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HEALTH & CONSUMERS DIRECTORATE-GENERAL
Unit 04 - Veterinary Control Programmes

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*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

Sweden

* in accordance with Commission Decision 90/424/EEC



ANNEX III

Standard requirements for the submission of national programmes of eradication and monitoring of TSEs¹ as referred to in Article 1(c)

1. Identification of the programme

Member State: Sweden

Disease(s)²: BSE, Scrapie

Year of implementation: 2009

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2. Description of the programme

Animals from all counties in Sweden are sampled. The programme is applied in accordance with Regulation (EC) 999/2001 of the European Parliament and of the Council of 22 May 2001.

Cattle

The estimated number of cattle foreseen to be sampled divided into categories is:

- All cattle over 30 months of age in normal slaughter: 170 000
 - All emergency slaughter and sick animals rejected from healthy slaughter (over 24 months of age): approximately 300
 - All fallen stock over 24 months of age: Approximately 23 000
- Total estimated number of cattle to be tested: 193 300.

Goat

¹ Bovine Spongiform Encephalopathy (BSE), Scrapie and Chronic Waste 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.

The goat population in Sweden is very small, and mainly not used for human consumption. The estimated number of goats foreseen to be sampled is:

- All fallen stock above 18 months: approximately 100

Sheep

The Swedish National Scrapie control programme (1874/2003/EC), was approved by the Commission the 24 October 2003.

- Due to this programme all fallen stock above 18 months shall be tested, approximately 4000.
- Sweden is applying the derogation provided for in Annex VII, Chapter A, point 2.3 c regarding atypical scrapie. Those herds are put under restrictions for 2 breeding years following the detection of the case. This includes movement restrictions: no animals are allowed to leave the herd for other purpose than direct slaughter. All animals shall be identified. All animals more than 18 months slaughtered for human consumption or dead at farm, approximately 100, shall be tested.
- Genotyping is performed in 100 randomly selected animals every year, in animals that are TSE-positive and in up to 50 animals from farms put under restrictions after a case of atypical scrapie.
- Total estimated number of sheep to be tested: 4100

3.

Description of the epidemiological situation of the disease

From 1st of January 1986, the use of any fallen stock and diseased parts of slaughtered animals was officially banned in any feeding stuff including MBM to other animals than fur and zoo animals. Since 1987 more than 95% of the bovine compound feeding stuff for ruminants no longer contained MBM as a result of a voluntary decision by the industry. Feeding MBM to dairy cows was prohibited by the above mentioned decision in 1986. The use of ruminant material for feeding ruminants was officially banned in Sweden in 1991. In 1995, as a result of the Swedish accession to the EU, the ban was extended to include material of mammalian origin.

One single case of BSE has been recorded in Sweden in 2006. This case was shown to be an atypical case of H-type. One single case of classical scrapie was found in 1986. Three cases of NOR98 was found in 2003, two cases in 2004, one case in 2005, 8 cases in 2006 and 4 cases in 2007.

The import of live animals to Sweden is limited and only applies for breeding animals.

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 Swedish Board of Agriculture

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

Animals from all counties of Sweden are sampled. In remote areas, in the northwestern part of the country, it is allowed to bury carcasses.

The number of cattle in these areas represents only about 2.3 % of the total bovine population in the country.

The Swedish Board of Agriculture (SBA) pays the fee for collecting fallen stock of sheep and goats over 18 month of age. In the northwestern parts of Sweden, where burying of animal waste is allowed, the owner can submit the skull direct to the NVL. The SBA will bear the expenses for sampling and cost related to submitting the samples. This regime increased the number of fallen stock of sheep and goat sent in to rendering plants. In 2007, 2495 sheep and goats over 18 month of age were tested at the rendering plants.

4.3. **System in place for the registration of holdings:** According to national legislation every keeper of cattle, sheep and goat has to register the holding at the Swedish Board of Agriculture. Every holding is given a number consisting of the country code, SE, followed by a six-digit number. Information concerning all holdingnumbers is stored in a computerised register. The national legislation concerning the system for identification and registration is "Statens jordbruksverks föreskrifter (SJVFS 2007:12) om märkning och registrering av nötkreatur", "Statens jordbruksverks föreskrifter (SJVFS 2007:13) om märkning och registrering av svin" and in Statens jordbruksverks föreskrifter (SJVFS 2007:14 om märkning och registrering av får och getter".

4.4. **System in place for the identification of animals:**

Cattle: All bovine animals have to be marked with a unique identification number. Calves must be marked with ear tags with a unique identification number within 20 days after birth. All ear tags are marked with: SE, number of the holding of birth, individual identification number and control digit.

The Swedish identification and registration system of bovine animals consists of a central database which was approved by the commission on the first of November 1999 (Commission Decision 99/693/EC), holders are obliged to report events in the herd within seven days. In addition to the database the registration system consists of unique identification numbers of all animals, this number includes the holding number of the herd of origin, the individual identification number and a control digit. Every animal

holder is also obliged to keep an updated farm register, in which they shall register information about birth and deaths, the sex of the animals, information about animals added to the herd including information about the origin of these animals and information about animals leaving the herd and their destination. The information shall be recorded on the same day as the event.

Sheep and goats: An updated system for identification and registration of sheep and goats was implemented in July 2005. All sheep and goats have to be marked with an ear tag with an identification number consisting of the country code (SE), the holding number of the herd of origin and a 5 digit individual number before 6 months of age. For animals intended for slaughter before the age of 12 months, one ear tag is sufficient.

The national legislation concerning the system for identification and registration is "Statens Jordbruksverks föreskrifter (SJVFFS 2007:14) om märkning och registrering av får och getter". This legislation is revised in compliance with the EG legislation 21/2004.

4.5.

Measures in place as regards the notification of the disease: All TSE's are compulsory notifiable on clinical suspicion according to Swedish legislation, the act of epizootic diseases, epizootilagen (1999:657). All holders of animals are obliged to report every suspect case of TSE to a veterinarian, and the veterinarian is obliged to report to the authorities.

4.6. Monitoring

4.6.1. Monitoring in Bovine Animals

| | Estimated Number of tests |
|--|---------------------------|
| Animals referred to in Annex III, Chapter A, Part I, points 2.1, 3 and 4 of Regulation (EC) No 999/2001 of the European Parliament and of the Council ³ | 23 300 |
| Animals referred to in Annex III, Chapter A, Part I, point 2.2 of Regulation (EC) No 999/2001 | 170 000 |
| Others (specify) | |

4.6.2. *Monitoring in Ovine animals*

| | Estimated Number of tests |
|---|---------------------------|
| Ovine animals referred to in Annex III, Chapter A, Part II, point 2 of Regulation (EC) No 999/2001 | 0 |
| Ovine animals referred to in Annex III, Chapter A, Part II, point 3 of Regulation (EC) No 999/2001 | 4000 |
| Ovine animals referred to in Annex III, Chapter A, Part II, point 5 of Regulation (EC) No 999/2001 | 0 |
| Ovine animals referred to in Annex VII, Chapter A, point 3.4(d) of Regulation (EC) No 999/2001 | 0 |
| Ovine animals referred to in Annex VII, Chapter A, point 5(b)(ii) of Regulation (EC) No 999/2001 | 50 |
| Others (specify other animal species referred to in Annex III, Chapter A, Part III of Regulation (EC) No 999/2001 | 0 |

4.6.3. Monitoring in Caprine animals

| | Estimated Number of tests |
|--|---------------------------|
| Caprine animals referred to in Annex III, Chapter A, Part II, point 2 of Regulation (EC) No 999/2001 | 0 |
| Caprine animals referred to in Annex III, Chapter A, Part II, point 3 of Regulation (EC) No 999/2001 | 100 |
| Caprine animals referred to in Annex III, Chapter A, Part II, point 5 of Regulation (EC) No 999/2001 | 0 |
| Caprine animals referred to in Annex VII, Chapter A, point 3.3(c) of Regulation (EC) No 999/2001 | 0 |
| Caprine animals referred to in Annex VII, Chapter A, point 5(b)(i) of Regulation (EC) No 999/2001 | 0 |
| Others (specify) | 0 |

4.6.4. Discriminatory tests

| | Estimated number of tests |
|---|---------------------------|
| Primary molecular testing referred to in Annex X, Chapter C, point 3.2(c)(i) of Regulation (EC) No 999/2001 | 5 |

4.6.5. Genotyping of positive and randomly selected animals

| | Estimated number of tests |
|--|---------------------------|
| Animals referred to in Annex III, Chapter A, Part II, point 8.1 of Regulation (EC) No 999/2001 | 5 |
| Animals referred to in Annex III, Chapter A, Part II, point 8.2 of Regulation (EC) No 999/2001 | 100 |

4.7. Eradication

4.7.1. Measures following confirmation of a BSE case:

4.7.1.1. Description: According to the Act of Epizootic Disease (1999:657), any veterinarian may decide about restrictions (to prevent spreading of disease) for a farm if there is a suspect case of a contagious disease included in this act. This applies also for BSE since it is included in the Act of Epizootic Disease. Such a restriction must immediately be reported to the SBA, which decides if the restrictions should continue to apply. The SBA has the legal power to decide about restrictions and further measures for the farm if there is a suspect or confirmed case of BSE.

Concerning clinical suspicion, i.e. cases where BSE cannot be ruled out on clinical examination, the animal is euthanized and sent to the NVI for examination first by rapid-test and then by immunohistochemistry and histopathology. Restriction is immediately put on the herd and if the rapid-test gives a positive result, a minor epidemiological investigation starts, while waiting for the other test results. In case of a confirmed case of BSE the herd would be put under legal restrictions.

4.7.1.2. Summary table

| | Estimated number |
|--|------------------|
| Animals to be killed under the requirements of Annex VII, Chapter A, point 2.1 of Regulation (EC) No 999/2001: | 0 |

4.7.2. Measures following confirmation of a Scrapie case:

4.7.2.1. Description:

If scrapie is confirmed the case will be traced back to the farm and restrictions concerning moving animals are immediately put on the herd. An epidemiological investigation is performed. Contact herds will be traced. In such case the whole herd will be stamped out and animals in appropriate age category will be examined for scrapie. Positiv animals will be genotyped. Following the revision of the rules for eradication of TSE in small ruminants Sweden will use the possibility not to cull the herds were NOR 98 has been found and instead put them under movement restrictions and extended monitoring. We will also perform genotyping of about 50 of the animals from these herds either from fallen stock or animals sent to slaughter.

4.7.2.2. Summary table

| | Estimated number |
|---|------------------|
| Animals to be killed under the requirements of Annex VII, Chapter A, point 2.3 of Regulation (EC) No 999/2001: | 0 |
| Animals to be genotyped under the requirements of Annex VII, Chapter A, point 2.3 of Regulation (EC) No 999/2001: | 50 |

4.7.3. Breeding programme for resistance to TSEs in sheep

4.7.3.1. General description⁴:

4.7.3.2. Summary table

| | Estimated number |
|---|------------------|
| Ewes to be genotyped under the framework of a breeding programme referred to in Article 6a of Regulation (EC) No 999/2001 | 0 |
| Rams to be genotyped under the framework of a breeding programme referred to in Article 6a of Regulation (EC) No 999/2001 | 0 |

⁴ Description of the programme according to the minimum requirements set out in Annex VII, Chapter B of Regulation (EC) No 999/2001.

5. Costs

Detailed analysis of the costs:

Estimated costs for cattle 2009:

| | |
|---|-----------------------|
| Cost | |
| Test-Kits and reagents, Analysis, transport of samples and sampling equipment | 43 520 000 SEK |
| Collection of samples (at rendering and at slaughter) (150 SEK) | 25 500 000 SEK |
| Administrative costs at the Swedish Board of Agriculture and at the National Veterinary institute | 1 257 277 SEK |
| 1. TOTAL | 70 277 373 SEK |

Estimated costs for goat 2009

| | |
|---|-------------------|
| Kits and reagents Costs for analysis, transport of samples, sampling equipment, collection of samples (490 SEK /sample) | 49 000 SEK |
| Administrative costs at the Swedish board of agriculture and at the National veterinary institute | 50 000 SEK |
| 2. TOTAL | 99 000 SEK |

Estimated costs for sheep 20 09

| | |
|--|---------------|
| Kits and reagents, Costs for analysis, transport of samples, sampling equipment, collection of samples 600 SEK/sample) | 1 984 500 SEK |
| Administrative costs at the Swedish board of agriculture and at the National veterinary institute | 720 000 SEK |
| Genotyping of 155 animals (150 SEK/sample) | 23 250 SEK |

| | |
|---|----------------------|
| Sampling costs for genotyping | 27 500 SEK |
| Stamping out of infected herds | 0 SEK |
| Costs for transport of sheep and goat to rendering plant (> 18 months old dead on farm) | 3 424 761 SEK |
| 3. TOTAL | 6 180 011 SEK |

5.2. Summary of the costs

| <i>Costs related to</i> | <i>Specification</i> | <i>Number of units</i> | <i>Unitary cost in EUR</i> | <i>Total amount in EUR</i> | <i>Community funding requested (yes/no)</i> |
|-------------------------|------------------------------|------------------------|----------------------------|----------------------------|---|
| 1. | BSE testing ⁵ | | | | |
| 1.1. | Rapid tests | | | | |
| | Test: Biorad | 157 992 | 25,3 | 4 002 309 | Yes |
| | Test: Idexx | 35 308 | 20,6 | 728 135 | Yes |
| | Test: | | | | |
| 2. | Scrapie testing ⁶ | | | | |
| 2.1. | Rapid tests | | | | |
| | Test: Biorad | 4 150 | 53,3 | 221 033 | Yes |
| | Test: | | | | |
| | Test: | | | | |

⁵ As referred to in point 4.6.1.

⁶ As referred to in points 4.6.2 and 4.6.3.

| | | | | | | |
|--|---------------------------------|---|-------|-----|-----|--|
| 3. Discriminatory testing ⁷ | | | | | | |
| 3.1. Primary molecular tests | Test: Biorad Ovine Western Blot | 5 | 108,7 | 544 | yes | |
| | Test: | | | | | |

7 As referred to in point 4.6.4.

| | | | | | | |
|--------------------------|--|--|-----|------|------|-----|
| 4. Genotyping | | | | | | |
| 4.1. | Determination of genotype of animals in the framework of the monitoring and eradication measures laid down by Regulation (EC) No 999/2001 ⁸ | Method: Sequencing of PCR product covering all three codon | 155 | 1,63 | 2527 | Yes |
| 4.2. | Determination of genotype of animals in the framework of a breeding programme ⁹ | Method | 0 | | | No |
| 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 | | 0 | | | No |
| 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 | | 0 | | | No |
| TOTAL⁹ | | | | | | |

⁸ As referred to in points 4.6.5 and 4.7.2.2.

⁹ As referred to in point 4.7.3.2.