

3 questions for Nikolaus Kriz

On 19 February 2018 EFSA published a [report](#) on the update on the occurrence of Lumpy Skin Disease (LSD) and the effectiveness of vaccination. It analyses the risk factors for its spread in south-eastern Europe. The report is based on data collected by affected countries and those at risk. The figures confirm that vaccination of cattle - recommended by EFSA in 2016 - is the most effective way to contain the disease.



Mr. Nikolaus Kriz is a veterinary surgeon who graduated in veterinary medicine in Austria. He has 25 years of professional experience in 4 continents in general practice; he has worked in regulatory bodies in both animal health and food safety area, mainly in the field of infectious diseases and veterinary medicines with a particular emphasis on vaccines and innovative products. He is Head of Unit for animal and plant health at EFSA since 1 January 2017.

Question 1 - Generally, on farm LSD lesions are difficult to detect (because of the number of animals showing them). Moreover, stamping-out policy as a sole control measure doesn't seem to be enough. In your opinion, what makes a vaccination campaign successful?

It is true that on farm clinical signs of an outbreak of LSD can be difficult to detect early on and this of course underlines the importance of applying preventive measures, where possible, in order to effectively control this disease. Like other vaccination campaigns, the key to success is very good coverage which is maintained at suitable intervals through comprehensive re-vaccination campaigns.

Ideally, 100% of the at-risk population should be immunised against LSD as long as the threat of incursion exists. EFSA's [report](#) refers to the mathematical modelling and the field situation both of which suggest that in areas where near-complete vaccination coverage was achieved no further outbreaks were reported. Another aspect is early vaccination: areas at risk of disease incursion will benefit most from the protective effects of mass immunisations by preventive vaccination, i.e. carried out before the introduction of the disease. This is due to the fact that not all LSD-infected animals show clinical signs and the virus may therefore spread "*silently*" hence a vaccination only after detecting the clinical cases would be too late to promptly stop the spread. Having said that, even where the disease has been detected, the early onset of vaccination will assist in the protection of surrounding areas.

Question 2 - What would be the best vaccination plan in endemic regions? (e.g. yearly vaccination or every second year)?

This is of course the big question being asked right now as all the countries affected by LSD would like to know whether or not to continue their vaccination campaigns and what is the likelihood of complete elimination of LSD and following on from that the risk of re-introduction. These issues are likely to be the subject of the next risk assessment on LSD requested by the European Commission to be delivered by EFSA in Autumn 2018 and will include topics such as re-vaccination and possible exit strategies from vaccination campaigns. Different scenarios can be possible, depending on whether the virus is still present in the cattle population in a certain area, the overall vaccination coverage and the status of the neighbouring areas or countries, thus presenting different risks of re-introduction of the disease.

Question 3 - Small herds are mostly affected by LSD. What advice would you give to veterinary practitioners supervising these herds?

Let me first note that in the affected areas in South-East Europe cattle farms are mostly small or very small, the majority with less than 10 animals per farm. Therefore, the fact that mostly small farms are affected simply reflects the demographics of cattle in these areas rather than any specific characteristic of the virus or the disease. It is important to stress that when LSD enters a large cattle farm it can spread just as easily and quickly and therefore can have the same devastating consequences.

With regards to what veterinarians can do in terms of surveillance, the most effective option for surveillance is the immediate notification of all clinically suspicious cases. Clinical signs have been well described but can of course vary and do not always involve the skin nodules which are typical of LSD. Here good communication with farmers to highlight the possible early signs of infections - such as a drop-in milk production, fever, inappetence, disinclination to move and salivation, lachrymation and nasal discharge - is key to allow early detection of the disease especially in areas at risk. Any notification of possible clinical signs should be followed up by the veterinarian through the involvement of laboratory tests, including the differentiation of field virus from vaccine strain to allow an accurate diagnosis and the correct intervention as soon as possible.

NOTES TO THE EDITOR

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