

Unit 11ii: Endoparasites Factsheet

Introduction

Considerable losses occur in the sheep flock through heavy infestation of parasites. A parasite is a living organism that depends upon a living host for its livelihood.

An endoparasite lives inside its host. It feeds off the host either taking nutrients or blood. It can prevent the animal from absorbing nutrients.

The most common are:

- Ostertagia
- Trichostrongylus
- Nematodirus
- Haemonchus
- Liver Fluke
- Tapeworm
- Coccidiosis
- Lungworm

Internal parasites

There are many types of internal parasites:

- A. Worms or helminths**
- B. Protozoans**

A. Worms

These are usually referred to as parasitic worms.

Characteristics of worms

- Worm-like!
- Live and feed off living hosts
- Receive nourishment and protection
- Disrupt nutrient absorption
- Cause weakness and disease
- Intestinal parasites live in the digestive tract.

Parasitic worms are categorised into three groups:

1. **Cestodes** e.g. parasitic flatworms e.g. tapeworm
2. **Nematodes** or known as **roundworms** e.g. ostertagia, trichostrongylus, nematodirus, haemonchus
3. **Trematodes** e.g. liver fluke - fasciola hepatica

Parasitic worms

1. Cestodes

Tapeworms

Tapeworms cause gid in sheep and hydatid disease in humans. Both have the sheepdog as the intermediate host. Dogs pass the infection to humans through licking. Cysts form in any organ including the brain and liver.

2. Nematodes known as roundworms

Two distinct groups:

- a. 1 year life cycle e.g. nematodirus
- b. Seasonal life cycle e.g. ostertagia, trichostrongylus, haemonchus

a. Nematodirus

- Strikes lambs between april and june
- Larvae hatch from eggs deposited by lambs the previous year
- Hatching needs cold followed by 10 degree warmth
- Heavy infestation kills lambs 5 – 10 weeks old
- Sudden very bad scouring
- Wool becomes dry
- Pot belly appearance
- Loss of weight
- Death
- Treat with anthelmintic wormer
- Avoid grazing same ground as previous year
- Dose susceptible lambs at 4-6 weeks.

b. Ostertagia, trichostrongylus and haemonchus

- Overwintered larvae
- Hatch out and grazed by lambs
- Lambs have no immunity
- Larvae hatch inside lambs and produce eggs
- Eggs passed out
- Ewe resistance low at pre-lambing
- Inhibited larvae in the gut develop into adult worms
- Excreting parasite e.g. about three weeks before lambing
- Egg production carries on up to 6 weeks after lambing
- Eggs fall onto the pasture and develop into immature worms that infect the pasture
- Develop into adults and the life cycle is complete
- Temperature regulates speed of egg development
- Very bad scouring
- Death could occur
- Treat with wormer and control with rotational grazing management.

The parasitic worms cause a condition called parasitic gastroenteritis (PGE).

3. Trematodes

Liver fluke

- Caused by a leaf like worm called fasciola hepatica
- Fluke requires a mud snail to complete its life cycle
- Associated with wet or poorly drained land
- Adult liver fluke lives in the liver
- Feeds on blood
- Lays large numbers of eggs which pass in the dung onto the grass.
- Warm moist condition make eggs hatch into infective larvae
- Swim around muddy areas
- Find and penetrate the small mud snail - lymnae spp
- The larvae develop and multiply in the snail
- In 5-10 weeks, masses of young flukes are released from the infected snails, attach to the grass
- Can survive for many months
- Picked up by animal, young flukes burrow through the gut wall into the liver where they mature
- Mature flukes lay eggs and are passed out back to pasture
- Progressive loss of condition
- Sheep may die suddenly
- Anaemia
- Treat with flukicide

Other worms

Lungworm

Lungworm (or husk or parasitic bronchitis) is a disease caused by parasitic worms that live in the respiratory tract of infected animals of the species.

The cattle lungworm can cause outbreaks of severe disease in young cattle in their first summer at grass.

Signs include coughing and breathlessness and some affected animals may die.

Recovered animals are generally immune to further disease, but may remain a source of infection for other animals. Immunity can be given via an oral vaccine.

B. Protozoa

Coccidiosis

- Caused by small protozoan
- Causes profuse black scouring in lambs
- Close proximity at housing helps spread
- Killed by coccidiostat
- Vaccine available to prevent infection.