



Mission of the Community Veterinary Emergency Team to the former Yugoslav Republic of Macedonia

SCOPE of the mission: Lumpy skin disease in
cattle in the former Yugoslav Republic of
Macedonia

(7 – 8th of June 2016)

Terms of Reference

- The expert should provide assistance to the **scientific, technical, managerial and practical on-the-spot aspects** required for the development and refinement of the control strategy for lumpy skin disease (LSD) under local conditions taking into account sound **scientific basis (including the recent EFSA report on LSD)** and within the framework of Council Directive 92/119/EEC.
- The expert should **report** exclusively to the **Commission services and the competent authorities of the former Yugoslav Republic of Macedonia**. A final report should include **recommendations** to the competent authorities.
- An expert of this team should report to the Commission and the Member States in the framework of the Standing Committee on Plants, Animals, Food and Feed.
- The expert shall operate under the provisions laid down in Commission Decision 2007/142/EC and in particular on the basis of the standard rules of procedure for groups of experts.

CVET experts and DG SANTE officials

- Dr Eeva Tuppurainen – team leader, FI
- Dr Pip Beard- The Pirbright Institute, UK
- Commission Representative: Dr Dimitrios Dilaveris (DG SANTE)

Fact finding (1/2)

- On 8th of June CVET met the CVO and central and local veterinary authorities at the Food and Veterinary Agency (FVA)
- General contingency plan is in place and applied to LSDV
- Strategic level: FVA (an independent governmental body)
- Regional level: Official veterinarians of the regional units are responsible of implementation of the animal health control measures and overseeing the private practices
- Local level: private veterinary clinics (148) carry out animal health control measures in the field - tasks and responsibilities are determined in the agreement between FVA and private veterinary clinics
- Notification is according to Book of Rules (equivalent to Council Directive 82/894/EEC)

Fact finding (2/2)

- A total number of cattle in the country is 234.170
- Primary outbreak on 18th of April 2016 in Demir Kapija
- Since then, several outbreaks have been reported in the eastern part of the country
- The number of cattle in the restricted zones is 56.590
- By 6th of June, 250 holdings including 5220 cattle have been affected
- A total number of 339 cattle have been tested positive and 996 were culled
- Protection (3km), surveillance (10km) and restriction (50km) zones were created around the infected farms

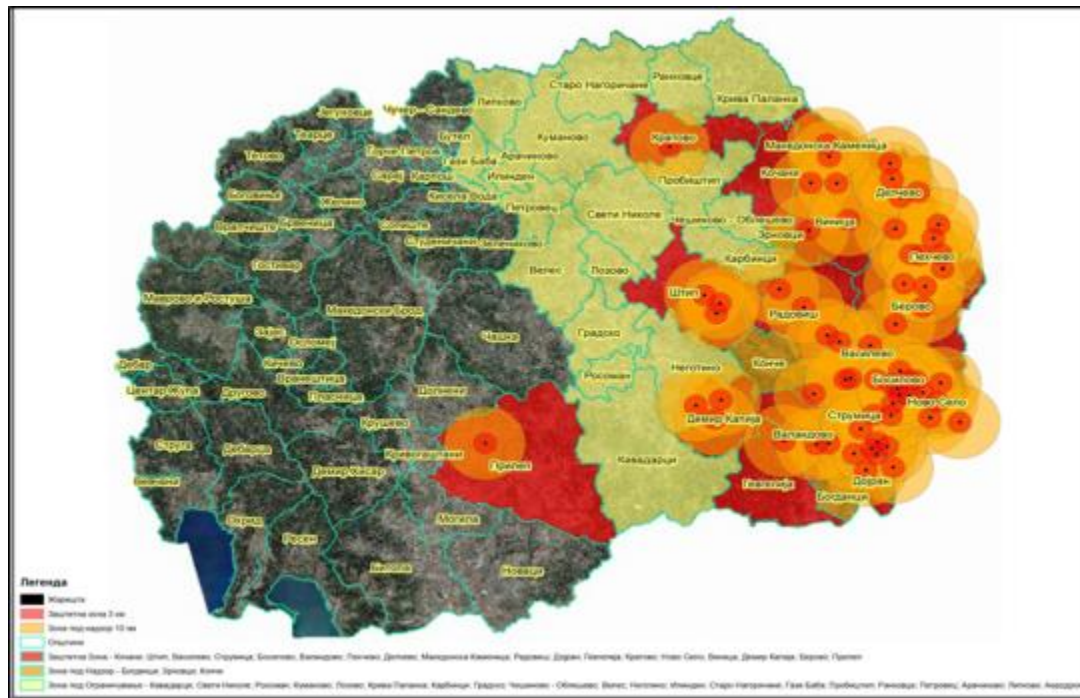
Cattle identification and vaccination database

- Animal identification and health database ISFVA is operational and comprises VIS (Veterinary Information system) animal identification system as well as animal health and veterinary public health records
- Laboratory Information System (LABIS) is included and contains data of sampling for laboratory examination and test results



European
Commission

Reported lumpy skin disease outbreaks in the former Yugoslav Republic of Macedonia by 6th of June 2016



Modified stamping-out

- Small-holders located in very close proximity to each other
- Communal grazing of cattle is a common practice by backyard cattle owners
- The whole village forms an epidemiological unit rather than a single holding
- Before vaccinations were started total stamping out was carried out but after that only animals showing clinical signs were removed and the rest of the cattle were vaccinated

Transboundary cattle movements

- Control of these animal movements is challenging
- In the mountainous border regions with neighbouring countries, grazing cattle from both sides may sometimes cross the borders and mixing of the herds occurs
- Transhumance farming is practised in the border regions
- Illegal trade of cattle across the borders occurs although it is officially banned

Visit to two affected farms in Strumica on 7th of June 2016

- Two back-yard cattle holdings in close proximity to each other were visited
- In both holdings the estimated time of infection was approximately 2 weeks before and animals were vaccinated six to 14 days earlier
- Adverse reaction to the vaccination is not likely cause
- During the night cattle are kept in stables and taken to the communal grazing area in the morning where they mix with neighbours' cattle
- Distance between neighbours are less than 20 meters

Visit to two affected farms in Strumica on 7th of June 2016

- No new animals were introduced to the first holding
- The second farm used a live breeding bull roughly one month ago
- Butox spot-on™ insect repellent used
- Abundance of flies and ticks and suitable breeding sites for all arthropod vector species (the mosquito season hasn't started yet)
- Common feeding/drinking troughs and licking stones
- Cattle feed, hay and straw are produced on site by the owner
- Private vets and milk collector vehicle regularly visit the farms

Vaccination campaign (1/2)

- EU vaccine bank provided 50.000 LSDV vaccine doses for the initial vaccination campaign which started on 24th of May 2016 – the aim was to vaccinate 46.370 animals in 5113 holdings
- Vaccination campaigns have been carried out by 46 private veterinary practices
- By 7th of June 2016, 77.68 % of the bovines (36.178) covering 74.91% of holdings (3855) have been vaccinated
- Vaccination was in accordance with the Decision 2015/2055

Vaccination campaign (2/2)

- A decision has been made by the FVA to vaccinate the whole cattle population in the country (234.170 heads)
- Sufficient numbers of LSDV vaccine doses have already been ordered from MSD (Lumpyvax®) and vaccine was expected to arrive within the following few weeks
- The vaccination campaign is expected to be completed within one and a half month. Total standstill of cattle movements will be implemented until full immunity has been established (28 days) in vaccinated animals.

Visit to NRL, Skopje on 7th of June 2016

- NRL reference laboratory is under the Faculty of Veterinary Medicine Skopje
- BSL level 2
- A real-time and conventional PCR methods are in place, after the CVET visit also DIVA PCR has been made available
- Work according to good laboratory practise although QA is not accredited by an external body
- Two veterinarians, one technician and a PhD student, all competent to perform PCR technique
- Training of staff on molecular methods has been carried out by the IAEA and EUFMD.

Visit to NRL, Skopje on 7th of June 2016

- Positive controls are obtained from positive field samples or extracted DNA from the LSDV vaccine
- No serology or virus isolation
- Number of LSDV samples tested in the lab varies between 20 and 50 (a maximum of 100)
- Manual extraction is the bottleneck limiting the sample numbers tested per day
- Laboratory capacity needs to be increased:
 - Automated extraction robot and a back-up real-time PCR machine
 - Limited resources to order materials and reagents

Recommendations (1/3)

- Regional rather than national approach is recommended, including exchange of information, coordination and harmonization of the control and eradication programs
- Swift mass vaccination in affected regions, aiming 100% vaccination coverage – if ring-vaccinations are used, no unvaccinated farms/animals should be left within the vaccinated regions
- Preventive vaccination campaigns should be carried out at the buffer zones between affected and disease-free countries
- Enforced awareness campaigns amongst field and abattoir veterinarians, farmers, animal care staff, cattle traders, slaughterhouse staff and drivers of cattle transport vehicles

Recommendations (2/3)

- Radius of protection and surveillance zones should be increased to 25 to 50 km
- Strict movement restrictions
- Movement of vaccinated cattle from infected regions to a slaughterhouse within disease-free area is not recommended
- The nearest slaughterhouse within the restricted region should be preferred
- Only healthy vaccinated animals are safe to move after the immunity has been fully established (28 days post-vaccination)
- In case it is necessary to use an abattoir at the disease-free region, cattle should be certified by a veterinarian to be free of clinical signs of LSDV on the day of dispatch at the farm of origin

Recommendations (3/3)

- Animal traders, their animal facilities and cattle resting/collection stations should be registered
- The diagnostic capacity at the NRL in the FYROM need to be strengthened
- Enforced biosecurity measure at a farm level should be implemented throughout the country
- Active and passive disease surveillance in the country should be enforced
- Detailed epidemiological surveys should be conducted
- In case vaccination campaign cannot be completed in time clinical and/or laboratory surveillance in the border regions with disease-free neighbouring countries should be commenced



Thank you for your attention!

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