

## Updated Outbreak Assessment #3

# Lumpy Skin Disease in North Africa

27 August 2024

## Disease Report

Our [last report](#) on lumpy skin disease (LSD) in North Africa in July 2024 detailed the detection of LSD in Algeria for the first time, which rapidly spread in the north of the country. Since then, LSD has been reported in Tunisia for the first time. Morocco is now the only North African country to have never reported the disease, though LSD is considered endemic in most African countries, including Egypt where it was first reported in 1988 (Bianchini *et al.*, 2023). LSD in Tunisia was first reported by the World Organisation for animal Health (WOAH), on 14 August 2024. The case was in a three-year-old bull in Firnana in the north of the country (Figure 1).

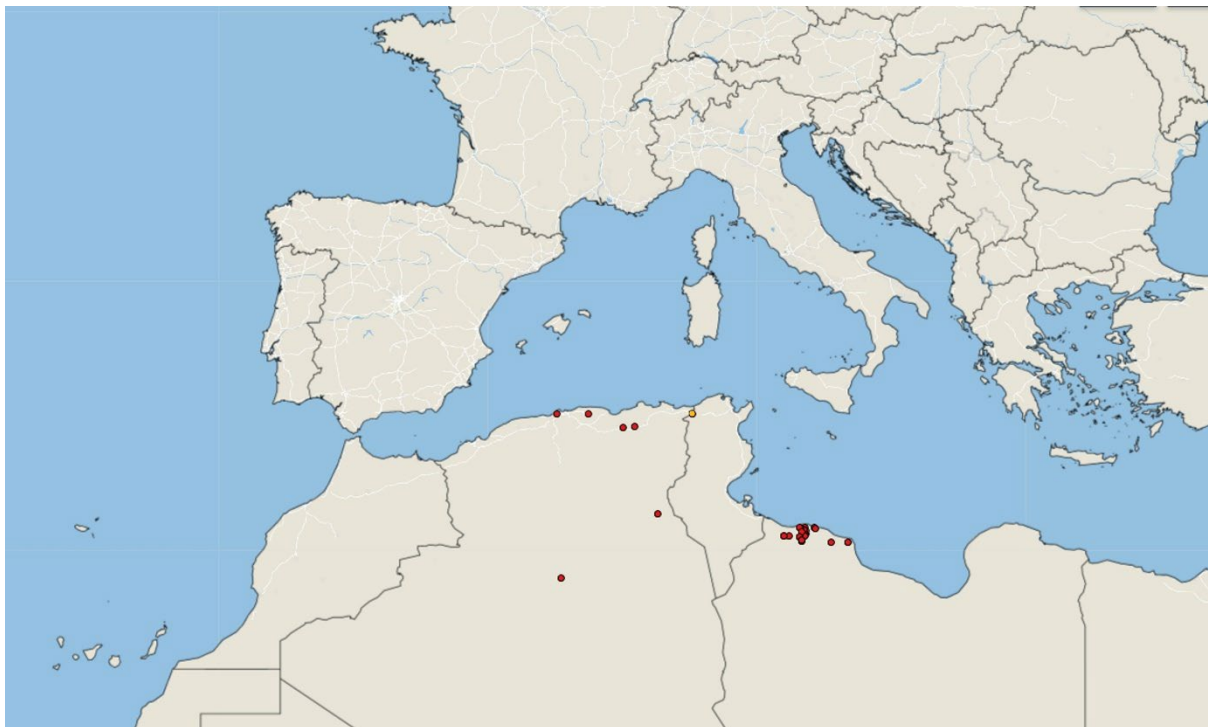


Figure 1: Map of Northern Africa - Reports of Lumpy Skin Disease, January 2024 - August 2024, showing reports since the last assessment on 8<sup>th</sup> July (yellow) and previously reported outbreaks (red) (Adapted from Empres, FAO).

## Situation Assessment

LSD in Tunisia was first reported by the World Organisation for animal Health (WOAH), on 14 August 2024. The case was in a three-year-old bull on a farm in Firnana, Jendouba in the north of the country, around 15km from the border with Algeria. The farm had only four animals on the premises.

The National Centre for Animal Health Surveillance in Tunisia is supporting regional veterinary services and is attempting to identify the source of infection. Insecticides and movement restrictions have been implemented on the affected farm and inspections on neighbouring farms have taken place.

Lumpy skin disease continues to spread in northern Algeria and northern Libya according to media reports (translated by ProMED ([promedmail.org](http://promedmail.org))), including in Tizi Ouzou, Tipaza and Jijel in Algeria and Misrata in Libya.

LSD is a pox virus mainly affecting cattle and water buffalo, which is notifiable to the WOAH (Eom, Lee and Yoo, 2023). The virus is mainly transmitted by mechanical transmission by biting insect vectors. Mechanical transmission has been demonstrated under experimental conditions for *Aedes aegypti* mosquitoes and biting flies, such as *Stomoxys calcitrans* and *Haematopota* species (WOAH, 2022). It is also highly likely that several other mosquitoes (such as *Culex mirificens*), biting flies (such as *Biomyia fasciata*), *Culicoides*, and ticks (*Rhipicephalus appendiculatus* and *Amblyomma hebraeum*) may play a role in transmission under field conditions (WOAH, 2022). Other transmission routes include direct contact and indirect contact with infectious bodily fluids, such as semen, with one report of placental transmission (WOAH, 2022). The virus is able to survive over 30 days in skin nodules and scabs, and transmission in semen can occur for up to 42 days after infection. (WOAH, 2002).

Lumpy skin disease virus is antigenically similar to sheep-pox and goat-pox viruses which cause sheep and goat pox (SPGP). LSD is characterised by fever, enlarged lymph nodes, oedema of the skin and nodules on the skin, mucous and membranes and internal organs and can also result in death. It is not a zoonotic disease but can cause significant impact to agricultural industries due to the high morbidity, up to 45%, causing loss in beef and milk production and damage to hides (WOAH, 2002). The mortality rate is relatively low (typically 1-5%) but may reach up to 40% in naïve and young animals (Coetzer, 2004), infection damages the hides and affects beef and milk production (WOAH, 2022) and affects export trade.

LSD is endemic within most African countries, with Morocco now being the only country where cases have not been reported (Eom, Lee and Yoo, 2023). Since 2012, LSD has spread through the Middle East, part of south-east Europe, the Balkans, Caucasus, Russia and Kazakhstan (WOAH, 2022). Since 2019, it has also been reported in southeast Asia, including Taiwan, China and Thailand (Eom, Lee and Yoo, 2023). There has not been a case of LSD reported within the United Kingdom (England, Scotland, Wales and Northern Ireland).

Lumpy Skin Disease is difficult to eradicate by stamping out of livestock alone, and often requires vaccination to eradicate the disease from the national herd. In many countries in Africa the true prevalence of LSD is unknown or yet to be studied (Abebaw, 2024).

## Conclusion

The spread of LSD to another previously unaffected country within the North African region highlights the transmissibility of this disease and the vulnerability of livestock in naïve and unvaccinated populations. The stability of the virus leading to survival on hides and in the environment also poses a potential risk for the virus to be transported to new destinations and provides a challenge in eliminating the virus.

The proximity of Tunisia and other north-west African countries to the Iberian Peninsula raises concerns around the potential for infected vectors to spread into southern Europe. The European Commission of the FAO for the fight against foot and mouth disease (EuFMD) issued an information alert on 11 July 2024 to inform member states of the spread of the disease in North Africa, which represents an increase in the level of risk of entry of the disease into the EU, particularly in countries close to these regions, such as Spain (MAPA, 2024)

Outbreaks of LSD occurred in Greece and Bulgaria in 2015 and 2016, respectively. Vaccination campaigns in both countries have been ongoing since then, along with passive and active surveillance, and the last outbreaks were reported in 2016 in Bulgaria and 2017 in Greece. [For more information on the LSD situation in Bulgaria, see the April 2023 PAFF presentation.](#) In 2024, a serological and virological surveillance programme has been implemented in the entire Greek territory to demonstrate the absence of LSD, during an 8-month recovery period of no vaccination. [For more information on the LSD situation in Greece, see the April 2023 PAFF presentation.](#)

The risk of introduction of LSD from Tunisia, Libya and Algeria into the United Kingdom (England, Wales, Scotland and Northern Ireland) at present is negligible, due to the distance from affected areas and the lack of trade in commodities which might act as potential entry pathways (live cattle, meat and milk products, germplasm, hides and skins and exotic animals). The United Kingdom has not received any consignments from Tunisia, Algeria or Libya in the last year of cattle or their products including hides and skins. In addition, personal imports are not allowed for third countries outside the EU.

These events highlight the importance of maintaining awareness of new introductions, updating contingency plans and considering vaccination as part of control programmes.

We will continue to monitor the situation.

## Authors

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