

CHAPTER 8.16.

INFECTION WITH RINDERPEST VIRUS

Article 8.16.1.

General provisions

- 1) The global eradication of rinderpest has been achieved and was announced in mid-2011 based on the following:
 - a) Evidence demonstrating that there is no significant likelihood that rinderpest virus (RPV) remains in susceptible domesticated or *wildlife* host populations anywhere in the world.
 - b) OIE Member and non-member countries have completed the pathway defined by the OIE for recognition of national rinderpest freedom and have been officially recognised by the OIE as free from *infection* with RPV.
 - c) All *vaccinations* against rinderpest are banned and have ceased throughout the world. A ban on *vaccination* against rinderpest means a ban on administering any vaccine containing RPV or any components derived from RPV to any animal.

However, RPV-containing material including live vaccines continues to be held in a number of institutions around the world and this poses a *risk* of virus re-introduction into susceptible animals. Therefore, Member Countries should not manipulate existing RPV-containing material, or synthesise or produce RPV-containing material, unless authorised by the FAO and OIE.

As sequestration and destruction of virus stocks proceed, the *risks* of re-occurrence of *infection* are expected to diminish progressively. The possibility of deliberate or accidental release of virus demands continuing vigilance, especially in the case of those countries hosting an institution holding RPV-containing material.

This chapter takes into account the global freedom status of rinderpest and provides recommendations to prevent re-emergence of the disease, to ensure adequate *surveillance* and protection of livestock and to manage any re-emergence and facilitate recovery of global freedom from rinderpest.

A *case* of *infection* with RPV shall be confirmed in an OIE Reference Laboratory for rinderpest.

- 2) For the purposes of the *Terrestrial Code*:
 - a) Rinderpest is defined as an *infection* of susceptible animals with RPV, with or without clinical signs.
 - b) The following defines the occurrence of a *case* of *infection* with RPV:
 - i) RPV has been isolated from a susceptible animal or a product derived from that animal and identified; or
 - ii) viral antigen or viral RNA specific to RPV has been identified in samples from a susceptible animal; or
 - iii) antibodies to RPV, that are not a consequence of *vaccination*, have been identified in a susceptible animal with either epidemiological links to a confirmed or suspected *outbreak* of rinderpest, or showing clinical signs consistent with recent *infection* with RPV.
 - c) The following defines a 'suspected *case*' of *infection* with RPV:
 - i) a potential *case* for which other diseases compatible with 'stomatitis-enteritis syndrome' have been ruled out by clinical and laboratory investigation; or
 - ii) a potential *case* which has given a positive reaction in a diagnostic test for RPV conducted outside of an OIE Reference Laboratory for rinderpest; or
 - iii) the detection of RPV-specific antibodies that are not a consequence of *vaccination* in a susceptible animal without clinical signs.
 - d) The *incubation period* for *infection* with RPV shall be 21 days.
 - e) RPV-containing material means field and laboratory strains of RPV; vaccine strains of RPV including valid and expired vaccine stocks; tissues, sera and other material from animals known or suspected to be infected; laboratory-generated diagnostic material containing live virus, recombinant morbilliviruses (segmented or nonsegmented) containing unique RPV nucleic acid or amino acid sequences; and full length genomic material including viral RNA and its cDNA copies.

Subgenomic fragments of RPV genome (either as plasmids or incorporated into recombinant viruses) that cannot be incorporated into a replicating morbillivirus or morbillivirus-like virus are not considered to be RPV-containing material, neither are sera that have been either heat-treated to at least 56°C for at least two hours, or shown to be free from RPV genome sequences by a validated RT-PCR assay.
- 3) For the purposes of this chapter:
 - a) 'Susceptible animals' means domestic, *feral*, *captive wild* and *wild* artiodactyls.

- b) A 'potential case' of *infection* with RPV means a susceptible animal showing clinical signs consistent with 'stomatitis-enteritis syndrome' and where these signs cannot be ascribed to another disease compatible with 'stomatitis-enteritis syndrome' by clinical or epidemiological investigation.

The occurrence of a potential case should draw special attention if it is linked to identified risks such as proximity to facilities holding RPV-containing material.

- c) 'Stomatitis-enteritis syndrome' is defined as fever with ocular and nasal discharges in combination with clinical signs of erosions in the oral cavity with diarrhoea, dysentery, dehydration or death or necropsy findings of haemorrhages on serosal surfaces, haemorrhages and erosions on alimentary mucosal surfaces and lymphadenopathy.

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

Article 8.16.2.

Safe commodities

1. Safe commodities during global freedom

When authorising import or transit of *commodities* of susceptible animals, *Veterinary Authorities* should not require any conditions related to rinderpest.

2. Safe commodities in the event of re-emergence of rinderpest

Regardless of the rinderpest status of the *exporting country*, *Veterinary Authorities* should not require any conditions related to rinderpest for:

- a) semi-processed hides and skins (limed hides, pickled pelts, and semi-processed leather);
- b) *meat products* in hermetically sealed containers with a F0 value of 3 or above;
- c) gelatine.

Article 8.16.3.

Article 8.16.4., Article 8.16.5. and point 1 of Article 8.16.6. apply during global freedom.

Point 2 of Article 8.16.6. and Articles 8.16.7. to 8.16.14. apply in the event of re-emergence of rinderpest.

Article 8.16.4.

Ongoing surveillance during global freedom

All countries in the world, whether or not Member Countries of the OIE, have completed all the procedures necessary to be recognised as free from rinderpest, and annual re-confirmation of absence of *infection* with RPV is no longer required. However, rinderpest should still be notifiable in the whole territory and countries are still required to carry out general *surveillance* in accordance with Chapter 1.4. to detect rinderpest should it recur and to comply with OIE reporting obligations concerning the occurrence of unusual epidemiological events in accordance with Chapter 1.1. Countries should either maintain the capacity for local investigation of potential *cases* or have protocols in place to send samples from such potential *cases* to an *approved laboratory*, which can be an OIE Reference Laboratory for rinderpest. Countries should also maintain national contingency plans for responding to events suggestive of rinderpest including the checking of potential *cases* and the prompt identification of suspected *cases*.

The Global Rinderpest Action Plan (GRAP) complements all national and regional contingency plans and lays out the roles and responsibilities of all relevant stakeholders to prepare for, prevent, detect, respond to and recover from a rinderpest *outbreak*. If needed, expertise from the region or continent, or international organisations may be requested to provide resources to help confirm or rule out whether the potential *case* meets the definition for a suspected *case* or a *case*.

Article 8.16.5.

Annual update on RPV-containing material

Annual reports on RPV-containing material should be submitted to the OIE each year by the *Veterinary Authority* of a Member Country hosting an institution or institutions holding RPV-containing material, using the online platform designated for such a purpose. A final report should be submitted to the OIE for each institution when all RPV-containing materials have been destroyed and no new related activities are foreseen.

Article 8.16.6.

Response to a recurrence of rinderpest

1. Procedures to be followed in the event of the suspicion of rinderpest

Any suspected *case of infection* with RPV should be immediately reported to the *Veterinary Authority*.

Veterinary Authorities shall immediately notify any suspected *case of infection* with RPV to the OIE.

Upon detection of a suspected *case*, the national contingency plan should be implemented immediately. If the presence of rinderpest cannot be ruled out or if there is a positive reaction in a diagnostic test for RPV conducted outside of an OIE Reference Laboratory for rinderpest, samples should be collected in accordance with the *Terrestrial Manual* and dispatched to one of the OIE Reference Laboratories for rinderpest for confirmation and, if applicable, for molecular characterisation of the virus to facilitate identification of its source. A full epidemiological investigation should be conducted simultaneously to provide supporting information and to assist in identifying the possible source and spread of the virus.

2. Procedures to be followed after confirmation of rinderpest

Veterinary Authorities shall immediately notify any *case of infection* with RPV to the OIE.

A *case of infection* with RPV shall constitute a global emergency requiring immediate, concerted action for its investigation and elimination.

Immediately following the confirmation of the presence of RPV, viral RNA or antibody as described in Article 8.16.1., the OIE Reference Laboratory for rinderpest should inform the country concerned, the OIE and the FAO, allowing the initiation of the response operations described in the GRAP.

When epidemiological investigation has indicated the extent of the infected area, zoning can be implemented for the purposes of disease control. In the event of a limited *outbreak*, a *containment zone* should be established in accordance with Article 8.16.9.

Emergency *vaccination* is acceptable only with rinderpest vaccines produced in accordance with the *Terrestrial Manual*. Vaccinated animals should always be clearly and permanently identified at the individual level.

Global rinderpest freedom is suspended and the *sanitary measures* for trade shall be those in Articles 8.16.13. and 8.16.14.

Article 8.16.7.

Country free from rinderpest

In the event of re-emergence of rinderpest, all OIE Member Countries without a *case* will remain free from rinderpest. However, all OIE Member Countries will be asked to provide a *risk assessment* to the OIE and free status will be suspended if their *risk assessment* is not accepted by the OIE.

Some countries will be at heightened *risk*. In particular, countries meeting the conditions below would be regarded as being at heightened *risk* and should carry out appropriate *surveillance*, capable of detecting the presence of *infection* with RPV even in the absence of clinical signs; this may be achieved through a *surveillance* programme in accordance with Article 8.16.12. in addition to ongoing *surveillance* in accordance with Article 8.16.4.

- 1) Countries that are adjacent to a country infected with RPV; or
- 2) Countries that have relevant epidemiological or ecological links through trade or animal movements to a country infected with RPV.

Article 8.16.8.

Country infected with RPV

A country infected with RPV is one in which a *case of infection* with RPV has occurred.

Article 8.16.9.

Establishment of a containment zone within a country previously free from rinderpest

In the event of a limited *outbreak* within a country previously free from rinderpest, a *containment zone* for the purposes of disease control and eradication should be established in accordance with Article 4.4.7. Notwithstanding the establishment of a *containment zone* for disease control and eradication, *international trade of commodities* of susceptible species from the entire country will be limited to the *commodities* listed in point 2 of Article 8.16.2. until free status is recovered for the whole country in accordance with Article 8.16.10.

Article 8.16.10.

Recovery of free status for a country

Should a *case of infection* with RPV occur, a country is considered infected with RPV until shown to be free from rinderpest in accordance with the procedures below.

The time needed to recover free status of a country depends on the methods employed to achieve the elimination of *infection*.

One of the following waiting periods is applicable:

- 1) when a *stamping-out policy* has been applied:
 - a) three months after the *disinfection* of the last affected *establishment* where a *stamping-out policy* without *vaccination* and targeted *surveillance* in accordance with Article 8.16.12. have been applied; or
 - b) three months after the *disinfection* of the last affected *establishment* and the *slaughter* of all vaccinated animals, where a *stamping-out policy*, emergency *vaccination* and targeted *surveillance* in accordance with Article 8.16.12. have been applied; or
 - c) 18 months after the *disinfection* of the last affected *establishment* and the last *vaccination*, where a *stamping-out policy*, emergency *vaccination* not followed by the *slaughter* of all vaccinated animals, and targeted *surveillance* in accordance with Article 8.16.12. have been applied;
- 2) when a *stamping-out policy* is not practised, the above waiting periods do not apply. Instead, the country must be in compliance with the requirements below:
 - a) have a record of regular and prompt disease *notification* in accordance with Chapter 1.1.;
 - b) send a declaration to the OIE stating that:
 - i) there has been no *case of infection* with RPV during the past 24 months;
 - ii) no suspected *case of infection* with RPV has been found during the past 24 months;
 - iii) no *vaccination* against rinderpest has been carried out during the past 24 months;
 - c) supply documented evidence that targeted *surveillance* for *infection* with RPV in accordance with Chapter 1.4. and Article 8.16.12. is in operation and that regulatory measures for the prevention and control of rinderpest have been implemented;
 - d) not have imported, since the cessation of *vaccination*, any animals vaccinated against rinderpest.

In point 1 and point 2 above, the recovery of free status requires an international expert mission to verify the successful application of containment and eradication measures, as well as a review of documented evidence by the OIE. The country shall be considered free only after the outcome of the mission and submitted evidence have been accepted by the OIE.

Article 8.16.11.

Recovery of global freedom

The suspension of global freedom will be lifted when all countries infected with RPV have recovered freedom in accordance with Article 8.16.10.

Unless it is verified through an OIE expert mission that the conditions below are met for all countries having experienced an *outbreak* within 12 months of suspension, then global rinderpest freedom is lost and recovery of freedom would require an assessment of free status of all countries by the OIE. If the conditions below are met within 12 months, then global freedom will remain suspended, subject to periodic review by the OIE.

- 1) The *outbreak* is limited to a country or *zone*, without any further *outbreaks* outside the ecosystem of the first *outbreak*.
- 2) The *outbreak* is handled in a prompt and efficient manner, with robust control measures including movement controls, which were rapidly implemented and were shown to be successful in mitigating the spread of rinderpest and reducing its *incidence*.

Article 8.16.12.

Surveillance for recovery of free status

A country infected with RPV applying for recovery of free status in accordance with Article 8.16.10. should provide evidence demonstrating effective *surveillance* in accordance with Chapter 1.4. and the points below.

- 1) The target for *surveillance* should be all populations of susceptible animals within the country. In certain areas some *wildlife* populations, such as African buffaloes, act as sentinels for *infection* with RPV.
- 2) An awareness programme should be established for all animal health professionals including *veterinarians*, both official and private, and livestock owners to ensure that clinical and epidemiological characteristics of rinderpest and *risks* of its recurrence are understood. Farmers and workers who have day-to-day contact with livestock, as well as diagnosticians, should report promptly any potential *case*.
- 3) Differing clinical presentations can result from variations in levels of innate host resistance (*Bos indicus* breeds being more resistant than *B. taurus*), and variations in the virulence of the attacking strain. In the case of sub-acute (mild) cases, clinical signs are irregularly displayed and difficult to detect. Experience has shown that syndromic *surveillance* strategies, i.e. *surveillance* based on a predefined set of clinical signs ('stomatitis-enteritis syndrome'), are useful to increase the sensitivity of the system.
- 4) Given these differing clinical presentations, virological *surveillance* should be conducted in addition to clinical surveillance. A procedure should be established for the rapid collection and transport of samples from suspected *cases* to an OIE Reference Laboratory for rinderpest.
- 5) Since rinderpest is an acute *infection* with no known carriers, serological *surveillance* should be conducted to detect mild *infections* that are not detected clinically. There are no serological means to differentiate animals infected with field virus from vaccinated animals. Consequently, serological surveys should target unvaccinated animals and young animals devoid of maternal antibodies.

Article 8.16.13.

Recommendations for importation of susceptible animals and their products from countries free from rinderpest

- 1) For susceptible animals, *Veterinary Authorities* should require the presentation of an *international veterinary certificate* attesting that the animals remained in a country free from rinderpest since birth or for at least 30 days prior to shipment. Animals must not transit through a country infected with RPV, in accordance with Chapter 5.7.
- 2) For *fresh meat* or *meat products* (except those listed in point 2 of Article 8.16.2.) of susceptible animals, for *milk* or *milk products* from susceptible animals, and for all products of animal origin intended for use in animal feeding, for agricultural use or for industrial use, *Veterinary Authorities* should require the presentation of an *international veterinary certificate* attesting that the entire consignment of product is derived from animals that remained in a country free from rinderpest since birth or for at least 30 days prior to *slaughter* or harvesting of the product.
- 3) For semen and oocytes of susceptible animals, *Veterinary Authorities* should require the presentation of an *international veterinary certificate* attesting that:
 - a) the donor animals showed no clinical signs of *infection* with RPV on the day of collection and had been kept in a country free from rinderpest for at least 30 days prior to collection;

- b) the semen and oocytes were collected, processed and stored in conformity with the provisions of Chapters 4.6., 4.7. or 4.9., as relevant.
- 4) For *in vivo* derived embryos of susceptible animals, *Veterinary Authorities* should require the presentation of an *international veterinary certificate* attesting that:
 - a) the donor females showed no clinical signs of *infection* with RPV on the day of collection and had been kept in a country free from rinderpest for at least 30 days prior to collection;
 - b) the embryos were collected, processed and stored in conformity with the provisions of Chapters 4.8. and 4.10., as relevant.

Article 8.16.14.

Recommendations for importation from countries not free from rinderpest

From countries not free from rinderpest, only *commodities* listed in point 2 of Article 8.16.2. can be traded.

NB: FIRST ADOPTED IN 1968; MOST RECENT UPDATE ADOPTED IN 2022.