MEVACTM LSD

TRANSBOUNDARY CONTROL



Live attenuated monovalent vaccine for immunization of cattle against Lumpy Skin Disease virus

INTRODUCTION

Lumpy skin disease (LSD) is a poxvirus disease of cattle characterized by fever, nodules on the skin, mucous membranes and internal organs, emaciation, enlarged lymph nodes, oedema of the skin, and sometimes death.1 It is a vector transmitted disease which can spread fast and invade surrounding areas, as far as 7.3 kilometers per week.²

Due to its rapid transboundary spread and substantial economic impact, LSD is listed by WOAH (formerly known as OIE) as notifiable disease.³ LSD is an economically important disease of cattle and can produce a chronic debility in infected animals comparable to that caused by foot and mouth disease (FMD).⁴

Skin lesions (lumps) can result in severe and permanent damage to hides and systemic infection can trigger temporary or permanent sterility in bulls. Oral and respiratory lesions can rapidly deteriorate health conditions and sometimes result in severe emaciation. These symptoms can persist following an outbreak, causing serious economic losses associated to udder teat lesions that compromise milk production and limb lesions which severely restrict movement .4

Consistent results under field conditions demonstrated that mass vaccination with live homologous vaccines can lead to a reduction of monthly cases by 99.4%.⁵

COMPOSITION (before inactivation)

Live attenuated lumpy skin disease virus (Neethling strain) $\geq 10^{3.5} \text{ TCID}_{50} / \text{dose.}$

TARGET SPECIES

Cattle.

INDICATIONS

Active immunization of cattle against Lumpy Skin Disease virus infection.

IMMUNITY

- Onset of immunity: 10 days after vaccination; animals are fully protected after 21 days.
- Duration of immunity: at least 1 year.

VACCINATION PROGRAM

Animals can be vaccinated from early age, as per advice from your veterinarian.

- Primary Vaccination:
 - Cattle: all adult animals should be vaccinated.
 - Calves from vaccinated cows: at 3 months.
 - Calves from unvaccinated cows: at any age.
- Booster vaccination:

- Annual vaccination. It is preferable to vaccinate the animals before the risk period (e.g. early spring).

Emergency cases:

- Vaccinated animals should be boosted with MEVAC[™] LSD after 5-6 months from the primary vaccination to increase the vaccination coverage.

WITHDRAWAL

Zero days.



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PRESENTATION

MEVAC[™] LSD is packed and presented in vials containing a lyophilisate pellet for reconstitution (10, 25, 50 doses).

CONSIDERATIONS

- Swelling at the injection site may occur in very rare cases and usually resolve without treatment.
- A temporary decrease in milk production may occur in very rare cases.
- Can be used during pregnancy (safe during all stages of pregnancy).

DOSAGE

• Cattle: 1 mL per animal via subcutaneous injection, to be applied in the area of the neck.

ADMINISTRATION

- The vaccine must be reconstituted with the provided sterile diluent.
- Using a single-use sterile syringe (3 mL; 16-gauge needle; ³/₄ inches), transfer about 2-3 mL of sterile diluent to the vial containing the vaccine.
- Mix thoroughly until the vaccine is dissolved.
- Transfer the suspension back to the remaining sterile diluent and mix well again.
- Shake the vial before filling the syringe.
- Use sterile injection equipment.
- Use the entire contents when first opened.

References

- 1. OIE terrestrial manual 2017 chapter 2.4.13
- Mercier et al., 2018, Spread rate of lumpy skin disease in the Balkans, 2015-2016
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 LSD cattle disease cases decrease sharply this year, The Nation Thailand, Sept 2022 https://www.nationthailand.com/in-focus/ national/40019616

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