



Stamping out strategies

- Carrying out stamping-out procedure
- Safe on- and off-site disposal of carcasses considering environmental and public health aspects
- Decontamination of the premises, personnel, vehicles, environment

Tsviatko Alexandrov

DVM, PhD, FAO International consultant



Preferred samples

- **For LSD:** Skin lesions and scabs, saliva or nasal swabs, EDTA blood for PCR assay, serum samples
- **For BT:** spleen, lymph node, EDTA blood for PCR assay, serum samples



Current policies to control LSD

3

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

B

- **Partial stamping out**
- Vaccination
- movement restrictions

C

- Vaccination
- movement restrictions?



Partial stamping out

4



Total stamping out

5



Lumpy skin disease and bluetongue training of trainers in FYR of Macedonia

Skopje, 13-14 September 2017

Stamping out

6

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



Lumpy skin disease and bluetongue training of trainers in FYR of Macedonia

Skopje, 13-14 September 2017

Before start...

7

- Communicate with all stakeholders
- Make all clear
- Make sure that farmers, personnel, others? are away..



Lumpy skin disease and bluetongue training of trainers in FYR of Macedonia

Skopje, 13-14 September 2017

All the time try to keep highest level of biosecurity!

8



Definition in "New Animal Health Law":

"Biosecurity" means the sum of management and physical measures designed to reduce the risk of the introduction, development and spread of disease to, from and within:

- (a) an animal population, or
- (b) an establishment, zone, compartment, means of transport or any other facilities, premises and location.

Lumpy skin disease and bluetongue training of trainers in FYR of Macedonia

Skopje, 13-14 September 2017

Appropriate methods for culling cattle

9

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



Protection of animals during culling to be considered!

10



Importantly, regardless of the selected stamping-out policy, 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 should not be subject to valuation and compensation

- **Directive 92/119, Art. 5**, paragraph 1 (a), (b), (c):
 - (a) **all animals of susceptible species** on the holding shall be killed on the spot, without delay. The animals which have died or been killed shall either be burnt or buried on the spot, if possible, or destroyed in a carcass disposal plant. These operations shall be carried out in such a way as to minimize the risk of disseminating the agent of the disease;
 - (b) **any substance or waste**, such as animal feed, litter, manure or slurry, which is liable to be contaminated, shall be destroyed or treated appropriately. This treatment, carried out in accordance with the instructions of the official veterinarian, must ensure that any agent or vector of the agent of the disease is destroyed;
 - (c) after carrying out operations listed in subparagraphs (a) and (b), the buildings used for housing animals of susceptible species, their surroundings, the vehicles used for transport and all equipment liable to be contaminated shall be cleaned and disinfected in accordance with **Article 16**;

- **Regulation (EC) 1069/2009**
- **Commission Regulation (EU) 142/2011, Art. 4**

REGULATION (EC) No 1069/2009 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL
of 21 October 2009

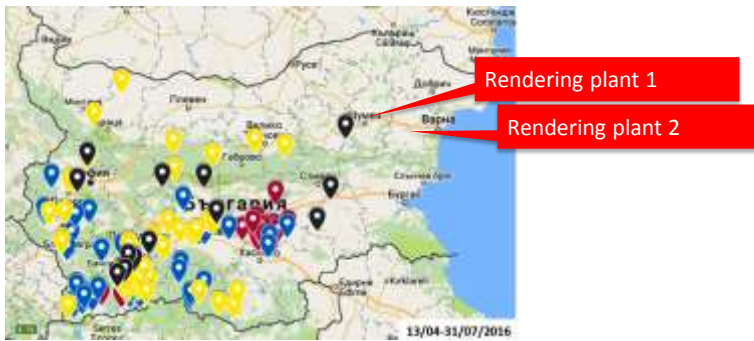
laying down health rules as regards animal by-products and derived products not intended for human consumption and repealing Regulation (EC) No 1774/2002 (Animal by-products Regulation)



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

Disposal of cattle carcasses in rendering plants

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



Mobile incinerators

Excellent option but
does not work for cattle

Disposal of carcasses by burial & burning

17

Reg. 1069/2009 (50) Burial and burning of animal by-products, in particular of dead animals may be justified in specific situations, in particular in remote areas, or in disease control situations requiring the emergency disposal of the animals killed as a measure to control an outbreak of a serious transmissible disease. In particular, disposal on site should be allowed under special circumstances, since the available rendering or incinerator capacity within a region or a Member State could otherwise be a limiting factor in the control of a disease.

On site burial and burning of carcasses

18

- Permission
- Remote site for burial/burning to be defined by environmental commission as close as possible to the affected farm
- Team for valuation of animals
- Team for loading and transportation of the cattle to the site for disposal
- Team for disposal
- Teams for cleaning and disinfection (at place of loading, at site for disposal)
- Transport technique, equipment, approved disinfectant
- Good weather.....



Lumpy skin disease and bluetongue training of trainers in FYR of Macedonia

Skopje, 13-14 September 2017



Lumpy skin disease and bluetongue training of trainers in FYR of Macedonia

Skopje, 13-14 September 2017



Lumpy skin disease and bluetongue training of trainers in FYR of Macedonia

Skopje, 13-14 September 2017



Lumpy skin disease and bluetongue training of trainers in FYR of Macedonia

Skopje, 13-14 September 2017



Lumpy skin disease and bluetongue training of trainers in FYR of Macedonia

Skopje, 13-14 September 2017



Lumpy skin disease and bluetongue training of trainers in FYR of Macedonia

Skopje, 13-14 September 2017



Lumpy skin disease and bluetongue training of trainers in FYR of Macedonia

Skopje, 13-14 September 2017

Biosecurity is always an issue



Lumpy skin disease and bluetongue training of trainers in FYR of Macedonia

Skopje, 13-14 September 2017

Cleaning and disinfection of personnel, premises

27

- 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 months
- Thorough cleaning and disinfection with appropriate disinfectants should be performed all over the affected farm, vehicles, equipment, 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)

28





Lumpy skin disease and bluetongue training of trainers in FYR of Macedonia

Skopje, 13-14 September 2017



Lumpy skin disease and bluetongue training of trainers in FYR of Macedonia

Skopje, 13-14 September 2017



Lumpy skin disease and bluetongue training of trainers in FYR of Macedonia

Skopje, 13-14 September 2017



Lumpy skin disease and bluetongue training of trainers in FYR of Macedonia

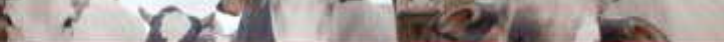
Skopje, 13-14 September 2017



Recommendations

- When applied, stamping-out should always be combined with a compensation programme. The long-term effect of stamping-out on farmers' livelihoods, public perception and media involvement needs to be considered while decision making;
- Severely affected animals should always be removed from the herd.
- Thorough cleaning and disinfection with appropriate disinfectants should be performed all over the affected farm, trucks, personnel, premises and potentially contaminated environment;
- Although LSDV is sensitive to most disinfectants and detergents, in order to effectively disinfect animal facilities and holdings, mechanical removal of surface material such as dirt, manure, hay and straw is required before disinfection.

FAO 2001 Manual on procedures for disease eradication by stamping out. In: FAO Anim. Heal. Man. <http://www.fao.org/docrep/004/Y0660E/Y0660E04.htm>. Accessed 4 Jan 2017



Thank you for the attention!