line with the TSE Roadmap and the Government propose to amend the TSE (Scotland) Regulations accordingly. The benefits of consolidation as well as updating the Regulations are that this will help provide transparency for those affected by the Regulations, as well as help with the consistency of operation and enforcement of the Regulations by industry and the enforcement bodies.

A description of the main areas of existing TSE Regulations that have been updated can be found in Annex A to this RIA.

Consultation

Within government

Colleagues within the Scottish Government and other UK administration have been and will continue to be involved with the implementation of this Regulation.

Public consultation

The main industry bodies will be invited to provide their views on the various options. Every effort will be made to ensure that the final package of measures is practical and workable for the Scottish industry.

This RIA provides estimates on the basis of the best information available and will now be issued for formal consultation. Should the results of the consultation exercise indicate that changes to the RIA are required a further RIA will be submitted to the Committees for consideration.

Options

The proposed options were considered:

Option 1 – Do nothing and continue current approach using existing Regulations.

Option 2A – Apply the amended EU controls and amend the existing Regulations as soon as possible with: Government paying for collection and disposal of 10,000 fallen sheep and 200 goats.

Option 2B – Apply the amended EU controls and amend the existing Regulations as soon as possible with: Industry paying, via NFSCo or other collector, for collection and disposal of 10,000 fallen sheep and 500 goats.

Costs and benefits

Sectors and groups affected

The Regulations are expected to affect those who keep and sell cattle, sheep and goats, hauliers, abattoirs, cutting plants, the meat processing industry, renderers, incinerators, independent butchers and other retailers, the catering industry and consumers.

Benefits

The economic, environmental and social benefits of each option is set out below.

Option 1

Provides benefits for human and animal health controls on TSEs.

This option will reduce sources of TSE infection from known scrapie affected flocks and prevent transmission to other flocks thus reducing the level of scrapie infection in the national flock and saving the taxpayer the cost of dealing with flocks that may otherwise have become infected. It also reduces a theoretical risk to human and animal health from BSE masked as scrapie.

Options 2A and 2B

The difference between options 2A and 2B is purely down to the method of collection and disposal of 10,000 fallen sheep and 500 goats.

- Option 2A assumes the continuation of the RPA method of collection and disposal.
- Option 2B assumes that industry pays as normal to send carcasses for disposal at ABP premises and that brainstem samples are taken from a 10,000 sample of sheep and a 500 sample of goats at a range of disposal sites without a free collection and disposal service funded by taxpayers.

Option 2A and 2B provide benefits to animal health. The milk restrictions on suspect TSE premises and adjustments to payable compensation will reinforce the necessity for stringent biosecurity measures and incentivise good practice. These measures will, in turn, yield increased protection of animal health. The options will also deliver a more appropriate, balance of scrapie costs between the taxpayer and industry.

Costs

A detailed analysis of the cost of each option is contained in Annex B.

Recommendation

Following consultation, **Option 2B** is the adopted policy. It will enable application and enforcement of EU controls as updated by recent EU legislation. It will also enable fallen sheep and goat carcasses to be selected at ABP premises after the RPA contracts expire. The Scottish Government will discuss any future changes to the current system with stakeholders.

Small/Micro Firms Impact Test

A Small Firms Impact test was carried out during the consultation period by consulting key representatives of the cattle, sheep and goat industries which are small businesses to gauge their views on the impact of proposed changes to the Regulations. The impact is not expected to be significant as only a very small number of businesses will be affected by the controls.

Legal Aid Impact Test

No new criminal sanctions or civil penalties are created and it is not expected to have any implications on an individual's right to access legal aid.

'Test Run' of business forms

No business forms will be involved with the implementation of the legislation.

Competition assessment

There will not be any direct or indirect limits to the number or range of farms in the industry caused by the proposed changes to the Regulations. The proposed Regulations will not change farmers' incentives or abilities to compete with each other.

Enforcement, sanctions and monitoring

The Regulation is enforced by domestic legislation, which in Scotland will replace the Transmissible Spongiform Encephalopathies (Scotland) Regulations 2006, as amended.

The Food Standards Agency enforces in slaughterhouses and cutting plants. Local Authorities enforce the current legislation at all other premises. Animal Health carries out official inspections on farms and premises. The responsibility for enforcing the new legislation will remain as is.

Regulatory Quality Declaration

I have read the RIA and I am satisfied that the costs and benefits are accurately captured and that the recommendations are the best one in these circumstances.

Signed:

Richard Lochhead
Cabinet Secretary for Rural Affairs and the Environment
May 2010

Detailed consideration of Schedules 2, 4 and 7 of the 2006 Regulations

BSE Testing

The European Commission has advised that the EU TSE Regulation requires the BSE testing of all cattle aged over the testing threshold. This includes cattle slaughtered in slaughterhouses and cattle which keepers slaughter on their premises for their own consumption (home-slaughtered). The 2006 Regulations require slaughterhouse operators to collect and submit samples from cattle aged over the testing threshold for BSE testing. Although the 2006 Regulations provide powers for inspectors to issue notices to enforce the EU TSE Regulation, they do not contain a clear obligation for cattle keepers carrying out home-slaughtering to comply with BSE testing requirements. We are making the following changes to the 2006 Regulations:

1. Amending paragraph 5 of Schedule 2 of the 2006 Regulations to require a cattle keeper home-slaughtering a bovine animal aged over the testing threshold to arrange both to sample the animal and to deliver the brainstem sample to an approved testing laboratory for BSE testing; and
2. Extending the retention and disposal requirements in paragraph 7 of Schedule 2 to cover home slaughter. We would also take the opportunity to clarify that an “insufficient test result” includes situations in which approved testing laboratories do not receive brainstem samples.

The EU TSE Regulation requires that specified risk material (SRM) is removed at slaughterhouses or, as appropriate, “other places of slaughter” (i.e. home slaughter). To administer this requirement we are inserting a new paragraph in Schedule 7 of the Regulations making it an offence not to remove SRM from cattle, sheep and goats slaughtered at “other places of slaughter” (i.e. from a home-slaughtered animal).

On 1 January 2009, the age threshold for BSE testing healthy cattle born in the EU15 slaughtered for human consumption was raised from 30 to 48 months. Schedule 2 of the current Regulations requires that all slaughterhouses in which cattle aged over 30 months are slaughtered for human consumption have an approved Required Method of Operation (RMOP). It also requires the RMOP to describe the system for removing vertebral column as SRM. Following the agreement of the Food Standards Agency Board, we are removing the requirement for slaughterhouses, which do not slaughter cattle eligible for BSE testing, to have an approved RMOP. We are also removing the requirement for RMOPs to describe the system for removing vertebral column as SRM.

Currently the EU TSE Regulation requires the UK to test an annual quota of 10,000 fallen sheep and 500 fallen goats aged over 18 months. This involves considerably fewer than 1% of fallen sheep carcasses and relatively few fallen goats. The fallen sheep and goat surveys are currently administered by the Rural Payments Agency via contracts which formerly covered the collection and disposal of fallen cattle eligible for BSE testing. The Scottish Government continues to provide a free service to farmers for the collection, sampling and disposal of sheep and goat carcasses accepted into the survey. Carcasses are currently volunteered by farmers. The Scottish Government would like greater flexibility in

establishing systems to ensure better compliance with EU requirements to test a random, annual sample of fallen sheep and goats for TSE in future. We are amending paragraph 7(5) of Schedule 2, Part 1 of the 2006 Regulations to require premises approved under the Animal By-Products Regulations to comply with a direction from the Scottish Ministers to select fallen sheep or goats for TSE sampling and to sample them. Tested carcasses would have to be retained pending a negative test result, unless they were disposed of by incineration or rendering followed by incineration in accordance with the Animal By-Products Regulations. These provisions would also apply to any future requirement to sample deer for TSE. The Scottish Government will discuss any future changes to the current system with stakeholders.

Changes to Scrapie Controls

Scrapie, a Transmissible Spongiform Encephalopathy (TSE), is a fatal disease of sheep and goats. It is a notifiable disease and can be transmitted within and between flocks and/or herds.

There is a theoretical risk that Bovine Spongiform Encephalopathy (BSE) might have been transmitted to sheep and if so it might be masked by scrapie. So flocks affected by scrapie could represent a reservoir of infection and potential public health risk. That said BSE has never been found in the UK sheep flock.

As a result EU controls were introduced in 2003. These require that sheep flocks with a confirmed case of scrapie are subject to either a whole flock cull or a genotype and selective cull, under which all the sheep in the flock are genotyped by taking a blood sample. Those sheep with genotypes that scientific research had shown to be more susceptible to infection by the form of scrapie now known as classical scrapie are culled.

Strict controls then apply to movements on and off the farm. Depending on its genotype, which determines the resistance to scrapie, a sheep:

- (a) may be retained or sold for breeding,
- (b) may be required to be sold for slaughter,
- (c) or must be collected by Government contractors and killed and destroyed as Specified Risk Material (SRM).

Current scientific knowledge suggests that goats are uniformly susceptible to scrapie regardless of their genotype. Therefore, the only option allowed in the EU Regulation introduced in 2003 for goat herds with a confirmed case of scrapie is to cull the whole herd.

The Compulsory Scrapie Flocks Scheme

The EU controls are applied via the Compulsory Scrapie Flocks Scheme (CSFS) throughout the UK, and the 2006 Regulations provide enforcement powers in Scotland (Similar legislation applies in England and Wales).

There are currently around 39 farms under the controls in Great Britain. The cost of applying the genotype and selective cull option to each flock is estimated at £55K and to cull the whole flock is £73K.

The scheme is administered by Animal Health with the Veterinary Laboratories Agency (VLA) undertaking TSE testing aspects. Local Authorities are responsible for monitoring movements from CSFS farms and for enforcement under the TSE Regulations.

Changes in EU controls

The EU controls were introduced at a time when it was not possible to determine if a TSE was scrapie or BSE (theoretically scrapie could be masking BSE). However new diagnostic tests mean that this is now possible to distinguish between BSE and scrapie and is used in all TSE testing of sheep. The new diagnostic tests also confirm the presence of a previously undetected form of scrapie, termed **atypical** scrapie to differentiate it from the form of scrapie known to have been in the national flock and herd for more than 200 years and now referred to as **classical** scrapie. Atypical scrapie has been found in sheep with genotypes that are resistant to classical scrapie as well as sheep with genotypes susceptible to classical scrapie. As a result, the EU Commission proposed a review of the EU controls in relation to animals from flocks where BSE is excluded and to provide a suitable approach for dealing with atypical scrapie.

The changes to the controls involve:

1. A monitored flock/herd option allowing flocks and herds with atypical scrapie to be monitored for a 2 year period, as an alternative to whole flock or herd cull. This option involves TSE testing of all fallen stock over 18 month of age and all animals over 18 months of age sent to slaughter in the UK for human consumption.
2. Allowing animals to go to slaughter, instead of having to be killed and destroyed with compensation paid, subject to TSE testing of those animals over 18 months of age.
3. Reducing the period of restrictions in flocks affected by classical scrapie to 2 years (from 3 years).

The UK's aim is to have scrapie controls that are flexible and reflect the degree of risk involved and we have been pressing for some time for changes to the EU controls to reflect this. The revised EU controls meet this objective with regard to atypical scrapie and the reduced restriction period.

The effect of applying these amended controls is to help eradicate scrapie in affected flocks/herds in a way that is cost effective and in compliance with the EU measures.

Business affected/assumptions

The business sectors affected are sheep and goat farms with suspected cases of classical and atypical scrapie. The following table shows the number of flocks and holding coming under CSFS controls since 2005 in Scotland:

Year	Flocks	Holdings
2005	42	22
2006	25	16
2007	5	3
2008	2	1

For a number of reasons, including a decrease in the surveillance at abattoir and of fallen stock required by EU Regulation but mostly as a result of the work of the National Scrapie Plan since its inception in 2001, we estimate that the decrease in the number of cases of classical scrapie over the coming years will continue.

Where atypical scrapie has been found it is generally only as isolated case on a holding. Most cases are discovered by the EU Regulatory TSE surveillance of animals at abattoirs and fallen stock. Cases of atypical scrapie are expected to remain relatively constant and be found in single cases on farms as opposed to classical scrapie, where action may be taken on several flocks within the same farm unit.

Given the reduction in the number of confirmed classical scrapie cases and the relatively stable number of confirmed atypical cases in recent years, we have assumed that there will be around 1 holdings (2 flocks) with new classical scrapie cases in year 1 in Scotland declining to 0 holdings (0 flocks) by year 5. We have assumed there will be 1 flocks with atypical scrapie each year.

Based on average number of animals in CSFS flocks to date, we have assumed that an average size flock is 500 adult animals, plus up to 700 lambs depending on the time of year. From information provided by sheep industry groups, we know that annual replacement rates (regardless of whether the flock is producing lambs for slaughter or breeding animals for use or sale) are somewhere between 20 and 30%. Therefore we have based our calculations on an annual adult replacement rate per flock of 25%. Depending on the nature and geographic location of a flock, the average adult mortality rate can vary between 2 and 5% per year. Therefore, we have assumed an overall average mortality rate of 3% per year.

New controls on milk

Following an opinion from the European Food Safety Authority (EFSA) in November 2008, the EU adopted new controls on milk from sheep and goat flocks in which TSE was suspected, classical scrapie was confirmed or BSE could not be excluded. The main impact is the ban on using milk or milk products from holdings on which TSE is suspected, other than on the holding, until the test result has been confirmed. Sheep or goat milk or milk products could still be used on the holding during this period. A potential impact is the requirement to destroy milk or milk products on holdings on which BSE cannot be excluded in a sheep or goat. Following the confirmation of classical scrapie there are restrictions on the use of milk/milk products in animal feed.

We are making the following changes to the 2006 Regulations to administer these controls:

1. Amending Regulation 15 and Paragraph 4 of Schedule 4 to require an inspector to serve a notice to prohibit the movement of sheep or goat milk or milk products from a holding on which a TSE is suspected in sheep or goats;
2. Amending Regulation 16 to allow inspectors to licence milk or milk products to premises for storage pending the outcome of the confirmatory tests, which are expected to take up to 12 working days from receipt at the laboratory. Sheep or goat milk or milk products could still be used on the holding during this period. Restrictions would be lifted if a TSE was not confirmed or if the TSE was confirmed as atypical scrapie. The Scottish Government will not pay for any consequential loss as a result of these restrictions (other than where BSE cannot subsequently be excluded following testing and milk or milk products were compulsorily destroyed);
3. Amending Paragraphs 6 and 7 of Schedule 4 to add new requirements for sheep or goat milk or milk products from a holding on which classical scrapie was confirmed, produced prior to the removal of genetically susceptible sheep/all goats. It will be an offence to use such milk/milk products as feed for ruminants (except on the holding of origin). If such milk/milk products are used for feed for non-ruminants it will be an offence:
 - to export the feed from the UK;
 - to fail to comply with the documentation and packaging requirements;
 - to bring such feed on to a premises with ruminants for storage or use; and
 - to fail to comply with the requirements for transport and cleaning and disinfection of vehicles.
4. Amending Paragraph 8 of Schedule 4 to add a new requirement for an inspector to serve a notice of intention to destroy sheep or goat milk or milk products on a holding on which BSE cannot be excluded following a test on a sheep or goat. This will apply to milk/milk products on the holding produced from the point of official suspicion to the point at which the herd or flock was culled. The Scottish Government will pay compensation at market value for milk or milk products compulsorily destroyed. The owner will be required to arrange and pay for the valuation.
5. Amending Regulation 14 to provide powers for inspectors to seize and dispose of milk and milk products. Regulation 15 will also be amended to allow inspectors to serve notices to require the disposal of milk or milk products.

Summary of cost to Option 1

	Cost to Government	Cost to Farmer
Fallen sheep and goat surveillance	£945,000	-
Changes to CSFS	£106,000	£1,261
Total	£1,051,000	£1,261

Environmental costs

The total weight of sheep incinerated in 1st year **76,850 – 107,590 kg**

Fallen Sheep and Goat Surveillance

Cost to Government

Cost of collection and disposal of 10,000 fallen sheep and 500 goats

- GB RPA collection and disposal cost = £90/sheep or goat
- Number of collections = 10,500
- Total cost = 10,500 x £90 = **£945,000**

Changes to CSFS

The current EU controls require either whole flock cull or genotype and selective cull where scrapie is confirmed in a sheep flock. (For a goat herd the only option is a whole herd cull).

The economic costs (including the cost to the Government and the cost to the farmer) for Option 1 are set out below. The tables supporting these calculations can be viewed at Annex C within Tables 1, 2, 3 and 4. All figures are approximate.

Costs to Government

Genotyping and selective cull of sheep flocks with classical scrapie

Table 1 shows that the average annual cost to Government is approximately **£33,000**.

Assumptions:

- We would expect there would be 2 flocks affected by classical scrapie in year 1, declining to 0 by year five.
- It costs an average of £55,000 per flock to apply genotype and selective cull action.
- The average cost has been calculated over a period of 5 years.

Whole flock cull with atypical scrapie

Table 2 shows that the average cost to Government is approximately **£73,000**.

Assumptions:

- (a) 1 flock affected by atypical scrapie each year.
- (b) It costs an average of £73,000 per flock to apply whole flock cull action.
- (c) The average cost has been calculated over a period of 5 years.

The average CSFS cost to the Government is approximately £106,000.

Costs to farmer

Genotype and selective cull of sheep flocks with classical scrapie

Table 3 shows that the average annual cost to farmers is approximately **£546**.

Assumptions:

- (a) 2 flocks under genotype and selective cull action.
- (b) Farmer's time gathering animals, dealing with paperwork – 2 days, £260 per flock
- (c) Farmer's time sourcing replacement animals for approximately 50% of adult flock that either must be sold for slaughter or killed and destroyed as SRM after genotype and selective cull action. They will spend the time sourcing replacements – This is a labour intensive action of one working week on average: £650 per flock
- (d) The total cost per flock is $£260 + £650 = £910$
- (e) The average cost has been calculated over a period of 5 years.

Whole flock cull of sheep flocks with atypical scrapie

Table 4 shows that the average annual cost to farmers is approximately **£715**.

Assumptions:

- (a) 1 holdings affected by atypical scrapie.
- (b) Farmers will have to spend approximately half a day on additional paper work relating to CSFS during the year e.g. additional record keeping dealing with legal notices and other CSFS administration paperwork: £65 per flock
- (c) In the 1 holding affect by atypical scrapie, farmers will have to source replacement animals after whole flock cull action. They will spend time sourcing. This is a labour intensive action of one working week on average: £650 per flock
- (d) The total cost per flock is $£65 + £650 = £715$
- (e) The average cost has been calculated over a period of 5 years.

Total average CSFS cost to the farmer is approximately £1261.

Option 1: Environmental Costs

Atypical scrapie

If we applied a whole flock cull to atypical flocks then there would be an increase in the number of animals incinerated. Assuming 20 rams and 480 ewes in 1 flock and action required when the flock has 700 lambs on the ground.

Rams (110-130 kg per animal) x 20 rams x 1 flocks = 20 rams
Weight incinerated = 2,200 – 2,600 kg

Ewes (60-85 kg per animal) 480 ewes x 1 flocks = 480 ewes
Weight incinerated = 28,200 – 40,800 kg

Lambs (25-35 kg per animal) 700 animals x 1 flocks = 700 lambs
Weight incinerated = 17,500 – 24,500 kg

Total 1200 sheep (maximum weight) = **48,500 – 67,900 kg**

Classical scrapie

2 flocks with 500 adults (20 rams and 480 ewes) and possibly 700 lambs per flock will be genotyped and susceptible animals culled and destroyed.

Assume 35% of adult flock would have been destroyed because of unsuitable genotypes under genotype and cull action = 7 rams and 168 ewes per flock.

Assume 50% of the 2 flocks which come under scrapie controls involve lambs that are taken and destroyed without genotyping.

(assume weights of 60-85 kg for a ewe, 110-130 kg for a ram and 25-35 kg for a lamb)

Rams (110-130 kg per animal) x 7 rams x 1 flocks = 7 rams
Weight incinerated = 770 – 910 kg

Ewes (60-85 kg per animal) 168 ewes x 1 flocks = 168 ewes
Weight incinerated = 10,080 – 14,280 kg

Lambs (25-35 kg per animal) 700 animals x 1 flocks = 700 lambs
Weight incinerated = 17,500 – 24,500 kg

Total 875 sheep (maximum weight) = **28,350 – 39,690 kg**

The total weight of sheep that would be incinerated under Option 1 is therefore between 76,850 – 107,590 kg in the first year.

Summary of cost to Options 2A and 2B

Tables A and B summarise the costs and the overall net benefit of the two options.

Table A: Summary of cost to Options 2A

Industry costs	
Milk restrictions following confirmation of classical scrapie	£7,700
Annual CSFS cost to farmers	£120
Annual cost to industry	£7,820
Industry benefit	
Saved annual CSFS cost to farmers	£1,300
Annual industry benefit	£1,300
Average annual cost to industry	£6520
Government costs	
Milk restrictions where BSE cannot be excluded	£1,000
Annual CSFS cost	£4,200
Annual cost to Government	£5,200
Government benefit	
Saved annual CSFS cost	£96,800
Annual benefit	£96,800
Average annual benefit to Government	£91,600

Table B: Summary of cost to Options 2B

Industry costs	
Milk restrictions following confirmation of classical scrapie	£7,700
Collection and disposal costs for fallen sheep and goat carcasses e.g. £27/Adult Sheep and £35/Adult Goat based on advice from NFSCo	£140,000
Annual CSFS cost to farmers	£120
Cost to industry	£147,820
Industry benefit	
Saved annual CSFS cost to farmers	£1,300
Industry benefit	£1,300
Average annual cost to industry	£146,520
Government costs	
Milk restrictions where BSE cannot be excluded	£1,000
Annual CSFS	£4,200
Annual cost to Government	£5,200
Government benefit	

Saved annual CSFS	£96,800
Collection and disposal costs for fallen sheep and goats falling to zero under new scheme	£460,000
Annual benefit	£556,800
Average annual benefit to Government	£551,600

Environmental costs of Options 2A and 2B

The total weight of sheep incinerated in 1st year **76,850 – 107,590 kg**

The difference between options 2A and 2B is purely down to the method of collection and disposal of 10,000 fallen sheep and 500 goats.

Option 2A assumes the continuation of the RPA method of collection and disposal.

Option 2B assumes that industry pays as normal to send carcasses for disposal at ABP premises and that brainstem samples are taken from a 10,000 sample of sheep and a 500 sample of goats at a range of disposal sites without a free collection and disposal service funded by taxpayers.

New controls on milk

The cost of milk restrictions following a suspected case of TSE in goats and sheep is passed on to industry. While awaiting the results of the tests, the farmer is banned from using milk or milk products other than on the holding where TSE is suspected. As milk perishes quickly, the milk that is held on the farm for the 2 week restriction period will spoil and cannot be sold by the farmer. There is no requirement for compensation to be paid for this milk and therefore the industry bears the full cost of the milk restriction. It is assumed that milk is disposed of on farm as category 2 animal by-product without significant costs to industry. The cost to industry is calculated in Table 2.

Table 2: Annual industry cost due to milk restrictions where TSE is suspected (Option 2A & 2B)

Size of sheep flock	400
Number of scrapie cases per herd per year	1
Number of flocks affected in Scotland per year	1
Milk yield per sheep per week (Litres)	10.5
Total milk yield per week (Litres)	4200
Price per litre	£0.90
Number of weeks restricted per suspect case	2
Total amount of sheep milk restricted	8400
Annual industry cost of restrictions on sheep milk	£7,560
Size of goat herd	10
Number of scrapie cases per herd per year	1

Number of herds affected in Scotland per year	1
Milk yield per goat per week (Litres)	18
Total milk yield per week (Litres)	180
Price per litre	£0.40
Number of weeks restricted per suspect case	2
Total amount of goat milk restricted	360
Annual industry cost of restrictions on goats milk	£144
Total annual industry cost of restrictions on sheep and goat milk	£7,704

Milk restrictions also apply in a case where BSE cannot be excluded. This involves destroying milk or milk products on holdings on which BSE cannot be excluded. It is assumed that milk is disposed of on farm as category 2 animal by-product without significant costs to government. However, in this case, the government would then have to compensate farmers for the milk or milk products destroyed. The cost to Government is worked out in Table 3.

Table 3: Annual Government cost due to milk restrictions where BSE cannot be excluded (Option 2A & 2B)

Size of sheep flock	400
Number of flocks in which BSE cannot be excluded in Scotland per year	0.14285714
Milk yield per sheep per week (Litres)	10.5
Total milk yield per week (Litres)	4005
Price per litre	£0.90
Number of weeks restricted per suspect case	2
Total amount of sheep milk restricted	8010
Annual industry cost of restrictions on sheep milk	£1,030
Size of goat herd	10
Number of herds in which BSE cannot be excluded in Scotland per year	0.14285714
Milk yield per goat per week (Litres)	18
Total milk yield per week (Litres)	180
Price per litre	£0.40
Number of weeks restricted per suspect case	2
Total amount of goat milk restricted	360
Annual industry cost of restrictions on goats milk	£21
Total annual Government cost of restrictions on milk where BSE cannot be excluded	£1,051

The cost due to restrictions on milk when BSE cannot be excluded is relatively small as such cases are rare.

Collection and disposal of 10,00 sheep and 500 goats

An additional benefit of option 2B is due to the change in the method of collection and disposal of 10,000 sheep and 500 goats. This leads to an increased cost to industry of £0.14m per annum, but as the government doesn't have to pay for collection and disposal, there is a government benefit of £0.46m per annum. Even though, as before, there is a trade off of cost and benefit between government and Industry, the government actually receives a larger benefit from the change in method of collection and disposal than the industry loses as a cost.

The Scottish Government currently provide a free service to farmers, administered under a Rural Payments Agency (RPA) contract, for the collection, sampling and disposal of sheep and goat carcasses accepted into the survey. This involves considerably fewer than 1% of fallen sheep carcasses and relatively few fallen goats. Carcasses are currently volunteered by farmers but the survey would be more representative if carcasses could be collected on a random basis at disposal sites.

The Scottish Government would like greater flexibility in establishing systems to ensure compliance with EU requirements to test an annual quota of fallen sheep and goats for TSE in future. This option would take a similar approach to that adopted for the fallen cattle survey, with farmers paying for collection and disposal in the natural course of disposing of their fallen sheep and goats. The Scottish Government could require ABP premises to select a certain number of sheep per week, pay for them to be sampled and sent to VLA Newcastle for analysis. Government would continue to cover the cost of taking brain samples and testing them at the VLA Newcastle laboratory under all options

Changes to CSFS

This would meet the policy objective. It would enable us to apply the controls in a flexible and cost effective way, in line with EU legislation, and enable us to enforce them.

The economic costs (including the cost to the Government and the cost to the farmer) for Option 1 are set out below. The tables supporting these calculations can be viewed at Annex C within Tables 5, 6, 7, and 8. All figures are approximate.

Costs to Government

TSE testing additional 25 annual culls in classical scrapie monitored flocks

There will be an additional cost to Government in arranging and carrying out an additional 25 tests on average for each flock monitored instead of genotyped and selectively culled.

Table 5 shows that the average annual cost to Government is approximately **£1,200**.

Assumptions:

- (a) Animal Health Central Operations: £30 per flock
- (b) Meat Hygiene Service (MHS) sample removal: £700 per flock
- (c) VLA TSE test: £1,250 per flock
- (d) Cost to Government per flock = £1,980
- (e) Average costs have been calculated over a period of 5 years.

Collect and TSE test all fallen stock from stocks with atypical scrapie monitored under Option 2

There will be an additional cost to Government in collecting fallen stock from atypical scrapie flocks that now come under CSFS control measures.

Table 6 shows that the average annual cost to Government is approximately **£3,000**.

Assumptions:

- (a) 3% adult mortality = 15 animals per flock x 1 flocks per year = 15 fallen stock per year.
- (b) The average cost of collecting a fallen stock carcass, removing the head and incinerating the carcass, delivering the head to a VLA laboratory, removing the brain sample at the VLA laboratory and testing for the presence of TSE including discriminatory test for BSE is approximately £200.
- (c) Cost per flock is £3,000.
- (d) Average costs have been calculated over a period of 5 years.

There are not expected to be any additional costs to delivery agents – Animal Health or VLA – or to Local Authorities who enforce the legislation as any extra burden in dealing with atypical scrapie will be offset by the reduction in the restriction period from three years to two years in genotyping and selective cull cases.

The total average annual CSFS cost to the Government is approximately £4,200.

Costs to farmers

Atypical scrapie – monitored flocks

Table 7 shows that the average annual cost to farmers is approximately **£100**.

Assumptions:

- (a) We assume that there will be around 1 flocks with atypical scrapie coming under the controls per year – they will be restricted and monitored for 2 years which will involve sending over 18 month fallen stock and annual culls for slaughter for TSE testing. (They will be able to send animals off for breeding in the UK but not to other Member States). Farmers are not expected to incur any additional one-off costs.
- (b) Regarding annual costs – farmers will incur nothing for collection of fallen stock as Government pays for this, but will have additional costs for annual culls as follows:
 - 25 additional culls for human consumption now required to be tested. 2 hours farmers time gathering animals and completing paper work in connection with the collection: £33 per flock.
- (c) Farmers will also have to spend approximately half a day on additional paper work relating to CSFS during the year e.g. additional record keeping in dealing with legal notices and other CSFS administration paper work: £65 per flock.
- (d) The total cost per flock is £98 (£33 + £65)
- (e) The average cost has been calculated over a period of 5 years.

TSE testing additional 25 annual culls in classical scrapie monitored flocks

It is not expected that farmers with detected or reported cases of classical scrapie in their flocks will incur any additional one-off costs arising from the new controls. At present owners of flocks with classical scrapie are required to submit a sample of annual culls slaughtered for the food chain for TSE testing (100 animal per average flock size). The EU Regulation now requires all such animal to be TSE tested when the monitored flock option is applied to a classical scrapie flock.

Table 8 shows that the average annual cost to farmer is approximately **£20**.

The total average annual CSFS cost to the farmer is approximately £120.

Saved costs to Government

Classical scrapie cases

As we will be monitoring approximately half the new cases rather than genotyping and selectively culling them, there will be benefits to the taxpayer from the reduced expenditure on culling of animals and compensating for them. Genotype and selective cull costs approximately £55,000 per flock.

Total benefit in the first year is $1 \times £55,000 = £55,000$
Average annual cost saving £22,000 (Annex C, Table 9)

There will be benefits to the taxpayer from the reduced expenditure on collecting fallen stock from flocks with classical cases of scrapie as a result of the reduction of the restriction period from three to two years.

Cost saving per flock is £3,000
Total benefit in the first year is $2 \times £3,000 = £6,000$
Average annual cost is £1,800 (Annex C, Table 10)

There will be an animal health benefit in reducing the sources of TSE infection thus avoiding costly action to tackle cases that may otherwise have occurred if the new regulation had not been implemented.

For classical scrapie, the estimated net present cost saving over 5 years to the Government is approximately **£120,000**.

Atypical scrapie

There will be cost savings from not culling all atypical scrapie affected flocks (estimated 1 flocks pa)

Cost saving per flock £73,000

Average annual cost saving is approximately **£73,000** (Annex C, Table 11)

Saved costs to farmers

Classical scrapie cases

Sheep and goat farms with confirmed cases of classical scrapie will benefit. There is a lot of paper work involved in CSFS. Farmers have to deal with legal notices, genotype and slaughter certificates, collection notices and correspondence with Animal Health and the owner should benefit by not having to spend two days in total on dealing with the administrative burden.

Farmers will also benefit from being subject to scrapie controls for 2 years instead of 3 years.

Farmers time gathering animals and dealing with paperwork: £260 per flock (2 days work)

Total benefit in year 2 is $1 \times £259.68 = £259.68$

Average annual cost saving is approximately £160 (Annex C, Table 12)

Classical scrapie – Monitored Flocks

Those whose flocks are subject to new monitored flock option will benefit from not having animals killed and destroyed so enabling them to retain them for breeding or send them for fattening or slaughter. They will save time they would have had to spend sourcing replacements and selling off those replacements found to be of unsuitable genotype for up to 50% of their flock that was compulsory culled and distorted with compensation paid or required to be sold for slaughter. This is a labour intensive action of one working week on average £649.50 per flock.

Total benefit in year 1 is $2 \times £649.50 = £1,299$

Average annual cost saving is approximately £390 (Annex C, Table 13)

For classical scrapie, the estimated net present cost saving (over 5 years) to the farmers is approximately £2,900.

Atypical scrapie

Flocks with atypical scrapie will no longer need to be culled out.

Farmers cost savings £715 per flock

Average annual cost saving is approximately £715 (Annex C, Table 14)

Options 2A and 2B: Saved Environmental costs

Reduced levels of culling will mean less transport of animal for destruction and reduction in the number of carcasses incinerated. However, we do not consider this to be a significant cost saving as total amount of sheep body weight saved that would be incinerated annually under current policy (Option 1) is between approximately 76,850 – 107,590 kg. (There should be no need to cull and destroy animals in the second year of restrictions in classical scrapie genotyped flocks as the remaining animals and progeny should be of the required genotype)