EPIDEMIOLOGICAL LINKS AND GRAZING-RELATED BIOSECURITY RISKS IN TWO SUCCESSIVE SHEEP POX OUTBREAKS IN IASI COUNTY, ROMANIA

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Abstract

Sheep pox represents a major threat to small-ruminant production systems, particularly in extensive and semi-extensive farming, where grazing practices and flock movements may facilitate disease transmission. This study examines the epidemiological characteristics of two successive sheep pox outbreaks recorded in Iasi County, Romania, in 2026, focusing on their spatial and temporal relationship and the implications of grazing management for farm biosecurity.

The first outbreak occurred in a commercial flock initially estimated at approximately 650 sheep and was confirmed on 31 July 2026. A second outbreak was reported on 3 September 2026 in a separate holding comprising 233 sheep, located approximately 2.4 km from the first. Official epidemiological records were analyzed alongside field observations and information obtained during the epidemiological investigation.

Verbal information collected during the investigation suggested that the second affected flock had previously grazed on pasture used by the first flock. Although this information was not independently verified through official documentary records, it indicates a potential epidemiological link associated with grazing management. Considering the environmental resistance of capripoxviruses, indirect transmission through contaminated grazing areas represents a biologically plausible hypothesis. However, the available evidence does not establish the actual transmission pathway.

These findings highlight the importance of integrating pasture-use history, flock movement monitoring and environmental biosecurity into sheep farm management. The study emphasizes the need for coordinated surveillance and preventive measures targeting epidemiologically connected holdings, particularly in extensive grazing systems.

Key words: *sheep pox; Capripoxvirus; epidemiological investigation; biosecurity; sheep production*