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Action Plan for Control and Containment of Glanders in Equines

**Government of India
Ministry of Agriculture
Department of Animal Husbandry, Dairying & Fisheries**

Action Plan for Control and Containment of Glanders in Equines

Introduction:

- Glanders is a contagious and fatal disease of horses, donkeys, and mules, caused by infection with the bacterium *Burkholderia mallei*.
- The pathogen causes nodules and ulcerations in the upper respiratory tract and lungs. A skin form also occurs, known as 'farcy'.
- Control of Glanders requires testing of suspect clinical cases, screening of apparently normal equids, and elimination of reactors.
- The disease has zoonotic potentials and *B. mallei* can be transmitted to humans. Due to the high mortality rate in humans and the small number of organisms required to establish infection, *B. mallei* is regarded as a potential biological warfare or bioterrorism agent.
- In the past, the disease was sporadically recorded in India and was last reported in 1986 which was successfully controlled and contained.
- Since 1988 there was no outbreak till August 2006 when the same was reported from Maharashtra after a long gap almost 20 years. This was followed by outbreaks in UP, Punjab, Uttarakhand, Andhra Pradesh and Himachal Pradesh.
- The sporadic incidences were also being reported at regular interval since 2006.
- The Department in 2007 had communicated an Action Plan outlining the various measures to be taken at the time of outbreaks and also for carrying out the surveillance program.
- Thereafter, the Department of Animal Husbandry, Dairying and Fisheries is continuously issuing advisories to States for prevention & control of Glanders including public awareness.
- However, recently, in 2016, States like J&K and Uttar Pradesh are regularly reporting the disease. Similarly, Gujarat and Uttarakhand has also reported the disease incidence. A number of sero-positive animals are increasing day by day.

Legislative back up:

- Glanders Disease is notifiable under the Prevention and Control of Infectious and Contagious Diseases in Animal Act, 2009 and hence, State Governments need to take necessary control measures as per provisions of the Act.
- All States have already framed the rules under Section 42 of the Act for Quarantine Camps and Check-post, Manner of Inspection etc., enabling states to examine the animals entering into the States

- Veterinary Officers as well as Veterinarians should be notified by the State as required under the Act if not done earlier who could exercise and perform the duties within their jurisdiction as per powers conferred on them as per provisions of the Act
- The State Animal Husbandry Department should also report any suspicion of disease or confirmed cases through National Disease Reporting Systems (NADRS) to the Central Government.

Action to be taken by States:

- In order to prevent, control & contains Glanders effectively in the States, following actions should be taken by the States.

A. Pre outbreak

The State Animal Husbandry Department should take following measure throughout the year to prevent spread of the disease:

- **Surveillance**
- The State Animal Husbandry Department should carry out intensive physical and clinical surveillance of susceptible animal population throughout the year on regular basis.
- Active surveillance should be carried out covering all the equines in the villages/ equine movement routes/ stables / fairs for Glanders so as to detect latently infected carrier horses.
- However, in endemic states 100% equine population within 5 Km radius of foci of glander outbreak and 50% equine population in next 5 km radius should be covered under surveillance programme.
- If the animals are found sero-positive, all control and containment actions should be followed as required under the Act.
- The sero-positive animal should be traced immediately and if animal is already moved to other place then further movement should be stopped and culled. All in contact animals of the sero-positive animals at previous location and the migrated location should also be tested.
- Further, suspected cases (debilitated equines, equines showing signs of nasal catarrh, nodular growth on skin) should be quarantined and subjected to test for which samples need to send to National Research Centre on Equines(NRCE),

Hissar or other designated laboratory in case of thorobred horses or Military horses.

- If found positive, animal should be culled immediately. All the zoo-sanitary measures should be followed at the time of culling and disposal of carcasses.
- Sampling of susceptible/in-contact animals should be carried out as follows:

Sl. No	Animals	Procedure
01	Horses / Mule / Donkeys	<ul style="list-style-type: none"> • 100% 5 km around the nuclei infection • 50% next 5 km above around the nuclei infection.
02	Thoroughbred	<ul style="list-style-type: none"> • 100% related to all movement of horse including race horses Irrespective of the distance in State • Organised equine establishment 100%
03	Stud Farms	<ul style="list-style-type: none"> • 100% yearlings and 100% foals • 20% mares and stallions at the Studs

- Extensive physical surveillance in districts around 50 k.m. from the nucleus of infection should also be carried out.
- **Public Awareness**
 - Glanders being a zoonotic nature, there is a need to conduct mass public awareness by State Animal Husbandry Departments by organizing State/regional/district/block/village level workshops to sensitize the stakeholders (govt. vets and paravets, private paravets, medical authorities, traders and equine owners at fairs/pilgrim sites etc.) regarding importance of the disease, its implication on equine and human health.
 - Regular awareness campaign should also be undertaken among the pilgrims/ tourist in the pilgrimage/ tourist places where horses/donkeys/ mules are used as a means for transportation.

B. During Outbreak Control measure:

The State Animal Husbandry Departments Should take following steps during the outbreak of the disease:

- The States could immediately adopt the combat measures depending upon the sources available with state veterinary services and follow the following steps:

- Once the outbreak is confirmed, then the State should notify the disease immediately under **the Prevention and Control of Infectious and Contagious Diseases in Animal Act, 2009**. Declaration of the Glanders for the first time in the state should preferably be based on isolation of the etiological agent.
- State should send intimation of the notified outbreak to neighbouring States as required under Act, 2009.
- All other measures for notifying the outbreak for general public may also be taken as per the provisions of the Act.
- Appoint Veterinary Officers as well as Veterinarians who could exercise the powers conferred on them and perform their duties as per provisions of the Act.
- Vacate the affected stables and standings soon after the detection of first Glander case.
- Culling of infected animals should be carried out immediately and carcass to be disposed off suitably. Carcasses may be disposed of either by burial or burning immediately to prevent the spread of the disease.
- For burial, a suitable site away from streams, river, canals or other water supply to be selected. A pit about minimum 8 ft. deep is to be made and dead animal should be put into the pit. The carcass should be covered with quick lime followed by filling of the pit. The area should be fenced and to be protected to prevent access of stray dogs. In this regard, the **Prevention & Control of Infectious and Contagious Disease in Animals (Form of Vaccination Certificate Manner of Post Mortem Examination & Disposal of Carcass) Rules 2010**, in vogue need to be followed.
- All affected area including stables, water and feeding troughs, other fittings should be disinfected using suitable disinfectants or by using blow lamps or by burning soiled hay and all contaminated disposable equipments and other materials.
- The attendant/ veterinarians/ para-vets and health workers in close contact with the diseased animal should follow high standard of personal hygiene and strict antiseptic measures. The personals should preferably remain themselves away from the non-infected flocks.
- The State Animal Husbandry Department should send a daily report through National Disease Reporting Systems (NADRS) to the Central Government till the incidence is nil and surveillance is over. Monthly report need also to be sent to this Department

- The NRC Equine will test the samples as per the OIE prescribed tests for Glanders.
- **Ban on movement of horses.**
 - Monitor/restrict the equines movement to and from the infected area
 - Further, movement of all horses/ equines is to be restricted for at least 3 months from the last culling of positive reactor horse. After 3 months based on physical examination and serological tests results, further restriction of movement of horses is to be decided by the State Department depending on the disease situation. In case of no case of Glanders is reported then movement is allowed based on sero negativity.
 - No fares of horses should be allowed to be held for 3 months from the last case of culling and disinfection.
- **Compensation:**
 - State Animal Husbandry Department should develop a fast-track strategy in releasing compensation amount so that the owner may be re-imbursed before hand.
 - Department has already communicated rates of compensation vide letter No. 53-57/2006-LDT(LH) Pt. Vol. II dated 18th August, 2015 based on the rates notified by Ministry of Home Affairs for assistance from the State Disaster Response Fund (SDRF)/National Disaster Response Fund (NDRF) to be paid under ASCAD on 50:50 basis. The rates are as under:
 - (i) Rs. 25,000/- for Horse
 - (ii) Rs. 16,000/- for Donkey/Pony/Mule
- There is a need to conduct mass public awareness by State to sensitize the stakeholders (govt. vets and paravets, private paravets, medical authorities, traders and equine owners at fairs/pilgrim sites etc.) regarding importance of the disease, its implication on equine and human health.
- **Role of National Research Centre ON Equines (NRCE):**
 - All the samples collected as a surveillance programme shall be tested by the NRCE as per the OIE approved tests.
 - The NRCE will also build necessary capacity in this regard. The NRCE may also help in capacity building of the Regional Disease Diagnostic Laboratories (RDDLs) and also State labs having required capacity to carry out disease testing for samples collected under surveillance.

C. Post Outbreak:

- The post outbreak surveillance programme should be aimed at:
 - (i) Detecting any latent foci of disease
 - (ii) Estimating level of disease in population
- The animals in contact should be inspected physically and also sero surveillance to be carried out for a period of two months. All positive reactors showing clinical picture, positive on CFT and/or by approved test need to be eliminated.
- The details of affected districts/ Taluka indicating the total strength of horses are to be prepared. Mapping of equine movement routes around 5 km from the nuclei of infection should be worked out and on defined routes where movement of horses is in vogue need to be monitored for clinical examination of the animals by designated State Veterinary Officers.