Programmes for the eradication, control and monitoring of certain animal diseases and zoonoses

Monitoring and eradication programme of TSE, BSE and scrapie

Approved* for 2009 by Commission Decision 2008/897/EC

Denmark

* in accordance with Commission Decision 90/424/EEC
Re.: Application for aid for the 2009 programme for monitoring of TSE in cattle in Denmark

Standard requirements for the submission of programmes of eradication and monitoring of TSEs\(^1\) co-financed by the Community

1. **Identification of the programme**

   Member State: Denmark

   Disease(s)\(^2\): BSE

   Year of implementation: 2000

   Reference of this document: File no. 2008-20-762-01615 Cattle – BSE.

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   Date sent to the Commission: 29 April 2008

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\(^1\) Bovine Spongiform Encephalopathy (BSE), Scrapie and Chronic Wasting disease (CWD).

\(^2\) One document per disease is used unless all measures of the programme applied on the target population are used for the control and eradication of different diseases.
2. **Description of the programme**

The Danish BSE surveillance programme started 1 October 2000. The programme has been altered several times due to amendments of the EU legislation on this area, and at present the programme according to Regulation 999/2001 consists of test for BSE of the following groups of cattle:

- Clinical suspects  
- Emergency slaughter > 24 months  
- Animals found sick at ante mortem > 24 months  
- Fallen stock > 24 months  
- Healthy slaughter animals > 30 months  
- BSE eradication

- c. 20 heads per year (all)  
- c. 2.000 heads per year (all)  
- c. 15 heads per year (all)  
- c. 41.000 heads per year (all)  
- c. 220.000 heads per year (all)  
- c. 150 heads per year (all)

**Purpose of the programme**

The purpose of the Danish BSE surveillance programme is to monitor the BSE status in the Danish cattle population in order to on a long view modify the surveillance programme accordingly. The Danish BSE programme fulfils the Regulation 999/2001 as amended and provides knowledge of the disease situation in Denmark. If necessary, additional measures needed to guarantee animal and public health can be taken. At present no timeframe is set for the duration of the programme.

**Prognosis**

The results obtained by the Danish BSE surveillance programme, which has been ongoing now for seven years, document that the disease incidence in Denmark is very low and declining. Taking into account the provisional results of the programme the National Veterinary Institute has forwarded the following prognosis in July 2007:

The most likely total number of positive BSE cases for 2008 will be 0,005. Until the year 2010 (2010 included) 0,01 case of BSE are expected in native-born Danish cattle. This is the most probable number, but the prognosis set an upper limit of certainty, which indicates that the number of BSE cases will not exceed 0,65 until 2010 (2010 included). The detailed prognosis for the years ahead is as follows:

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3 Animals belonging to the cohort to be culled in connection with a positive BSE case.
<table>
<thead>
<tr>
<th></th>
<th>2007/2</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2007-2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cases found by active monitoring.</td>
<td>0.006  (0.26)</td>
<td>0.004 (0.22)</td>
<td>0.001 (0.05)</td>
<td>0.00 (0.01)</td>
<td>0.01 (0.54)</td>
</tr>
<tr>
<td>Total</td>
<td>0.007  (0.31)</td>
<td>0.005 (0.26)</td>
<td>0.001 (0.06)</td>
<td>0.00 (0.01)</td>
<td>0.01 (0.65)</td>
</tr>
</tbody>
</table>

The numbers in brackets are the upper confidence level of 95% (Two-sided Poisson)

**Monitoring system for BSE**

The only way to detect the presence of BSE in an animal is examination of relevant tissue (brain or brainstem material) post mortem. There are several methods to diagnose BSE. The following are used in Denmark:

1. Autopsy and histopathology.
2. Immunohistochemistry.
3. Western Blotting (used for testing both risk animals and healthy slaughter animals).
4. Prionics-Check PrioSTRIP (used when testing healthy slaughter animals).
5. IDEXX HerdCheck test (used when testing healthy slaughter animals and fallen stock).

In case of **cattle with clinical signs** of BSE the National Veterinary Institute carry out histopathology and immunohistochemistry as recommended by Commission Regulation (EC) No 999/2001 as amended. Furthermore the National Veterinary Institute performs a Western Blotting test.

In case of **healthy animals age 30 months or older** slaughtered for human consumption either the Enfer test, the Western Blotting test or the IDEXX HerdCheck test are used at private Danish BSE laboratories and the National Veterinary Institute. In case of a not clearly negative test result test material are sent to National Veterinary Institute, where a histopathology and an immunohistochemistry are performed.

For the **fallen stock and animals found sick at ante mortem inspection and emergency slaughter animals** the Western Blotting-test/ IDEXX Herdchek test are used as diagnostic screening tests, and in case of a not clearly negative or a positive WB-test/ IDEXX Herdchek test histopathology and immunohistochemistry are performed.

The types of tests used for verification of BSE in Denmark are all tests approved for this purpose in accordance with the Commission Regulation (EC) No 999/2001 as amended.

**The eradication measures for bovine animals**

In autumn 2005 Denmark altered the eradication policy for positive BSE cases amending the culling of the entire herd to cohort culling. The reason for this alteration was a risk assessment made by The Danish Institute for Food and Veterinary Research evaluating the possibility of an additional
outbreak of BSE among the remaining animals using different eradication measures when a positive BSE case was found. The new Danish policy is an extended version of the EU eradication policy as stated in Commission Regulation (EC) No. 999/2001 and take two situations into account. In the case of a BSE case aged 6 years or younger it is likely that the contamination has taken place when the animal was calf. Therefore a cohort of animals born or raised with the sick animal 1½ year before and after the animal was born shall be put down. In the other scenario the BSE case is 7 years or older and the time for infection with BSE is therefore more difficult to assess. For this reason a cohort defined by a wider time span is put down. The new Danish policy was used, when the 14th BSE case was found in September 2005 resulting in the culling of a minor number of animals.

The former Danish eradication policy using culling of the entire herd applied for the other 13 cases. That is all animals in the herds, where the BSE-positive animals were found, born or where they had been, up to 20 months before the death/slaughtering of the positive animal, were killed. Moreover all animals sold from the above-mentioned herds up to one year before birth of the positive animal, and in risk of being contaminated there, were killed. The progeny of the infected animal was killed too. All the destroyed animals tested for BSE showed a negative test result.

3. **Description of the epidemiological situation of the disease**

The epidemiological situation concerning BSE positive cases

No cases of BSE have been recorded in Denmark in 2007 (or until now in 2008).

The 14 indigenous cases in Denmark are in the table below:

<table>
<thead>
<tr>
<th>Case no.</th>
<th>Case confirmed</th>
<th>Date of birth</th>
<th>Age (Year)</th>
<th>Surveillance category</th>
<th>Herd category</th>
<th>Region</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>12 Jan 2001</td>
<td>Jul 1993</td>
<td>7½</td>
<td>Fallen stock</td>
<td>Dairy</td>
<td>Northern Jutland</td>
</tr>
<tr>
<td>3</td>
<td>23 Feb 2001</td>
<td>8 Feb 1997</td>
<td>4</td>
<td>Clinical suspect</td>
<td>Dairy</td>
<td>South Jutland</td>
</tr>
<tr>
<td>4</td>
<td>22 Aug 2001</td>
<td>23 Feb 1996</td>
<td>5½</td>
<td>Normal Slaughter</td>
<td>Dairy</td>
<td>Ringsted, Zealand</td>
</tr>
<tr>
<td>5</td>
<td>14 Sep 2001</td>
<td>12 Mar 1996</td>
<td>5½</td>
<td>Fallen stock</td>
<td>Dairy</td>
<td>Funen</td>
</tr>
<tr>
<td>6</td>
<td>16 Nov 2001</td>
<td>25 Jun 1996</td>
<td>5</td>
<td>Normal Slaughter</td>
<td>Dairy</td>
<td>Funen</td>
</tr>
<tr>
<td>7</td>
<td>20 Nov 2001</td>
<td>23 May 1998</td>
<td>3½</td>
<td>Normal Slaughter</td>
<td>Dairy</td>
<td>Aarhus, Jutland</td>
</tr>
<tr>
<td>8</td>
<td>15 May 2002</td>
<td>17 Jun 1996</td>
<td>5½</td>
<td>Normal Slaughter</td>
<td>Dairy</td>
<td>Bornholm</td>
</tr>
<tr>
<td>10</td>
<td>20 Nov 2002</td>
<td>8 Dec 1998</td>
<td>4</td>
<td>Fallen stock</td>
<td>Dairy</td>
<td>Northern Jutland</td>
</tr>
<tr>
<td>12</td>
<td>8 May 2003</td>
<td>1 Mar 1996</td>
<td>7</td>
<td>Normal Slaughter</td>
<td>Dairy</td>
<td>Northern Jutland</td>
</tr>
<tr>
<td>13</td>
<td>14 May 2004</td>
<td>Unknown (1990)</td>
<td>14</td>
<td>Fallen stock</td>
<td>Beef</td>
<td>Herning, Jutland</td>
</tr>
<tr>
<td>14</td>
<td>9 Sep 2005</td>
<td>1 Mar 1996</td>
<td>9</td>
<td>Fallen stock</td>
<td>Dairy</td>
<td>Viborg, Jutland</td>
</tr>
</tbody>
</table>
Furthermore there have been three cases in native Danish cattle, which were exported to Portugal and Italy. These cases were diagnosed positive in June 2002 and in July 2003 in Portugal and in November 2002 in Italy. In addition an imported cow from the UK was found BSE positive in Denmark in 1992. Though this cow had been infected in the UK.

Summary of the Danish cases of BSE including a map:
4. Measures included in the programme

4.1. Designation of the central authority in charge of supervising and coordinating the departments responsible for implementing the programme:

The Danish Veterinary and Food Administration (DVFA) carry out the programme assisted by its 3 regional offices. The central coordination activities at the DVFA are placed in the Division for Animal Health in close collaboration with the 3 regions and the unit for Food Policy in the department; all of which are part of the Ministry of Family and Consumers affairs. The regions are responsible for making sure that test material from risk animals at rendering plants, from slaughterhouses and from animals with clinical signs of BSE are sent to the laboratories. Furthermore, the regions are responsible for the administration of official movement restrictions in connection with suspected and confirmed BSE-cases.

4.2. Description and delimitation of the geographical and administrative areas in which the programme is to be applied:

The programme will cover the whole of Denmark. A map of Denmark is included in this report (see earlier map of Denmark with all the positive BSE cases).

4.3 System in place for the registration of holdings:

All Danish cattle farms are registered in The Central Husbandry Register (CHR), a database owned by the Ministry of Food, Agriculture and Fisheries. The rules for registration are laid down in Order 815 of 14 July 2006 on registration of animal husbandry in the CHR. Each unit is registered by a CHR number and the database covers registration of the unit e.g. address and diseases.

4.4 System in place for the identification of animals:

All Danish cattle are ear tagged in both ears, with individual numbers in accordance with the EU-rules. Each individual animal number is registered in the CHR with information regarding movements, offspring etc. Rules are laid down in Order No. 1066 of 10 November 2005 concerning identification, registration and movement of cattle, swine, sheep and goats.

4.5 Measures in place as regards the notification of the disease:

BSE is a notifiable disease in Denmark. Any farmer or veterinarian must notify the veterinary authorities of all suspicions of BSE. The symptom of BSE and the obligation to notify the competent authorities are laid down in Order No. 800 of 13 July 2006.

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4 The Danish Food and Veterinary Administration, Region North, South and East.
5 These activities were formerly placed in the Division of Zoonoses at the DVFA.
4.6. Monitoring

4.6.1. Monitoring in Bovine Animals

<table>
<thead>
<tr>
<th>Description</th>
<th>Estimated Number of tests</th>
</tr>
</thead>
<tbody>
<tr>
<td>Animals referred to in Annex III, Chapter A, Part I, points 2.2 of Regulation (EC) 999/2001</td>
<td>220.000</td>
</tr>
<tr>
<td>Others (specify)</td>
<td>0</td>
</tr>
</tbody>
</table>

4.7. Eradication

4.7.1. Measures following confirmation of a BSE case

4.7.1.1. Description.

The eradication measures include:

1) Extended cohort, which is the cohort as defined in 999/2001 extended with additional animals. For definition see below.

2) Offspring born within two years prior to, or after the clinical onset of the disease.

The Danish Veterinary and Food Administration will notify the Commission, the other Member States and the OIE of every positive case of BSE in accordance with the current EU rules.

Definition of extended cohort:
The Danish cohort is an extended version of the EU eradication policy as stated in Commission Regulation (EC) No. 999/2001 and take two situations into account. In the case of a BSE case aged 6 years or younger it is likely that the contamination has taken place when the animal was calf. Therefore a cohort of animals born or raised with the sick animal 1½ year before and after the animal was born shall be put down.

In the other scenario the BSE case is 7 years or older and the time for infection with BSE is therefore more difficult to assess. For this reason a cohort, which is defined by a wider time span, is put down.

Whenever a suspicion of BSE arises all animals in the herd is placed under official movement restriction until the cohort is defined. Then only those animals belonging to the cohort are placed under movement restrictions until the case is confirmed.

When a case is confirmed all animals belonging to the cohort is euthanised, animals older than 24 months are tested for BSE and the cohort is finally incinerated at the rendering plant.
Rules for compensation of animals:
Rules for compensation of farmers for animals, which have to be killed due to clinical suspicion of BSE or due to diagnosis of a positive case, are laid down in Order No. 800 of 13. July 2006 and in Order No. 239 of 12 April 1991 concerning expenses and compensation related to eradication and prevention of animal diseases as amended by Order No. 812 of 29 October 1999. The animals are compensated at the market value and, in case of compulsory culling of the entire herd, that is in cases where the cohort constitute the entire herd, the Danish Veterinary and Food Administration cover 20% of the estimated loss of profits.

Cleaning measures:
The purpose of cleaning premises, on which a positive BSE case was recorded, is to remove all leftovers of feed from the feeding system, silos and other places where the feed has been kept through the years. Here feed means feeding stuffs, which might have contained mammalian protein, but not grain and other vegetable feed.

Compartments, feeding systems, silos, where feed have been kept, together with implements, carriages e.g. from these places, will be cleaned to remove feed leftovers.

<table>
<thead>
<tr>
<th>Animals to be killed under the requirements of Annex VII, Chapter A, point 2.1 of Regulation (EC) 999/2001</th>
<th>Estimated number</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>150</td>
</tr>
</tbody>
</table>

This number is estimated according to prognosis from the National Veterinary Institute predicting the number of positive cases for the year 2008 to be 0,005 ~ 1 case. It is impossible to know the exact number of animals belonging to the cohorts of future BSE cases, but an estimate of 150 animals per positive case is a qualified assessment.
5. Costs

5.1. Detailed analysis of the costs for the BSE programme for cattle in Denmark 2007

BSE program for cattle in Denmark for 2008:

In 2009 the tests Prionics Western Blotting and IDEXX herd check are used to test healthy slaughtered and risk bovine animals, while Prionics-Check PrioSTRIP only are used for healthy slaughtered animals. The price of the test is approximately 8 € per test. If other direct costs are included (for instance other consumables and fees for sampling) the average cost is around 12 € pr. test for risk and healthy slaughtered animals.

Compulsory slaughter in 2008

Each animal is compensated according to its marked value. Three independent cattle experts are always performing the valuation of the animals, which always secure a fair valuation for the farmer and the Danish Veterinary and Food Administration. The average market value of cattle are 670 € per animal.
5.2. Summary of the costs

<table>
<thead>
<tr>
<th>Costs related to</th>
<th>Specification</th>
<th>Number of units</th>
<th>Unitary cost in €</th>
<th>Total amount in €</th>
<th>Community funding requested (yes/no)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. BSE testing(^b)</td>
<td>Test: Prionics-Check Danish Crown</td>
<td>110,000</td>
<td>12</td>
<td>1,320,000</td>
<td>Yes</td>
</tr>
<tr>
<td>1.1. Rapid tests</td>
<td>Test: IDEXX Herdcheck, EUROFINS</td>
<td>140,000</td>
<td>12</td>
<td>1,785,000</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>Test: WB, DTU Vet</td>
<td>4,015</td>
<td>12</td>
<td>48,180</td>
<td>Yes</td>
</tr>
<tr>
<td>4. Compulsory Slaughter</td>
<td>Cattle</td>
<td>150</td>
<td>670</td>
<td>100,500</td>
<td>Yes</td>
</tr>
</tbody>
</table>

**TOTAL** | 3,256,680 | YES |

Yours faithfully

[Signature]

Birgit Hendriksen
Deputy Chief Veterinary Officer
Head of division, Division of Animal Health

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\(^b\) As referred in point 4.6.1.
Re.: Application for aid for the 2009 programme for monitoring of TSE in sheep and goats in Denmark

Standard requirements for the submission of programmes of eradication and monitoring of TSEs\(^1\) co-financed by the Community

1. Identification of the programme

Member State: Denmark

Disease(s)\(^2\): TSE

Year of implementation: 2002

Reference of this document: File no. 2008-20-762-01614- sheep and goats –TSE.

Contact (name, phone, fax, e-mail): Hanne Christensen, telephone +45 33 95 63 10, e-mail: hchr@fvst.dk or Thomas Lyegaard, telephone: +45 33 95 60 11, e-mail: tly@fvst.dk

Date sent to the Commission: 29 April 2008.

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\(^1\) Bovine Spongiform Encephalopathy (BSE), Scrapie and Chronic Wasting disease (CWD).

\(^2\) One document per disease is used unless all measures of the programme applied on the target population are used for the control and eradication of different diseases.
2. **Description of the programme**

TSE in sheep and goats was made notifiable in 1988, and a Danish TSE surveillance programme was initiated 1 January 2002. The programme has later been altered due to amendments of the EU legislation. On 1 October 2003 Denmark started testing all fallen stock of both species for TSE as a agreement following negotiations with the EU allowing Denmark to omit to start a breeding programme for TSE resistance in sheep and allowing Denmark to imply additional guaranties when importing sheep and goats from other countries. This national surveillance program guarantees that all fallen stock age 18 months or older in Denmark will be collected and send to a rendering plant, tested for TSE and incinerated.

The Danish TSE surveillance programme according to Regulation 999/2001 as amended includes TSE testing of the following groups of sheep and goats in 2009:

- Clinical suspects
- Fallen stock aged 18 months or older
- Healthy slaughtered animals 18 months or older

  - c. 10 heads per year (all).
  - c. 9,000 heads per year (all).
  - c. 100 heads per year

Furthermore a random sample of at least 100 sheep of the fallen stock animals will be genotyped.

The fallen stock animals exceed the minimum requirements of Regulation 999/2001 as amended, in accordance with the Commission Regulation 546/2006 (this is the replacement of Commission Regulation 1874/2003), which approved the national scrapie surveillance programme for Denmark.

**Purpose of the programme**

It is the purpose of the national TSE surveillance programme to monitor the TSE situation in the Danish population of sheep and goats and eradicate the positive cases and in case of classical scrapie other animals which may be infected. In case of atypical scrapie, which is not assumed to be contagious, Denmark will follow the TSE regulation concerning atypical scrapie.

The overall aim of this national TSE programme is to get Denmark recognised as being free from classical scrapie. At present there is no future timeframe terminating the programme.
Monitoring systems for TSE in sheep and goats

The only way to detect the presence of TSE in an animal is examination of relevant tissue (brainstem material) post mortem. There are several ways to make the diagnosis TSE. The following are used in Denmark:

1. Autopsy and histopathology.
2. Immunohistochemistry.
3. IDEXX HerdCheck.

In case of small ruminants with clinical signs of TSE the National Veterinary Institute carry out histopathology and immunohistochemistry as recommended by Commission Regulation (EC) No 999/2001 as amended.

The fallen stock are tested using IDEXX HerdCheck as the primary test, and in case of a not clearly negative or a positive primary test, histopathology and immunohistochemistry are carried out at National Veterinary Institute.

The types of tests used for verification of TSE in Denmark are all tests approved for this purpose in accordance with the Commission Regulation (EC) No 999/2001 as amended.

3. **Description of the epidemiological situation of the disease**

The Danish sheep and goat population consists of approximately 110,000 sheep and 10,000 goats divided among approximately 10,000 sheep holdings and 3,000 goat holdings distributed over the entire country. In total four positive cases of TSE in small ruminants have been diagnosed in Denmark. All four cases were atypical scrapie cases. Three of the cases were diagnosed in 2006 and the last case was diagnosed in January 2008.
4. Measures included in the programme

4.1. Designation of the central authority in charge of supervising and coordinating the departments responsible for implementing the programme:

The Danish Veterinary and Food Administration (DVFA) carry out the programme assisted by its 3 regional offices. The central coordination activities at the DVFA are placed in the Division for Animal Health in close collaboration with the 3 regions and the department; all of which are part of the Ministry of Food, Agriculture and Fisheries. The regions are responsible for making sure that test material from risk animals at rendering plants, from slaughterhouses and from animals with clinical signs of BSE are sent to the laboratories. Furthermore, the regions are responsible for the administration of official movement restrictions in connection with suspected and confirmed TSE-cases.

4.2. Description and delimitation of the geographical and administrative areas in which the programme is to be applied:

The programme will cover the whole of Denmark.

4.3. System in place for the registration of holdings:

All Danish sheep and goat farms are registered in The Central Husbandry Register (CHR), a database owned by the Ministry of Food, Agriculture and Fisheries. The rules for registration are laid down in Order No. 815 of 14 July 2006 on registration of animal husbandry in the CHR. Each unit is registered by a CHR number and the database covers registration of the unit e.g. address and diseases.

4.4. System in place for the identification of animals

Rules are laid down in order No. 1066 of 10 November 2005 concerning identification, registration and movement of cattle, swine, sheep and goats. Sheep and goats are ear tagged in both ears with individual numbers in accordance with the EU regulations. The individual numbers are recorded in the holding register on the farm, but they are not recorded in CHR. Movements of sheep and goats are recorded in the CHR. For each batch of animals being moved the following information is recorded: The number of animals, the date, the number of the holding from which the animals are moved, the number of the holding of destination and transport id. Each movement of animals is accompanied by a movement document containing relevant information on the animals being moved.

4.5. Measures in place as regards the notification of the disease:

TSEs in sheep and goats are notifiable disease in Denmark. Any farmer or veterinarian must notify the veterinary authorities of all suspicions of BSE. The symptoms of BSE and the obligation to notify the competent authorities are laid down in Order No. 930 of 7 September 2006.

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3 The Danish Food and Veterinary Administration, Region North, South and East.
4 These activities were formerly placed in the Division of Zoonoses at the DVFA.
4.6. Monitoring:

4.6.2. Monitoring in Ovine animals

<table>
<thead>
<tr>
<th>Description</th>
<th>Estimated Number of tests</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ovine animals referred to in Annex III, Chapter A, Part II, point 2 of Regulation (EC) 999/2001</td>
<td>80</td>
</tr>
<tr>
<td>Ovine animals referred to in Annex III, Chapter A, Part II, point 3 of Regulation (EC) 999/2001</td>
<td>7,200</td>
</tr>
<tr>
<td>Ovine animals referred to in Annex III, Chapter A, Part II, point 5 of Regulation (EC) 999/2001</td>
<td>1,600</td>
</tr>
<tr>
<td>Ovine animals referred to in Annex VII, Chapter A, points 3.4 (d) of Regulation (EC) 999/2001</td>
<td>0</td>
</tr>
<tr>
<td>Ovine animals referred to in Annex VII, Chapter A, points 5(b) (ii) of Regulation (EC) 999/2001</td>
<td>0</td>
</tr>
<tr>
<td>Others</td>
<td>0</td>
</tr>
</tbody>
</table>

4.6.3. Monitoring in Caprine animals

<table>
<thead>
<tr>
<th>Description</th>
<th>Estimated Number of tests</th>
</tr>
</thead>
<tbody>
<tr>
<td>Caprine animals referred to in Annex III, Chapter A, Part II, point 2 of Regulation (EC) 999/2001</td>
<td>20</td>
</tr>
<tr>
<td>Caprine animals referred to in Annex III, Chapter A, Part II, point 3 of Regulation (EC) 999/2001</td>
<td>1,800</td>
</tr>
<tr>
<td>Caprine animals referred to in Annex III, Chapter A, Part II, point 5 of Regulation (EC) 999/2001</td>
<td>0</td>
</tr>
<tr>
<td>Caprine animals referred to in Annex VII, Chapter A, points 3.3 (c) of Regulation (EC) 999/2001</td>
<td>0</td>
</tr>
<tr>
<td>Caprine animals referred to in Annex VII, Chapter A, points 5(b) (ii) of Regulation (EC) 999/2001</td>
<td>0</td>
</tr>
<tr>
<td>Others (specify)</td>
<td>0</td>
</tr>
</tbody>
</table>

4.6.4. Discriminatory tests

<table>
<thead>
<tr>
<th>Description</th>
<th>Estimated number of tests</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary molecular testing referred to in Annex X, Chapter C, point 3.2 (c) (i) of Regulation (EC) 999/2001</td>
<td>6</td>
</tr>
</tbody>
</table>

4.6.5. Genotyping of positive and randomly selected animals

<table>
<thead>
<tr>
<th>Description</th>
<th>Estimated number of tests</th>
</tr>
</thead>
<tbody>
<tr>
<td>Animals referred to in Annex III, Chapter A, Part II, point 8.1 of Regulation (EC) 999/2001</td>
<td>6</td>
</tr>
<tr>
<td>Animals referred to in Annex III, Chapter A, Part II, point 8.2 of Regulation (EC) 999/2001</td>
<td>100</td>
</tr>
</tbody>
</table>
4.7. Eradication

4.7.2. Measures following confirmation of a scrapie case:

3.7.2.1. Description:

Rules for movement of animals from herds placed under movement restrictions are laid down in the Order No. 930 of 7. September 2006. When an animal is suspected of TSE, sheep and goats and ovine/caprine embryos, ova and semen are placed under official movement restrictions according to Regulation 999/2001 as amended, until all examinations of the suspected animal are finished.

Classical scrapie case

In case of a positive test result of classical scrapie in a sheep or a goat the animals under official movement restrictions will be culled and destroyed as SRM in accordance with Regulation 999/2001 as amended. The positive animal will be genotyped in accordance with Commission Regulation (EC) No 999/2001 as amended. In addition the buildings, manure and grazing land must be treated accordingly with disinfection, destruction and quarantine.

Atypical scrapie

In case of a positive test result of atypical scrapie in a sheep, measures according to TSE regulation 722/2007 point 5 will be applied. The measures will place for a two breeding year period all animals in the affected holding under official movement restrictions with intensified monitoring and testing of all ovine and caprine animals aged over 18 months slaughtered for human consumption and all animals which have been killed/or are dead in the holding. Furthermore measures will be applied to secure that no live ovine and caprine, embryos or ova from the holding will be dispatched to other countries during a period of three years. Exceptions are animals of the ARR/ARR genotype, in which case the period of export restriction is two breeding years.

Rules for compensation of farmers for animals, which have to be killed due to clinical suspicion or related to positive cases of TSEs, are laid down in Order No. 930 of 7. September 2006 and in Order no. 239 of 12 April 1991 concerning expenses and compensation related to eradication and prevention of animal diseases as amended by Order no. 812 of 29 October 1999. The animals are compensated at the market value and, in case of compulsory culling of the entire herd; the Danish Veterinary and Food Administration cover 20% of the estimated loss of profits.

The Danish Veterinary and Food Administration will notify the Commission and the OIE of every single positive finding of TSE in accordance with the current EU rules.
3.7.2.2. Summary table

<table>
<thead>
<tr>
<th>Animals to be killed under the requirements of Annex VII, Chapter A, point 2.3 of Regulation (EC) 999/2001:</th>
<th>Estimated number</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2.000</td>
</tr>
<tr>
<td>Animals to be genotyped under the requirements of Annex VII, Chapter A, point 2.3 of Regulation (EC) 999/2001:</td>
<td>300</td>
</tr>
</tbody>
</table>

3.7.3. Breeding programme for resistance to TSE in sheep

4.7.3.1. General description

Denmark has no breeding programme for TSE in sheep since the programme according to Article 6a of Regulation (EC) No 999/2001 isn’t obligatory. Denmark has never had a breeding programme since the Danish national TSE surveillance programme was approved the 24 October 2003 with Commission Regulation No. 1874/2003 (later replaced by 546/2006). This surveillance programme granted Denmark the derogation from the obligation to establish breeding programmes for TSE resistance in sheep and defined additional guarantees concerning import.

4.7.3.2. Summary table

<table>
<thead>
<tr>
<th>Ewes to be genotyped under the framework of a breeding programme referred to in article 6a of Regulation (EC) 999/2001:</th>
<th>Estimated number</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0</td>
</tr>
<tr>
<td>Rams to be genotyped under the framework of a breeding programme referred to in article 6a of Regulation (EC) 999/2001:</td>
<td>0</td>
</tr>
</tbody>
</table>

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5 Description of the programme according to the minimum requirements set out in Annex VII, Chapter B of Regulation (EC) 999/2001.
5. **Costs**

5.1. **Detailed analysis of the costs:** Scrapie monitoring program for sheep and goats in 2008

The tests IDEXX herd check are used to test healthy slaughtered and risk ovine and caprine animals. One sample of brainstem is tested for each animal. The price for the test is approximately 8 € Euro. If other direct costs are included (for instance other consumables, transport of tests and fees for sampling) the cost is around 44 € Euro per test of healthy slaughtered animal, fallen stock and culled animals.

Inconclusive and positive results are submitted for confirmatory to National Veterinary Institute. If the final test result is positive, a discriminatory test is carried out. If BSE cannot be excluded, the sample is sent to the CRL for further discriminatory testing. The cost of primary discriminatory test is 516 €Euro per sample.

**Genotyping in 2008**

The sample is preformed by sequencing. The tests are performed by Danish Veterinary Institute and the direct costs are 34 € Euro per sample.

**Compulsory slaughter in 2008**

Each animal is compensated according to its marked value. Three independent sheep and goat experts are always performing the valuation of the animals, which always secure a fair valuation for the farmer and the Danish Veterinary and Food Administration. The average market value of sheep and goats is 400 Euro€ per animal.
### 5.2. Summary of the costs

<table>
<thead>
<tr>
<th>Costs related to</th>
<th>Specification</th>
<th>Number of units</th>
<th>Unitary cost in Euro €</th>
<th>Total amount in Euro</th>
<th>Community funding requested (yes/no)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. Scrape testing⁶</td>
<td>Test: IDEXX Herdcheck, EUROFINS</td>
<td>10,700</td>
<td>44</td>
<td>470,800</td>
<td>Yes</td>
</tr>
<tr>
<td>2.1. Rapid tests</td>
<td>Test: immunoblot</td>
<td>6</td>
<td>516</td>
<td>3,096</td>
<td></td>
</tr>
<tr>
<td>2. Discriminatory testing⁷</td>
<td>Test:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Genotyping</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.1. Determination of genotype of animals in the framework of the monitoring and eradication measures laid down by Regulation 99/2001⁸</td>
<td>Method. Sequencing</td>
<td>406</td>
<td>34</td>
<td>13,804</td>
<td>Yes</td>
</tr>
<tr>
<td>3.2. Determination of genotype of animals in the framework of a breeding programme</td>
<td>Method</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Compulsory Slaughter</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.1. Compensation for animals to be killed/slaughtered under the requirements of Annex VII, Chapter A, point 2.3 of Regulation (EC) 999/2001</td>
<td>2000</td>
<td>460</td>
<td>800,000</td>
<td>Yes</td>
<td></td>
</tr>
</tbody>
</table>

**TOTAL** | | | | | 1,287,700 |

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Yours faithfully,

Birgit Hendriksen

Deputy Chief Veterinary Officer,
Head of Division, Division of Animal Health

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⁶ As referred in point 4.6.2 and 4.6.3.
⁷ As referred in point 4.6.4.
⁸ As referred in points 4.6.5 and 4.7.2.2.