

TERRESTRIAL ANIMAL HEALTH STANDARDS COMMISSION

FEBRUARY 2013 REPORT

CHAPTER 8.12.

INFECTION WITH RINDERPEST VIRUS

Article 8.12.1.

Preamble

The global eradication of rinderpest has been achieved and was announced in mid-2011 based on the following:

- 1) Evidence demonstrates that there is no significant risk that rinderpest virus (RPV) remains in susceptible domesticated or *wild* host populations anywhere in the world.
- 2) All 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 the *infection*.
- 3) All *vaccination* against rinderpest has ceased throughout the world.

However, ~~rinderpest virus and~~ as RPV-containing material including live vaccines continue to be held in a number of institutions around the world and this poses a ~~small~~ risk of virus re-introduction into susceptible animals.

As sequestration and destruction of virus stocks proceed, the risks of reintroduction of *infection* into *animals* is expected to progressively diminish. The possibility of deliberate or accidental release of virus demands continuing vigilance, especially in the case of those countries known to host an institution holding RPV-containing material ~~to retaining the virus~~. This chapter takes into account the new global status and provides recommendations to prevent re-emergence of the *disease* and to ensure adequate *surveillance* and protection of livestock.

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

Article 8.12.2.

Definitions and general provisions

For the purpose of the *Terrestrial Code*:

RPV-containing material means field and laboratory strains of RPV; vaccine strains of RPV including valid and expired vaccine stocks; tissues, sera and other clinical material from *animals* known or suspected to be infected; diagnostic material containing or encoding live virus, recombinant morbilliviruses (segmented or non-segmented) containing unique RPV nucleic acid or amino acid sequences, and full length genomic material including virus RNA and cDNA copies of virus RNA. Sub-genomic fragments of morbillivirus nucleic acid that are not capable of being incorporated in a replicating morbillivirus or morbillivirus-like virus are not considered as RPV-containing material.

Ban on *vaccination* against rinderpest means a ban on administering any vaccine containing RPV or RPV components to any *animal*.

~~For the purposes of the *Terrestrial Code*,~~ The *incubation period* for rinderpest (~~RP~~) shall be 21 days.

~~For the purpose of this chapter,~~ A case is defined as an *animal* infected with ~~rinderpest virus~~ (RPV) whether or not showing clinical signs.

For the purpose of this chapter, ~~the term~~ 'susceptible *animals*' ~~applies to~~ means domestic, ~~feral~~ feral and ~~wild~~ wild artiodactyls.

~~'Ban on *vaccination* against RP' means a ban on administering any vaccine containing RPV or RPV components to any *animal*.~~

Article 8.12.3.

Ongoing surveillance post 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 RP rinderpest infection and annual re-confirmation of RP rinderpest absence is no longer required. However, countries are still required to carry out general *surveillance* in accordance with Chapter 1.4. to detect RP 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 also maintain national contingency plans for responding to events suggestive of RP rinderpest.

Article 8.12.4.

Recommendations for international trade in livestock and their products

When authorising import or transit of livestock and their products, *Veterinary Authorities* should not require any RP rinderpest related conditions.

Article 8.12.5.

Response to recurrence of RP rinderpest

~~In the post-eradication era, any direct or indirect detection of RPV in an animal or animal product confirmed in an OIE-FAO Reference Laboratory using a prescribed test, shall constitute a global emergency requiring immediate, concerted action for its investigation and elimination.~~

1. Definition of a suspected case of rinderpest RP

Rinderpest RP should be suspected if one or more *animals* of a susceptible species is found to be exhibiting clinical signs consistent with 'stomatitis-enteritis syndrome'.

Stomatitis-enteritis syndrome which is defined as fever with ocular and nasal discharges in combination with any one or more of the following:

a) clinical signs of erosions in the oral cavity; with diarrhoea; and dysentery; and dehydration or *death*;

or

b) necropsy findings of haemorrhages on serosal surfaces; and haemorrhages and erosions on alimentary mucosal surfaces; and lymphadenopathy.

~~Stomatitis-enteritis syndrome could indicate rinderpest RP as well as a number of other diseases which should elicit a suspicion of rinderpest RP and from which rinderpest RP needs to should be differentiated by appropriate laboratory investigation, including bovine virus diarrhoea/mucosal disease, malignant catarrhal fever, infectious bovine rhinotracheitis, foot and mouth disease and bovine papular stomatitis.~~

The detection of RPV specific antibodies in an *animal* of a susceptible species with or without clinical signs is considered a suspected case of rinderpest RP.

2. Procedures to be followed in the event of the suspicion of rinderpest RP

~~In the post-eradication era, Any direct or indirect detection of RPV in an animal or animal product shall must be notified/reported immediately, to OIE and FAO. Confirmation in an appointed OIE-FAO Reference Laboratory, using a prescribed test, shall constitute a global emergency requiring immediate, concerted action for its investigation and elimination.~~

Upon detection of a suspected case, the national contingency plan should be implemented immediately. If the contingency procedure cannot rule out the suspicion presence of rinderpest RP cannot be ruled out, samples should be submitted to an international reference laboratory. These samples should be collected in duplicate in accordance with Chapter 2.1.15. of the *Terrestrial Manual* with one set being and dispatched to one of the appointed OIE-FAO Reference Laboratories for rinderpest RP for confirmation and, if applicable, to enable for molecular characterisation of the virus to facilitate identification of its source. A full epidemiological investigation should simultaneously be conducted simultaneously to provide supporting information and to assist in identifying the possible source and spread of the virus.

3. Definition of a case of rinderpest RP

Rinderpest RP should be considered as confirmed when, based on a report from an appointed OIE-FAO reference laboratory for rinderpest:

- a) RPV has been isolated from an *animal* or a product derived from that *animal* and identified; or
- b) viral antigen or viral RNA specific to RPV has been identified in samples from one or more *animals*; or
- c) antibodies to RPV have been identified in one or more *animals* with either epidemiological links to a confirmed or suspected *outbreak* of rinderpest RP, or showing clinical signs consistent with recent *infection* with RPV.

4. Procedures to be followed after confirmation of rinderpest RP

A case of rinderpest confirmed in an appointed OIE-FAO Reference Laboratory using a prescribed test shall constitute a global emergency requiring immediate, concerted action for its investigation and elimination.

Immediately following the confirmation of the presence of RPV virus, viral RNA or antibody, the appointed OIE-FAO Reference Laboratory should inform the country concerned, the OIE and the FAO, allowing the initiation of the international contingency plan.

In the event of the confirmation of rinderpest RP, the entire country ~~shall be~~ is considered to be infected, until When epidemiological investigation has indicated the extent of the infected area, ~~allowing definition of~~ infected and protection zones can be defined for the purposes of disease control. In the event of limited *outbreaks*, a single *containment zone*, which includes all cases, may be established for the purpose of minimising the impact on the country. The *containment zone* should be established in accordance with Chapter 4.3. and may cross international boundaries.

Emergency *vaccination* is acceptable only with live-attenuated tissue culture rinderpest RP vaccine, produced in accordance with the *Terrestrial Manual*. Vaccinated *animals* should always be clearly identified at a herd or individual level.

5. Global rinderpest RP freedom is suspended and the sanitary measures for trade with the infected country or countries shall revert to those in Articles 8.12.5. to 8.12.19. Chapter 8.12. of the *Terrestrial Animal Health Code* 2010 Edition.

Article 8.12.6.

Recovery of free status

Should there be a confirmed occurrence of rinderpest RP, as defined above, a country or *zone* shall be considered as RPV infected until shown to be free through targeted *surveillance* involving clinical, serological and virological testing procedure surveillance. The country or zone shall be considered free only after the OIE has accepted the evidence submitted to it.

The time needed to recover rinderpest RP free status of the entire country or zone, or of the *containment zone*, if one is established, depends on the methods employed to achieve the elimination of *infection*.

One of the following waiting periods applies:

- 1) three months after the last *case* where a *stamping-out policy* and serological *surveillance* are applied in accordance with Article 8.12.8.; or
- 2) three months after the *slaughter* of all vaccinated *animals* where a *stamping-out policy*, emergency *vaccination* and serological *surveillance* are applied in accordance with Article 8.12.8.

The recovery of rinderpest RP 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 or zone shall be considered free only after the OIE has accepted the evidence submitted to it.

Article 8.12.7.

Recovery of global freedom

Global rinderpest RP freedom shall be reinstated provided that within six months of the confirmation of an *outbreak*, the following conditions have been met:

- 1) the *outbreak* was recognised in a timely manner and handled in accordance with the international contingency plan;
- 2) reliable epidemiological information clearly demonstrated that there was minimal spread of virus;
- 3) ~~robust control measures consisting of stamping out herds containing infected animals, and any vaccinated animals, combined with sanitary procedures including movement controls were rapidly implemented and were successful in eliminating the RPV. were rapidly implemented and were successful in eliminating the virus. The control measures consisted of stamping out of infected herds and any vaccinated animals, combined with sanitary procedures including quarantine and other movement controls;~~
- 4) the origin of the virus was established, and it did not relate to an undetected reservoir of *infection*;
- 5) a risk assessment indicates that there is negligible risk of recurrence;
- 6) if *vaccination* was applied, all vaccinated *animals* were slaughtered or destroyed.

7) the affected country or zone has regained free status in accordance with Article 8.12.6.

If the conditions above are not met, the global rinderpest RP freedom is lost and Chapter 8.12 of the *Terrestrial Animal Health Code* 2010 Edition is reinstated. Recovery of global rinderpest RP freedom would **then** require reestablishment of an internationally coordinated rinderpest RP eradication programme and assessments of rinderpest RP free country status.

Article 8.12.8.

Surveillance for recovery of RP rinderpest free status

A country Member Country applying for reinstatement of rinderpest RP free status in accordance with 8.12.6. should provide evidence demonstrating effective *surveillance* in accordance with Chapter 1.4.

- 1) The target for *surveillance* should be all ~~significant~~ populations of rinderpest RP susceptible species within the country. In certain areas some *wildlife* populations, such as African buffaloes, act as sentinels for rinderpest RP *infection*.
- 2) Given that rinderpest RP is an acute *infection* with no known carrier state, virological *surveillance* ~~using tests described in the *Terrestrial Manual*~~ should be conducted to confirm clinically suspected cases. A procedure should be established for the rapid collection and transport of samples from suspect cases to an appointed OIE-FAO Reference Laboratory ~~recognised laboratory~~ for diagnosis as described in the *Terrestrial Manual*.
- 3) An awareness programme should be established for all animal health professionals including *veterinarians*, both official and private, and livestock owners to ensure that rinderpest RP's clinical and epidemiological characteristics 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 suspicion of rinderpest RP.
- 4) 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 (e.g. searching for "stomatitis-enteritis syndrome") are useful to increase the sensitivity of the system. ~~In the case of sub-acute (mild) cases, clinical signs are irregularly displayed and difficult to detect.~~

Article 8.12.9.

Annual update on RPV-containing material

Annual reports on RPV containing material should be submitted to the OIE by the end of November each year by the *Veterinary Authority* of the a Member Country hosting an institution or institutions holding RPV-containing material. A separate report, drawn up in accordance with the model below, should be produced by for each institution. A final report should be submitted to the OIE for each institution when all materials have been destroyed and no new activities are foreseen for the future.

~~For the purpose of this article, "RPV-containing material" means field and laboratory strains of RPV; vaccine strains of RPV including valid and expired vaccine stocks; tissues, sera and other clinical material from infected or suspect animals; and diagnostic material containing or encoding live virus. Recombinant morbilliviruses (segmented or non-segmented) containing unique rinderpest virus nucleic acid or amino acid sequences are considered to be rinderpest virus. Full length genomic material including virus RNA and cDNA copies of virus RNA is considered to be RPV-containing material. Sub-genomic fragments of morbillivirus nucleic acid that are not capable of being incorporated in a replicating morbillivirus or morbillivirus-like virus are not considered as RPV-containing material.~~

Model annual report on rinderpest virus (RPV)-containing material as of 1 November [year]

Name of institution:

Biosecurity level of the facility holding RPV-containing material

Postal address:

Title and name of contact person:

Email/phone/fax:

1. RPV-containing material currently held as of 1 November [year]

Type	Vaccine stocks <u>Live viruses, including field isolates</u> <u>but excluding vaccine strains</u>	Vaccine <u>stocks including seed</u> strains virus	Other virus isolates <u>potentially</u> <u>infectious materials</u>	Other (serum, tissue etc)
Check [x] if yes	[]	[]	[]	[]
Strain/Genetic characterisation				
Quantity/doses (if applicable)				
Ownership (if other institution)				

2. RPV-containing material destroyed during the past 12 months

Type	Vaccine stocks <u>Live viruses, including field isolates</u> <u>but excluding vaccine strains</u>	Vaccine <u>stocks including</u> seed strains virus	Other virus isolates <u>potentially</u> <u>infectious materials</u>	Other (serum, tissue etc)
Check [x] if yes	[]	[]	[]	[]
Strain/Genetic characterisation				
Quantity/doses (if applicable)				

3. RPV-containing material transferred to another institution during the past 12 months

Type	Vaccine stocks <u>Live viruses, including field isolates</u> <u>but excluding vaccine strains</u>	Vaccine <u>stocks including</u> seed strains virus	Other virus isolates <u>potentially</u> <u>infectious materials</u>	Other (serum, tissue etc)
Check [x] if yes	[]	[]	[]	[]
Transferred to				
Strain/Genetic characterisation				
Quantity/doses (if applicable)				

4. RPV-containing material received from another institution during the past 12 months

Type	Vaccine stocks <u>Live viruses, including field isolates</u> <u>but excluding vaccine strains</u>	Vaccine <u>stocks including seed</u> strains virus	Other virus isolates <u>potentially</u> <u>infectious materials</u>	Other (serum, tissue etc)
Check [x] if yes	[]	[]	[]	[]
Received from				
Strain/Genetic characterisation				
Quantity/doses (if applicable)				

5. Research or any other use conducted on RPV-containing material during the past 12 months

[Please specify]