TOMKAT RANCH

Grazing Planning for Small Critters

Small Livestock

- What is your Holistic Goal?
  - “If you don’t have a goal, then somebody will have one for you.” - Bruce Ward
- Holistic Management and a Grazing Plan are <u>tools</u> not a solution.
  - The value depends on how we wield it.
- A Holistic decision making process and and a grazing plan allow us to make informed decisions within a very complex natural system.


PLANNING
GRAZING
TRACKING
MONITORING
FEEDBACK

Why Have a Grazing Plan?

- Why do you have land?
- Why do you have animals?
- Why do you have or want to have the species you have?
- Why do you have or want to have the animals on pasture?
- Why or why isn't your family involved, or want to be involved?

What is a Grazing Plan?

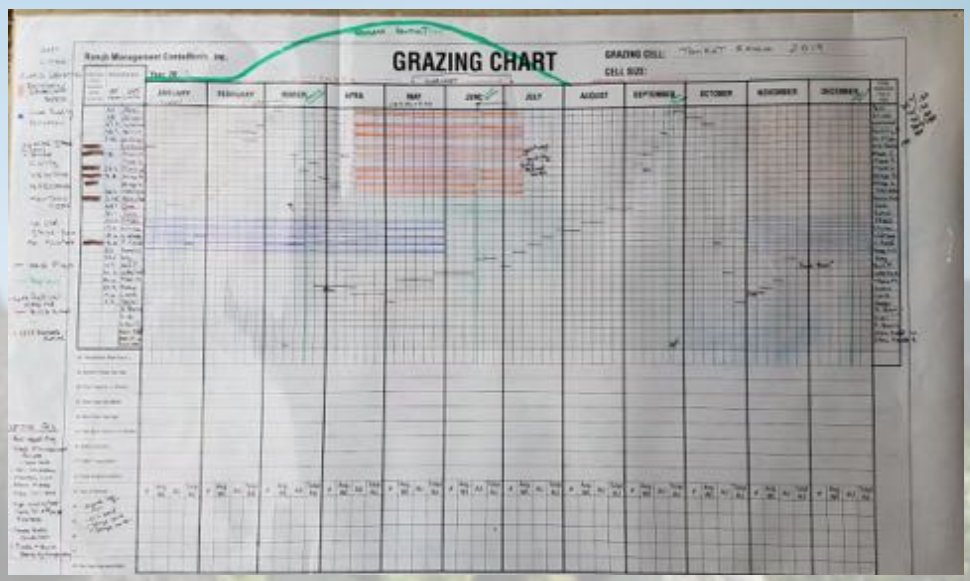
It is a planning process for dealing with the complexity of nature and the interactions between animals, plants, soil microbes, water, and human communities.

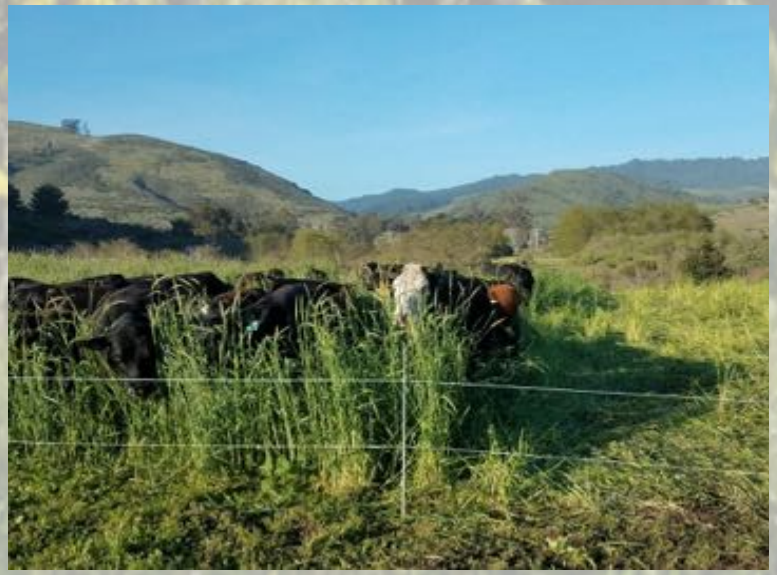
- A grazing plan allows us to have animals in the right place at the right time for the benefit of the animals, the regeneration of soil, and improved profit.
- It requires observation, thinking, planning, execution, and patience.

Keys to Success

- There is no finish line or goal, only your current trend. Are your pastures and soils improving or degrading?
- Manage and plan for what you want (work with Nature it's been around a lot longer than we have) not for what you don't want (applying force to nature).

Adaptive Planned Grazing





The primary tools we use to manage landscapes with livestock are the location, duration, timing, and density of grazing.

Types of Grazing plans

- **Rotational Grazing - it may or it may not be rotational.**
- **MIG - Management Intensive Grazing**
- **UHDG - Ultra High Density Grazing**
- **Adaptive Grazing**

A good grazing plan is fluid and adaptive. Without observations and adjustment to animal needs, forage production and the current climate a grazing plan is just a piece of paper.

Overgrazing is the enemy of natural grassland and soil microbiological processes. Overgrazing occurs to individual plants, and it happens plant, by plant, by plant. It can only occur when one of two specific conditions exist:

1) Animals remain too long in a paddock under fast growth conditions (the second bite)

2) Animals return to a paddock (and therefore its plants) too soon in periods of slow growth (lack of recovery time)

"In preparing for battle I have always found that plans are useless, but planning is indispensable."

-Dwight D. Eisenhower

Considerations for a Grazing Plan

- **Resource Concerns**
  - Mineral Cycle
  - Water Cycle
  - Energy Cycle(Photosynthesis)
  - Carbon Cycle
- **People / Family**
- **Brittle vs. Non-brittle Environment**
- **Current and historic use of land, and grazing management.**
- **Space - Carrying capacity vs. stocking rate. Square foot vs. AU/ac**
- **Forage**
  - Type - grasses, legumes, forges, broadleaf, brush, trees,
  - Production
  - Diversity - 3 of 3 (SHA)
  - Quality
  - Recovery
  - Year round vs. seasonal
  - Irrigation
- **Water - storage, delivery, drinkers, gravity feed, natural, power,**
- **Power**
- **Fences - permanent and temporary, corrals**
- **Shelters - permanent, portable/ Natural**
- **Appropriate Animal Species**
  - Feed requirements
  - Positive and negative aspects of Feed Inputs
  - Market
- **Soil Compaction**
- **Manure Management**
- **Bare Soil - current status, seasonal or year round? Where and why?**
- **Weeds - why do they exist? Are they weeds? What do they indicate? Rain cycle and growing season**
- **Wildlife including predators**

Benefits of A Grazing Plan

- **Resource Concerns** - address non-functioning Cycles
  - Mineral Cycle
  - Water Cycle
  - Energy Cycle(Photosynthesis)
  - Carbon Cycle
- **People / Family** - find balance
- **Forage** - provides sufficient recovery time
  - Prevent overgrazing
  - Production - increase production and/or length growing season.
  - Diversity - 3 of 3. Increases diversity
  - Quality - increase the quality either from sufficient recovery and/or through diversity.
  - Weeds - different plants are feed for different animals, and indicate soil health.
- **Economic Benefits for Producers**
  - Multi-species
  - Water, Power, fencing, building, and shelters - utilize infrastructure efficiently.
  - Feed requirements - appropriate animal species,age, sex, to match the forage available, reduce costs.
- **Soil**
  - Keep soil covered year round with a living root or litter to feed microbes.
  - Compaction -can be reduced or increased depending on how you manage.
  - Lower soil temperature, benefits soil microbes, reduces volatilization of ammonia from urine.
  - Increased water infiltration and holding capacity.
  - Manage Manure evenly with animal movement. Decreases parasite/fly load.
- **Wildlife**
  - Reduce predation and/or increase wildlife

Where to Start

- Maps
  - Hand drawn, photo, GIS...
  - Property boundary
  - Existing
    - Fields and acreage
    - Fence/gates/corrals - type if important, or lack thereof
    - Water - permanent, seasonal
    - Roads or access
    - Other - erosion gullies, swamps, …
  - Contours if needed
  - Fields limited by - climate - wet, access, fence type
- Forage Production calendar
  - Growing season
  - Feed type and value
  - Livestock that can utilize
- Considerations to develop a Grazing Plan - what information needs to be considered.
- Graze Plan chart
  - **START tracking wherever you are NOW. Build the Habit.**
  - Id fields (number/letter)with room to reduce size and increase number
  - Keep it simple.
  - ADA, or #/ac
- Graze Plan - build it going forward.
  - AUM/Day
  - Manure distribution

Crucial Concepts

Nature is very resilient and chaos is normal. Planned chaos is your job.

- Never graze the same all the time.
  - Graze different species
  - Graze different intensities
  - Graze different seasons
  - Distribute Manure differently
  - Feed hay or feed in different patterns
  - Move water, pens, corrals etc whenever feasible.

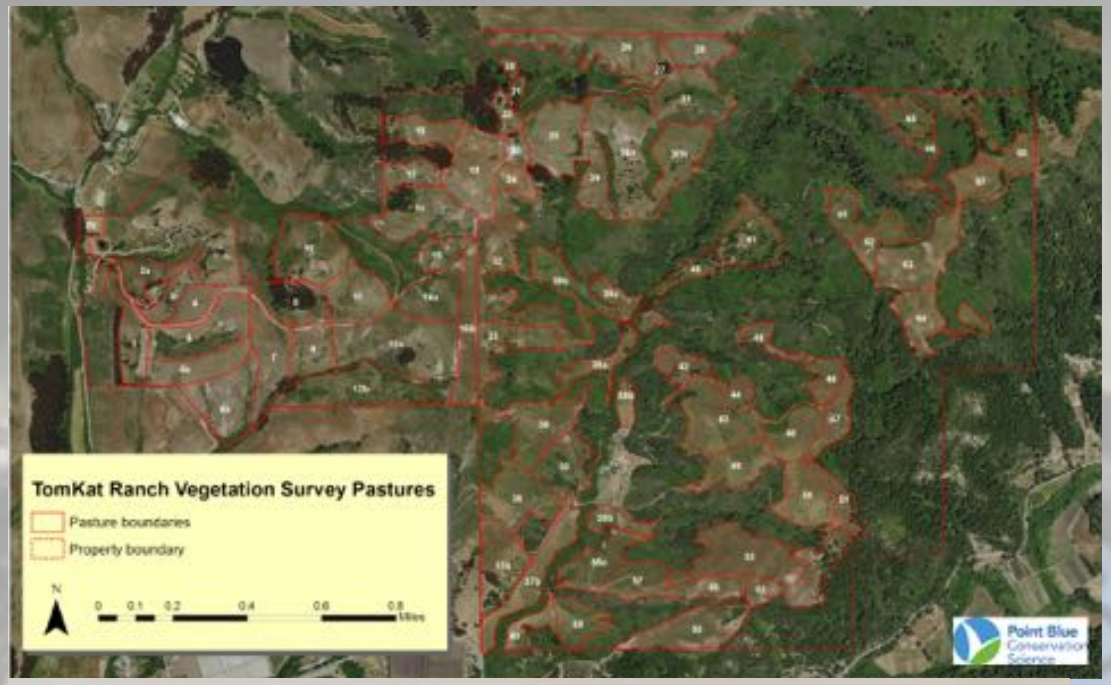
Understand

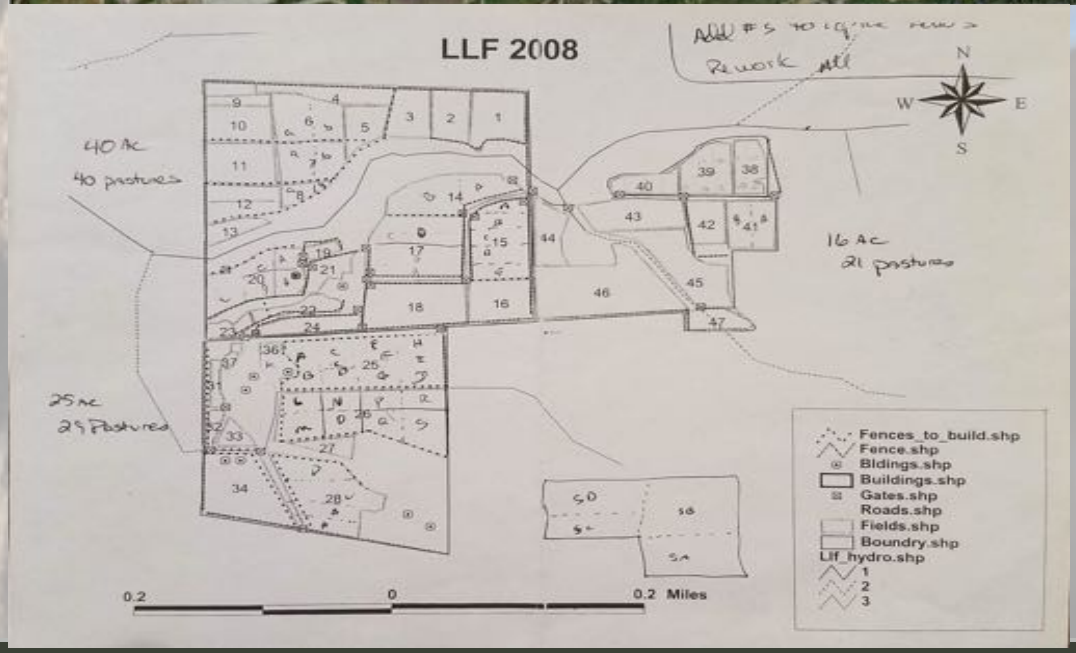
- Animal Unit (AU) = 1,000 lb cow w/ calf = equivalent to 5-7 sheep or goats.
- NRCS AU equivalent chart https://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs144p2_051957.pdf
- Animal Unit Month (AUM)or Animal Days per Acre (ADA) use these as a guide and to monitor but not as the only tool.
- Difference between Carrying Capacity and Stocking Rate

Successful Habits

- **Observation**
  - Preferred forages
  - What is your management selecting for or against.
  - Plant communities, recovery, growing seasons - who, when and how long.
  - Grazing - selective vs. non-selective
  - Water - all at once or individual
  - Litter, standing feed, residue
  - Manure distribution
  - Insect population - Spider webs!
- **Record observations**
  - Back of the grazing plan or a grazing notebook.
- Plan, observe, replan, execute, track.
- Patience
- The art of asking the right question.

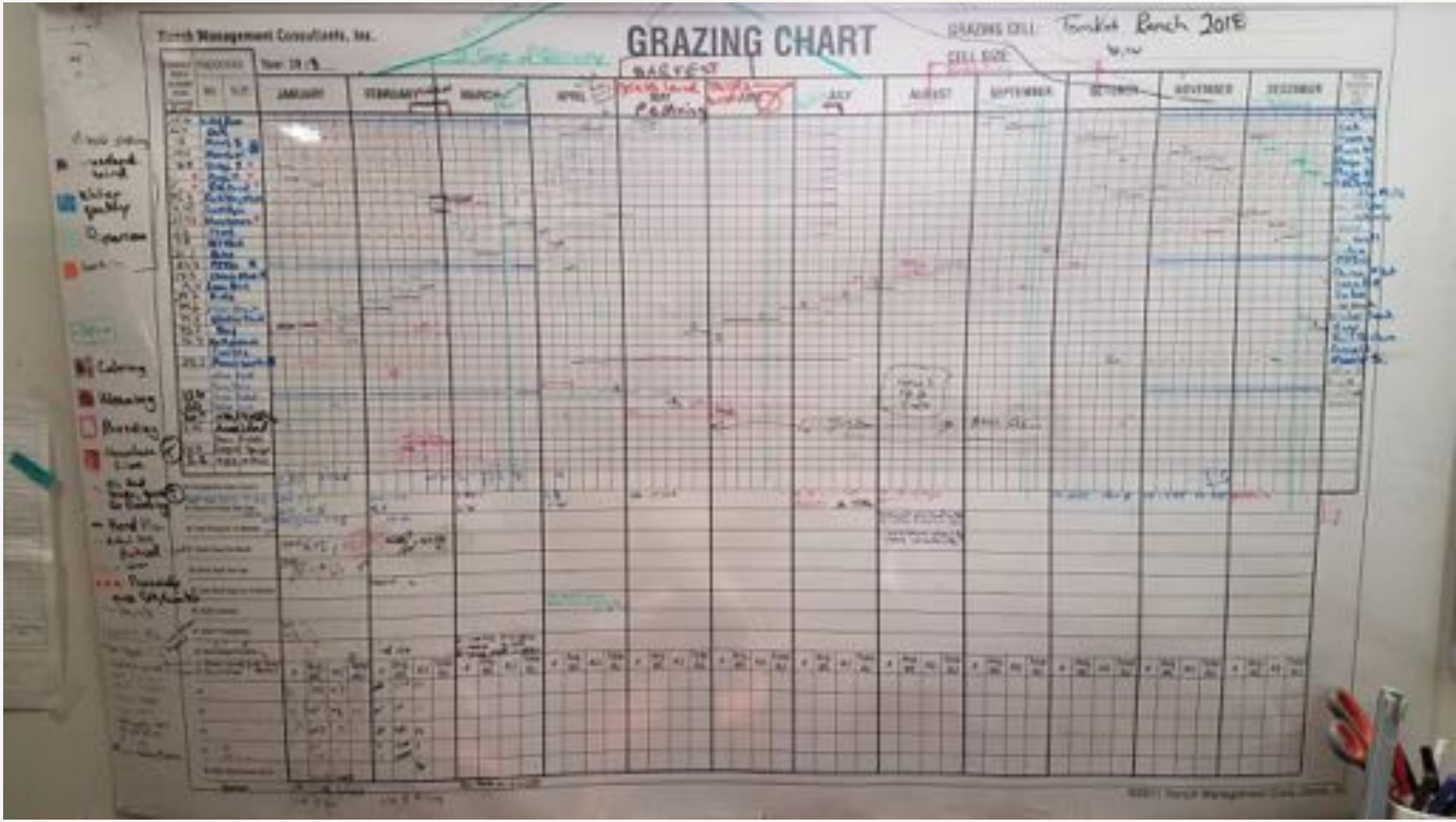
Maps- Complex or Simple





Working Maps for Adjustments

Grazing Plan in action - Plan, monitor, replan, actual



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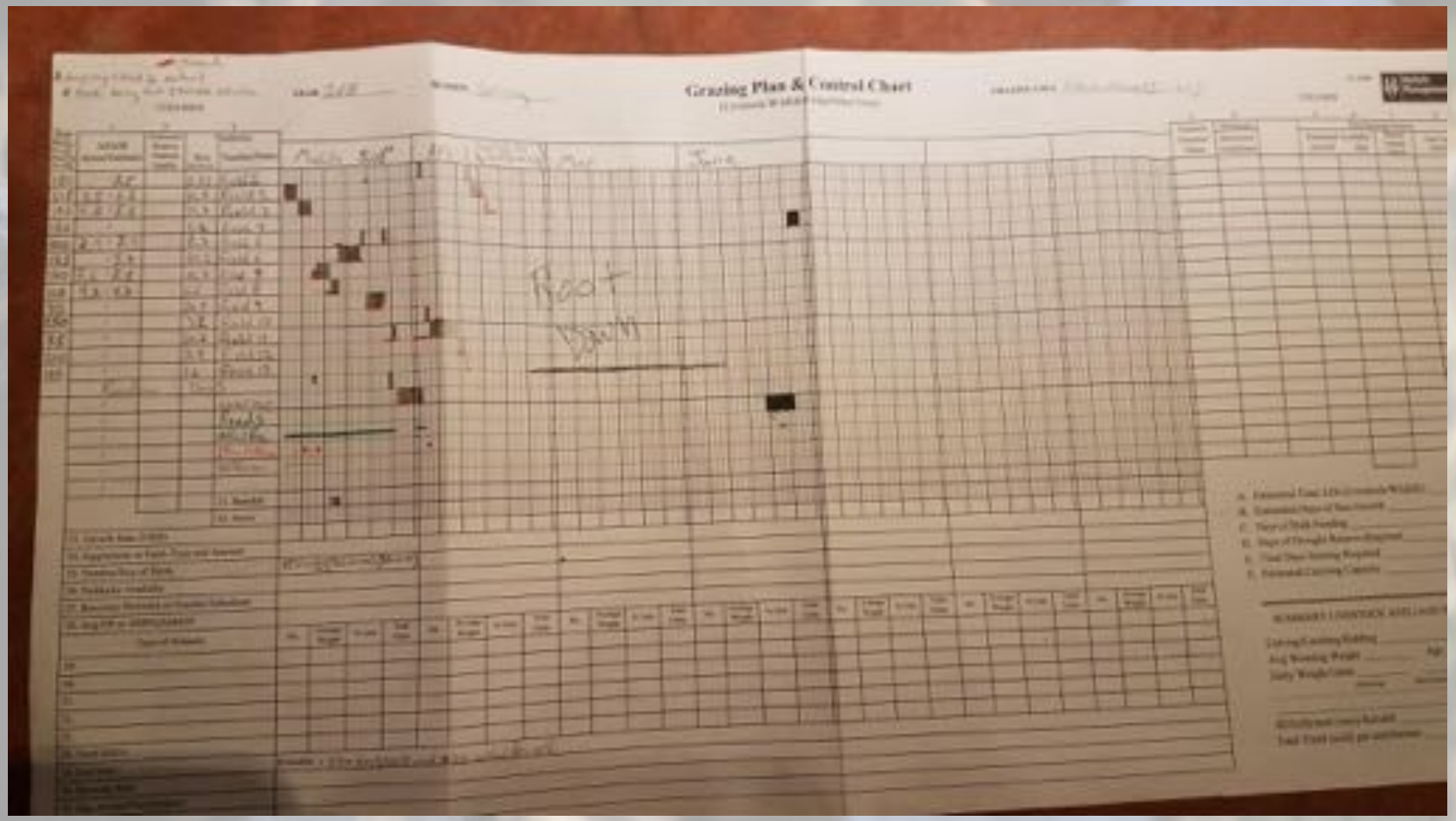

Tools

There is no one right tool, but many adaptations.

Portable Water

- Do NOT haul water
- Do Not set water system up to fail
- How can you make them flexible, economical and livestock proof.

Environmentally-Adapted Livestock

Long Recovery Periods

- Beneficial to Perennial plants
- Good parasite management
- Higher carbohydrates in feed
- Increases plant biodiversity
- Creates opportunity for litter > no bare soil > increased water infiltration
- Challenges for small livestock

Litter

Integration of Cover Crops and Livestock (Neighbors?)

Big animals setting the plate for small animals and microbes

Observation Above, Below, Within

Timing

- Sufficient recovery
- Using non-typical forages to fill the forage chain allows for longer recoveries. Jan 2018

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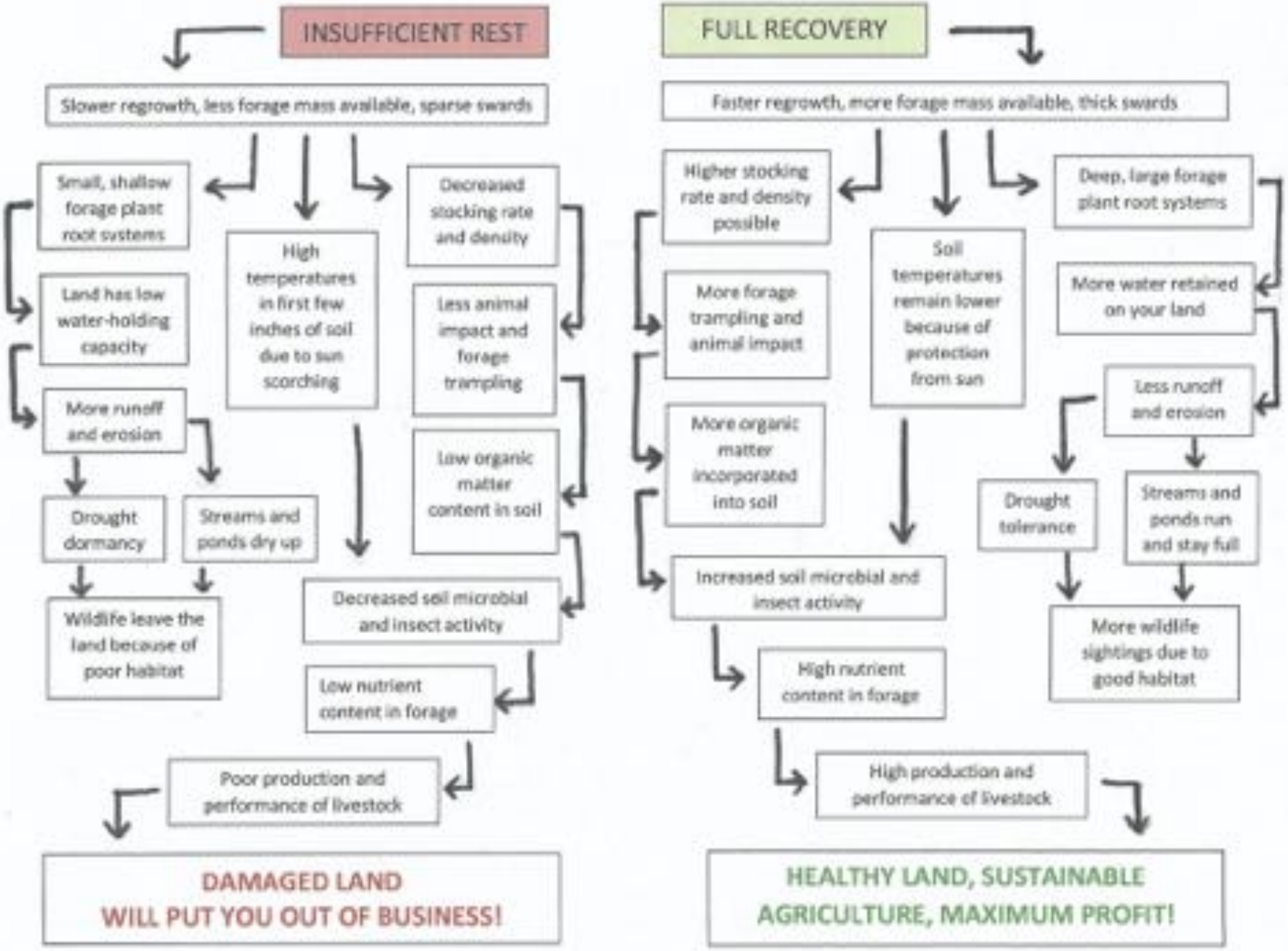
INSUFFICIENT REST
Slower regrowth, less forage mass available, sparse swards
Small, shallow forage plant root systems
Land has low water-holding capacity
More runoff and erosion
Drought dormancy
Streams and ponds dry up
Wildlife leave the land because of poor habitat
High temperatures in first few inches of soil due to sun scorching
Decreased stocking rate and density
Less animal impact and forage trampling
Low organic matter content in soil
Decreased soil microbial and insect activity
Low nutrient content in forage
Poor production and performance of livestock
DAMAGED LAND
WILL PUT YOU OUT OF BUSINESS!
FULL RECOVERY
Faster regrowth, more forage mass available, thick swards
Higher stocking rate and density possible
More forage trampling and animal impact
More organic matter incorporated into soil
Increased soil microbial and insect activity
High nutrient content in forage
High production and performance of livestock
Soil temperatures remain lower because of protection from sun
Deep, large forage plant root systems
More water retained on your land
Less runoff and erosion
Drought tolerance
Streams and ponds run and stay full
More wildlife sightings due to good habitat
HEALTHY LAND, SUSTAINABLE AGRICULTURE, MAXIMUM PROFIT!

Grazing Plan Resources

- Holistic Management International
- Savory Institute
- Holistic Management Handbook - Allan Savory and Jody Butterfield
- Bruce Ward http://www.holisticresults.com.au/