

BRIEFING; LUMPY SKIN DISEASE.

Only a year ago, lumpy skin disease (LSD) was relatively unknown to most people in Mongolia, and there had been no cases in the country. Since then, affected cattle have been identified in the eastern provinces of Dornod, Khentii and Sukhbaatar¹. By November of 2021, at least 1,734 animals had been slaughtered in an attempt to control spread of the disease². In October 2022 – at a meeting on the ‘*Performance of Veterinary Services Evaluation*’ in Ulaanbaatar, the incidence and impact of LSD were raised by a number of veterinarians.

The most obvious sign of the disease – in its advanced form – is the presence of hard nodules, 1 to 8 cm in diameter, within the animal’s hide. But other, more serious indicators include fever, weakness, weight loss, abortion, infertility and ultimately death. The disease has major impacts on meat and milk production, and inevitably affects the value of the hide (for use in the leather industry).



Cow exhibiting LSD nodules. (FAO, 2017).

LSD is caused by the lumpy skin disease virus (LSDV); which is itself related to sheep pox virus (SPPV) and goat pox virus (GTPV). The main method of transmission of LSD is by arthropods of various sorts; including insects (e.g. mosquitoes) and arachnids (e.g. ticks). Infection rates vary considerably from as little as 1%, to as much as 90%. Though the level of mortality may be relatively low – less than 5% - the disease is very debilitating, and animals take months to recuperate. Susceptible species include cattle (*Bos taurus*, and *B. indicus*), yaks (*B. grunniens*), and many game animals (USDA, 2016). The disease is not known to affect humans. The main way of preventing the disease, or controlling an outbreak, is vaccination.

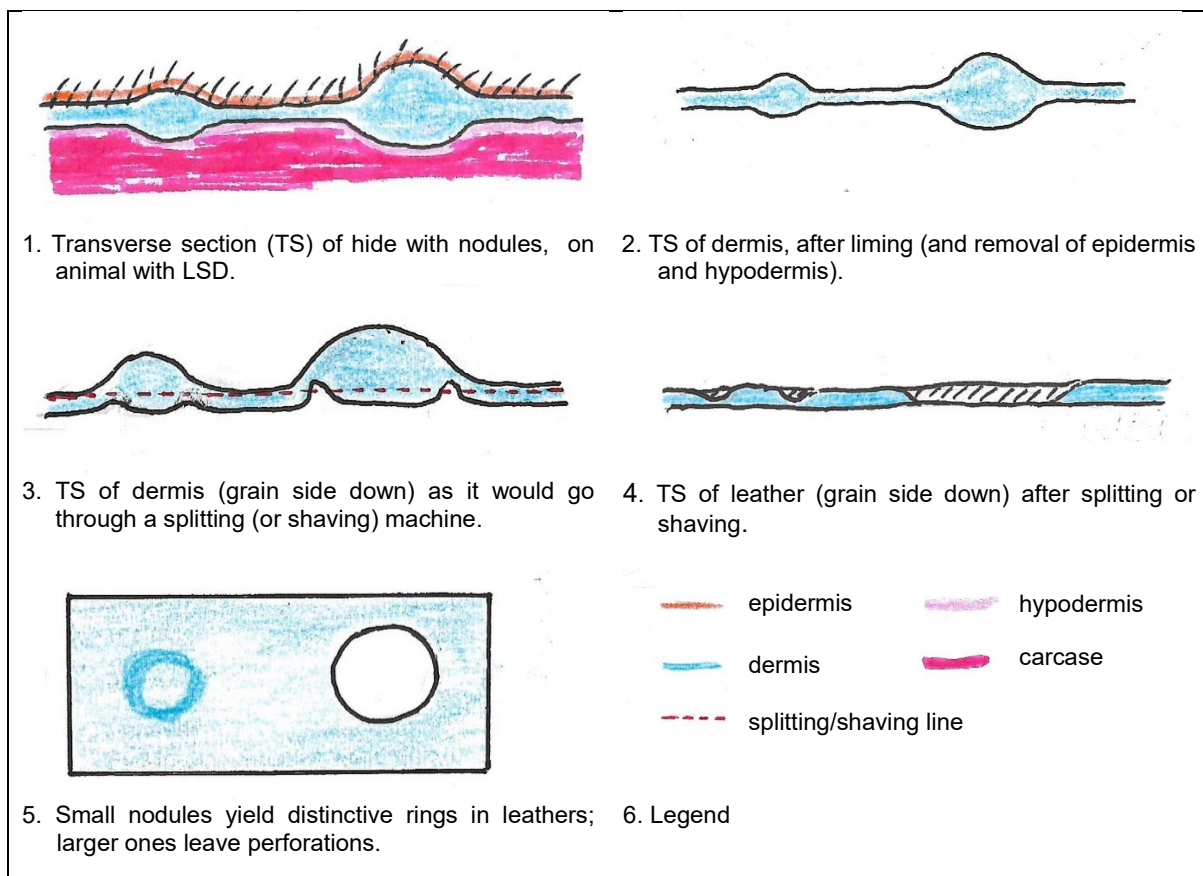
LSD has long been endemic in sub-Saharan Africa, but in recent decades the disease has migrated through the Middle East and beyond. The first case in Russia was documented in 2015; and 2016 Kazakhstan (USDA, 2016).

¹ http://www.xinhuanet.com/english/asiapacific/2021-10/23/c_1310263967.htm

² http://www.news.cn/english/asiapacific/2021-11/16/c_1310313836.htm

Carcases of animals with LSD should not enter the food chain, but be disposed of appropriately (FAO, 2017). Despite this, in many other countries at least, some products and by-products (such as hides) of affected animals may end up being traded and delivered to tanneries. The LSDV can remain viable for some weeks in dried hides, but is susceptible to sunlight, and detergents. The virus is not a significant hazard for tannery staff, but hides from affected animals present a number of problems. For example, although the nodules present initially on animals will slowly disappear, scar damage may remain for a year or more (and ultimately become visible on the grain surface of finished leathers). If the LSD nodules are still present on hides during processing, the results become increasingly serious.

During conventional tanning operations, LSD nodules prevent the hide from laying fully flat during some machine operations. Depending upon the size of the nodule (and the thickness of the dermis, or leather) the end result is a tell-tale ring or perforation.



Damage in leather, related to LSD in livestock (based on O'Shaughnessy and Leach, 1989)

It is too early to say how serious LSD may become in Mongolia; among cattle in general and yaks in particular. However, elsewhere in the world, the disease has been seen to be spreading inexorably. More information is available on the website of the World Organisation for Animal Health (WOAH)³

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³ <https://rr-asia.woah.org/en/projects/lumpy-skin-disease-lsd/>



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