



DIVISION OF AGRICULTURE
RESEARCH & EXTENSION

University of Arkansas System

Nutritional Considerations for Small Ruminants

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Basic Nutritional Requirements

General Rules of Thumb

- Consume 2-4% of body weight
- Early to Mid-Gestation (First 15 weeks)
 - Not necessary to supplement feed unless poor forage or thin females
- Late Gestation (Last 6 weeks)
 - 0.5-1 lb of grain/female/day

- Early Lactation (First 6-8 weeks)
 - 1 lb of grain/offspring being nursed
- Always provide roughage (rumen function)



Feeding Management

- Feeder space
- Separate
- Feed off ground
- Clean, fresh water



Minerals/Vitamins

- Loose, free choice
- 2:1 Ca:P
- Vitamins A, D, E
- Selenium
- Copper



Basic Pasture Management

Species Differences



Sheep

- Grazer
- Prefer forbs
- Graze close to ground



Goats

- Browser
- Prefer Shrubs
- Top-down grazer

Best Management Practices

- Monitor Forage Height
- Stocking Rates
- Nutritional Quality
- Multi-Specie or Co-Specie Grazing
- Rotational Grazing



Forage species

Grasses

- Small grains
- Annual ryegrass
- Crabgrass
- Fescue (NE+)
- Fescue (E+)
- Orchardgrass
- Bermudagrass
- Bahiagrass
- Millet
- Sudangrass

Legumes

- Clovers
 - Arrowleaf
 - Crimson
 - White
 - Red
- Alfalfa
- Annual lespedeza
- Sericea lespedeza
- Cowpeas, soybeans

Browse and forbs

- Oak
- Greenbrier
- Blackberry
- Honeysuckle
- Persimmon
- Others
- Brassicas*
- Plantain*
- Chicory*
- Pigweed
- Ragweed
- Buttercup
- Others



Condensed Tannins

Sericea Lespedeza



Forage Chicory



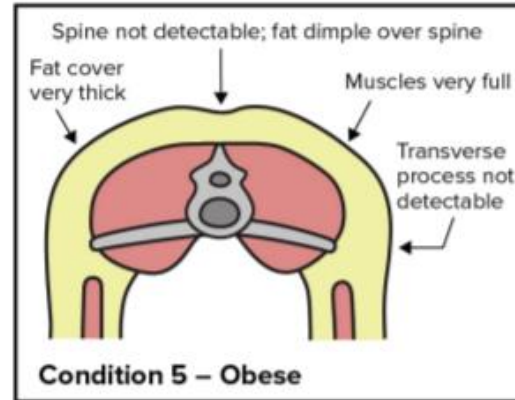
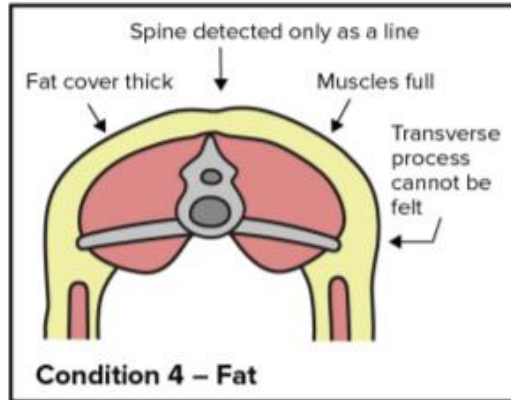
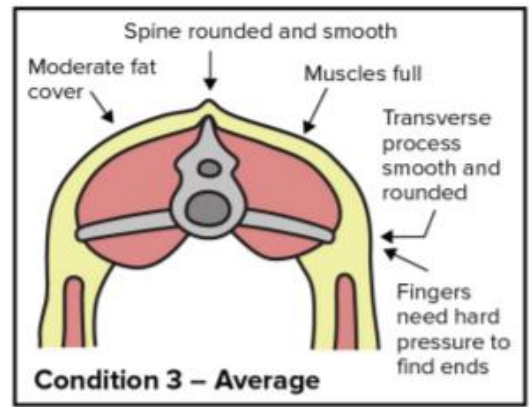
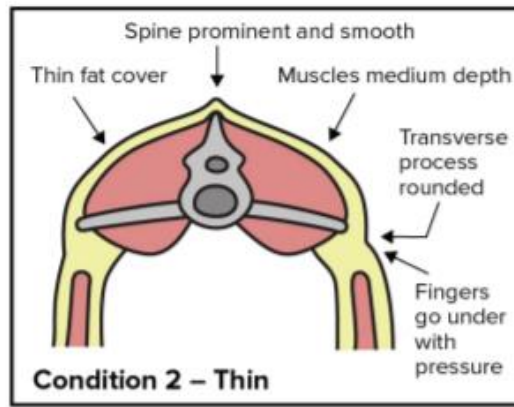
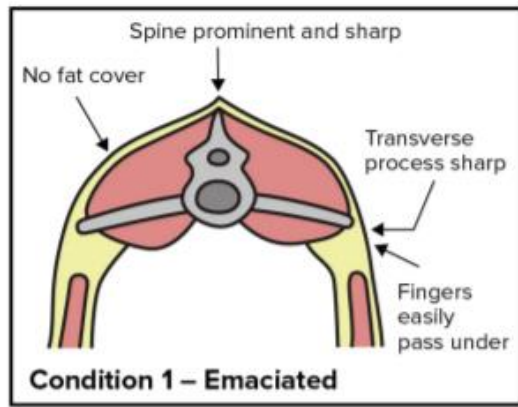
Birdsfoot Trefoil



Feeding Strategies

Flushing

- Elevation in plane of nutrition around breeding
- Boost ovulation, conception and embryo implantation rates
- Help females to exhibit estrus
- Can increase lambing & kidding rates 10-20%



Adapted from 'Body Condition Scoring of Sheep' by JM Thompson and H Meyer (Oregon State University)

Ewes vs Does

- 4-6 weeks – Ewes
 - 2-3 weeks pre-breeding
 - 2-3 weeks into breeding
- 6-8 weeks – Does
 - 3-4 weeks pre-breeding
 - 3-4 weeks into breeding
- Higher quality pasture or supplementing 0.5-1 lb of grain/female

Creep Feeding

- Provides extra nutrition & helps facilitate weaning
- Placed in high traffic areas
- Start as early as 2 weeks old
- <50 lbs: 18-20% CP
- >50 lbs: 14-16% CP



Creep Feed Additives

- Coccidiostat
 - Deccox – labeled for sheep and young goats
 - Bovatec – labeled for sheep in confinement
 - Rumensin – labeled for goats
- Ammonium chloride
 - 0.5% of diet for sheep
 - 2% of diet of goats

Resources

- Langston Interactive Nutrient Calculator (LINC)
 - Goats
- Montana State University Sheep Ration Program
- Maryland Small Ruminant Spreadsheets
- UA Grazing and Hay Calculators

Common Nutritional Diseases

- Acidosis
- Enterotoxemia
- Bloat
- Urinary Caculi
- Prussic Acid Poisoning
- Nitrate Poisoning
- Grass Tetany
- White Muscle Disease
- Polioencephalomalacia
- Ketosis

Questions?