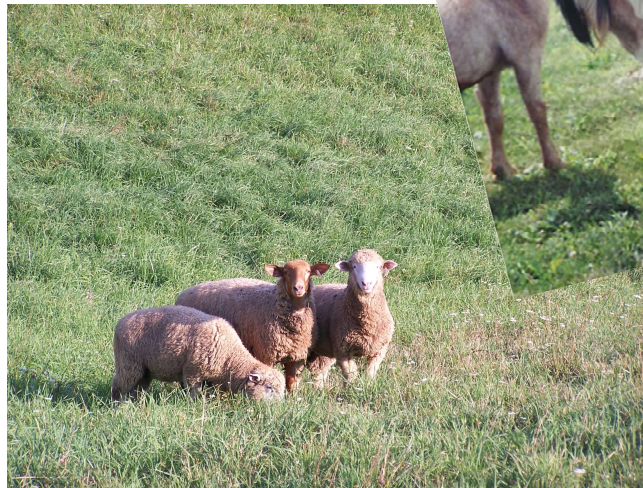


Sheep & Goat Internal Parasites



PennState Extension

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Sheep & Goat Internal Parasites

- Significance to Producers
- Challenges
- Parasite Types and Symptoms
- Prevention
- Treatment



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Significance to Producers

- Decreased performance
 - Weight loss
 - Poor growth
 - Lower milk production
 - Lowered reproduction
 - Decreased feed efficiency
 - Death



Challenges

- Expensive to treat
 - Products and LABOR
- “Dewormers don’t work”
 - Resistant parasites



**20 to 30%
of animals
harbor
70 to 80%
of parasites**



Types of Parasites

Tropical Roundworm

- Barberpole worm – *Haemonchus contortus*
- Feeds on blood in abomasum
- Causes anemia
- Poor performance
- Death
- Sheep and Goats

Barberpole Worms

- 1-5 drops of blood per day
 - 1,000 worms nearly a pint in a week
- Blood is 36% red blood cells
 - Deworm when 22% red blood cells
 - Death at 8%
- Produces 1-6,000 eggs/day
- Rapid development of resistance
 - 3 week generation interval
- Sheep and Goats



Photo by Dr. Steve Hart, Langston University

Barberpole worm adults in abomasum

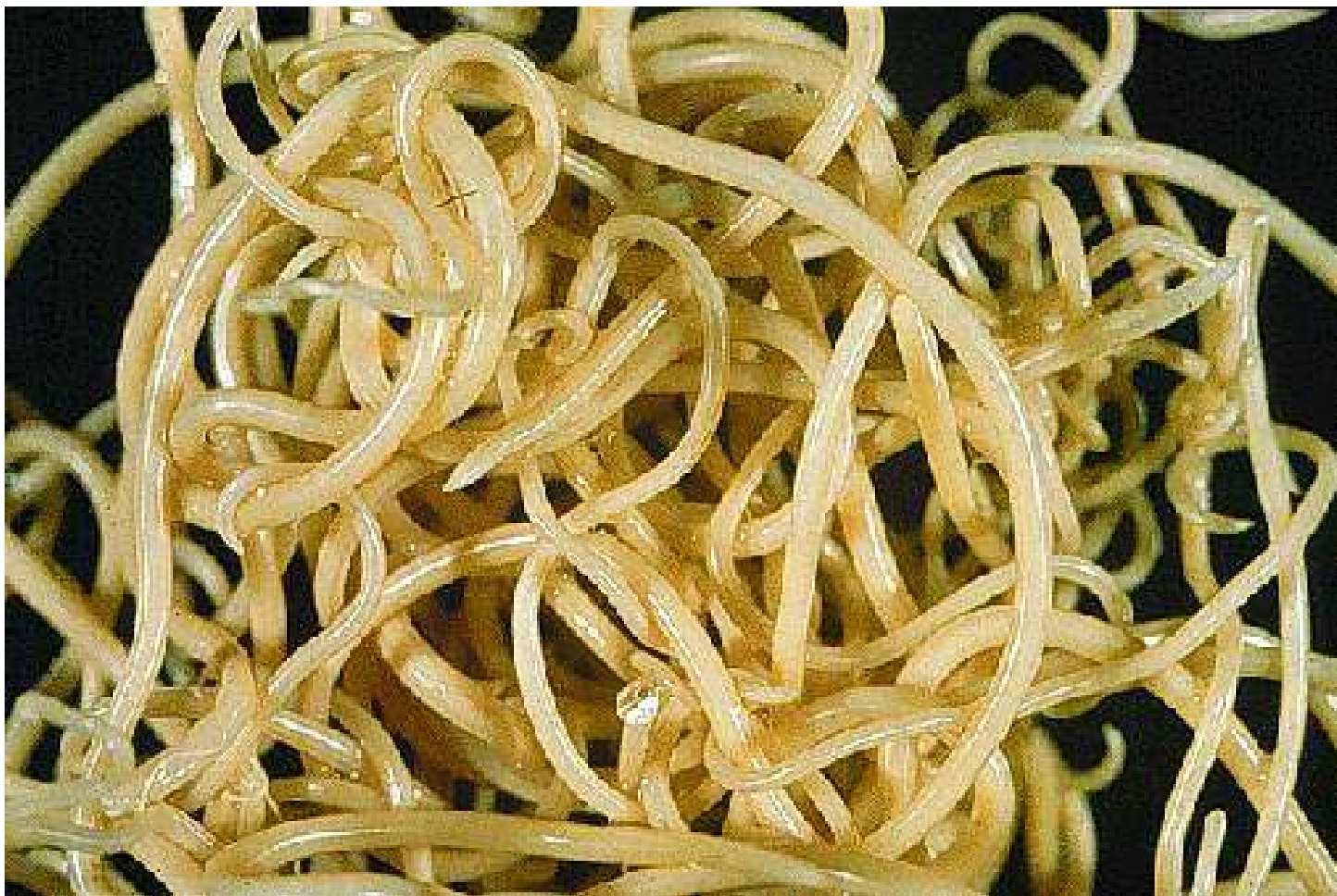
Temperate Roundworms

- Bankrupt worm – *Trichostrongylus colubriformis*
 - Feeds on mucus in small intestine
- Brown stomach worm – *Teledorsagia circumcincta*, *Ostertagia*, or *Cooperia*
 - Feeds on secretory cells of abomasum – loss of blood plasma
- Cause Diarrhea
- Reduced appetite
- Poor performance
- Cattle, sheep and goats

Bankrupt Worm – *Trichostrongylus colubriformis*



Brown Stomach Worm – *Teledorsagia circumcincta*, or *Ostertagia*



Lungworm – Dictoyocaulus filaria

- Adult females live in brochi
- Eggs coughed up and swallowed
- Causes coughing, rapid breathing, nasal discharge, loss of appetite, poor performance
- Sheep and Goats

Lungworm



Parasitic bronchitis - adult worms in the major diaphragmatic bronchi with mucus exudate

Photo from goat-link.com

Tapeworm

- Flat, ribbon shaped worms
- Segmented
- Live in intestines
- Segments are passed in feces and contain eggs
- Intermediate host – pasture mites
- Non-pathogenic
 - GI disturbances in large numbers
- Cattle, Sheep, Goats

Tapeworm segments in feces



Photo by Baalands

Meningeal Worm

- Brain worm or deer worm
- Neurological problems in goats
- Enters spinal cord, travels to brain
 - 10-14 days after ingestion
- Slugs and Snails intermediate host
- Wobbly on rear legs
 - Progresses to paralysis

Photo from king.portlandschools.org



Coccidia

- Single celled parasite
- Eimeria species
 - E arloingi, E christenseni or E ninakohlyakimovae in kids
 - E ahsata and E ovinoidalis in lambs
- Causes diarrhea (may be bloody), dehydrations, emaciation, weakness, anorexia and death
- Cattle, Sheep and Goats

Coccidia



Photo from rianimalhospital.com

Preventing Internal Parasites

- Rotational grazing
 - Move out at 4 inches
- Graze with other species
- Use “clean” pastures for young stock
- 1st spring pasture
 - Grazed last summer
 - Made hay off field



Preventing Internal Parasites

- Use feeders
- No critters in feeders
- Clean feeders and watering systems regularly



Preventing Internal Parasites

- Tannin containing plants
 - Sericea lespedeza
 - Birdsfoot trefoil
- Short duration grazing
 - Follow with LONG rest period (6 weeks)
- Cull wormy or skinny critters
- Good animal management practices
 - Nutrition (protein, energy, minerals)
 - Low stress environment



Nutritional Management



Nutritional Management

Protein
Supplementation

Above NRC
Requirement

Decreased FEC
in Periparturient
ewes



Common Symptoms of Internal Parasites

FAMACHA Scoring Card

FAMACHA[©]

2015

Anaemia guide

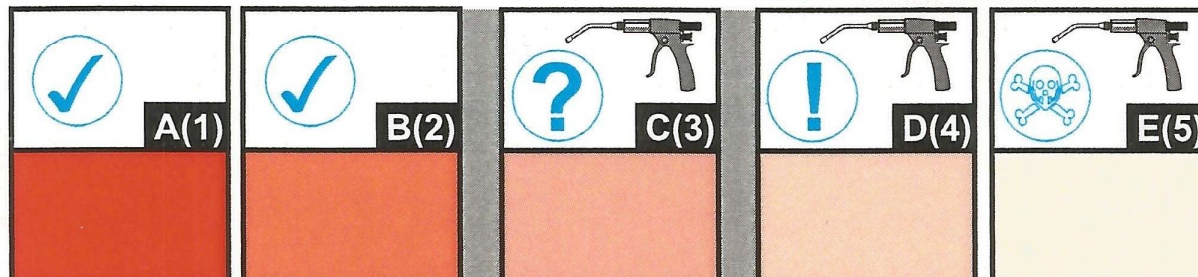
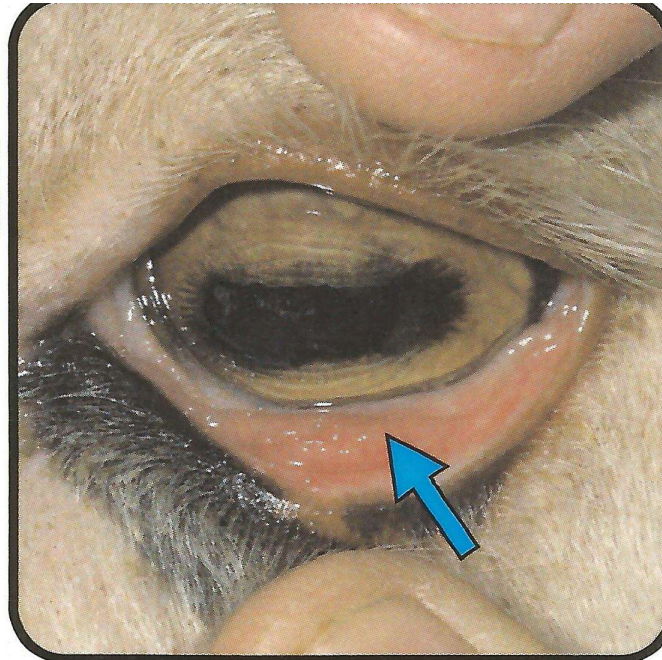
Guide sur l'anémie

Guía de anemia

مرشد فقر الدم

ऐनिमिया सँबधि निर्देश

貧血症檢測卡



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Bottle Jaw



Diarrhea

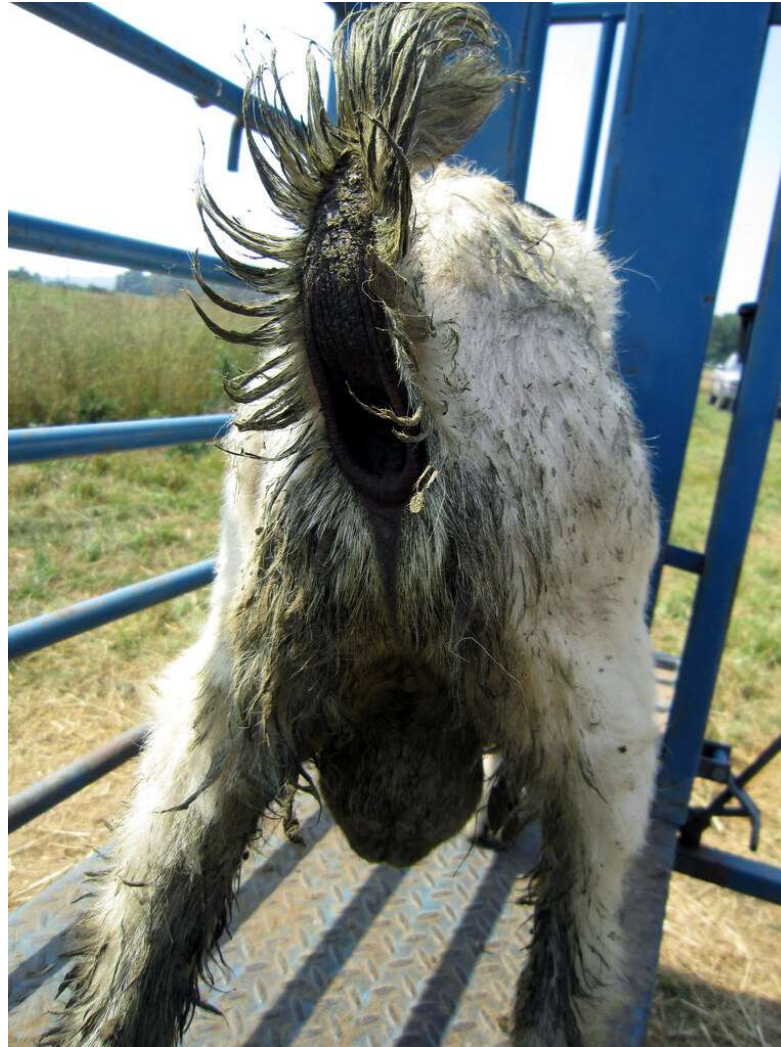


Photo from
hiveminer.com

Poor Body Condition



Photo by Jean-Marie Luginbuhl

Pale Nose or Vulva



**Consult your veterinarian for
treatment protocols**

Commonly Used Anthelmintics

Drug	Class	Sheep Approved	Goat Approved	Days Meat Withdrawal
Ivermectin (Ivomec)	AM	Yes	No	Sheep 11 Goats 14
Doramectin (Dectomax)	AM	No	No	NE
Moxidectin (Cydectin)	AM	Yes	No	Sheep 14 Goats 17
Levamisole (Prohibit)	I/T	Yes	No	Sheep 3 Goats 4
Morantel (Rumatel)	I/T	No	Yes	Goats 30
Fenbendazole (Safeguard or Panacur)	BZ	No	Yes	Goats 6 days (suspension)
Albendazole (Valbazen)	BZ	Yes	No	Sheep 7 Goats 9

AM = Avermecting/Milbemycin
BZ = Benzimidazole

I/T = Imadazothiazole/Tetrahydropyrimidine
NE = Not established

Managing Internal Parasites

- Prevention is key
 - Good pasture management
 - Good flock/herd management
- Integrated pest management
 - Use multiple options approach
 - FAMACHA
 - Culling
 - Fecal tests
 - Dose accurately



QUESTIONS