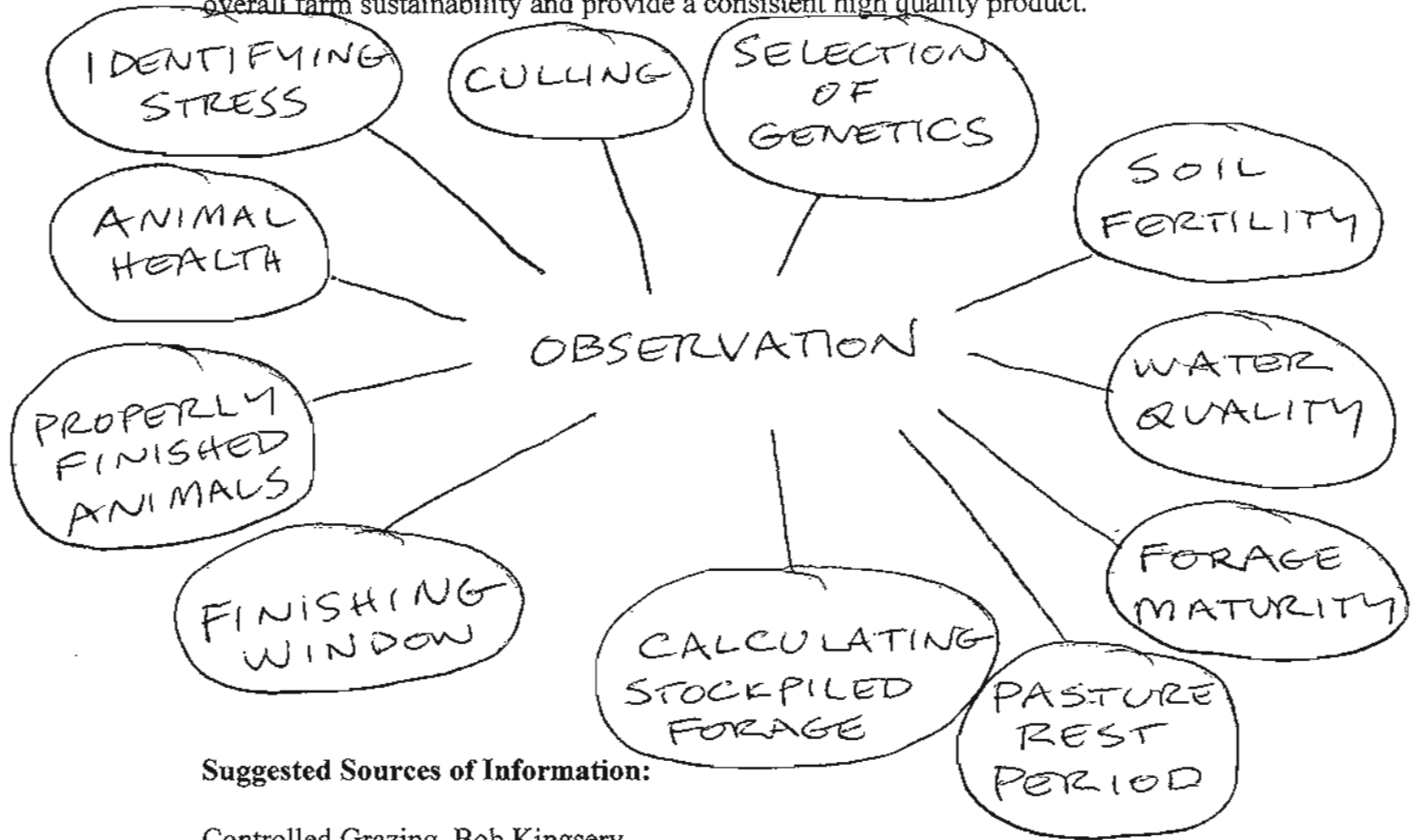


Pasture Management

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Objective: Holistically raising 100% grass-fed cattle for beef and breeding stock using low input, forage diverse intensive rotational grazing to improve soil, animal health, overall farm sustainability and provide a consistent high quality product.



Suggested Sources of Information:

Controlled Grazing, Bob Kingsery
Field Guide to Grasses, Sedges and Rushes of the U.S., Ed Knobel
Wortham Lectures in Animal Science, Jan Bonsma
Weeds, Control without Poisons, Charles Walters
Lasater Philosophy of Cattle Raising, Laurence Lasater
Raising with the Moon, Jack Pyle and Taylor Reese
Humane Livestock Handling, Temple Grandin
Soil Fertility and Animal Health, William Albrecht
Alternative Treatments for Ruminants, Paul Dettloff
 Stockman Grass Farmer Magazine, Allan Nation

Suggested Suppliers:

Fencing -- Premier, Kencove
 NRCS -- Soil and Water Division
 Supplements - Agridynamics, Shaklee, Thorvin, Redmond, Countryside Natural Products

Fertility – Start with soil tests, balanced N, P, K, Ca levels

- pH 6.0 - 6.5
1 ton lime/acre raises pH approximately .1
- balanced granular fertilizers
 - delayed availability
 - off farm input
 - costs up to \$500/acre
 - weeds can be fertility indicators
- Foliar fertilizers
 - More immediate availability
 - Many can be generated on farm
 - Examples: liquid fish, liquid kelp, composts tea, weed tea, nettle tea, menafee humates, sea-90, etc., azomite
 - 2% cost compared to granular fertilizers
 - Timing of application
 - Wood ashes, charcoal
- Grazing, Mowing for Weed Control/Soil Building
 - Smaller grazing cells and frequent rotation = more even manure/urine distribution
 - More complete grazing = greater regrowth of forage (quality and quantity)
 - More labor intensive but lower input costs (hay, fuel, machine wear) etc
 - Greater overall herd health
 - *Reduced parasite levels by breaking the reproductive chain of pathogens
 - Mowing – the last resort
- Stocking Density – lbs. per acre
 - Smaller cows more efficient
 - Higher stocking rate = more beef/acre
 - The trampling effect – grazing 50%, trampling 50% speeds microbial activity, adds carbon to the soil, speeds regrowth
 - Often the hardest paradigm to embrace

Grazing Design/ Set – Up

- Water
 - Ponds, creeks, etc
Controlling runoff
Controlling heavy use areas
Lower water quality = less weight gained
Greater risk of potential contamination
 - Well water
Can incorporate frost free waterers
Less waste, contamination
Allows greater flexibility when designing pastures
Cleaner water = greater weight gains
Recommend “heavy use areas”
 - Hauling Water
- Pasture Design
 - Working with existing land/water features
 - Designing cells to complement natural animal behaviors - learn by watching/observing
 - Permanent fencing
 - High tensile
 - Woven
 - Barbed
 - Electric or non-electric, solar powered
 - Costs more
 - Temporary Fencing
 - Woven fence
 - Single wire
 - Posts
 - Chargers, electric, solar powered
 - Costs less, super portable
- Summer grazing/Winter grazing
 - Faster forage growth = faster pasture rotation
 - Slower forage growth (i.e. winter) = slower pasture rotation
 - Rotate into fresh pasture afternoons, evenings when carbohydrates (sugars) are at highest levels
 - Rest period 30-40 days ideal, 50-70 days TDM drops by 25%
 - Always graze the most mature forage
 - Delayed spring turnout
 - Muddy situations

Forage Selection

- The mountains of WNC/Va have the advantage of cool summer nights that allow grasses to hold the plant sugars made the day before making summer ideal for finishing
- Seeding forages: frost seeding, sow and mow, sow before grazing, others
 - Ideally about 70% cool season forages
 - Forage Types
 - Annual ryegrass
 - Perennial ryegrass
 - Orchard grass
 - Fescue
 - Bunchgrass
 - White clover
 - Alfalfa
 - Eastern gammagrass
 - Birdsfoot trefoil
 - Crabgrass
 - Beets, turnips, kale rape, mustard, radish, chicory, chickweed, etc
 - Weeds!
 - Create a seasonally adapted forage chain

Breed Selection

- Select regionally adapted animals
- Affects the degree of success in any grazing operation
- Frame 2-4 cows most efficient
- Select for the Six Essentials
 - Disposition - docility = tenderness
 - Fertility: Cow/heifer breeding season 45 days (2 heat cycles) cull the ones that aren't bred
 - Weight: cows 900 – 1200 lb
 - Conformation: low, wide long
 - Milk production = higher weaning weights
 - Hardiness = adaptability to forages and climates
- Longevity encompasses all other traits
- Culling in favor of animals that do well with your particular management

Supplements – including hay

- Spring and fall when forage is unbalanced (washy, too lush, low in dry matter and high in protein) feed hay **before** rotating into fresh pasture
- Using hay to feed and mulch simultaneously
- Mineral supplements
 - Pasture mineral
 - Trace mineral salt – loose not block
 - Kelp meal - helps prevents pink eye
 - Other supplements – diversity of forage
 - Don't mix salt with other minerals
- Worming/parasites
 - Prevention by rotating pastures/multi species grazing
 - Selection of animals showing greater parasite resistance
 - Agridynamics
 - Apple cider vinegar, diatomaceous earth, garlic, kaolin clay
 - Shaklee basic H

“The best fertilizer for any soil is the footprints of the owner”

Chinese Proverb