

### Improving the Efficiency of Your Cattle Operation "Grazing Management Essentials"

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# **Grazing Essentials**

• 2a: of the utmost importance : BASIC, INDISPENSABLE, NECESSARY Merriam-Webster

# **Rogers Cattle Company, LLC**

- Start up farm with knowledge, money and dreams
- Operate on 100% leased land (450 acres)
- Limited equipment
- Enterprise mix

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- Cow-calf/Seedstock (2001)
- Ewes/lambs-Solar Grazing (2005)
- Meat goats (2002-2009)

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- Custom grazing (2002-2010)
- Pasture-Raised Meats
  - ➢ Beef (2005)
  - ➤ Lamb (2008)
  - > Pork (2012)
  - Chicken (2011-2014)
  - > Turkey (2011-2013)



# **Johnny's Grazing Management Essentials**

- Understanding pasture soil health
- Manage pasture nutrient distribution
- Power of One Wire (P.O.W)

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- Extending the grazing season
- Cows that fit your environment



## What is Adaptive Grazing Management?

The practice of using proven grazing management principles and practices to meet the dynamic, biologic, economic and social needs of individual grazing operations and their communities.

Johnny Rogers, 2020

# **Tools for Adaptive Grazing**



### "When you buy an acre of land, you buy 43,560 square feet of solar panel." -Jim Gerrish

You also have a 43,560 square feet of water collector...





Water Makes Grass Grow



- Forage yield increases with annual precipitation
  - More forage will increase carrying capacity
  - More potential income
  - Rainfall must enter the soil to produce forage
    - Effective rainfall
- Soil water retention varies
  - Soil type
  - Management
- How can we capture more of the rain that falls on our pasture?

### Soil Health Principles

- 1. Soil Armor
- 2. Minimizing Soil Disturbance
- 3. Plant Diversity
- 4. Continual Live Plant/Root

healthy SOI IS made of about 45% minerals 25% water 5% organic 25% air

Source: The Nature & Properties of Soils page 17 (Nyle Brady, Ray R Weil)



United States Department of Agriculture Want more soil secrets? Check out www.nrcs.usda.gov

USDA is an equal opportunity provider and employer.

### **Living Roots Builds Soil Structure**



## **Use Stock Density to Build Soil Health**







Plant Diversity leads to Root Diversity



Soil Armor – Keep it Covered



### How can we disturb the soil in grazing systems?

- Grazing
- Equipment traffic
- Mowing
- Fertilizer/manure
- Herbicides
- Parasite/fly control







Nutrient Movement in Pasture Systems-Winter Feeding Areas



Nutrient Movement in Pasture Systems-Winter Feeding Areas









- 1.0-2.0 medium
- 2.0-3.0 high
- >3.0 very high

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100 m

Google Earth

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### Forage management to improve soil nutrient distribution







## **Unrolling Hay**

## **Unrolling Hay**



# "The Power of One Wire"



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## What is the Power of One Wire?

### It is the Key to Adaptive Grazing!

- Better forage production is only the beginning of Adaptive Grazing
- Better observation equals better management
  - Livestock Health and welfare BQA
  - Keep in Touch with Pasture Ecology
  - A Good Lifestyle physical exercise, family activity, safety, etc.
- Improved livestock handling
- Protecting "hot spots"
- Preserving pasture shade....protect trees
- Temporary fence repair after storm damage

# **Extending the Grazing Season**

- All forages can be stockpiled
- Excellent livestock nutrition
- Rested plant

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- Feeds the Soil Food Web
- Nutrient Distribution
- Ground cover
- Limited equipment (Safety)



# **Stockpiled Fescue Quality**



# **Stockpiled Bermudagrass Quality**

Sampling Date	CP, %	TDN, %
Early-Nov	18	73
Late-Nov	12	64
Dec	11	58
Early-Jan	11	53
Late-Jan	10	53
Average	12	60

Mullenix et al Auburn University



### **Grazing Stockpiled Forage/Hay Feeding – November 17, 2020**



### For every \$1.00 your cattle consume they will deposit approximately \$0.85 somewhere on your farm. Will they deposit it in the correct location?



# **Extending the Grazing Season - Annuals**

- Most cover crops can be grazed and will meet the nutritional requirements of grazing livestock
- Provides rest for perennial pastures
- Improves biological activity in cropland
- Can improve soil organic matter

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# **Extending the Grazing Season - Annuals**

- Livestock will remove high quality forage quickly
- Strip grazing offers the best utilization and control
  - Temporary fence should be used



### Average weaning weight

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- Growth characteristics of calves
- Pounds of calf weaned per cow exposed
  - Reproductive performance of cows
- Pounds of calf weaned per pound of female exposed
  - Begins to account for individual unit inputs
- Pounds of calf weaned per unit of forage consumed
  - Manufacturing mentality



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# Income



Profit (Loss)





### **NC Cow Efficiency Project**



■ %Cow Eficiency ■ Cow Herd %

# What is an Ideal Cow?

- Crossbred cow that is adaptable to the specific farm/ranch environment and forage resource (Tall Fescue)
- Cow Size? 1,000 to 1,300 lbs. (not 1500 to 1700 lbs.)
- Maternally oriented or a multi-purpose cow?
- Balance or optimize cow herd
  - Cow efficiency, Growth and Carcass
  - Can lead to higher production costs
- Low-input cow herd

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- Moderate cow size and maternal focus
- Steer value?
- High value replacement females
- Terminal system
  - Source and cover low-input females with bulls that emphasize growth, carcass and feed efficiency.
  - Sell all progeny



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- Extending the grazing season
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Pasture based livestock systems using sound grazing principles provide tremendous economic and ecological benefits to our society.





Pasture-Based Livestock Education Program



### Thank you jrroger3@ncsu.edu



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North Carolina Division of SOIL & WATER CONSERVATION

CPS The North Carolina

Natural Resources Conservation Service The North Carolina Cattle Industry Assessment