Food and Agriculture Organization of the United Nations

Current FAO initiatives on LSD in the region

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Regional Workshop on Foot and Mouth Disease (FMD) and other Transboundary Animal Diseases (TADs) "Risk based approaches and Emergency Management

Vladimir, Russia, 29-30 November 2017

FAO Vision

- Close monitoring (EMPRES-i)
- Regional Approach - Regional response plan
- Risk assessment for at risk countries
- Information sharing: lessons learnt and best practices
- Foster cooperation of all stakeholders: farmers, traders, processors, veterinarians, etc.
- Raising awareness
- Harmonization of vaccination protocols
- Harmonization of other preventive and control measures
- Piloting new approaches for risk mitigation and outbreak control

Previous FAO activities on LSD

- Publications
- Trainings
- Expert meetings
- Projects
- Research

Publications – Early warning messages

empres watch on LSD:

- November 2013- LSD in the Middle East
- September 2015- LSD in Europe

Publications – Position paper

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- FAO Position on *the sustainable prevention, control and elimination of Lumpy Skin Disease*

http://www.fao.org/3/a-i7827e.pdf

  - Analysis of incursion risk
  - Vaccines
  - Movement Control
  - Stamping Out
  - Carcass Disposal
  - Restocking
  - Vector Control
  - Laboratory support
  - Options for combining vaccination, movement control and stamping out
  - Areas of uncertainty

Publications - Monograph on LSD

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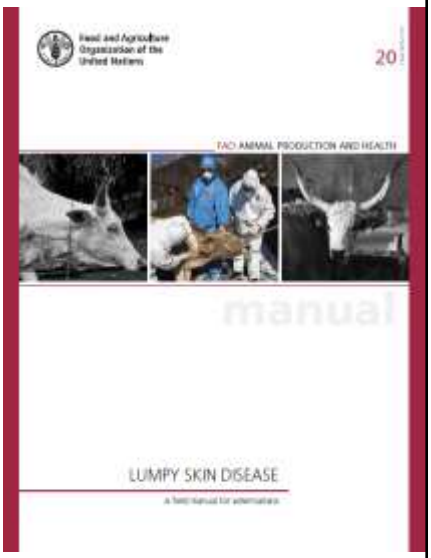
- EMPRES 360 Monograph on LSD in the Region - http://www.fao.org/3/a-i7982e.pdf (Nov. 2017)

Publications – *Field Manual on LSD*

- Europe-focused
- Developed by experts in LSD and field implementation;
- Part of the EMPRES series of manuals;
- Audience: Private and official veterinarians (in the field and slaughterhouses), para-professionals and laboratory diagnosticians;
- Contents: Basic epidemiology, clinical recognition, sampling and shipping of specimens, and basic notions on the prevention and control of the disease;
- Translation into Albanian, Macedonian, Russian, Turkish and Serbian;
- Distributed in the region (paper and electronic copies).
- www.fao.org/documents/card/en/c/bd35c5



Publications – *Template of LSF contingency plan*

- http://www.fao.org/fileadmin/user_upload/reu/europe/documents/LSD_template.pdf

- Contingency plans are:
  - key instrument for preparedness and control of a disease emergency
  - country-specific

- This template:
  - Outlines the key elements that have to be present in any LSD contingency plan.
  - Aims to aid vet services in the development of their own national LSD contingency plans
  - Already applied in Georgia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Chapter 4 Chain of command and disease control

4.1 Structure of the Veterinary Services and Competent Veterinary Authority (CVA)
4.2 National Disease Crisis Center (NDCC) and the chain of command

Capacity building – Vector surveillance

EuFMD Practical training on vector transmissible animal diseases – from theory to practice (with focus on LSD)

- Participants: Albania, Greece, FYR of Macedonia, Kosovo, Serbia and Bulgaria
- 31 May-3 June 2016, Stara Zagora, Bulgaria
- Lectures on:
  - LSD vaccines
  - Israeli experience with LSD
  - vector surveillance & taxonomy

- Practical sessions on:
  - vectors trapping systems, vector traps used, best places for vector traps locations, observation on the field
  - entomological investigation of the trapped vectors, differential diagnosis of the trapped species, samples preparation for the laboratory investigation, vector species identification

Capacity building – Cascade training for field vets

- In the Republic of Macedonia
- Just finalized (November 2017)
- Developed in close collaboration with the veterinary authorities
- To improve field detection, prevention and control of LSD and bluetongue
- A video is also being produced on LSD for TV broadcasting

- Training-of-trainers (TOT) approach:
  - Skopje, September 2017 - Initial 2-day training of the focus group (staff from the central office and selected official veterinarians)
  - 1-day replicas of the training in each of the seven regions.
  - A total of 250 veterinarians across all regions of the country, plus 1-2 selected livestock advisors per region.
  - Each veterinarian will receive a printed copy of the LSD field manual in Macedonian.

Meetings - Various

- **Webinar with EuFMD on LSD vaccination** with the participation of several experts from Jordan, Israel and UK - April 2015
- **Sub-regional workshop LSD prevention and control: a new challenge for European countries** under GF-TADs Europe, Tbilisi, Georgia, 11-12 November 2015

- ✓ Participants: Georgia, Armenia, Azerbaijan, Russian Federation, Belarus and Ukraine
- ✓ Experts: Israel; FAO; EC Commission, DG SANTE; Pirbright Institute (UK), OIE Reference Laboratory on LSD
- ✓ LSD epidemiology, surveillance, control, vaccination, networking, sharing experience on LSD control

The *ad-hoc* LSD expert meeting

- 25 July 2016, Belgrade, Serbia
- Organized upon request from CVOs from central and south Europe
- The following topics were discussed to inform revision of existing legislation:

1. *Review and rank the potential ways that LSD virus could be transmitted from one infected holding to another, from the point of infection of animals to their carcass disposal on the site.*
2. *Review current measures, and propose updated guidance, to be taken after confirmation of LSD on a holding, including the question of alternatives to on-site burial.*
3. *Review the proposals for modification to measures to be taken after confirmation of LSD in animals recently vaccinated against LSDV.*
4. *Review the proposals for (a) modification to measures relating to restocking of holdings depopulated after LSDV, and (b) movement of animals and animal products after vaccination.*
5. *Identification of likely scenarios for spread of infection within the Balkan and Central European region and impact and likely duration of control options, that could be assisted by modelling and other studies.*
6. *Identify essential information that need to be collected and shared by affected countries, particularly to assist modelling of spread and impact of measures, and to enable review of the effectiveness of currently used vaccines.*

http://www.fao.org/fileadmin/user_upload/reu/europe/documents/Events2016/LSD/report_en.pdf

Regional workshops on LSD prevention and control

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- **Participants:**
  - Vet services from Albania, Armenia, Azerbaijan, Belarus, Bulgaria, FYR of Macedonia, Georgia, Kosovo, Montenegro, Romania, Russian Federation, Serbia, Turkey and Ukraine
  - Cattle associations from recipient countries
- **Objectives:** Share experiences, improve knowledge, and discuss in an open forum with the aid of experts
- Highly interactive format
- Thematic sessions moderated by experts

Budapest, Hungary (7-9 March 2017)

Thematic sessions:

- Contingency planning, risk management and communication;
- Awareness campaigns; Animal movement control;
- Insect control and environmental impact;
- Diagnostic tools and vaccination strategies;
- Stamping out strategies.

Tirana, Albania (10-11 May 2017)

Thematic sessions:

- Cost-benefit analysis
- Vaccination strategies
- Contingency plans
- Risk Communication.

Standing Group of Experts on Lumpy Skin Disease in South-East Europe

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http://web.oie.int/RR-Europe/eng/Regprog/en_GF_TADS%20-%20Standing%20Group%20LSD.htm

- Launched on 4-5 July 2016 under the GF-TADs umbrella
- Aims to build up a closer cooperation among LSD-affected countries, addressing the disease in a more collaborative and harmonised manner across the region.
- Builds on the successful experience of a similar mechanism for ASF (2014)

Members:

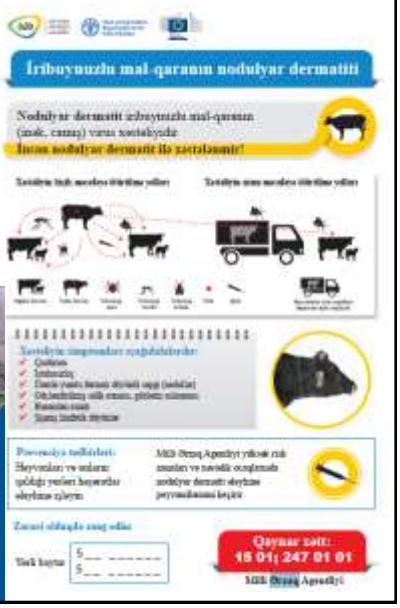
- Affected and at-risk countries: Albania, Bosnia and Herzegovina, Bulgaria, Croatia, Cyprus, the former Yugoslav Republic of Macedonia, Greece, Hungary, Israel, Kosovo, Montenegro, Romania, Serbia, Slovenia, Turkey and Russian Federation
- Organizations: EC - OIE - FAO
- Experts: designated on an ad hoc basis

Meetings:

- First meeting (SGE LSD1) - Brussels, July 2016
- Second meeting (SGE LSD2) - Lisbon, September 2016
- Third meeting (SGE LSD3) - Istanbul, December 2016
- SGE LSD Teleconference on LSD Vaccination programmes for 2017
- Fourth meeting (SGE LSD4) - Paris, May 2017
- Fifth meeting (SGE LSD5) - Budva, October 2017

Project on *LSD risk mitigation and control in Georgia*

- Finalized (2017)
- Assessment of the situation
- Technical guidance on LSD control plan in Georgia
- Development of a LSD contingency plan
- Training on LSD epi, risk based surveillance, outbreak investigation and control (Feb 2017)
- Training on LSD laboratory diagnosis (March 2017)
- Develop, print and distribute posters and leaflets



Spatial Analysis of Lumpy Skin Disease LSD

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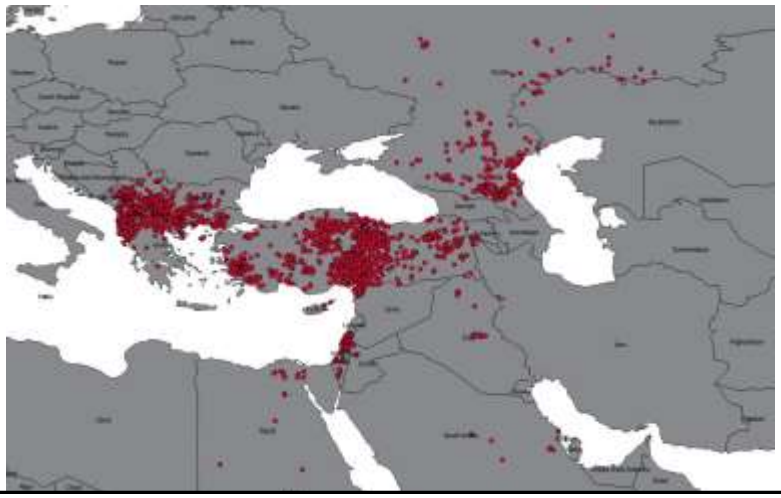
Objective: To provide useful information for the design of surveillance systems by analyzing the association between the reported LSD outbreaks in the Balkans, Caucasus and Middle East with environmental variables, i.e. Density of cattle, Land cover, and Climate data



Spatial Analysis of Lumpy Skin Disease LSD

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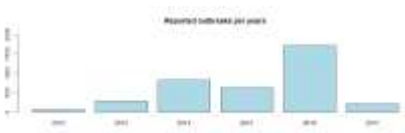

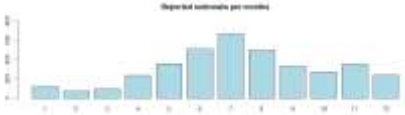

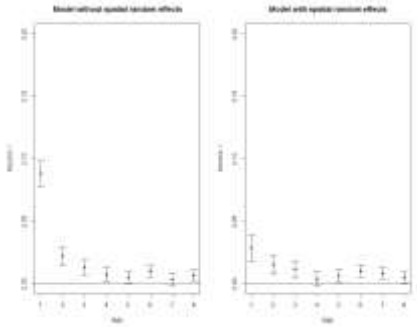

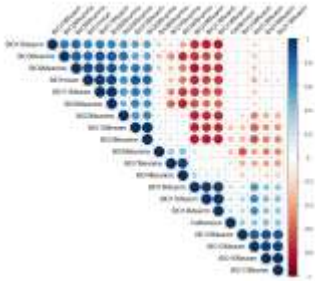

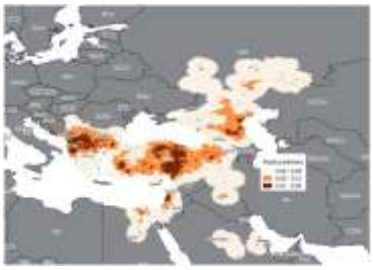

Cost-benefit analysis of different management strategies

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Objective: To quantify the cost of the disease and control measures in three selected Balkan countries (Albania, Bulgaria and Macedonia) based on the fact that they were affected with different intensity, implemented different control measures and had different production structures.

Table 3. Distribution of the costs at country level of LSD in the three countries by year.

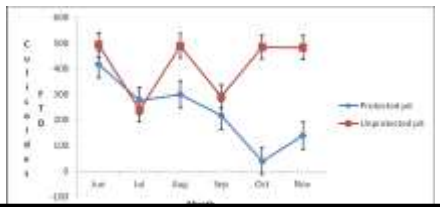
	ALBANIA			BULGARIA			MACEDONIA		
	2016	2017	Total	2016	2017	Total	2016	2017	Total
Outbreak investigation	164.186	17.218	181.404	99.456		99.456	155.523	457	155.980
Carcass disposal	139.953	23.536	163.490	90.105		90.105	740.381	1.914	742.295
Compensation to farmers				1.213.030		1.213.030	3.021.390	4.895	3.026.284
Cleaning / Disinfection / Desinsectation	5.153	4.225	9.378	66.524		66.524	483.900	1.265	485.165
Treatments	31.132	6.064	37.196	105		105			
Disease Costs	2.740.933	458.169	3.199.103	12.803		12.803	317.298	861	318.160
Vaccination	970.320	970.320	1.940.641	1.858.311	1.889.660	3.747.971	1.019.377	941.928	1.961.305
Desinsectation*				2.895.644		2.895.644	15.000	15.000	30.000
Animal surveillance	3.591	780	4.371	2.007		2.007			
Vector surveillance				5.770		5.770			
Wildlife surveillance				508		508			
Awareness campaigns	5.161		5.161	12.973		12.973	3.681		3.681
Indirect costs				464.033		464.033			
Total	4.060.431	1.480.313	5.540.744	6.721.269	1.889.660	8.610.929	5.754.550	966.320	6.720.870

* In Bulgaria, a broad insect control campaign was carried out in all the farms of the southern part of the country

Future activities - Livestock Protective Fencing (LPF)

LPF to Protect Dairy Cattle against Vector-borne Disease

- A highly effective technology successfully implemented in several countries in sub-Saharan Africa for the control of various vector-transmitted diseases.
- Fences are placed around cattle to prevent insect bites.
- South-South Cooperation: Sharing knowledge, technical know-how and practices on LPF
- Case-control study in 20 dairy farms



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