Year-round pastures for Goats in central Texas

Dr. Jim Muir

Goats are misunderstood!!

- They are ruminants

Goats are misunderstood!!

- High metabolic rates
- Selective mixed feeders

Goats are misunderstood!!

Prehensile lips

Goats are misunderstood!!

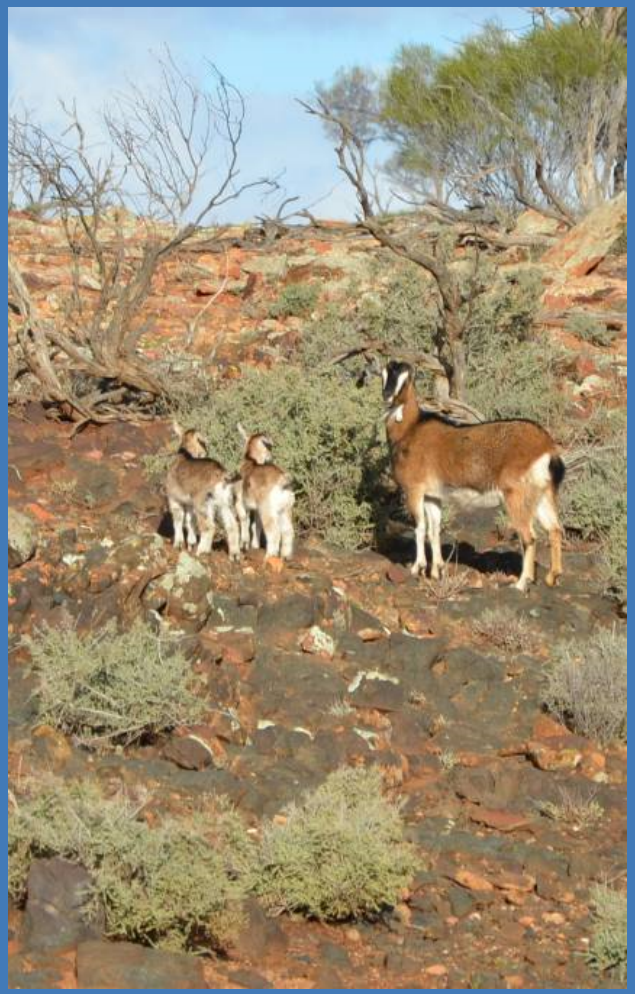
- Keep their heads high

Goats are misunderstood!!

- VERY susceptible to worms

- Eggs from host ruminants infect pasture
- L3 larvae migrate up plants to be ingested

Manage pastures & rangeland to minimize GIN



- Clean or safe pastures
- Pasture rest/rotation
- Stocking rates
- Browsing
- Plant height
- Plant morphology
- Mixed species grazing

Acknowledge Dr. Niki Whitley,
Fort Valley State University in south Georgia

Clean or safe pasture

A pasture that is FREE from parasites.

1. A pasture that has never grazed by sheep or goats.
2. A pasture that has not been grazed by sheep or goats for 6 to 12 months.
3. Pasture that has been grazed by cattle or horses for past 6 to 12 months.
4. Pasture in which a hay or silage crop has been removed.
5. A pasture that has been renovated with tillage.
6. A pasture that has been rotated with row crops.
7. Burnt pasture.
8. Annual pastures.

Newly planted dwarf pearl millet

Cleaner, safer pastures are usually a more practical option.

Pasture rest/rotation

The primary method for creating safer (less contaminated) pastures.

- Parasite infection is driven by stocking rates and duration of grazing periods.

  Overgrazing → parasitism

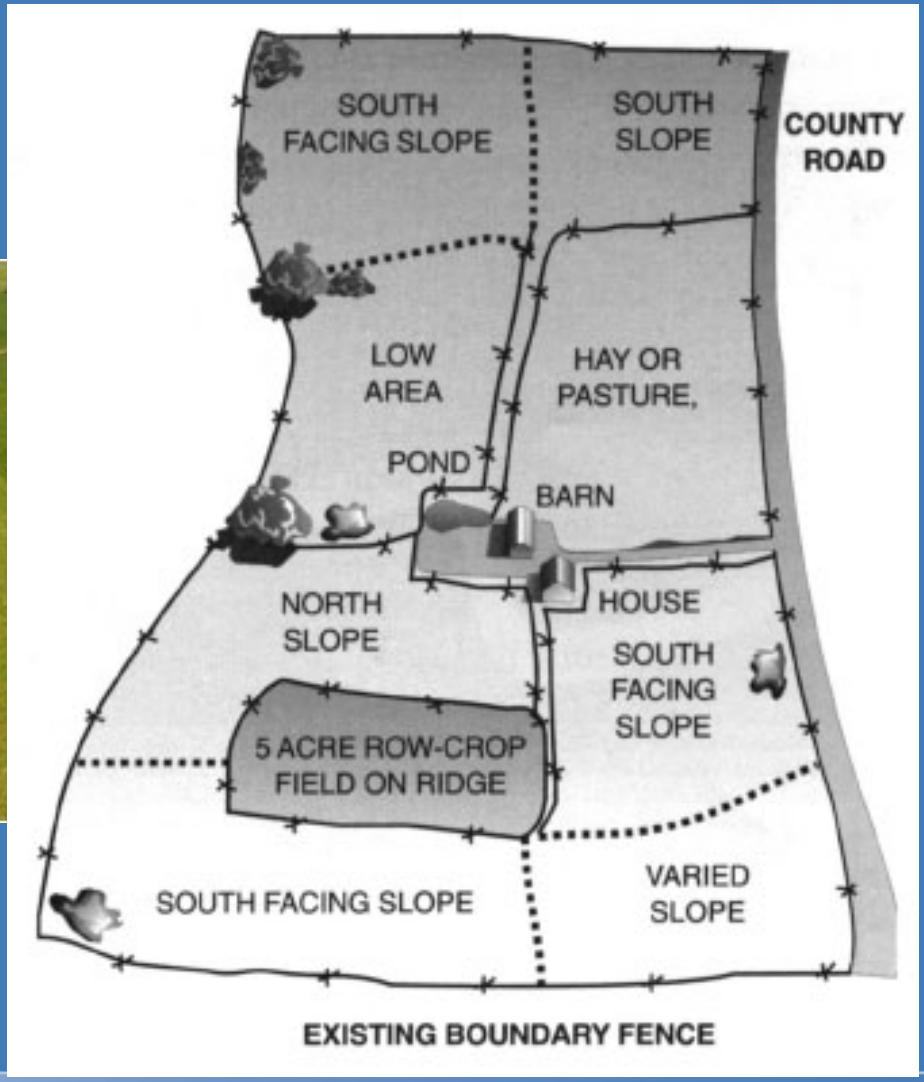
- The higher the stocking rate, the more the pasture gets infected and the more likely livestock are to ingest infective worm larvae.

- The longer the grazing period, the more the pasture gets infected and the more likely livestock are to ingest infective parasite larvae.

Rotational grazing

- There are many variables to manage:
  - Climate
  - Season
  - Rainfall
  - Number of paddocks
  - Size of paddocks
  - Number of livestock
  - Susceptibility of livestock
  - Forage type and quality
  - Supplemental feed

Rotational grazing



General recommendations

- It takes at least 60 days for a highly contaminated pasture to have fewer worm larvae.
- “Take half, leave half”
- Don’t graze below 4 inches (10 cm).

Plant height

- It is estimated that 80% worm larvae in first 2 to 3 inches of the ground surface.
- Do not graze pastures below 4 inches.
- Overgrazing is one of the primary causes of internal parasitism in small ruminants.

Alternative forages

- Forages containing condensed tannins
  - Native forbs
  - Rangeland browse

How do they work (?) – reduce egg hatch and development of larvae.

Browsing

- Goats that are allowed to browse (their natural grazing behavior) have fewer parasite problems.
- Browse should be managed to provide continuous nutrition for goats.
- Sheep will also browse.

Plant morphology

- There are lower numbers of larvae on non-grass plants, e.g. legumes, forbs.
- Non-grass plants reduce parasite survival on pasture or reduce larval migration up plant.
- Management strategies
  - Include legumes in pasture mixes (e.g. 30%).
  - Plant alternative forages.

Plant moisture

- Delay grazing until after dew has lifted or the grass has dried after a rain.
- Dry conditions force the larvae to stay at the base of the plant.

- Parasites need moisture!

Mixed or multi-species grazing

- Parasites are mostly host-specific.
  - Worms rarely transmit from one species to another.
  - Cattle and horses have different parasites than sheep and goats.
- Complementary grazing habits
  - Goats → browse
  - Sheep → forbs/grass
  - Cattle → grass

Nutrition

There is an interaction between parasites and nutrition.

- Livestock are far more capable of coping with parasites if their nutritional needs are being met.
- Animals on low protein diets are more susceptible to infection because they produce less IgA.