



**Date of Acceptance:** January 25, 2019

**Published on:** February 5' 2019

## CONTROL OF IMPORTANT DISEASES IN DOMESTIC ANIMALS

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Control measures minimize harms to the animals during outbreaks of infectious or contagious diseases. It varies from country to country. In Asian and African countries very limited approach is made to control the disease due to obvious financial implication towards vaccine cost and execution. Besides there is limitation of slaughter of infected animals.

In developed countries, large scale vaccination programme with strict quarantine and slaughter measures are employed. There is also stamping out policy where all infected animals are slaughtered and the carcasses are either buried or burnt. By adopting this method and vaccination programme as well, it has become possible to eradicate this disease from many countries of the world, But this has not been possible in India due to economic strain and religious grounds.

Young animals are very prone to infections than adult animals. They should be separated to each other and first of all it should be divide herd of animals to follow the common rules as well as to control the several infectious or contagious diseases. The important infectious diseases were observed in Cattle & Buffalo is Foot & Mouth Disease (FMD), Hemorrhagic Septicemia (H.S.), Black Quarter (B.Q.), Anthrax pox etc. and in Goat is Enterotoxaemia, FMD, Peste des Petits Ruminants (PPR), Goat Pox, H.S. B.Q. & Anthrax etc.

Flood are one of the most common natural disasters and it has become an annual event in Bihar causing extensive damage to agricultural, production, loss of property, and livestock and loss of human life. Animal standing in contaminated flood water for long period and underfeeding, animals become weak, their disease resistance power goes down and they become prove to various kinds of disease common animals illness caused by sewage contaminated water include tetanus, food poisoning, dysentery hepatitis etc.

There are following common rules for control of diseases in animals:

- (A) General measures
- (B) Prophylaxis measures

### (A) GENERAL MEASURES

#### 1. ISOLATION

In case of outbreaks or in possibility of outbreaks of infectious or contagious diseases all the animals should be examined thoroughly by veterinarians. If the symptom of disease appears like fever, salivation, epiphora secretion from nose, mouth and natural orifices, swelling on neck region, diarrhoea & anorexia etc. then such animals should be imidiate isolated. Affected animals should be look after separately if possible separate person allotted for sick animal. If it is not possible then first of all healthy animal should look after then affected one. All the affected animal should be isolated during an outbreaks of disease. In flood affected area all the animals should be kept at elevated place. Do not allow affected animal to a common grazing pasture, common water drinking sources like ponds, river, streams etc. because they will help in spreading the disease in healthy animals.

#### 2. QUARANTINE

Quarantine is restraint placed upon the movement of man, animals, plants, goods, animates which are suspected of being carriers or vehicles of infections. Quarantine station and check post are to be opened in main livestock route to prevent entry and spread of the disease from one part to another, even from interstate and International border.

- Restriction of animal movements should be made through regulation.
- Avoid purchasing of animals from outbreak places until 6 months.
- Only vaccinated animals should be brought into the village from outside sources that too only 15-21 days following vaccination.
- A foot bath or truck bath may be made at the entrance of village. This will check the spread of the disease.

### 3. SANITATION

Sound health of animals are essentially need for beneficial animal husbandry. Sound health can be achieved by good sanitation of animals and their surroundings. Therefore special care should be taken in sanitation management, animal's body and their houses. Some of which have been listed below.

- All the healthy animal should be kept at clean place.
- The place of diseased animals should be clean daily with good quality disinfectant like phenyl, D.D.T. Lime etc.
- The person who looks after the animal should be cleaned his hand, foot and cloths etc.
- Utensils used for milk collection must be cleaned with 4% Sodium carbonate.
- Clean & fresh water should be provide to the animals. This practice prevents water born diseases.
- Sprinkle crude burnt oil in the stagnant dirty water to control mosquitoes & flies.
- During flood disaster use boiled drinking water. Destroy the flood commodities that have been affected by floods.

### 4 DISINFECTION OF ANIMAL PREMISES

Disinfection of contaminated shed & premises is essential at time to time to prevent from several infectious or contagious diseases. The utensils which are to be used daily should be disinfected. Internal wall and instruments of dairy farm should be washed with 3% warm soda alkali. The chemical which is used for disinfection of dairy building, instruments and other utensils are mentioned below

#### (i) Sodium carbonate

It is effective chemicals used for cleaning of utensil and floor of dairy farm. Its solution must be slightly warm and then used.

#### (ii)Lime

Lime powder should be sprinkled around the houses, wall, floor for disinfection. It increases quality of dung which prevent proliferation of pathogenic micro-organism in soil. If 5%-phenyl solution is mixed with lime is very effective for wall painting.

#### (a) Chloride of lime

The solution of 1kg calcium chloride and 35 kg water should be used. It also used effectively by mixed coltar

#### (b) Potassium per magnate

It acts as antiseptic, deodorant disinfectant and as a caustic.

#### (c) Formalin

The 5% solution of formalin in water is effective for disinfectant. It also used in fumigation at dairy buildings.

Other chemical which is used as disinfectant for animal's body and dairy building are cresole, phenyl, dettol, savlon, lysole etc. These are used by mixed with proper water killing.

### 5. KILLING OF DISEASED ANIMALS

As matter of fact, killing of healthy animals are unconstitutional and non humanity activity but in some times it is essential in case of seriously dreadly diseased animals, animals are in at last stage of diseased course and those affected animals which are dangerous for other healthy animals, painless killing method, gun shoot method may be applied for killing of diseased animals.

### 6. DISPOSAL OF CARCASS

The dead body should be removed from animal house as soon as possible after death. If animals are died due to infectious or contagious diseases, it spreads the infection to other healthy animals. Carcass should not be buried/ burnt at the near of colony, river, ponds & tank because causative agents of disease mixed with water and finally can spreads the diseases. Most common methods for disposal of carcass are mentioned below:

#### (a) Burial of carcass

Deep Burial is one of the most convenient means of disposal of numerous animals/poultry as it is easy to prepare. A pit of 6x4x6 ft size should be made according to size of carcass then putting the carcass along with litters, contaminated feed and soil (5cm) at dead place into the pit Abundant quantity of lime and salt (1:2) or bleaching powder should be spread over the carcass and should be covered with soil at least 6ft (2m). After buried sprinkled the kerosene oil or phenyl on the surface to protect from carnivores animals like Jackals, Dog etc.

#### (b) Burning

In view of neat & clean burning is an excellent means for disposing carcasses. Burning carcass in an open site should be done only when legally permitted and place about 1 km away from the shelter of people and livestock. Under this process firstly 0.5m pit one to be made according to carcass size then wooden fill up. After then Iron rod put on fill up pit then finally carcass put on and burnt. So this way all pathogenic micro organisms will burned. After burning the ashes should be buried. The space of carcass should be disinfect with phenyl.

### (B) PROPHYLAXIS MEASURES

#### i) Colostrum feeding

Colostrum is the first milk secreted by a mother after parturition. The quality, quantity and timing of colostrum feeding are very much important for establishment of immunity in animals against diseases. The colostrum should be fed to the animal

immediately as early as possible after birth without waiting for placenta removal at the rate 10% of the body weight total in should be 2-3 divided doses/day.

- It decreases neonatal calf mortality by providing immunity against Neonatal diseases eg.- Pneumonia, Diarrhoea Calf scour, enteritis etc.
- Is a good source of vit A, D,E & minerals which is very important for new born calf or young one.
- In case of no availability of colostrum from mother, colostrum from other animal can be provided. In the absence of colostrum, a mixture of 2 egg in 30 ml castor oil is recommended for new born.

## ii. Deworming

Follow the regular deworming schedule to prevent endoparasitic infestation in calves:

- 7 days old calf should be deworm with piperazineadipate (2 spoonfuls) specially in buffalo calves to prevent neonatal ascariasis.
- At 14<sup>th</sup> day- Albendazole/ Fenbendazole/ Thiabendazole.
- At 30<sup>th</sup> day- Albendazole/ Fenbendazole/ Thiabendazole.
- At monthly interval up to 6 months- Albendazole/ Fenbendazole.

- Repeat biannual after 6 month one each before and after raing season with Albendazole, Fenbendazole.
- If coccidiosis is suspected give recommended dose of sulphamethazine/ sulphadimidine.

## iii. Balanced feeding

Balanced feeding provide all the nutritional elements; like carbohydrate, protein, fat, vitamins & minerals mixture to the animal as per recommended dose. It prevent nutritional deficiency diseases i.e. Pica, rickets; AvitaminosisA etc & digestive problems like *indigestion*, Acidosis, impaction rumen, diarrhea etc. and reproductive like anoestrus, repeat breeder, an ovulation and delayed ovulation etc.

Adverse climate and deficiency of essential micro minerals usually put stress over the immune system which leading to greater risk of infectious diseases in animals.

## iv. Vaccination

As matter of fact "Prevention is better than cure" It provides specific immunity against specific infections or contagious disease.

Do not purchase unvaccinated animals from cattle fair/village. Animals should be purchase, three weeks after the administration of booster dose of vaccine as infected animals brought to the fair may spread the disease. It was also observed that this is one of the most commonly observed epidemiological features in the spread of the disease to the healthy and even vaccinated animals, by swamping their immune levels.

**Table-1. Vaccination Schedule in Cattle & Buffalo**

SL	NAME OF THE DISEASES	PRIMARY VACCINATION	BOOSTER	REVACCINATION	SEASON
1.	Foot & Mouth Disease (F.M.D.)	4 month & above	3 month after primary dose.	Twice in a year	Sept. & March
2.	Rinderpest	6 month & above	---	Repeat every 6 years	Preferable in winter month
3.	Hemorrhagic Septicemia(H.S.)	6 month & above	---	Repeat every year	Before monsoon (April –May)
4.	Black Quarter (B.Q.)	6 month & above	---	Repeat every year	Before monsoon (April –May)
5.	Anthrax	6 month & above	---	Repeat every year	---
6.	Brucellosis	4 -8 months only once in female calves in problem herd	---	---	---
7.	Tuberculosis (T.B.)	6 month & above	---	Repeat after 2-3 years.	---
8.	Theileriosis	2 month & above	---	---	---

Table-2. Vaccination Schedule in Goat &amp; Sheep

SL	NAME OF THE DISEASES	PRIMARY VACCINATION	BOOSTER	REVACCINATION	SEASON
1	Foot & Mouth Disease (F.M.D.)	4 month & above	---	Twice in a year	Sept. & March
2	Hemorrhagic Septicemia (H.S.)	6 month & above	---	Repeat every year	Before monsoon (April –May)
3	Black Quarter (B.Q.)	6 month & above	---	Repeat every year	Before monsoon (April –May)
4	Anthrax	6 month & above	---	Repeat every year	---
5	Enterotoxaemia	- 4 month if dam is vaccinated - At 1 week if dam is unvaccinated	15 days after primary and every revaccination	Repeat every year	Before monsoon (April –May)
6	Peste des Petits Ruminants (P.P.R.)	3 months and above	---	Every 3 yrs.	---
7	POX	3 months	---	Repeat every year	(Dec.)
8	Contagious Caprine Pleuro-pneumonia (C.C.P.P.)	3 months	---	Repeat every year	(Jan)