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

Finland

* in accordance with Commission Decision 90/424/EEC
Standard requirements for the submission of national programmes of eradication and monitoring of TSEs\(^1\) as referred to in Article 1(c) and Annex III to [Doc. SANCO/10522/2007 Rev.2]

1. **Identification of the programme**
   
   Member State: Finland
   
   Disease(s)\(^2\): BSE and scrapie
   
   Year of implementation: 2009
   
   Reference of this document: 1169/820/2008
   
   Contact (name, phone, fax, e-mail): Kajsa Hakulin, phone +358.9.1605.2433, fax +358.9.1605.3338, e-mail kajsa.hakulin@mmm.fi
   
   Date sent to the Commission: 23.4.2008

2. **Description of the programme**
   
   The programme is aimed at monitoring the BSE and scrapie situation in the territory of Finland and eradicating positive cases as well as other animals which may have been infected.
   
   The monitoring for BSE covers the target groups defined in Article 6 paragraph 1a of Regulation 999/2001.
   
   The monitoring for scrapie covers the target groups defined in Annex III, Chapter A, part II, points 3 and 5, as well as Annex VII, Chapter A, points 3.3(c), 3.4(d) and 5(b)(ii) of Regulation 999/2001. As regards point 3 (ovine and caprine animals not slaughtered for human consumption) the sampling is exceeding the minimal requirements of Regulation 999/2001, in accordance with Commission Regulation 546/2006 where the national scrapie control programme of Finland is approved. According to the national control programme, all ovine and caprine animals above 18 months of age which die on farms in the cadaver collection area will be tested for TSE.
   
   The monitoring is carried out using rapid tests for screening. Inconclusive and positive cases are submitted for confirmatory tests. Where positive cases are found, eradication measures are implemented in accordance with Annex VII of Regulation 999/2001 (see below).
   
   The eradication measures for bovine animals cover:
   
   1) Cohorts as defined in Regulation 999/2001,

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\(^1\) Bovine Spongiform Encephalopathy (BSE), Scrapie and Chronic Wasted Disease (CWD).

\(^2\) One document per disease is used unless all measures of the programme on the target population are used for the control and eradication of different diseases.
In total, eight outbreaks of scrapie have been confirmed in Finland as follows:

2007: one outbreak of classical scrapie (two holdings, one case in sheep)
2006: two outbreaks of classical scrapie (two holdings, two cases in sheep)
2005: one outbreak of classical scrapie (one holding, one case in sheep)
2004: one outbreak of classical scrapie (one holding, one case in sheep)
2002: one outbreak of classical scrapie (two holdings, four cases in goats)

Scrapie

Pleodrome has applied to the OIE for official recognition of the BSE status in category I, negligible BSE risk.

According to the Scientific Steering Committee and FSA, the GBP-status of Finland is level III. BSE confirmed at a low incidence.

So far, only one BSE case has been recorded in Finland. That case was recorded in 2001, in a cow born in Finland in 1993.

BSE

Description of the epizootiological situation of the disease

1) In so far as they are detectable, parents and in the case of females, all embryos, ova and the last progeny.

2) Based on an epidemiological enquiry, animals on connected holdings where it is considered that these animals have been exposed to the affected herd or herd at risk of having BSE.

3) Other animals from the same herd as a confirmed BSE case may also be killed if Fenna (Finish Food Safety Authority) decides that they are at risk of having BSE.

The epidemiological measures for cattle and captive animals cover:

1) All live and captive animals on farms where classical scrapie has been confirmed. If the infected animal has been introduced from another holding or herd where the case was confirmed.

2) Offspring born within two years prior to or after the clinical onset of BSE in female animals.

3) Other holdings from the same herd as a confirmed BSE case may also be killed if Fenna (Finish Food Safety Authority) decides that...
In all outbreaks of classical scrapie, all sheep and goats on the infected farms have been destroyed. Contact farms have been traced and animals at risk have been destroyed.

In the outbreaks of atypical scrapie, all sheep and goats on the infected farms have been destroyed except for one farm in 2006 where Evira decided not to kill the remaining animals but to apply restrictions and intensified testing instead as laid down in Regulation 999/2001.

The Commission approved the national scrapie programme of Finland in 2004 by Regulation 1874/2003, which was later replaced by Regulation 546/2006. According to that programme, all dead-on-farm sheep and goats above 18 months of age in the cadaver collection area must be tested for TSE.
4.6. Monitoring in bovine animals

4.6.1. Monthly estimation of deaths

4.6.2. Monthly sampling of animals

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

4.5.1. Decision making is mandatory to register all cows and cattle animals in a central database.

4.4. System in place for the identification of animals:

4.4.1. Law on a Register for Rural Enterprises (1973/1974)

4.3. System in place for the registration of holdings:

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

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

Measures included in the programme:
<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Animals referred to in Annex III, Chapter A, Part I, point 2.2 of Regulation (EC) No 999/2001</td>
<td>100 000</td>
</tr>
<tr>
<td>Others (specify)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Estimated Number of kas</th>
<th>Monitoring in Ovine animals</th>
</tr>
</thead>
<tbody>
<tr>
<td>100</td>
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<tr>
<td>200</td>
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<td>900</td>
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<tr>
<td>1000</td>
<td></td>
</tr>
</tbody>
</table>

Part III of Regulation (EC) No 999/2001
Overseas (specify other animal species referred to in Annex III, Chapter 4

Regulation (EC) No 999/2001, Chapter VI, point 3.4.4. (d) of 01
Overseas (EC) No 999/2001, Chapter VI, point 3.4.4. (d) of 01
Overseas (EC) No 999/2001, Chapter VI, point 3.4.4. (d) of 01
Overseas (EC) No 999/2001, Chapter VI, point 3.4.4. (d) of 01
Overseas (EC) No 999/2001, Chapter VI, point 3.4.4. (d) of 01
Overseas (EC) No 999/2001, Chapter VI, point 3.4.4. (d) of 01
Overseas (EC) No 999/2001, Chapter VI, point 3.4.4. (d) of 01
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Overseas (EC) No 999/2001, Chapter VI, point 3.4.4. (d) of 01
Overseas (EC) No 999/2001, Chapter VI, point 3.4.4. (d) of 01
Overseas (EC) No 999/2001, Chapter VI, point 3.4.4. (d) of 01
Overseas (EC) No 999/2001, Chapter VI, point 3.4.4. (d) of 01
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Overseas (EC) No 999/2001, Chapter VI, point 3.4.4. (d) of 01
Overseas (EC) No 999/2001, Chapter VI, point 3.4.4. (d) of 01
Overseas (EC) No 999/2001, Chapter VI, point 3.4.4. (d) of 01
Overseas (EC) No 999/2001, Chapter VI, point 3.4.4. (d) of 01
Oversea...
### 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) No 999/2001</td>
<td>0</td>
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<tr>
<td>Caprine animals referred to in Annex III, Chapter A, Part II, point 3 of Regulation (EC) No 999/2001</td>
<td>350</td>
</tr>
<tr>
<td>Caprine animals referred to in Annex III, Chapter A, Part II, point 5 of Regulation (EC) No 999/2001</td>
<td>50</td>
</tr>
<tr>
<td>Caprine animals referred to in Annex VII, Chapter A, point 3.3(c) of Regulation (EC) No 999/2001</td>
<td>50</td>
</tr>
<tr>
<td>Caprine animals referred to in Annex VII, Chapter A, point 5(b)(ii) of Regulation (EC) No 999/2001</td>
<td>50</td>
</tr>
<tr>
<td>Others (specify)</td>
<td></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) No 999/2001</td>
<td>5</td>
</tr>
</tbody>
</table>
4.7.1.2 Summary Table

<table>
<thead>
<tr>
<th>Regulation (EC) No 999/2001: Animals to be killed under the requirements of Annex VII, Chapter A, point 2.1 of</th>
<th>Estimated number</th>
</tr>
</thead>
<tbody>
<tr>
<td>50</td>
<td></td>
</tr>
</tbody>
</table>

These animals are at risk, they may be decided to be killed.

3 Other animals from the same herd as a confirmed BSE case are normally not killed, but in certain cases, where it is considered that

2) Offspring born within two years prior to or after the clinical onset of BSE in female animals,

1) Contaminated in accordance with Regulation 999/2001,

The eradication measures cover:

4.7.1 Description

4.7.1 Measures following confirmation of a BSE case:

<table>
<thead>
<tr>
<th>(EC) No 999/2001</th>
<th>Animals referred to in Annex III, Chapter A, point 8.1 of Regulation</th>
</tr>
</thead>
<tbody>
<tr>
<td>100</td>
<td>1002/699/EC</td>
</tr>
</tbody>
</table>

4.6.5. General points of positive and randomly selected animals
4.7.2. Measures following confirmation of a Scrapie case:

4.7.2.1. Description:
The eradication measures cover:

1) All ovine and caprine animals on farms where scrapie has been confirmed. If the infected animal has been introduced from another holding it may be decided, based on the history of the case, to kill the animals in the holding of origin in addition to, or instead of, the holding where the case was confirmed.

Evira may decide not to cull animals at holdings with atypical scrapie.

2) Based on an epidemiological enquiry, animals on contact holdings where it is considered that these animals have been exposed to the infection.

3) In so far as they are identifiable, parents, and in the case of females all embryos, ova and the last progeny.

Animals that are killed and destroyed are fully compensated for their market value, as assessed by an independent expert. If property is destroyed based on orders from the competent authority, its value is fully compensated to the farmer. The competent authority may also decide to compensate for production losses, if the farmer gets his main income or a substantial part thereof from animal production.

4.7.2.2. Summary table

<table>
<thead>
<tr>
<th>Animals to be killed under the requirements of Annex VII, Chapter A, point 2.3 of Regulation (EC) No 999/2001:</th>
<th>Estimated number</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2000</td>
</tr>
<tr>
<td>Animals to be genotyped under the requirements of Annex VII, Chapter A, point 2.3 of Regulation (EC) No 999/2001:</td>
<td>0</td>
</tr>
</tbody>
</table>

4.7.3. Breeding programme for resistance to TSEs in sheep

4.7.3.1. General description:

Finland does not have a breeding programme in place.

4.7.3.2. Summary table

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4 Description of the programme according to the minimum requirements set out in Annex VII, Chapter B of Regulation (EC) No 999/2001.
<table>
<thead>
<tr>
<th>Estimated number</th>
<th>Article 6a of Regulation (EC) No 99/2001 1001</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Rams to be purchased under the framework of a breeding programme referred to in</td>
</tr>
<tr>
<td></td>
<td>Article 6a of Regulation (EC) No 99/2001</td>
</tr>
<tr>
<td></td>
<td>Ewes to be purchased under the framework of a breeding programme referred to in</td>
</tr>
</tbody>
</table>
5. **Costs**

5.1. **Detailed analysis of the costs:**

**BSE monitoring**

Healthy slaughtered bovines are screened by BioRad TeSeEe. The price of the kit is 6.5 € per test. Bovine animals in the risk population (fallen stock, emergency slaughtered animals, animals showing clinical signs or conditions at ante mortem inspection) are screened by Prionics WB. The price of the kit is 8 € per test.

**Scrapie monitoring**

Each sample from ovine and caprine animals selected for monitoring is screened with BioRad TeSeEe. Two samples (brainstem and cerebellum) are tested separately for each animal. The price of the kit is 6.5 € per test and 13 €/two tests for each animal.

Inconclusive and positive results are submitted for confirmatory testing. If the final test result is positive, a discriminatory test is carried out by immunoblot. The cost of the primary discriminatory testing is 125 € per sample.

**Genotyping**

Genotyping is carried out by direct sequencing of the amplified PrP open reading frame. The direct costs are 11.4 € per test, including sample tubes and reagents used in DNA purification, PCR and sequencing (sequencing costs include also polymer, capillaries, buffer and plastic consumables).

**Compulsory slaughter and destruction**

Each animal is compensated according to its market value, as assessed by an independent expert. The average market value of bovine animals is 1000 € and the average market value of sheep and goats is 200 €.

### 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 EUR</th>
<th>Total amount in EUR</th>
<th>Community funding requested (yes/no)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. BSE testing²</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>1.1. Rapid tests</td>
<td>Test: BioRad TeSeE</td>
<td>100 000</td>
<td>8.5</td>
<td>650 000</td>
<td>yes</td>
</tr>
</tbody>
</table>

² As referred to in point 4.6.1.
<table>
<thead>
<tr>
<th>Test</th>
<th>Test: Primary molecular tests</th>
<th>Test: Molecular tests</th>
<th>Test: Rapid tests</th>
<th>Test: Sample tests</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
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<td>6</td>
<td>5</td>
<td>125</td>
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</table>

As referred to in points 4.6.4.
As referred to in points 4.6.2 and 4.6.3.
4. Genotyping

<table>
<thead>
<tr>
<th>4.1.</th>
<th>Determination of genotype of animals in the framework of the monitoring and eradication measures laid down by Regulation (EC) No 999/2001&lt;sup&gt;8&lt;/sup&gt;</th>
<th>Method</th>
<th>105</th>
<th>11.4</th>
<th>1197</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Direct sequencing of teh amplified PrP open reading frame</td>
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</tr>
<tr>
<td>4.2.</td>
<td>Determination of genotype of animals in the framework of a breeding programme&lt;sup&gt;9&lt;/sup&gt;</td>
<td>Method</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

5. Compulsory Slaughter

| 5.1. | Compensation for bovine animals to be killed/slaughtered under the requirements of Annex VII, Chapter A, point 2.1 of Regulation (EC) No 999/2001 | 50     | 1000 | 50000 | yes |

| 5.2. | Compensation for ovine and caprine animals to be killed/slaughtered under the requirements of Annex VII, Chapter A, point 2.3 of Regulation (EC)No 999/2001 | 2000   | 200  | 400000 | yes |

TOTAL 1279697  yes

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<sup>8</sup> As referred to in points 4.6.5 and 4.7.2.2.
<sup>9</sup> As referred to in point 4.7.3.2.