



Sheep Project Parasite Control



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Outline

- Damage Caused by Parasite
- Common Parasite in Sheep
- Treatment and Deworm program
- Prevention

Damage Caused by Parasite

Internal parasite

- Decrease nutrient absorption
- Mechanical Injury
- Anemia
- Edema

External parasite

- Skin problem
- Anemia
- Insect-borne disease



**Economic
Loss**

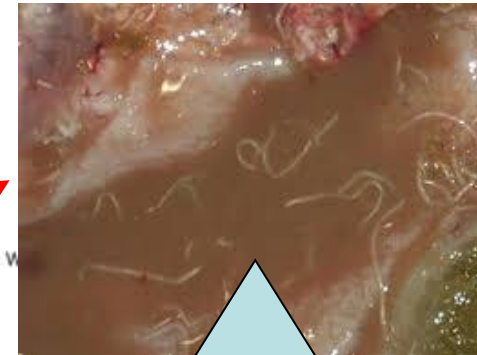
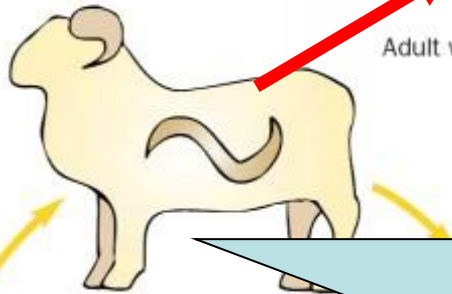
**Financial
Burden**

Damage Caused by Parasite- Internal parasite

Decrease nutrient absorption

General nemotode life cycle

Ingested L₃ develop through L₄ and L₅ to adult egg laying worms



Adult worms

**Emaciation:
Thin animal**



Third stage (infective) larvae migrate onto grass in approximately 3 weeks



Eggs embryonate in 5 days +

First stage larvae in faeces (L₁)



Second stage larvae in faeces (L₂)

Damage Caused by Parasite- Internal parasite

Mechanical Injury



Haemonchus contortus(barber pole worm)

Damage Caused by Parasite- Internal parasite

Anemia

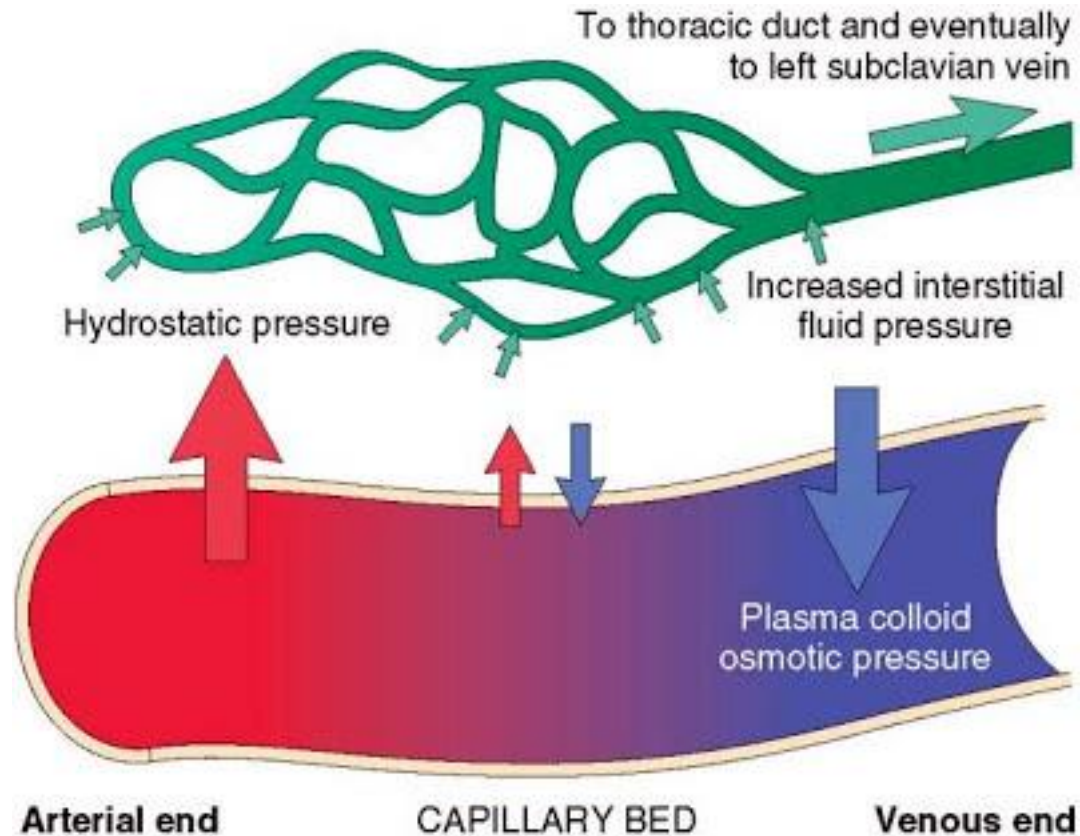


Haemonchus contortus(barber pole worm)

Damage Caused by Parasite- Internal parasite

Edema

- General
- Local



Damage Caused by Parasite-

Internal parasite

Edema

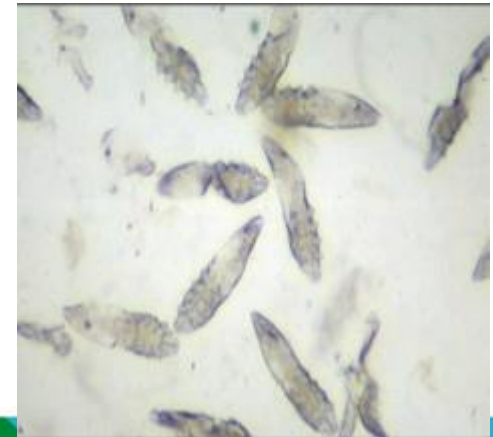
- **General**
- **Local**



Bottle jaw caused by Barber pole worm

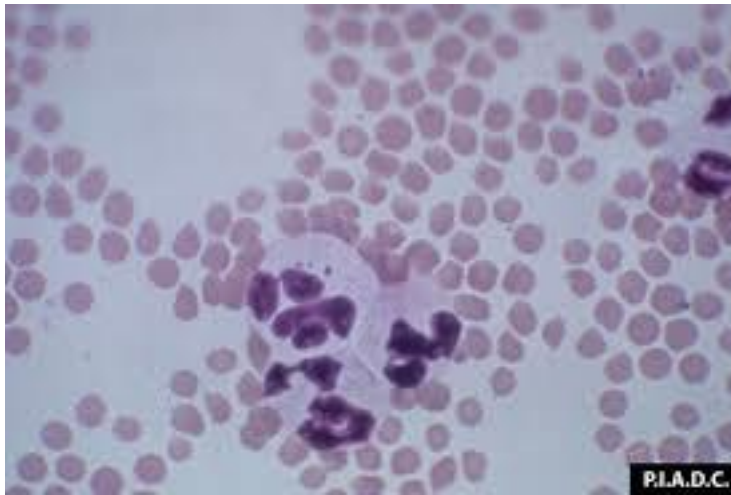
Damage Caused by Parasite- External parasite

1. Skin problem
2. Anemia



Damage Caused by Parasite- External parasite

3. Insect-borne disease



Heartwater disease

Die

Common parasite infection in Sheep

Internal Parasite

1. Haemonchosis (Nematode)

2. Liver Fluke (Trematode)

3. Tape Worm (Cestode)

4. Coccisiosis (Protozoa)

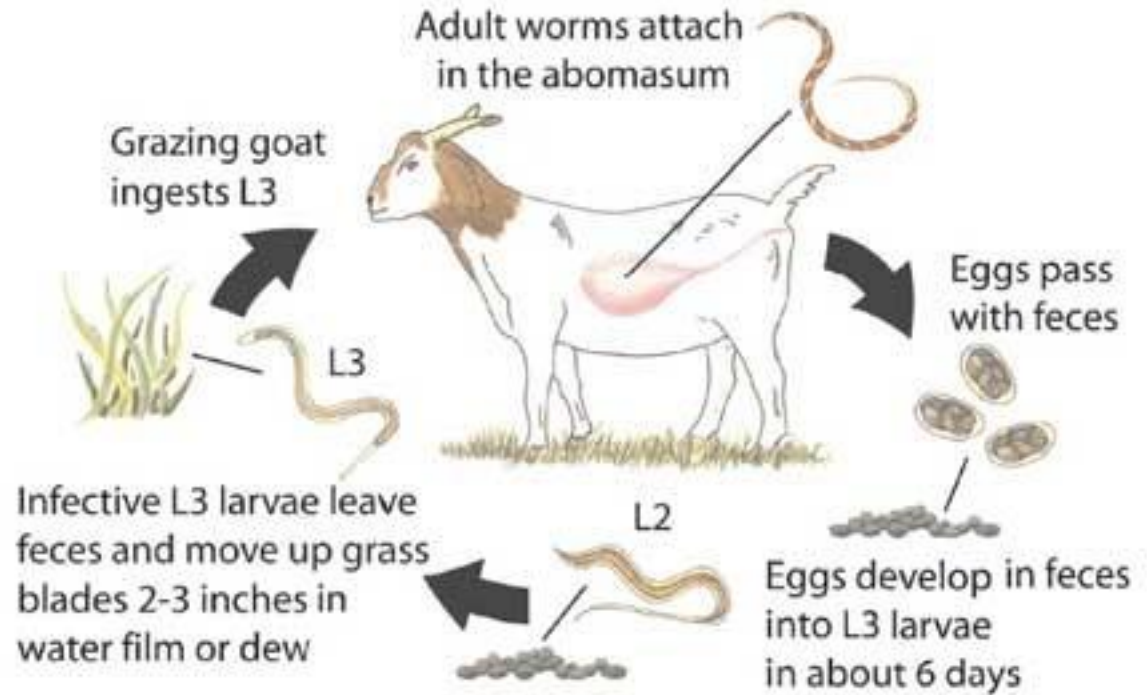
Common parasite infection in Sheep- Haemonchosis(Barber pole worm)

- **Etiology: Haemonchus Contortus**
- **Life cycle**
- **The largest and deadly stomach worm**
- **Clinical sign: anemia, bottle jaw, Low growth rate**
- **Secondary infection with *Ostertagia*, *Trichostrongylus***
- **Diagnosis**



Common parasite infection in Sheep- Haemonchosis(Barber pole worm)

- **Life cycle**



**Life Cycle of *Haemonchus contortus*,
the barber pole worm**

Common parasite infection in Sheep- Haemonchosis(Barber pole worm)

- **Clinical Sign:**
- **Anemia, Bottle jaw**

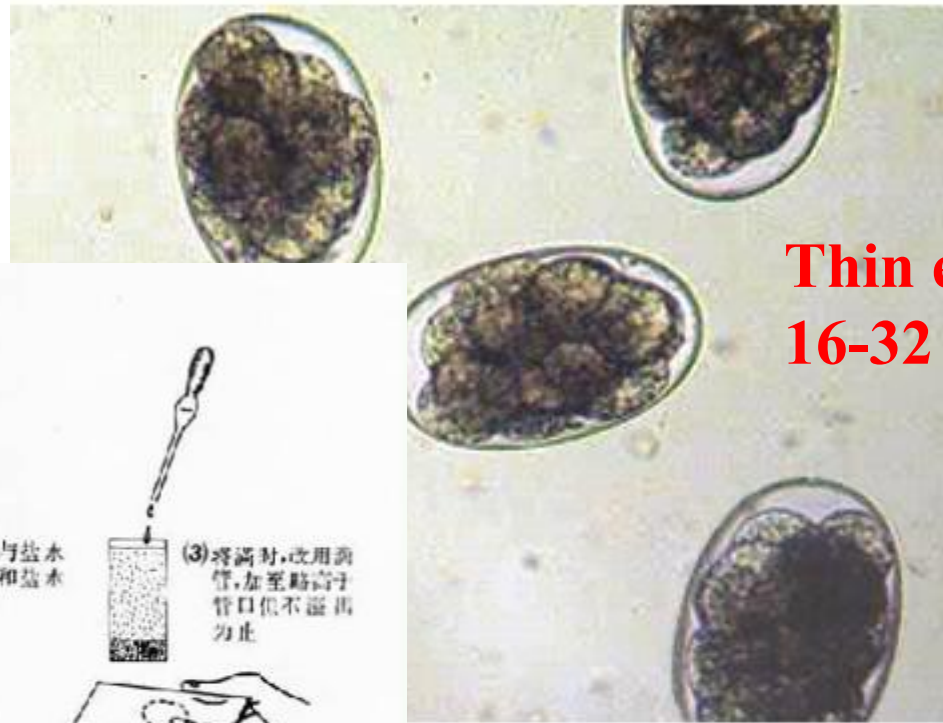


Common parasite infection in Sheep- Haemonchosis(Barber pole worm)

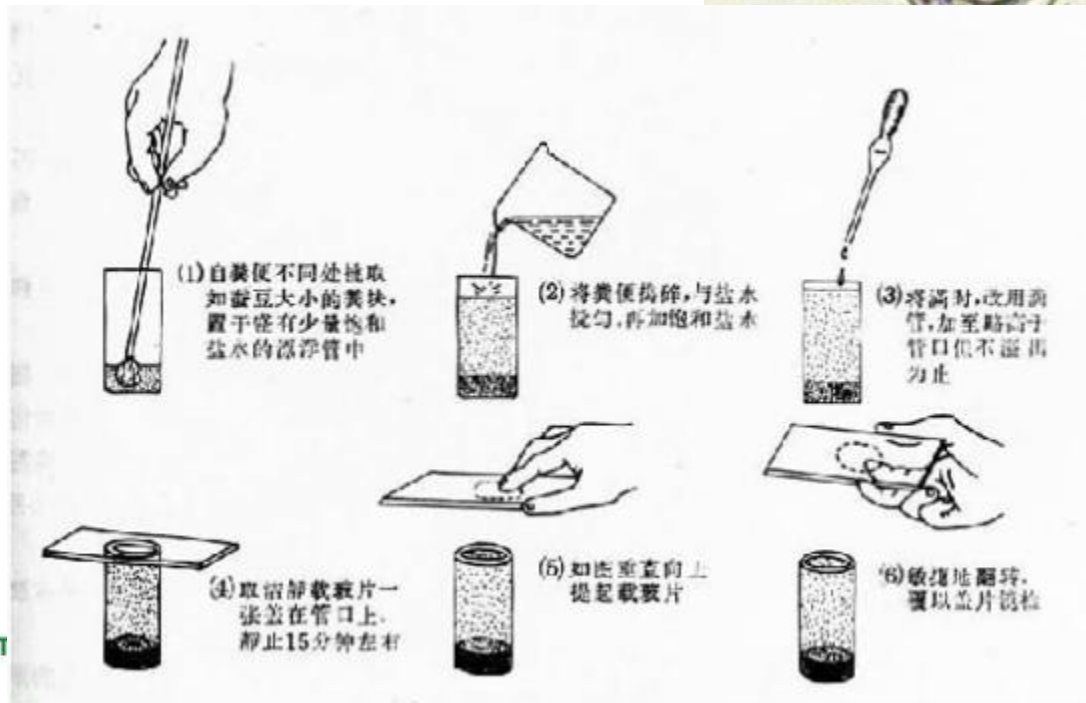
- **Diagnosis**
 1. **Faceal count**
 2. **Clinical sign**
 3. **Post-mortem examination: high porportion of adult worm and numerous haemorrhagic lesion**

Common parasite infection in Sheep- Haemonchosis(Barber pole worm)

- **Diagnosis**
 1. **Fecal egg count**

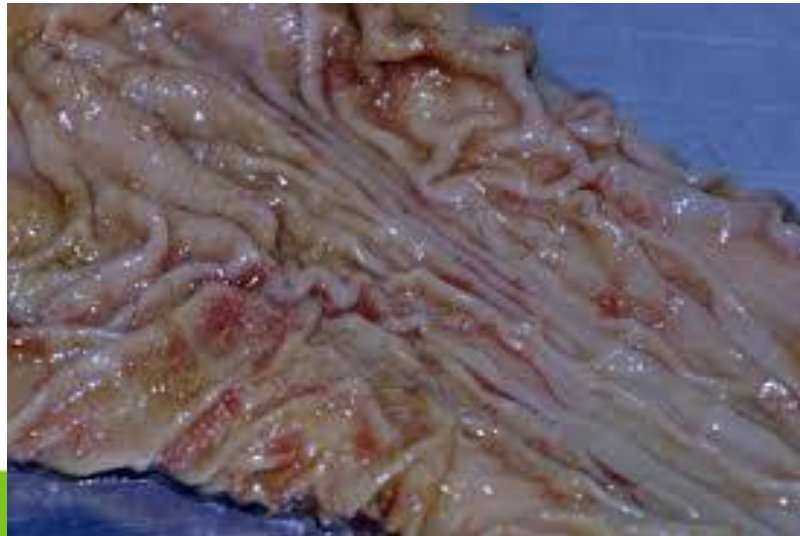


**Thin egg
16-32 cells**



Common parasite infection in Sheep- Haemonchosis(Barber pole worm)

- **Diagnosis**
- **Post-mortem examination: high porportion of adult worm and numerous haemorrhagic lesion**



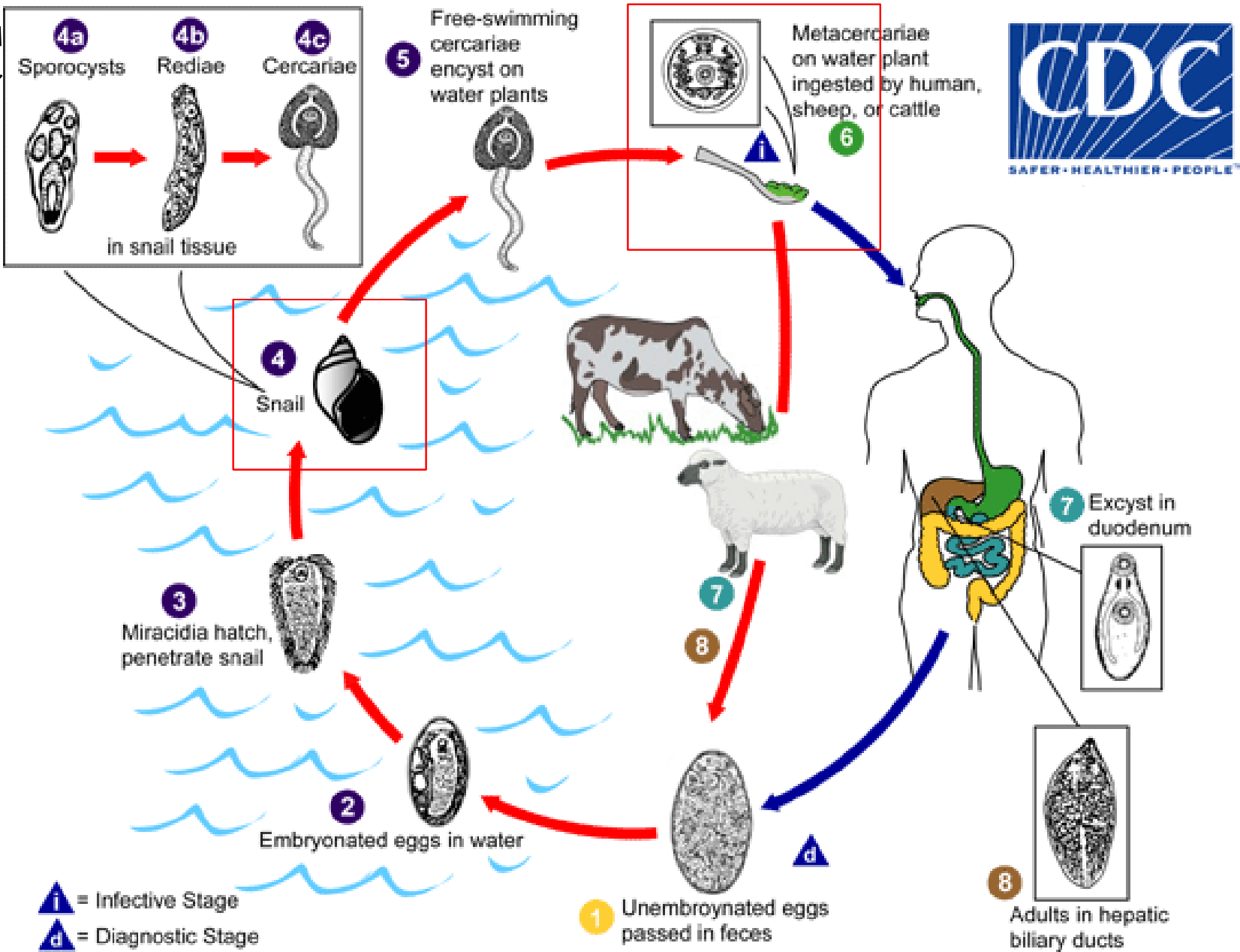
Common parasite infection in Sheep- Liver Fluke



- **Etiology:** *Fasciola Hepatica*
- **Life cycle**
- **Clinical sign:** Hepatitis, cholangitis, Weight loss
- **Diagnosis**

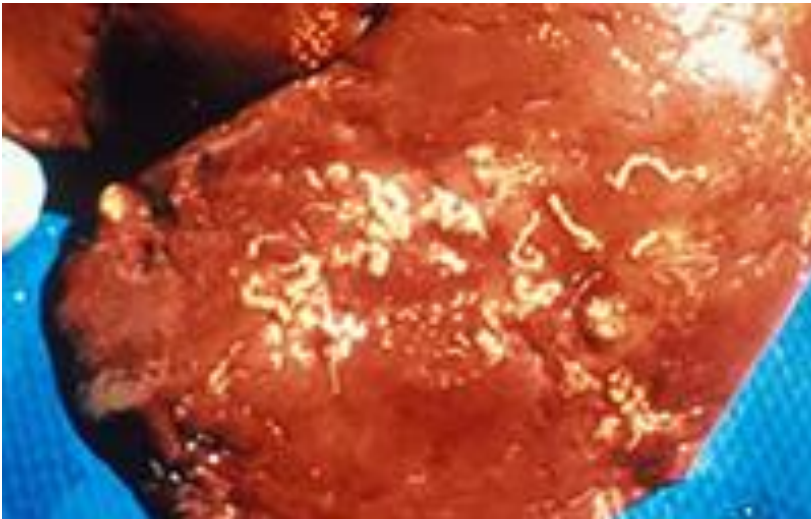


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Common parasite infection in Sheep- Liver Fluke

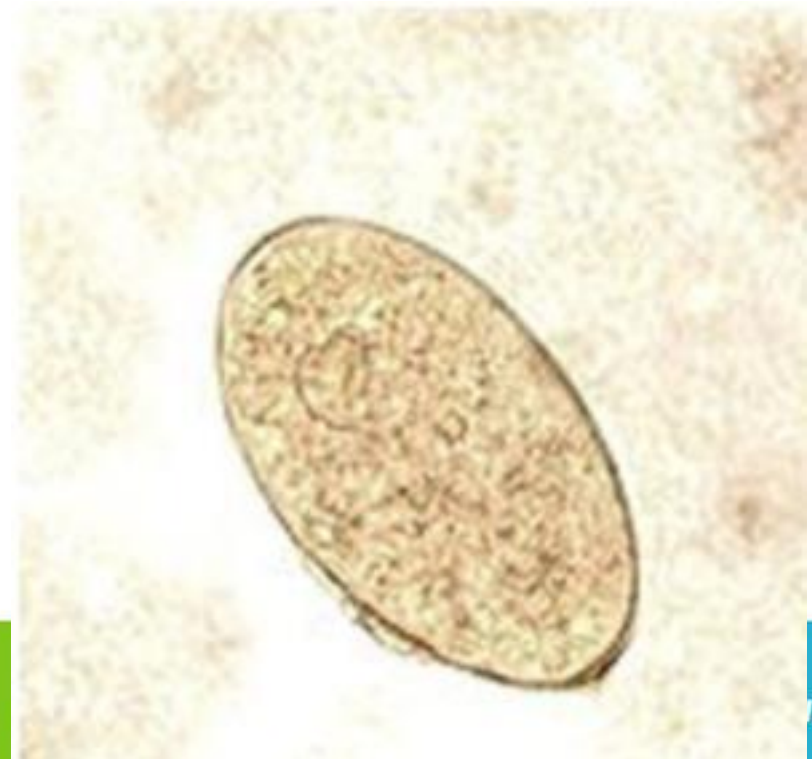
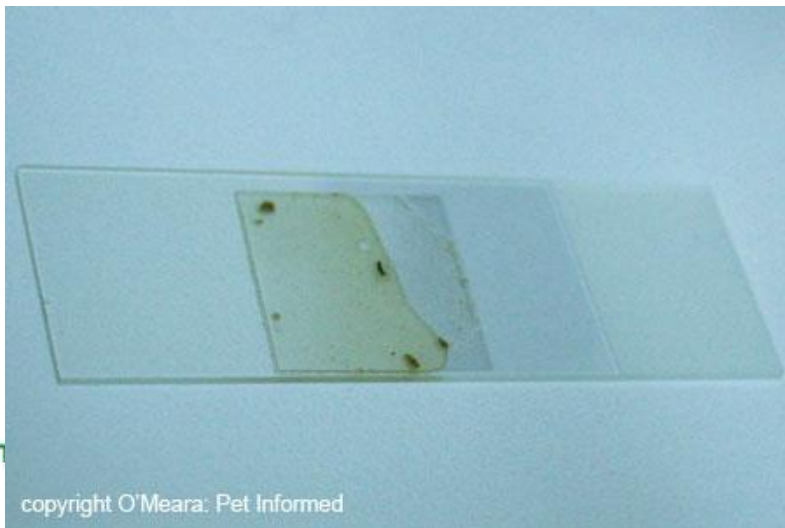
- **Clinical sign: Acute, Chronic**



Common parasite infection in Sheep- Liver Fluke

- **Diagnosis**
 1. **Smear method(not good)**
 2. **ELISA(Enzyme-linked immunosorbent assay)**

**Thin egg, operated
unembyonated**



Common parasite infection in Sheep- Liver Fluke



- **Prevention**
 - **Reduce the snail populations by**
 - a. keeping the pastures dry**
 - b. Ensuring an adequate drainage**
 - c. If permanent humid environments cannot be eliminated, they have to be fenced to prevent livestock from grazing there**
 - **Rotational grazing**

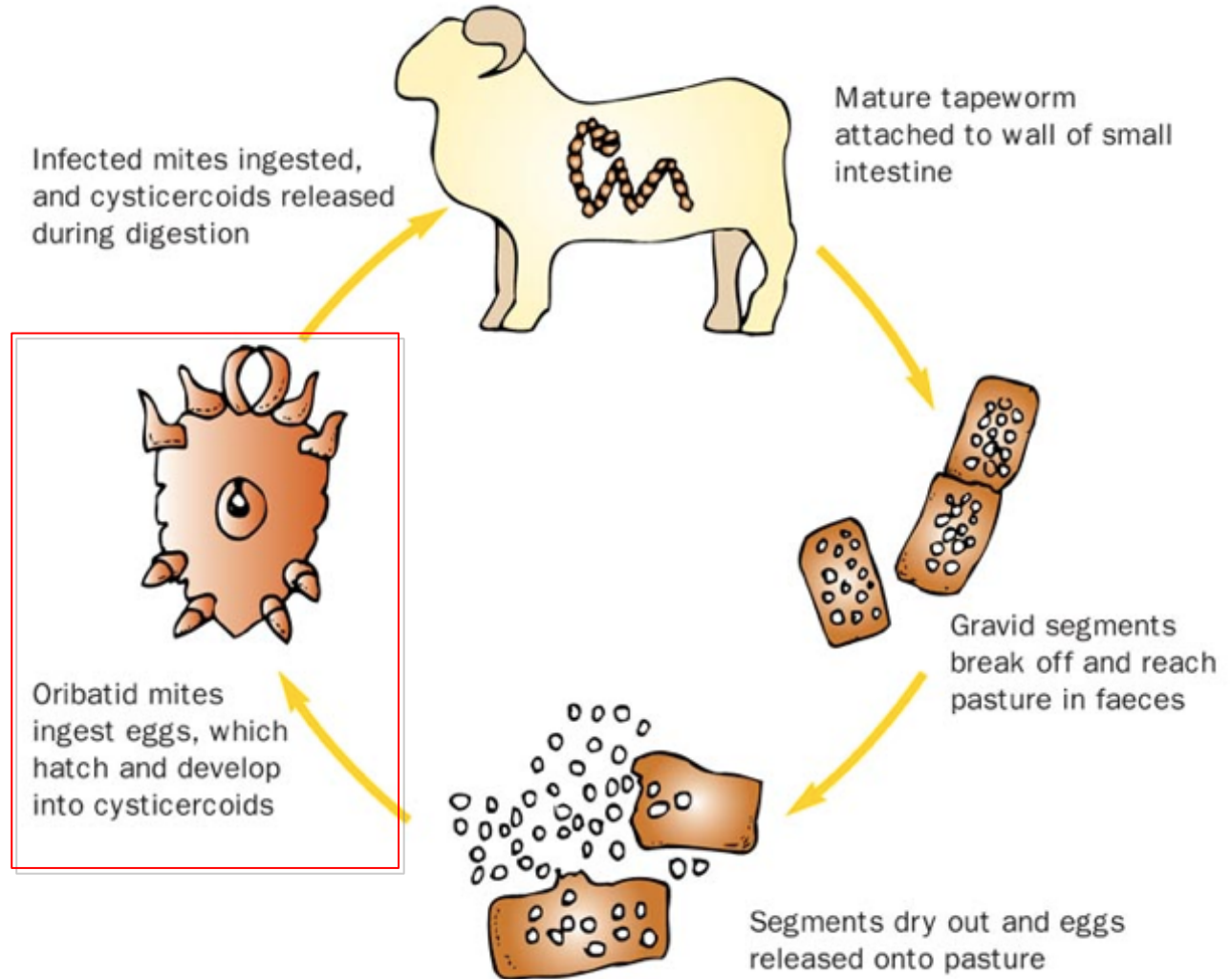
Common parasite infection in Sheep- Tape worm

- **Etiology: Moniezia spp.(Moniezia expansa)**
- **Life cycle**
- **Clinical sign: intestinal blockages, weight loss**
- **Diagnosis**



Common parasite infection in Sheep- Tape worm

- Life cycle



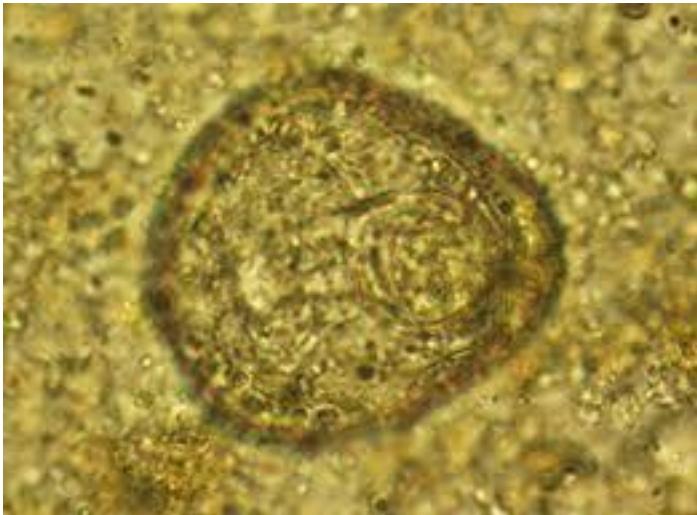
Common parasite infection in Sheep- Tape worm

- **Clinical sign: intestinal blockages(Small intestine), weight loss(interfere nutrient absorption**



Common parasite infection in Sheep- Tape worm

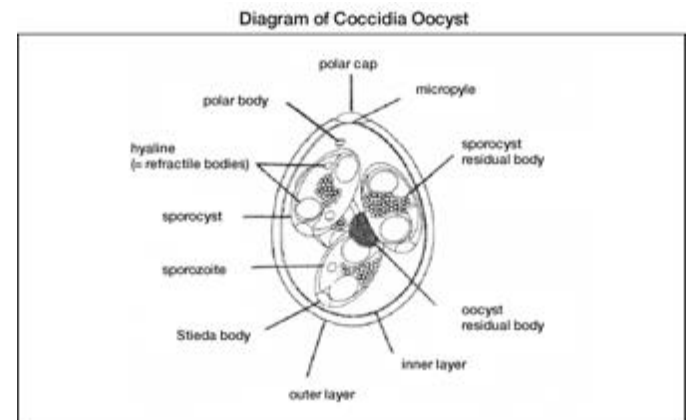
- **Diagnosis:**
 1. **Egg flotation**
 2. **Post-mortem**



Pyriiform, Thick shell

Common parasite infection in Sheep- Coccidiosis

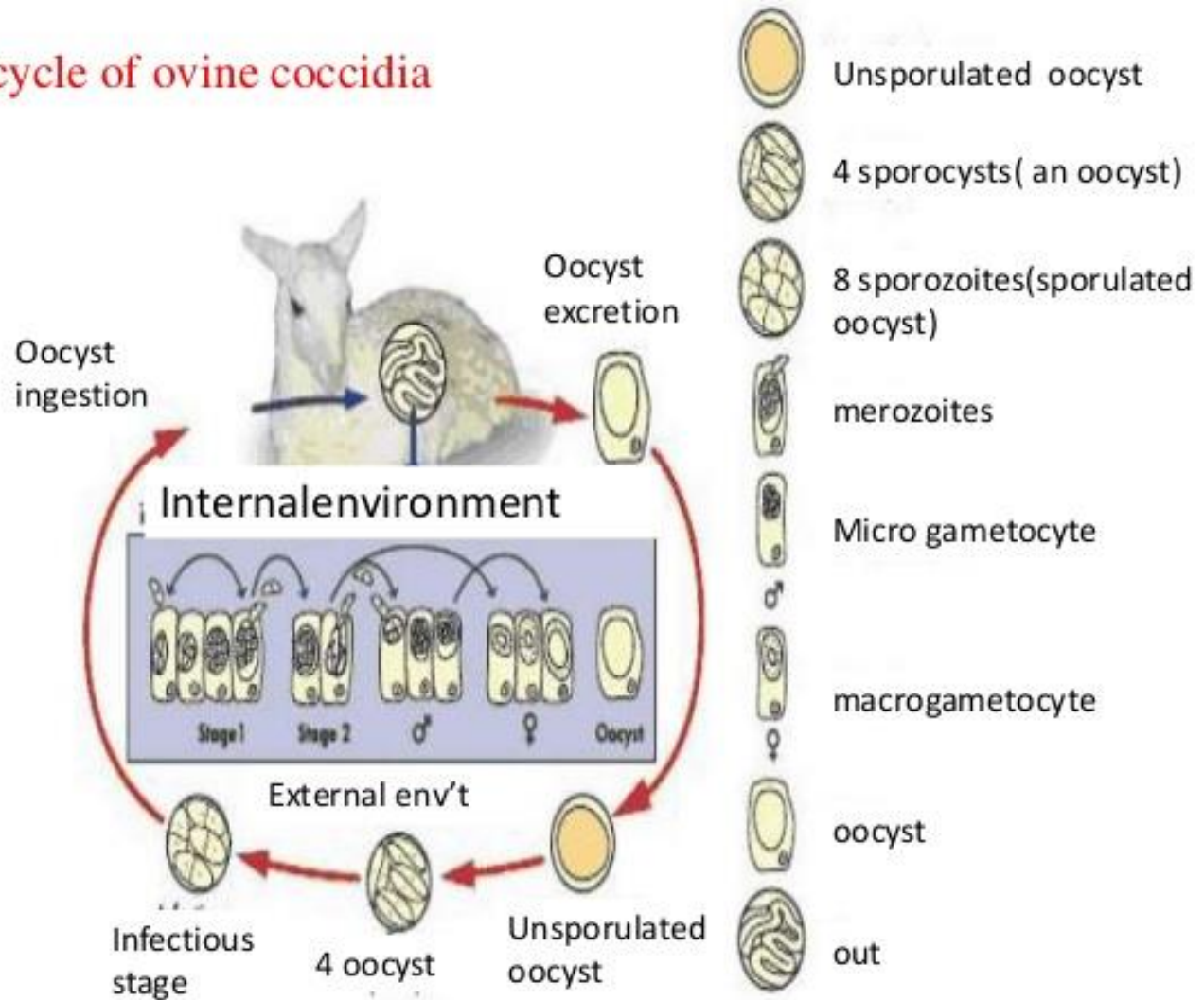
- **Etiology:** *Eimeria* spp.(*Moniezia ovinodalis*)
- **Life cycle**
- **Clinical sign:** **diarrhea(with blood sometimes)**,
abdominal pain, weight loss
- **Diagnosis**



Common parasite infection in Sheep-

Life cycle of ovine coccidia

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Common parasite infection in Sheep- Coccidiosis

- **Clinical Sign**
- **1. Diarrhea with mucus and blood**
- **(especially lamb**
- **2.pain, death**
- **3. subclinical in adult sheehp**



Common parasite infection in Sheep- Coccidiosis

- **Diagnosis**
- **1.faecal sample**
- **2.post-mortern**



Treatment and Deworm program

	Nematode	Tapeworm	Fluke	Coccidia
1. Benzimidazole Ex: Albendazole	+	+	+	
2. Imidazothiazoles Ex: Levamisole	+	-	-	
3. Ivermectin	+	-	-	
4. Inophores Ex: Amprolium				+

Treatment and Deworm program



Awareness:

- 1.Dose on Empty Stomach**
- 2.Drench on the right position**
- 3.Deworm 1 week after the rains start**
- 4.Deworm before the dry set in**

Treatment and Deworm program

a. Ewes:

Lambing Going to pasture 3 weeks later Weaning



b. Weaned lambs:

Birth Weaning New pasture



c. Replacements

Arrive on farm 3 weeks later



Treatment and Deworm program

- 1. Rotating dewormer: using a different family of wormer each year (for a full year)**
- 2. Performing fecal samples routinely to determine the frequency of dewormer. (Before/after deworm)**
- 3. High Grazing ratio: four times a year is recommended.**

Prevention

1. Pasture management:

- **Rotation grazing: rest 20-30 days**
- **Avoid too heavy a stocking rate**
- **Harrowing**

1. Sanitation: water, floor, sheep pen

Common parasitic infestation in Sheep- External

- 1. Tick
- 2. Lice
- 3. Sheep ked
- 4. Psoroptic mange
- 5. Flea



Common parasite infection in Sheep- External parasite

- Clinical signs



Common parasite infection in Sheep-

External parasite

- **Treatment**

Coumpound	Generic name	Target
Organophosphate	Trichlorfon	Lice, mites
	Diazinon	Ticks, lice, mites
	Dioxathion	Lice, mites, flies
Avermectin	Doramectin	Mites, lice
	Ivermectin	Mites, lice

Common parasite infection in Sheep- External parasite

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Common parasite infection in Sheep- External parasite

- **Prevention:**
- **Once found the external parasite, the overall disinfection is recommended.**

Thank You!