

Post-Fmd Sequelae on Animal Health And Productivity

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Foot and Mouth Disease (FMD) is a major viral disease of cattle buffaloes, sheep, and goats. It is a deadly contagious disease that spreads through contaminated air and water. Intermittent outbreaks appear all along year in country in all three seasons. The disease has become a critical concern for livestock owners for the last two-three years. Foot and Mouth Disease along with infection brings with it many adverse effects related to animal health as well as the economics of animal husbandry. The spread of FMD restricts the production and export of livestock products. Therefore, the economic loss of animal husbandry-based industry makes a negative impact on the GDP of the country. Hence, controlling this disease is a primary priority in the interest of farmers, livestock sector and alternatively for the country. At present, vaccination is one of the convenient and best ways to prevent the spread of this deadly disease. To this end, the Government of India has already set a target of vaccinating every animal in the country through the National Animal Disease Control Program launched during year 2019. Every livestock farmer needs to make substantial efforts to prevent this disease from entering in his herd. With concrete and sizable undertaking by all stakeholders we can avoid loss towards treatment cost, labour, time, milk, animal productivity etc. due to FMD.

Commonly, there is 100% morbidity observed in situation of FMD outbreak. Out of the total seven major serotypes of FMD virus, O, A, and Asia-1 strains found in India. FMD virus become ineffective in intense sunlight, high acid / alkaline environments. However, cold climate is conducive to the efficacy and spread of the disease. The disease is transmitted through all the body secretions (saliva, tears, milk, semen, urine, dung, etc.) from the infected animal.



FMD is an easily identifiable disease of animal. Initially the animal gets high fever for 2- 3 days. Animal becomes off feed, avoid drinking water. The animal becomes dull and lethargic. Dairy animal milk production decreases. Pustules, blisters occur at mouth, lips, palate, tongue, and gums of the animal. The condition becomes painful thus, chewing/ drinking movement becomes restricted. Similar lesions observed at udder, legs, and hooves in infected animal. Younger calves are more susceptible to this disease. In native animals 2-3% mortality is observed as compared to 10-20% in crossbred animals. However, in recent times, large scale mortality of adult animal due to FMD has become a matter of great concern among livestock owners. Course of disease outbreak, loss of production, cost of treatment becomes a turmoil for livestock farmers. In this disease, there is reduction in immunity, loss of physical strength, loss of overall productivity of animal.

FMD has many long-term consequences on health and productivity of animal,



- 1. Mastitis:** Usually, mastitis is a major problem associated with FMD in milch animals. There are blisters on epithelium of teats and udder of animals. Lack of proper treatment and care can lead to severely affected udder and further complications. Blisters on teats and udder are painful and may cause secondary bacterial infection. Dairy losses due to mastitis in milch crossbreds increase the financial burden on the owner.
- 2. Abortion:** Abortion due to the outbreak of this disease in pregnant animals is a complex problem. Infection of the foetus of a pregnant animal can lead to stillbirth. Domestic/ crossbred cows are more affected by this disease than buffaloes. Abortion can cause temporary or long-term infertility in animals. Diseased animals or recovered animals do not show normal oestrous cycle or do not remain pregnant easily. Rarely, problems like repeat breeders appear in cows following disease outbreak.
- 3. Lameness:** This disease causes rashes / blisters on the hooves/ feet of the animal. The animal becomes lame. The painful blisters on the hoof breaks and transformed in well-defined lesions. If these lesions get contaminated with faeces and urine, maggot infestation becomes a common phenomenon delaying recovery of animal. In some animals, the hoof falls off. Permanent lameness can also occur in such animals. Due

to the pain in the wound, the animal does not move, it stays at one place. After the disease is cured, some animals develop distorted hooves

4. **Retarded Growth:** After the course of disease is over, the growth of calves and heifers becomes stunted. Normally, the animal does not attain expected growth. The skin of the diseased animal loses shine, loss of hairs or excessive hair growth is observed. In overall scenario FMD affects the endocrine system, destroys the function of hormones, and hinders normal growth of the animal.
5. **Diabetes:** Diabetes can occur in animals just like in humans. Diabetes caused post-FMD infection brings hidden heavy losses to the animal owners. Post-FMD-related disorders, such as diabetes, have been recorded in many animals specially milch animals. Proportionately, crossbred animals were affected more as compared to indigenous animals. Diabetic animals become weak. Their feed intake is reduced, there is a decrease in appetite. Animal becomes emaciated. The animal always stays very thirsty and drinks a lot of water, urinates a lot. Due to dehydration state, the faeces are thick, scanty, and foul smelling. The animal does not recover in size and weight even after supplements/ treatment/ deworming. Diabetes is diagnosed in a blood-urine test in such animals. In animals, ketone bodies and high blood sugar level is observed.

In addition to the long-term adverse effects mentioned above, FMD has a detrimental effect on the overall health of the animal and can result in permanent loss of productivity of the animal.

Sl No	Particulars/ description	Image
1	FMD: Mouth ulcers	

2	FMD: feet lesions	
3	FMD: Blisters on teats	
4	FMD: Blisters on tongue	