The LSD epidemic in the Russian Federation – Situation update and key challenges

Report of Russia
Dr A. Kononov
Lumpy Skin Disease in the RF in 2015

1. No LSD cases were reported in the RF until 2015.

2. Epidemic situation in 2015:
   - Clinical signs of LSD were detected in cattle in 11 settlements of the Republic of Dagestan;
   - in 4 settlements of the Chechen Republic;
   - in 2 settlements of the Republic of North Ossetia.

In all cases biomaterial samples were collected and tested by PCR
Неблагополучные регионы РФ по нодулярному дерматиту
в 2015 году

1. Республика Дагестан
2. Республика Чечня
3. Республика Северная Осетия

Вновь выявленные (на 01.11.2015):

Республика Дагестан:
1. с. Красное
2. ЗАО "Даграда - Мурада"
3. с. Улубуевка

Республика Северная Осетия:
4. с. Даг-Кох
5. с. Карджин

Продолжающиеся:

Республика Чечня:
1. ст. Капиноеская
2. с. Новотерское
3. с. Подворное
4. с. Бень-Юрт

Республика Дагестан:
5. с. Багиб
6. с. Гервель
7. с. Камилух
8. с. Капош
9. с. Чумулух
10. с. Хадилла
11. с. Хидеб
12. с. Геедыш
Неблагополучные регионы РФ по нодулярному дерматитну
в 2015 году

Республика Дагестан:
1. с.Барнаб
2. с.Камилух
3. с.Красное
4. с.Герель
5. с.Калоб
6. с.Цумилух
7. с.Хадиял
8. с.Хидиб
9. с.Гведыш
10. ЗАО "Дарада - Мурада"
11. х.Улубиевка

Республика Чечня:
12. ст.Калиновская
13. с.Новотерское
14. с.Подгорное
15. с.Кень-Юрт

Республика Северная Осетия:
16. с.Дарг-Кох
17. с.Карджин
Lumpy Skin Disease in the RF in 2016

Epidemic situation in 2016:
- infected Subjects of the RF - 16
- total number of outbreaks - 313

Republic of Chechnya – 108
Republic of Kalmykia – 57
The Republic of Ingushetia – 35
Stavropol region – 30
The Republic of Dagestan – 28
Astrakhan region and the Republic of Karachay-Cherkessia – on 10
Volgograd region – 9
Tambov region – 6
Rostov and Samara region – on 5
Ryazan region – 2
Republic Adygea and Kabardino-Balkaria, Voronezh region – on 1
Krasnodar region – 5

In all cases biomaterial samples were collected and tested by PCR
Неблагополучные регионы РФ по нодулярному дерматиту в 2015 - 2016 гг.
LSD situation in 2016

(N = 289 по данным* на 03.10.2016)

*данные ФГБУ "Центр ветеринарии" (г.Москва) и МЭБ
Lumpy Skin Disease in the RF in 2017

not notification
Damage

- Decrease in milk productivity;
- Abortion;
- Damage to skin;
- Infertility;
- Death of animals;
- Costs of treatment.
Costs analysis:

Loss of milk – 155 000 €
Veterinary treatments – 11 500 €
Laboratory diagnosis:

- LSD is diagnosed based on the epidemiological data, clinical signs, post-mortem findings and laboratory tests;

- FGBI “ARRIAH” performs comprehensive diagnosis which includes:

  • Virological tests: virus isolation;
  • Molecular biology techniques: capripoxvirus detection and identification using multiplex PCR, study of capripoxvirus genome fragments by sequencing;
  • Serological test (neutralization)
  • Bioassay in naturally susceptible animals
Preventive vaccination

Heterologous live attenuated vaccine is used for the disease specific prophylaxis.

FGBI ARRIAH has completed a series of experiments involving cattle infection with the vaccine based on the attenuated sheep pox virus strain “ARRIAH”:

At OIE recommended administration dose of $10^4 \text{TCID}_{50}$ the vaccine demonstrates relevant potency and protects cattle against challenge with virulent LSD virus strain.
Measures taken in case of infection

Legal basis of the control: Order of the Ministry of Agriculture of the Russian Federation No. 81 of May 17, 2005 (Moscow) “Approval of the List of Quarantine and Highly Dangerous Animal Diseases”

1. No cattle movements and regrouping;
2. In case of new disease cases the diseased and suspect animals shall be isolated in the same facilities where they were housed;
3. No marketing of animals, their slaughter products and feed;
4. Samples of pathological materials shall be collected from disease suspected animals and/or from dead cattle and shall be urgently (within 24 hours) sent for testing;
5. Comprehensive measures shall be taken to prevent spread of the disease and to eradicate it taking into account potential confirmation of lumpy skin disease diagnosis.
Measures taken for the infection eradication

According to quarantine requirements in case of the outbreak confirmation on a farm the cattle owners shall do the following:

- Stop all cattle movements and regrouping;
- Ban entrance of unauthorized persons to the farm excluding animal handlers and veterinarians;
- Stop slaughter of animals kept on the farm as well as marketing of animals, their slaughter products and feed;
- Ban exit and entrance of vehicles to the LSD outbreak as well as exit of personnel without decontamination.

As soon as the first LSD cases occurred in a herd the diseased and contact animals shall be withdrawn from the herd. Such animals shall be bloodlessly killed under the due control of the official veterinarians.

In order to prevent the disease spread all LSD susceptible animals located in the outbreak shall be treated with repellents and insecticides. The animals are also subject to vaccination!
Thank you for attention!

FGBI Federal Center for Animal Health
Tel/Fax: (4922) 26-38-77, (4922) 26-06-14, (4922) 26-19-14
E-mail: kononov@arriah.ru