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## The evolution of peste des petits ruminants (PPR) in Romania and neighboring countries

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### Abstract

Peste des petits ruminants is a very serious viral disease that affects several species of small ruminants, both domestic and wild, highly contagious and with a very severe course, ending in death in 70-80%. The disease also causes significant economic losses in the livestock sector. On 19.07.2024, the first outbreak of peste des petits ruminants in Romania was confirmed. In August 2024, 56 outbreaks of peste des petits ruminants were confirmed in Romania in Tulcea, Constanța and Timiș counties. A total of 236,082 sheep and goats were killed, as a result of the measures instituted by the authorities. The first cases of the disease appeared on 11.07.2024, followed by deaths in the following days. Peste des petits ruminants also appeared in Greece, in goats and sheep kept in the municipal unit of Kalambaka, municipality of Meteora, in the regional unit of Trikala, region of Thessaly, which was confirmed on 11 July 2024. In 2018, among the countries closer to Romania, the disease was reported in Turkey, Georgia and, more recently, in Bulgaria. PPR is a highly contagious, transboundary disease associated with significant economic losses. Because they did not think about peste des petits ruminants, given that this virus had nowhere to appear, veterinarians suspected the development of some bacterial lung diseases exacerbated by the extremely high temperatures of this period. Only after 8 days, the virus was confirmed at the farm in Tulcea and, subsequently, at several farms in the county, after which it appeared, a few days later, absolutely mysteriously, in the farms in Constanța. Tens of thousands of animals were killed, and extensive areas were quarantined. In January 2025, the first outbreak of peste des petits ruminants was confirmed in Hungary, in the Laboratory of the National Office for Food Chain Safety (Nébih) in Zal County, being the first cases of sheep plague in this country, and the sanitary-veterinary authorities went on alert. Measures were also taken in Slovenia.

### Introduction

Peste des petits ruminants (PPR) is an infectious viral disease first mentioned in Ivory Coast, on the West African continent, in 1942. In the following years, the disease spread rapidly to other African countries, then encompassing Asia. For a long time, this disease was difficult to describe due to confusion with other conditions, which its evolution favours. Under natural conditions, small ruminants, especially goats, are susceptible to the disease, and it is sometimes possible for it to develop only in goats, without affecting sheep. The most susceptible to the disease were initially the Dwarf goat breeds from West Africa, generally affecting young animals between 3 and 18 months of age. The involvement of wildlife in the epidemiology of PPR is not fully elucidated. In recent years, the PPR virus has spread rapidly, covering increasingly large areas, especially in developing countries.



In the case of peste des petits ruminants, the clinical signs fall into supracute, acute, subacute and chronic evolutions. The difference is mainly given by the virulence of the virus. The incubation period is 21 days. Among the main symptoms of peste des petits ruminants are: high fever, over 40 degrees Celsius, anorexia, serious ocular and nasal secretions that evolve into mucopurulent secretions, necrotic lesions in the oral cavity, diarrhea with blood and mucus (after 3-4 days), dyspnoea and cough, death (usually one week after the onset of the disease). In severe outbreaks, morbidity rates can reach 90-100%, with 100% mortality, while in less severe outbreaks, morbidity does not exceed 50%.

### Result and discussions

The first outbreaks of PPR in Europe were reported in 2000 in Istanbul, originating from the Thrace region, Turkey, and in February 2016 in Georgia, on a sheep farm in the Tbilisi region. In June 2018, an outbreak of PPR was reported in Bulgaria 10 km from the Turkish border. Another outbreak of PPR was discovered in Georgia, confirmed in March 2024. On 11 July 2024, in the Trikala regional unit, Thessaly region, Greece. The disease appeared, almost at the same time, in the largest sheep farms in Tulcea and Constanța, although the virus did not exist in Europe, except for a brief episode in Bulgaria in 2018. The first cases of illness appeared on 11.07.2024, followed by deaths in the following days. In mid-August, Romania still had 37 active outbreaks of peste des petits ruminants. At the beginning of October, Romania had 7 active outbreaks of peste des petits ruminants in Timiș County, after the last outbreaks in Tulcea County were extinguished. On 5 March 2025, following the confirmation of an outbreak of peste des petits ruminants in Gepiu, Bihor County. Numerous countries, including Greece, Albania, Russia, Croatia, Serbia and Saudi Arabia, have suspended imports of live animals from Romania, which has had a devastating impact on the Romanian livestock industry and exporters. On February 28, 2025, the export of live sheep and goats to the Member States of the European Union was suspended after a case of Peste des Petits Ruminants was detected in Austria from sheep coming from Romania. The export of carcasses is not affected.

### Conclusions

•The first outbreak of PPR in Romania was confirmed on July 19, at a commercial farm with 49,091 sheep in Baia, Tulcea County, but the first cases of the disease appeared as early as July 11. In mid-August, 60 outbreaks of peste des petits ruminants were detected. The most outbreaks (49) were discovered in Tulcea, with a total of over 230,000 sheep being killed to eradicate the disease. A deadly virus that does not exist in Europe, except for a short episode in Bulgaria in 2018, has emerged and spread precisely in the large exporting farms in our country, from Tulcea and Constanța county, then arriving in a county far from these two, namely Timiș county. Romania is facing a growing crisis in the livestock sector, generated by the spread of PPR and the controversy over the export of live animals. Numerous countries have suspended imports of live animals from Romania, which has had a devastating impact on the Romanian livestock industry and exporters. Due to the peste des petits ruminants (PPR), the European Commission has decided to limit imports and exports until June.

•The main possible routes of introduction of PPR into free areas, the introduction of infected animals is by far the most efficient route of introduction of PPR into a country. In the EU, this could occur through the illegal transport of infected animals. In addition, PPRV can be introduced into the EU via infected animal products, particularly when transported illegally or intentionally to spread the virus (e.g. bioterrorism), although the risk of this occurring is low and it is unlikely that PPRV will spread further via this route. Of less importance is the introduction of PPRV via fomites (inanimate objects that can carry and spread diseases and infectious agents) into the EU, which is considered unlikely.

•Farmers in areas affected by peste des petits ruminants can request during this period the temporary authorization of slaughter points at the farm level, while respecting strict hygiene and animal welfare conditions. According to ANSVSA, slaughtered animals will be able to be sold, under control, for example at the farm gate or through direct sale. These are measures intended to support farmers and allow the valorization of local production, without compromising the biosecurity measures necessary to stop the spread of the disease.

•It is absolutely necessary to make more investments in Romanian animal husbandry precisely so that animals are better controlled sanitary-veterinary, have better quality, and everything that enters the country is thoroughly checked and tested. In addition, funds should be allocated to support the establishment of breeding and production farms, for the maintenance, selection and improvement of native breeds. Sheep exports must remain open, green light must be prepared, and the ANSVSA (National Sanitary Veterinary and Food Safety Authority) is committed to supporting the development of sheep exports, including by renegotiating export conditions with third countries and by establishing an additional system for testing animal batches intended for export. The latter can be carried out through the ANSVSA laboratories that have the necessary equipment and expertise. Representatives of the ANSVSA assured the of the economic operators present of the provision of compensation for the affected animals, subject to compliance with legal provisions.

•The year 2025 was not without events related to the evolution of PPR in Romania: a new outbreak occurred in Bihor county. This outbreak represents a recurrence of infection with the peste des petits ruminants virus in the respective Member State, since the last outbreak of the disease in Romania, which was reported on 4 September 2024, although it is the first outbreak ever reported in Bihor county. This outbreak was confirmed on 5 March 2025, and a restricted area was established, comprising a protection zone, a surveillance zone and an additional restricted area, where additional disease control measures are applied, according to EU Implementing Decision 525/2025, adopted on 14 March and published in the Official Journal of the European Union on Monday, 17 March. Although peste des petits ruminants does not affect humans, as there is no risk of disease, it still has a major social and economic impact.