PASTURE MANAGEMENT & IMPROVEMENTS FOR SMALL RUMINANTS

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A PASTURE IS...?

- Loafing area
- Fresh air & exercise
- Bonafied feed
- Source
- *hopefully all three
A PASTURE...

- Takes Effort!!!
- BEFORE...forage plants can be food for our animals...
- We must provide plant food for the plants
IT STARTS WITH THE SOIL

- Pasture fertility or infertility?
- Balanced or imbalanced soil nutrients
- Soil Ph, Phosphorus, Potassium
- Soil test is NOT Rocket Science and it
- Won’t make you go blind.
- Driving with your eyes closed
- Small Ruminant economics
SOIL TEST

- Inexpensive snap shot of fertility
- Cost – 6pk or 12 pk of your favorite cold beverage = $6 per sample
- Cheap investment to learn of need for lime and or fertilizer
- Low soil pH dooms all forage plantings
- Low P&K values stymie production
PASTURE IMPROVEMENTS

- What to plant??
  - Cool Season grass
  - Warm Season grass
  - Legumes
  - Annuals winter and summer
CHOICES VS ECONOMY

- Apply LIME first to correct pH
- Apply fertilizer
- Small ruminant farms must develop
  - A fertilizer plan –
  - Rotational fertilizer program
- Lime and fert pastures on a plan
- Lime required every 5-8 yrs
- Fertilize with care
When to plant is just as important as to what to plant.

- Perennials and annuals
- Cool season grasses/legumes should be planted in FALL
- Fescue/orchardgrass – fall plantings
- Alfalfa – fall planted legume
- Ryegrass – Millet – annuals
SMALL RUMINANT GRAZING HABITS

- Goats select grass over clover, sheep really prefer browse plants.
- Sheep prefer browse plants.
- Goats like rough terrain vs smooth flat lands.
- Goats graze along fence lines before grazing center of pasture.
- Goats graze above their heads naturally.
- Goats eat “other plants” their cousins ignore.
Small Ruminants nutritional needs are greatest last trimester of pregnancy and first two months of lactation.

Lowest RQ. Dry does/mature bucks can utilize “roughest forage” – “browse time”

Using forages to supplement “prime time” needs.
GRAZING TOOLS TO AID MANAGEMENT

- Rotational grazing provides max economic returns.
- Fencing – cross fencing to divide pastures
- Fencing – “protects” growing forages
- Rotational grazing allows forage plants to re-grow (re-foliate)
- Rotational vs Continuous grazing returns
- Healthier plants and animals
ANIMAL ROTATION

- Learn to look @ both animals and plants in developing your skills as a rotational grazer. Body condition, plant re-growth.
- Stocking rate – animals per acre
- 2-3 Mature animals/acre
- Change stocking rate for Lush forage
- 10-50 goats/sheep per acre – 20 alpacas/acre
ANIMAL NEEDS

- Minerals – Copper rq are DIFFERENT
- Min. Differences among small ruminants
- Summer – 50% Diacalcium Phos + 50% TM Salt
- Lush Winter/Spring grazing include High magnesium mineral (20-25% Mg Ox) especially for Dairy goats on winter annuals – Rye, wheat, fescue, orchard grass, etc
PASTURE IMPROVEMENTS

- Soil Fertility improvements
- Lime, fertilizer, new forage plantings
- Warm season grasses
- Cool season grasses
- Blended and matched to supplemental forages – ie ryegrass
- All the above require planning & effort
PASTURE IMPROVEMENTS INCLUDE SOIL FERTILITY

- Measure soil fertility with soil test
- Lime to correct soil pH levels
- Lime will encourage plant growth
- Fertilizer sources
- Commercial fertilizer – bulk or bagged
- Commercial spreading 200 lbs/A
- Poultry/hog manure
SOIL AMENDMENTS

- Lime provides Ca; increases pH levels
- Fertilizer supplies - N-P-K
- Small Ruminant Farm Economy
- Apply Lime 1st
- Apply Fertilizer
- SR Farm must dev. a fert plan
- Lime 5-8 yrs
- Fertilizer rotation
FERTILIZER N-P-K

- N for green up and growth
- P for plant growth
- K for root health and winter hardiness
- Commercial Fert
- Compare plant food per lb of Com. Fert.
- Compare 10-10-10 vs 17-17-17
- Higher analysis less material to spread
- More plant food for $
POULTRY LITTER/MANURE

- Supply time released Nutrients
- 50% inorganic N released 1\textsuperscript{st} yr
- 2\textsuperscript{nd} half inorg. N released 2\textsuperscript{nd} yr.
- Odor issues for neighbors
- Availability – transportation, immediate application @ farm required
- Rate – 1 -2 T per acre for grasses
- Additional N recommended for hay prod.
SEEDING DEPTH

- Forages are planted shallow
- ¼ - ½ in deep
- Broadcast in prepared seedbed
- Culti-packing helps seeding vigor
- Prepared seed bed always out yields no till
- No till planting into existing forage works
- Plant winter annuals via No till into dormant Bermuda
PASTURE PLAN

- Built around cool season grasses
- 20% dedicated to summer forage
- 10% dedicated to supplemental forages
- Browse – great to have when it’s there, difficult to manage—usually a warm season thing.
COOL SEASON FORAGES

- Perennials – Fescue – Orchard grass
- Annuals
- Rye, wheat (plant late fall, early winter)
- Ryegrass (select know varieties not generic)
- Oats (plant early fall)
- *all including ryegrass can be no tilled
- Into existing Bermuda grass pastures.
PERENNIAL COOL SEASON GRASS

- Fescue – endophyte issues esp for llamas and alpacas.
- Sheep & goats ???
- Select endophyte friendly fescue for new plantings – visit your Co. Extension Office
- Plant Sept 1 – Nov 15 (Piedmont)
- 20-30 lbs/Acre
- Fertilize @ planting or shortly afterwards
ORCHARD GRASS

- Another cool season grass
- Best in SC planted with Fescue
- Not good stand alone grass
- Produces 75% of fescue production
- Add at 10-15lbs to 20 lbs of Fescue at planting.
- Plant in Fall along with Fescue
- See Extension for latest O-grass Varieties
COOL SEASON LEGUMES

- Alfalfa – hay production or grazing
- Plant in Fall – summer production
- MUST have soil fertility RIGHT @ start!
- pH – 7.0 - ++ levels of P&K
- Expensive crop – EXCELLENT hay potential- fantastic supplement feed for all species
- Check with Extension for latest Variety info
A Clovers

- Add clovers to Fescue/Orchard grass for sheep, alpaca and llama (?)
- Perennial Clover – white clovers (ladino)
- Annual Clover – crimson, arrowleaf
- Fix N into soil make them a great companion crop for grass pastures
WARM SEASON GRASSES

- Planted in Spring/Early Summer
- Soil moisture important
- Perennial grass – Bahia, Bermuda grass
- Bahia preferred summer grass
- Bahia lower fertility requirements
- Strictly a summer forage
- Late no till planting option (wheat, rye)
- 15 lbs/A – plant shallow
WARM SEASON GRASSES

- Bermuda grass
- Sprig hybrids for hay production
- Seeded varieties for grazing – 10-20 lbs/A
- Bahia preferred over Bermuda by S Rum.
- Common Bermuda will encroach in fescue
- Great over seeding potential in fall
- Use rye, wheat, ryegrass Oct – Nov.
Lespedeza – Sericea Lespedeza or
Other High tannin Lespedeza varieties
Plant in March @ 20lbs/A in tilled soil.
Lespedeza has lower fertility requirements
Drought tolerant, insect resistant
Good Summer grazing for Small Rum.
Good hay crop for all grazing animals
**LESPEDEZA HAS ANIMAL BENEFITS**

- High tannin varieties aid in internal parasite control in Sheep and goats.
- Noble Foundation research, et.al.
- Seed source
- Cousin’s Ag Center, Newberry, SC
- Mr. Warren Cousins 803-276-5750
- *contact to order your seed*
OTHER FORAGES FOR SMALL RUMINANTS

- Johnson grass – has frost issues
- Pearl Millet – 25 lbs/A in spring– has no frost problems
- Sudan grass
- Chicory
- Cowpeas – plant late spring @ 100 lb/A
- Soybeans
- Mixes of Sudan + cowpeas and/or soybeans excellent summer grazing for lactating ewes/does or fattening lambs/wethers/bucks
HAY CROPS

- Haying equipment is expensive
- Hay production may not be wise for small ruminant operations.
- Buying hay
- Small bales vs Round bales
  - Sq. bales are more expensive, but can be used with less waste, less mold
  - Round bales are cheaper, but small rum. Animals waste a lot of hay, mold issues can happen.
REFERENCES

- Southern Forages
  - 4th Edition
  - By: DM Ball, CS Hoveland and GD Lacefield
  - To order: www.IPNI.net
  - $35

- The Sheep Health Handbook
  - Or: The Goat Health Handbook
  - Written by: Thomas R. Thedford, DVM
  - Available from: Hoegger Goat Supply
  - Fayetteville, GA
  - 1-800-221-4638