

Benefits and Considerations for Grazing CRP



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Grazing CRP

- Soil Health/Mineral Cycle
- Wildlife Habitat
- Layout and Design
 - Fencing Options
 - Water Options
- Animal Performance



Mineral Cycle

Good Cycle

Poor Cycle

Mineral Cycle

Good Cycle

- Mature plants that are rapidly decaying

Poor Cycle

- Immature or oxidizing plants

Soil Health/Mineral Cycle

Brittle

vs

Non-Brittle



Mineral Cycle

Good Cycle

- Mature plants that are rapidly decaying
- Close plant spacing

Poor Cycle

- Immature or oxidizing plants
- Wide plant spacing

Soil Health/Mineral Cycle

-3/2 Rule of Plant Self Thinning Law

- As plants get bigger their spacing gets farther apart.
- As individual plants are allowed to become larger, fewer individual plants can occupy a given area.
- Over time, in the absence of grazing or other disruptions (fire, clipping), grass stands have become increasingly sparse, particularly in more brittle areas.

Mineral Cycle

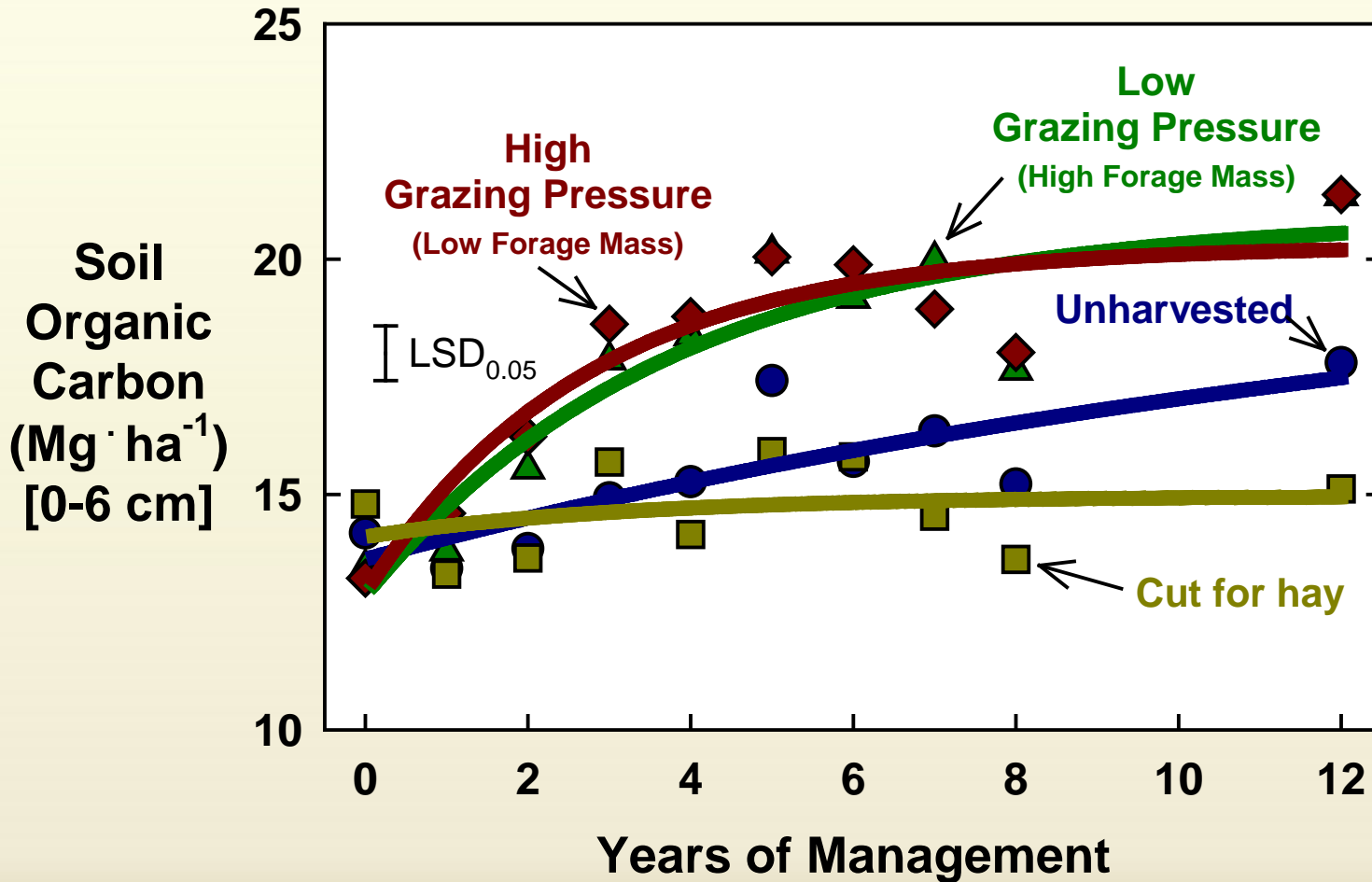
Good Cycle

- Mature plants that are rapidly decaying
- Close plant spacing
- High plant turnover

Poor Cycle

- Immature or oxidizing plants
- Wide plant spacing
- Low plant turnover

Soil organic matter accumulation under pasture management



Yearly Accumulation Rate

C	N
Mg	kg
ha ⁻¹ yr ⁻¹	

0.62	71
0.59	76
0.32	31
0.07	8

Mineral Cycle

Good Cycle

- Mature plants that are rapidly decaying
- Close plant spacing
- High plant turnover
- Many surface insects and microorganisms

Poor Cycle

- Immature or oxidizing plants
- Wide plant spacing
- Low plant turnover
- Reduced insects and microorganisms

Grazing initiates plants to release root exudates that feed soil biology.



Cows actually add biology

- Biology in the manure
- Biology in the saliva
- Biology in the milk foam



Wildlife Benefits



MDC-David Stonner



MDC-David Stonner



Grazing Options

- Continuous Grazing
- Managed Grazing

Layout and Design Guidelines For Managed Grazing

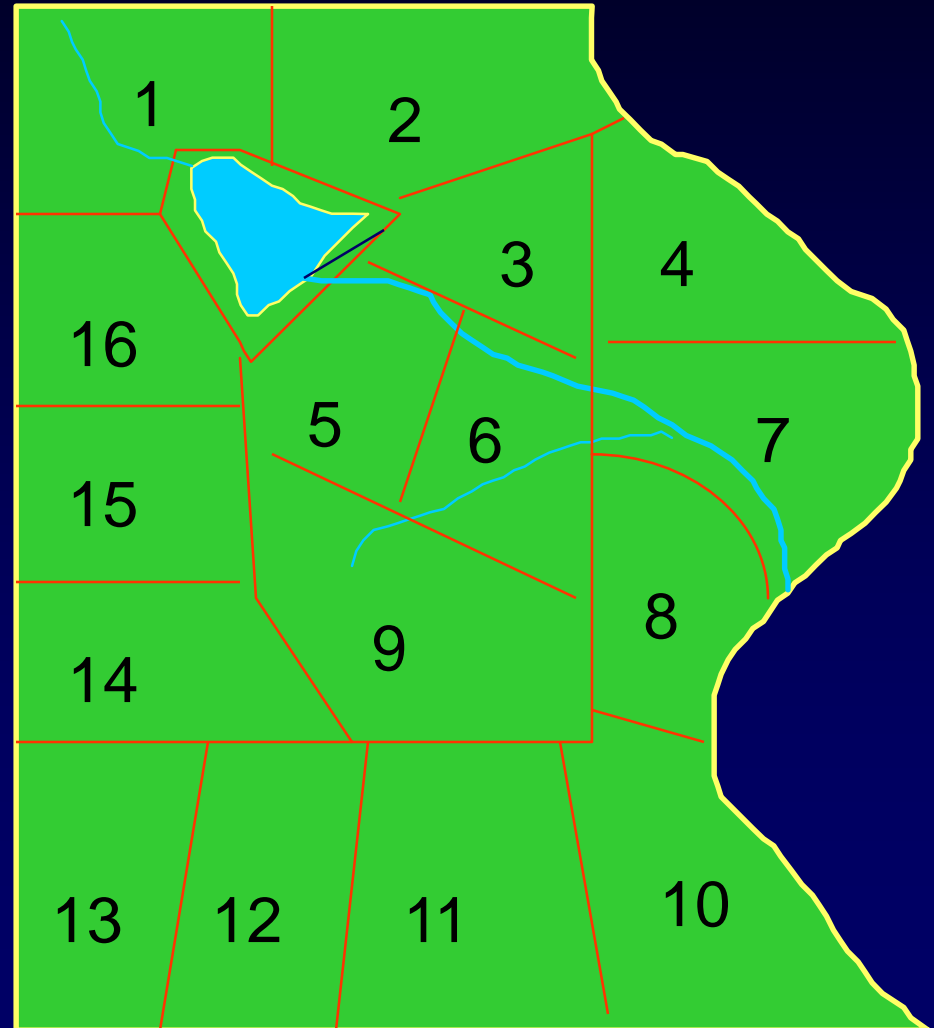
- Keep livestock as close as possible to water
- Make paddocks as near to square as possible
- Follow landscape lines for paddock boundaries
- Make paddocks of similar grazing capacity
- Plan lanes for livestock movement only
- Plan for adverse weather conditions

Grazing System Design

- 2 types of systems
 - Fixed system
 - Uses permanent fence and watering points
 - Flexible system
 - Uses portable fence and water facilities in a framework of permanent fence

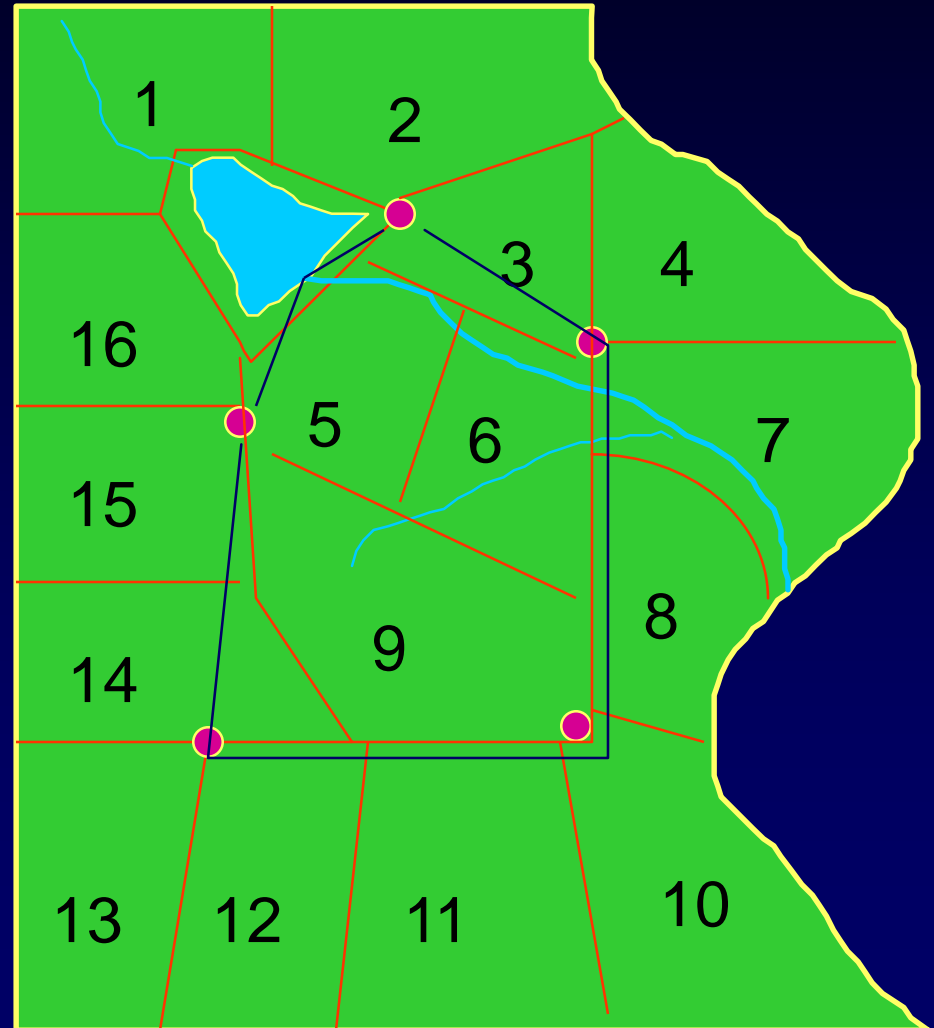
Fixed System Design

- 16 paddock system



Fixed System Design

- 16 paddock system
- Water available in every paddock



Grazing System Design

- Fixed system
 - Uses permanent fence and watering points

Advantages:

- Relatively low cost on large installations
- Minimal daily labor
- Low maintenance

Disadvantages:

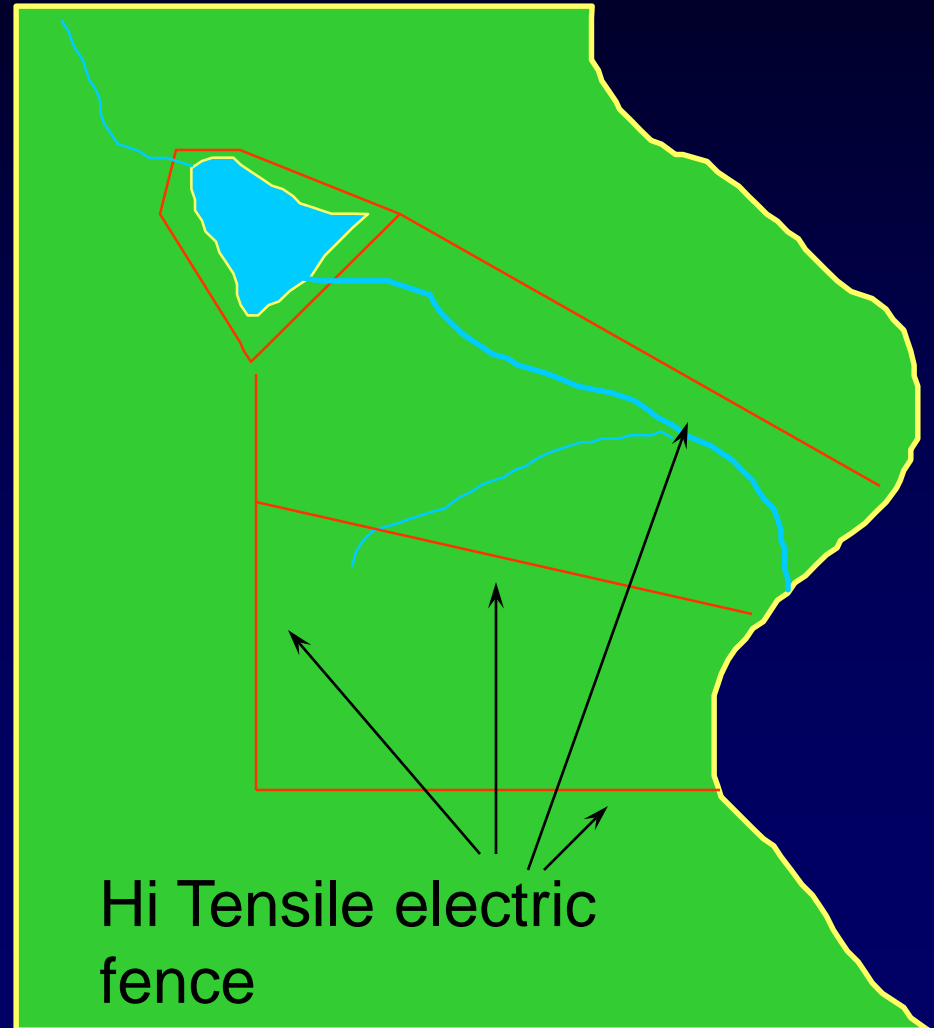
- Relatively high cost on small operations
- Limited management flexibility

Grazing System Design

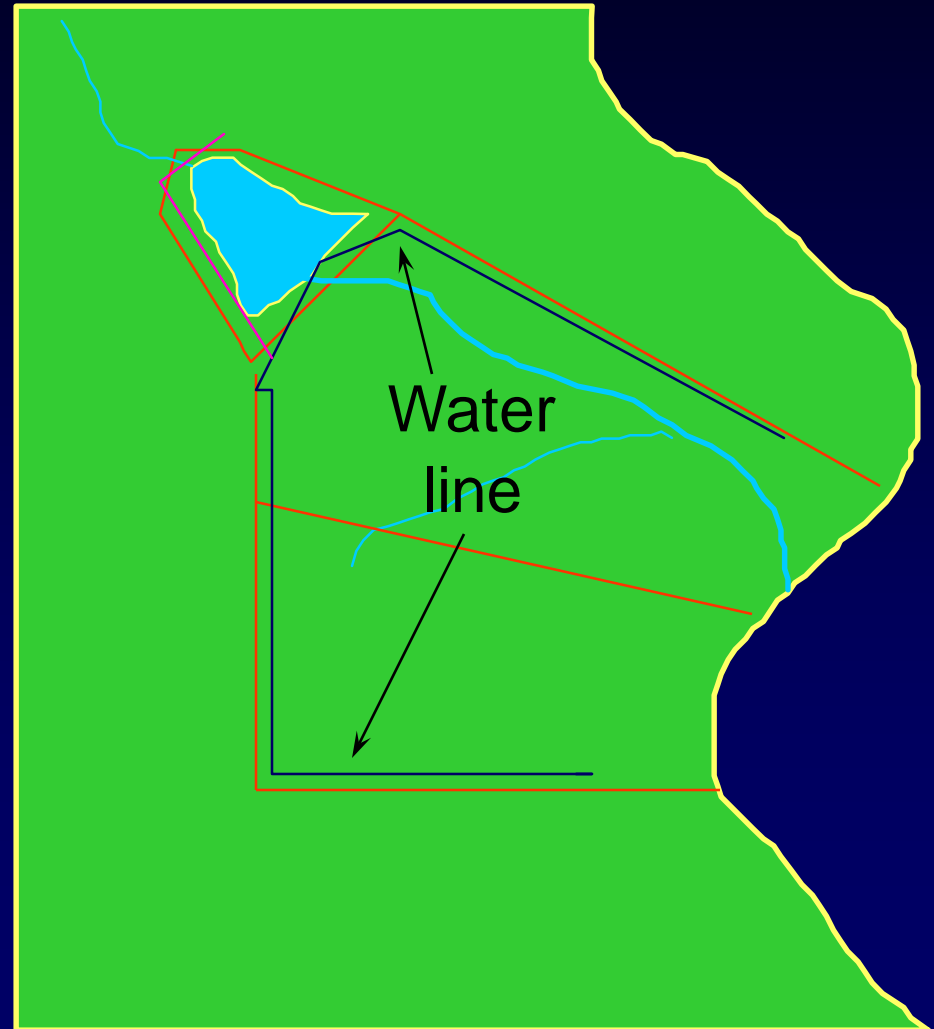
- Flexible system
 - Uses portable fence and water facilities in a framework of permanent fence



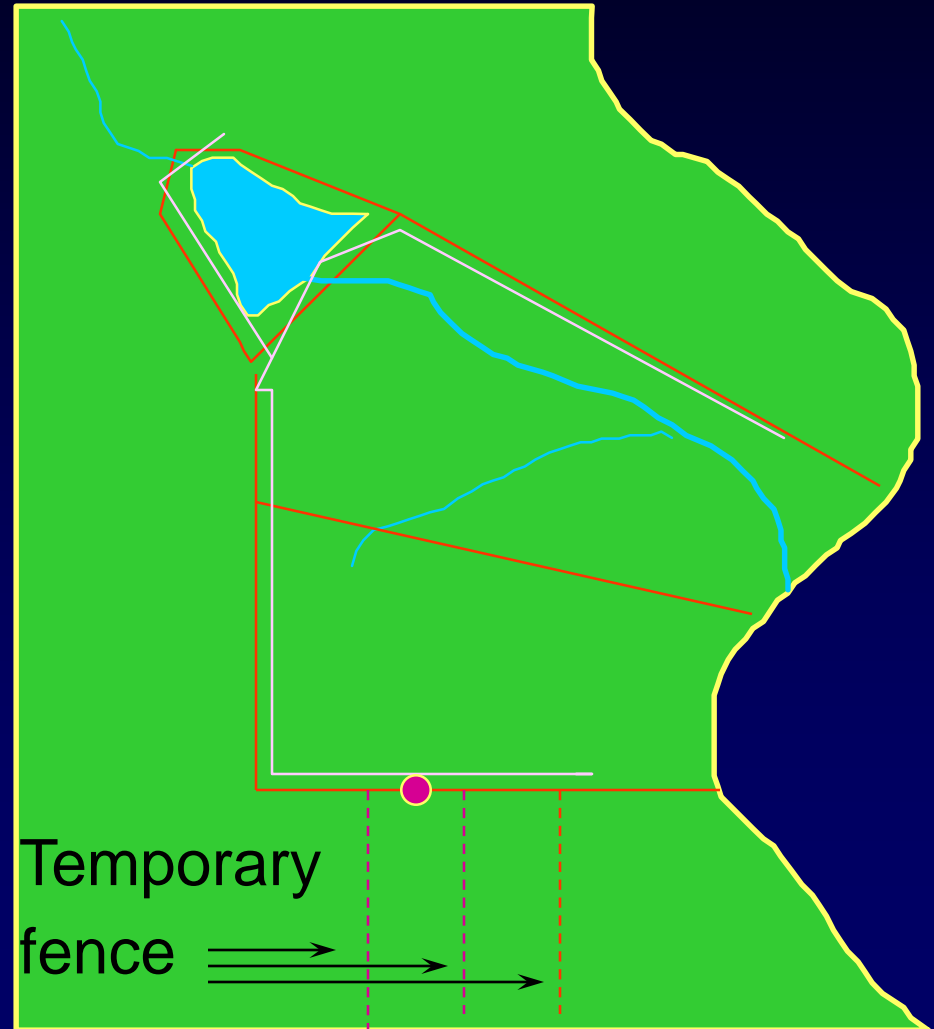
Flexible System Design



Flexible System Design



Flexible System Design



Grazing System Design

- Flexible system
 - Uses portable fence and water facilities in a framework of permanent fence

Advantages:

- Maximum management flexibility
- Lower initial capital cost
- Works well on rented land

Disadvantages:

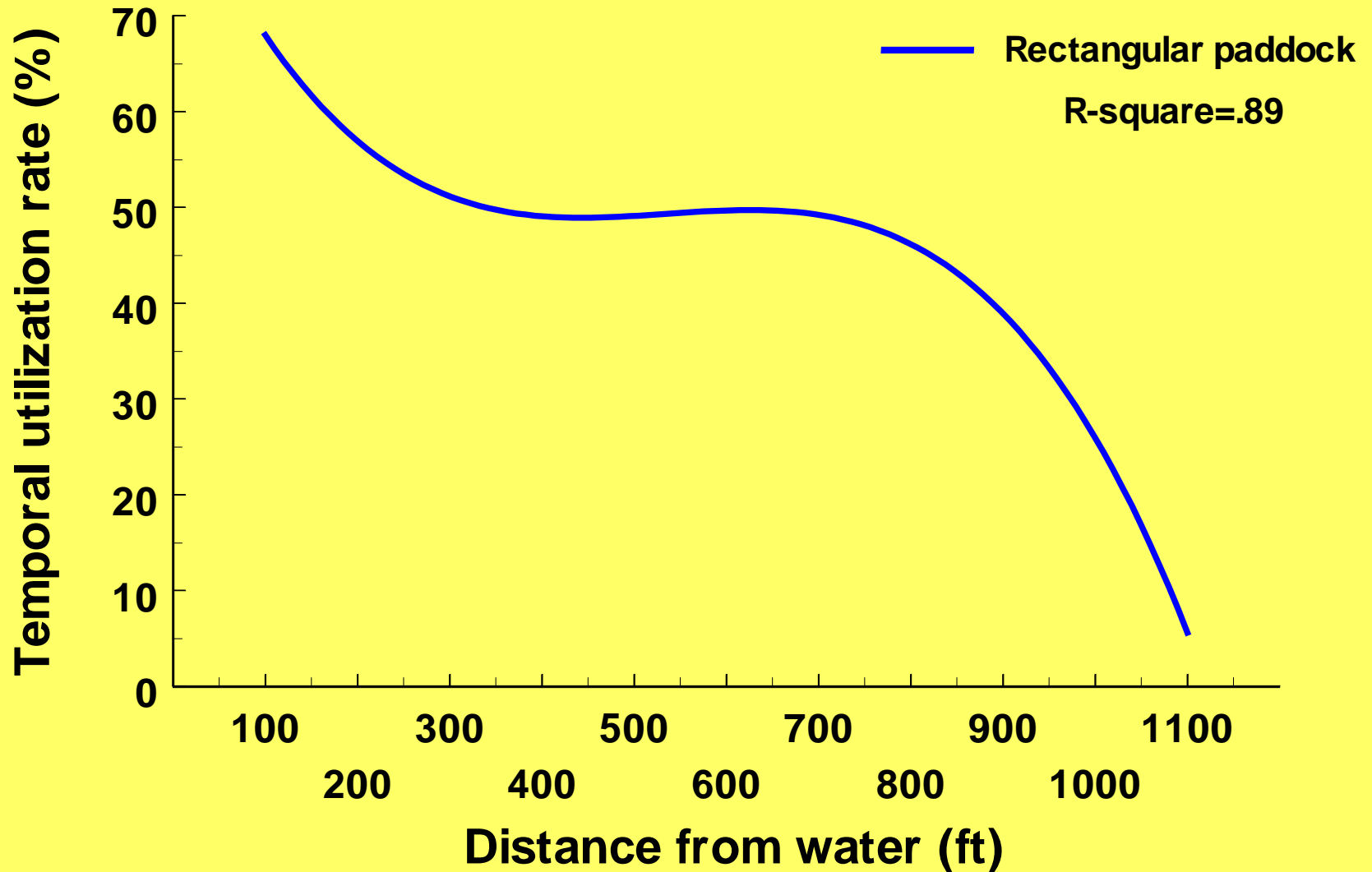
- More daily labor required
- More maintenance

Water Systems

**Water is generally the
MOST limiting factor for any kind
of Managed Grazing**

Water deficiency will reduce animal performance more quickly and more severely than will any other nutrient (feed or mineral).

Figure 1. Impact of distance from water on temporal utilization rate in rectangular 10 acre paddocks.



Typical Water Sources

- Wells
- Ponds
- Springs
- Creeks
- Public Water

How to get water to the fields?

- **Gravity systems** – are they really the cheapest?
 - Tank locations are limited.
 - Rarely serve entire farms
 - Long systems can have air lock problems
 - Survey very carefully
- **Pumped systems** – what are the options?
 - AC is the only really economical option
 - Will pump lots of water for large herds

Water point location and design

- How to fence over and around the tanks
 - Can use a “diamond” around tanks
 - Serves multiple paddocks
 - Don’t make it to big



Water point location and design

- How to fence over and around the tanks
 - Electric fence over tank
 - No pushing, no scratching
 - No feet in the tank to tear things up



Flexible System

- Install hydrants or other valves along pipeline
 - Allows use of portable tanks
 - Allows subdividing in growing season
 - Could be useable in the winter





Fence Systems

How Do I Decide Which Type of Fence to Use?

- Existing fences
- Livestock to be controlled
- Cost
- Ease of construction
- Intensity of rotation grazing
- Strip grazing
- FLEXIBILITY

What Is the Right Fence?

- Any fence that keeps livestock where you want them.



What Is the Right Fence?

- Physical Barrier



Barbed Wire



Woven Wire



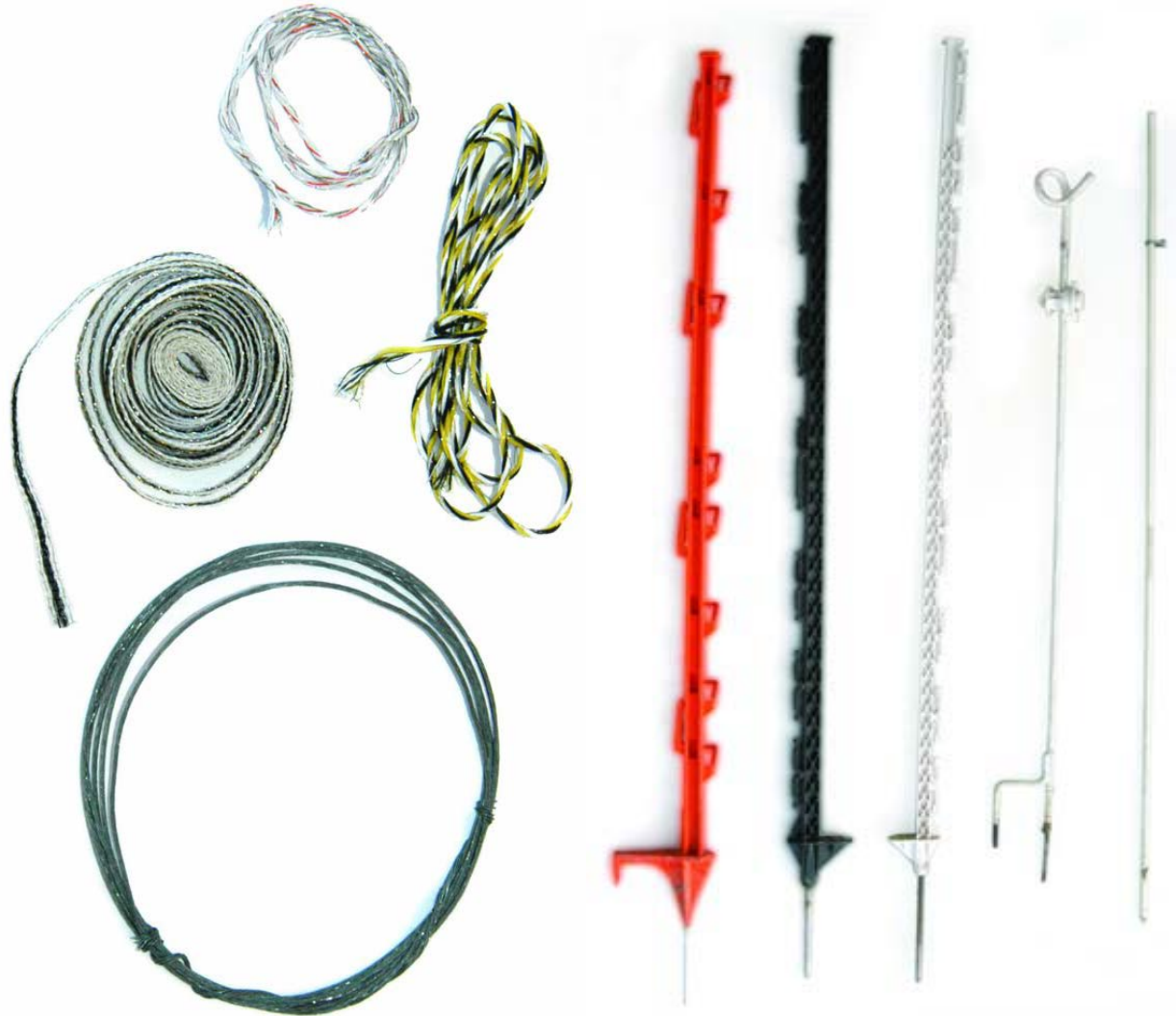
Plank or Pipe

What Is the Right Fence?

- Psychological Barrier
 - Electric or Power fence



Temporary Fencing Products





Animal Performance



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- If managed properly it is really good.

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 - Energy/Protein ratio

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 - Allowing/Controlling Livestock plant selection is the tricky part



10/06/2008

Animal Performance

- If managed properly it is really good.
 - Energy/Protein ratio
 - Allowing/Controlling Livestock plant selection is the tricky part
 - Goal should be to only have them eat the parts of the plant that meets their nutritional needs
 - Generally that means 60% or less utilization by livestock

Grazing CRP

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Questions??



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