CHAPTER 11.9.

INFECTION WITH LUMPY SKIN DISEASE VIRUS

Article 11.9.1.

General provisions

Lumpy skin disease (LSD) susceptible animals are bovines (*Bos indicus* and *B. taurus*) and water buffaloes *(Bubalus bubalis)* and certain *wild* ruminants.

For the purposes of the *Terrestrial Code*, LSD is defined as an *infection* of bovines and water buffaloes with lumpy skin disease virus (LSDV).

The following defines the occurrence of *infection* with LSDV:

1) LSDV has been isolated from a sample from a bovine or a water buffalo; or
2) antigen or nucleic acid specific to LSDV, excluding vaccine strains, has been identified in a sample from a bovine or a water buffalo showing clinical signs consistent with LSD, or epidemiologically linked to a suspected or confirmed *case*, or giving cause for suspicion of previous association or contact with LSDV; or
3) antibodies specific to LSDV have been detected in a sample from a bovine or a water buffalo that either shows clinical signs consistent with LSD, or is epidemiologically linked to a suspected or confirmed *case*.

For the purposes of the *Terrestrial Code*, the *incubation period* for LSD shall be 28 days.

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

Article 11.9.2.

Safe commodities

When authorising import or transit of the following *commodities*, *Veterinary Authorities* should not require any LSD-related conditions regardless of the status of the animal population of the *exporting country*:

1) skeletal muscle *meat*;
2) *casings*;
3) gelatine and collagen;
4) tallow;
5) hooves and horns.

Article 11.9.3.

Country or zone free from LSD

A country or a *zone* may be considered free from LSD when *infection* with LSDV is notifiable in the entire country, importation of bovines and water buffaloes and their *commodities* is carried out in accordance with this chapter, and either:

1) the country or *zone* is historically free as described in Article 1.4.6.; or
2) for at least three years, *vaccination* has been prohibited in the country or *zone* and a clinical *surveillance* programme in accordance with Article 11.9.15. has demonstrated no occurrence of *infection* with LSDV; or
3) for at least two years, *vaccination* has been prohibited in the country or *zone* and a clinical, virological and serological *surveillance* programme in accordance with Article 11.9.15. has demonstrated no occurrence of *infection* with LSDV.

A country or *zone* free from LSD that is adjacent to an infected country or *zone* should include a *zone* in which *surveillance* is conducted in accordance with Article 11.9.15.

A country or *zone* free from LSD will not lose its status as a result of introduction of seropositive or vaccinated bovines or water buffaloes or their *commodities*, provided they were introduced in accordance with this chapter.

Article 11.9.4.

Recovery of free status

1) When a *case* of LSD occurs in a country or *zone* previously free from LSD, one of the following waiting periods is applicable to regain free status:

   a) when a *stamping-out policy* has been applied;

      i) 14 months after the *slaughter* or *killing* of the last *case*, or after the last *vaccination* if emergency *vaccination* has been used, whichever occurred last, and during which period clinical, virological and serological *surveillance* conducted in accordance with Article 11.9.15. has demonstrated no occurrence of *infection* with LSDV;

      ii) 26 months after the *slaughter* or *killing* of the last *case*, or after the last *vaccination* if emergency *vaccination* has been used, whichever occurred last, and during which period clinical *surveillance* alone conducted in accordance with Article 11.9.15. has demonstrated no occurrence of *infection* with LSDV;

   b) when a *stamping-out policy* is not applied, Article 11.9.3. applies.

2) When preventive *vaccination* is conducted in a country or *zone* free from LSD, in response to a threat but without the occurrence of a *case* of LSD, free status may be regained eight months after the last *vaccination* when clinical, virological and serological *surveillance* conducted in accordance with Article 11.9.15. has demonstrated no occurrence of *infection* with LSDV.

Article 11.9.5.

Recommendations for importation from countries or zones free from LSD

For bovines and water buffaloes

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

1) showed no clinical sign of LSD on the day of shipment;

2) come from a country or *zone* free from LSD.

Article 11.9.6.

Recommendations for importation from countries or zones not free from LSD

For bovines and water buffaloes

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

1) showed no clinical sign of LSD on the day of shipment;

2) were kept since birth, or for the past 60 days prior to shipment, in an *epidemiological unit* where no *case* of LSD occurred during that period;

3) were vaccinated against LSD according to manufacturer's instructions between 60 days and one year prior to shipment;

4) were demonstrated to have antibodies at least 30 days after *vaccination*;

5) were kept in a *quarantine station* for the 28 days prior to shipment during which time they were subjected to an agent identification test with negative results.

Article 11.9.7.

Recommendations for importation from countries or zones free from LSD

For semen of bovines and water buffaloes

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

1) the donor animals:
   a) showed no clinical sign of LSD on the day of collection;
   b) were kept in a free country or *zone* for at least 28 days prior to collection;
2) the semen was collected, processed and stored in accordance with Chapters 4.6. and 4.7.

Article 11.9.8.

Recommendations for importation from countries or zones not free from LSD

For semen of bovines and water buffaloes

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

1) the donor males:
   a) showed no clinical sign of LSD on the day of collection and the following 28 days;
   b) were kept for the 60 days prior to collection in a *semen collection centre* where no *case* of LSD occurred during that period;
   c) EITHER:
      i) were vaccinated regularly against LSD according to manufacturer's instructions, the first *vaccination* being administrated at least 60 days prior to the first semen collection; and
      ii) were demonstrated to have antibodies against LSDV at least 30 days after *vaccination*;
      OR
      iii) were subjected to a serological test to detect antibodies specific to LSDV, with negative results, at least every 28 days throughout the collection period and one test 21 days after the final collection for this consignment; and
      iv) were subjected to agent detection by PCR conducted on blood samples collected at commencement and conclusion of, and at least every 28 days during, semen collection for this consignment, with negative results;
2) the semen to be exported was subjected to agent detection by PCR;
3) the semen was collected, processed and stored in accordance with Chapters 4.6. and 4.7.

Article 11.9.9.

Recommendations for importation from countries or zones free from LSD

For embryos of bovines and water buffaloes

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

1) the donor females:
   a) showed no clinical sign of LSD on the day of collection of the embryos;
   b) kept for at least 28 days prior to collection in a free country or *zone*;
2) the embryos were collected, processed and stored in accordance with Chapters 4.8., 4.9. and 4.10., as relevant;
3) the semen used for the production of the embryos complied with Articles 11.9.7. and 11.9.8., as relevant.

Article 11.9.10.

Recommendations for importation from countries or zones not free from LSD

For embryos of bovines and water buffaloes

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

1) the donor females:
   a) showed no clinical sign of LSD on the day of collection and the following 28 days;
   b) were kept in an *establishment* where no *case* of LSD occurred during the 60 days prior to collection;
   c) EITHER:
      i) were vaccinated regularly against LSD according to manufacturer's instructions, the first *vaccination* being administrated at least 60 days prior to the first collection; and
      ii) were demonstrated to have antibodies against LSDV at least 30 days after *vaccination*;
      OR
      iii) were subjected to a serological test to detect antibodies specific to LSDV, with negative results, on the day of collection and at least 21 days after collection;
   d) were subjected to agent detection by PCR with negative results on a blood sample on the day of collection;
2) the semen used for the production of the embryos complied with Articles 11.9.7. and 11.9.8., as relevant;
3) the embryos were collected, processed and stored in accordance with Chapters 4.8., 4.9. and 4.10.

Article 11.9.11.

Recommendations for the importation of milk and milk products

Veterinary Authorities of *importing countries* should require the presentation of an *international veterinary certificate* attesting that the *milk* or the *milk products*:

1) have been derived from animals in a country or *zone* free from LSD;

OR

2) were subjected to pasteurisation or any combination of control measures with equivalent performance as described in the Codex Alimentarius Code of Hygienic Practice for Milk and Milk Products.

Article 11.9.12.

Recommendations for importation of meal and flour from blood, meat other than skeletal muscle, or bones from bovines and water buffaloes

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

1) that these products were derived from animals in a country or *zone* free from LSD; or
2) that
   a) the products were processed using heat treatment to a minimum internal temperature of 65°C for at least 30 minutes;
   b) the necessary precautions were taken after processing to avoid contact of the *commodities* with any potential source of LSDV.

Article 11.9.13.

Recommendations for importation of hides of bovines and water buffaloes

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

1) these products were derived from animals that had been kept in a country or *zone* free from LSD since birth or for at least the past 28 days;

OR

2) these products were:
   a) derived from animals which had undergone ante- and post-mortem inspections in accordance with Chapter 6.3. with favourable results; and
   b) dry-salted or wet-salted for a period of at least 14 days prior to dispatch; or
   c) treated for a period of at least seven days in salt (NaCl) with the addition of 2% sodium carbonate (Na_2CO_3); or
   d) dried for a period of at least 42 days at a temperature of at least 20°C; and
3) the necessary precautions were taken after processing to avoid contact of the *commodities* with any potential source of LSDV.

Article 11.9.14.

Recommendations for importation of other products of animal origin from bovines and water buffaloes

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

1) these products were derived from animals that have been kept in a country or *zone* free from LSD since birth or for at least the past 28 days; or
2) these products were processed to ensure the destruction of the LSDV and the necessary precautions were taken after processing to avoid contact of the *commodities* with any potential source of LSDV.

Article 11.9.15.

Surveillance

1. General principles of surveillance

A Member Country should justify the *surveillance* strategy chosen as being adequate to detect the presence of *infection* with LSDV even in the absence of clinical signs, given the prevailing epidemiological situation in accordance with Chapter 1.4. and Chapter 1.5. and under the responsibility of the *Veterinary Authority*.

The *Veterinary Services* should implement programmes to raise awareness among farmers and workers who have day-to-day contact with livestock, as well as *veterinary paraprofessionals*, *veterinarians* and diagnosticians, who should report promptly any suspicion of LSD.

In particular Member Countries should have in place:

a) a formal and ongoing system for detecting and investigating *cases*;
b) a procedure for the rapid collection and transport of samples from suspected *cases* to a *laboratory* for diagnosis;
c) a system for recording, managing and analysing diagnostic and *surveillance* data.

2. Clinical surveillance

Clinical *surveillance* is essential for detecting *cases* of *infection* with LSDV and requires the physical examination of susceptible animals.

Surveillance based on clinical inspection provides a high level of confidence of detection of disease if a sufficient number of clinically susceptible animals is examined regularly at an appropriate frequency and investigations are recorded and quantified. Clinical examination and *laboratory* testing should be pre-planned and applied using appropriate types of samples to clarify the status of suspected *cases*.

3. Virological and serological surveillance

An active programme of *surveillance* of susceptible populations to detect evidence of *infection* with LSDV is useful to establish the status of a country or *zone*. Serological and molecular testing of bovines and water buffaloes may be used to detect presence of *infection* with LSDV in naturally infected animals.

The study population used for a serological survey should be representative of the population at *risk* in the country or *zone* and should be restricted to susceptible unvaccinated animals. Identification of vaccinated animals may minimise interference with serological *surveillance* and assist with recovery of free status.

4. Surveillance in high-risk areas

Disease-specific enhanced *surveillance* in a free country or *zone* should be carried out over an appropriate distance from the border with an infected country or *zone*, based upon geography, climate, history of *infection* and other relevant factors. The *surveillance* should be carried out over a distance of at least 20 kilometres from the border with that country or *zone*, but a lesser distance could be acceptable if there are relevant ecological or geographical features likely to interrupt the transmission of LSDV. A country or *zone* free from LSD may be protected from an adjacent infected country or *zone* by a *protection zone*.

NB: FIRST ADOPTED IN 1968; MOST RECENT UPDATE ADOPTED IN 2018.