



Lumpy skin disease: Scientific report

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PAFF meeting, 6 April 2017, Brussels



DATA COLLECTION AND ANALYSIS ON LSD

- EC request as outcome of recommendation from GF-TADS meeting, July 2016
- ToR:
 - To analyse epidemiological data on LSD from MS and neighbouring countries
 - To include spatio-temporal analysis
 - risk factors involved in the occurrence, spread and persistence.



INVOLVEMENT OF MS AND NEIGHBOURING COUNTRIES

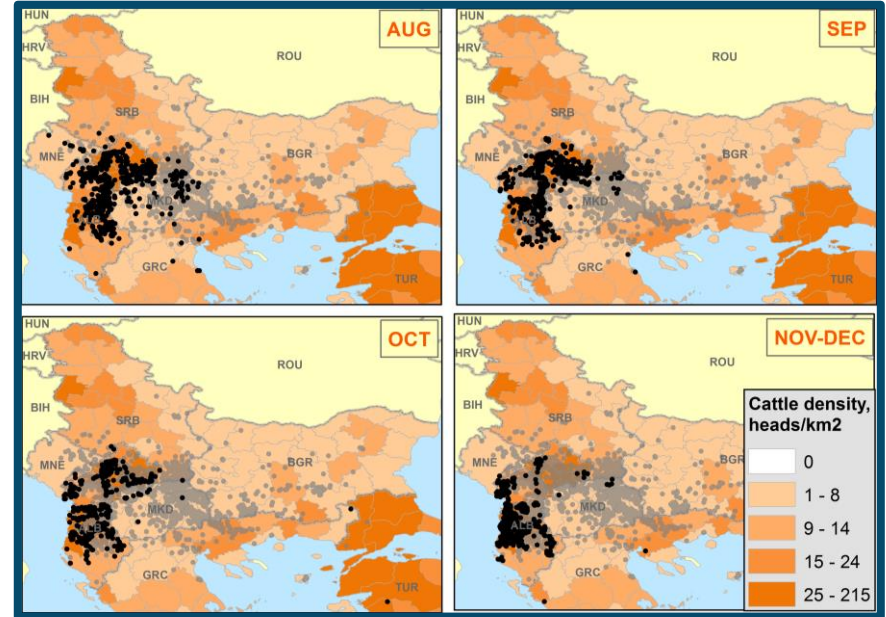
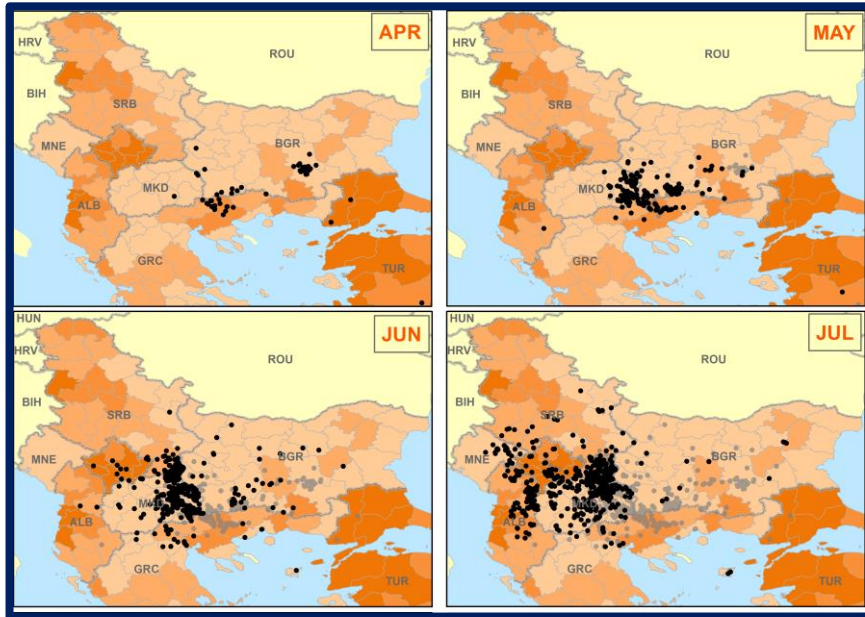
- **High degree of participation:** Greece, Bulgaria, FYROM, Albania, Serbia, Montenegro, Turkey, Kosovo, Croatia, Bosnia and Herzegovina, Romania
- **Agreement on data models:**
 - Outbreak data
 - Cattle population
 - Vaccination data
- **Creation of mutual collaboration:**
 - Workshop, web meeting
 - support from EC

FIRST REPORT ON LSD

- ❑ publication before Easter 2017
- ❑ Content:
 - Descriptive analysis of spatial-temporal of outbreaks + vaccination+ climatic data
 - LSD speed of propagation
 - Assessment of vaccination effectiveness
 - Distribution of vaccine adverse reaction
 - Opportunity maps for vector survival
 - Guidance for field survey on vectors

LUMPY SKIN DISEASE – SITUATION IN SOUTH-EASTERN EUROPE IN 2016

East-west spread; seasonality with outbreak peak in summer months



Black dots: new outbreaks; grey dots past outbreaks

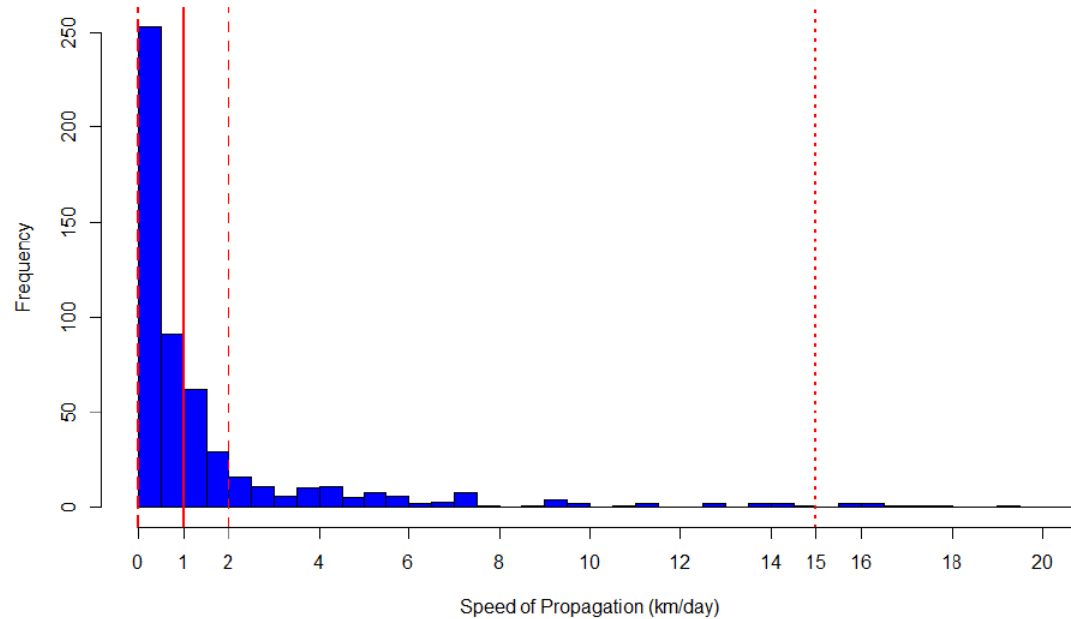
- proximity to affected farms
 - temperatures > abundance of insect vectors
- 
 risk factors for spread

Since 2015 (excluding Turkey): 7,600 LSD outbreaks; 12,800 affected animals

SPEED OF PROPAGATION OF LSD



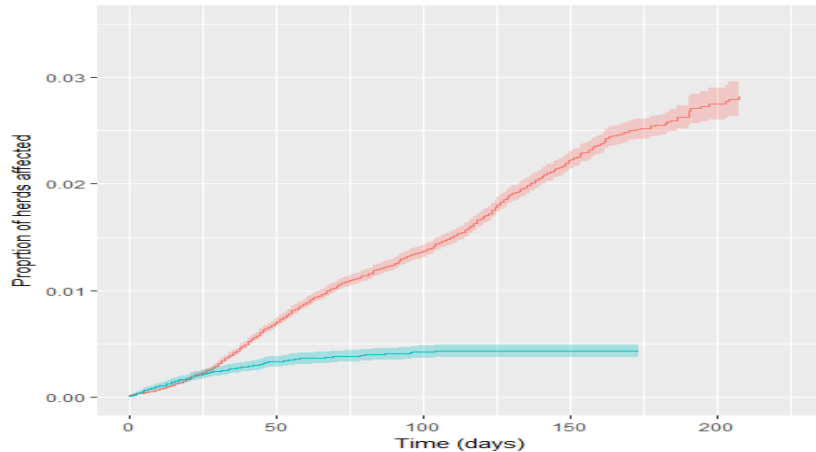
spatial pattern of outbreaks, as reported in Turkey in 2014



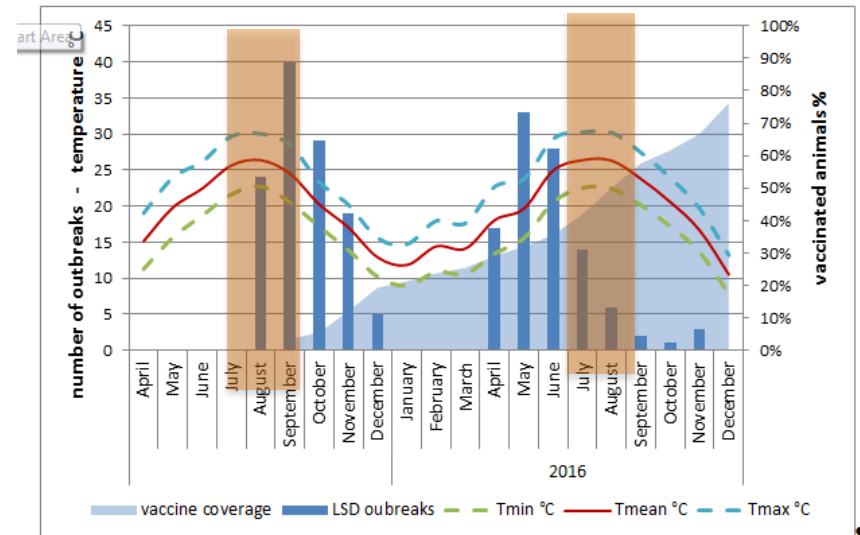
transmitted mainly by vector at short distance (<10km), and with some transmission over longer distances and faster spread rate, due to less frequent long distance movement of infected cattle

VACCINATION CAMPAIGN

- mass vaccination with homologous strain is one of the factor that mainly influence LSD spread
- protective effect of vaccination (case study of Albania): about 70% at farm level and 77% at animal level
- Adverse effects in 0.19% of the vaccinated farms (Croatia)



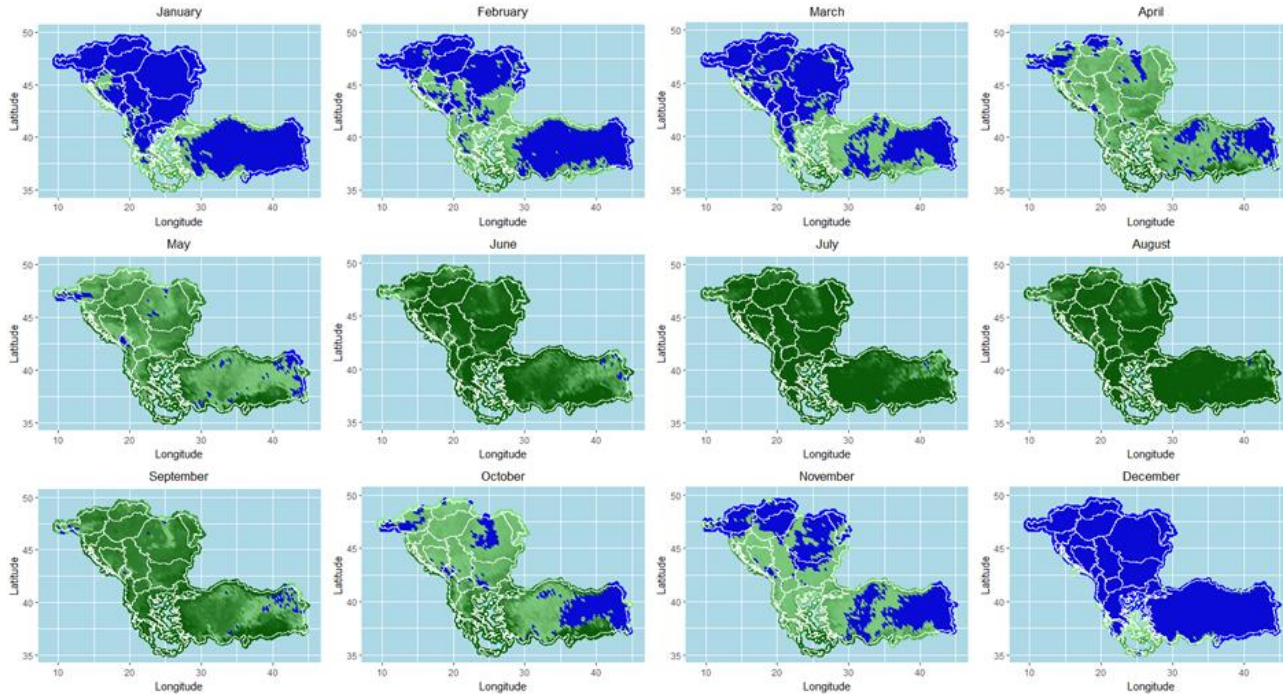
proportion of vaccinated (blue) and unvaccinated (red) affected herds in Albania



outbreaks per month, temperatures and percentage of vaccinated animals in Greece 2015-2016

OPPORTUNITY MAPS OF VECTOR SURVIVAL

- vector survival : possible throughout the entire year in many regions of Greece.
- warm temperatures and related abundance of insect vectors considered ones of the main risk factors for LSD spread



DATA COLLECTION & REGIONAL COOPERATION

- Data collection from 9 countries (Greece, Bulgaria, Albania, Serbia, FYROM, Montenegro, Turkey, Croatia, Kosovo): **great effort and high commitment** by the veterinary services
- Data provided on 1, 2, 3
- quality and quantity can be improved (adherence data model and farmID)

REGIONAL CONTROL STRATEGY AND RESPONSIVENESS

- **Mass vaccination campaign** with a live homologous vaccine against LSD carried out at **regional level** in south-eastern Europe: in few months 90% vaccination coverage of the animal population reached

ACKNOWLEDGEMENT

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 - Drago Marojevic from the Ministry of Agriculture and Rural Development, Montenegro;
 - Srgjan Meshterovikj, Food and Veterinary Agency, FYROM;
 - Tatjana Labus from the Ministry of Agriculture and Environmental Protection, Republic of Serbia;
 - Esra Satir from Pendik Veterinary Control Institute, Turkey
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- EFSA staff, WG, AHAW Panel
 - JRC

- Past LSD events and related EFSA outputs >>

LSD events

EC/MS reactions

EFSA outputs

2013

LSD spread in
Middle East, Turkey

EC Mandate for EFSA
SO - Nov 2013

EFSA SO
Jan 2015

2015

LSD spread to
Greece

Bulgarian letter to
EFSA for regional
coop. - Dec 2015

EFSA/DG SANTE
Workshop
May 2016

2016

Further spread
to Bulgaria and
neighbouring countries

EC Mandate for EFSA
urgent advice- Jun
2016

EFSA urgent advice
- Aug 2016

New: EC Request for
scientific and technical
assistance - Aug 2016

Ongoing, 2016-
2018



EFSA OUTPUTS ON LSD – OBJECTIVES

- EFSA scientific opinion on LSD: disease characterisation; assessment of risk of introduction, spread, impact, control in the EU
- EFSA/DG SANTE workshop: strengthening regional cooperation in South East Europe and Middle East for improving LSD surveillance, prevention and control (15 countries + 6 international orgs)
- EFSA urgent advice on LSD: assessment of combinations of stamping-out and vaccination policy
- Data collection on LSD: cooperation with with South-European countries, spatio-temporal dynamics of LSD epidemics