

A Review of Global Epidemiology of Lumpy Skin Disease, its Economic Impact, and Control Strategies

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Abstract

Lumpy skin disease (LSD) is an emerging viral disease, particularly of cattle and water buffalo. The disease is caused by lumpy skin disease virus (LSDV), a member of the genus Capripoxvirus of family Poxviridae which is manifested by characteristic skin nodules, pyrexia, lachrymation, nasal discharge, and swelling of superficial lymph nodes. Lumpy skin disease causes huge economic losses to the livestock farmers due to significant milk loss, damage of the hides, and reproductive problems such as abortion and infertility in affected animals. Initially, LSD was confined to Africa but later spread to Asia and Europe, particularly after 2012. This article describes the spatial and temporal patterns of LSD outbreaks that occurred from 2005-Mid-September, 2020 using the publicly available outbreak data from the World Animal Health Information System (WAHIS) of the World Organization for Animal Health (OIE). There were 3118 LSD outbreaks reported in the last 15 years with 2265 (72.6%) from Europe, 462 from Asia (14.8%), and 391(12.5%) outbreaks from Africa. 3070 (98.46%) of the total outbreaks during the study period occurred since 2012, with the highest month-wise outbreaks observed in July (778) and seasonally in the summer season (1873) which corresponds with the vector season. Since 2012, around 3 (2.78) new countries per year are being affected by LSD. The current situation of LSD spread demands for globally coordinated efforts to control this transboundary disease. Effective surveillance for early detection, vector control measures, vaccination, and regulation of animal movement is necessary to curb down the further spread of LSD.

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