Guide to Internal Parasites of Ruminants

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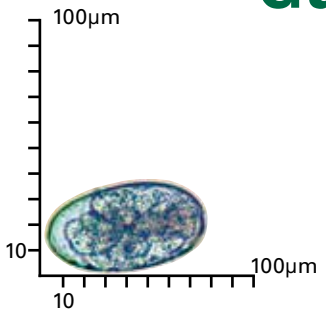
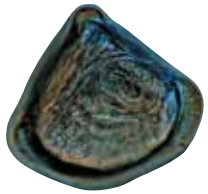
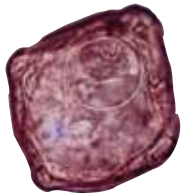


Ostertagia
(brown stomach worm)

Cooperia
(small intestinal worm)



Moniezia
(tapeworm - sheep)



Moniezia
(tapeworm - cattle)

Bunostomum
(hookworm)

Haemonchus
(barberpole worm)

Nematodirus
(threadneck worm)

Trichostrongylus
(bankrupt worm)

Oesophagostomum
(nodular worm)

Trichuris
(whipworm)

Strongyloides
(threadworm)

Coccidia
(a protozoan that causes coccidiosis)

Dictyocaulus
(lungworm)

Mite Egg – 1/4 actual size
(contaminant - often mistaken for worm eggs)

D.H Bliss and W.G. Kvasnicka; the compendium, April 1997

Consult your veterinarian for assistance in the diagnosis, treatment and control of parasitism.

MSD Animal Health

Health Impact and Characteristics of Internal Parasites

Parasite	Approximate Length (µm)	Characteristics
Ostertagia (brown stomach worm) ■ Supresses appetite ■ Weight loss, poor body condition	60-70	Medium-sized, standard strongyle egg; barrel-shaped sidewalls; large number of blastomeres nearly fills egg
Haemonchus (barberpole worm) ■ Anemia ■ Death common in sheep and goats	85	Larger and rounder than *Ostertagia* egg; blastomeres more easily seen than in *Ostertagia*
Trichostrongylus (bankrupt worm) ■ Watery diarrhea ■ Slowed growth	85	Often shaped like a kidney bean; one side is more rounded than the other; there is usually a lot of clear space within the egg
Cooperia (small intestinal worm) ■ Diarrhea ■ Slowed growth	75-85	Medium-sized egg with parallel sides and numerous blastomeres that are hard to distinguish
Nematodirus (threadneck worm) ■ Diarrhea ■ Slowed growth ■ Emaciation and death in sheep, young cattle	200	Large egg; looks like an American football with basketballs inside; two to eight large blastomeres are surrounded by a fluid-filled cavity
Oesophagostomum (nodular worm) ■ Diarrhea ■ Slowed growth	95	Medium-sized to large egg; about one and a half times the size of the *Ostertagia* egg: 16 to 32 blastomeres; are easier to see than those of *Haemonchus*
Bunostomum (hookworm) ■ Anemia ■ Weight loss	100	Medium-sized to large egg; four to eight blastomeres; sometimes the walls are thick and rectangular
Strongyloides (threadworm) ■ Diarrhea ■ Fatal infections reported in young raised on sawdust	40-65	Small egg with a thin shell containing an L1 larva in young that can be seen under low power
Trichuris (whipworm) ■ Reduced appetite ■ Slowed growth	75	Egg is shaped like an American football and has two protruding polar caps; the shell is double and thick
Coccidia ■ Bloody diarrhea in young cattle ■ Reduced weight gains in sheep, goats, cattle ■ Death can occur in calves, lambs, kids and adult goats	16-47	Coccidia appear small in size, pink in color; size and shapes vary depending on species
Moniezia (tapeworm) ■ Blocks small intestine in lambs ■ Loss of nutrients	80x80	Quadrangular; somewhat irregular; contains a circular or pear-shaped apparatus at one end
Dictyocaulus (lungworm) ■ Cough ■ Reduced appetite and milk production	450	Rectal sample of feces needed for positive identifincation; L1 larva found in feces; flattened head and tail end in blunt point

Modified Wisconsin Sugar Fecal Worm Egg Flotation Method

1. Fecal samples can be stored for long periods if refrigerated (not frozen).
2. Sugar solution is prepared by adding 1 lb. of sugar into 12 fluid oz. (355 ml) of hot water: stir until all sugar is dissolved.
3. Slides can usually be placed in the refrigerator for several days prior to reading.
4. Identify parasites present:
   +(1-10 eggs/sample) ++(11-50 eggs/sample) +++(over 50 eggs/sample)
5. # of eggs found x 150 = # of eggs per pound feces
6. Materials needed:
   - **a.** Sugar solution plus dispensing bottle, gun, or syringe
   - **b.** Tea strainer
   - **c.** 3 oz. and 5 oz. Dixie cups
   - **d.** Tongue depressors
   - **e.** Taper-bottom test tubes
   - **f.** Test tube rack
   - **g.** Standard microscope slides
   - **h.** Centrifuge
   - **i.** Microscope