

# Strip Grazing Our Hay Fields

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# Manage stocking rate to manage risk

- “Stock the farm at 85% of the carrying capacity to manage for drought.”  
(old Texan proverb)
- Stock the farm at 80% - 85% of the economic carrying capacity to manage for drought 85% of the time, cost 3% of marginal income.  
(statistics)

# Calculating the number of paddocks needed

## Spring

- days rest = 21
- days stay = 7
- #paddocks = rest / stay + 1
- #paddocks =  $21 / 7 + 1 = 4$

## Summer

- days rest = 42
- days stay = 7
- #paddocks = rest / stay + 1
- #paddocks =  $42 / 7 + 1 = 7$

# Calculating paddock size given forage supply and forage demand.

- Forage supply/acre = FM/acre x utilization rate
  - Initial forage mass = 3000 lb DM/acre (10" tall avg. density pasture)
  - Utilization rate = 50%
  - Supply lb DM/acre =  $3000 \times 50/100 = 1500$
- Forage demand = animal BWt x DMI %BWt x #head x #days
  - Animal BWt = 1200 lb
  - DMI %BWt = 3.0%
  - #head = 30
  - #days = 2
  - Demand =  $1200 \times 3/100 \times 30 \times 2 = 2160$  lb
- Paddock size = Demand / Supply
  - Paddock size =  $2160 \text{ lb DM} / 1500 \text{ lb DM/a} = 1.44 \text{ a}$

# Calculating stock density per acre.

Stock density = Total BWt / acre

Stock density = BWt/head x #head / acres

Stock density = 1200 lb x 30 / 1.44 a = 25,000 lb/a

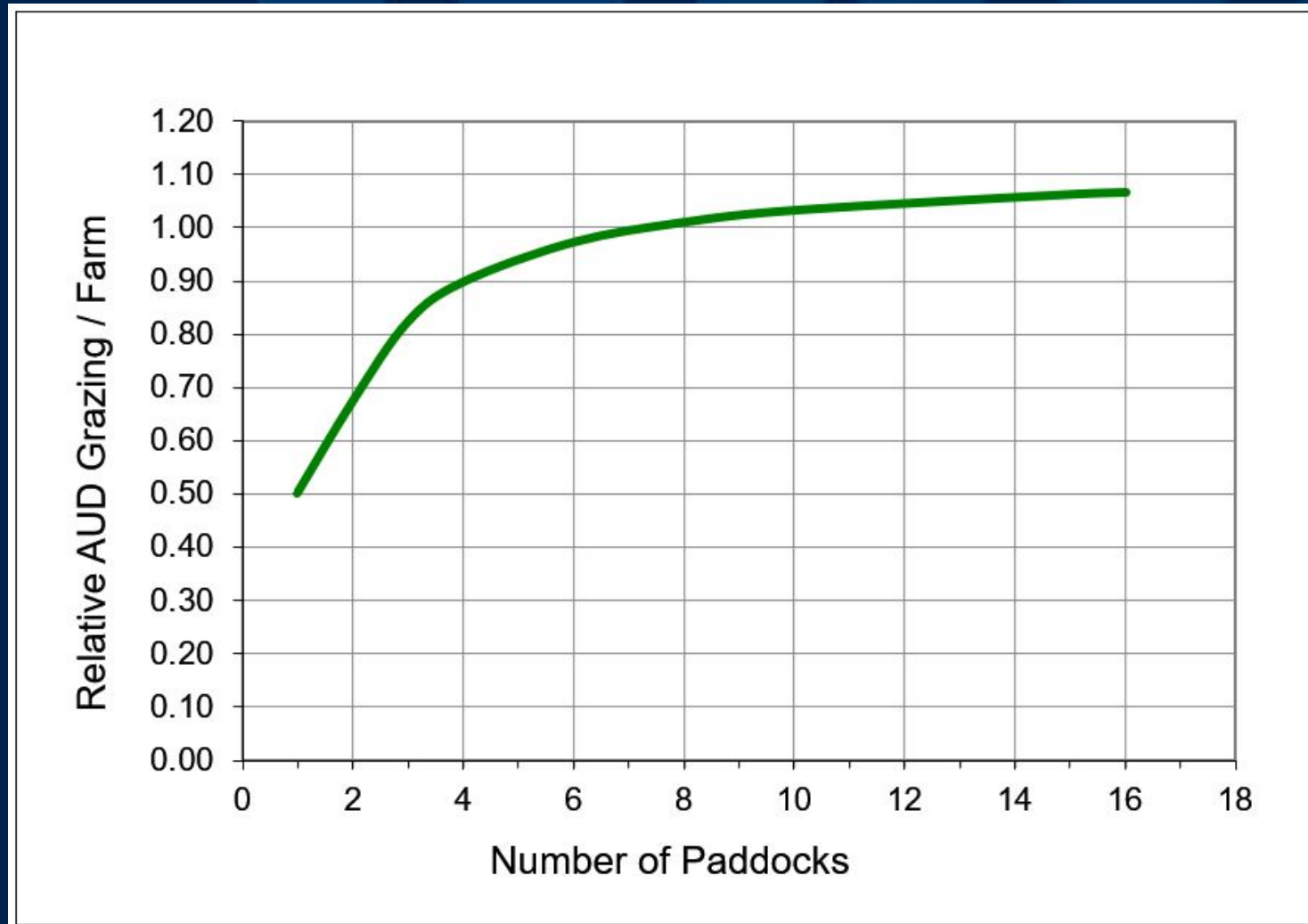
# Stock density, occupation period, and efficiency

(IFM 2800 lb DM/a, RFM 1360 lb DM/a, 40 cow-calf pairs, 36 lb DMI/hd/day, PGR 36 lb DM/a/day)

Acres/ paddock	Stock density pairs/a	GFM supply/ paddock	FM demand/ day	FM demand/a /grazing stay	Grazing stay days	Ingrowth lb DM/ paddock/ stay	Ingrowth % FM supply	Efficiency
1	40	1,440	1,440	1,440	1	36	2.5	98
2	20	2,880	720	1,440	2	144	5	95
4	10	5,760	360	1,440	4	576	10	90
5	8	7,200	288	1,440	5	900	12.5	88
10	4	14,400	144	1,440	10	3,600	25	75
20	2	28,800	72	1,440	20	14,400	50	50

FM – forage mass  
GFM – grazable FM  
DM – dry matter

# Number of paddocks and relative grazing days/year observed on farms changing from continuous to rotational grazing.



# Grazing Management.

- Stocking rate in balance with forage production
- Stock density to graze off 50% of the forage in 7 days or less
- Rest interval between grazing events 21 to 42 days
- Leave 4-inch residual height for best animal performance
- Leave 2-inch residual height or more for plant performance
- Short grazing heights hurt animal performance
- Long grazing periods hurt plant performance



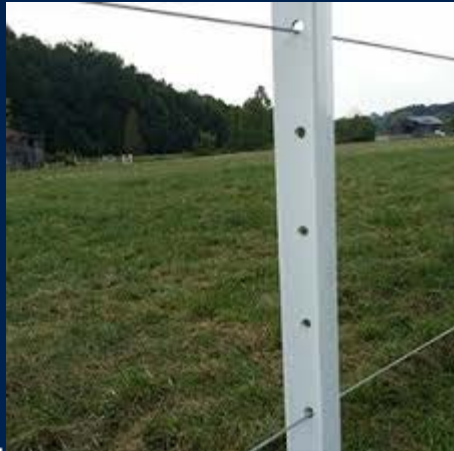
# Hay Field Challenges

- Lack of Fence
- Lack of Water
- Handling Facility
- Land Degradation



# Fence Solutions

- High Tensile
- Poly
- Geared Reels
- Step-In Posts



# Strip Graze to Decrease Waste

**You will double the # of grazing days in a pasture with strip grazing!**



**Stockpiled forages last longer with strip or rotational grazing.**

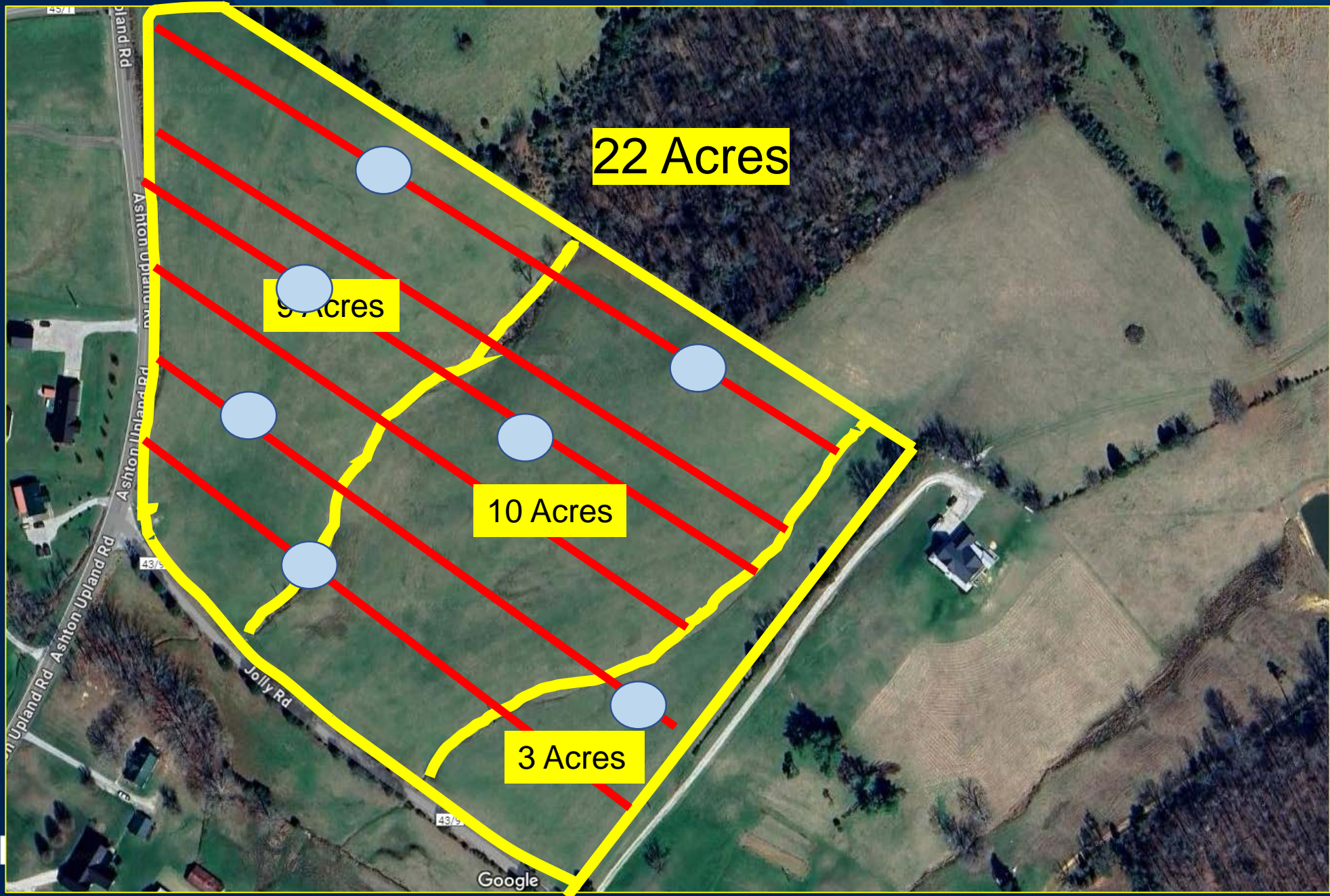
**Strip grazed consumed about 65% forage ( U Arkansas)**

**Unrestricted grazing cattle consume only about 35% of available forage**

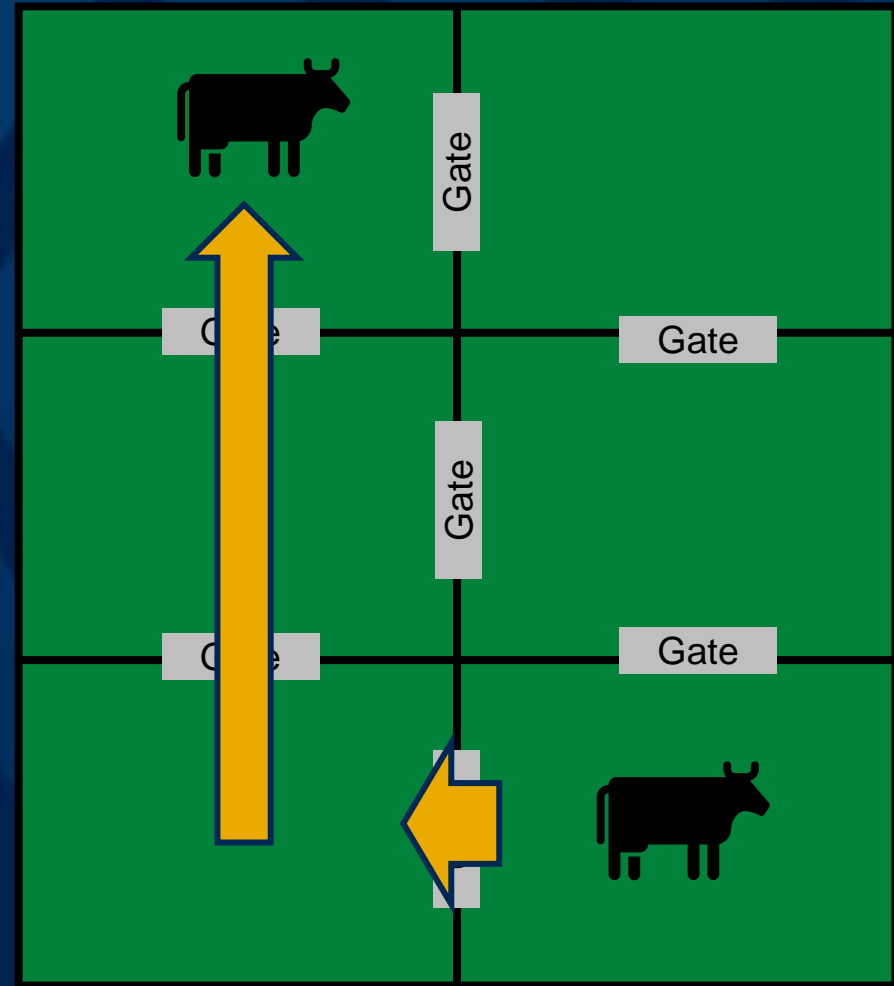
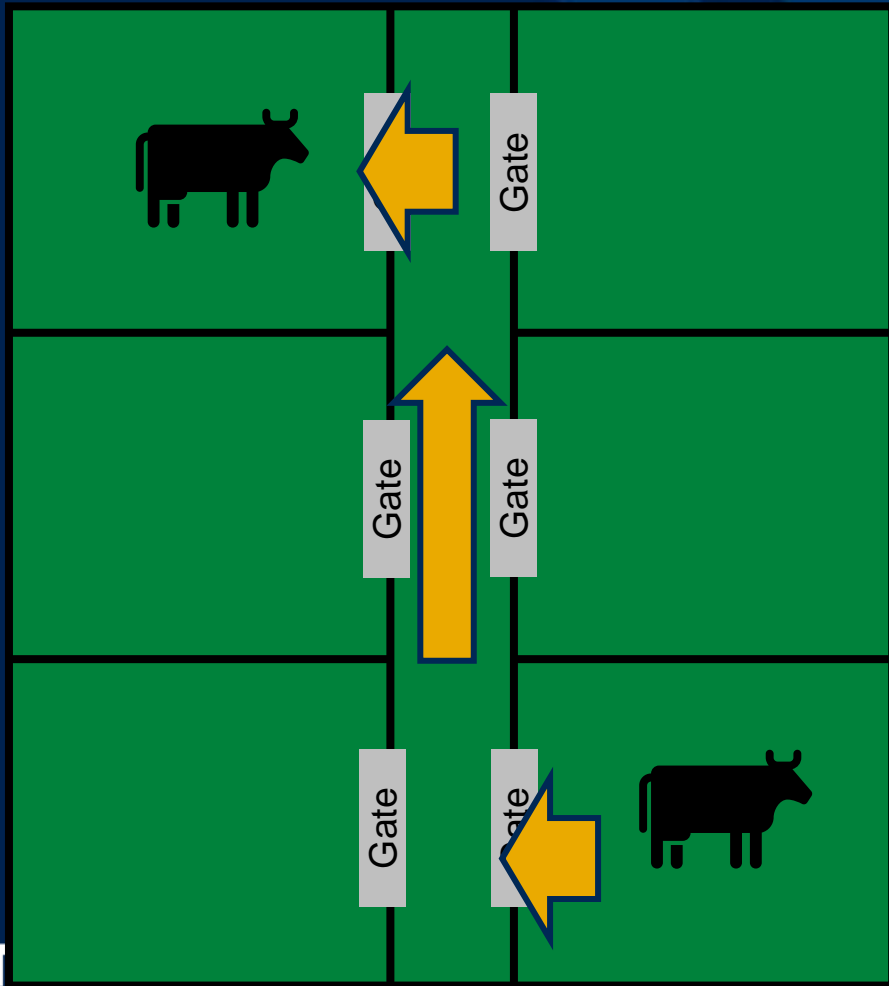
# Water Solutions

- Haul Water
- Municipal Taps
- Fire Trucks
- Well Development
- Pond Development





# Lanes vs Gates



# *Lanes vs. Gates*

- **Lanes:**

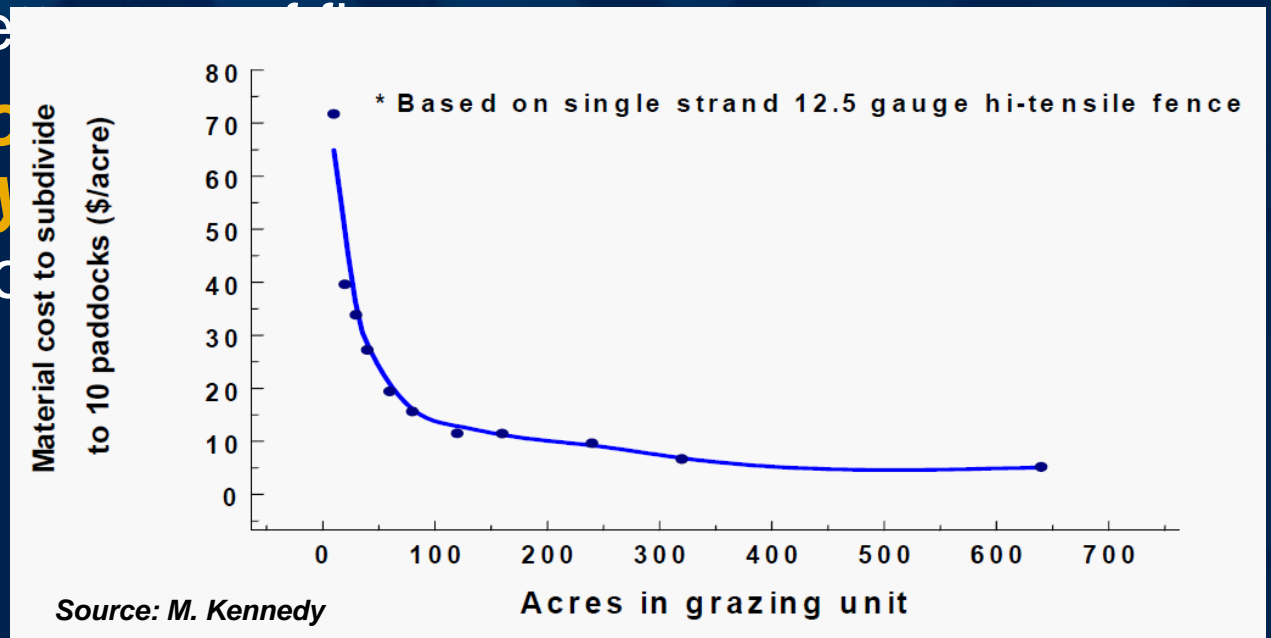
- May be helpful for long moves
- Reduces labor
- Less grazing area
- May have issues with compaction and manure deposition if used for waters

- **Gates:**

- Easier, especially over short moves
  - Potentially more problematic over long distance move
- Better pasture utilization/manure distribution
- Potentially, less flexibility over grazing sequence of pastures
- More risk of tearing up field in wet weather

# Incorporating Flexibility

- **Start with temporary fencing before creating permanent interior fencing**
  - Cheaper and is “practice” for real thing
- **Permanent interior fencing is more costly to smaller operation (< 100 acres)**
  - Water systems may be a benefit
- **More paddocks gives more optimal carrying capacity**
  - i.e. shade during hot periods, soil composition, etc.





# *Principles of Paddock Layout*

- 1. Water should be within 800 feet of livestock*
- 2. Make paddocks as square as possible*
- 3. Base paddock size on similar grazing capacities instead of size*
- 4. Plan for animal movement for between fields*
  - Primarily between fixed paddocks
  - Lanes vs gates
    - Depends on the operation

# Handling Facility



# Hay Field Degradation Prevention

- Keep Them Moving
- Move out of wet spots
- Could improve soil and forage quality



<b>Title</b>	<b>Author</b>	<b>Title</b>	<b>Author</b>
<b>Knowledge Rich Ranching</b>	Allan Nation	Dirt to Soil	Gabe Brown
Land Livestock and Life	Allan Nation	Man, Cattle and Veld	Johann Zietsman
Pasture Profits with Stocker Cattle	Allan Nation	<b>The E Myth Revisted</b>	Michael Gerber
<b>Kick the Hay Habit</b>	Jim Gerrish	<b>The Seven Habits of Highly Effective People</b>	Steven Covey
Management Intensive Grazing	Jim Gerrish	<b>Essentialism: The disciplined pursuit of less</b>	Greg McKeown
<b>Thoughts and Advice from an Old Cattlemen</b>	Gordon Hazard	A Soil Owner's Manual	John Stika
<b>The Turnaround: A Rancher's Story</b>	Dave Pratt	<b>How to not go broke ranching</b>	Walt Davis
Cerebral Ranching: Sunshine- Rainfall-Management	Walt Davis		
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