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Lumpy Skin Disease and its Emergence in India

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Abstract: Lumpy skin disease is a viral disease that affects cattle. It is transmitted by blood-feeding insects, such as certain species of flies and mosquitoes, or ticks. It causes fever, nodules on the skin and can also lead to death, especially in animals that that have not previously been exposed to the virus. Lumpy skin disease is a vector-borne pox disease of domestic cattle and Asian water buffalo and is characterized by the appearance of skin nodules. Endemic across Africa and the Middle East, the disease has, since 2015, spread into the Balkans, the Caucasus and the southern Russian federation. Outbreaks of LSD cause substantial economic losses in affected countries, but while all stakeholders in the cattle industry suffer income losses, poor, small-scale, and backyard farmers are hit hardest. The disease impacts heavily on cattle production, milk yields, and animal body condition. It causes damage to hides, abortion, and infertility. Total or partial stamping-out costs add to direct losses. Indirect losses stem from restrictions on cattle movements and trade. In addition to vectors, transmission may occur through consumption of contaminated feed or water, direct contact, natural mating or artificial insemination. Large-scale vaccination is the most effective way of limiting the spread of the disease. Effective vaccines against LSD exist and the sooner they are used the less severe the economic impact of an outbreak is likely to be.

Keywords: Lumpy Skin Disease. Tran's Boundary Spread. Outbreak. India

REFERENCES

- [1]. https://doi.org/10.1007/s11259-020-09780-1
- [2]. https://www.donatekart.com/Donatekart/Save-innocent-cows/
- [3]. Lumpy skin disease a field manual for veterinarian's page number 01.
- [4]. https://en.wikipedia.org/wiki/Lumpy_skin_disease
- [5]. CFSPH (2008) Center for Food Security and Public Health, Iowa State University. Lumpy Skin Disease. Accessed on July 17, 2017.
- [6]. AU-IBAR (2013) African Union Interafrican Bureau for Animal Resources: lumpy skin disease. Selected content from the Animal Health and Production Compendium.
- [7]. Gari G, Waret-Szkuta A, Grosbois V, Jacquiet P, Roger F (2010) Risk factors associated with observed clinical lumpy skin disease in Ethiopia. Epidemiol Infect 138: 1657-1666.
- [8]. EFSA (2015) European Food Safety Authority. 6cientific Opinion on Lumpy Skin Disease. EFSA Panel on Animal Health and Welfare (AHAW). EFSA Journal 13: 3986.
- [9]. Babiuk S, Bowden T, Boyle D, Wallace D, Kitching RP (2008b) Capripoxviruses: an emerging world wide threat to sheep goats and cattle. Transbound Emerg Dis 55: 263-272.
- [10]. Lefèvre PC, Gourreau JM (2010) Lumpy Skin disease. In: Lefèvre PC, Blancou J, Chermette R, Uilenberg G (Eds.) Infectious and Parasitic diseases of Livestock. OIE -407.
- [11]. Tuppuraine ES, Alexandrov T, Beltran-Alcrudo D (2017) Lumpy skin disease field manual A manual for veterinarians. FAO Animal Production and Health Manual 20: 1-60.
- [12]. Ali H, Ali AA, Atta MS, Cepica A (2012) Common, emerging, vectorborne and infrequent abortogenic virus infections of cattle. Transbound Emerg Dis 59: 11-25.
- [13]. Tuppurainen E, Oura C (2012) Review: Lumpy skin disease: An emerging threat to Europe, the middle east and Asia. Transbound Emerg Dis 59: 40-48.

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- [14]. Tuppuraine ES, Stoltsz WH, Troskie M, Wallace D, Oura CA, et al. (2011) A Potential Role for Ixodid (Hard) Tick Vectors in the Transmission of Lumpy Skin Disease Virus in Cattle. Transbound Emerg Dis 58: 93-104.
- [15]. Lubinga JC, Tuppuraine ES, Coetzer JA, Stoltsz WH, Venter EH (2014) Evidence of lumpy skin disease virus over-wintering by transstadial persistence in Amblyomma hebraeum and transovarial persistence in
- [16]. Rhipicephalus decoloratus ticks. Exp Appl Acarol 61: 77-90. Chihota CM, Rennie LF, Kitching RP, Mellor PS (2001) Mechanical transmission of lumpy skin disease virus by Aedes aegypti (Diptera:Culicidae). Epidemiol Infect 126: 317-321.
- [17]. Carn VM, Kitching RP (1995) He clinical response of cattle experimentally infected with lumpy skin disease (Neethling) virus. Arch Virol 140: 503-513.
- [18]. Weiss KE (1968) Lumpy skin disease virus. In: Virology Monographs. Springer Verlag, Vienna, New York, pp: 111-13.
- [19]. Chihota CM, Rennie LF, Kitching RP, Mellor PS (2003) Attempted mechanical transmission of lumpy skin disease virus by biting insects. Med Vet Entomol 17: 294-300.
- [20]. Sevik M, Dogan M (2015) Epidemiological and Molecular Studies on Lumpy Skin Disease Outbreaks in Turkey during 2014-2015. Transbound Emerg Dis 64: 1268-1279.
- [21]. Irons P, Tuppurainen E, Venter E (2005) Excretion of lumpy skin disease virus in bull semen. Heriogenology 63: 1290-1297.
- [22]. Annandale CH, Holm DE, Ebersohn K, Venter EH (2014) Seminal Transmission of Lumpy Skin Disease Virus in Heifers. Transbound Emerg Dis 61: 443-448.
- [23]. Lumpy skin disease field manual A manual for veterinarians Scientific Figure on Research Gate. Available from: https://www.researchgate.net/figure/Schematic-illustration-of-the-spread-of-LSdV-Shortdistance-spread_Long-distance-spread_fig1_318347415 [accessed 1 Nov, 2022].
- [24]. Lumpy Skin Disease in Cattle Integumentary System MSD Veterinary Manual https://www.msdvetmanual.com/integumentary-system/pox-diseases/lumpy-skin-disease-in-cattle.
- [25]. https://images.app.goo.gl/HXqpc8dh4V6GJEJQ6.
- [26]. Your Support Can Save Thousands Of Innocent Cows From The Deadly Lumpy Skin Disease https://www.donatekart.com/Donatekart/Save-innocent-cows/
- [27]. Lumpy Skin Disease: No evidence of transmission to humans, say experts | Mint https://www.livemint.com/news/india/lumpy-skin-disease-no-evidence-of-transmission-to-humans-say-experts-

11664984013569.html?utm_source%3Dshare%26utm_medium%3Dsocial%26utm_campaign%3Dshare_via _amp Download mint app for latest in Business News - https://bit.ly/32XEfFE.

- [28]. lumpy skin disease: Milk from LSD-infected cattle safe for consumption, IVRI official says The Economic Times https://m.economictimes.com/industry/healthcare/biotech/healthcare/milk-from-lsd-infected-cattle-safe-for-consumption-ivri-official-says/articleshow/94193266.cms.
- [29]. https://www.google.com/imgres?imgurl=https%3A%2F%2Fcdn.siasat.com%2Fwpcontent%2Fuploads%2F2 020%2F10%2F08-Style-4-660x440.jpg&imgrefurl=https%3A%2F%2Fwww.siasat.com%2Fgovt-debunksrumours-of-lumpy-skin-disease-spreading-in-cattle-1993841%2F&tbnid=n0R-0sCto2qDUM&vet=1&docid =jaJsZcmNkNi5kM&w=660&h=440&itg=1&hl=en-US&source=sh%2Fx%2Fim
- [30]. https://vikaspedia.in/agriculture/livestock/cattle-buffalo/lumpy-skin-disease/guidelines-for-prevention-of-lumpy-skin-disease
- [31]. https://doi.org/10.1016/B978-0-12-811054-6.00010-6.
- [32]. https://www.google.com/imgres?imgurl=https%3A%2F%2Fimages.livemint.com%2Fimg%2F2022%2F08% 2F12%2F600x338%2FLumpy_Skin_Disease_1660312369955_1660313059047_1660313059047.jpg&imgre furl=https%3A%2F%2Fwww.livemint.com%2Fphotos%2Fin-pics-what-is-lumpy-skin-disease-killing-cattlein-gujarat-11660311119247.html&tbnid=RhH6iRQXttwfUM&vet=1&docid=Bzq8FtNa7LaFwM&w=60 0&h=338&hl=en-US&source=sh%2Fx%2Fim
- [33]. https://images.app.goo.gl/pDvikpwUGVdUjR8Z6



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[34]. https://www.google.com/imgres?imgurl=https%3A%2F%2Fwww.fao.org%2Ffileadmin%2Fuser_upload%2 Freu%2Fimg%2Fmedium_30jul.jpg&imgrefurl=https%3A%2F%2Fwww.fao.org%2Feurope%2Fnews%2Fd etail-

news%2Fen%2Fc%2F1146637%2F&tbnid=vu2ntkV4lyjKCM&vet=1&docid=kSW8aN9yLLXfiM&w=300 &h=164&hl=en-US&source=sh%2Fx%2Fim

- [35]. https://www.macsenlab.com/blog/methylene-blue-treatment-for-lumpy-skin-disease-in-cattle/.
- [36]. https://arrowquip.com/blog/animal-science/best-healthy-feed-beef-cattle