



Monsoon diseases affect the cattels and buffalos: Prevent by vaccination

Durga Shankar Goswami¹ and Seema Jat²

¹Agriculture Research Station, Kota (Rajasthan) India

²Dayanand College, Ajmer (Rajasthan) India

(Email : goswamiahs@gmail.com)

Our country is endemic to many diseases that cause severe economic losses due to drastic reduction in the production capacity. Some of the diseases are even highly fatal. Fortunately, vaccines are available for most of these diseases in our country and can be easily controlled if timely vaccination is carried out in a mass scale, covering a large proportion of the susceptible population (at least 80%). The following diseases:

Foot and mouth disease (FMD): The foot-and-mouth disease is a highly contagious viral disease, spreads by direct contact or indirectly through infected through contact, contaminated water, feed and air. The disease affecting cloven-footed animals. In India, the disease is widespread and assumes a position of importance in livestock industry a highly contagious viral disease.

Causal organism: It is a viral disease caused by Aphthovirus, Family - Picornaviridae.

Symptoms:

- Fever with 104-105 F
- Drastic drop in milk production and working capacity (draft animals).
- Vesicles may be seen on tongue, dental pad, lips, gums etc.
- Vesicle in inter-digital cleft may lead to lameness.
- Lesions on teat may lead to mastitis.
- Loss in condition may persist even after recovery.
- Cross bred cattle are highly susceptible to it.



Prevention:

- Get your animals aged 4 months and above vaccinated once in 6 months.
- Infected animals should be immediately separated

since all excretions and secretions from infected animals contain the virus.

- All feed and fodder in contact with the infected animal should be destroyed.
- All equipment used should be cleaned and disinfected with 4 per cent sodium carbonate solution or as suggested by a veterinarian.
- Healthy animals should not be handled by persons in contact with infected animals.
- The infected premises should be disinfected with 4 per cent sodium carbonate solution or with the disinfectant suggested by a veterinarian.
- Vaccinating sheep, goat and pigs would control the disease to a better extend.
- Informing authorities promptly would enable them initiate control measures at the earliest which will help in limiting the spread of the disease.

Treatment:

- The external application of antiseptics contributes to the healing of the ulcers and wards off attacks by flies.
- A common and inexpensive dressing for the lesions in the feet is a mixture of coal-tar and copper sulphate in the proportion of 5:1.

Haemorrhagic septicaemia (HS): This is an acute bacterial disease of cattle and buffaloes which usually occurs during monsoon. Germs of this disease survive longer in humid and waterlogged conditions. In this disease mortality rate may be as high as 80 per cent.

Causal organism: It is a bacterial disease caused by *Pasteurella multocida*.

Symptoms:

- High temperature, sudden decrease in milk yield.
- Salivation and serous nasal discharge.
- Severe oedema of the throat region.
- Difficulty in breathing, animal produces a grunting sound.
- Animal usually dies within 1-2 days of showing symptoms.
- Buffaloes are generally more susceptible than cattle.

– Animals with clinical signs, particularly buffalo, rarely recover.

– In endemic areas, most deaths seen in older calves and young adults.



Prevention:

– Segregate the sick animal from healthy ones and avoid contamination of feed, fodder and water.

– Avoid crowding especially during wet seasons.

– Vaccinate all animals which are 6 months and above of age annually before the onset of monsoon in endemic areas.

Treatment:

– Treatment is usually ineffective unless treated very early, that is during the stage when fever sets in.

– Few animals survive once clinical signs develop.

– Case fatality approaches 100 per cent if treatment is not followed at the initial stage of infection.

Black quarter (Black-leg): It is an acute infectious and highly fatal, bacterial disease of cattle. Buffaloes, sheep and goats are also affected. Young cattle between 6-24 months of age, in good body condition are mostly affected. It is soil-borne infection which generally occurs during rainy season. In India, the disease is sporadic (1-2 animal) in nature.

Causal organism: It is a bacterial disease caused by *Clostridium chauvoei*.

Symptoms:

– Sudden high fever (107°F-108°F) and the animal stops eating and ruminating.

– Characteristic hot and painful swelling develops on loin and buttocks causing lameness. Swelling sometimes affects shoulders, chest and neck also. When pressed, a crackling sound is heard because of the gas accumulation in the swellings.

– Animal dies within 24-48 hrs of appearance of symptoms. At this juncture, swellings become cold and painless.



Prevention:

– Vaccinate all animals which are 6 months and above

of age annually before the onset of monsoon in endemic areas.

– Burning the upper layer of soil with straw to eliminate spores may be of help in endemic areas.

– Sprinkle lime over carcass at the time of burial.

Treatment:

– Treatment may be effective in initial stages of infection. However, in most cases treatment is not worth the while.

– Penicillin @ 10,000 units /kg body weight IM and locally daily for 5-6 days.

– Oxytetracycline in high doses *i.e.* 5-10 mg/kg body weight IM or IV

– Induce the swelling and drain off

– B.Q. antiserum in large doses, if available.

– Injection. Avil / Cadistin @ 5-10 ml IM.

Anthrax: A highly fatal bacterial disease affecting all farm animals. Anthrax is characterized by high fever, respiratory distress, bleeding from orifices and sudden death. Disease Infection is due to ingestion of contaminated feed and fodder with spores of the bacteria, which can survive for upto 30 years in the soil. Treatment is usually ineffective unless done at very early stages. Humans get infection by eating infected raw meat, contact with infected animals or by inhalation of spores.

Causal organism: It is a bacterial disease caused by *Bacillus anthracis*.



Prevention:

– Regular annual vaccination of animals in endemic areas will prevent the disease from occurring.

– Vaccination may be carried out at least a month prior to expected disease occurrence in endemic areas.

– Never open a carcass of an animal suspected to have died from anthrax.

– Contact a veterinarian immediately if the above symptoms are seen and seek advice on control measures to be adopted.

Rinder pest (cattle plague): Rinder pest is the most destructive of the virus diseases of cloven-footed animals, such as cattle, buffaloes, sheep, goats, pigs and wild ruminants. Its control was a major issue till recently all

over the world. Organized efforts over half a century have brought about a total eradication of the disease in the Western Hemisphere. The disease still persists in the Asian countries.

Causal organism: It is a virus disease caused by a *Morbillivirus* of the family *Paramyxoviridae*.

Symptoms:

- Rise in temperature upto 104 – 107 0 F. Lacrimation and redness of eye. The virus is found notable in the saliva; discharge from eyes and nostrils and in the urine and faeces.

- It is present in the circulating blood during the febrile stage and is later concentrated in different organs, especially in the spleen, lymph nodes and liver.

- Foul odour from mouth.

- Discrete necrotic foci develop in the buccal mucosa, inside lip and on the tongue.

- Bloody mucoid diarrhea is noticed.



Treatment: Symptomatic treatment with penicillin, streptomycin, sulphadimidine and intestinal antiseptics has no action on the virus, but may help in the recovery of less severe cases of rinderpest, as these control secondary complications caused by bacteria.

Milk fever: Milk fever, also known as parturient hypocalcaemia and parturient paresis, is a disease which has assumed considerable importance with the development of heavy milking cows. Decrease in the levels of ionized calcium in tissue fluids is basically the cause of the disease. In all adult cows there is a fall in serum-calcium level with the onset of lactation at calving. The disease usually occurs in 5 to 10 year old cows, and is chiefly caused by a sudden decrease in blood-calcium level, generally within 48 hours after calving.

Causal organism: It is a milk fever caused by a sudden decrease in blood-calcium level.

Symptoms:

- In classical cases, hypocalcaemia is the cause of clinical symptoms. Hypophosphataemia and variations in the concentration of serum-magnesium may play some subsidiary role.

- The clinical symptoms develop usually in one to

three days after calving. They are characterized by loss of appetite, constipation and restlessness, but there is no rise in temperature.



Rabies: A highly fatal viral disease mainly transmitted by bite of a rabid dog. Humans can also get the disease through bites of rabid dogs. Wild carnivores and bats also present a considerable risk where the disease is prevalent. The disease is endemic in India.

Causal organism: It is a viral disease caused by bites of rabid dogs.

Symptoms:

- Hyperexcitability.

- Drooling of saliva y Peculiar hoarse sound (bellowing).

- Aggression or paralysis.

- The animal dies within 24-48 hours after appearance of first sign, which may be mostly seen within 3 weeks or as late as 5-6 months of the dog bite. Once symptoms are seen, death is inevitable.



Prevention:

- Wash the wound immediately in running water for 5-10 minutes.

- Gently clean the wound with bath soap.

- Consult a veterinarian immediately.

- Carry out post-bite vaccination in suspected cases.

- Protect your pet dogs and cats against the disease through annual vaccination.

Important points to be kept in mind during vaccination:

- Animals should be in good health at the time of vaccination.

- The cold chain of the vaccines wherever prescribed

Table 1: Vaccination schedules for cattle and buffaloes

Sr. No.	Name of disease	Age of first dose	Booster dose	Subsequent dose (s)
1.	Foot and Mouth Disease (FMD)	4 months and above	1 month after first dose	Six monthly
2.	Haemorrhagic Septicaemia (HS)	6 months and above	-	Annually in endemic areas
3.	Black quarter (BQ)	6 months and above	-	Annually in endemic areas.
4.	Anthrax	4 months and above	-	Annually in endemic areas.
5.	Rabies (Post bite therapy only)	Immediately after suspected bite	4 th day	7,14, 28 and 90 (optional) days after first dose

should be maintained till the time of administration to the animal.

- The manufacturers' instruction on the route and dosage should be strictly followed.
- Minimum vaccination coverage of 80 per cent of population is required for proper control of the disease.
- It is beneficial to deworm the animals 2-3 weeks before vaccination is carried out for better immune

response.

- Vaccination should be carried out at least a month prior to the likely occurrence of the disease.
- Vaccination of animals in advanced pregnancy may be avoided even though in most cases nothing untoward may happen.

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