

PPR and LSD

CDG ANIMAL PRODUCTS

Sheep and Goat 30/06/15

EFSA scientific opinions PPR and LSD

LSD Disease situation

Commission mandates to EFSA on PPR and LSD

Set of mandates on exotic diseases approaching EU:

- **PPR,**
- **sheep pox,**
- **lumpy skin disease**

*Scientific opinion presented by EFSA at PAFF
Committee on 13-14 Jan 2015*

http://ec.europa.eu/food/committees/regulatory/scfcah/animal_health/docs/2015011314_sgp_lsd_and_ppr_efsa_en.pdf

Content of mandate to EFSA

- Characterise the disease and global occurrence
- Mapping of animal movements in the Mediterranean Basin and Black sea
- Evaluate pathways of introduction into the EU and ranking them
- Assess the risk of introduction and speed of propagation into the EU and neighbouring countries
- Assess the risk of endemicity in animal population in the EU and neighbouring countries
- Assess the impact if enter the EU considering different scenarios
- Review the feasibility, availability and effectiveness of the main disease prevention and control measures

Main conclusions EFSA (description)

PPR

- PPR transmission is essentially via contact with infected animals
- Goats considered more susceptible than sheep to PPR.
- Cattle and pigs can be infected, but show no clinical signs.
- Camels and several wild ruminants can be infected and show clinical disease, although their role in the epidemiology needs to be clarified.

LSD

- endemic in most African countries. Since 2012–2013 spreading largely to Middle Eastern countries including Turkey (endemic)
- involvement of haematophagous arthropod vectors (flies, ticks) in LSDV transmission
- spread with very low abundances of vectors may occur, thus direct and/or indirect transmission (fomites) may occur

Main conclusions EFSA (risks)

PPR

*The **movement of small ruminants** related to trade (both legal and illegal) is the **most likely reason for the spread** of PPR across borders (East Africa and the Arabian Peninsula)*

LSD

- **Skins and hides processed only by drying or salting treatments may pose a risk for introduction of SPPV/GTPV into the EU >> more detailed information needed to complete import risk assessment**

Main conclusions EFSA (introduction pathways)

PPR

- people having contact with animals (e.g. immigrants, traders, visitors, animal workers)
- vehicles
- illegal movement of animals
- Insects, wildlife (to be clarified for SPP)

LSD

- infected animals (long-distance spread) . The spread of limited in distance when sick animals are not moved.
- The active movement of flying vectors > pathway for LSD introduction from a short distance.
- windborne transmission of vectors carrying the virus could be a potential route of LSDV introduction into a country

Main conclusions EFSA (risk of endemicity)

PPR

- lack of data regarding PPR transmission in the EU, the international data (Tunisia) cannot be extrapolated directly to the European situation
- Given the control measures foreseen by the current EU policy, PPR would most likely not become endemic in the EU.

LSD

- Owing to a lack of data regarding the ability of potential European vectors of disease transmission, the international data cannot be extrapolated directly to the European situation.
Under the current EU policy, according to the scenarios produced using the spread model, if the situation and ability of vectors was the same as in Israel, LSD would most likely not become endemic in the EU

Control measures PPR

- **Clinical signs of PPR are not disease specific, should be confirmed by laboratory testing.**
- **Live, attenuated PPR vaccines are available, with high safety and efficacy, protecting against all known isolates of PPRV. No PPR vaccines are licensed in the EU.**
- **No vaccines support the DIVA principle. recombinant techniques at experimental stage.**
- **Inactivated vaccines are not available and would not be fully effective.**
- **PPR can be controlled in areas, such as Northern Africa (Morocco), through mass vaccination if means are available and correctly implemented.**
- **In endemic areas, assiduous vigilance is needed because risk of PPR reoccurrence (illegal movements of livestock).**
- **Early detection of (re)occurrence is needed for rapid response and the management of possible outbreaks of PPR.**

Control measures LSD

- **Rapid laboratory confirmation for successful eradication.**
- **Only live attenuated vaccines against LSD are currently commercially available. No LSDV vaccines are licensed in the EU.**
- **limited epidemics controlled by using SPP vaccine AND culling animals with generalised skin lesions.**
- **Large epidemics controlled by vaccination with homologous vaccine AND culling of animals with generalised symptoms.**
- **RM-65 attenuated sheep pox vaccine at the recommended dose for sheep has limited effectiveness. 10-times dose of RM-65 is more effective in term of protection, although less effective than vaccination with homologous strain.**
- **The Neethling attenuated lumpy skin disease virus vaccine is highly effective BUT safety issues have been reported linked to generalized clinical reactions due to the vaccination.**
- **No evidence to prove effectiveness of insecticide in controlling LSD morbidity**

Mission of the Community Veterinary Emergency Team to Cyprus

21-23 January 2015

http://ec.europa.eu/food/committees/regulatory/scfcah/animal_health/docs/20150204_cvet_lumpy_skin_diseases_cyprus_en.pdf

Recommendations CVET

Early detection and reporting

- ***Enforcement of local diagnostic capacity***
- ***Awareness campaigns for field veterinarians, farmers and animal care staff***
- ***Compensation for farmers***

Large scale, subsidized vaccination campaign should be carried out in combination with:

- ***Culling of infected and in-contact cattle with compensation to farmers***
- ***Cleaning and disinfection of the premises combined with vector control***
- ***Strict movement restrictions of live cattle***
- ***Enforced biosecurity measures at the farm level for persons and vehicles on entry and exit***
- ***Intensive active and passive surveillance***
- ***Recommended homologous vaccines:***
 - ***Lumpy Skin Disease Vaccine for Cattle™ by Onderstepoort Biological Products, South Africa***
 - ***Lumpyvax™ MSD Animal Health, Intervet, South Africa***

Conclusions CVET

Origin of new infection

- *Inconclusive – no reported direct connections between this outbreak and previous ones in the peninsula*
- *Introduction of infected vectors by the wind or with imported hay or straw from outbreak regions*
- *Unauthorised introduction of infected cattle*
- *Movement of people, such as temporary farm workers with previous contact with infected cattle*

LSD current situation

LSD has been notified by the Turkish authorities in Traces (in the EDIRNE region), very close to Greece and Bulgaria. The events were confirmed by the Turkish lab on 13 and 18 May but they were notified only on 17 June 2015.

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Information from Turkey



2014 LSD Outbreaks



Total 784 outbreaks



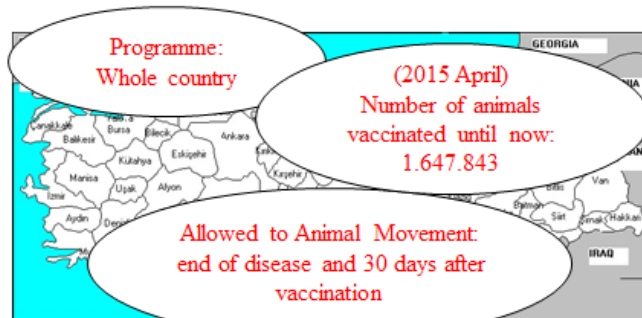
2015 April LSD Outbreaks



Total 60 outbreaks



Vaccination Programme



A study on effectiveness of vaccine will be carried out in coordination with EuFMD in June 2015.



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Information from Greece

MAPS: First Lumpy skin Disease Outbreaks in European Turkey



Lumpy Skin Disease outbreaks



Limits of 3 km – Protection zone



Limits of 10 km – Surveillance zone

Information from Greece

- **Establishment of a surveillance zone in the area of the Evros Prefecture at the location where the 10 km zone around one of the two LSD outbreaks in European Turkey expands in Greek soil (see Maps) in the sense of the provisions of Dir. 92/119/EEC (even though these outbreaks were confirmed in mid-May).**
- **Establishment of an Enhanced Safeguard Zone (a 10 km stripe along the Greco-Turkish border of the Evros Prefecture) where the following measures apply:**
 - Strict pre-movement clinical control of all cattle exiting the zone
 - Briefing and on the spot clinical visits of all cattle holdings within the zone
- **Strict pre-movement clinical control of all cattle that move from the Evros prefecture to the rest of the country.**
- **Increased safeguard measures at the entry points to Greece from Turkey (Peplos BIP and Kastanies check-point) with an emphasis on vehicle disinfection.**
- **Increased awareness–safeguard measures throughout Greece for the timely report /investigation of any LSD suspicion anywhere in the country.**

Thanks