



D.O No. K-11053/69/2019-LH

Dated: 2nd September, 2021

My dear Secretaries,

You may be aware that there have been incidences of Lumpy Skin Disease (LSD) in cattle in different states namely Assam, Andhra Pradesh, Bihar, Chhattisgarh, Goa, Gujarat, Haryana, Jharkhand, Karnataka, Kerala, Maharashtra, Madhya Pradesh, Manipur, Odisha, Tamil Nadu, Telangana, Uttar Pradesh and West Bengal. In order to prevent the spread of the disease to other areas / States, strict action is required to be taken up by the AH Department of the affected States.

Accordingly, advisory and guidelines were sent to affected states to carry out suggested measures including vaccinations strategy (ring vaccination) in and around affected villages. States were advised that requisite biosecurity measures be strictly enforced in letter and spirit so that the disease is contained and controlled at the earliest and further spread halted. Further, States were requested to commence clinical surveillance wherever necessary, if not done till date, so that suspected LSD cases could be confirmed from samples sent to ICAR-NIHSAD, Bhopal.

However, it is observed that incidences of LSD are reported in new areas/ States and therefore, it is reiterated that the following preventive measures as well as isolation of the affected animal should be implemented immediately, to prevent future LSD incidences.

- a) **Control of animal movement** -In order to minimize the economic impact of the outbreaks and to control LSD, the movement of animals to and from the infected area should be completely banned. This will check the transmission/spread of LSD
- b) **Restriction with affected animals and persons dealing with such animals**-Movement of people to and from the affected area should be restricted. Animal handlers and those attending to affected animals should be advised to keep away from healthy animals.
- c) **Vaccination:** The infected villages be identified so that precautionary plans are carried out in a specific area and ring vaccination carried out in villages upto 5 km around the affected village. Cattle and buffaloes should be vaccinated with available Goat pox vaccine (cattle and buffalo at the age of 4 months and above through S/C route) with $10^{3.5}$ TCID₅₀ of GTPV vaccine (*Uttarkashi* strain). However, affected animals should not be vaccinated
- d) **Bio-security measures:**
 - Immediate isolation of sick animal from healthy animals. Symptomatic treatment of affected animals may be carried out with all precautions and biosecurity measures. Feeding of liquid feed, soft feed and fodder is recommended.
 - Clinical surveillance against LSD in affected districts and around surrounding villages should be intensified.
 - The buffaloes should be kept separately till complete recovery of the affected animals, if reared together
 - Dis-infection of premises at regular intervals
 - Ecto- parasiticide should also be applied to healthy animals on the infected and on surrounding farms
 - The persons dealing with the infected animal should wear gloves and face mask and carry out hygienic and disinfection measures at all time
 - Care should be taken to report any unusual sickness of other animals to nearest veterinary Hospital/Dispensary

- Hygienic practices should be followed at the animal farm and by the people in area where animals are infected
 - Farms with affected animals should be visited regularly by the field veterinarians until all the cases are recovered. The veterinary staff should take all precautionary hygienic measures to avoid further spread of disease to other farms/households
 - In case of mortality, carcass should be disposed of by deep burial method observing all hygienic measures
 - Cattle markets located within 10 km radius of the epicentre of infection should be closed
 - Trade of live cattle, participation in fairs, shows should be banned immediately upon confirmation of the disease in the affected areas
 - Semen from LSD affected animals should not be collected and processed for production and distribution
- e) **Vector control:** Control of vector population (ticks, flies, mosquitoes, fleas, midges) in the premises and the animal body should be carried out using the insecticide, repellents and other chemical agents.
- f) **Disinfection and cleaning measures:** Affected Premises, vehicles plying through the affected animal holdings should be carried out with appropriate chemicals / disinfectants [Ether (20%), chloroform, formalin (1%), phenol (2% /15 minutes), sodium hypochlorite (2-3%), iodine compounds (1:33 dilution) and quaternary ammonium compounds (0.5%)].
- g) **Awareness programme:** Mass awareness campaign to be taken up to make the public aware of the disease and report to the veterinary authority immediately when suspected cases are detected. This will help in prevention and control of LSD.
- h) Regular training and sensitization of veterinarians including awareness to animal owners and other stake holders should be enhanced on clinical presentation of the disease along with surveillance strategy and control measures.
- i) Animal Husbandry Department should maintain proper liaison with police and border agencies to check illegal entries of cattle from neighbouring countries (wherever required)

I therefore request you to kindly bestow your personal attention and direct the officials concerned to ensure carrying out the above measures as well as those suggested in earlier advisories, to control this disease.

With best regards,

Yours sincerely,

Upamanyu Basu
(Upamanyu Basu)

Encl: a/a

To,

Principal Secretary, Animal Husbandry Department (Assam, Andhra Pradesh, Bihar, Chhattisgarh, Goa, Gujarat, Haryana, Jharkhand, Karnataka, Kerala, Maharashtra, Madhya Pradesh, Manipur, Odisha, Tamil Nadu, Telangana, Uttar Pradesh, West Bengal)

Copy to:

Director/Commissioner, Animal Husbandry Department (Assam, Andhra Pradesh, Bihar, Chhattisgarh, Goa, Gujarat, Haryana, Jharkhand, Karnataka, Kerala, Maharashtra, Madhya Pradesh, Manipur, Odisha, Tamil Nadu, Telangana, Uttar Pradesh, West Bengal)

The following measures should be imposed for prevention of LSD (Lumpy Skin Disease)

1. **Movement control of animals:** In order to minimize the economic impact of the outbreaks and to control LSD, the movement of animals to and from the infected area should be completely banned. This will check the transmission/spread of LSD
2. **Restriction to be enforced with affected animals and the persons dealing with infected animals:** Movement of people to and from the affected area should be restricted. The animal handlers and those attending to the affected animals should be advised to keep away from healthy animals. It is therefore, of utmost importance to ensure these safety measures
3. **Vaccination:** The infected villages be identified so that precautionary plans will be carried out in a specific area and ring vaccination will be carried out in villages upto 5 km around the affected village. Cattle and buffaloes should be vaccinated with available Goat pox vaccine (cattle and buffalo at the age of 4 months and above through S/C route) with $10^{3.4}$ TCID₅₀ of GTPV vaccine (Uttarkashi Strain). However, affected animals should not be vaccinated
4. **Bio-security measures:**
 - Isolation of sick animal from the healthy animals
 - Clinical surveillance against LSD in affected districts and around surrounding villages should be intensified
 - The buffaloes should be kept separately till complete recovery of the affected animals, if reared together
 - Disinfection of premises at regular intervals
 - Ecto-parasiticide should also be applied to healthy animals on the infected and on surrounding farms
 - The persons dealing with the infected animal should wear gloves and face mask
 - Care should be taken to report any unusual sickness of other **animals to nearest veterinary Hospital/Dispensary**
 - Hygiene practices should be followed at the animal farm and by the people in area where animals are infected
 - Farms with affected animals should be visited regularly by the field veterinarians until all the cases are recovered. The veterinary staff should

take all precautionary hygiene measures to avoid further spread of disease to other farms/households

- In case of mortality, carcass should be disposed of by deep burial method observing all hygienic measures
- Cattle markets located within 10 km radius of the epicentre of infection should be closed
- Trade of live cattle, participation in fairs, shows should be banned immediately upon confirmation of the disease in the affected areas

5. **Vector control:** Control of vector population in the premises and the **animal** body should be carried out using the insecticide, repellents and other chemical agents.

6. **Awareness programme:** Mass awareness campaign to be taken up to make the public aware of the disease and report to the veterinary authority immediately when suspected cases are detected. This will help in prevention and control of LSD.

**Information for Immediate Notification of Lumpy Skin Disease
(Separate sheet for each epicenter)**

Name of Epicenter -	Details to be given
1) Date of start of the event / outbreak /symptoms noticed	
2) Date of sample submission	
3) Date of confirmation of the event by NIHSAD or RDDDL	
4) Name of the state, district, block, village i.e. details of the epicentre of the outbreak	
5) Type of establishment	
6) Latitude and longitude of the epicentre	
7) Animal species affected and number of each species affected	Cattle Buffalo Others specify
8) Number of susceptible animals	Cattle Buffalo Others specify
9) Number of cases	Cattle Buffalo Others specify
10) Number of animals died (mortality cases)	Cattle Buffalo Others specify
11) Number of animals killed and disposed of	
12) Number of animals slaughtered (meat used for human consumption)	
13) Epidemiological findings	
14) Control measures applied	
15) Whether treatment given to animals, if so specify	
16) If Vaccination done name of the vaccine and animals vaccinated	
17) Date of end of the event or outbreak if all animals have recovered	

Advisory - Lumpy Skin Disease (LSD)

Lumpy skin disease (LSD) is an infectious viral disease of cattle and buffaloes caused by the *Capripox* virus of family *Poxviridae*. It is transmitted by arthropod vectors such as mosquitoes, biting flies and ticks. The disease is characterised by mild fever for 2-3 days followed by development of stiff, round cutaneous nodules (2-5 cm in diameter) on the skin all over the body. These nodules are circumscribed, firm, round, raised and involves the skin, sub-cutaneous tissue and sometimes muscles. Symptoms may include lesions in mouth, pharynx and respiratory tract, emaciation, enlarged lymph nodes, oedema of limbs, reduction in milk production, abortion, infertility and sometimes, death.



Although infected animals often recover within a period of 2-3 weeks, there is reduction in milk yield in lactating cattle for several weeks. The morbidity rate is around 10-20% and mortality rate is around 1-5%.

Clinical Surveillance

Clinical surveillance of susceptible cattle population for nodular skin lesions should be carried out along with recording of morbidity and mortality data in LSD-suspected areas. Monthly clinical surveillance data should be communicated to DAHD in the format annexed.



Referral of Samples from clinically affected animals

Representative samples (EDTA blood and skin biopsies/scabs) from animals in LSD suspected outbreaks should be referred to ICAR-NIHSAD, Bhopal for laboratory testing.

Prevention and Control:

- a) Immediate isolation of sick/ infected animals from the healthy animals

- b) Any animal suspected of febrile nodular skin disease should not be introduced into the unaffected holding or farm
- c) In affected villages and animal holdings, the affected animal should be kept separate from unaffected animals by avoiding common grazing and thereby direct contact
- d) Efforts should be made to reduce the vector population in affected areas. Unaffected animal should be applied with insect (ticks, flies, mosquitoes, fleas, midges) repellent to minimize mechanical transmission of LSD
- e) Ensure strict control of animal movement from affected areas to free areas and to local animal markets
- f) Trade of live cattle, participation in fairs, shows should be banned immediately upon confirmation of the disease in the affected areas
- g) All biosecurity measures and strict sanitary measures for disposal of personal protective equipment (PPE) etc. used during sampling from affected animals should be followed
- h) Cattle markets located within 10 km radius of the epicentre of infection should be closed
- i) Thorough cleaning and disinfection of affected personnel, premises and contaminated environment including vehicles plying through the affected animal holdings should be carried out with appropriate chemicals/disinfectants [Ether (20%), chloroform, formalin (1%), phenol (2%/15 minutes), sodium hypochlorite (2–3%), iodine compounds (1:33 dilution), quaternary ammonium compounds (0.5%)].



Bovine Semen:

1. Semen should not be collected and processed for frozen bovine semen production and distribution from the animals showing clinical sign of LSD
2. The blood and semen from affected and clinically recovered animals shall be subjected to agent detection by PCR with negative results before use for AI/natural service

Awareness campaign

Awareness campaign regarding the clinical signs and production losses due to LSD shall be conducted. Reporting to the veterinary authority should be done immediately when suspected cases are noticed.

Treatment

- a. Sick animals are to be kept in isolation
- b. Symptomatic treatment of affected animals may be carried out in consultation with veterinarian
- c. Administration of antibiotics for 5-7 days to check secondary infection may be considered on case to case basis to check secondary bacterial infection.
- d. Administration of anti-inflammatory and anti-histamine preparation may also be considered.
- e. In case of pyrexia, paracetamol can be given
- f. Application of antiseptic ointment with fly-repellent property over the eroded skin is recommended
- g. Parenteral / oral multivitamins is advised.
- h. Feeding of liquid food, soft feed and fodder and succulent pasture is recommended for the infected animals.



Disposal of carcass of LSD-affected animals

In cases of mortality, animal carcass should be disposed of by deep burial.

Annexure

Format for Reporting on Monthly clinical surveillance data on LSD

Month:

Name of the State:

Sl. No	No. of Samples screened at State level	No. of Samples submitted to NIHSAD, Bhopal	No. of animals found positive	Name of the District