



Sheep and Goat Internal Parasites (who are the players?)

2020 University of Hawaii at Manoa
College of Tropical Agriculture and Human Resources
Virtual Livestock Industry Field Day

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Overview of the problem

- **Gastrointestinal parasites are the number one health problem affecting sheep and goats**
- **Climate in HI is very permissive to most parasites, therefore our animals are at greater risk**
- **Goats are more susceptible than sheep**
- **Seeing more and more resistance to dewormers**





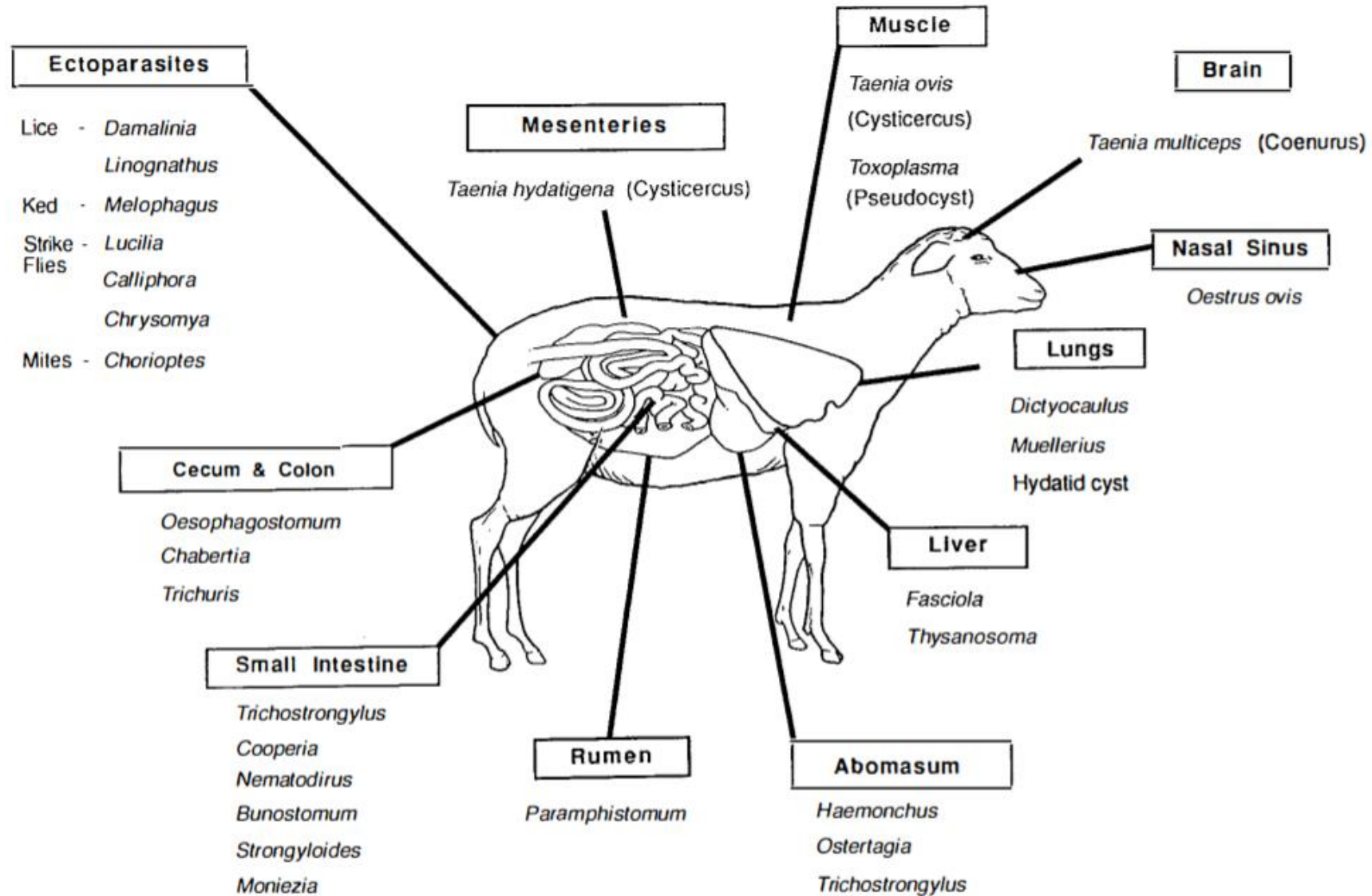
HOST IMMUNITY

Age	Production Status	Plane of Nutrition	Relative Immunity
Lambs	< 5 months parasite exposure	Well-fed	++
		Underfed	+
	> 5 months parasite exposure	Well-fed	+++
		Underfed	++
Ewes 12-24 months	Dry, non-lactating	Well-fed	++++++
		Underfed	++++
	Lactating, single	Well-fed	+++
		Underfed	++
	Lactating, twins	Well-fed	++
		Underfed	+
Ewes 2 years and older	Dry, non-lactating	Well-fed	+++++++ ⁺ +++
		Underfed	+++++++
	Lactating, single	Well-fed	+++++
		Underfed	+++
	Lactating, twins	Well-fed	+++
		Underfed	++
	Lactating, triplets	Well-fed	++
		Underfed	+





Parasites of Sheep





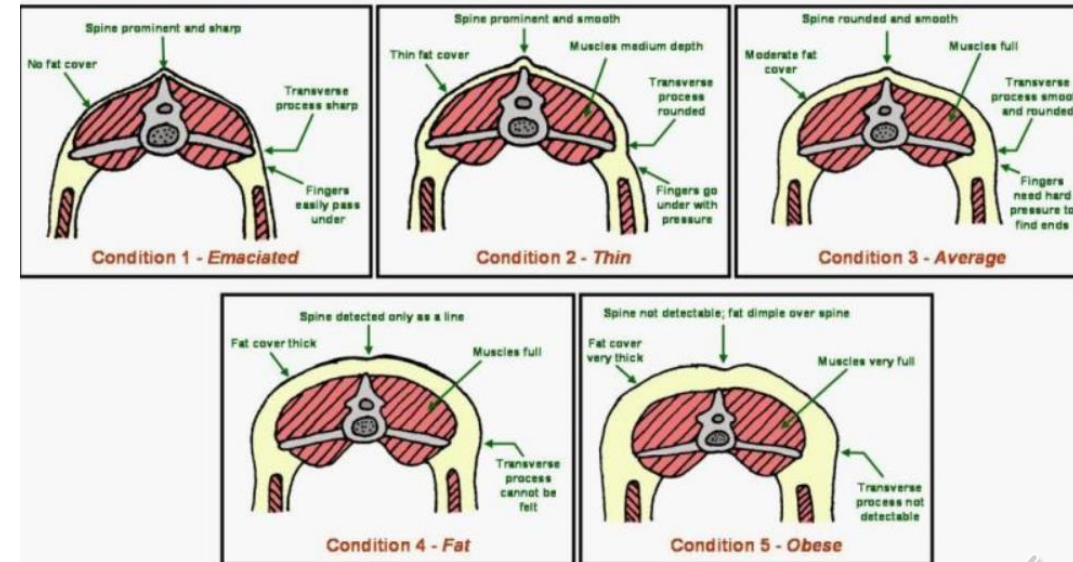
5-point check for health

1. Body condition
2. Jaw (swelling)
3. Diarrhea/dags
4. FAMACHA (eye)
5. Nasal discharge or coat appearance



Figure 2

Body Condition Scores – Sheep/Goats



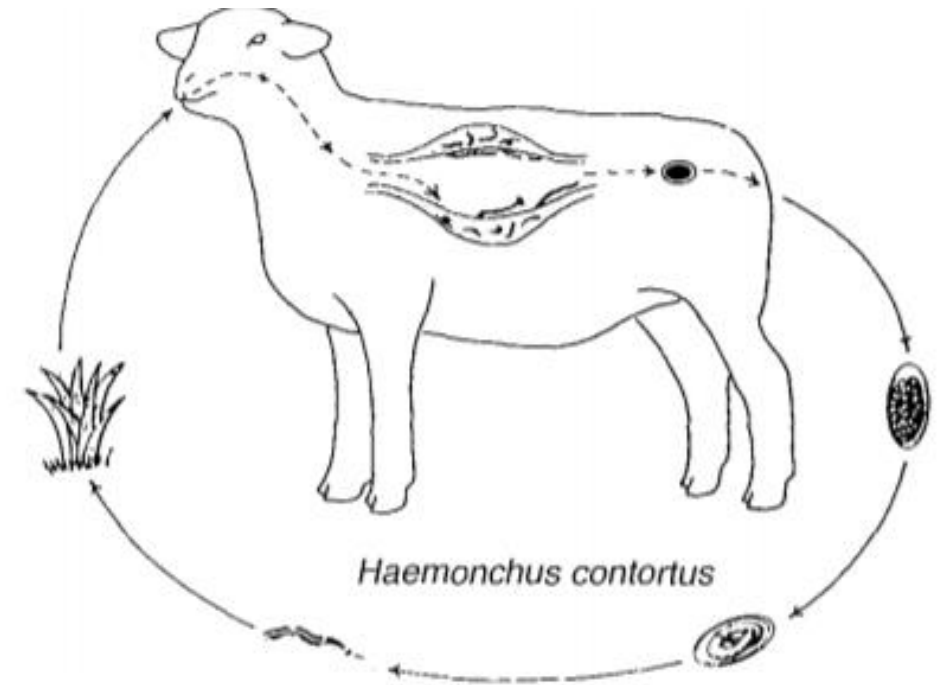
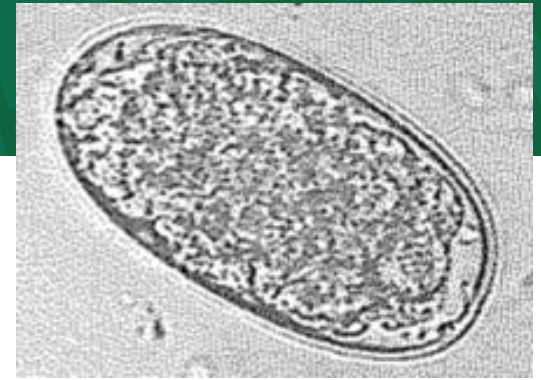
Adapted from "Body Condition Scoring of Sheep" by J.M. Thompson and H. Meyer (Oregon State University)





Haemonchus contortus

- aka “Barber Pole Worm)
- Lives in the abomasum
- Can cause anemia, protein loss, bottle jaw (mandibular edema), chronic weight loss in adults, death (can be sudden)



Pathology of *Haemonchus contortus* in New World camelids in the southeastern United States: a retrospective review

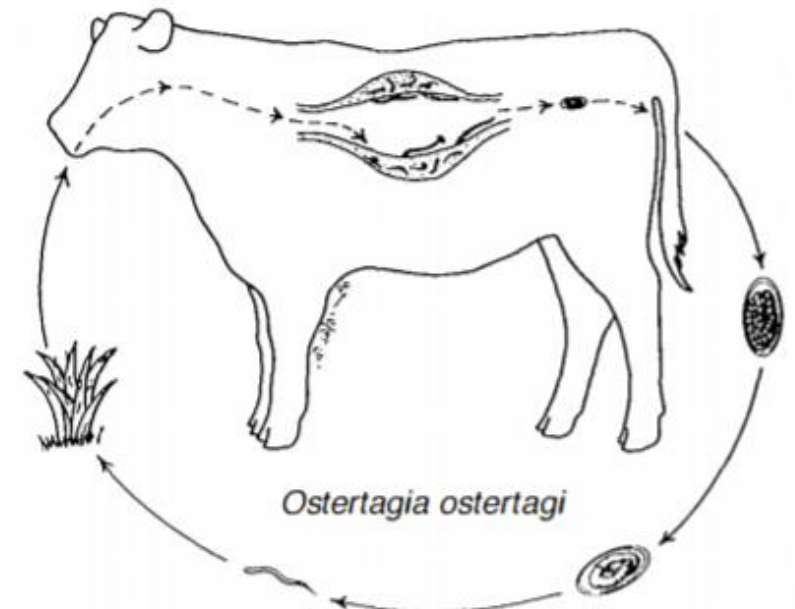




Ostertagia (Teladorsagia) circumcincta



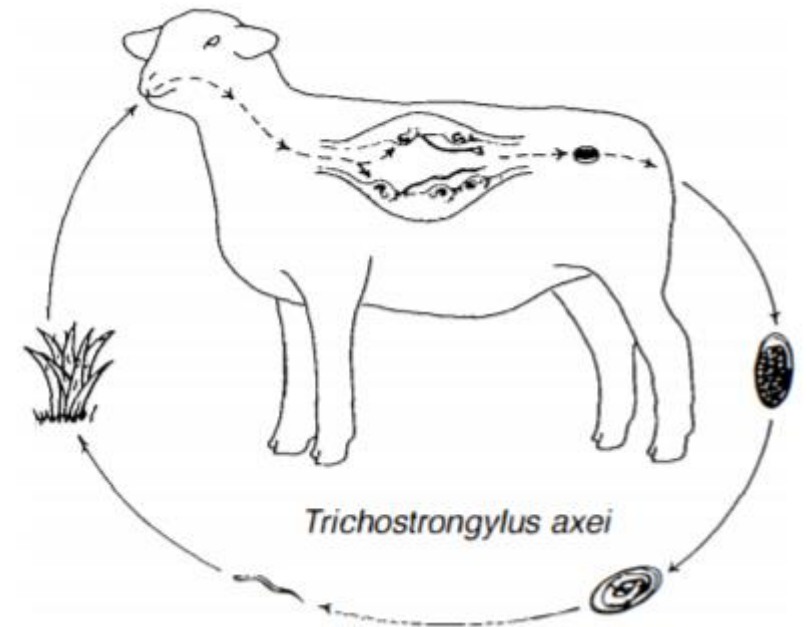
- aka Brown Stomach Worm
- Can cause diarrhea, weight loss, anemia
- Adult worms live in the abomasum; larvae destroy glands and cause nodules





Trichostrongylus axei

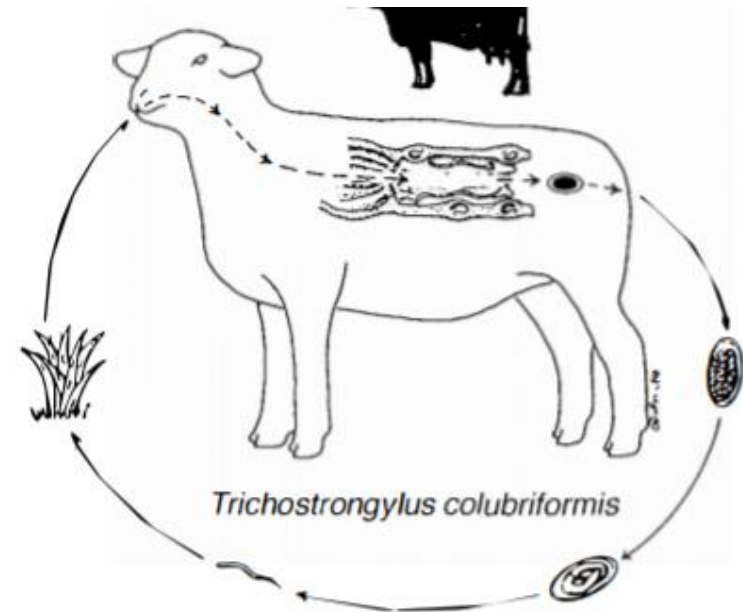
- aka Bankrupt Worm or Small Stomach Worm
- Can cause diarrhea, dehydration, bottle jaw, emaciation
- Adults live in the abomasum





Trichostrongylus colubriformis

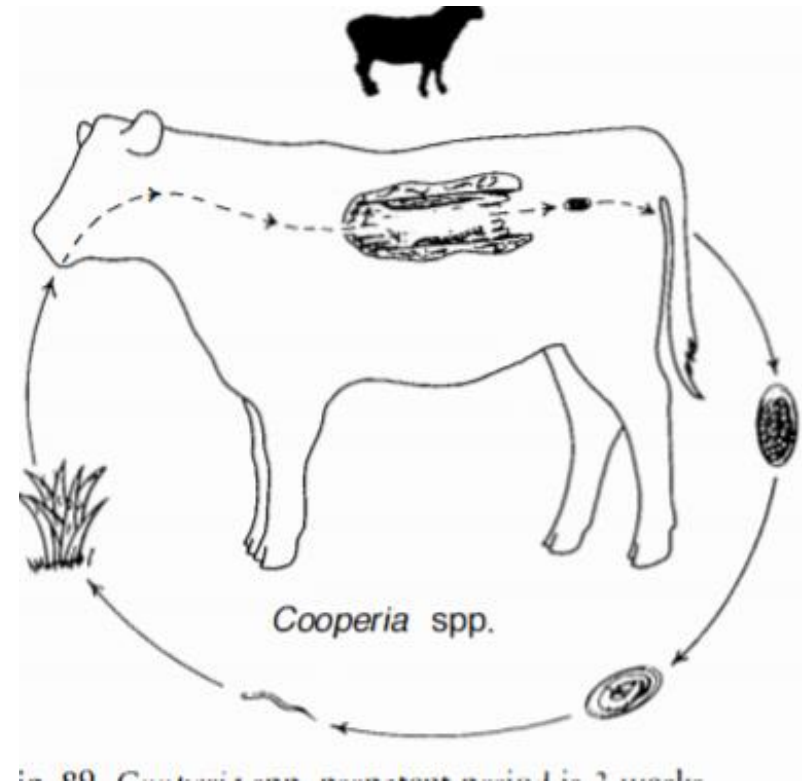
- aka Hair Worm, Black Scour Worm
- Adults live in the small intestine
- Can cause diarrhea, bottle jaw, and poor growth





Cooperia punctata

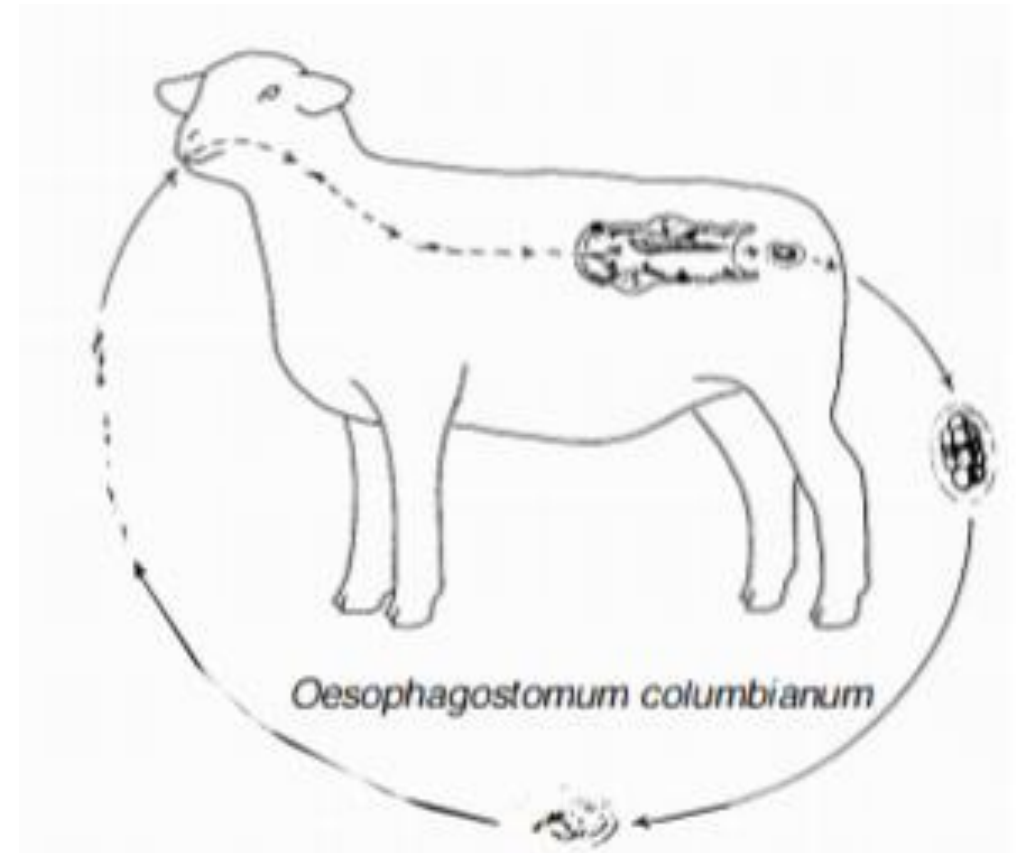
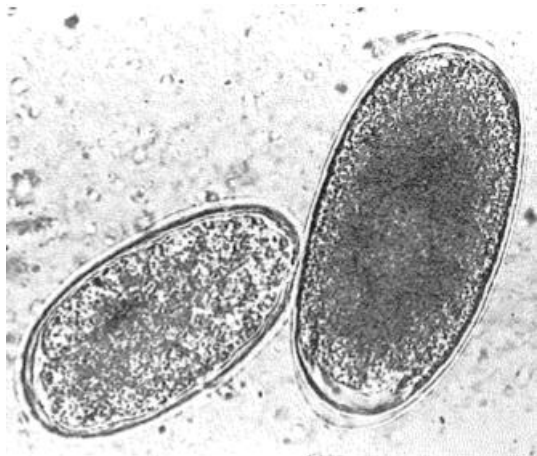
- aka Cattle Bankrupt Worm
- Adults live in the small intestine
- Can cause diarrhea, anorexia and poor growth





Oesophagostomum columbianum

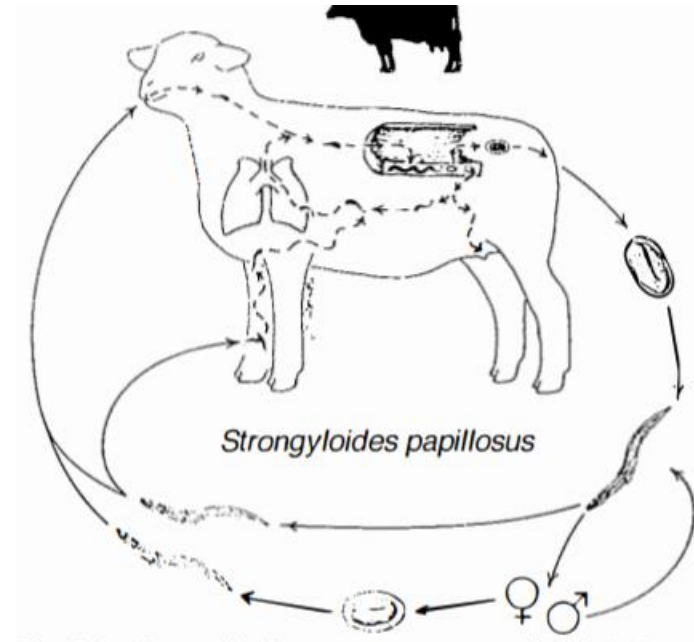
- aka Nodular Worm
- Adults live in the large intestine
- Can cause diarrhea





Strongyloides papillosus

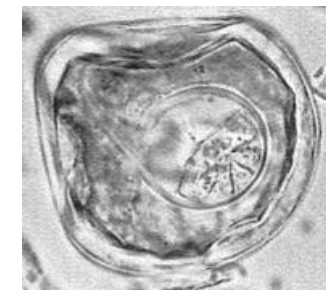
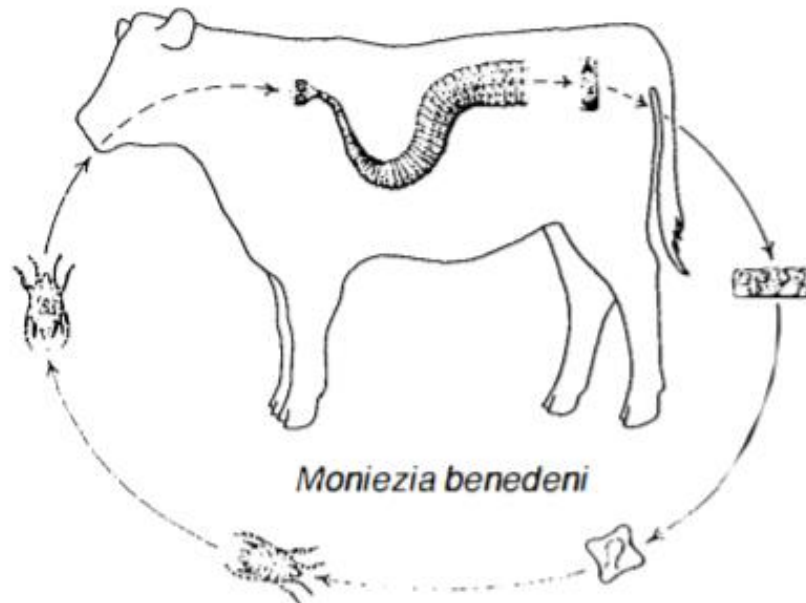
- aka “Threadworm”
- Adults live in the small intestine
- Can cause diarrhea in young animals, can also be transmitted cutaneously or transmammary





Moniezia spp.

- Tapeworms
- Adults live in the small intestine
- Relatively nonpathogenic, though in large numbers can probably contribute to diarrhea or cause obstruction





Fasciola hepatica

- Liver Fluke
- Adults live in bile ducts in the liver
- Can cause hepatitis, death, anemia, weight loss, and predisposes to clostridial diseases
- Diagnose with fecal sedimentation or necropsy

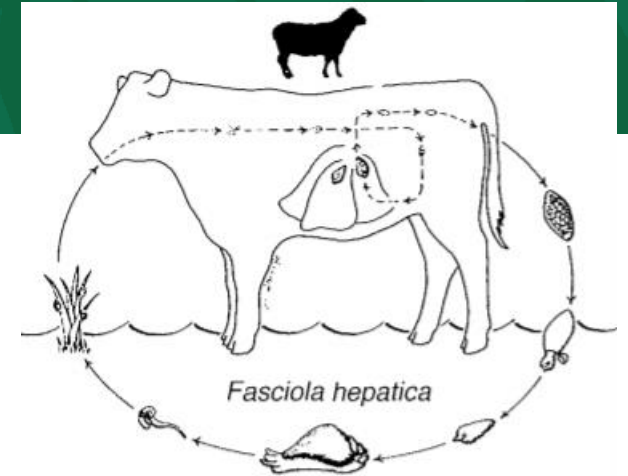
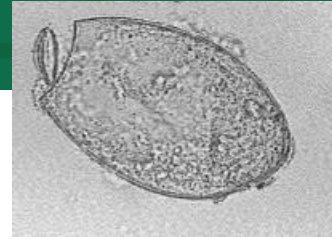
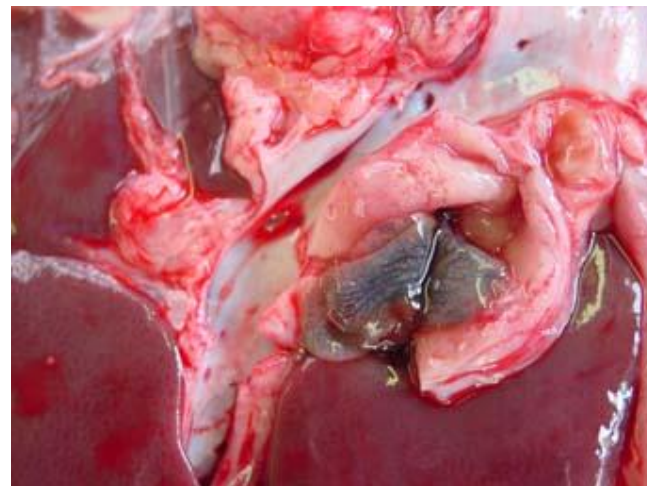


Fig. 97a. Fasciola hepatica. Important period is 10-12

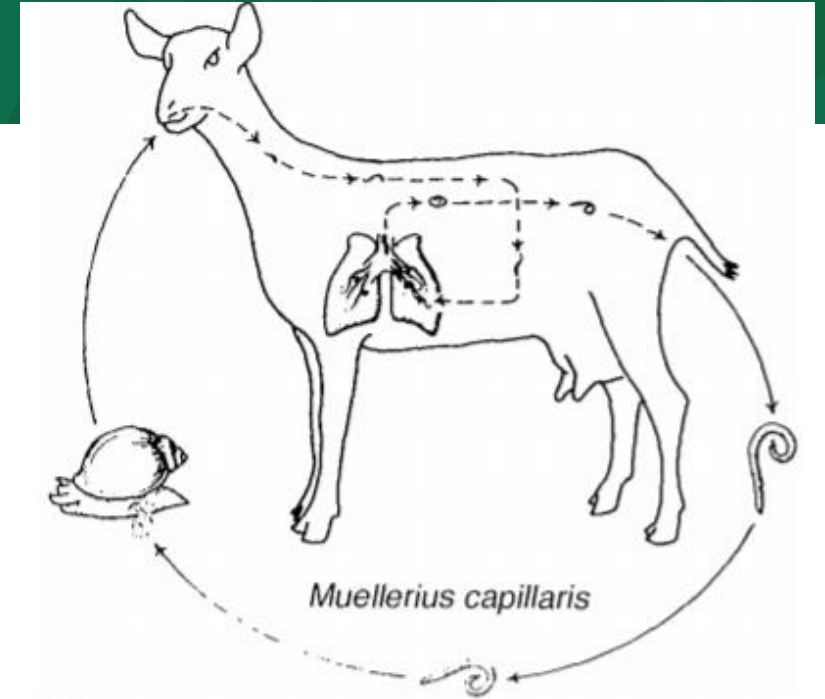




Muellerius capillaris

- Goat Lungworm
- Adults live in the lungs
- Can predispose to pneumonia
- Diagnose with Baermann technique or at necropsy

https://vet.uga.edu/ivcvm/courses/VPAT5316/01_respiratorypath/14_parasitic/parasiticqza.html





Best place to get information online:

Wormx.info

Acsrpc.org

References for this presentation: Foreyt's Veterinary Parasitology Reference Manual and the above websites

