Ethnoveterinary Medicine: An alternative approach for treatment of Lumpy skin disease

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Lumpy skin disease (LSD) strikes cattle like an enigmatic dance of infectious intrigue, choreographed by the Neethling virus from the Pox viridae family. Carried by bloodthirsty ticks and insects, such as crafty flies, relentless mosquitoes, and stealthy ticks, the disease paints its canvas with fever, swollen lymph nodes, and peculiar nodules, adorning the skin and mucous membranes with 1 to 2-inch wonders. Limbs may succumb to oedematous swelling and lameness, while the consequences for the afflicted animals range from marred skin to diminished milk production, debilitation, infertility, and even mortality. The financial toll on farmers from this LSD epidemic has been nothing short of catastrophic.

LSD's story began with a mysterious outbreak in Zambia in 1929, initially mistaken for poisoning or hypersensitivity to insect bites. The 1989 epidemic in Israel was attributed to the diabolical winds that carried infected *stomoxys calcitrans* (stable flies) from Egypt. In 2019, Bangladesh faced its first LSD outbreak, claiming over half a million victims in its grasp, yet the entry mode of this viral intruder remains shrouded in uncertainty.

India, still reeling from the aftermath of the Covid-19 pandemic, witnessed another LSD eruption between July and September of 2022, unleashing havoc on farmers. Rajasthan bore the brunt of this calamity, with over 80,000 reported cases. In response, the nation restricted cattle movement across states and districts and set its scientific minds to work, seeking solace in the creation of an indigenous vaccine. Amidst the chaos, Veterinarians valiantly treated the symptoms, while a glimmer of hope emerged from an unexpected source – the goat pox vaccine, wielding its positive influence against LSD.

Yet, even as Assam grapples with the dual challenges of LSD and the merciless floodwaters, impoverished farmers find themselves facing further devastation. A beacon of low-cost hope emerges in the form of Ethnoveterinary Medication, as recommended by the NDDB. This approach promises to bring relief to beleaguered farmers with its potential for remarkable results, a glimmer of light amidst the darkness of their struggles.

Treatment consists of two methods:

1. Oral administration 2. External application

1. Oral Administration

There are two different preparations in this method

Preparation 1:

Ingredients:

a. Betel leaves (paan ke patte): 10 No.
b. Black pepper: 10 gm
c. Salt: 10 gm
d. Jaggery (gud): sufficient to make paste of good thick consistency

Procedure: blend all the above listed ingredients preferably to a fine paste and mix with jaggery. Feed the prepared dose to the animal.

Dose: To be fed alternatively at a gap of at least one hour for the first day and three times in a day from second day for two weeks.

Preparation 2:

Ingredients:

a. Garlic (Lahasun): 2 pearls
b. Coriander (dhaniya): 10gms
c. Cumin (jeera): 10 gms
d. Tulsi: one handful
e. Bay leaves (tej patta): 10 gms
f. Black pepper (kaalee mirch): 10 gms
g. Betel Leaves (paan ke patte): 5Nos.
h. Shallots: 2 bulbs
i. Turmeric powder: 10 gms
j. Chirata leaf Powder: 30 gms.

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k. Sweet Basil (tulaseedal): 1 handful
l. Neem Leaves: one handful
m. Aegle marmalos (Bel) leaves: one handful
n. Jaggery: 100gms.

Procedure: Blend all the above listed ingredients preferably to a fine paste and mix with jaggery. Feed the prepared dose to the animal in small portion orally.

Dose: To be fed alternatively at a gap of very three hours for the first day and then two doses from second day until healed.

2. External application

Ingredients:

a. Acalypha indica leaves (khokali ke patte): one handful
b. Garlic Cloves: 10 pearls
c. Neem leaves: one handful
d. Coconut oil or sesame oil: 500ml
e. Turmeric powder: 2ogms
f. Mehandi leaves: one handful
g. Tulsi leaves: one handful

Procedure: Blend all the ingredients thoroughly into a fine paste. Mix with 500 ml coconut or sesame oil and boil for at least 2-5 mins and let it cool.

Application: Clean the wound and apply directly. In case wounds are infested with maggot then in addition to this apply Annona leaf (Sugar Apple or Custard Apple) paste or camphorated coconut oil for the first day.

Conclusion

Ethnoveterinary medicine (EVM) is a legitimate and traditional practice of veterinary medicine, often referred to as Ayurveda in India. EVM offers cost-effective solutions that naturally boost the animals' immune system and are readily available locally. Moreover, EVM treatments have no known side effects and may even address issues such as antibiotic resistance and the misuse of chemotherapy drugs for animal treatment. Embracing EVM can be a beneficial and sustainable approach to caring for our animals' well-being.

Reference

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