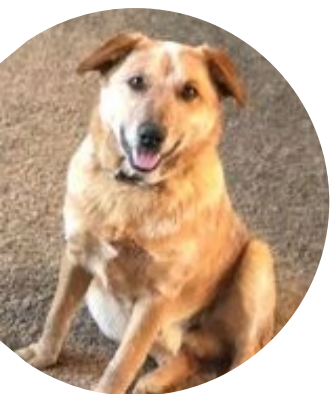
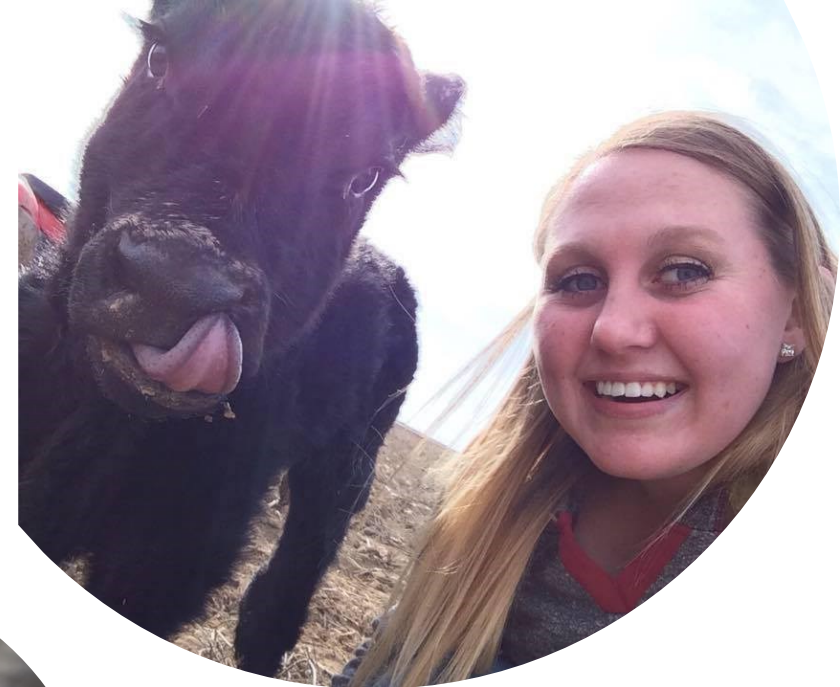


# Pasture Based Livestock Systems and Fencing

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Samantha Ball

# Who am I?





# What will we be covering today?

- Rotational Grazing
- Livestock Grazing Habits
- Forage Use
- What do I need to know about the plant?
- Stocking Rates, Animal Units, and Stock Density
- Rotational Grazing Paddocks
- Pasture Poultry
- Fencing
- Questions

# What is "Rotational Grazing"?

## Management Intensive Grazing (MIG)

- By definition:
  - The Practice of moving grazing livestock between pastures (Paddocks) as needed or on a regular basis.
  - Well Managed Rotational Grazing
    - Evaluating the nutritional and forage needs and assess forage quality and quantity, regulate the control of which parts/range that animals have access to.





- Extend grazing season
- Stronger pasture stands
- More uniform grazing
- Higher quality forage
- Less weeds
- Make hay with extra ground?
- Soil and water conservation

## Why...Rotational Grazing?

# Advantages of Rotational Grazing

- Increased Forage production
- Increased Soil Fertility
- Increased Resistance to Drought
- Less Waste
- Soil Compaction
- Control of undesirable plants
- Extended grazing season
- Improved Animal Management



## So... How does Rotational Grazing work?

There is no “One size fits all” pasture rotation schedule.

There are many variables to manage.

- Climate
- Season
- Rainfall
- Number of Paddocks
- Size of Paddocks
- Susceptibility of Livestock
- Forage type and Quantity
- Supplemental Feed

There is often a trade off between good parasite control and good pasture management



# Livestock Grazing Habits

- Different animal species have different grazing styles.
  - Cattle and horses cannot eat forage less than one-half inch tall.
  - Sheep and goats can graze level with the soil surface.
  - Fowl will strip the soil bare, eating everything including roots, and insects.



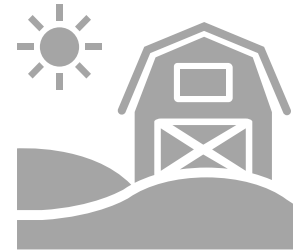


# Types of Forage Use



## Rotational Grazing

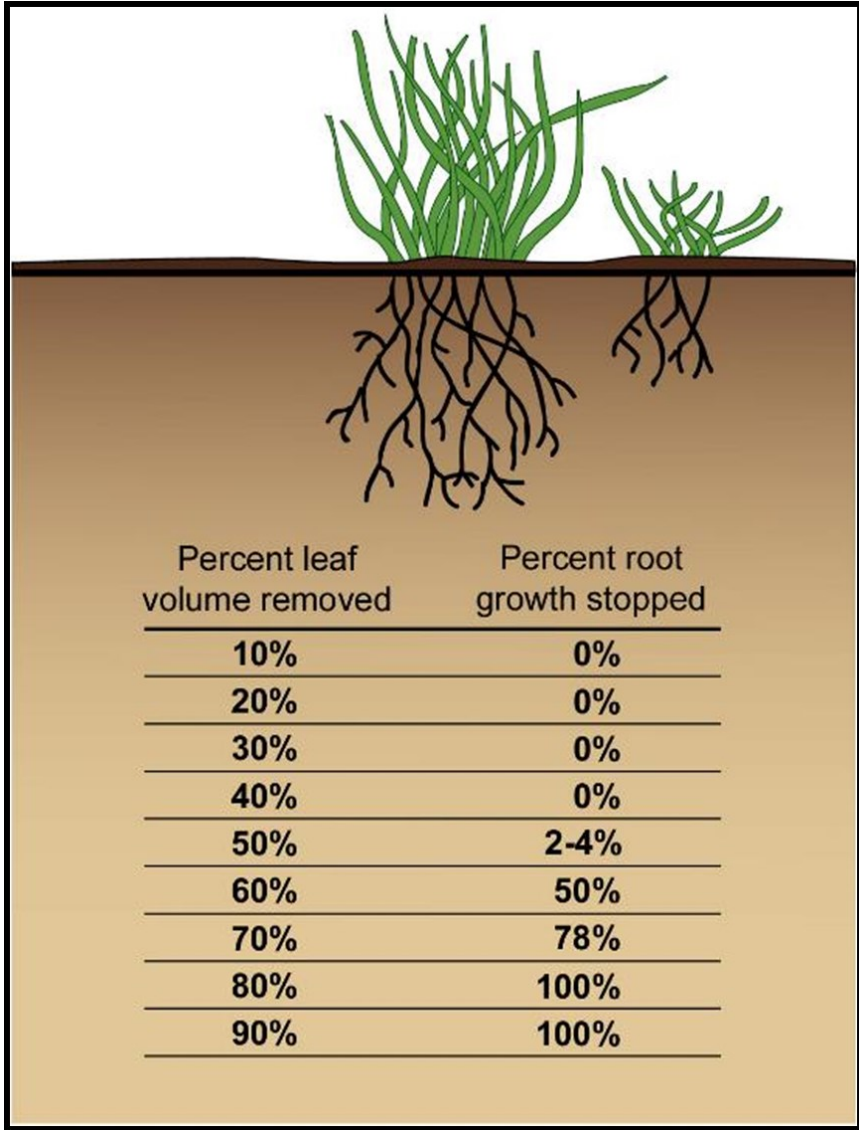
Requires more management infrastructure



## Continuous Grazing

Easy

But...yields are reduced

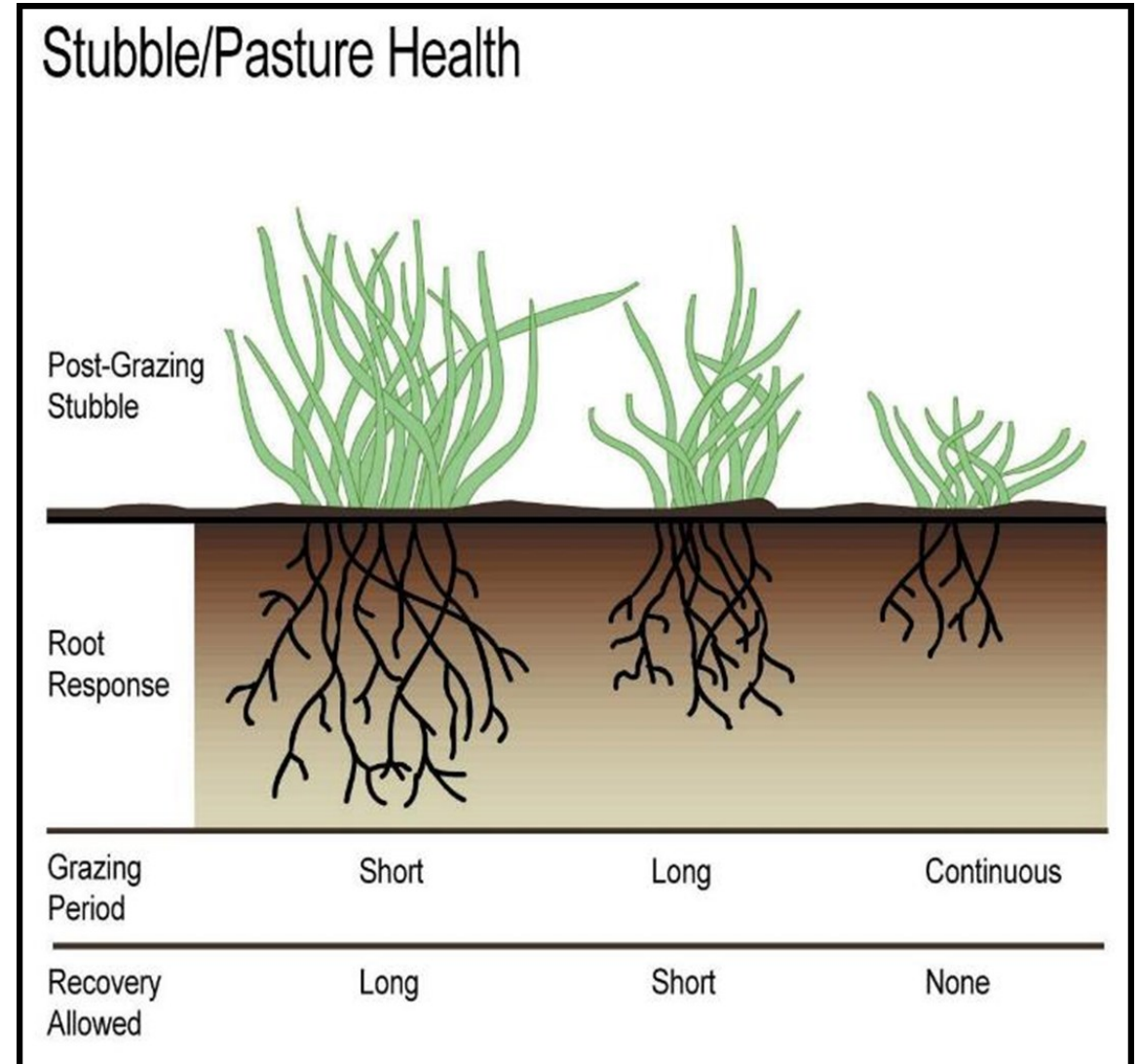


How do I know  
what I need to do?

TAKE HALF, AND LEAVE HALF

# What is really going on?

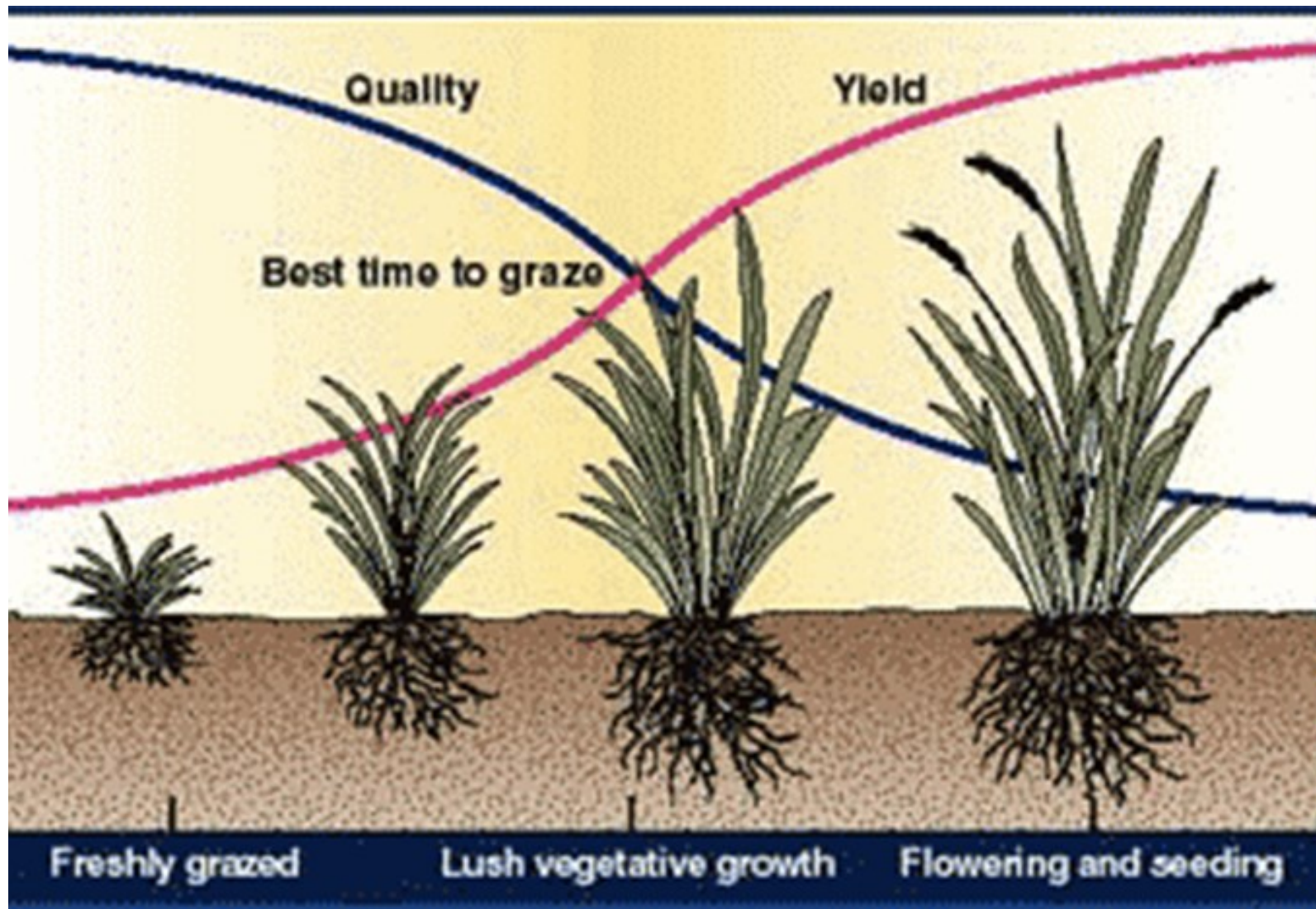
- Digging beneath the surface.



# Grasses Need Nitrogen Applications

- Pure grass stands require timely applications of nitrogen (N).
- Pastures with less than 25% legumes are considered grass pastures.
- Pastures with 25% or more legumes do not require additional N.
- Legumes fix  $N_2$  into a form plants can use (clovers, lespedeza, alfalfa, vetch, trefoil).





Forage  
Growth  
Curve

# Stocking Rates, Animal Units, Stock Density, OH MY!

- An **animal unit (AU)** is commonly defined as 1000 lbs of body weight and an AUM is the amount of forage that an animal unit will consume in 1 month.

Cattle	Animal Unit
Mature cows without a calf	1.0
Cow with a calf	1.2
Weaned calf to yearling	0.6
Steers and heifers (1-2 years)	1.0
Mature bulls	1.3
Sheep	
5 weaned lambs to yearlings	0.6
5 mature ewes with or without lambs	1.0
5 mature rams	1.3
Goats	
6 weaned kids to yearlings	0.6
6 does with or without kids	1.0
6 mature bucks	1.3
Horses and Mules	
Mature horse (1200 lbs)	1 to 1.25
Mature mule	1 to 1.25
Wildlife	
6 deer	1.0
Antelope, mature	0.20
Bison, mature	1.00

# Stock Density

- Stock density increases uniformity of grazing by increasing competition between animals so there is less selectivity.
- Improves distribution of manure and nutrient cycling.
- Stock Density is the number of animals in a particular area at any moment in time and increases as the number of animals in a paddock increase or as paddock size decreases and is based on level of grazing management.

# Stocking Rate vs. Stock Density

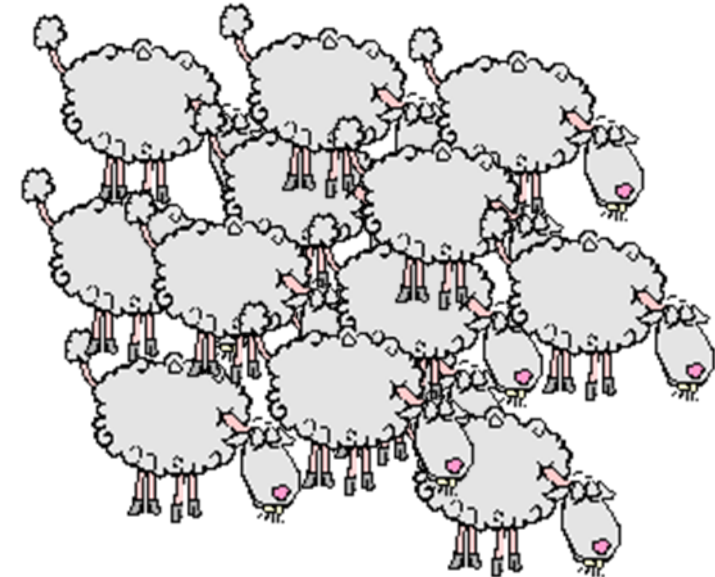
- Units of SD and SR are the same, however the concept is very different.
- 100 Animal Days/Acre =



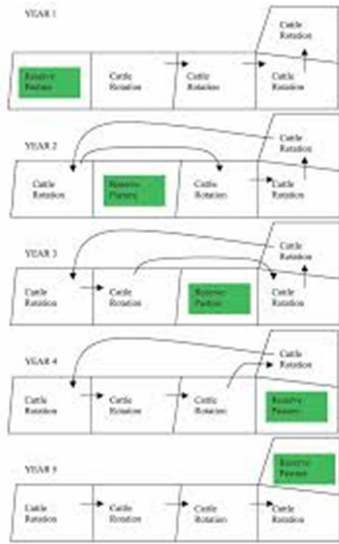
**1 acre**  
**X**  
**1 animal**  
**X**  
**100 days**

or

**1 acre**  
**X**  
**100 animals**  
**X**  
**1 day**

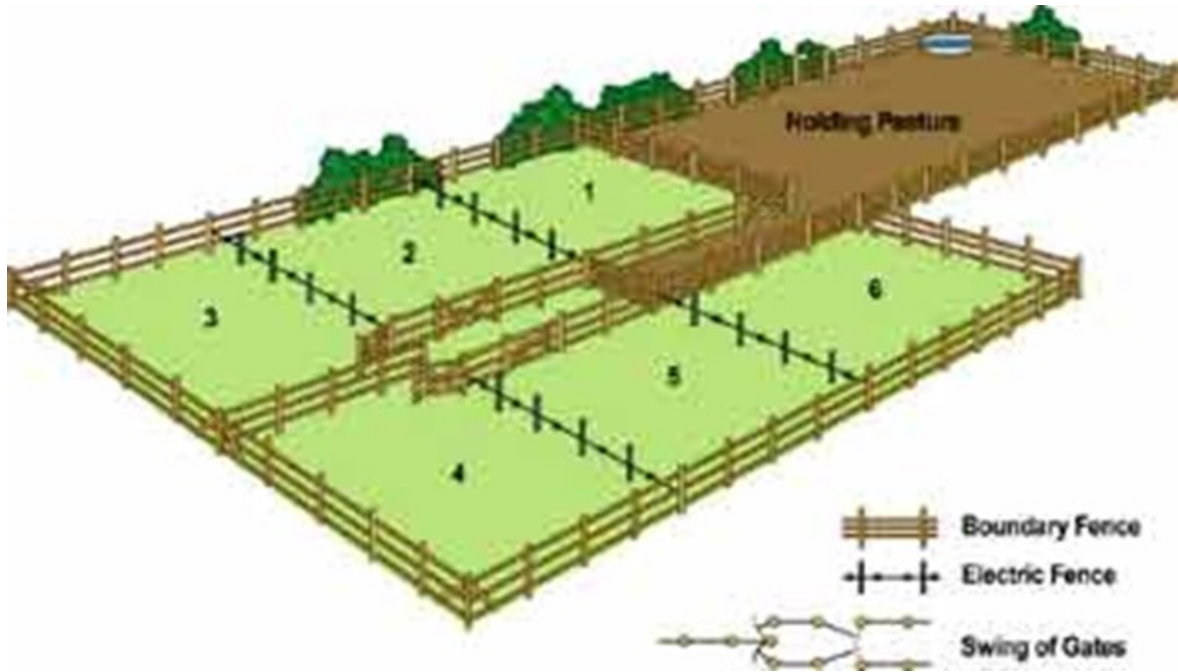






# Rotational Grazing Paddocks

- Unique
- Ease of chores for YOU
- Water Accessibility
- Tractor Ease



# Why do I need a sacrificial area?

- It protects pastures from damage.
- Sacrificial areas are for heavy use.
- Animals are held in this area when conditions are unsuitable for the pasture.
- It helps to minimize soil compaction and trampling of the sod.
- It provides an area for supplemental feeding and animal management.



# Pasture Poultry

## Recommended:

- 5 square feet per
- bird in the pasture area

## Advantages:

- Feed Savings
- Nutrition Source



# Pasture Poultry

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## Time of Day

- Most active in morning and evening

## Experience

- Takes time to adapt

## Shade

- Encourages foraging

## Height of Forage

- Short, under 4 inches (ideally 2 inches)

## Palatability

- Perennial rye, fescues, creeping bent, meadow grass

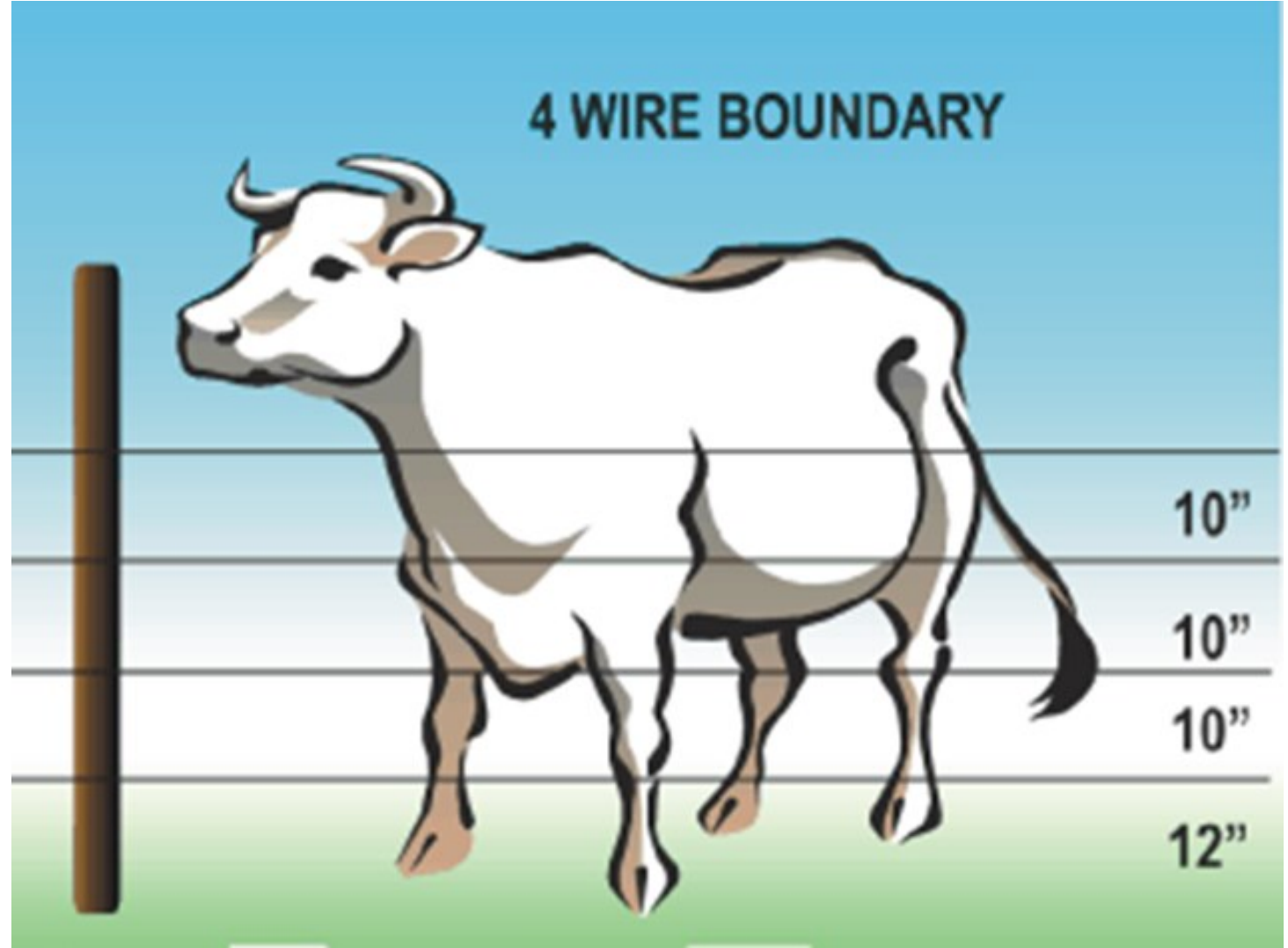


# Fencing

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Permanent perimeter fence

- Surrounds the entire acreage
  - High tensile wire construction
  - Use line posts, corner systems, gates
- Purposes
  - Keep your animals in and neighbors out
  - Distribution network for fence power



# Fencing

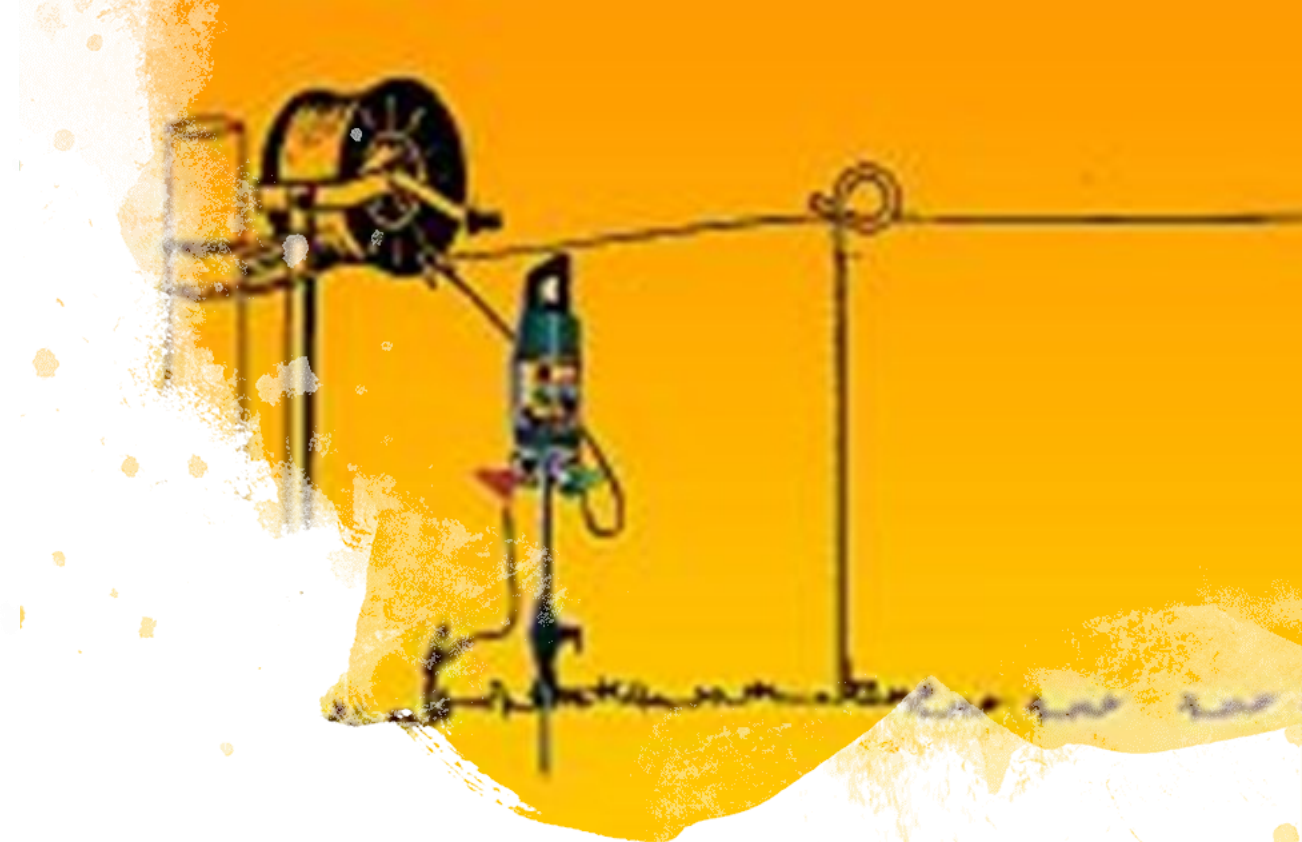
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**Permanent fence:** Can be as simple as a single strand of electrified high tensile wire on solid corners with line-posts that wildlife cannot knock off the wires

- Permanent subdivision fence
  - Divides the larger acreage into smaller management zones
  - May also be used for alleyways, watering, etc

# Portable Fencing

- A temporary, flexible fence commonly relying on poly-wire or poly-tape and poly or fiberglass posts.
- Commonly used with MiG for paddocks
- Allows paddock size and shaped to be change to meet needs.



# Interior Fencing

For rotational grazing and animal management

- Permanent
- Semi-permanent
- Temporary, electric
  - Smooth wire,
  - Poly wire, tape, or rope
  - Electric netting



# Recommended # of Wires & Post Spacing

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Livestock	Number of wires	Wire heights (inches)	Post spacing (feet)
<b>Internal fences</b>			
Cow/calf and	1	28 to 34	40 - 80
stockers	2	22, 32	40 - 60
Sheep and	3	10, 20, 32	20 - 40
cattle	4	10, 20, 32, 46	20 - 40
<b>Perimeter fences</b>			
Cattle, horses	5	10, 20, 30, 40, 50	20 - 40
sheep (nonpredator)			
Sheep, goats	8	4, 8, 12, 18, 24, 30, 40, 52	20
(predator)			

“Growth is a process of trial and error: experimentation”

-Benjamin Franklin



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Questions for  
Samantha?



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small farms education