MULTI-SPECIES GRAZING AT 
BIG SPRING FARM

Greg Brann, Grazing and Soil Health Specialist, TACD
and
Owner/Operator of Big Spring Farm
Adolphus, South Central Kentucky
53 inches of rain,
First Fall Frost (36F): Oct. 17,
Last Spring Frost (36F): April 21
Holistic Goal:

A **low stress**, low cost grazing operation that improves the environment, **life** and production while being consistently **profitable**
SOIL

- **PHYSICAL**
  - **TAXONOMIC CLASS:** Fine-loamy, siliceous, mesic Typic Paleudults
  - **RANGE IN CHARACTERISTICS:**
    - Depth to bedrock ranges from 60 to more than 100 inches
    - Extremely acid to medium acid
    - Rock fragments are mostly chert, averages less than 35 percent

- **CHEMICAL**
  - **INHERIANT SOIL FERTILITY:**
    - pH 5.6, *(Target 6.2 – 6.7)*
    - OM 3.0 %, *(Target 4% or higher)*
    - P2O5 low and K2O medium *(Target Medium High)*

- **BIOLOGICAL**
  - 30 or more earthworms per cubic foot during April or November
  - Roots: Fibrous and tap
  - Living and dying plants in all seasons
Diverse plant community

- **Grasses:**
  - Cool season: Tall fescue, Orchardgrass, Prairie Bromegrass, Annual ryegrass and Small grains
  - Warm season: Johnsongrass, Bermudagrass, Crabgrass, Sudangrass, Corn, Millets

- **Legumes:**
  - Cool Season: White clover, Red clover, Hairy vetch
  - Warm Season: Annual lespedeza, Cow peas, Soybeans, Sun hemp

- **Forbs:** Turnips and other brassicas, Chicory

- **Green Leaf:**
  - Begin Grazing: Seven to 11 layers of grass leaves
  - End Grazing Residual: 3+ layers of grass leaves

- **Residue:** covering the soil up to 3/8” thick
ANIMAL

Stocking Rate:

• Dynamic 220 AC/100 AU = 2.2 ac/AU
  – 150 Ewes (27 AU)
    • Breed ewes November 7 (6 rams)
    • Target lambing date April-May
  – 50 Cows and 37 stockers (73AU)
    • Breed cows May 9 (2 Bulls)
    • Calving date February 15- April 15
  – Spring calving and lambing

• Pregnancy test cows in fall
• Cull stock that don’t maintain body condition, raise good lambs or calves and don’t rebreed
• Ewes and Cows should have lots of capacity, good body condition, and be good mothers
Soil Health Management

• Maintain Cover
  – pH of 6.2 to 7.4
  – P2O5 and K2O in the medium high category
  – Chicken litter (45-45-45/ton) 1 ½ ton/ac added for P typically
  – Nitrogen from legumes, seed half rate annually (Target 30 to 40% legume)
  – Green leaves 7 to 11 layers
  – Strive to not let brown leaves shade green leaves
  – Strive to not let undesirables shade desirables and vice versa
  – Residue cover up to 3/8”
  – Diverse plant community
  – Seed 1 lb of buckwheat, 1 lb sunflowers, 1 lb of turnips in most mixes
  – I use annual ryegrass as a smother crop of weeds
  – Johnsongrass may be my favorite forage
Grazing Management
Dynamic/Adaptive Management

- **Flerd**: easiest grazing the cows and sheep together
  - Best for pasture due to longer forage recovery time (target 45 to 210 days)
  - Typically graze a paddock 3 days or less (not allowing them to take a second bite of a plant).
  - Mineral: (park it on weeds or low fertility area)
    - Cattle mineral with high copper in barrels on mobile wagon
    - Sheep mineral fed behind a single hot wire about 34” off the ground
  - Cattle add predator control and are typically respectful of lambs

***Disadvantage: multi-wire fencing (typically 3 wire depending on grass available)***
Grazing Management

• Strive to not graze close
• Lock stock down on one paddock when minimum grazing heights are reached “sacrifice area”
• Feed hay when we can grow grass: September or October
• Top third grazing
• Take half Leave half
• Creep Grazing and other Forward Grazing
• Boom or Bust with long recovery (weed management)
• Stock density 10,000-100,000 lb/ac.
• No inputs on some fields in 10 years
• Fewer cows and keep calves longer
Hay: too expensive to buy, too cheap to sale

- Feed hay on low fertility and/or weedy areas
- Typically feed 1500 to 2,000 lb hay/AU/yr
- Each ton of hay contains 60-13-48 of N-P2O5-K2O
- Anecdotal: Hay harvest sets back production 5 years w/o outside nutrients
Get them all to stand before moving
Weeds are palatable at certain stages. A fast rotation of 3 days or less on a paddock and returning in ~45 days works well.
Buttercup selectively grazed by sheep
Before grazing by Goats, 600 lbs/ac

Disclaimer: livestock preferences vary according to experience and management
After Grazing 30 days by Goats

Note fence for goats is offset electric old barb behind electric
Blackberry briars and Tall fescue before grazing

Too mature

Electronet
Blackberry briars and Tall fescue after grazing 1700 lb/ac of goats for 1 wk
Before Picture in August
Pigs with Cattle, Goats, Dogs
and Sheep
After Picture November - Prairie Bromegrass adapted to shade and heavy manure areas
Strip Grazing Corn
Are we suppose to be in here?
What is this stuff?

150,000 ppa, drilled
Later Day 1, 8/10/2012
Goat heads high,
Sheep heads low, Cattle in tall corn

Note: All species will do some browsing and grazing
Path for fence knocked down with truck, 3 wire poly fence
August 18, Day 8, of strip grazing
Too much can be eaten, **screw up!**

Not good residue (litter) management should have back fenced, results in reduced: fertility, moisture
Summary
Be Observant!
18th Annual Pasture Walk
October 19, 2018
Adolphus, KY

gregbrann5@gmail.com

Welcome friends on facebook