

Terrestrial Animal Health Standards Commission  
Report

September 2009 Report

CHAPTER 14.9.

**SCRAPIE**

Article 14.9.1.

**General provisions and safe commodities**

Scrapie is a neurodegenerative *disease* of sheep and goats. The main mode of transmission is from mother to offspring immediately after birth and to other susceptible neonates exposed to the birth fluids and tissues of an infected animal. Transmission occurs at a much lower frequency to adults exposed to the birth fluids and tissues of an infected animal. A variation in genetic susceptibility of sheep has been recognised. The *incubation period* of the *disease* is variable; however, it is usually measured in years. The duration in *incubation period* can be influenced by a number of factors including host genetics and strain of agent.

Scrapie ~~is does not considered to~~ pose a risk to human health. The recommendations in this chapter are intended to manage the animal health risks associated with the presence of the scrapie agent in sheep and goats. The chapter does not cover so-called ‘atypical’ scrapie which is clinically, pathologically, biochemically and epidemiologically unrelated to ‘classical’ scrapie, may not be contagious and may, in fact, be a spontaneous degenerative condition of older sheep.

1. When authorising import or transit of the following *commodities* derived from sheep or goats and any products made from these *commodities* and containing no other tissues from sheep or goats derived, *Veterinary Authorities* should not require any scrapie-related conditions, regardless of the scrapie risk status of the sheep and goat populations of the *exporting country, zone or compartment*:
  - a. semen collected, processed and stored in conformity with the provisions of Chapters 4.5. and 4.6.;
  - b. meat (excluding materials as referred to in Article 14.9.12.);
  - c. hides and skins;
  - d. gelatine;
  - e. collagen prepared from hides or skins;
  - f. tallow (maximum level of insoluble impurities of 0.15% in weight) and derivatives made from this tallow;
  - g. dicalcium phosphate (with no trace of protein or fat);
  - h. wool or fibre.

2. When authorising import or transit of other *commodities* listed in this chapter, *Veterinary Authorities* should require the conditions prescribed in this chapter relevant to the scrapie risk status of the sheep and goat populations of the *exporting country, zone or compartment*.

Standards for diagnostic tests are described in the *Terrestrial Manual*.

#### Article 14.9.2.

### **Determination of the scrapie status of a country, zone, compartment or establishment**

The scrapie status of the sheep and goat populations of a country, *zone, compartment or establishment* should be determined on the basis of the following criteria:

1. the outcome of a *risk assessment* identifying all potential factors for scrapie occurrence and their historic perspective, in particular the:
  - a. importation or introduction of sheep and goats or their ~~semen or~~ their embryos/oocytes potentially infected with scrapie;
  - b. extent of knowledge of the population structure and husbandry practices of sheep and goats;
  - c. feeding practices, including consumption of *meat-and-bone meal* or *greaves* derived from ruminants;
  - d. importation of *milk* and *milk products* of sheep or goats origin intended for use in feeding of sheep and goats;
2. an on-going awareness programme for *veterinarians*, farmers, and workers involved in transportation, marketing and *slaughter* of sheep and goats to facilitate recognition and encourage reporting of all animals with clinical signs compatible with scrapie;
3. a *surveillance* and monitoring system including the following:
  - a. official veterinary *surveillance*, reporting and regulatory control in accordance with the provisions of Chapter 1.4.;
  - b. a *Veterinary Authority* with current knowledge of, and authority over, all *establishments* which contain sheep and goats in the whole country;
  - c. compulsory notification and clinical investigation of sheep and goats showing clinical signs compatible with scrapie;
  - d. examination, in accordance with the *Terrestrial Manual*, in a *laboratory* of appropriate material from sheep and goats older than 18 months displaying clinical signs compatible with scrapie;
  - e. maintenance of records including the number and results of all investigations for at least 7 years.

## Article 14.9.3.

**Scrapie free country or zone**

Countries or *zones* may be considered free from scrapie if within the said territory:

1. a *risk assessment*, as described in point 1 of Article 14.9.2., has been conducted, and it has been demonstrated that appropriate measures are currently in place and have been taken for the relevant period of time to manage any *risk* identified and points 2 and 3 have been complied with for the preceding 7 years;

AND

2. one of the following conditions should be met:
  - a. the country or the *zone* have demonstrated historical freedom taking into account the recommendations in Articles 14.9.14. and 14.9.15. (~~under study~~); or
  - b. for at least 7 years, a sufficient number of representative mature ~~culled~~ sheep and goats over 18 months of age culled and/or dead on farm have been tested annually, to provide a 95% level of confidence of detecting scrapie if it is present at a prevalence rate exceeding 0.1% out of the total number of all chronic wasting conditions in the population of sheep and goats older than 18 months of age and no *case* of scrapie has been reported during this period; it is assumed that the occurrence rate of chronic wasting conditions within the population of sheep and goats older than 18 months of age is at least 1% (~~under study~~); or
  - c. all *establishments* containing sheep or goats have been accredited free as described in Article 14.9.5.;

AND

3. the feeding to sheep and goats of *meat-and-bone meal* or *greaves* of ruminant origin has been banned and effectively enforced in the whole country for at least 7 years;

AND

4. introductions of sheep and goats or their ~~semen~~ or their embryos/oocytes from countries or *zones* not free from scrapie are carried out in accordance with Articles 14.9.6., 14.9.7., ~~14.9.8.~~ or 14.9.9., as relevant.

## Article 14.9.4.

**Scrapie free compartment**

A *compartment* may be considered free from scrapie if the following conditions are fulfilled:

1. all *establishments* within the *compartment* are free from scrapie according to Article 14.9.5.;
2. all *establishments* within the *compartment* are managed under a common *biosecurity plan* protecting them from introduction of scrapie, and the *compartment* has been approved by the *Veterinary Authority* in accordance with Chapters 4.3. and 4.4.;
3. introductions of sheep and goats are allowed only from accredited free *establishments*;

4. introductions of sheep and goat embryos are allowed either from accredited free establishments or in accordance with Article 14.9.9.;
5. sheep and goat semen introduced into the compartment should have been collected, processed and stored in conformity with the provisions of Chapters 4.5. and 4.6.;
6. sheep and goats in the compartment should have no direct or indirect contact, including shared grazing, with sheep or goats from establishments not within the compartment.

One or more establishments may be considered eligible for accreditation as a scrapie free compartment if:

1. in the country or zone where the establishments are situated, the following conditions are fulfilled:
  - a. the disease is compulsorily notifiable;
  - b. an awareness, surveillance and monitoring system as referred to in Article 14.9.2. is in place;
  - c. affected sheep and goats are slaughtered and completely destroyed;
  - d. the feeding to sheep and goats of meat and bone meal or greaves of ruminant origin has been banned and effectively enforced in the whole country;
  - e. an official accreditation scheme is in operation under the supervision of the Veterinary Authority, including the measures described in point 2 below;
2. in the establishments the following conditions have been complied with for at least 7 years:
  - a. sheep and goats are permanently identified and records maintained, to enable trace back to their establishment of birth;
  - b. records of movements of sheep and goats in and out of the establishment are maintained;
  - c. introductions of sheep and goats are allowed only from free establishments of an equal or higher stage in the process of accreditation; however, rams and bucks complying with the provisions in point 1 of Article 14.9.8. may also be introduced;
  - d. an Official Veterinarian inspects sheep and goats in the establishments and audits the records at least once a year;
  - e. no case of scrapie has been reported;
  - f. sheep and goats of the establishments should have no direct or indirect contact, including shared grazing, with sheep or goats from establishments of a lower status;
  - g. all culled sheep and goats over 18 months of age are inspected by an Official Veterinarian, and a proportion of those exhibiting wasting signs and all those exhibiting neurological signs are tested in a laboratory for scrapie. The selection of the sheep and goats to be tested should be made by the Official Veterinarian. Sheep and goats over 18 months of age that have died or have been killed for reasons other than routine slaughter should also be tested (including 'fallen' stock and those sent for emergency slaughter).

- ~~3. cattle, water buffalo and wood bison in a *compartment* free from bovine tuberculosis are protected from contact with wildlife reservoirs of bovine tuberculosis and are managed under a common biosecurity plan protecting them from contamination with *M. bovis*, and the *compartment* has been approved by the *Veterinary Authority* in accordance with Chapters 4.3. and 4.4.~~

Article 14.9.5.

### Scrapie free establishment

An *establishment* may be considered eligible for accreditation as a scrapie free *establishment* if:

1. in the country or *zone* where the *establishment* is situated, the following conditions are fulfilled:
  - a. the *disease* is compulsorily notifiable;
  - b. an awareness, *surveillance* and monitoring system as referred to in Article 14.9.2. is in place;
  - c. affected sheep and goats are slaughtered and completely destroyed;
  - d. the feeding to sheep and goats of *meat-and-bone meal* or *greaves* of ruminant origin has been banned and effectively enforced in the whole country;
  - e. an official accreditation scheme is in operation under the supervision of the *Veterinary Authority*, including the measures described in point 2 below;
2. in the *establishment* the following conditions have been complied with for at least 7 years:
  - a. sheep and goats are permanently identified and records maintained, to enable trace back to their *establishment* of birth;
  - b. records of movements of sheep and goats in and out of the *establishment* are maintained;
  - c. introductions of sheep and goats are allowed only from free *establishments*;
  - d. introduction of sheep and goat embryos should comply with Article 14.9.9.;
  - e. sheep and goat semen introduced into the *establishment* should have been collected, processed and stored in conformity with the provisions of Chapters 4.5. and 4.6.;
  - f. an *Official Veterinarian* inspects sheep and goats in the *establishments* and audits the records at least once a year;
  - g. no *case* of scrapie has been reported;
  - h. sheep and goats of the *establishments* should have no direct or indirect contact, including shared grazing, with sheep or goats from *establishments* of a lower status;
  - i. all culled sheep and goats over 18 months of age are inspected by an *Official Veterinarian*, and a proportion of those exhibiting wasting signs and all those exhibiting neurological signs are tested in a *laboratory* for scrapie. The selection of the sheep and goats to be tested should be made by the *Official Veterinarian*. Sheep and goats over 18 months of age that have died or have been killed for reasons other than routine *slaughter* should also be tested (including ‘fallen’ stock and those sent for emergency *slaughter*).

## Article 14.9.6.

**Recommendations for importation from countries or zones not considered free from scrapie**for sheep and goats for breeding or rearing

*Veterinary Authorities* should require the presentation of an *international veterinary certificate* attesting that the animals come from an *establishment* free from scrapie as described in Article 14.9.5.

OR

~~In cases where the animals do not come from an *establishment* free from scrapie as described in Article 14.9.5., the *importing country* may require the placing of the animals in a *quarantine station* located on its territory, in conformity with the conditions stipulated in its animal health legislation.~~

## Article 14.9.7.

**Recommendations for importation from countries or zones not considered free from scrapie**for sheep and goats for slaughter

*Veterinary Authorities* should require the presentation of an *international veterinary certificate* attesting that:

1. in the country or *zone*:
  - a. the *disease* is compulsorily notifiable;
  - b. an awareness, *surveillance* and monitoring system as referred to in Article 14.9.2. is in place;
  - c. affected sheep and goats are slaughtered and completely destroyed;
2. the sheep and goats selected for export showed no clinical sign of scrapie on the day of shipment.

~~Article 14.9.8.~~~~**Recommendations for importation from countries or zones not considered free from scrapie**~~~~for semen of sheep and goats~~

~~*Veterinary Authorities* should require the presentation of an *international veterinary certificate* attesting that:~~

- ~~1. the donor animals:
 
  - a. are permanently identified to enable trace back to their *establishment* of origin;
  - b. have been kept since birth in *establishments* in which no *case* of scrapie had been confirmed during their residency;
  - c. showed no clinical sign of scrapie at the time of semen collection;~~
- ~~2. the semen was collected, processed and stored in conformity with the provisions of Chapter 4.5. and Chapter 4.6.~~

## Article 14.9.9.

**Recommendations for importation from countries or zones not considered free from scrapie**  
for embryos/oocytes of sheep and goats

*Veterinary Authorities* should require the presentation of an *international veterinary certificate* attesting that:

1. in the country or *zone*:
  - a. the *disease* is compulsorily notifiable;
  - b. an awareness, *surveillance* and monitoring system as referred to in Article 14.9.2. is in place;
  - c. affected sheep and goats are slaughtered and completely destroyed;
  - d. the feeding to sheep and goats of *meat-and-bone meal* or *greaves* of ruminant origin has been banned and effectively enforced in the whole country;
2. the donor animals either have been kept since birth in a free *establishment*, or meet the following conditions:
  - a. are permanently identified to enable trace back to their *establishment* of origin;
  - b. have been kept since birth in *establishments* in which no *case* of scrapie had been confirmed during their residency;
  - c. showed no clinical sign of scrapie at the time of embryo/oocyte collection;
3. the embryos/oocytes were collected, processed and stored in conformity with the provisions of Chapter 4.7.

## Article 14.9.10.

**Recommendations for importation from countries or zones not considered free from scrapie**  
for milk and milk products of sheep or goat origin intended for use in feeding of sheep and goats

*Veterinary Authorities* should require the presentation of an *international veterinary certificate* attesting that the *milk* and *milk products* come from scrapie free *establishments*.

## Article 14.9.11.

**Recommendations on meat-and-bone meal**

*Meat-and-bone meal* containing any sheep or goat protein, or any feedstuffs containing that type of *meat-and-bone meal*, which originate from countries not considered free of scrapie should not be traded between countries for ruminant feeding.

## Article 14.9.12.

**Recommendations for importation from countries or zones not considered free from scrapie**

for skulls including brains, ganglia and eyes, vertebral column including ganglia and spinal cord, tonsils, thymus, spleen, intestine, adrenal gland, pancreas, or liver, and protein products derived therefrom, from sheep and goats

1. these commodities should not be traded for use in ruminant feeds;
2. for purposes other than ruminant feeding, *Veterinary Authorities* should require the presentation of an *international veterinary certificate* attesting that:
  - a. in the country or *zone*:
    - a.i. the *disease* is compulsorily notifiable;
    - a.ii. an awareness, *surveillance* and monitoring system as referred to in Article 14.9.2. is in place;
    - a.iii. affected sheep and goats are slaughtered and completely destroyed;
  - b. the materials come from sheep and goats that showed no clinical sign of scrapie on the day of *slaughter*.

## Article 14.9.13.

**Recommendations for the importation of ovine and caprine materials destined for the preparation of biologicals**

*Veterinary Authorities* of *importing countries* should require the presentation of an *international veterinary certificate* attesting that the products originate from sheep and goats born and raised in a scrapie free country, *zone* or *establishment*.

## Article 14.9.14.

**Principles for declaring a country or zone historically free from scrapie**

Articles 14.9.14. and 14.9.15. outline principles for declaring a country or *zone* free from scrapie.

An essential prerequisite to provide the guarantees required for the recognition of freedom from *disease/infection* is that the *Veterinary Services* of the Member comply with the provisions of Chapter 3.1. on evaluation of *Veterinary Services*, and, if relevant, with the provisions of Chapter 4.3. on zoning and compartmentalisation.

The provisions of the above-mentioned articles are based on the principles developed in Chapter 1.4. and the following premises:

1. ~~the sheep population of the country or *zone* includes a range of genotypes known to be susceptible to scrapie;~~
2. the *Veterinary Services* have the competence, capacity and mandate to investigate, diagnose and report scrapie, if present;

32. the absence of scrapie over a long period of time can be substantiated by effective *disease* investigation and reporting by the *Veterinary Services* of an OIE Member.

Article 14.9.15.

### Requirements to declare a country or zone historically free from scrapie

A country or *zone* may be recognised free from scrapie without having applied the requirements of Article 14.9.3. when:

- a. scrapie has been notifiable for at least 25 years; and
- b. a formal programme of targeted *surveillance* and monitoring, which includes clinical suspects, animals dead on farm and aged sheep and goats, can be documented as having been in place for at least 10 years; and
- ~~e. the presence of a range of scrapie susceptible genotypes in this sheep population can be documented; and~~
- ~~ec.~~ appropriate measures to prevent scrapie introduction can be documented as having been in place for at least 25 years; and
  - i. either scrapie has never been reported; or
  - ii. no *case* of scrapie has been reported for at least 25 years.