

REGENERATIVE GRAZING GUIDE

This guide was created for an on-farm field day at Lyle Wetzel's farm on September 8, 2021 organized by the Embarras Grazing Partnership.



Pasture Project
AT THE WALLACE CENTER



Illinois Extension
UNIVERSITY OF ILLINOIS URBANA-CHAMPAIGN

Interested in learning more about the Embarras Grazing Partnership?

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HISTORY & PRACTICES OF THE WETZEL FARM

Lyle Wetzel, Owner Operator
Bobby Orman, Herd Manager

Lyle Wetzel owns and operates Wetzel Farm on the county line between Moultrie and Coles counties. While he is the second generation to farm this land, Lyle's farming roots run deep going back many generations. After a career as a Resource Conservationist for his local Soil and Water Conservation District, Lyle returned to the 185 family acre farm when his father was looking toward retirement.

Primarily operated as a traditional corn and soybean operation, Lyle started building paddocks on his pastureland around 2008. Lyle's neighbor, Bobby Orman, manages the grazing of 18 cattle in this cow-calf system. Additionally, the farm still manages production of corn, soy, and wheat in a minimal tillage system that also utilizes cover crops. Lyle also grows hay and straw for the herd. All of the beef produced on the farm is currently sold direct to consumer in Lyle and Bobby's community.



Photo: Elisabeth Spratt

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ASSESSING FORAGE QUALITY & CALCULATING BIOMASS

Ted Krauskopf, Hickory Flat
Cattle Company



Ted began rotational grazing in the late 1990s, and began adaptive grazing, or **strip grazing**, in 2010. He continues strip grazing today with daily fence moves.



ASSESSING FORAGE AVAILABILITY

There are a number of ways to calculate available forage. A common tool to achieve this is a grazing or pasture stick. This tool allows you to evaluate pounds of dry matter per acre.

It is important to realize how much of the forage present is “available.”

Typically a large percentage should be left to encourage faster regrowth.

Use the rule, take half/leave half. If grass finishing, reduce that to take 1/3, leave 2/3.

BRIX

Brix refers to the amount of sugars, primarily sucrose, in forage at a given moment in time. Brix fluctuates throughout the day as photosynthesis increases and then slows down as the sun fades. Measuring Brix makes it possible to determine the relative value of one forage compared to another as well as the amount of daily gain possible of the livestock grazing the forage. The highest readings come on a sunny day about mid-day.

MEASURING BRIX

Taking Brix measurements requires a garlic press (or other type of press), and a refractometer or Brix meter.

To measure Brix, take a random sample of forage, place it in a garlic press, and squeeze out the plant sap. Make sure the sample does not have excess water and dirt on it.

To make a reading using an optical refractometer, place three to four drops of the liquid sample on the prism surface, close the cover, and point it toward any light source. Focus the eyepiece by turning the ring to the right or left. Locate the point on the graduated scale where the light and dark fields meet. Read the percent sucrose (solid content on the scale).

If using a digital refractometer, place the sample in the glass chamber and let it equilibrate, and obtain the reading.

(adapted from Mississippi State University Extension, 2014)

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SOIL HEALTH & WATER QUALITY

Cliff Schuette, Grazing Lands Conservation Initiative

Cliff began grazing in 1996. He says that the reason he went into grazing is because "I didn't have money to buy new equipment and I don't like to fix used equipment."



Photo: Elisabeth Spratt

Notes

WALK YOUR PASTURE OFTEN AND MAKE OBSERVATIONS

- Where is there shade?
- Where is there water?
- What types of forage are available?
How many species are present?

SIGNS OF TROUBLE

- Poor growth throughout the year. (Overgrazing can lead to loss of productivity and degradation of soils.)
- Pugging. (Pugging occurs when the soil is very saturated and soil pores are filled with water. In these conditions, livestock trampling can create considerable soil and pasture damage)
- Wilted plants. (Wilting may be a symptom of drought or other stress. Any stress on the plant which causes abrupt stoppage of growth can also contribute to nitrate buildup, which can be very hazardous to livestock.)

Most often, allowing the pasture to rest for longer periods will clear up problems. Avoid the urge to re-graze too soon!

FENCING & WATERING

Matt Bunger, State Grazing Lands Specialist, Illinois NRCS

Matt has worked with livestock producers for NRCS since the 1990s.

In May 2020, Matt became the Illinois State Grazing Lands Specialist where he works with and advises NRCS field offices, partners and producers throughout the state on grazing management and practices for cattle, goats, sheep, Alpaca, Bison, horses, and chickens. In 2014, Matt worked with the Pasture Project and Dr. Allen Williams on an Adaptive High Stock Density Grazing pilot project. The techniques used and results obtained are the forefront of regenerative grazing.

WHEN CHOOSING FENCING...

- Consider the livestock species you will be managing, your management strategy, and cost.
- Consider how frequently you will be able to check on livestock.
- Observe the amount of trees in the fence lines.
- Will paddocks be hayed and require fence to be taken down?
- Will paddock size change based on desired outcomes?



Photo: Ted Krauskopf

Paddock Design Basics

Your soils and landscape are key factors to consider in paddock design. Observe your surroundings. Bottom land vs. hillside, north facing slopes vs. south facing slopes: these factors will influence forage production and well as the species that will succeed in the forage mixture. If it is feasible, paddock divisions should be made where soils and topography changes occur and managed accordingly.

Square paddocks are better than rectangular. Wagon wheel shaped systems should be avoided. As livestock travel to and from water, excessive trampling and overgrazing can occur, resulting in a loss of forage production over time and poor manure distribution.

CONSIDERATIONS FOR WATER SOURCING

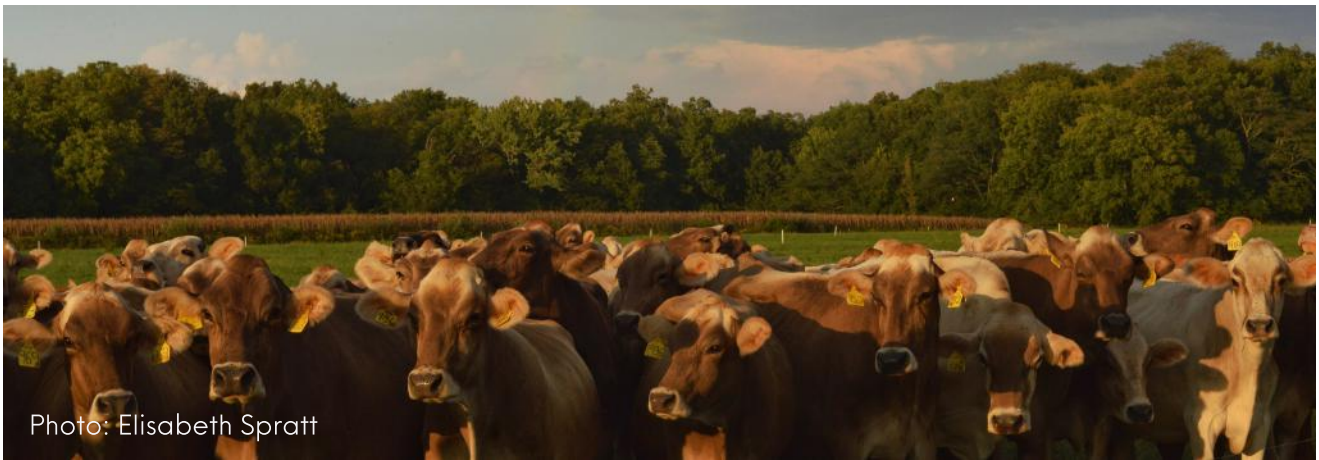
- What water sources are available? How much water is available? Is there a power source nearby to run a pump? At what rate can the available water be pumped?
- If a well is available, is it dependable? Is the pump capable of handling the additional gallons needed to support livestock? Is gravity flow from a pond an option?
- What is the cost per gallon of water? (Watering systems should be able to accommodate usage of 20-30 gallons per AU.)
- What quality is the available water source? (Consider the quality of the water for the stock being raised and the cost. Research has shown of significant gains based on quality of water.)
- Additional water source options to consider: old wells, creeks, ponds with a watering ramps, and rural water.

TIPS ON WATER PLACEMENT

- Water points should be located in the center of the paddock. (This may not be feasible based on cost and paddock size)
- For efficiency, place watering points where multiple paddocks can access the same water trough.
- Livestock should be able to access the entire trough. (If a water trough is being shared between paddocks, a larger trough will likely be needed.)
- Do not place the watering point on sloping ground.
- Keep watering points on well drained soils, preferably on hill tops.

NOTES ON HEAVY USE AREAS

- NRCS defines a **heavy use area** as "all areas where livestock congregate and cause surface stability problems."
- Heavy Use Area Pads are suggested to be used at all water points unless the trough will be moved at least every two days and not placed in the same location in the next grazing cycle.
- Practices should be implemented in high traffic areas to help mitigate mud and runoff. (Develop and enact systems to collect, store, use and/or treat contaminated runoff from the area.)



PROVIDE ADEQUATE SPACE FOR LIVESTOCK AT WATERING POINTS

- If the watering point is farther than 800 feet from the far reach of the pastures, figure one third of the herd coming to water at a time. If less than 800 feet, figure one tenth of the herd will water at a time
- Allow 12 inches of linear space per animal at the water trough for small ruminants and allow 24 inches of linear space per animal for large animals.
- For freeze proof fountains, animal numbers should not exceed 20 per drinking space/hole/lid.
- Ramps should be narrow, but not too narrow. Ramps should be 10 feet wide at a minimum. For cattle, it is suggested to add one foot to the 10 minimum for every 10 animals.

Notes

HERD HEALTH

Travis Meteer, Commercial Ag
Educator specializing in beef
research, University of Illinois
Extension

Travis grew up on a livestock farm and has been around cattle his entire life. He has experience managing purebred and commercial cowherds, backgrounding feeder cattle, and custom grazing. In his role as an Extension Educator, Travis consults on all areas of beef cattle production and management. He also serves as the state beef quality assurance coordinator and manager of the Illinois Performance Tested Bull Sale.

OVERVIEW

A good herd health protocol starts with your local veterinarian. Knowing what diseases have been in your herd or local herds is important. Utilize vaccinations where possible to build immunity. Quarantine incoming animals for a minimum of two weeks. Consider testing incoming cattle for blood-born diseases. Learn and understand animal behavior. Apply timely observation and quick diagnosis when intervention is needed.



Photo: Elisabeth Spratt

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ASSESSING HERD HEALTH

Observation is key. Pay attention to the animals, the feedstuffs, the water source, and the weather.

Signs of good health: Attentive, alert, good locomotion, unaltered stride, normal respiration rates, moist nose free from discharge, adequate fill, content behavior, proper manure consistency, good body condition score, shiny haircoat that is shedded off.

Signs of poor health: Lethargic, lameness, elevated respiration rates, nasal discharge, removed from the herd or off by themselves, empty or too full, restlessness or uneasy behavior, manure is too loose or very dry and sticky, poor body condition score, dull haircoat, poorly shedded haircoat.

TIPS FOR A HEALTHY HERD

- Plan the best you can, but understand that animals get sick. It is important to quickly identify and diagnose sick animals. This will result in better response to treatment and reduce the spread of transmittable health concerns.
- Proper nutrition includes water quality, adequate protein and energy, good mineral nutrition, and functional fiber that will cause cattle to eructate and chew their cud. Much of nutrition is a balancing act. Too much of one thing can lead to problems, too little of another can do the same. Many times excesses cause deficiencies. Test high risk feeds.
- Keep animals clean and comfortable. Consider shade, windbreaks, shelters, limiting access to ponds or streams, sacrifice paddocks instead of drylotting, fly control, etc.
- Develop a herd health plan. Consult your veterinarian. Include vaccination protocols, weaning strategies, annual bull fertility testing, treatment protocols, and quarantine/testing plans for incoming cattle.

Notes
