

Rinderpest



What is Rinderpest?

Rinderpest, also known as cattle plague, is a contagious viral disease affecting cloven-hoofed animals (mainly cattle and buffalo). In 2011, rinderpest became the second disease to be declared officially eradicated, following eradication of the human disease smallpox in 1980.

Rinderpest is caused by a virus of the *Paramyxoviridae* family, genus *Morbillivirus*. Many species of wild and domestic cloven-hoofed animals (including sheep and goats) show only mild symptoms of the disease when infected, but for cattle and buffalo, mortality rates can reach up to 100 per cent in highly susceptible herds.

The OIE *Terrestrial Animal Health Code* contains detailed recommendations on the prevention and control of rinderpest, in the event that there is a recurrence of the disease. Rinderpest is one of seven diseases for which the OIE had established official recognition of the sanitary status procedures for countries and zones.

Rinderpest remains a notifiable disease to the OIE, and adequate surveillance systems must be maintained to ensure early detection of clinical cases, should there be any accidental or intentional escape of the virus from high-containment storage facilities.

Where can the disease be found?

Rinderpest historically occurred in Europe, Africa and Asia. The Americas and Oceania never faced rinderpest epizootics.

Infected animals that recovered from rinderpest have lifetime acquired immunity. In the past, vaccination programmes led to a continuous decline in the prevalence of rinderpest in the world. A programme named the Global Rinderpest Eradication Programme (GREP) was initiated in the 1980s. GREP was coordinated by the Food and Agriculture Organization of the United Nations (FAO), in collaboration with the OIE and major donors such as the European Commission. It was based on the OIE's surveillance and control guidelines as well as the official disease status recognition Pathway to successfully control rinderpest. Subsequently the world was officially declared free of rinderpest in 2011.

How is the disease spread?

Rinderpest is spread by effective contact between animals carrying the virus and susceptible animals. The virus is found in nasal secretions a few days before any clinical signs appear. As the disease progresses the virus is found in most body fluids and either death ensues, or the animal recovers, develops immunity and clears the virus from the body. Other than cattle and buffalo, rinderpest can infect zebu, water buffaloes, African buffaloes, eland, kudu, wildebeest, various antelopes, bushpigs, warthogs, giraffes, sheep, and goats. Some wild animals can carry the virus without showing signs of disease and in a few cases have made contact with domestic animal populations, leading to (re)introduction of the disease.

What are the clinical signs?

In cattle, the most susceptible species, classical signs of the disease include fever, erosive lesions in the mouth, discharge from the nose and eyes, profuse diarrhoea and dehydration, often leading to death within 10 to 15 days. In other species rinderpest may show milder clinical signs.

How is the disease diagnosed?

The clinical signs, especially in milder cases, do not point specifically to rinderpest. Serological tests indicate whether animals have been exposed to the virus, while a definitive diagnosis is based on identifying the virus from blood or tissues, according to the standards in the OIE *Manual of Diagnostic Tests and Vaccines for Terrestrial Animals*.

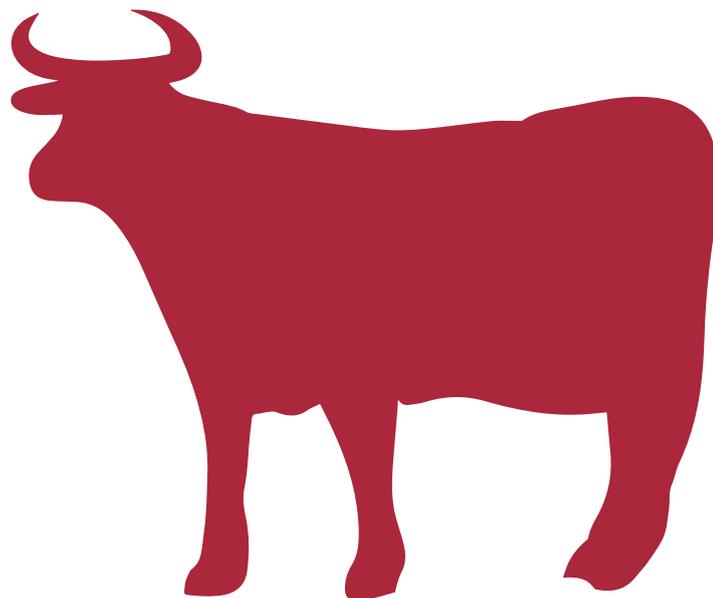


What can be done to prevent or control this disease?

Should rinderpest ever be detected in its natural host again, a full animal disease emergency response would be needed. OIE Member Countries agreed to follow guidelines for the safe storage and destruction of any remaining rinderpest virus under strict biosecurity conditions. Measures to control rinderpest in animals include:

- movement control;
- destruction of infected and contact animals;
- disposal of carcasses and infective material;
- sanitation and disinfection.

Currently, the OIE is committed to encouraging its Member Countries to either destroy or transfer their rinderpest virus containing materials and rinderpest vaccine stocks to approved holding facilities.



Rinderpest

What is the public health risk?

There is no public health risk, since rinderpest does not affect people.

Disease-free status

Rinderpest is a disease for which the OIE established official recognition of the sanitary status of countries. The OIE has defined a transparent, science-based and impartial procedure for the recognition of rinderpest disease status of Member Countries and non-OIE Member Countries that have rinderpest susceptible livestock. To date, all countries of the world have been recognised as free from the disease, and therefore the current status of the disease is eradicated.



More Information?

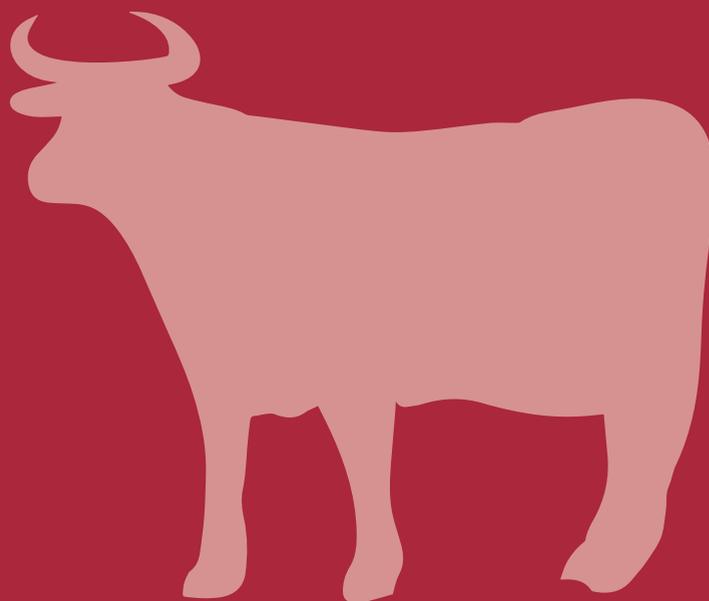
References:

1. OIE *Terrestrial Animal Health Code* (Chapter 8.15.)
www.oie.int/terrestrialcode
2. OIE *Manual of Diagnostic Tests & Vaccines for Terrestrial Animal* (Chapter 2.1.19.)
www.oie.int/terrestrialmanual
3. OIE Technical Disease Card
www.oie.int/technicalcard
4. OIE web portal on rinderpest post-eradication
www.oie.int/rinderpest
5. Merck Veterinary Manual
www.merckvetmanual.com/mvm/generalized_conditions/rinderpest/overview_of_rinderpest.html?qt=rinderpest&alt=sh
6. *Atlas of Transboundary Animal Diseases*
P. Fernandez, W. White;
Revised edition 2016
7. FAO's portal on rinderpest
www.fao.org/ag/againfo/programmes/en/rinderpest/home.html

Ask our experts:

List of Reference Laboratories
www.oie.int/referencelab

List of Collaborating Centres
www.oie.int/collaboratingcentre





Key Facts

- Rinderpest was known before the Roman era, when plagues of rinderpest killed hundreds of millions of cattle in Europe, Asia and Africa.
- There were attempts to vaccinate animals as early as 1744 in the Netherlands and England. An effective vaccine was developed by the beginning of the twentieth century.
- An outbreak of rinderpest in Belgium in 1920 was the impetus for international cooperation in controlling animal diseases, leading to the establishment of the OIE in 1924.
- An international campaign against rinderpest progressively reduced the number of countries affected and the disease was officially declared eradicated from the planet in 2011. Rinderpest is the first animal disease to have been entirely eradicated in the history of humankind.

- 12, rue de Prony • 75017 Paris, France
- Tel.: 33 (0)1 44 15 18 88 - Fax: 33 (0)1 42 67 09 87
- www.oie.int • oie@oie.int

© OIE 2016

Cover photo: © C.Slagmulder INRA.

Inside photos: © J.Crenn OIE,

© F.Carreras INRA, © S.Normant INRA.

© M.Vincent INRA.



WORLD ORGANISATION FOR ANIMAL HEALTH

Protecting animals, preserving our future