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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

Hungary

* in accordance with Commission Decision 90/424/EEC

APPLICATION FOR

COMMUNITY CO-FINANCING OF

TSE MONITORING PROGRAMME OF

HUNGARY FOR 2009

April 2008

1. Identification of the programme

Member State: HUNGARY

Diseases: Bovine spongiform encephalopathy (BSE) and scrapie

Year of implementation: 2009

Reference of this document: Article 24 of Council Decision 90/424/EEC, Commission Decision 2004/450/EC as modified by Commission Decision 2006/282/EC and Commission Decision 2007/268/EC of 13 April 2007, and SANCO/10522/2007 Rev. 2 (POOL/04/2007/10522/10522R2-EN.doc)

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2. Description of the programme

Annual programme for monitoring BSE and scrapie using rapid tests in accordance with Article 6 and Annex III, Chapter A of Regulation (EC) No 999/2001.

3. Description of the epidemiological situation of the disease

The Act on the Veterinary Rules (Act No CLXXVI. of 2005 now and Act No XCI of 1995 earlier) prescribes that the animal keeper shall report the illness or the suspicion to a disease of the animal to the veterinarian. Before 1995 the former legislation rules on animal health also prescribed it. It has to be stressed that the veterinary legislation have prescribed for decades that the animal keeper has to report the illness or the suspicion of a disease of his/her animal to the veterinarian in every case not only in case of notifiable disease or suspicion of notifiable disease. It is the task of the veterinarian to state the suspicion of an notifiable disease and in case of the suspicion act on the basis of the detailed rules of the Zoosanitary Code (Decree No 41/1997(V.28.) FM of the Minister of Agriculture) or other ministerial decrees.
The BSE is a compulsorily notifiable disease in Hungary by the Act No. XCI of 1995 on the Veterinary Rules. It has to be noted that many years before the

BSE became compulsory notifiable disease it was already compulsory to report each ruminant showing any neurological signs as a suspicious case of rabies and since 1989 these animals were investigated for BSE (or scrapie) besides the laboratory tests for rabies. The BSE have never occurred in indigenous herd Hungary. There was one imported BSE case in 2007.

The scrapie is also a compulsorily notifiable disease in Hungary by the Act on the Veterinary Rules (Act No CLXXVI. of 2005 now and Act No XCI of 1995 earlier). Many years before the scrapie became compulsory notifiable disease it was already compulsory to report each ruminant showing any neurological signs as it was mentioned before. The scrapie was confirmed twice in imported animals. The first one was in 1964 at an import quarantine station among imported sheep. The second case was confirmed in January 2005 in a sheep imported from Romania for immediate slaughter. There were six confirmed scrapie cases in 2006 and there were eight of them in 2007 in domestic sheep population.

Between 1989 and March 2001 our surveillance system was the following:

The investigations of the brains of all ruminants showing any neurological signs were carried out for BSE or scrapie with histopathological method, irrespective of any other existing diagnosis. Furthermore on the basis of Zoosanitary Code (Decree No 41/1997(V.28.) FM) the compulsory, nationwide monitoring system has contained the investigation of the brains of the slaughtered, culled ruminants, as well as of the bovine animals older than three years and the sheep older than two years which died even without showing any neurological signs. This procedure corresponded to the Appendix 3.8.4. of the OIE International Animal Health Code (Surveillance and monitoring systems for BSE) and its Chapter 2.3.13.

Besides the ruminants the histopathological investigation were carried out in case of the felidae species, too. In Hungary the Central Veterinary Institute and the five regional veterinary institutes have carried out tests for TSEs with histopathological method. In these laboratories our experts performed these investigations according to the recommendations of the OIE Manual of Standards for Diagnostic Tests and Vaccines. The sampling place, as well as, the investigation procedure corresponded to the recommendations of the Manual. From 1989 to 2000, 1806 bovine brains and 1983 ovine brains were tested, with negative results in each case. In the case of felidae species our experts carried out over 3800 tests, with negative results, too. The population of goats is very small in Hungary, therefore only a few goats are investigated per year (e.g. in 1998 11 and in 1999 5 goats). There were not any positive results in case of this species, either. Please see the attached table (***Table 1***).

From March 2001 our surveillance system regarding TSE have been extended as follows:

1.Passive surveillance

It has been compulsory to investigate all ruminants showing any neurological signs in an official laboratory (as it was in the past, too). But there are some differences in the examination of the different species. In case of bovine animals only the Central Veterinary Institute (Budapest) was allowed to carry out investigation for BSE until March 2003 (After March 2003 the two regional veterinary institutes are also allowed to carry this investigations.). In the first step a histopathological examination is carried out as laid down in the latest edition of the OIE Manual. Where the result of the histopathological examination is inconclusive or negative or where the material is autolysed, the tissues shall be subjected to an examination by one of the other diagnostic methods laid down in the Manual (immuno-blotting, immunocytochemistry, or demonstration of characteristic fibrils by electron microscopy). In case of other ruminants the Central Veterinary Institute and the two* regional veterinary institutes are allowed to carry out histopathological investigation for TSE. Where the result of the histopathological investigation is inconclusive or negative without alternative diagnosis, the tissues shall be subject to an examination by immunocytochemistry in the Central Veterinary Institute.

* From 1 January 2001 there were only two regional veterinary institutes in Hungary, not five. At the end of 2004 these two institutes were attached to the Central Veterinary Institute and became the regional institutes of the CVI. From 1 January 2007 the National Reference Laboratory is the Veterinary Diagnostic Directorate of the Central Agricultural Office (the former Central Veterinary Institute). The rapid test and the histopathology in case of TSE suspicion is also carried out by the Veterinary Diagnostic Directorate's two regional labs in Debrecen and Kaposvár. The confirmatory test is carried out by the National Reference Laboratory in Budapest.

2.Active surveillance, National Monitoring Programme

A new National Monitoring Programme for BSE based on the rapid tests were introduced in March 2001 by the internal instruction of the CVO No 32505/2001. These programme has been changed several times since March 2001 following the modifications of the relevant EU rules, but since the start of the programme until 2004 the Bio-Rad Platelia test had been used. Since 2004 the Bio-Rad TeSeE™ Detection Kit has been used. The internal instruction of the CVO No 32505/2001 were modified by internal instructions No 32505/1/2001. and 8349/2002. Until July 2001 the main target subpopulation were the dead bovine animals over 30 moths of age without any neurological signs. After the first modification of our surveillance program (in July 2001) the monitoring investigations covered the following groups:

- bovine animals over 24 months which died without any neurological signs, or killed ones (excluding bovines killed due to an epidemic);
- all emergency slaughtered bovine animals over 24 months;
- animals over 30 months of age subject to normal slaughter.

In February 2002 the compulsory investigation of all bovine animals over 30 months of age subject to normal slaughter was introduced. These monitoring investgations were carried out by the Central Veterinary Institute (CVI) only. Please see the attached tables on the BSE monitoring investigations 2001 and 2002. ***(Table 2 and 3)***

The above mentioned internal instructions contained the following rules for the confirmatory tests.
Where the result of the monitoring test is inconclusive or positive, the tissues immediately shall be subjected to confirmatory examinations. The confirmatory examination shall start by a histopathological examination of the brainstem as laid down in the OIE Manual. Where the results of the histopathological examination is inconclusive or negative or where the material is autolysed, the tissues shall be subjected to an examination by one of the other diagnostic methods laid down in the Manual (immuno-blotting, immunocytochemistry, or demonstration of characteristic fibrils by electron microscopy), but the method must not be the same as the one used in the monitoring test.

In March 2003 a new internal instruction of the CVO were issued (No 11496/2/2003.) and the compulsory investigation of all dead bovine animals over 24 months has been introduced since 1 May 2003. These internal instruction contained the approval for the two regional veterinary institute (at Debrecen and Kaposvár) to carry out rapid tests for BSE and scrapie as well as to carry out histopathology in case of bovine animals. (Before this date it was allowed only in case of other ruminants as it was mentioned earlier.)

As a part of the harmonisation process of the Hungarian veterinary legislation to the EU rules in June 2003 the Decree No 69/2003. (VI.25.) FVM of the Minister of Agriculture and Rural Development on the prevention, control and eradication of transmissible spongiform encephalopathies were published. On the basis of the Decree the TSE Contingency Plan issued at the end of November 2003. This Contingency Plan contains a special chapter for the official control carried out by the State Veterinary Service and a very detailed Instruction Manual for the practical implementation of the legislative rules. Furthermore in February 2004 Decree No. 22/2004. (II.27.) FVM amending Decree No. 69/2003. (VI.25) FVM were published and from the date of accession Hungary has been directly under the effect of Regulation EC (No) 999/2001.

4. Measures included in the programme

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

In national level this monitoring program is supervised and coordinated by the Animal Health and Animal Welfare Directorate of the Central Agricultural Office.

In county level the Food Chain Safety and Animal Health Directorate of the County Agricultural Office is responsible for the implementation of the programme.

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

The TSE monitoring programme covers the whole territory of Hungary, the derogation laid down in Annex III, Chapter A, I.3.2. of Regulation No (EC) 999/2001 is not applied in our country. (Please see the map of Hungary.)

4.3. System in place for the registration of holdings:

In case of cattle a computerized, centralized identification and registration system (ENAR) has been operated since 1997 and each bovine herd has been registered in the frame of this system.

In case of sheep a computerized, centralized identification and registration system (ENAR) has been operated since 2000. The ovine herds has been registered on the basis of the Decree No. 29/2000. (VI. 9.) FVM of the Minister of Agriculture and Regional Development. Please see also the following point.

In case of goats the Zoosanitary Code (Decree No 41/1997. (V.28.) FM of Minister of Agriculture) prescribes that during identification of these animals pre-printed ear-tags must be used, but until May of 2005 there was no special ministerial decree for the identification and registration of goats. However the voluntary registration of goats have been started by the breeding organizations of goats without the special legislation. In May of 2005 a new decree of the Minister of Agriculture and Rural Development, Decree No 47/2005. (V.23.) FVM, was published about the identification and registration of goats and sheep and for the implementation of Council Regulation (EC) No 21/2004. (In case of sheep this new decree replaced the Decree
No. 29/2000. (VI. 9.) FVM.) In October of 2007 a new decree of the Minister of Agriculture and Rural Development, Decree No 119/2007. (X.18.) FVM was published about centralized registration of holdings and herds.

Please see also the following point.

4.4. System in place for the identification of animals:

Bovine animals

Bovine animals are subject to individual identification and registration. This obligation has been laid down in several legal texts. The most common provisions related to individual identification of animals belonging to *inter alia* bovine animals are laid down in the Zoosanitary Code and in the legal texts dealing with the animal passport which has got to accompany the animals during domestic transport.
Special rules for bovine animals have been implemented as follows:

Individual identification of bovine animals:

Until 31 December 1972:
- horn branding
- tattooing
- ear-tagging (by pre-printed or handwritten individual number)
- data recorded and handled in the herd-book.

From 1 January 1973: (Decree No. 10/1972. (VIII.9.) MÉM of the Minister of Agriculture and Alimentation)
- ear-tagging (for most animals by pre-printed individual number)
- data recording and handling on both herd and county level.

Registration and identification using central, computerised database

From 18 September (Decree No. 62/1997. (IX. 10.) FM of Minister of agriculture
- ear-tagging by pre-printed, bar-coded individual number
- data recording and handling in computerised, central database.

The rules of the Decree No. 62/1997. (IX. 10.) FM were equivalent to the relevant rules of the European Union. Since 1997 due to *inter alia* the changes of the EU rules we have modified our rules several times. The current legislative text, namely the Decree No 99/2002. (XI.5.) FVM of Minister of Agriculture and Rural Development are fully compatible with the following legislative Rules of the European Union: (The Decree No 99/2002. (XI.5.) FVM was modified before Accession by Decree No 12/2004. (I.31) FVM of the Minister of Agriculture & RD.)

•Regulation (EC) No 1760/2000 of the European Parliament and of the Council establishing a system for the identification and registration of bovine animals and regarding the labelling of beef and beef products and repealing Council Regulation (EC) No 820/97;
•Commission Regulation (EC) No 494/98 laying down detailed rules for the implementation of Council Regulation (EC) No 820/97 as regards the application of minimum administrative sanctions in the framework of the system for the identification and registration of bovine animals;
•Commission Regulation (EC) No 2629/97 laying down detailed rules for the implementation of Council Regulation (EC) No 820/97 as regards ear tags, herd registers and passports in the framework of the system for the identification and registration of bovine animals;
•Commission Regulation (EC) No 1082/2003 of laying down detailed rules for the implementation of Regulation (EC) No 1760/2000 of the European Parliament and of the Council as regards the minimum level of controls to be carried out in the framework of the system for the identification and registration of bovine animals;
•Council Directive (EC) No 97/12 amending and updating Directive 64/432/EEC on health problems affecting intra-Community trade in bovine animals and swine;
•Council Directive (EEC) No 92/102 on the identification and registration of animals.

Ovine and caprine animals

Ovine and caprine animals are subject to individual identification and registration. This obligation has been laid down in several legal texts.
The most common provisions related to individual identification of animals belonging to the two species are laid down in the Zoosanitary Code and in the legal texts dealing with the animal passport which has got to accompany the animals during domestic transport.
Special rules for these two species have been implemented as follows:

Individual identification of ovine and caprine animals:

By 30 June 1997:

tattooing

ear-tagging

From 1 July 1997: (Zoo-Sanitary Code, Decree No. 41/1997. (V.28.) of the Minister of Agriculture)

ear-tagging by pre-printed individual number

Registration and identification of ovine animals using central, computerised database:

From 17 June 2000: (Decree No. 29/2000. (VI. 9.) of the Minister of Agriculture and Regional Development regarding ovine animals

ear tagging by pre-printed number,

(supported by a tattooed ear number prefix)

data recording and handling in computerised, central database for breeders.

Since July of 2005 the Decree No. 47/2005. (V.23.)* FVM about the identification and registration of sheep and goats and for the implementation of Council Regulation (EC) No 21/2004 has been effective. Parallel making the new decree in the frame of a PHARE project a new central, computerised database for sheep and goats were developed. After 1 January of 2006 this new central database is fully operable.

* It was published on 23 May of 2005.

Registration and identification of caprine animals

As it was mentioned earlier the voluntary registration of goats have been started by the breeding organizations without special decree as result of this work the most of the breeding farms were registered by these organizations before May of 2005. As it was mentioned earlier in May of 2005 the Decree No 47/2005. (V.23.) FVM, were published about the identification and registration of sheep and goats and for the implementation of Council Regulation (EC) No 21/2004. This is the first special Hungarian decree regarding the identification and registration of goats. On the basis of the new decree the new central, computerised database is fully operable for goats as well.

The detailed rules for registration and identification of ovine and caprine animals

On the basis of Decree No 47/2005. (V.23.) FVM of the Minister of Agriculture the identification and registration of sheep and goats are the following.

The identification system is the same in the breeding and the commercial flocks.

All sheep and goats are identified until 6 months of age or before leaving the birth holding. In case of animals not intended for keeping in the birth holding the first and second mean of identification are also eartags.

The identification of animals intended for keeping in the birth holding is the following:

a tattoo of registration number in two ears and one tag with the same number and bar code. (In case of transport to other member states the second eartag is also compulsory)

The eartag consists a 9-11 digits individual code in case of sheep and a 10 digits individual code in case of goats.

In case of sheep the registration number consist of a 5 digits holding code after that a 2-5 digit individual number (the first digit of this number is the last number of the birth year). Before this number may be a one digit serial number. This system is used in breeding sheep flocks from the early seventies and in the commercial sheep flocks from 1997.

The individual numbers are given by a central computer database that operating according to Article 7 and 8 of the Regulation (EC) No 21/2004. It is compulsory to register the data listed in Part D of Annex to Regulation (EC) No 21/2004 in the Central Database.
The holding register is in the same computer database, it consists all data of holdings and animal keepers.
During the transport an official document accompanies the animals. This document contains the data listed Part C1 of Annex to Regulation (EC) No 21/2004 as well as the ID number of animals. This transport document has five copies, two from it remain at the original keeper, two ones accompanying the shipment, and the last has to be given to the veterinarian who signed the animal health declaration in the transporting document.

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

As it was mentioned in point 1 the BSE and the scrapie are compulsorily notifiable diseases in Hungary by the Act No. XCI of 1995 on the Veterinary Rules. Furthermore according to the Section 19 of Decree No. 69/2003. (VI.25) FVM during the implementation of the provisions of the Act on Veterinary Rules persons engaging in the keeping and buying of animals shall

•notify the suspicion of a TSE to the veterinary surgeon, if any animal owned or taken care of or transported by the person shows neurological symptoms, behavioural disorder or a progressively deteriorating condition, which may be attributed to a disease of the nervous system;

•notify any death of bovine, ovine or caprine animals to the veterinary surgeon irrespective of the symptoms shown prior to the death of the animal;

•follow the veterinary surgeon's instructions, promote his/her work in all possible ways and tolerate the measures and interventions ordered.

4.6. Monitoring

As it was mentioned earlier the National TSE Monitoring Program is supervised and coordinated by the Animal Health and Animal Welfare Directorate of the Central Agricultural Office and this program covers the whole territory of Hungary.

In Hungary it is compulsory to investigate by rapid test:

- all bovine animals over 24 months which died, or killed ones (excluding bovines killed due to an epidemic)
- all emergency slaughtered bovine animals over 24 months
- all bovine animals over 24 months with clinical signs at ante mortem.
- all bovine animals over 30 months of age subject to normal slaughter
- 10 000 slaughtered sheep over 18 months
- 10 000 dead sheep over 18 months
- all slaughtered goats over 18 months (from 2005 only)
- 500 dead goats over 18 months

In 2003, 86595 healthy slaughtered cattle over 30 months as well as 4263 emergency slaughtered and 6532 dead ones over 24 months were tested with negative results. (Please see ***table 4***.) In 2004, 81284 healthy slaughtered cattle over 30 months, 2436 emergency slaughtered and 12264 dead cattle over 24 months as well as the 35 cattle over 24 months with clinical signs at ante mortem were tested with negative results. (Please see ***table 5***.) During 2005, 67770 healthy slaughtered cattle over 30 months, 2464 emergency slaughtered and 13269 dead cattle over 24 months as well as the 12 cattle over 24 months with clinical signs at ante mortem were tested with negative results. (Please see ***table 6***.) In 2006, 67362 healthy slaughtered cattle over 30 months, 2579 emergency slaughtered and 13725 dead cattle over 24 months as well as the 37 cattle over 24 months with clinical signs at ante mortem were tested with negative results (Please see ***table 7***.). In 2007 69440 healthy slaughtered cattle over 30 months, 1971 emergency slaughtered and 13522 dead cattle over 24 months as well as the 15 cattle over 24 months with clinical signs at ante mortem were tested. In case of a cattle imported from Slovakia for immediate normal slaughter the rapid test and the confiratory tests were positive, too. (Please see ***table 8***)

In 2003, totally 2545 sheep over 18 months were tested by Bio-Rad Platelia tests and all results were negative. These 2545 sheep covered 1717 dead and 828 (714 healthy and 114 emergency) slaughtered ones. During 2004, 4196 dead, 218 emergency slaughtered and 1306 healthy slaughtered ovine animals over 18 months were tested, all results were negative excluding one healthy slaughtered sheep imported from Romania for immediately slaughter

During 2005, 5483 dead, 354 emergency slaughtered and 3113 healthy slaughtered ovine animals over 18 months were tested, all results were negative. During 2006, 5615 dead, 477 emergency slaughtered and 5905 healthy slaughtered ovine animals over 18 months were tested, and excluding the seven positive animals the results were negative. During 2007, 6682 dead, 764 emergency slaughtered and 4473 healthy slaughtered ovine animals over 18 months were tested, and excluding the seven positive animals the results were negative. (Please see ***tables 9-17.***)

In 2003, 77 dead, 10 emergency slaughtered and 66 healthy slaughtered caprine animals over 18 months were tested with negative results. In 2004, 136 dead, 4 emergency slaughtered and 132 healthy slaughtered caprine animals were tested by negative results. During 2005, 173 dead, 21 emergency slaughtered and 53 healthy slaughtered caprine animals were tested by negative results. During 2006, 120 dead, 26 emergency slaughtered and 45 healthy slaughtered caprine animals were tested by negative results. During 2007, 258 dead, 25 emergency slaughtered and 119 healthy slaughtered caprine animals were tested by negative results (Please see ***tables 18-26.***)

Genotyping

During 2004 the genotypes of 601 sheep were determined in accordance with Annex III Chapter A, Part II, points 8.2. In 2005, 2006 and 2007 this number was 600 per year.

Under the framework of a breeding programme as established in Commission Decision 2003/100/EC in 2005, 3322, in 2006, 4450, and in 2007 3791 sheep were genotyped.

(Please see ***table 27, 28, 29 and 30*** regarding the investigation in 2006 and 2007.)

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) 999/2001[1]	17 000
Animals referred to in Annex III, Chapter A, Part I. points 2.2 of Regulation (EC) 999/2001	75 000
Others (specify)	0

[1] OJ L 147, 31.5.2001, p. 1. Regulation as last amended by Regulation (EC) No 2245/2003 (OJ L 283, 19.12.2003, p. 28).

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) 999/2001	10 000*
Ovine animals referred to in Annex III, Chapter A, Part II, point 3 of Regulation (EC) 999/2001	10 000
Ovine animals referred to in Annex III, Chapter A, Part II, point 5 of Regulation (EC) 999/2001	1 500**
Ovine animals referred to in Annex VII, Chapter A, point 3.4(d) of Regulation (EC) No 999/2001	300**
Ovine animals referred to in Annex VII, Chapter A, point 5(b)(ii) of Regulation (EC) No 999/2001	300**
Others (specify)	0

* Taking into consideration not only the investigation of sheep slaughtered in the Hungarian slaughterhouses, but ovine animals slaughtered (by the farmer) for own consumption.

** Estimated on the basis of the scrapie cases found during 2006, 2007 and 2008.

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) 999/2001	230
Caprine animals referred to in Annex III, Chapter A, Part II, point 3 of Regulation (EC) 999/2001	500
Caprine animals referred to in Annex III, Chapter A, Part II, point 5 of Regulation (EC) 999/2001	150*
Caprine animals referred to in Annex VII, Chapter A, point 3.3(c) of Regulation (EC) No 999/2001	60*
Caprine animals referred to in Annex VII, Chapter A, point 5(b)(ii) of Regulation (EC) No 999/2001	60*
Others (specify)	0

* There were no cases in our domestic goat population, therefore it is very difficult to estimate it.

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) 999/2001	96*

*Estimated on the basis of the scrapie cases found during 2006, 2007 and 2008.

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) 999/2001	12*
Animals referred to in Annex III, Chapter A, Part II, point 8.2 of Regulation (EC) 999/2001	600

* Estimated on the basis of the scrapie cases found during 2006, 2007 and 2008.

4.7. Eradication

4.7.1. Measures following confirmation of a BSE case

4.7.1.1. Description

The BSE have never occurred in indigenous herd in Hungary, therefore the necessary information are not available to estimate the number of the animals which will be killed under the requirements of Annex VII, Chapter A, Point 2.1 of Regulation (EC) 999/2001 during 2009.

Our current legislative rules for the implementation Regulation (EC) 999/2001 are the following.

Based on the information identified in the course of the epidemiological investigation, the following measures shall be taken:

In case of confirmation of BSE in bovine animals:

- all bovine animals on the holding where the sick animal has been kept;
- in case of sick animals, their progeny born within two years prior to, or after, the appearance of the clinical symptoms; and
- all animals belonging to the cohort

shall be killed and destroyed.

Based on the available epidemiological data and the traceability of the animals the District Chief Veterinary Officer, after consultation with the Food Chain Safety and Animal Health Directorate of the County Agricultural Office may decide not to have all the animals killed kept on the same holding as the sick animal. (However, such decision shall not apply to the progeny of sick bovine animals and the animals belonging to the cohort). Notwithstanding the above exemptions, the movement restrictions imposed on the herd shall be maintained. No animal shall be sold for further keeping from the herd in question. Only those animals younger than 6 months or older than 24 months shall be slaughtered for human consumption, the bodies of the latter shall only be passed for human consumption if the rapid test result is negative.

4.7.1.2. Summary table

	Estimated number
Animals to be killed under the requirements of Annex VII, Point 2.1 of Regulation (EC) 999/2001:	0*

* There were no BSE cases in domestic population in Hungary, therefore we are not able to estimate it.

4.7.2. Measures following confirmation of a scrapie case

4.7.2.1 Description

The first scrapie outbreak (with two cases) in our domestic herds was found in June 2006 in Fejér county. During the second half of 2006 other four outbreaks occurred, one in Jász-Nagykun-Szolnok county and three in Hajdú-Bihar county. Furthermore we found an other sheep in December in Bács-Kiskun county where the rapid test was positive in December 2006, but the scrapie confirmed in January 2007. There were 8 confirmed scrapie cases including the above mentioned case, too. The attached table contains the most important data regarding the scrapie cases (***table 31 and 32***).

Our current legislative rules for the implementation Regulation (EC) 999/2001 are the following.

Based on the information identified in the course of the epidemiological investigation, the following measures shall be taken:
a) If the case of confirmation of BSE in ovine or caprine animals, the following measures shall be taken:

all ovine and caprine animals on the holding where a BSE sick animal has been found;

the parents of the sick animals and, in the case of sick female animals, their embryos and ova collected and progeny born within one year prior to, or after, the appearance of clinical symptoms;

animals belonging to cohort;

shall be killed and destroyed.

b) In case of confirmation of scrapie in ovine and caprine animals, the following measures shall be taken:

all ovine and caprine animals on the holding where the sick animal has been found;
the parents of the sick animal, and in the case of sick female animals, their embryos and ova collected and progeny born within one year prior to, or after, the appearance of the clinical symptoms;
shall be killed and destroyed.

Where there is a testing institute having the means of reliably identifying the genotype of ovine animals, and if the animal keeper is prepared to bear the costs of such tests, the Animal Health and Animal Welfare Directorate of the Central Agricultural Office, at the recommendation of the Food Chain Safety and Animal Health Directorate of the County Agricultural Office may, in the case of breeding stocks or autochthonous breeds of ovine and caprine animals, decide to only have those animals killed which have a non-resistant genotype.

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:	5000*
Animals to be genotyped under the requirements of Annex VII, Chapter A, point 2.3 of Regulation (EC) No 999/2001:	5000*

*Estimated on the basis of the scrapie cases found during 2006, 2007 and 2008.

4.7.3. Breeding programme for resistance to TSEs in sheep

4.7.3.1. General description[2]:

The breeding programme for resistance to scrapie has been developed and organised by the Hungarian Sheepbreeders Association. The program based on the risk groups listed in table A and the results of the preliminary investigations carried out in 2003 (see table B).

Table A: Prion protein genotype and likelihood of manifestation of scrapie according to the risk groups

Risk group	Genotype	The likelihood of manifestation of scrapie
R1	ARR/ARR	Very low risk in case of tested animal and its offspring as well.
R2	ARR/AHQ AHQ/AHQ	Low risk in case of tested animal and its offspring as well.
R3	ARR/ARH ARR/ARQ AHQ/ARH	Low risk in case of tested animal, but there is a real risk in case of its offspring depending on the genotype of the other parents

[2] Description of the programme according to the minimum requirements laid down by Commission Decision 2003/100/EC.(reference can be made to the Report referred to in Article 5 (a)).

	AHQ/ARQ	
R4	ARH/ARH ARH/ARQ ARQ/ARQ ARR/VRQ AHQ/VRQ	There is a high risk in case of tested animal and offspring as well.
R5	ARH/VRQ ARQ/VRQ VRQ/VRQ	The highest risk

It is very important to prevent and control of scrapie. Its elements are the following:

The results of this preliminary investigations are the basis of the current Hungarian breeding programme (Table B).

Breeds	n	ARR	ARQ	VRQ	R1	R5
Cigája	84	33,33	61,90	0,60	4,76	1,19
Gyimesi racka	57	27,19	70,18	1,75	5,26	1,75
Hortobágyi racka	140	23,93	42,50	3,57	5,00	3,57
Cikta	64	20,29	70.29	-	1,45	-
Landschaf merinó	57	21,05	73,68	0,88	5,26	1,75
Charollais	75	38,67	47,33	12,67	13,33	10,67
Texel	102	38,24	31,37	8,82	10,78	7,87
Ile de France	53	69,81	22,64	6,60	52,83	5,66
Prolific merino	59	58,47	37,29	-	32,20	-
German blackheaded	65	51,54	46,15	0,77	21,54	-
Suffolk	69	50,72	43,48	0,72	26,09	-
Hungarian merino	404	46,29	49,75	0,99	22,52	0,74
German meatmerino	137	41,97	44,53	0.36	13,14	-
Lacaune	38	39,47	51,32	-	10,53	-
Awassi	62	38,71	46,77	5,65	17.74	4,84
Booroola merino	46	35,87	55,43	-	8,70	-
British milking	53	35,85	27,36	-	11,32	-

The breeds were divided two groups on the basis of the preliminary investigations.

1. The selection for resistance to scrapie is not compulsory:

a) indigenous breeds (cikta, cigája, milking cigája, hortobágyi racka, gyimesi racka) and landschaf merino (the frequency of ARR allele is below 25%).

- It is compulsory to genotype all breeding rams.
- It is highly recommended the using of breeding rams of R1, R2 or R3 risk groups.

2. The selection for resistance to scrapie is not compulsory (the frequency of ARR allele is over 25%):

Breeds: Hungarian merino, German muttonmerino, German blackheaded, suffolk, ile de France, awassi, lacaune, British milking sheep. charollais, texel

- It is compulsory to genotype all breeding rams sheep.
- Only rams of R1, R2 or R3 risk groups may be breeding rams, in case of R3 risk group the using of animals ARR/ARQ alleles is not recommended

Female animals with VRQ allele may leave the flock only for slaughter.

Genotyping and data recording

The Hungarian Sheepbreeder Association approves the results of accredited laboratories only.
To request the investigation the document approved by the Hungarian Sheepbreeder Association has to be used. The Hungarian Sheepbreeder Association records the results with the individual ID number of the tested sheep in the database.

Qualifying of flocks

I. scrapie free level:
All lambs originated from ARR/ARR rams for one years at least.
II. scrapie free level:
All lambs originated from ARR/ARR, ARR/ARH or ARR/AHQ rams for one years at least

Effect:

This program is effective 31 December 2007 when on he basis of the experiences of the beginning years it will be modified as it necessary.

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	4000
Rams to be genotyped under the framework of a breeding programme referred to in Article 6a of Regulation (EC) No 999/2001	6000

5. Costs

5.1. Detailed analysis of the costs:

The costs of our BSE monitoring programme cover the costs of the rapid tests used for the laboratory investigations of the

- animals referred to in Annex III, Chapter A, Part I, points 2.1, 3 and 4 of Regulation (EC) 999/2001: 17000 cattle
- animals referred to in Annex III, Chapter A, Part I, points 2.2 of Regulation (EC) 999/2001: 75000 cattle

It means the investigations of 92 000 cattle totally.

The costs of our scrapie monitoring programme cover the costs of the rapid tests used for the laboratory investigations of the

- animals referred to in Annex III, Chapter A, Part II, point 2 of Regulation (EC) 999/2001: 10000 sheep and 230 goats
- animals referred to in Annex III, Chapter A, Part II, point 3 of Regulation (EC) 999/2001: 10000 sheep and 500 goats.
- animals referred to in Annex III, Chapter A, Part II, point 5 of Regulation (EC) 999/2001: 1500 sheep and 150 goats
- Ovine animals referred to in Annex VII, Chapter A, point 3.4(d) of Regulation (EC) No 999/2001: 300 sheep
- Ovine animals referred to in Annex VII, Chapter A, point 5(b)(ii) of Regulation (EC) No 999/2001:300 sheep
- Caprine animals referred to in Annex VII, Chapter A, point 3.3(c) of Regulation (EC) No 999/2001: 60 goats
- Caprine animals referred to in Annex VII, Chapter A, point 5(b)(ii) of Regulation (EC) No 999/2001: 60 goats
- Primary molecular testing referred to in Annex X, Chapter C, point 3.2 (c) (i) of Regulation (EC) 999/2001: minimum 12 and maximum 96 animals with positive in rapid tests. (In case of TeSe Sheep/Goat Western Blot (Bio-Rad) one unit is eligible for the testing of 32 animals as a maximum, but in case rare positive rapid tests results (as in Hungary) it is eligible only investigation of 4 animals. In case of 51.177 Discriminatory test (Bio-Rad) one unit is eligible for the testing of 8 animals as a maximum, but in case rare positive rapid tests results (as in Hungary) it is eligible only investigation of 2 animals.)

It means the monitoring investigations of 22100 ovine and 1000 caprine animals (23100 small ruminants) and the primary molecular testing of maximum 96 (minimum) 12 animals

During monitoring investigations for TSE the Bio-Rad Platelia (Bio-Rad TeSeE) test has been used from March 2001, therefore we have calculated with the using of the Bio-Rad TeSeE test in the future, too. However according to our national financial rules it is compulsory to make a call for a tender of the rapid test for 2009. Therefore depending on the result of this tender an other rapid test might be used in 2009.

The costs of the genotyping of 5612 sheep in accordance with Regulation (EC) No 999/2001 as well as costs of the genotyping of 10000 sheep in accordance with the breeding programme for resistance to TSEs in sheep are added to the costs of the TSE monitoring investigations.

The costs of the state compensation of 5000 sheep or goats killed due to confirmation of scrapie.

5.2. Summary of the costs (excluding VAT)

Costs related to		*Specification*	*Number of units*	*Unitary cost in EUR*	*Total amount in EUR*	*Community funding requested (yes/no)*
1.	BSE testing[3]					
1.1.	Rapid tests	Test: **Bio-Rad TeSeE**	**92 000 sample**	**8,67 €**	**797 640**	**yes**
		Test:				
		Test:				
		Test:				
2.	Scrapie testing[4]					
2.1.	Rapid tests	Test: **Bio-Rad TeSeE**	**23 100 sample**	**8,67 €**	**200 277**	**yes**
		Test:				
		Test:				
3.	Discriminatory testing[5]					
3.1.	Primary molecular tests	Test: **TeSe Sheep/Goat Western Blot (Bio-Rad)**	**3 unit (32 tests/unit)**	**1 760 €/unit**	**5 280**	**yes**
		Test: **51.177 Discriminatory test (Bio-Rad)**	**12 units (8 tests/unit)**	**792 €/unit**	**9 504**	**yes**

[3] As referred to in point 4.6.1.
[4] As referred to in points 4.6.2 and 4.6.3.
[5] 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[6]	Method: **microsequencing**	***5 612***	***11,8€***	***66 221,6***	***yes***
4.2.	Determination of genotype of animals in the framework of a breeding programme[7]	Method: **microsequencing**	**10 000**	***11,8 €***	**118 000**	**yes**
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***		***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		***5000***	***100 €***	***500 000***	***yes***
		TOTAL'			***1696922,6***	***yes***

* No data to estimate

[6] As referred to in points 4.6.5 and 4.7.2.2.
[7] As referred to in point 4.7.3.2.

Table 1

Histopathological investigations for TSE in Hungary 1989-2000

Year	Cattle			Sheep			Goats	Cats
	monitoring	neurological signs	all	monitoring	neurological signs	all		
1989-1997	19	1341	1360	8	1596	1664	*	2373
1998	95	40	135	73	27	100	11	441
1999	41	82	123	28	72	100	5	521
2000	113	75	188	63	56	119	15	496
Total	**268**	**1538**	**1806**	**172**	**1751**	**1983**	**31**	**3831**

All results were negative

* The statistics between 1989 and 1997 did not contain the detailed data regarding goats.

About 1-2 goats were investigated with negative results yearly

Table 2

BSE monitoring investigations in cattle during 2001

County according to the place of origin of the animal	Normal slaughtered animals over 30 months	Emergency slaughtered animals over 24 months	Dead animals over 24 months	Total
Baranya	460	12	11	**483**
Bács-Kiskun	766	7	48	**821**
Békés	552	64	59	**675**
Borsod-Abaúj-Zemplén	513	8	25	**546**
Csongrád	560	16	27	**603**
Fejér	440	88	42	**570**
Győr-Moson-Sopron	629	7	2	**638**
Hajdú-Bihar	1160	96	151	**1407**
Heves	401	23	9	**433**
Jász-Nagykun-Szolnok	679	61	71	**811**
Komárom-Esztergom	231	15	13	**259**
Nógrád	133	3	7	**143**
Pest	541	14	2	**557**
Somogy	580	55	17	**652**
Szabolcs-Szatmár-Bereg	581	54	50	**685**
Tolna	672	188	34	**894**
Vas	278	7	25	**310**
Veszprém	254	34	8	**296**
Zala	391	2	1	**394**
Alfhogther	**9821**	**754**	**602**	**11177**

Notes:
The Bio-Rad Platelia test was used

All results were negative

Table 3

BSE monitoring investigations in cattle during 2002

County according to the place of origin of the animal	Normal slaughtered animals over 30 months	Emergency slaughtered animals over 24 months	Dead animals over 24 months	Total
Baranya	2932	19	52	3003
Bács-Kiskun	4072	139	82	4293
Békés	4234	193	263	4690
Borsod-Abaúj-Zemplén	3537	34	34	3605
Csongrád	3044	72	106	3222
Fejér	3032	614	42	3688
Győr-Moson-Sopron	5243	444	164	5851
Hajdú-Bihar	5866	427	218	6511
Heves	2605	138	22	2765
Jász-Nagykun-Szolnok	5354	263	178	5795
Komárom-Esztergom	1407	131	88	1626
Nógrád	956	7	16	979
Pest	3032	221	12	3265
Somogy	2366	260	21	2647
Szabolcs-Szatmár-Bereg	4131	98	104	4333
Tolna	2746	264	99	3109
Vas	2910	455	131	3496
Veszprém	3638	612	88	4338
Zala	2188	31	88	2307
Althogther	**63293**	**4422**	**1808**	**69523**

Notes:
The Bio-Rad Platelia test was used

All results were negative

Table 4

BSE monitoring investigations in cattle during 2003

County according to the place of origin of the animal	Normal slaughtered animals over 30 months	Emergency slaughtered animals over 24 months	Dead animals over 24 months	Total
Baranya	4210	25	398	4633
Bács-Kiskun	6377	188	215	6780
Békés	5860	350	384	6594
Borsod-Abaúj-Zemplén	4883	54	437	5374
Csongrád	3939	23	189	4151
Fejér	3868	757	665	5290
Győr-Moson-Sopron	7173	479	598	8250
Hajdú-Bihar	9961	205	475	10641
Heves	2193	78	88	2359
Jász-Nagykun-Szolnok	6122	121	292	6535
Komárom-Esztergom	1663	147	106	1916
Nógrád	1207	13	93	1313
Pest	4691	219	251	5161
Somogy	4439	278	143	4860
Szabolcs-Szatmár-Bereg	5567	74	336	5977
Tolna	3520	175	356	4051
Vas	3888	569	533	4990
Veszprém	4313	469	691	5473
Zala	2721	39	282	3042
Althogther	**86595**	**4263**	**6532**	**97390**

Notes:
The Bio-Rad Platelia test was used
All results were negative

Table 5

BSE monitoring investigation in cattle during 2004 in Hungary by counties of origin

County according to the place of origin of the animal	Normal slaughtered animals over 30 months	Emergency slaughtered animals over 24 months	Animals with clinical signs at AM over 24 months	Dead animals over 24 months	Total
Baranya	3355	7	1	654	4017
Bács-Kiskun	4807	119	0	325	5251
Békés	5181	56	2	866	6105
Borsod-Abaúj-Zemplén	4443	44	2	904	5393
Csongrád	3907	26	0	455	4388
Fejér	4904	1082	4	1396	7386
Győr-Moson-Sopron	6982	75	2	1235	8294
Hajdú-Bihar	7575	78	5	691	8349
Heves	1906	7	0	205	2118
Jász-Nagykun-Szolnok	6005	25	0	634	6664
Komárom-Esztergom	1421	385	0	222	2028
Nógrád	999	3	0	163	1165
Pest	5011	280	5	380	5676
Somogy	2999	4	4	509	3516
Szabolcs-Szatmár-Bereg	4599	32	1	531	5163
Tolna	3844	44	1	619	4508
Vas	3522	13	1	766	4302
Veszprém	4117	137	2	1141	5397
Zala	2315	16	3	560	2894
Budapest	112	3	0	7	122
Foreign countries	3280	0	2	1	3283
Althogther	**81284**	**2436**	**35**	**12264**	**96019**

Notes:

Bio-Rad TeSeE test was used All results were negative

Table 6

BSE monitoring investigation in cattle during 2005 in Hungary by counties of origin

County according to the place of origin of the animal	Normal slaughtered animals over 30 months	Emergency slaughtered animals over 24 months	Animals with clinical signs at AM over 24 months	Dead animals over 24 months	Total
Baranya	3118	8	2	875	4003
Bács-Kiskun	3425	146	0	394	3965
Békés	5464	6	0	1199	6669
Borsod-Abaúj-Zemplén	3590	47	1	861	4499
Csongrád	3518	22	0	660	4200
Fejér	4254	932	1	1105	6292
Győr-Moson-Sopron	6202	138	0	1152	7492
Hajdú-Bihar	6556	127	4	1196	7883
Heves	1500	1	0	187	1688
Jász-Nagykun-Szolnok	5494	37	0	751	6282
Komárom-Esztergom	1338	305	0	214	1857
Nógrád	945	7	0	177	1129
Pest	4004	457	0	459	4920
Somogy	2791	15	1	829	3636
Szabolcs-Szatmár-Bereg	3629	19	0	697	4345
Tolna	2684	15	1	520	3220
Vas	2475	11	0	577	3063
Veszprém	3573	139	0	940	4652
Zala	1999	4	2	459	2464
Budapest	108	28	0	16	152
Foreign countries	1103	0	0	1	1104
Althogther	**67770**	**2464**	**12**	**13269**	**83515**

Notes:

Bio-Rad TeSeE test was used

All results were negative

Table 7

BSE monitoring investigation in cattle during 2006 in Hungary by counties of origin

County according to the place of origin of the animal	Normal slaughtered animals over 30 months	Emergency slaughtered animals over 24 months	Animals with clinical signs at AM over 24 months	Dead animals over 24 months	Total
Baranya	3283	6	1	980	4270
Bács-Kiskun	3309	153	1	436	3899
Békés	5050	19	1	1185	6255
Borsod-Abaúj-Zemplén	4040	49	3	807	4899
Csongrád	3852	30	0	608	4490
Fejér	4128	990	6	1196	6320
Győr-Moson-Sopron	5567	154	2	1260	6983
Hajdú-Bihar	7256	114	5	1199	8574
Heves	1482	0	2	199	1683
Jász-Nagykun-Szolnok	5832	10	3	722	6567
Komárom-Esztergom	1089	360	0	361	1810
Nógrád	903	5	0	234	1142
Pest	4174	505	6	561	5246
Somogy	2470	20	0	706	3196
Szabolcs-Szatmár-Bereg	3482	23	2	617	4124
Tolna	2499	48	2	587	3136
Vas	2263	11	0	636	2910
Veszprém	3554	57	2	983	4596
Zala	1748	4	1	500	2253
Budapest	110	21	0	13	144
Foreign countries	1367	0	0	1	1368

Althogther	**67458**	**2579**	**37**	**13791**	**83865**

Notes:

Bio-Rad TeSeE test was used All results were negative

Table 8

BSE monitoring investigation in cattle during 2007 in Hungary by counties of origin

County according to the place of origin of the animal	Normal slaughtered animals over 30 months	Emergency slaughtered animals over 24 months	Animals with clinical signs at AM over 24 months	Dead animals over 24 months
Baranya	3097	4	0	783
Bács-Kiskun	4070	45	2	392
Békés	5151	10	1	1167
Borsod-Abaúj-Zemplén	3557	41	0	784
Csongrád	3721	27	0	621
Fejér	3979	655	3	1095
Győr-Moson-Sopron	5145	204	2	1269
Hajdú-Bihar	7446	147	0	1180
Heves	1741	2	3	174
Jász-Nagykun-Szolnok	5017	4	2	855
Komárom-Esztergom	1166	182	0	230
Nógrád	884	8	0	246
Pest	4266	494	2	629
Somogy	2321	23	0	692
Szabolcs-Szatmár-Bereg	3298	39	0	658
Tolna	2248	23	0	551
Vas	2301	6	0	699
Veszprém	3585	6	0	939
Zala	1754	4	0	541
Budapest	196	47	0	17
Foreign countries	4497*	0	0	0
Altogther	69440	1971	15	13522

Notes: Bio-Rad TeSeE test was used. * In case of a cattle originated from Slovakia the result was positive in September. All other results were negative.

Table 9

Healthy slaughtered ovine animals over 18 moths of age tested by rapid test during 2005 in Hungary.

Month	Number of samples	Positive	Negative	Pending
January	95	0	95	0
February	151	0	151	0
March	254	0	254	0
April	139	0	139	0
May	215	0	215	0
June	298	0	298	0
July	243	0	243	0
August	273	0	273	0
September	415	0	415	0
October	351	0	351	0
November	336	0	336	0
December	343	0	343	0
Total	**3113**	**0**	**3113**	**0**

Over the above mentioned investigations in the frame of the TSE monitoring the following animals were also tested by rapid test with negative results:
- 10 healthy slaughtered sheep under 18 months of age
- 10 healthy slaughtered sheep where the age of the animal could not be found out on the basis of the document accompanying the sample

Table 10

Healthy slaughtered ovine animals over 18 moths of age tested by rapid test during 2006 in Hungary.

Month	Number of samples	Positive	Negative	Pending
January	191	0	191	0
February	292	0	292	0
March	382	0	382	0
April	816	0	816	0
May	633	0	633	0
June	637	1	636	0
July	592	1	591	0
August	776	0	776	0
September	603	1	602	0
October	423	0	423	0
November	290	0	290	0
December	270	0	270	0
Total	**5905**	**3**	**5902**	**0**

One positive result was found in June in one sheep originated from Jász-Nagykun county
One positive result was found in July in one sheep originated from Hajdu-Bihar county
One positive result was found in September in a sheep originated from Hajdu-Bihar county, confirmed in October

Table 11

Healthy slaughtered ovine animals over 18 months of age tested by rapid test during 2007 in Hungary

Month	Number of samples	Positive	Negative	Pending
January	223	0	223	0
February	259	0	259	0
March	441	1	440	0
April	750	0	750	0
May	427	1	426	0
June	378	0	378	0
July	509	0	509	0
August	392	0	392	0
September	394	0	394	0
October	248	1	247	0
November	217	0	217	0
December	235	0	235	0
Total	**4473**	**3**	**4470**	**0**

Positive cases:

In case of an 84 month-old sheep originated from Bács-Kiskun county the result was positive in March.

In case of a 72 month-old sheep originated from Bács-Kiskun county the result was positive in May.

In case of a 24 month-old sheep originated from Bács-Kiskun county the result was positive in October. All other results were negative.

Over the above mentioned investigations in the frame of the TSE monitoring the following animals were also tested by rapid test with negative results:

- 12 healthy slaughtered sheep under 18 months of age
- 75 healthy slaughtered sheep where the age of the animal could not be found out on the basis of the document accompanying the sample

Table 12

Emergency slaughtered ovine animals over 18 moths of age tested by rapid test during 2005 in Hungary

Month	Number of samples	Positive	Negative	Pending
January	37	0	37	0
February	22	0	22	0
March	36	0	36	0
April	22	0	22	0
May	21	0	21	0
June	26	0	26	0
July	29	0	29	0
August	33	0	33	0
September	24	0	24	0
October	36	0	36	0
November	38	0	38	0
December	30	0	30	0
Total	**354**	**0**	**354**	**0**

Over the above mentioned investigations in the frame of the TSE monitoring the following animals were also tested by rapid test with negative results:
- 5 emergency slaughtered sheep under 18 months of age
- 7 emergency slaughtered where the age of the animal could not be found out on the basis of the document accompanying the sample

Table 13

Emergency slaughtered ovine animals over 18 moths of age tested by rapid test during 2006 in Hungary

Month	Number of samples	Positive	Negative	Pending
January	29	0	29	0
February	45	0	45	0
March	66	0	66	0
April	36	0	36	0
May	24	0	24	0
June	20	0	20	0
July	37	0	37	0
August	47	0	47	0
September	29	0	29	0
October	24	0	24	0
November	51	0	51	0
December	69	0	69	0
Total	**477**	**0**	**477**	**0**

Table 14

Emergency slaughtered ovine animals over 18 months of age tested by rapid test during 2007 in Hungary

Month	Number of samples	Positive	Negative	Pending
January	44	0	44	0
February	72	0	72	0
March	68	0	68	0
April	73	0	73	0
May	53	0	53	0
June	36	0	36	0
July	25	0	25	0
August	51	0	51	0
September	84	0	84	0
October	78	0	78	0
November	108	0	108	0
December	72	0	72	0
Total	**764**	**0**	**764**	**0**

Over the above mentioned investigations in the frame of the TSE monitoring the following animals were also tested by rapid test with negative results:
- 2 emergency slaughtered sheep under 18 months of age
- 4 emergency slaughtered where the age of the animal could not be found out on the basis of the document accompanying the sample

Table 15

Dead ovine animals over 18 moths of age tested by rapid test during 2005 in Hungary

Month	Number of samples	Positive	Negative	Pending
January	361	0	361	0
February	427	0	427	0
March	465	0	465	0
April	362	0	362	0
May	433	0	433	0
June	337	0	337	0
July	217	0	217	0
August	459	0	459	0
September	528	0	528	0
October	597	0	597	0
November	619	0	619	0
December	678	0	678	0
Total	**5483**	**0**	**5483**	**0**

Over the above mentioned investigations in the frame of the TSE monitoring the following animals were also tested by rapid test with negative results:
- 6 dead sheep under 18 months of age
- 52 dead sheep where the age of the animal could not be found out on the basis of the document accompanying the sample

Table 16

Dead ovine animals over 18 moths of age tested by rapid test during 2006 in Hungary.

Month	Number of samples	Positive	Negative	Pending
January	562	0	562	0
February	686	0	686	0
March	636	0	636	0
April	538	0	538	0
May	487	0	487	0
June	275	2	273	0
July	276	0	276	0
August	369	0	369	0
September	481	0	481	0
October	319	1	318	0
November	436	0	436	0
December	550	1	549	0
Total	**5615**	4	**5611**	**0**

Two positive results were found in June in two sheep originated from Fejér county.

One positive results was found in October in one sheep from Hajdu-Bihar county, confirmed in November

One positive results was found in December in one sheep from Bács-Kiskun county, confirmed in January 2007

Table 17

Dead ovine animals over 18 months of age tested by rapid test during 2007 in Hungary

Month	Number of samples	Positive	Negative	Pending
January	514	0	514	0
February	594	0	594	0
March	804	0	804	0
April	749	1	748	0
May	594	0	594	0
June	500	0	500	0
July	337	0	337	0
August	387	0	387	0
September	502	1	501	0
October	473	0	473	0
November	573	1	572	0
December	655	0	655	0
Total	**6682**	**3**	**6679**	**0**

Positive cases:
A 96 month-old dead ovine animal originated from Bács-Kiskun county in December 2006. (The confirmation test was carried out in January 2007.)
A 39 month-old dead ovine animal originated from Veszprém county in April.
A 53 month-old dead ovine animal originated from Pest county in September.
A 44 month-old dead ovine animal originated from the TSE infected flock in Veszprém county in November.

Over the above mentioned investigations in the frame of the TSE monitoring the following animals were also tested by rapid test with negative results:

- 13 dead sheep under 18 months of age
- 139 dead sheep where the age of the animal could not be found out on the basis of the document accompanying the sample

Table 18

Healthy slaughtered caprine animals over 18 moths of age tested by rapid test during 2005 in Hungary.

Month	Number of samples	Positive	Negative	Pending
January	13	0	13	0
February	4	0	4	0
March	1	0	1	0
April	1	0	1	0
May	0	0	0	0
June	29	0	29	0
July	1	0	1	0
August	0	0	0	0
September	0	0	0	0
October	0	0	0	0
November	1	0	1	0
December	3	0	3	0
Total	**53**	**0**	**53**	**0**

Over the above mentioned investigations in the frame of the TSE monitoring the following animals were also tested by rapid test with negative results:
- 1 healthy slaughtered goat under 18 months of age

Table 19

Healthy slaughtered caprine animals over 18 moths of age tested by rapid test during 2006 in Hungary

Month	Number of samples	Positive	Negative	Pending
January	1	0	1	0
February	1	0	1	0
March	0	0	0	0
April	2	0	2	0
May	17	0	17	0
June	11	0	11	0
July	3	0	3	0
August	0	0	0	0
September	0	0	0	0
October	7	0	7	0
November	2	0	2	0
December	1	0	1	0
Total	**45**	**0**	**45**	**0**

Table20

Healthy slaughtered caprine animals over 18 months of age tested by rapid test during 2007 in Hungary

Month	Number of samples	Positive	Negative	Pending
January	1	0	1	0
February	11	0	11	0
March	11	0	11	0
April	4	0	4	0
May	5	0	5	0
June	6	0	6	0
July	64	0	64	0
August	12	0	12	0
September	0	0	0	0
October	0	0	0	0
November	1	0	1	0
December	4	0	4	0
Total	**119**	**0**	**119**	**0**

Over the above mentioned investigations in the frame of the TSE monitoring the following animals were also tested by rapid test with negative results:
- 2 healthy slaughtered goats under 18 months of age

Table 21

Emergency slaughtered caprine animals over 18 moths of age tested by rapid test during 2005 in Hungary

Month	Number of samples	Positive	Negative	Pending
January	0	0	0	0
February	2	0	2	0
March	1	0	1	0
April	1	0	1	0
May	0	0	0	0
June	0	0	0	0
July	2	0	2	0
August	1	0	1	0
September	4	0	4	0
October	2	0	2	0
November	3	0	3	0
December	5	0	5	0
Total	**21**	**0**	**21**	**0**

Table 22

Emergency slaughtered caprine animals over 18 moths of age tested by rapid test during 2006 in Hungary.

Month	Number of samples	Positive	Negative	Pending
January	1	0	1	0
February	7	0	7	0
March	8	0	8	0
April	0	0	0	0
May	1	0	1	0
June	0	0	0	0
July	0	0	0	0
August	0	0	0	0
September	1	0	1	0
October	5	0	5	0
November	0	0	0	0
December	3	0	3	0
Total	**26**	**0**	**26**	**0**

Table 23

Emergency slaughtered caprine animals over 18 months of age tested by rapid test during 2007 in Hungary

Month	Number of samples	Positive	Negative	Pending
January	3	0	3	0
February	1	0	1	0
March	5	0	5	0
April	0	0	0	0
May	0	0	0	0
June	3	0	3	0
July	0	0	0	0
August	3	0	3	0
September	6	0	6	0
October	0	0	0	0
November	1	0	1	0
December	3	0	3	0
Total	**25**	**0**	**25**	**0**

Table 24

Dead caprine animals over 18 moths of age tested by rapid test during 2005 in Hungary

Month	Number of samples	Positive	Negative	Pending
January	21	0	21	0
February	13	0	13	0
March	28	0	28	0
April	18	0	18	0
May	19	0	19	0
June	9	0	9	0
July	4	0	4	0
August	14	0	14	0
September	16	0	16	0
October	7	0	7	0
November	13	0	13	0
December	11	0	11	0
Total	**173**	**0**	**173**	**0**

Over the above mentioned investigations in the frame of the TSE monitoring the following animals were also tested by rapid test with negative results:
- 1 dead goat under 18 months of age
- 3 dead goats where the age of the animal could not be found out on the basis of the document accompanying the sample

Table 25

Dead caprine animals over 18 moths of age tested by rapid test during 2006 in Hungary

Month	Number of samples	Positive	Negative	Pending
January	12	0	12	0
February	13	0	13	0
March	21	0	21	0
April	10	0	10	0
May	16	0	16	0
June	7	0	7	0
July	2	0	2	0
August	2	0	2	0
September	5	0	5	0
October	4	0	4	0
November	5	0	5	0
December	23	0	23	0
Total	**120**	**0**	**120**	**0**

Table 26

Dead caprine animals over 18 months of age tested by rapid test during 2007 in Hungary

Month	Number of samples	Positive	Negative	Pending
January	14	0	14	0
February	26	0	26	0
March	47	0	47	0
April	27	0	27	0
May	10	0	10	0
June	44	0	44	0
July	7	0	7	0
August	9	0	9	0
September	15	0	15	0
October	14	0	14	0
November	27	0	27	0
December	18	0	18	0
Total	**258**	**0**	**258**	**0**

Over the above mentioned investigations in the frame of the TSE monitoring the following animals were also tested by rapid test with negative results:
- 0 dead goat under 18 months of age
- **1** dead goat where the age of the animal could not be found out on the basis of the document accompanying the sample

Table 27
The genotypes of sheep sampled in accordance with chapter A, Part II, points 8.2 during 2006 in Hungary

NSP classification	Breed / Genotypes	HM	GMM	ML	GBH	SUF	TEX	ILE	CHA	AWA	DOI	LAC	BMS	BTE	CIG	CIK	RAC	TR	Althogether genotypes	Althogether NSP
NSP1	ARR/ARR	77	30	2	5	6	4	31				16					7	4	*182*	**182**
NSP2	ARR/ARQ	57	30	23	12	19	5	14	5		3	15		3	6		12	5	*209*	272
	ARR/ARH					5											8		*13*	
	ARR/AHQ	7	20	5	2	4								1			11		*50*	
	VRR/ARQ																		*0*	
NSP3	ARQ/ARQ	11	10	6	3	7	2	3	2	2				2			8	4	*60*	**60**
NSP3 (others)	AHQ/AHQ		2														10		*12*	72
	ARH/ARH																3		*3*	
	ARH/ARQ																5		*5*	
	AHQ/ARH			3			3										8		*14*	
	AHQ/ARQ	4	22				2					3					7		*38*	
NSP4	ARR/VRQ							5											*5*	**5**
NSP5	ARQ/VRQ								4		1						2		*7*	9
	ARH/VRQ																1		*1*	
	AHQ/VRQ																1		*1*	
	VRQ/VRQ																		*0*	
Total		***156***	***114***	***39***	***22***	***41***	***16***	***53***	***11***	***2***	***4***	***34***	***0***	***6***	***6***	***0***	***83***	***13***	***600***	***600***

Table 28

The genotypes of sheep sampled in accordance with chapter A, Part II, points 8.2 during 2007 in Hungary

		Number of samples																	
NSP classi-fication	Breed / Genotypes	Hun-garian Merino	German Mutton Merino	Merino Land-schaf	German Black Headed	Suffolk	Texel	Ile de France	Charollais	Dairy Tsigai	Lacaune	British Milk-sheep	Bábolna Tetra	Tsigai	Hungarian Racka	Trans-sylvanian Racka	Altogether Genotypes	Altogether NSP
NSP1	ARR/ARR	24	33	2	28	16	6	32			18	1	4	5	5	3	177	177
NSP2	ARR/ARQ	64	38	8	15	24	6	13	3	1	19	2	1	14	6	7	221	257
	ARR/ARH	3	0	0	0	0	0	0	0	1	0	0	0	1	2	0	7	
	ARR/AHQ	5	9	0	0	2	0	0	0	0	2	2	0	0	8	1	29	
	VRR/ARQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
NSP3	ARQ/ARQ	20	9	5	5	8	2	2	3	5	1	2	0	7	4	6	79	79
NSP3 (others)	AHQ/AHQ	0	0	1	0	0	0	0	0	0	0	5	1	0	5	0	12	61
	ARH/ARH	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	ARH/ARQ	0	1	0	0	0	2	0	0	3	0	0	0	0	4	2	12	
	AHQ/ARH	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	
	AHQ/ARQ	3	9	4	0	0	1	0	0	0	0	6	1	1	7	1	35	
NSP4	ARR/VRQ	0	0	0	2	0	2	3	4	0	0	0	1	1	0	0	13	13
NSP5	ARQ/VRQ	1	1	0	0	0	1	0	0	0	0	0	0	1	4	0	8	13
	ARH/VRQ	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	
	AHQ/VRQ	0	0	0	0	0	0	0	0	0	0	0	1	0	2	0	3	
	VRQ/VRQ	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	
Total		*120*	*100*	*20*	*50*	*50*	*20*	*50*	*10*	*10*	*40*	*20*	*10*	*30*	*50*	*20*	*600*	*600*

Table 29

Sheep genotyped under the framework of a breeding programme as established in Commission Decision 2003/100/EC during 2006 in Hungary

NSP classification	Breed	*HM*	*GMM*	*ML*	*GBH*	*SUF*	*TEX*	*ILE*	*CHA*	*AWA*	*DCI*	*LAC*	*BMS*	*BTE*	*CIG*	*CIK*	*RAC*	*TR*	Althogether	
	Genotypes																		genotypes	NSP
NSP1	ARR/ARR	177	216	35	86	124	23	146	9		1	89	1	8	22		80	13	*1030*	**1030**
NSP2	ARR/ARQ	332	302	111	122	200	41	79	18	1	19	119		13	27		145	6	*1535*	**2125**
	ARR/ARH	8	3	4	2	18	14	5		2	2	3	2	4	15		54	4	*140*	
	ARR/AHQ	48	149	32	3	22	6	4	1			39		7	134			5	*450*	
	VRR/ARQ																		*0*	
NSP3	ARQ/ARQ	116	87	64	24	46	18	6	14	5	7	19		4	25		59	28	*522*	**522**
NSP3	AHQ/AHQ	3	7	3		1						11					49		*74*	**574**
(others)	ARH/ARH		2			3	1			2				3	3		8	11	*33*	
	ARH/ARQ	16		4	3	12	8	9		8	6			3	8		29		*106*	
	AHQ/ARH	3		3			2							1	4		47		*60*	
	AHQ/ARQ	31	74	9	1	17	2	5	2		2	20		9	6		120	3	*301*	
NSP4	ARR/VRQ	11	10		2	3	8	42	8	1	2	1	1	3	4		24	1	*121*	**121**
NSP5	ARQ/VRQ	10	11	2		3	8	6	10						4		1		*55*	**78**
	ARH/VRQ	1	1	1							1		1						*5*	
	AHQ/VRQ					1		1									15		*17*	
	VRQ/VRQ							1											*1*	
Total		***756***	***862***	***268***	***243***	***450***	***131***	***304***	***62***	***19***	***40***	***301***	***5***	***55***	***252***	***0***	***631***	***71***	***4450***	***4450***

Table 30

Sheep genotyped under the framework of a breeding programme as established in Commission Decision 2003/100/EC during 2007 in Hungary

NSP classification	Breed / Genotypes	*HM*	*GMM*	*ML*	*GBH*	*SUF*	*TEX*	*ILE*	*CHA*	*DCI*	*LAC*	*BMS*	*BTE*	*CIG*	*CIK*	*RAC*	*TR*	Althogether genotypes	Althogether NSP
NSP1	ARR/ARR	189	199	57	114	159	18	194	14	0	115	3	5	4	0	23	5	***1099***	**1099**
NSP2	ARR/ARQ	403	234	133	110	218	31	75	30	16	132	5	3	13	5	33	27	***1468***	1744
	ARR/ARH	8	1	2	1	8	3	0	0	2	0	0	0	0	0	10	0	**35**	
	ARR/AHQ	31	91	28	1	32	0	5	3	0	10	8	0	2	0	28	2	***241***	
NSP3	ARQ/ARQ	177	65	94	24	65	9	9	10	10	17	12	7	12	22	27	17	***577***	**577**
NSP3 (others)	AHQ/AHQ	1	10	2	0	0	0	0	0	0	1	2	1	0	0	7	0	***24***	259
	ARH/ARH	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	***0***	
	ARH/ARQ	6	1	1	1	4	4	0	0	6	0	0	2	0	0	10	0	***35***	
	AHQ/ARH	1	0	0	0	0	4	0	0	0	0	0	0	0	0	3	0	***8***	
	AHQ/ARQ	39	54	22	0	26	1	1	2	0	10	13	2	1	6	13	2	***192***	
NSP4	ARR/VRQ	11	5	0	1	2	6	18	10	2	0	0	2	1	0	2	0	***60***	**60**
NSP5	ARQ/VRQ	6	4	0	1	0	1	5	9	1	1	0	5	0	0	3	0	***36***	52
	ARH/VRQ	0	0	0	0	0	1	0	0	0	0	0	2	0	0	3	0	***6***	
	AHQ/VRQ	2	0	0	0	0	0	0	0	0	0	0	1	0	0	4	0	***7***	
	VRQ/VRQ	0	0	0	0	0	0	0	1	0	0	0	2	0	0	0	0	***3***	
Total		***874***	***664***	***339***	***253***	***514***	***78***	***307***	***79***	***37***	***286***	***43***	***32***	***33***	***33***	***166***	**53**	***3791***	3791

Explanation of abbreviations used in the tables for genotyping

HM	Hungarian Merino
GMM	German Mutton Merino
ML	Merino Landschaf
GBH	German Blackhead Mutton Sheep
SUF	Suffolk
TEX	Texel
ILE	Ile de france
CHA	Charollais
LAC	Lacaune
AWA	Awaassi
BMS	British Milksheep
DCI	Dairy Tsigai
BTE	Bábolna Tetra
CIG	Tsigai
CIK	Cikta
RAC	Hungarian Racka
TR	Transsylvanian Racka

Table 31
Confirmed scrapie cases in Hungary (domestic sheep population) in 2006

Case No	County	Name of the farm/owner	Subgroup of animal	Positive rapid test	Positive confirmatory test	Discriminatory test (CEA WB)	Genotype	Killing
2006/1	Fejér	Kovács Zoltán	Dead, 85 months	Bio-Rad TeSeE, 2 June 2006	(histopathology and *immunocytochemistry* 23 June 2006	classical form of scrapie	ARH/ARQ	The whole flock was killed
2006/2	Fejér	Kovács Zoltán	Dead, 125 months	Bio-Rad TeSEe 2 June 2006	(histopathology and *immunocytochemistry.* 23 June 2006	classical form of scrapie	ARQ/VRQ	The whole flock was killed
2006/3	Jász-Nagykun-Szolnok	Jász-Ovin Kft.	Healthy slaughter, 60 months	Bio-Rad TeSeE, 16 June 2006	histopathology and *immunocytochemistry,* 29 June 2006	atypical	ARR/AHQ	The whole flock was killed
2006/4	Hajdu-Bihar	Lamb & Land Kft.	Healthy slaughter, 37 months	Bio-Rad TeSeE, 7 July 2006	Immunoblotting 20 July 2006	atypical	Not known*	The whole flock was killed
2006/5	Hajdu-Bihar	Kati László	Healthy slaughter, 72 months	Bio-Rad TeSeE, 29 September 2006	Immunoblotting 10 October 2006	atypical	Not known*	The whole flock was killed
2006/6	Hajdu-Bihar	Hortobágyi Temészetvédelmi és Génmegörző KHT.	Dead, 96 months	Bio-Rad TeSeE, 31 October 2006	Immunoblotting 9 November 2006	atypical	ARR/AHQ	Killing after genotyping

*** The results of the genotyping was not appreciable.**

Table 32
Confirmed scrapie cases in Hungary (domestic sheep population) in 2007

Case No	County	Name of the farm/owner	Subgroup of animal	Positive rapid test	Positive confirmatory test	Discriminatory test (CEA WB)	Genotype	Killing
2007/1	Bács-Kiskun (Kunszent-miklós)	Gajár János	Dead, 96 months	Bio-Rad TeSeE, 20 December 2006	Immunoblotting 8 January 2007	atypical	ARQ/ARQ	Killing after genotyping
2007/2	Bács-Kiskun (Dunavecse)	Gulyás György	Healthy slaughtered, 84 months	Bio-Rad TeSEe 2 March 2007	Immunoblotting 14 March 2007	Classical form of scrapie	ARR/ARQ	Killing after genotyping
2007/3	Veszprém (Hajmáskér)	Palota-Mező Kft	Dead, 39 months	Bio-Rad TeSeE, 20 April 2007	Immunoblotting 9 May 2007	atypical	ARQ/ARQ	Killing after genotyping
2007/4	Bács-Kiskun (Tiszaug)	Szőke Tisza Fogy. Otthona	Healthy slaughtered, 72 months	Bio-Rad TeSeE, 18 May 2007	Immunoblotting 1 June 2007	Classical form of scrapie	ARR/ARQ	Killing after genotyping
2007/5	Pest (Dömsöd)	Bak Gábor	Dead, 53 months	Bio-Rad TeSeE, 13 September 2007	*Immunocytochemistry 21 September 2007* Immunoblotting 26 September 2007	Classical form of scrapie	ARH/ARQ	Killing after genotyping
2007/6	Bács-Kiskun (Jász-szentlászló)	Ritka Mátyás	Healthy slaughtered, 24 months	Bio-Rad TeSeE, 19 October 2007	*Immunocytochemistry 24 October 2007* Immunoblotting 7 November 2007	atypical	ARR/AHQ	There was no other animal on the farm.
2007/7	Pest (Dömsöd)	Bak Gábor	Culled for destruction, 62 months	Bio-Rad TeSeE, 24 October 2007	*Immunocytochemistry 6 November 2007* Immunoblotting 7 November 2007	atypical	ARQ/ARQ	Killing after genotyping
2007/8	Veszprém (Hajmáskér)	Palota-Mező Kft	Dead, 44 months	Bio-Rad TeSeE, 22 November 2007	*Immunocytochemistry 4 December 2007* Immunoblotting 5 December 2007	Classical form of scrapie	ARQ/ARQ	Killing after genotyping

The Map of Hungary