

## C7: Risk of introduction of Lumpy Skin Disease in France by the import of cattle

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**Background:** The lumpy skin disease (LSD) virus belongs to the genus *Capripoxvirus* and causes a disease in cattle with economic impacts. In November 2014, the disease was first reported in Europe (in Cyprus); it was then reported in Greece (in August 2015) and has spread through different Balkan countries in 2016. Although indirect vector transmission is predominant in at-risk areas, long-distance transmission usually occurs through movements of infected cattle.

**Methods and principal findings:** In order to estimate the threat for France, a quantitative import risk analysis (QIRA) model was developed according to international standard (OIE, 2004) and to assess the risk of LSD being introduced in France by imports of cattle. Based on available information and using a stochastic model, the probability of a first outbreak of LSD in France following the import of batches of infected live cattle for breeding was estimated to be between  $4 \times 10^{-5}$  and  $3.3 \times 10^{-3}$  (in 95% of cases).

**Conclusion and significance:** The development of a stochastic QIRA made it possible to quantify the risk of LSD being introduced in France through the import of live cattle. This tool is of prime importance because the LSD situation in the Balkans is continuously changing. Indeed, this model can be updated to process new information on the changing health situation in addition to new data from the Trade Control and Expert System (TRACES, EU database). This model is easy to adapt to different countries and to other diseases.

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### Reference

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