

## M.Sc. 1<sup>st</sup> Semester; Course Code: Zoo-09-GE; Unit: II

### 2.2. Insects as vectors of helminthic diseases of domestic animals

Some of the important helminthic diseases of domestic animals are:

- 1) **Moniezia Ceystodiasis:** it is commonly called as *Monieziasis*

**Causative agents:** *Moniezia expansa*

*M. benedini*

**Host:** Sheep, Goat and Cattle

**Vectors:** Beetles and mites like Galumnid beetles, Oribatid beetles

**Symptoms:**

- i. Intestinal obstruction
- ii. Enteritis
- iii. Anaemia
- iv. Diahorrea
- v. Weight loss
- vi. Young animals are very sensitive to this disease

**Control and treatment**

- i. Dichlorophene @ 300-600 mg/kg body weight
- ii. Niclosamide
- iii. Paraziquantel
- iv. Use of acaracides for mite control

- 2) **Filarial dermatitis**

This disease is also known as *Ilaeophorosis*

**Causative agent:** *Ilaeophora schneideri*

**Host:** Sheep, Goat, and Mule deer

**Vector:** Horse fly, *Hybomitra spp.*

**Symptoms:**

- i. Necrosis of muzzle, ears and optic nerves
- ii. Ataxia
- iii. Horn deformities

**Treatment and control**

- i. Tartar emetic
- ii. Emetic hydrochloride
- iii. Use of insecticides for controlling horse flies

- 3) **Lymphatic Filariasis**

It is a parasitic disease caused by thread like nematodes transmitted from host to host by blood feeding arthropods like Black flies and mosquitoes. It affects both domestic animals as well as humans

**Causative agent:**

- i. *Parafilaria* sp. affecting cattle
- ii. *Dirofilaria* sp. affecting dog

**Host:** Cattle, Sheep, Dog and Buffalo

**Vectors:** face flies of genus *Musca*, *Musca autumnalis*

**Symptoms**

- i. Haemorrhagic dermatitis
- ii. Summer bleeding in horses due to the haemorrhagic sub cutaneous nodules in the head and upper fore limbs
- iii. Heart filariasis in dogs

**Treatment and control:**

- i. Use of anti-helminthic drugs
- ii. Use of insecticides for control of vectors
- iii. Removal and destruction of aquatic vegetation on which larval and pupal stages are attached.

**4) Avian Taeniasis**

**Causative agent:** the causative agents are *Raillietina* sp. like *R. tetragona* and *R. echinobothrida* which are parasitic tape worms of the poultry

**Vectors:** House flies and ants like *Tetramorium* and *pheidole*

**Symptoms:**

- i. Tubercle like nodules on the intestinal walls
- ii. Heavy bleeding (Enteritis)
- iii. Anaemia and Anorexia
- iv. Decrease of egg production in Hens
- v. Heavy infestation causes death of young animals

**Treatment and control**

- i. Use of antihelminthic drugs like Panhelmin
- ii. Elimination of ants and horse flies in farming areas by insecticides
- iii. Proper sanitation of cages

**5) Dipylidiasis**

It is a common tape worm infection of dogs and cats. Linnaeus (1758) first described dipylidiasis disease in humans.

**Causative agents:** Double pored tape worm, *Dipylidium caninum*. It is also called as cucumber tape worm which is a Cestode that infects organisms afflicted with fleas.

**Hosts:** Dogs and Cats

**Vectors:** Fleas, Biting louse and Chewing louse

**Symptoms:**

- i. Peri-anal swelling
- ii. Enteritis
- iii. GIT infection
- iv. The suffering dogs walk with dragged anus

**Treatment and control**

- i. Use of drugs like Niclosamide, Paraziquentel and Dichlorophene
- ii. Treatment of infected animals to kill fleas and dog lice with 0.1% BHC