

# Collaborative Adaptive Rangeland Management

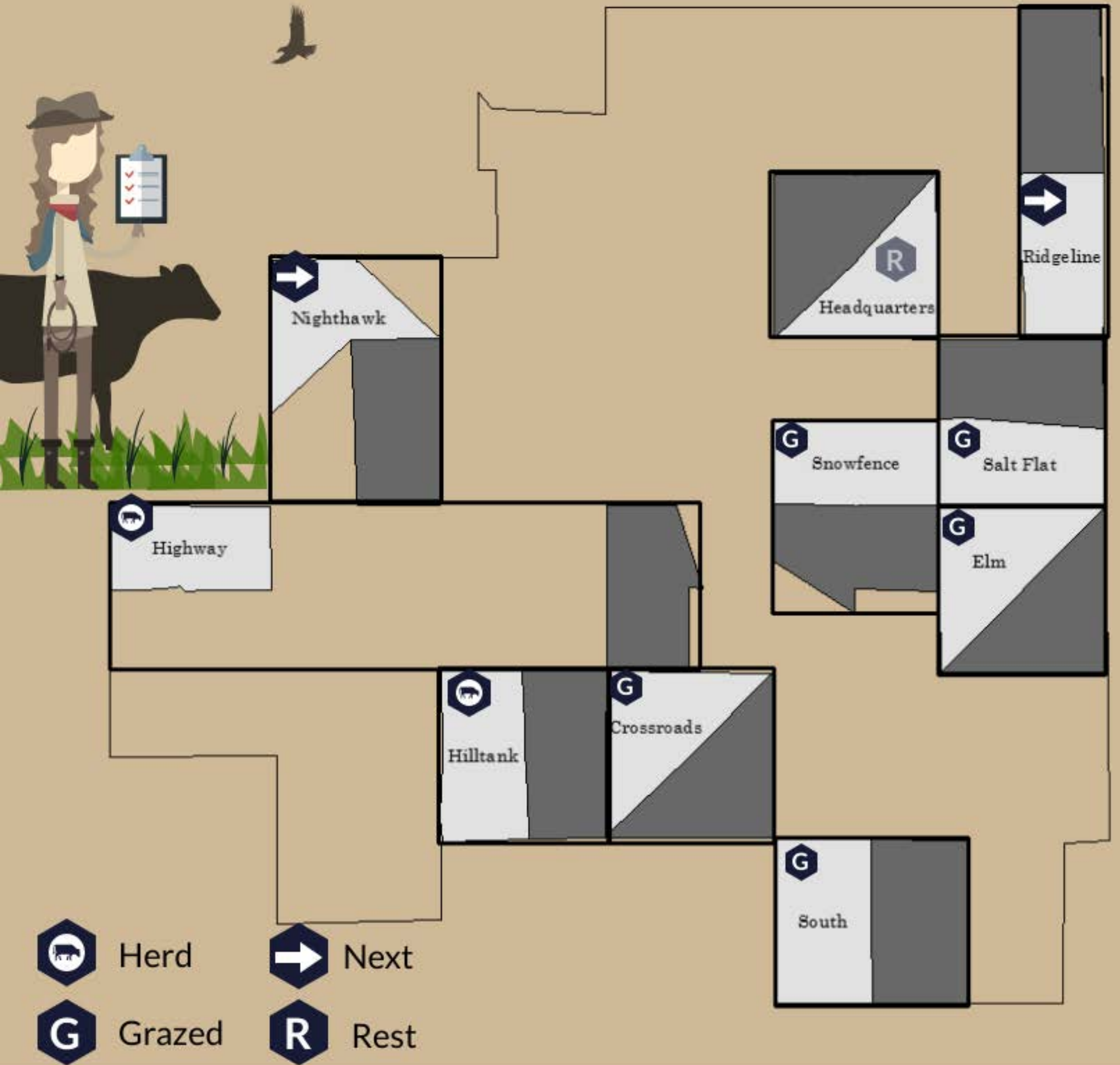


Where it all began





Dive into the details...



**Highway | Hilltank**

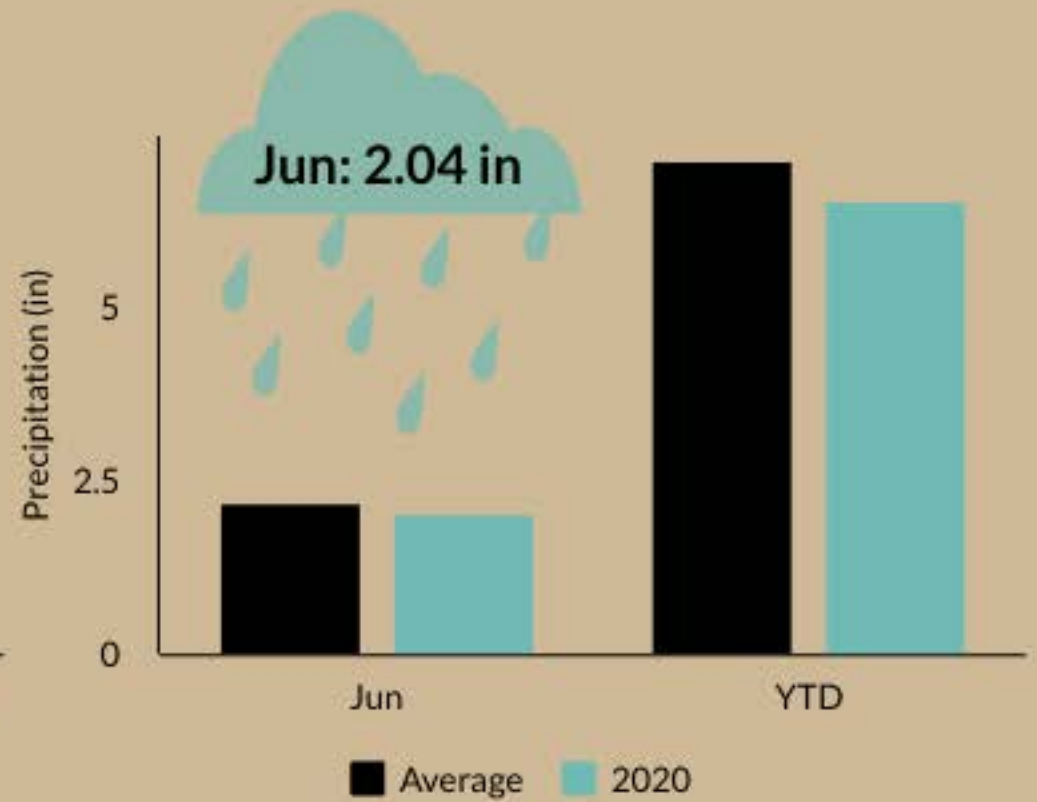
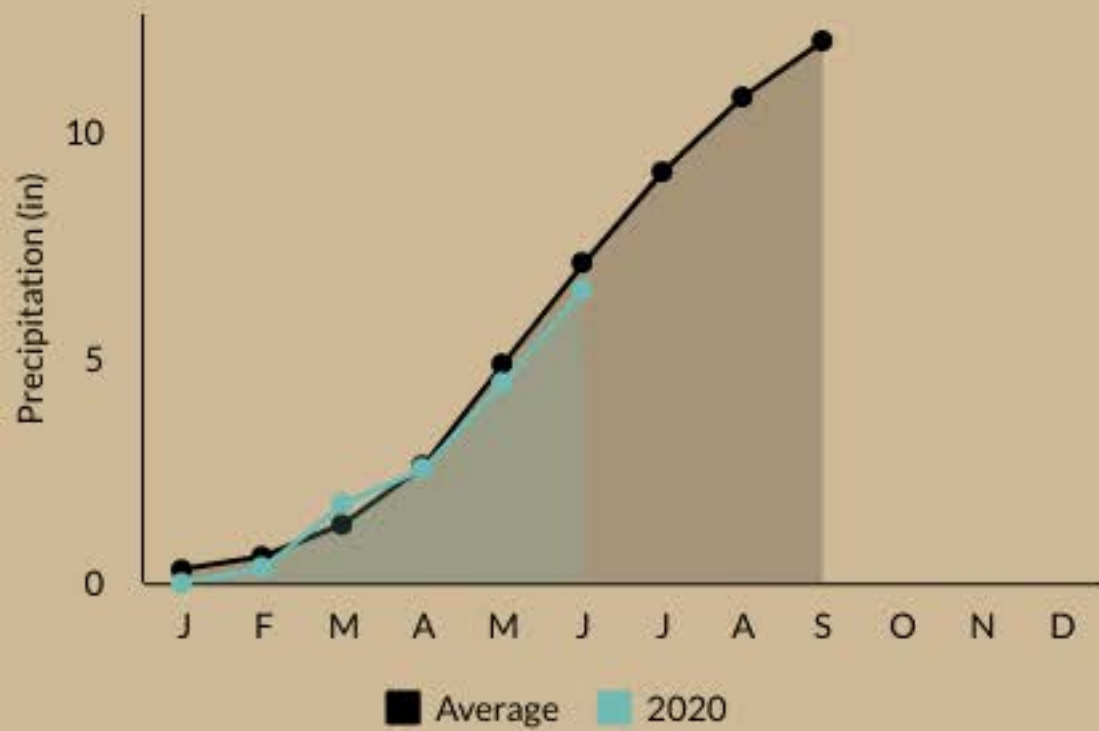
- Loamy Soils
- Warm Season Grasses
- Vegetation Threshold:
  - 300 pounds/acre

- Loamy Soils
- Warm Season Grasses
- Vegetation Threshold:
  - 300 pounds/acre



# Highlights of Happenings

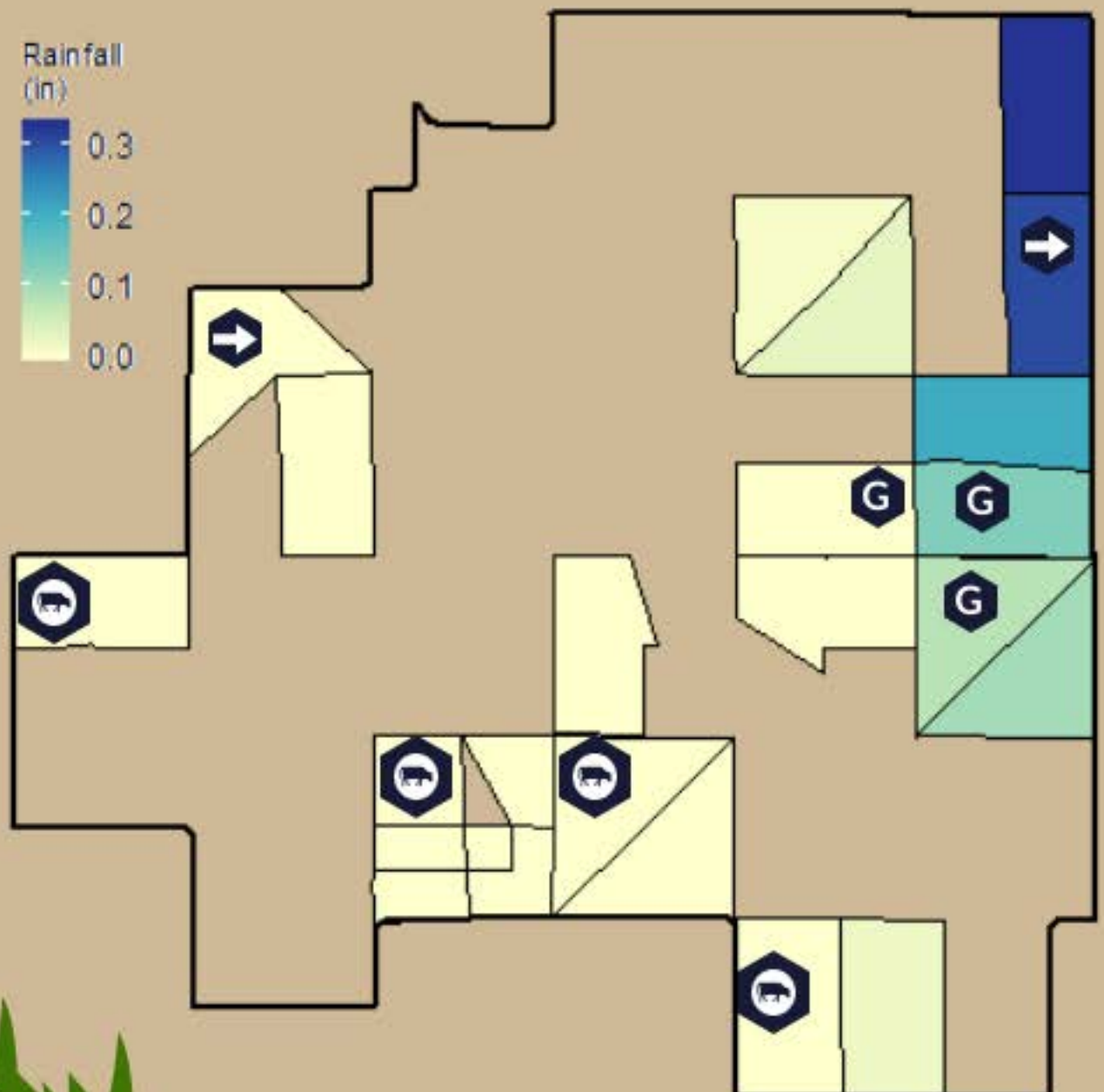
## Rainfall Totals



## Total Rainfall

2020-06-28 to 2020-07-05

## Rainfall Distribution



Drought Monitor

Grass-Cast



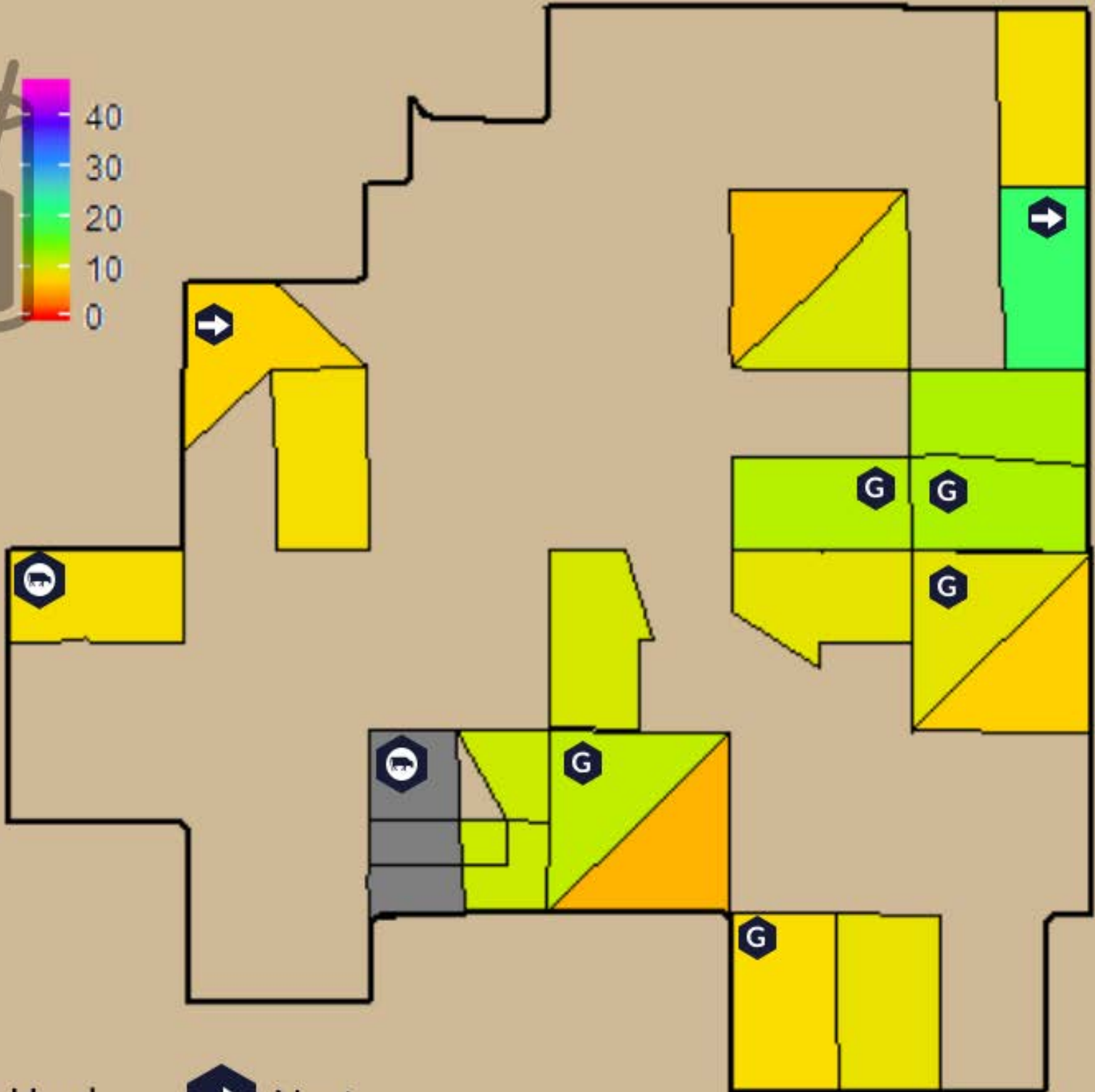
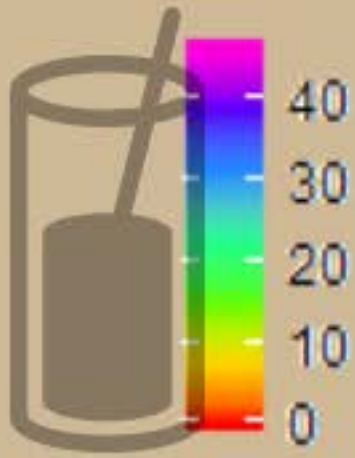
# Soil Moisture Distribution

## What's in our cup?

*This heat wave is forcing those grasses to drink that cup.*

### Current Soil Moisture

2020-07-05



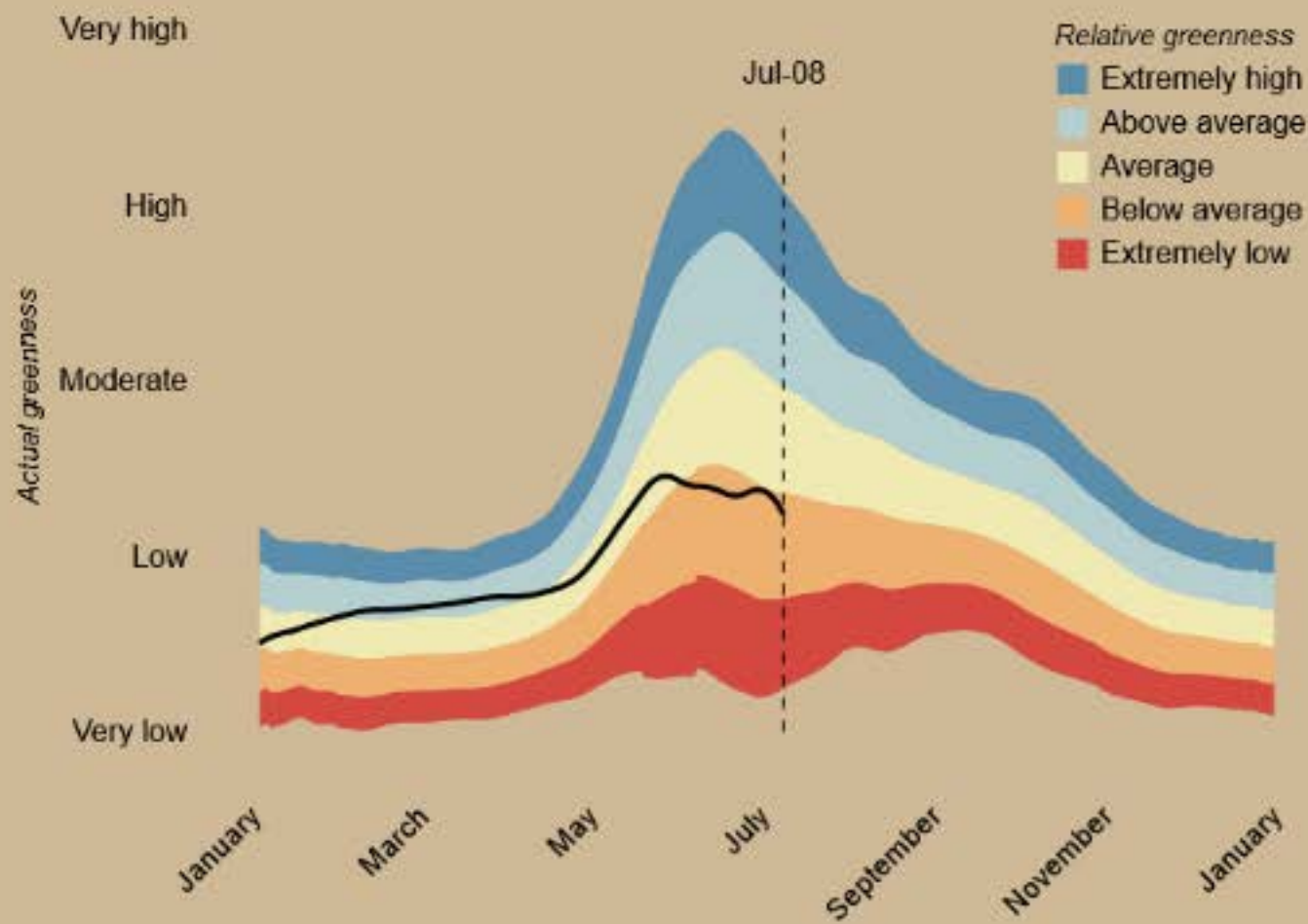
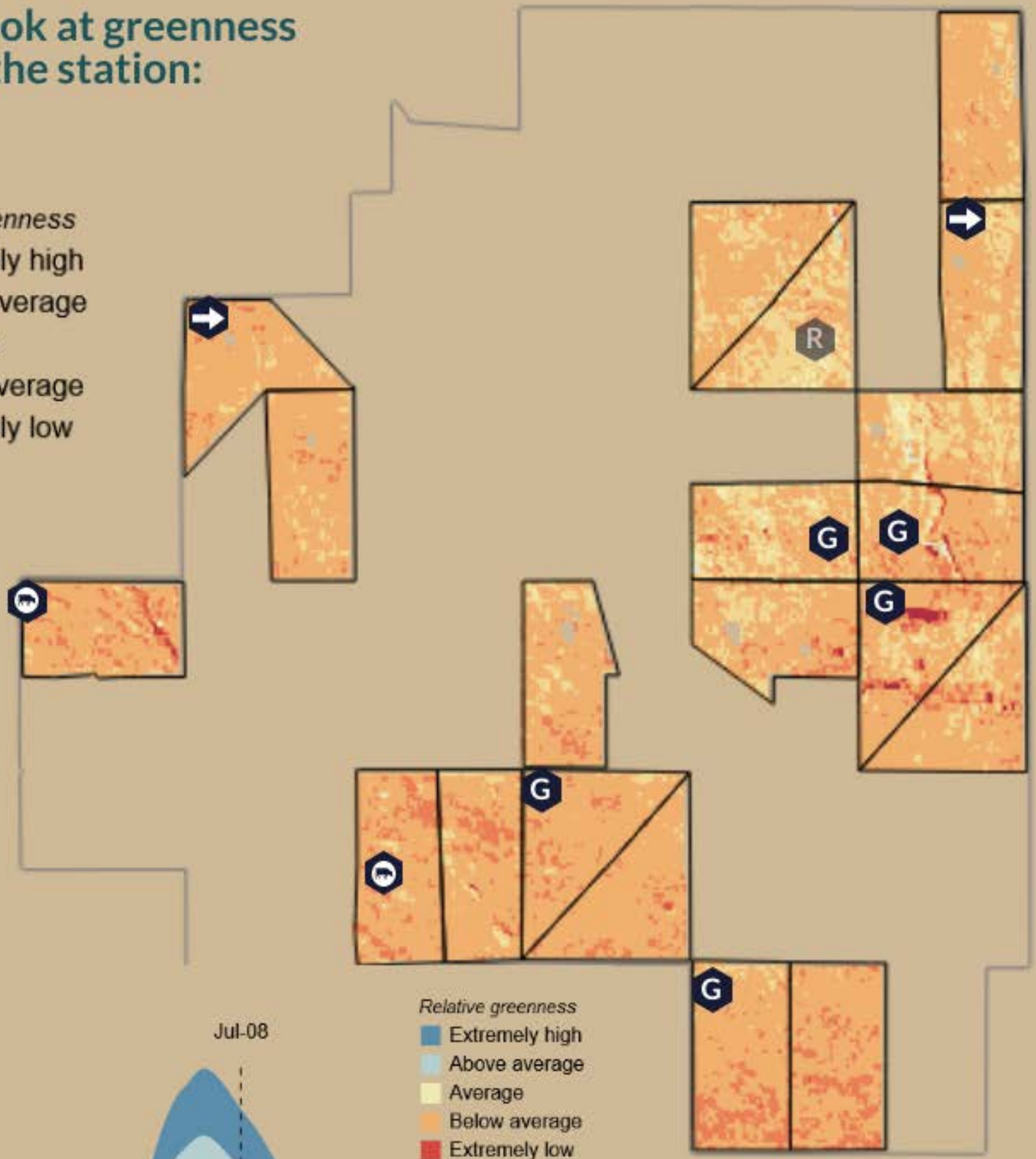
- Herd
- Next
- Grazed
- Rest



## A detailed look at greenness across the station:



- Relative greenness*
- Extremely high
  - Above average
  - Average
  - Below average
  - Extremely low



- Relative greenness*
- Extremely high
  - Above average
  - Average
  - Below average
  - Extremely low

- Herd
- Next
- Grazed
- Rest

*The pastures are drying out in this heat.*



# Highway

# Hilltank



**E** **F**  
NOTE: Empty (E) is set at 300 lbs/acre



**E** **F**  
NOTE: Empty (E) is set at 300 lbs/acre





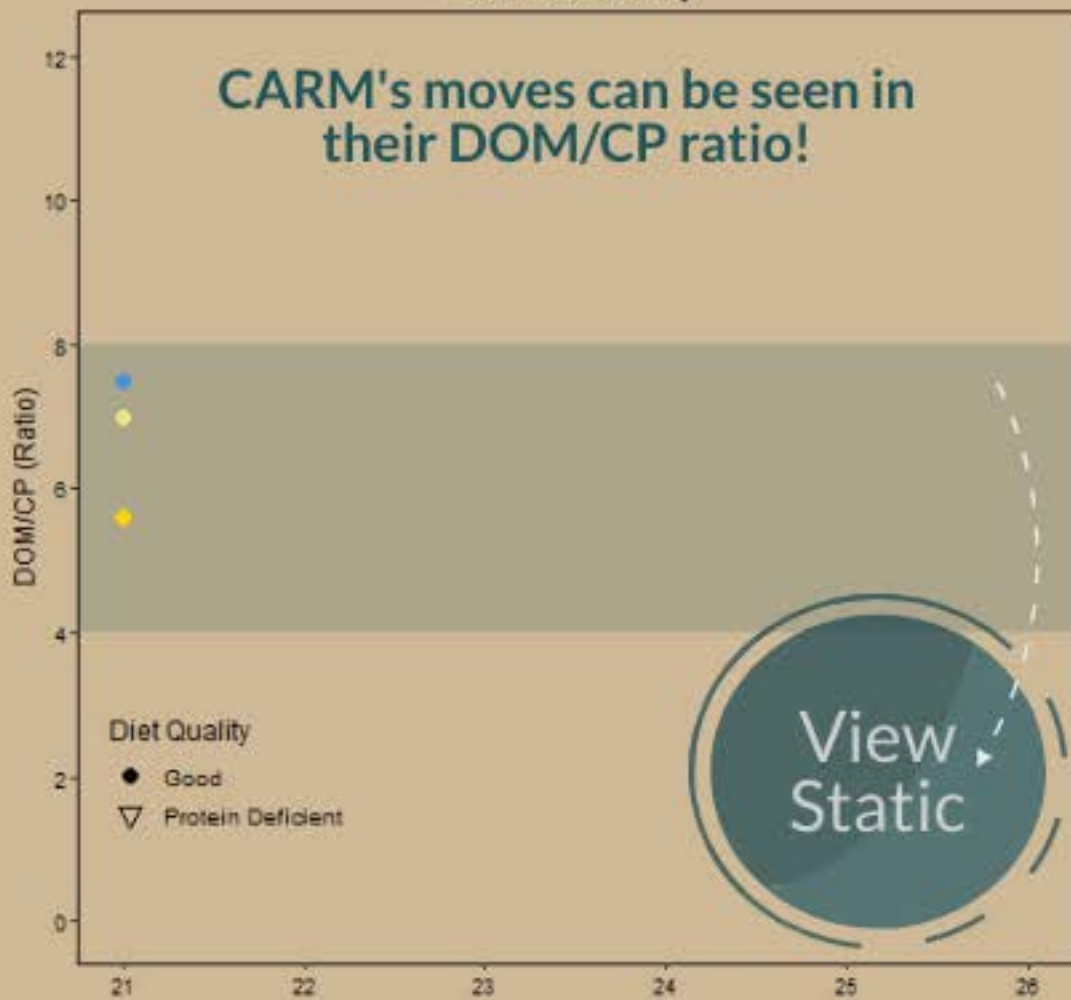




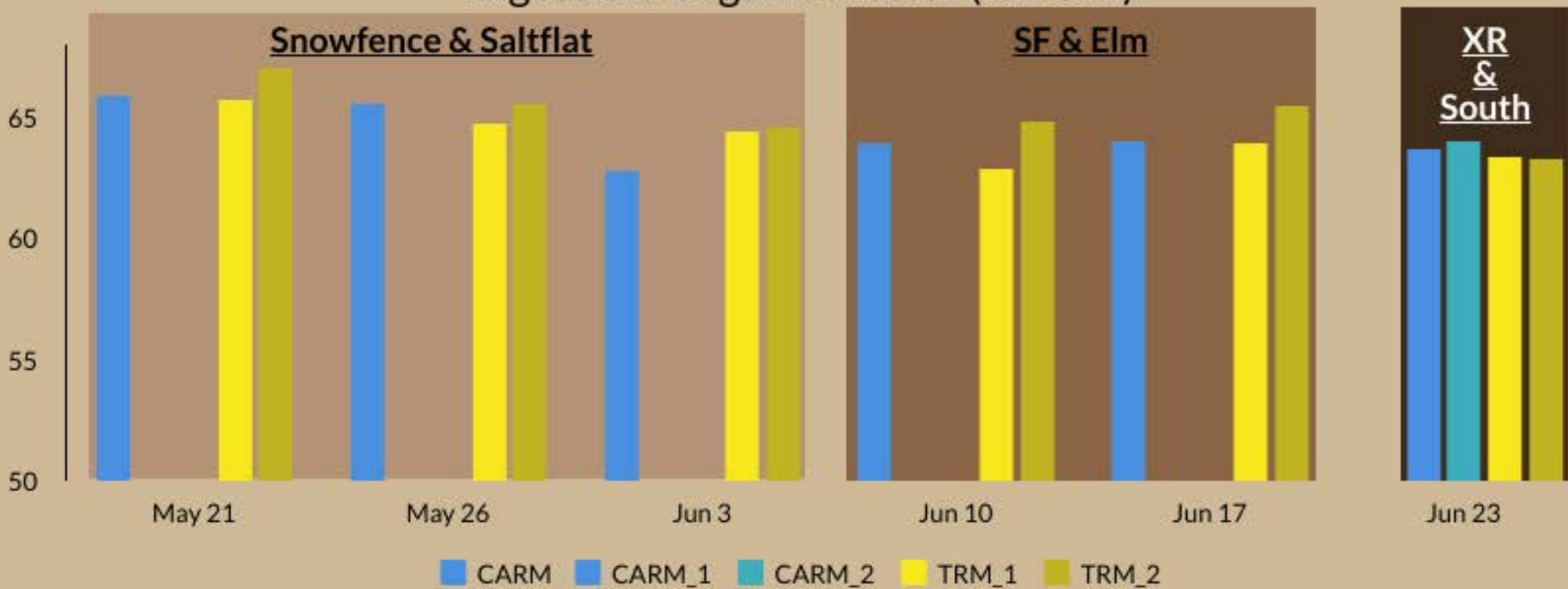




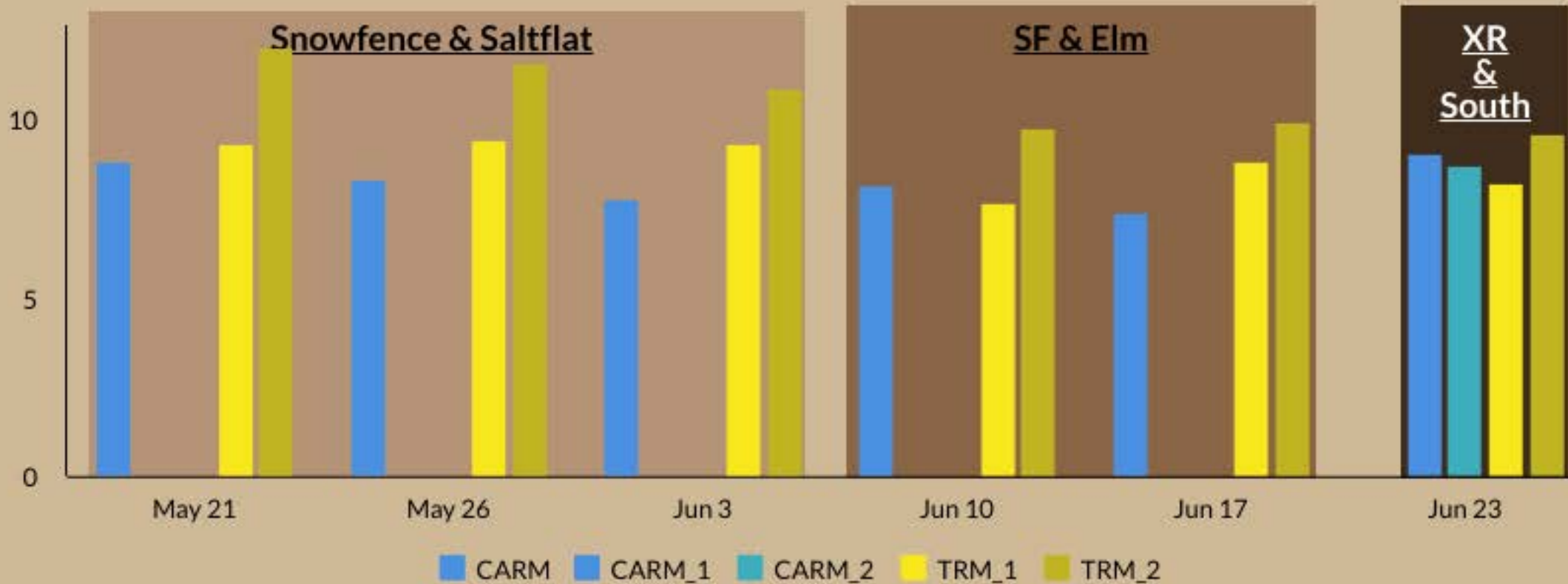
CARM's moves can be seen in their DOM/CP ratio!



Digestible Organic Matter (%DOM)



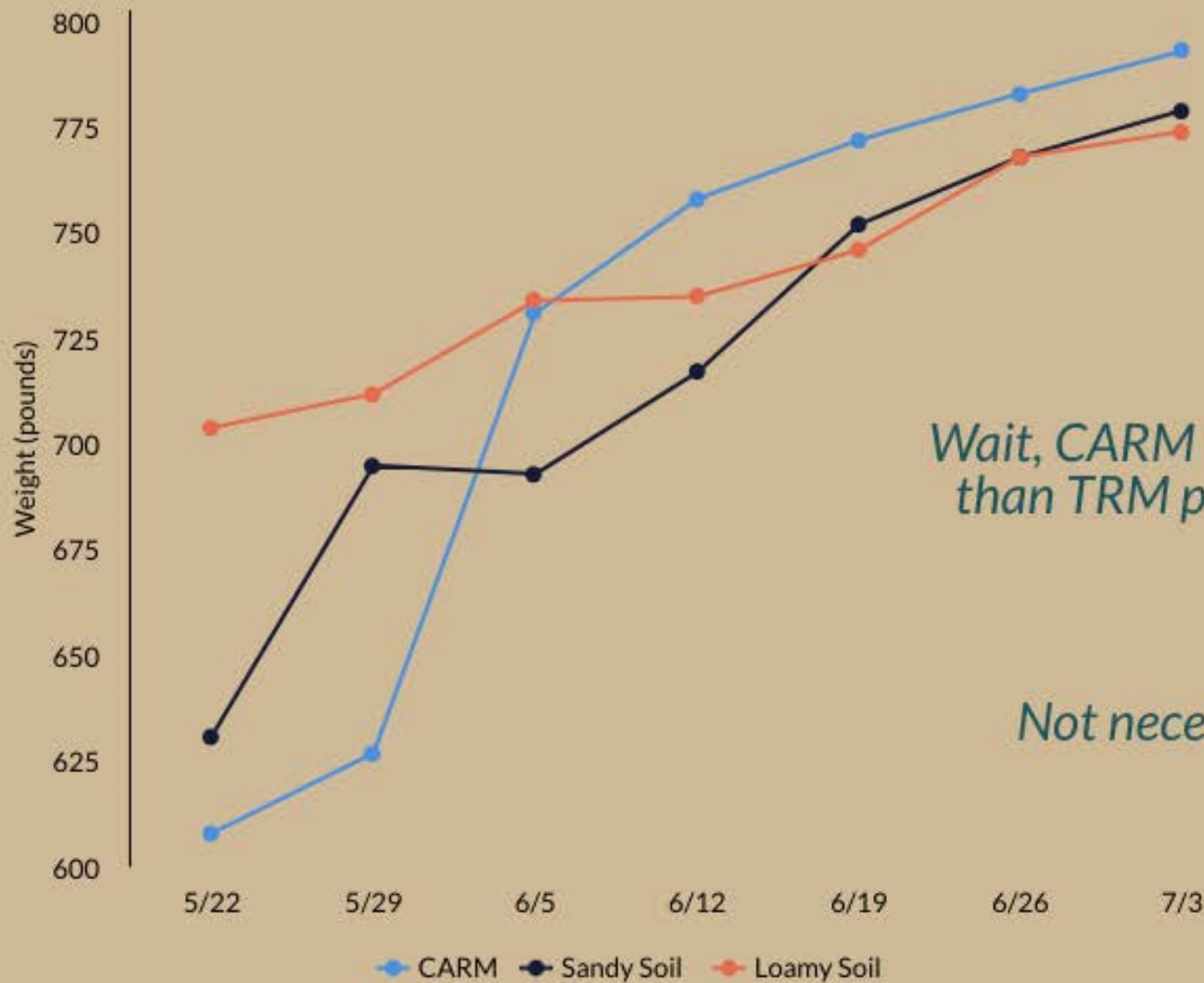
Crude Protein (%)







Walk-over Weigh Scale Data



Wait, CARM is heavier than TRM pastures?

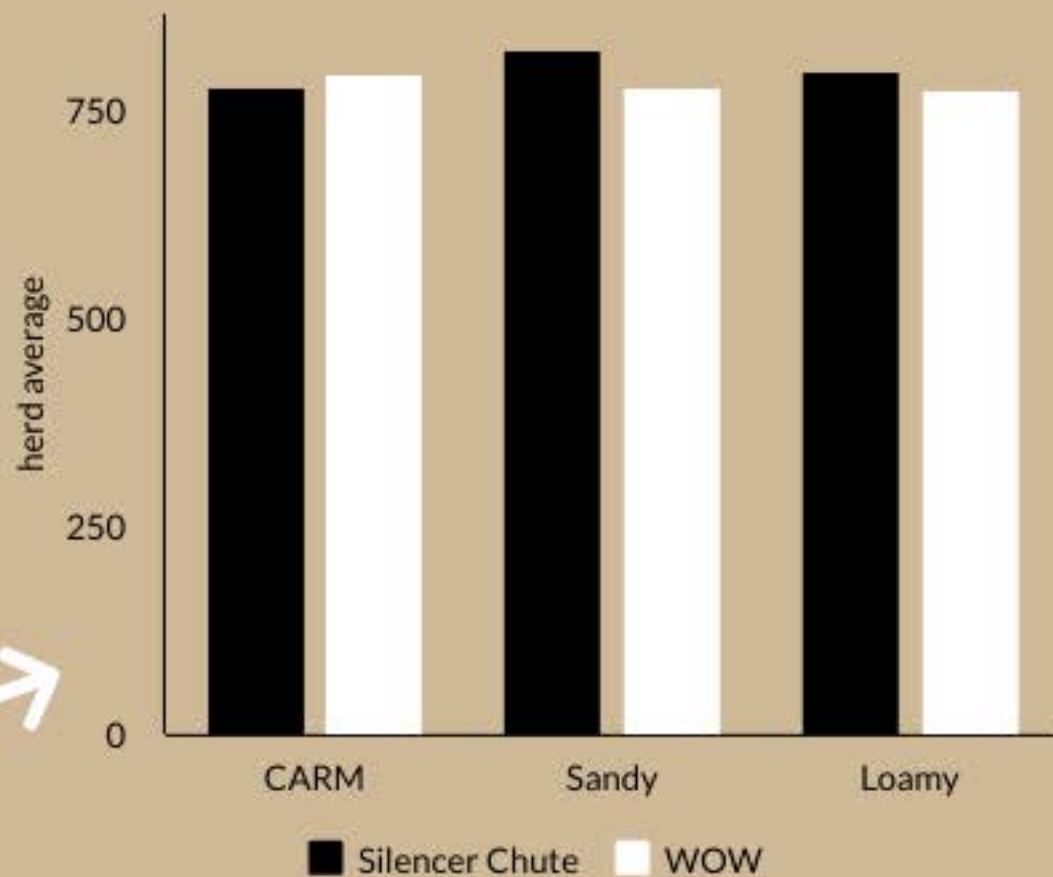
Not necessarily...

Remember!  
Not every pass across the scale produces a good read, therefore not every animal is accounted for every day.

However -  
The WOW trend may hold value.

Here are the two methods side by side.

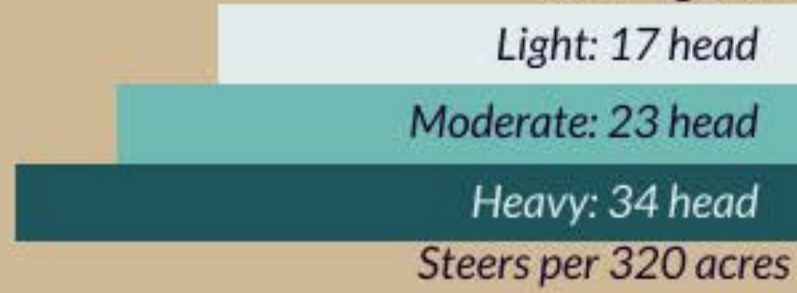
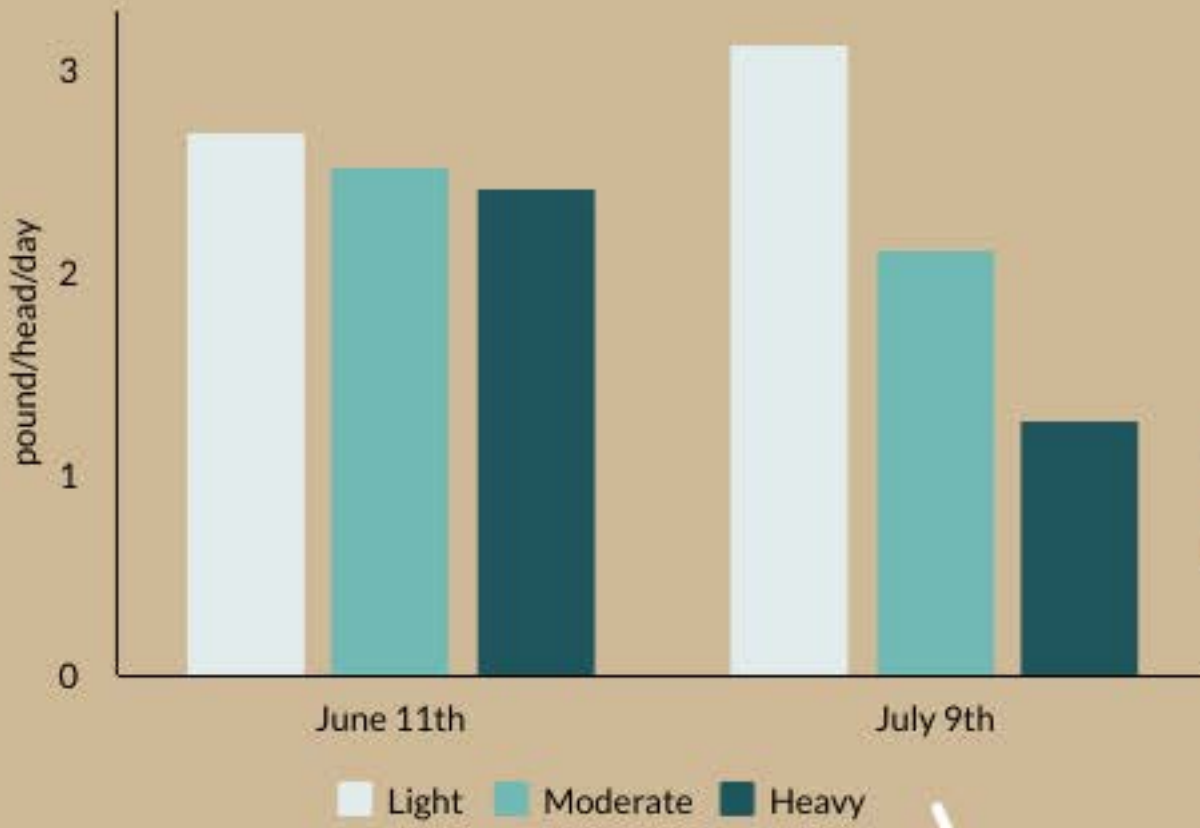
Scale Comparisons





# Average Daily Gains

## Average Daily Gains (28 Days)



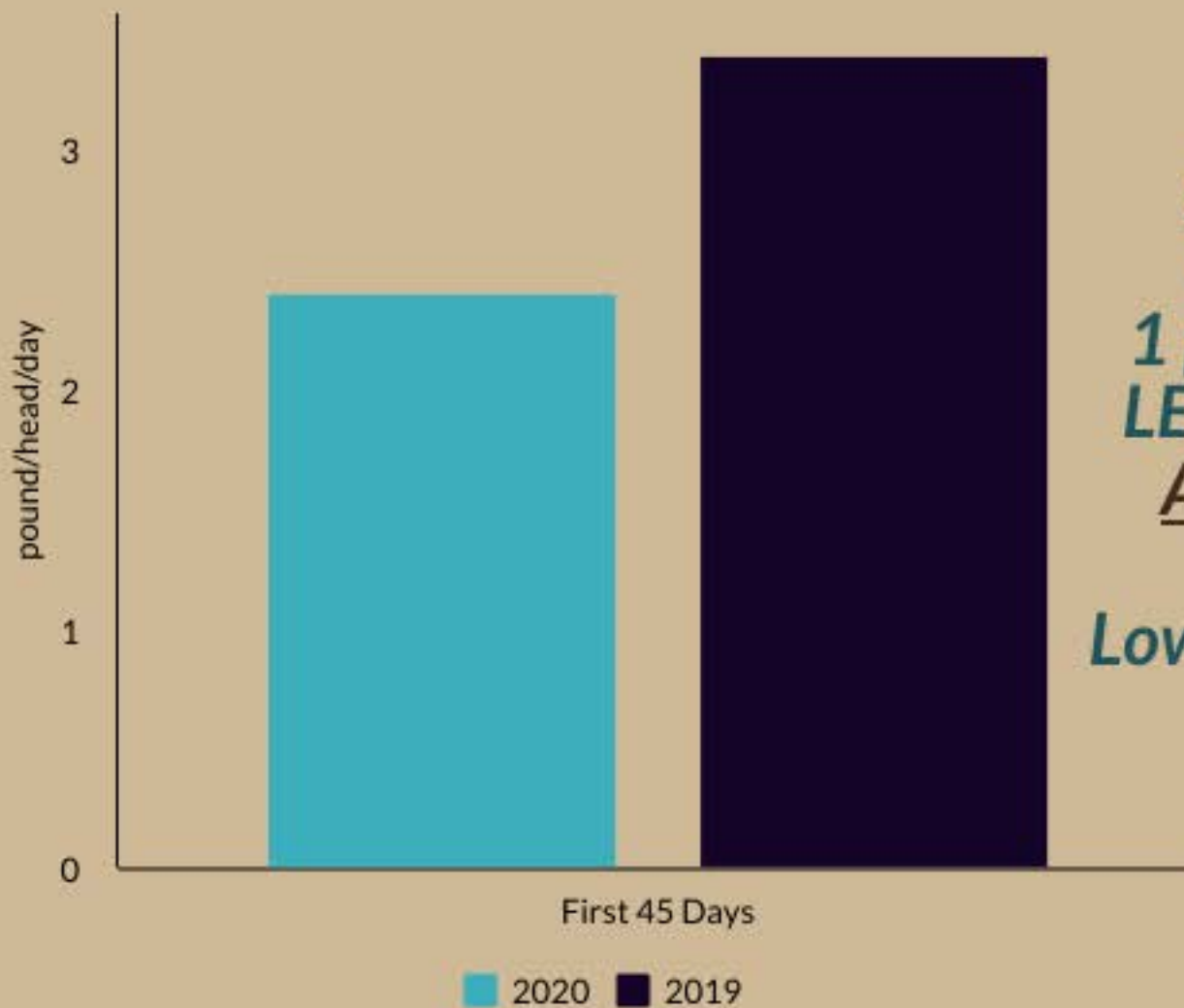
Note: If you recall the June update that had the Daily Gains, you'll remember the June 11th ADG is very different from this graph here. This graph has ADG calculated across 28-days (not two 14-day periods).

**Big change across stocking densities!**



*How is CARM standing up to the dry conditions?*

## CARM Average Daily Gains



**2020 CARM is gaining about 1 pound/head/day LESS than in 2019. As are ALL other treatments. Low grass, Low gains.**





# Decision Recap

Stakeholders voted on some big changes this April!

Rotation 4:  
 Start Date: August 10  
 Max Days: 42  
 VOR trigger: same  
 CARM1 in Highway and CARM2 in Hilltank  
 This should not negatively impact Fourwing saltbush.  
 It should help reach shortgrass goals in Hilltank.

Pasture	What we wanted to happen	What actually happened			
	Notes from April	Date In	Date Out	Trigger Used	Notes
1) Snowfence & Saltflat	Gates open between, Shoot for 21-24 days, measure VOR separate & use average to gauge veg trigger, cattle gains, 5/15 - 6/8	15-May	4-Jun	Max Days	
2) Saltflat & Elm	Gates open between, Shoot for 21-24 days, measure VOR separate & use average to gauge veg trigger, cattle gains, 6/8 - 6/29	4-Jun	18-Jun	VOR Threshold	Left almost two weeks earlier than planned.
3.1) Crossroads	Reduce VO for MCLO (< 5cm) 6/29-8/10	18-Jun	1-Jul	VOR Threshold	
3.2) South	Reduce VO for MCLO (< 5cm) 6/29-8/10	18-Jun	1-Jul	VOR Threshold	
4.1) Highway	Reduce VO for MCLO (< 5cm) 8/10 - 9/21	1-Jul			
4.2) Hilltank	MCLO 8/10 - 9/21	1-Jul			
5.1) Nighthawk	9/21 - end of easeon				
5.2) Ridgeline	9/21 - end of easeon				
6) Headquarters	Rest				



Desktop  
Field View



## Up & Coming

- Virtual Pasture Tour - July 30th
- CARM Data Day - Same day as the Virtual Tour!

On behalf of the USDA-ARS  
Rangeland Resources & Systems Research Unit,  
I thank you all  
for your continued participation  
in this project.

Happy Trails!



For detailed precipitation  
data, maps, last year's  
updates, Scientist bios, and  
CARM documents, see our  
website:



ALL access data!