



Food and Agriculture Organization
of the United Nations



Measures used on LSD positive holdings

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Train-of-trainer program for field veterinarians on LSD (TCP/RER/3605) - Kiev, Ukraine, 31 May – 1 June 2018



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Control and eradication measures for LSD


2

Total and modified stamping out
Movement restrictions
Vaccination



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LSD control strategies

A

- A **total stamping-out** policy of the affected holdings (stamping out the whole herd after detection of an infected case)
- Vaccination** using live homologous vaccines
- Movement restrictions

Bulgaria
Greece
Serbia


B

- Partial stamping out**
- Vaccination**
- Movement restrictions

Israel
FYR of Macedonia
Albania,
Kosovo,
Turkey?

C

- Vaccination**
- Movement restrictions?



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Partial stamping out



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Total stamping out

5



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Stamping out

6

- Killing of animals
- Valuation of animals
- Safe disposal of carcasses
- Cleaning and disinfection



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12 April 2016 – suspicions for LSD in two farms in Haskovo region

The example of Bulgaria

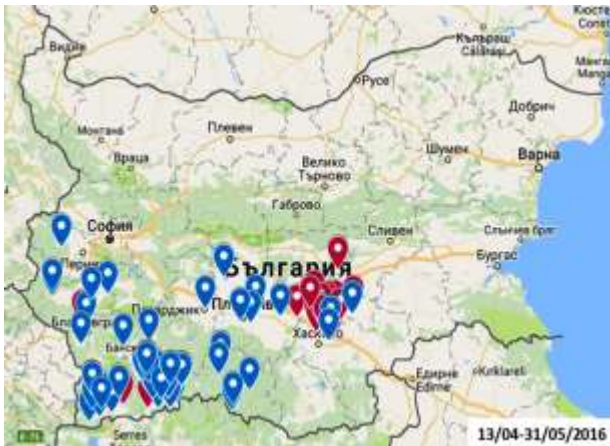
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The 1st month of LSD epidemic in Bulgaria - Apr 2016

- ✓ 34 outbreaks (affected herds)
- ✓ 5 regions
- ✓ 26 settlements
- ✓ 46 affected bovines
- ✓ 994 bovines in the affected herds

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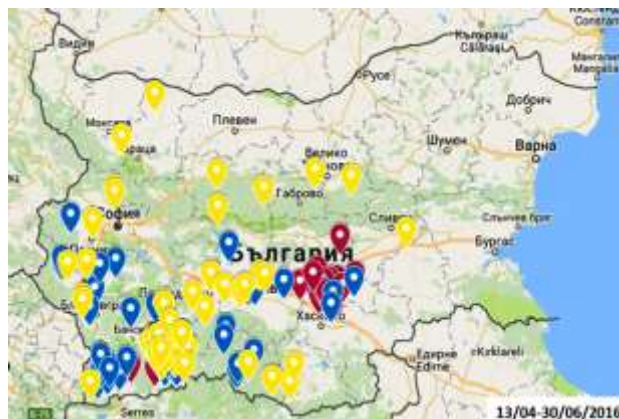
The 2nd month of LSD epidemic in Bulgaria - May 2016



- ✓ 92 outbreaks (affected herds);
- ✓ 8 regions
- ✓ 52 settlements;
- ✓ 115 affected bovines;
- ✓ 1170 bovines in the affected herds.

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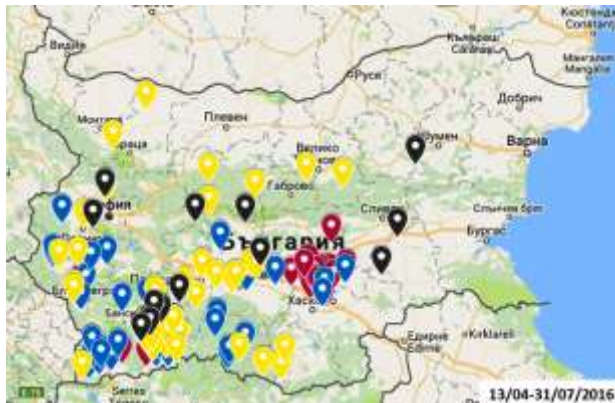
The 3rd month of LSD epidemic in Bulgaria - Jun 2016



- ✓ 75 outbreaks (affected herds)
- ✓ 14 regions
- ✓ 46 settlements
- ✓ 126 affected bovines
- ✓ 470 bovines in the affected herds

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The 4th month of LSD epidemic in Bulgaria - Jul 2016



- ✓ 16 outbreaks (affected herds)
- ✓ 7 regions
- ✓ 13 settlements
- ✓ 873 affected bovines
- ✓ 180 bovines in the affected herds.

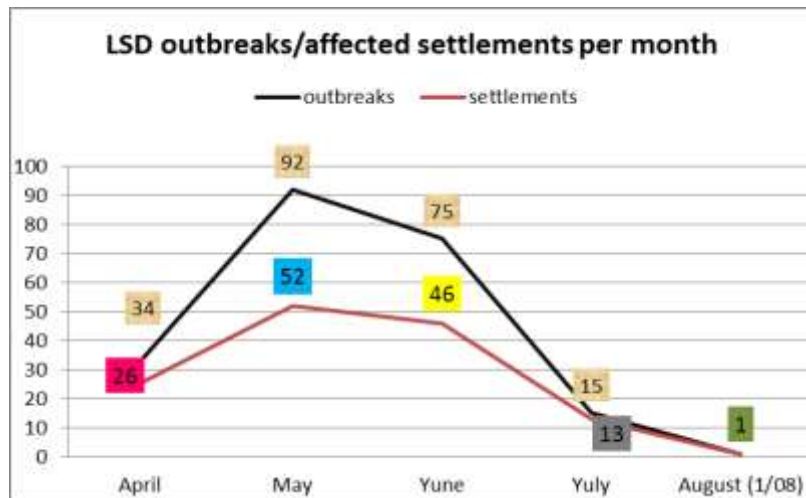
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LSD situation in Bulgaria in 2016



- ✓ Date of first outbreaks: 13 Apr
- ✓ Date of last outbreak 01 Aug
- ✓ 217 outbreaks in total
- ✓ 17 regions affected
- ✓ 2814 bovines in the affected herds
- ✓ 366 bovines with clinical signs

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Control measures applied

- ✓ Total stamping out
- ✓ Compensation schemes and immediate payments to the farmers
- ✓ Restriction zone established - at the beginning South part of Bulgaria, then the whole territory of the country
- ✓ Intensified clinical surveillance
- ✓ Reinforced biosecurity measures
- ✓ Movement control as per the provisions of Decision (EU) 2016/645 and Decision 2016/1183 and before that
- ✓ Vector control and desinsectisation over vector biotopes (along main rivers, valley and paddy fields).
- ✓ Vaccination in 2016, 2017, 2018.....

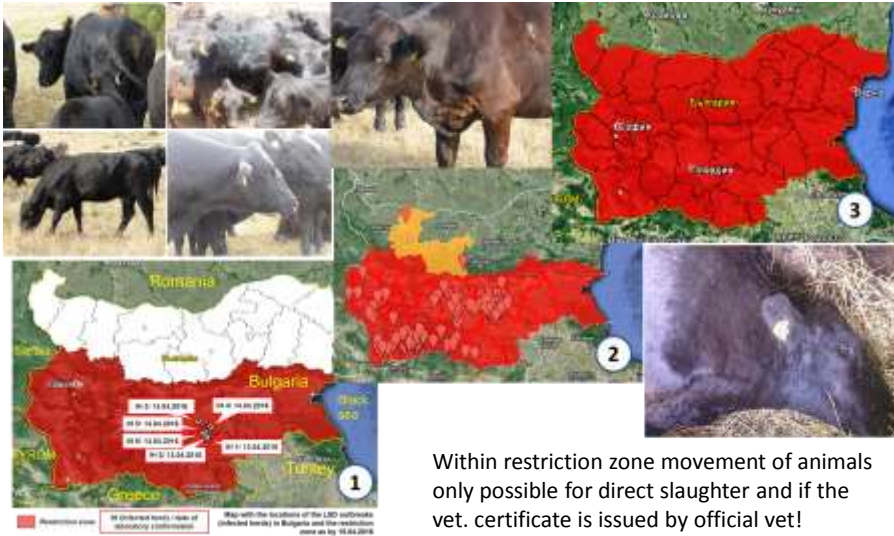


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Restriction zones

15



Within restriction zone movement of animals only possible for direct slaughter and if the vet. certificate is issued by official vet!

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16

Appropriate methods for culling cattle

- penetrative captive bolt with pithing,
- premedication and injection with barbiturates or other drugs
- free bullet



Protection of animals during culling to be considered!

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Severely affected animals should always be removed from the herd because they serve as a constant source of contamination for biting and blood-feeding vectors.



Valuation of animals

- Done by a Commission
- Market price for the day taken for valuation
- Non-identified animals are not subject to valuation and compensation



Disposal

19



- ✓ Rendering
- ✓ Incineration
- ✓ Burial
- ✓ Burning

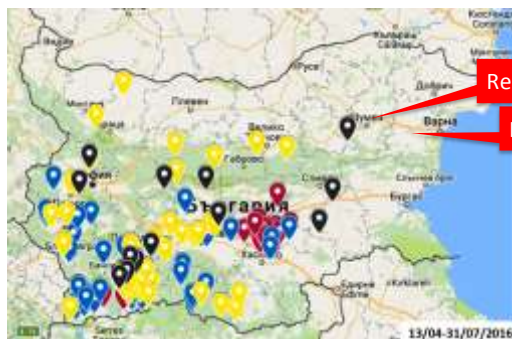
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Disposal of cattle carcasses in rendering plants

20

- ✓ Preferred method for cattle in Austria, Denmark, other countries
- ✓ No rendering plants in many countries
- ✓ Biosafety during transportation to be considered



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Mobile incinerators

Excellent option but
does not work for cattle





24

Cleaning and disinfection of personnel, premises and environment

- ✓ LSDV is very stable and survives well in extremely cold and dry environments.
- ✓ The virus survives within the pH range 6.3-8.3.
- ✓ Infected animals shed scabs from skin lesions to the environment. Inside of these scabs the virus may remain infectious for several months.
- ✓ Thorough cleaning and disinfection with appropriate disinfectants should be performed all over the affected farm, trucks, personnel, premises and potentially contaminated environment.
- ✓ FAO provides practical recommendations for decontamination of premises, equipment and environment in the Animal Health Manual on Procedures for Disease Eradication by Stamping out (FAO 2001).

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25




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26



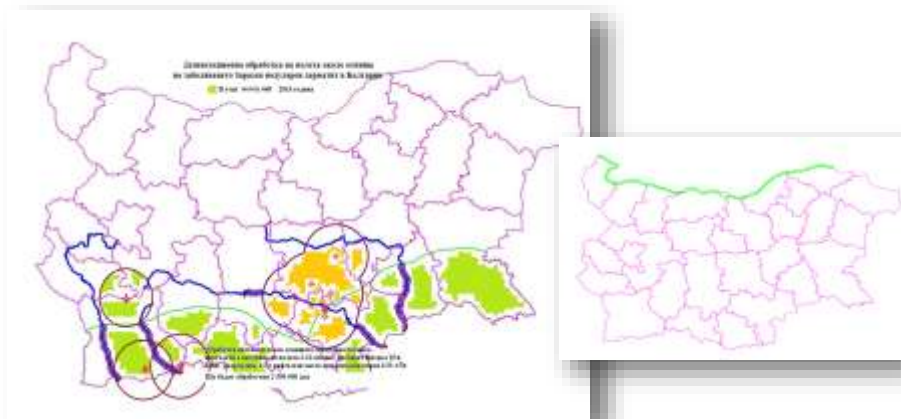
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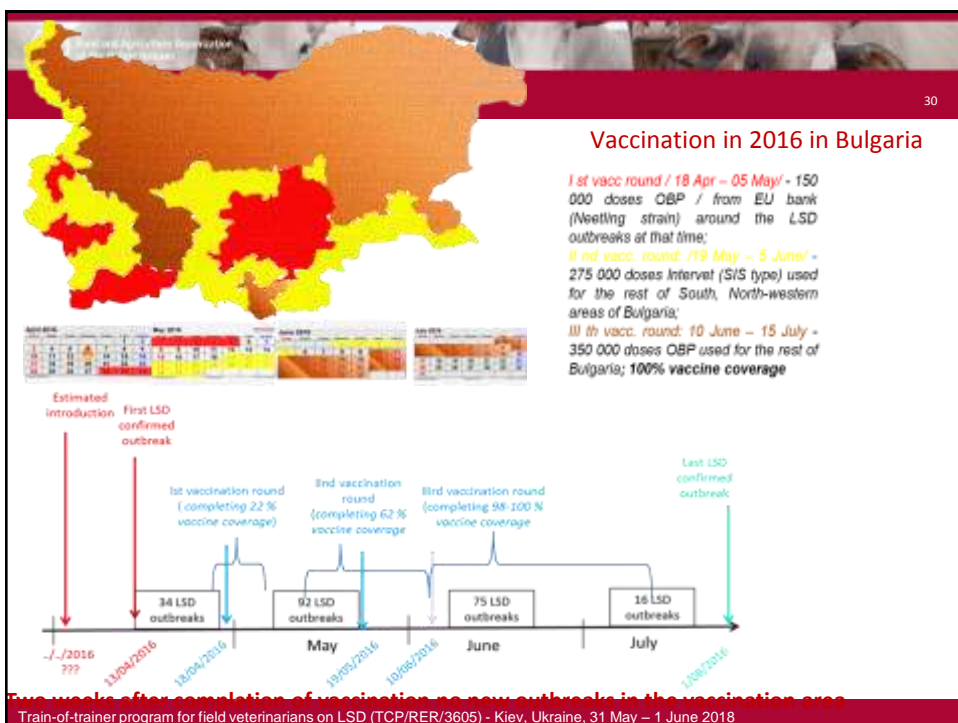
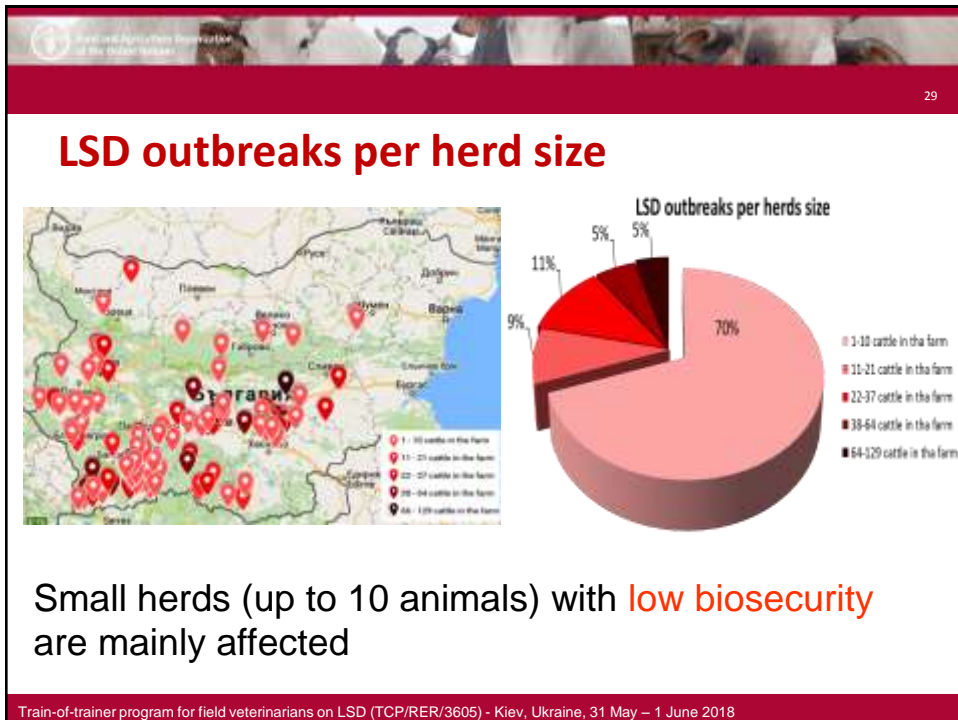
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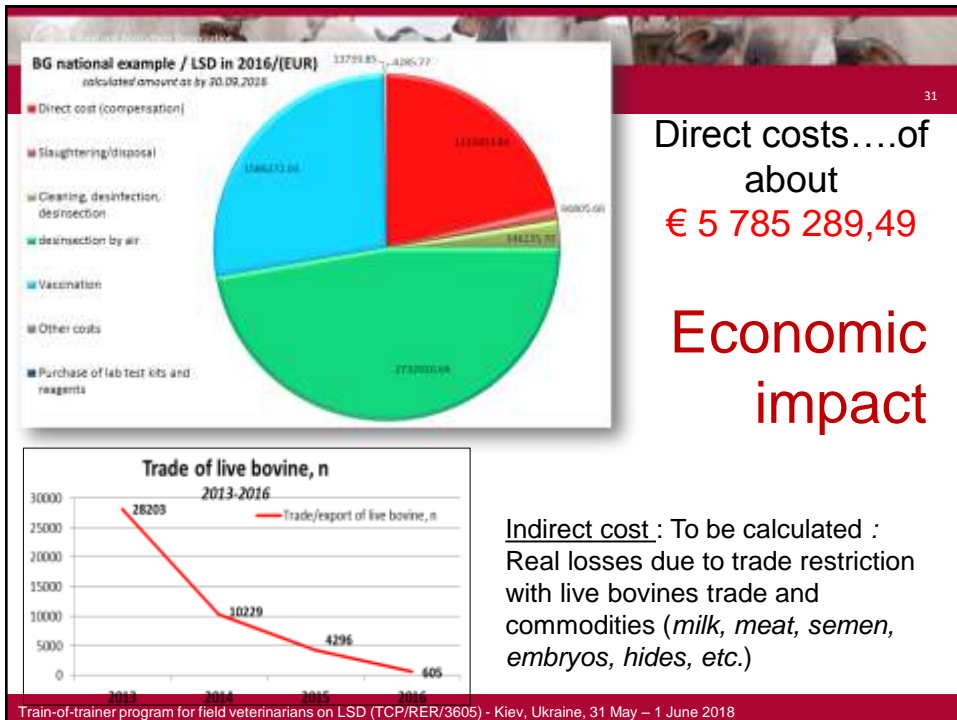


Vector control and desinsectisation over vector biotopes
(along main rivers, valley and paddy fields).



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32

Key challenges and problems faced

- ✓ New disease and lack of experience
- ✓ Quick response to many outbreaks at the same time
- ✓ Vaccine delivery – tender procedures; EC vaccine bank
- ✓ Outbreaks after vaccination
- ✓ Laboratory capacity
- ✓ Trade restrictions
- ✓ The social factor

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Lessons learnt

33

- ✓ LSD is clearly a regional problem that requires high level of awareness at technical and political level, involving many countries and can only be dealt with through coordinated international efforts
- ✓ The main risks of LSD transmission are associated with transfer of virus by blood-feeding vectors and possibly direct contact between infected and naive animals as well as non-controlled animal movements.
- ✓ Priority actions to prevent transmission are immediate culling and safe destruction of infected animals, safe mass vaccination to reduce disease spread, and movement controls to avoid long distance spread via direct contact with affected animals.
- ✓ Vaccination of cattle is the most effective option for controlling the spread of LSD especially if applied before the virus enters a region or a country.
- ✓ A lot of uncertainties and questions
- ✓ Researches needed

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34

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C

- **Vaccination**
- Movement restrictions?

Israel

FYR of Macedonia – **1591 outbreaks in 2016**

Albania, - **3647**

Kosovo, - **1415**

Turkey

Bulgaria – **217 outbreaks in 2016**

Greece – **104**

Serbia – **225**

Kazakhstan - **1**



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35



Thank you!

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