### **General Goat Health**

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#### **General Goat Health**

- A Healthy goat
- Preventative health care
  - Biosecurity
  - Vaccination program
  - Parasite control
  - Good nutrition
  - Hoof care
  - Predator control
- Common health problems
  - Internal parasites
  - Digestive
  - Respiratory
  - Reproductive
  - Skin
  - Hoof-related
  - Wasting diseases



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# A healthy goat . . .vital signs



Rectal temperature	102-104°F	
Heart rate (beats)	60-90 per minute	
Ruminations	1-2 per minute	
Respiratory rate (breaths)	15-30 per minute	
Packed cell volume (blood hematocrit)	22-28% avg. 28%	
FAMACHA© score	<u>&lt;</u> 3	

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#### **Normal Behavior**

- Head up
- Ears up
- Tail up
- Bright-eyed
- Healthy hair coat
- Good appetite
- Chew cud
- Curiosity
- Agile, normal gait
- Keep up with herd



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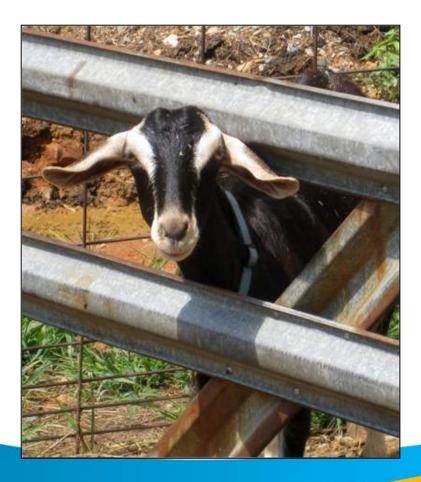
#### **Preventative Health Care**



- Biosecurity
- Vaccination program
- Parasite control program
- Good nutrition and feeding management
- Predator management
- Hoof care

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### **Good Biosecurity**



- Start with healthy stock.
- Buy from reputable breeders.
- Isolate new animals for at least 30 days.
- Maintain a closed herd.

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# **Biosecurity for Goat Ranches**

- Don't mix your goats with other goats (or sheep).
- Don't loan goats.
- Don't board goats.
- Don't loan equipment.
- Limit access to your farm and animals.
- Control dog, cat, rodent, fly, and bird populations.



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### **Vaccination Program for Goats**

#### **Clostridial diseases (CD-T)**

- Clostridium perfringens
  - type C affects kids < 1 month</p>
  - type D affects kids > 1 month
  - Most critical for farms which feed a lot of grain.
  - Vaccine not as effective in goats
- Clostridium tetani tetanus



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# **Vaccination Program for Goats**



#### Does

- Vaccinate 1 to 2 months prior to kidding.
- Two shots are necessary the first time an animal is vaccinated.

#### Kids

- Vaccinate at approximately 8 and 12 weeks of age
- Vaccinate earlier if dams were not vaccinated
- Use tetanus antitoxin at the time of castration or disbudding if dam was not vaccinated.

#### Bucks and wethers

Vaccinate annually

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#### Other Possible Vaccinations

\*\*None of these vaccines are labeled for goats\*\*

- 7 and 8-way Clostridial
- Caseous Lymphadenitis (CL)
- Vibrio and Chlamydia abortion
- Sore mouth
- Pneumonia
- Foot rot
- Rabies
- Autogenous
   Vaccine made from bacteria isolated on a specific farm



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# Deworming Program Integrated Parasite Management (IPM)

- Do not overstock pastures and pens
- Don't overgraze
- Rest pastures sufficiently
- Enable browsing
- Practice selective deworming, not prophylactic deworming
- Administer drugs properly
- Determine which drugs work on your farm
- Select goats which are more resistant to internal parasites
- Practice good sanitation
- Use coccidiostats



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### **Good Nutrition and Feeding Management**



- Feed balanced rations
- Feed according to production cycle and growth stage
- Separate animals according to their nutritional needs
- Supplement pasture and forage, when necessary and economical
- Provide free choice goat minerals
- Make feed changes gradual
- Adequate feeder space
- Good feeder design

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### **Common Health Problems**

- Internal parasites
- Digestive/Nutritional
- Respiratory complex
- Reproductive
- Hoof
- Skin
- Chronic







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# **Internal Parasites (worms)**



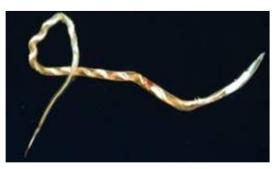
- Primary health problem affecting small ruminants
- It is normal for goats to have some parasites.
- Goal is to control, not eradicate parasites.
- Due to long-time overuse and misuse of anthelmintics, parasites have developed resistance to all of anthelmintics.
  - Resistance varies by drug, animal, and farm.
  - Safeguard, Ivermectin have most reported resistance.

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### **Gastro-Intestinal Parasites**

#1 health problem affecting small ruminants

- Round worms
  - Barber pole worm
  - Ostertagia
  - Trichostrongyles
- Lungworms
- Tapeworms
- Liver flukes
- Coccidia

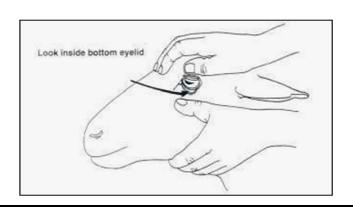




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### The FAMACHA© System

for assessing anemia and barber pole worm infection in small ruminants





OPTIMAL - (NO DOSE)
ACCEPTABLE - (NO DOSE)
BORDERLINE -
DANGEROUS - DOSE!
FATAL - DOSEIII

Clinical Category	Color	PCV	Deworm?
1	Red	<u>≥</u> 28	No
2	Red-Pink	23-27	No
3	Pink	18-22	?
4	Pink-White	13-17	Yes
5	White	<u>&lt;</u> 12	Yes

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# Digestive / Nutritional / Metabolic

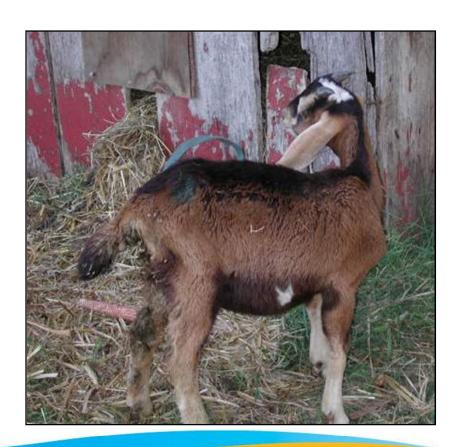


- Scours (diarrhea)
  - Infectious
  - Non-infectious
- Enterotoxemia
- Urinary calculi
- Acidosis
- Bloat
- Polioencephalomalacia
- White muscle disease
- Floppy kid syndrome
- Pregnancy toxemia
- Milk fever
- Poisonous plants

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# Scours (Diarrhea)

- Infectious
  - Bacterial
  - Viral
  - Protozoa
- Non-infectious
  - Parasites
  - Nutritional
  - Stress



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#### **Nutritional Disorders**

#### Enterotoxemia

- Caused by bacteria clostridium perfringins
- Caused by sudden change in diet

#### Acidosis

- High levels of lactic acid in rumen
- Sudden excess consumption of concentrates (grain)

#### White muscle disease

Vitamin E and/or Selenium deficiency

#### Bloat

- Frothy pasture-related
- Free gas feed lot related

#### Polio

- Thiamine deficiency
- Usually grain-related.

#### Floppy kid syndrome

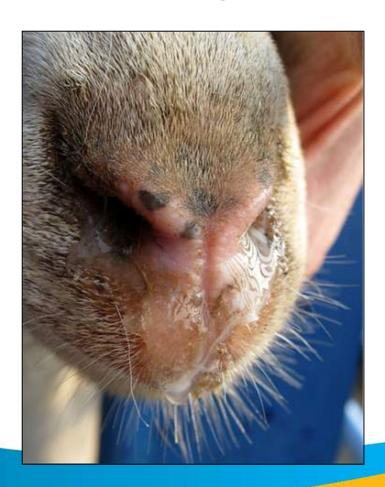
- Affects kids 3-10 days of age
- Metabolic acidosis
- Urinary calculi (stones)
  - Imbalance of Ca:P

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Making a Difference

http://www.sheep101.info/201/diseasesa-z.html

### **Respiratory Complex**



- Infectious
  - Bacterial pneumonia
- Non-infectious
  - Dust
  - Poor ventilation
  - Nasal bots
  - Lung worms
  - Stress
- Secondary

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### Hoof

- Foot rot (in hoof)
  - Infectious
  - Two bacteria
  - Contagious
  - Foul odor



- Foot scald (between toes)
  - Environmental
  - One bacteria
  - Not contagious



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### Skin

- External parasites
  - Mites
  - Ticks
  - Lice
  - Nose bots
- Sore mouth





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# Reproductive

- Dystocia
- Abortion
  - Infectious
    - Chlamydia
    - Vibro
    - Toxoplasmosis
  - Environmental
- Metabolic
  - Pregnancy toxemia inadequate energy consumption
  - Milk fever low blood Ca
- Mastitis
  - Chronic
  - Acute



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# **Chronic or Wasting Diseases**

- Caprine arthritic encephalitis (CAE)
- Caseous lymphadenitis (CL)
  - Caused by bacteria
  - Abscesses
- Johne's disease
- Scrapie
  - Voluntary and mandatory scrapie programs
  - Prevalence not known in U.S. goats, but believed to be less than in sheep
  - No resistant genotypes have been identified for goats



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# **General Goat Husbandry**

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### **General Goat Care**

- Pasture
- Fencing
- Housing
- Handling
- Breeding
- Kidding
- Feeding
- Management



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#### **Pasture**

- Pasture or browse should be the primary source of nutrients for goats.
- The number of goats that can be grazed per acre depends upon many factors: time of year, rainfall, amount of supplementation, length of winter feeding period, and type and management of pasture.
- Rule of thumb is 1,000 lbs. of grazing animal per 1 to 2 acres.



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# **Fencing**

- Major expense in raising goats.
- Goats require good fences to keep them in and to keep predators out.
- Two types of fencing are usually recommended for perimeter fencing for goats.
  - Multi-strand, high-tensile, electric
  - Woven wire with electric offset wires





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# Housing

#### A dry, draft-free area for kidding

- Need for housing depends upon when kids are born and how comfortable the owner wants to be.
- Kidding in inclement weather requires good housing.
- Should have shelter when kidding on pasture.
- Grazing goats should have access to shade/shelter.
- Facilities are needed to store feed and equipment.





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# Handling

catching, sorting, treating, weighing, loading, hoof trimming, etc.



- Without an easy way to handle goats, important tasks often to not get done in a timely fashion
- For a small herd, animals can be handled in small pen
- Larger herds should have a set or working pens

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### **Breeding and Reproduction**





- Goats are seasonal in their breeding habits.
- Goats are most fertile in the fall.
- Seasonality varies by breed and goat.
- Estrus cycle lasts ~21 days.
- Pregnancy lasts about five months.
- Goats usually give birth to 2 to 3 kids.
- Litter size is affected by breed, age, season, and nutrition.
- Doe determines number of offspring; buck determines sex of offspring.

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# **Kidding**

- Most does kid on their own without the need for help.
- Most kids nurse on their own without the need for help.
- It's best to leave doe and kids alone unless there is a problem.
- Check doe if no progress 1 hour after water bag breaks.
- After 30 minutes of trying to help with a difficult birth, seek qualified help.
- Make sure kids get adequate colostrum within 24 hours.
- Feed week kids via esophageal tube





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# **Feeding**

- Pasture and browse should provide majority of nutrients to goats
- Supplement pasture as needed
  - Free choice minerals
  - Late pregnancy
  - Early lactation
  - To increase growth rates
  - Flush does in poor body condition
  - Poor quality pasture
  - Drought.
- Adequate feeder space



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### Management

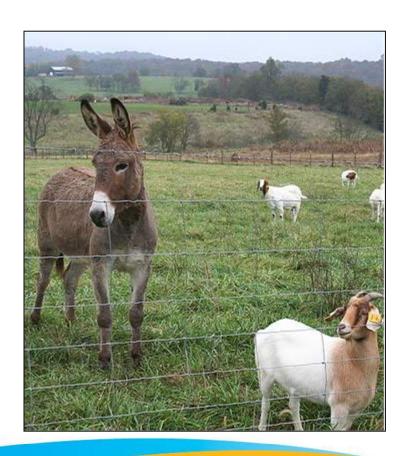


- Predator control
- Castration
- Disbudding
- Hoof trimming

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#### **Predator Control**

- Fencing
  - Woven wire with electric offset wires.
  - Multi-strand, high-tensile electric fence.
- Management
- Livestock guardians
  - Guardian dogs
  - Donkeys
  - Llamas
- Lethal control



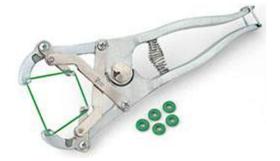
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### Castration

#### Removing or inhibiting the function of the testes

- Decision to castrate is based on many factors.
  - Pets
  - Wethers for show
  - Management ease
- Methods
  - Surgical
  - Elastrator
  - Burdizo
- Age
  - Band 1 to 7 days
  - Less than 30 days.







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# Disbudding

# **Dehorning**

#### Removal of the horn buds

- Decision to disbud is based on many factors
  - Dairy goats
  - Pets
  - Show wethers
  - Personal preference
- Methods
  - ✓ Disbudding iron
  - Paste
  - Surgical removal by vet
- Age
  - 1 to 2 weeks, when horn buds start to appear.





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# **Hoof Trimming**

- Need varies by farm, goat, environmental conditions, and personal preferences
- Method
  - Hoof trimmers
  - Knife
- Restraint
  - On a stand
  - Tied to a fence
  - Tipped
  - Tilt table





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Questions?

