

Guidance on Peste des petits ruminants (PPR)

Peste des petits ruminants (PPR) is a **notifiable viral disease** of sheep and goats with acute febrile generalised signs of inflammation of the mucous membranes of the mouth and digestive tract. **The disease causes significant economic losses.**

PPR affects sheep and goats, and occasionally wild small ruminants may also be affected. Given that PPR has also been detected in camels, cattle and buffaloes on some occasions, these species are also considered susceptible, although their possible role in the spread of the virus is not yet clear.

PPR is one of the most infectious diseases of small ruminants. The infection is usually transmitted by **direct contact with** excreta from infected animals. In the early stages of infection, during the fever period, the **virus is present in high numbers in all secretions.** Coughing and sneezing of the animals spreads the virus rapidly by airborne transmission within the herd between animals in close proximity to each other. Viral shedding can last for more than 2 months after recovery.

Animals can **also** become infected **by consuming contaminated feed or water.** Feeders and waterers, as well as contaminated bedding, can also be an **indirect source of infection**, but only for a short period of time, as the PPR virus cannot survive in the environment for long.

Resistance:

The virus is susceptible to heat, ultraviolet radiation and dehydration and therefore cannot survive in the environment for long periods of time. However, in shaded areas and at normal ambient temperatures, it remains infectious for up to 72 hours. **The virus is sensitive to most disinfectants. It survives for long periods in chilled and frozen meat.**

Symptoms:

The incubation period is usually 4-6 days but can vary from 3 to 10 days.

In addition to the most common acute form, PPR can also occur in peracute, semi-acute and sub-clinical forms, depending on the species, breed and susceptibility of the infected animal.

In **the acute form**, it is characterised **by fever, acid reflux in the eyes and nose, diarrhoea and pneumonia, and discharge from various mucous membranes, particularly in the mouth.**

The fever can be as high as 41°C and lasts for 3-5 days, the **animals are depressed, lack appetite** and the mucous membranes are dry. If the animal does not die, the initially acidic discharge from the eyes and nose gradually becomes mucopurulent and persists for about 14 days.

Within 4 days of the onset of fever, the gums become enlarged and necrosis and eruptions develop in the oral cavity, with increased salivation. The excrescences are covered with dead, whitish, pulpy tissue which gives off a nauseating odour when the animal opens its mouth.

In the later stages, watery, bloody diarrhoea is common. Pneumonia, coughing, wheezing and increased abdominal breathing may also occur.

If PPR occurs in an area previously free of the disease, the clinical presentation is most often acute. In such cases, **the morbidity and mortality rates** vary depending on the species and breed, but **can be as high as 90-100%!**

A **peracute form of the** disease has also been observed in **young goats over 4 months** of age, which are no longer protected by maternal antibodies. The incubation period is about 3 days. The disease **starts with the same clinical signs:** high fever (40-42 °C), followed by haemorrhagic mucous membranes, watery eyes and acidic runny nose and eyes. However, this form is **more rapid. After 5-6 days, 100% of infected animals die, even if there are no excretions, diarrhoea or secondary bacterial infection.**

Despite the high incidence of complications, the **semi-acute form** is the least severe form of the disease and does not result in death. After an incubation period of 5 days, the disease causes a moderate fever (39-40 °C) lasting one to two days. All other clinical signs may be mild and unremarkable. A small amount of dried mucus, a build-up around the nostrils, may lead to the diagnosis of another disease, scabies.

PPR may **also** occur in a **subclinical form** that is **asymptomatic**. The absence of symptoms can only be detected by blood tests.

If several sheep or goats in a flock suddenly develop fever with runny eyes and nose, PPR should be suspected and the attending veterinarian and the local veterinary authority should be informed immediately.