

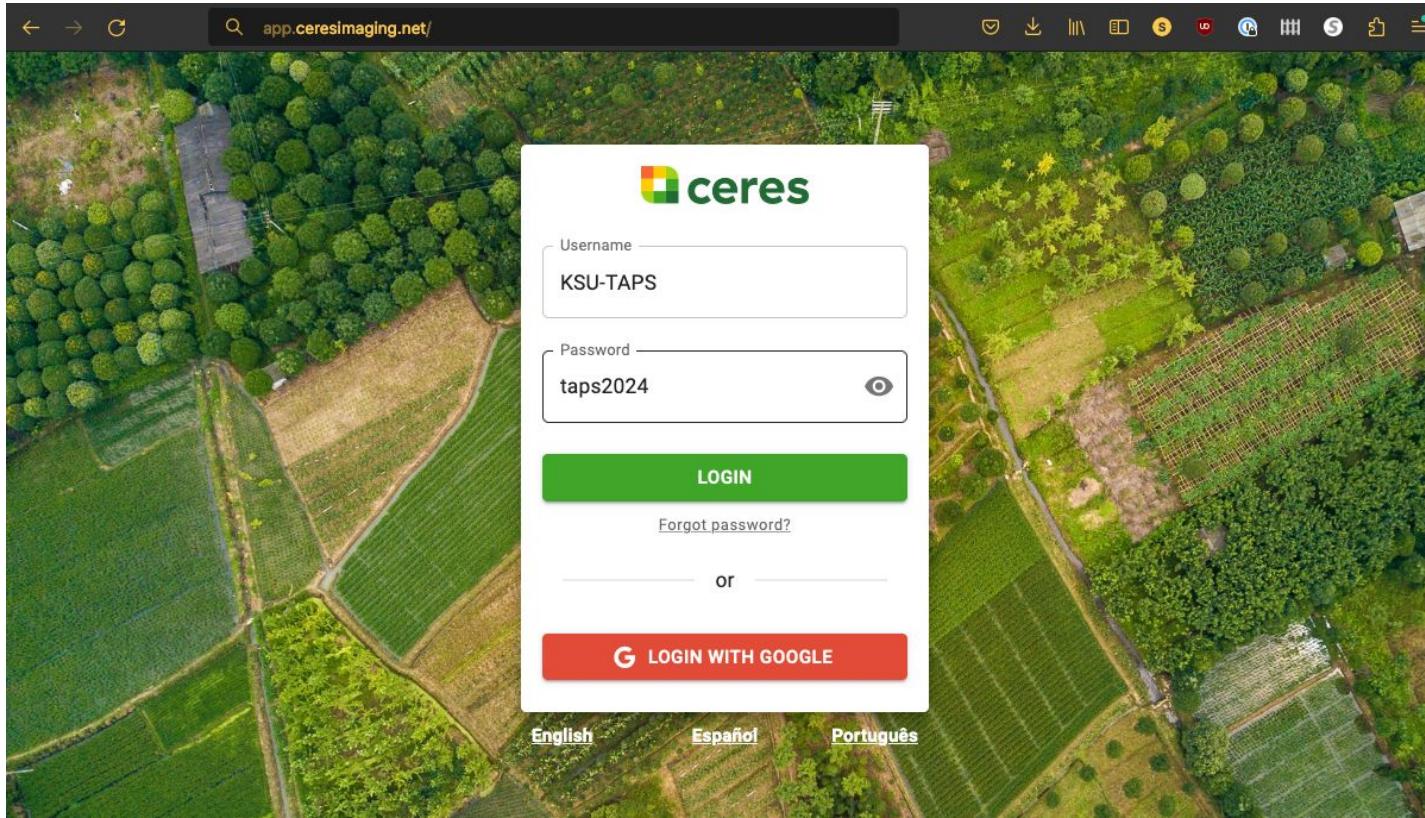
# Ceres Imaging

## 2024 KSU-TAPS Summaries



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Senior Scientist @ Ceres  
[sbratschun@ceresimaging.net](mailto:sbratschun@ceresimaging.net)

# Access Ceres from: <https://app.ceresimaging.net/>

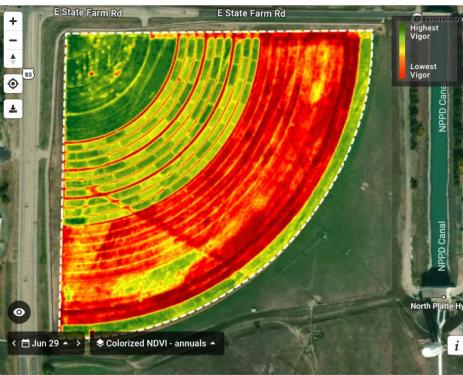


# Ceres Imagery - image types



## RGB

Best for: getting familiar with imagery



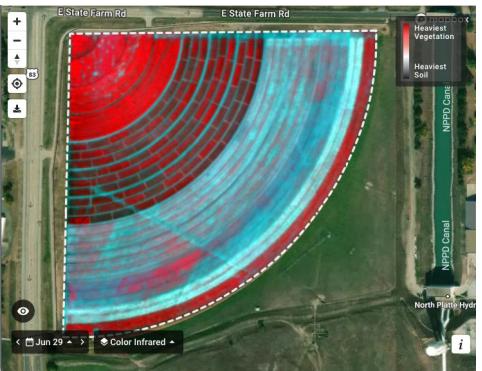
## NDVI

Best for: biomass, vigor, crop development



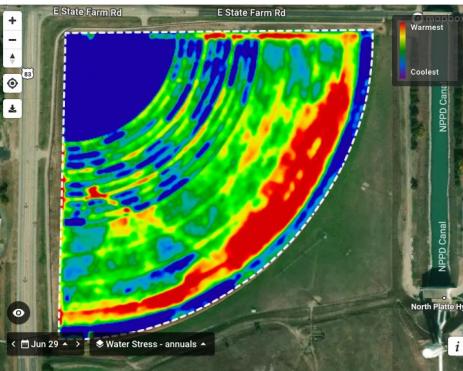
## Chlorophyll Index

Best for: nitrogen management, disease pressure



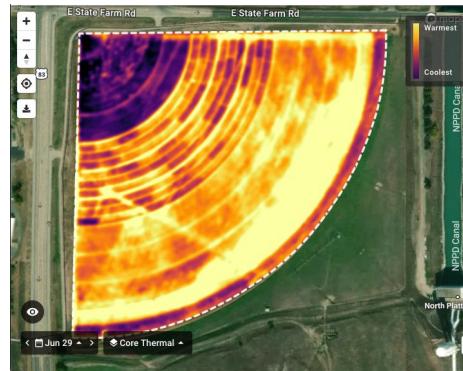
## Color Infrared

Best for: emergence, canopy coverage, soil texture



## Water Stress

Best for: irrigation management

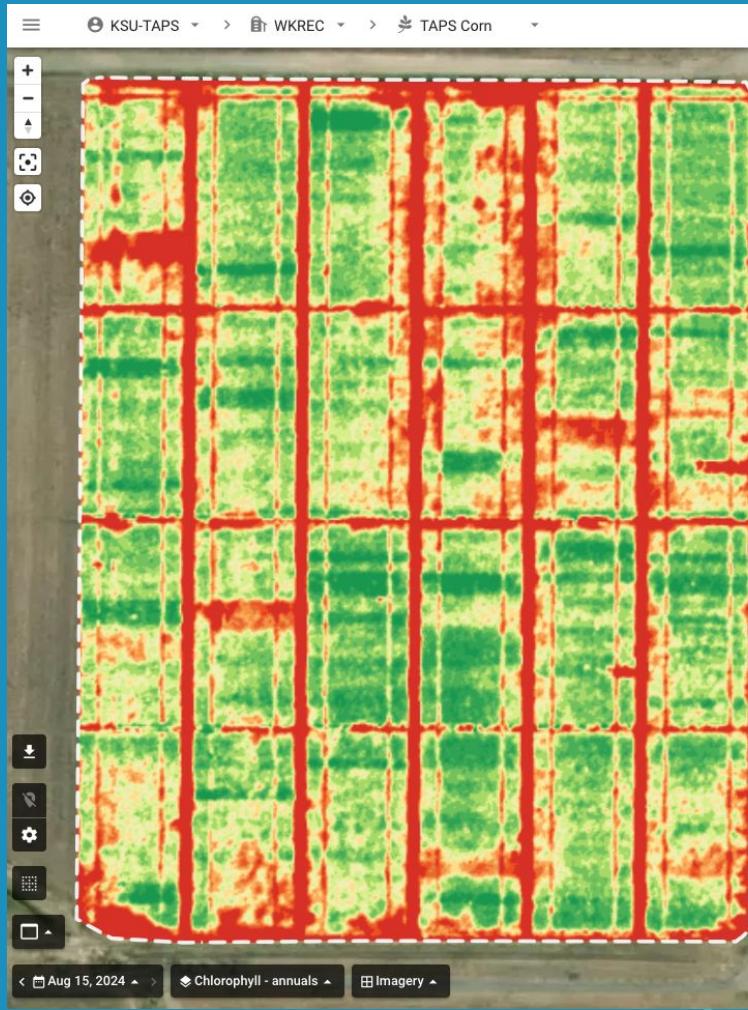


## Thermal

Best for: irrigation leaks, canopy coverage

# Flight #5

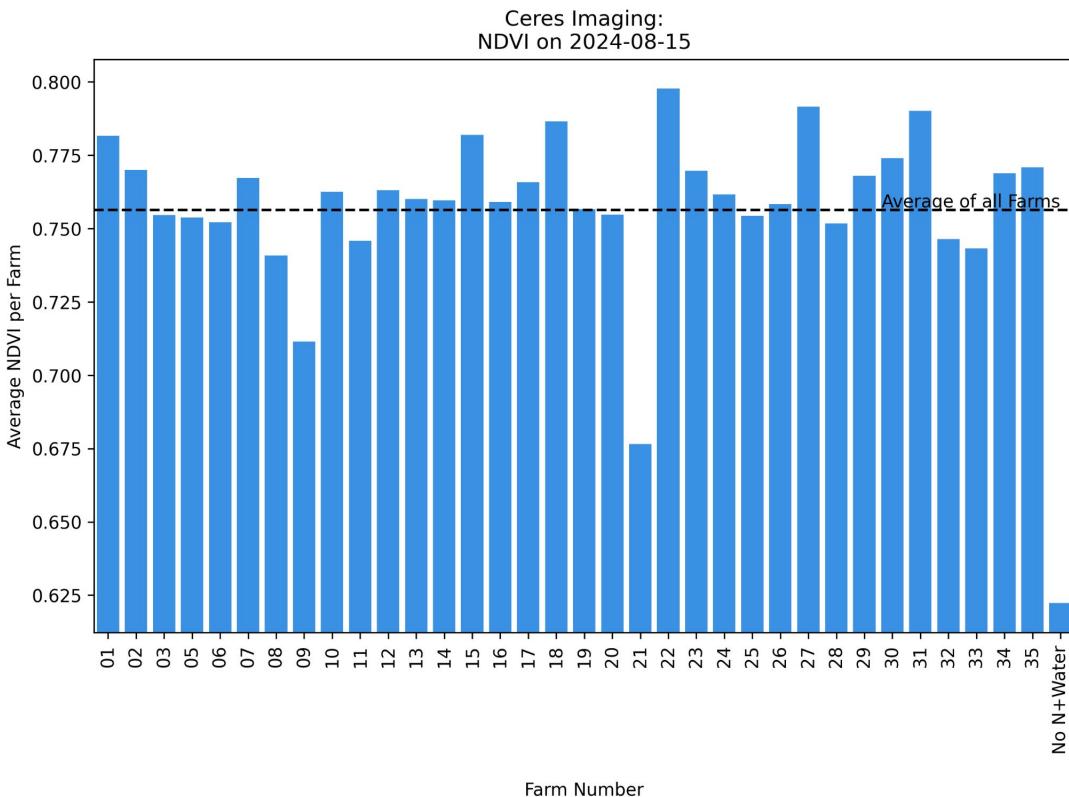
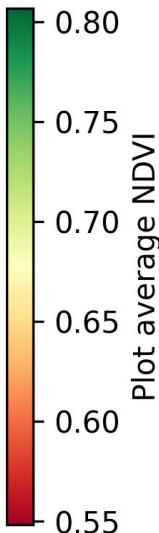
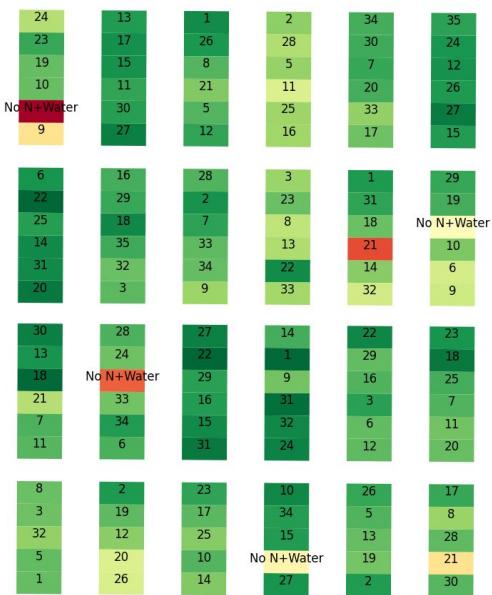
## Aug 15, 2024



# NDVI Map

## Sprinkler Corn Competition

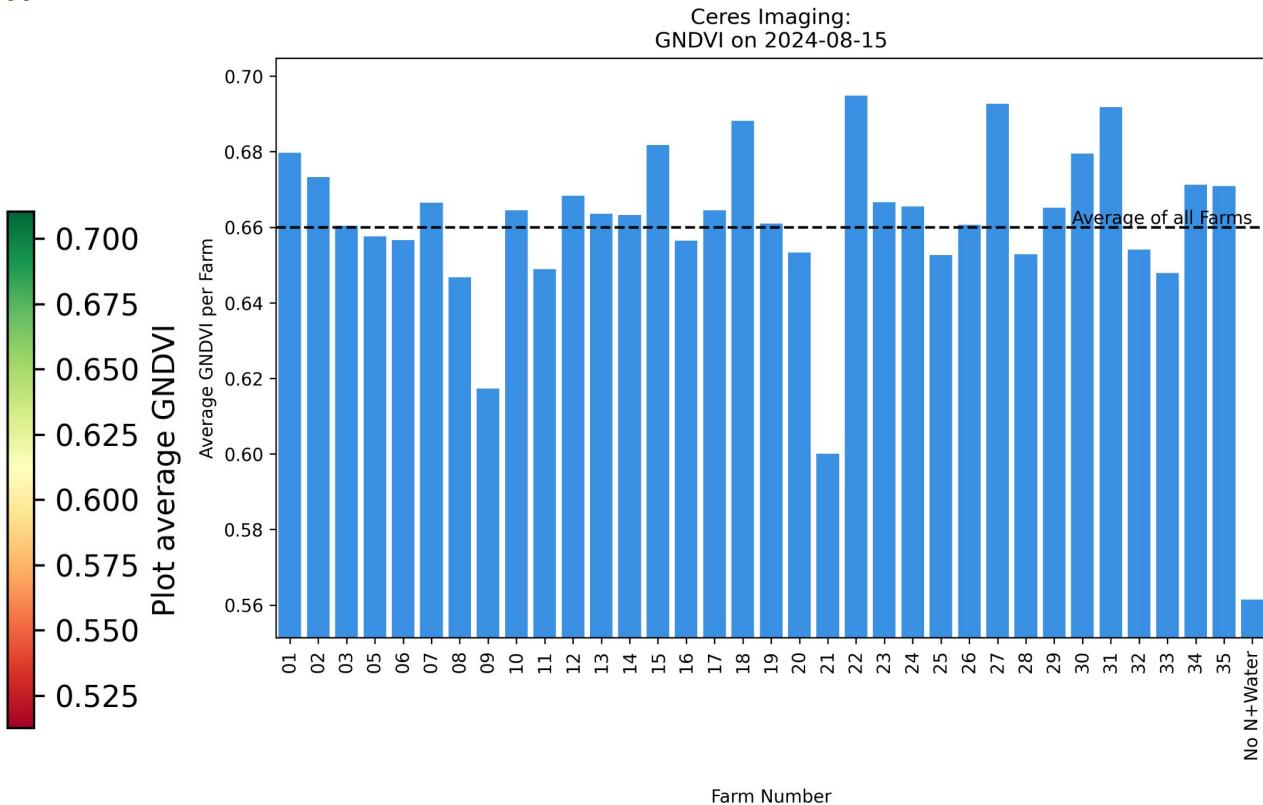
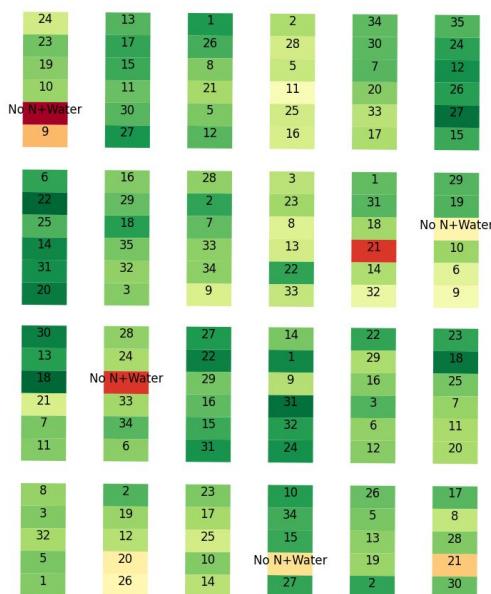
Ceres Imaging:  
NDVI on 2024-08-15



# Green NDVI Map

## Sprinkler Corn Competition

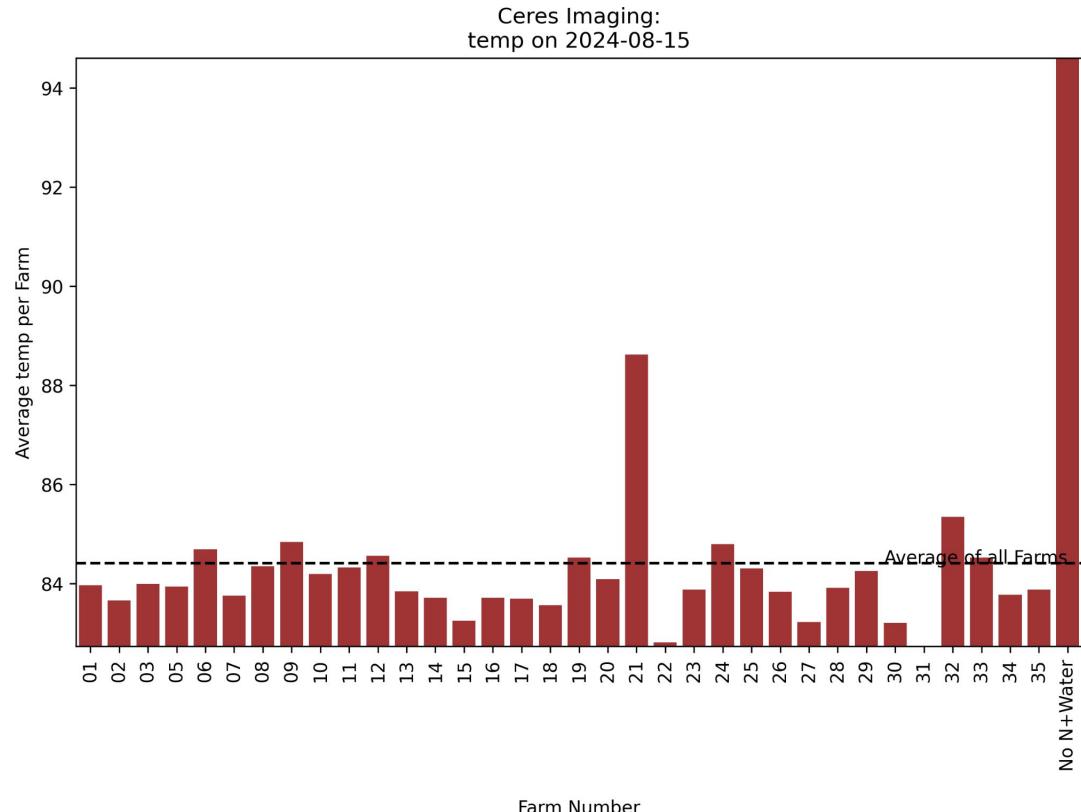
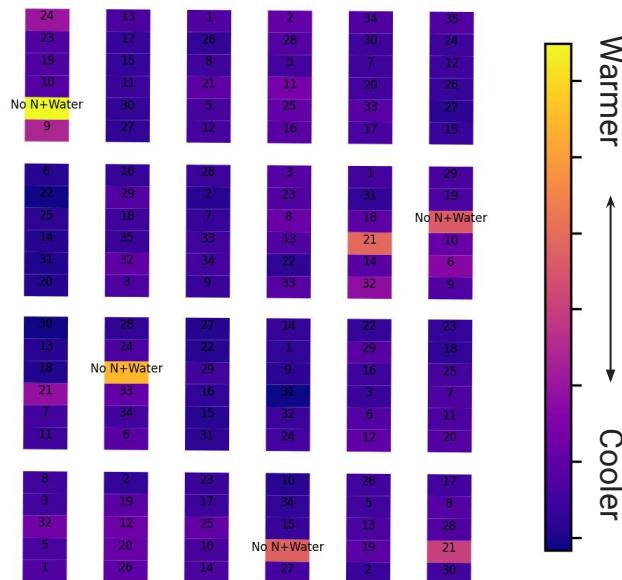
Ceres Imaging:  
GNDVI on 2024-08-15



# Temperature Map

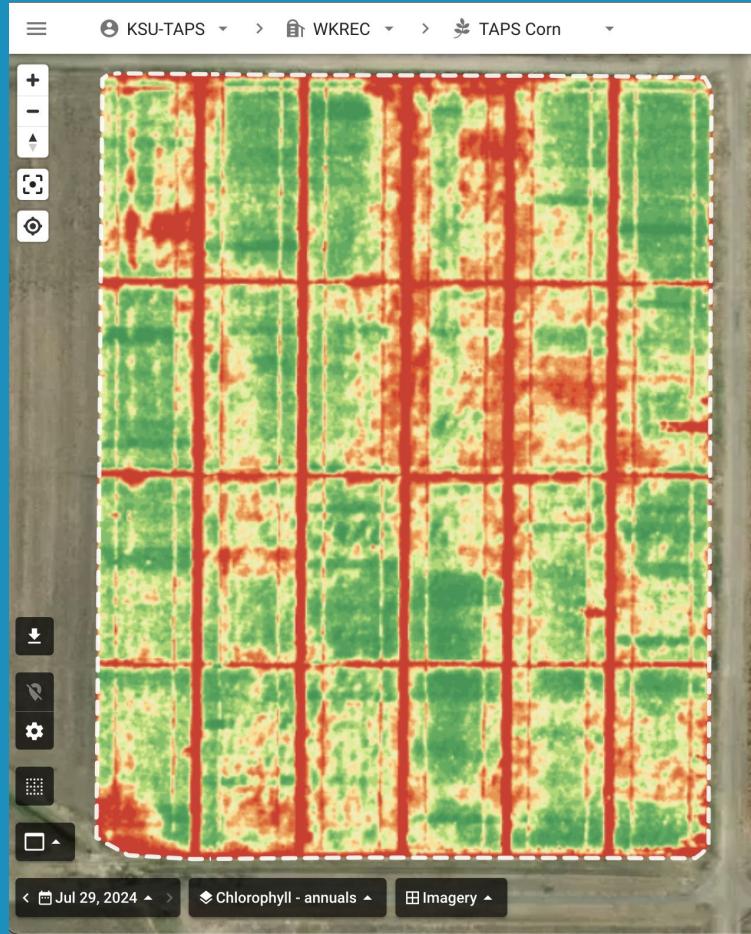
## KSU-TAPS Corn Competition

Ceres Imaging:  
Temperature on 2024-08-15



# Flight #4

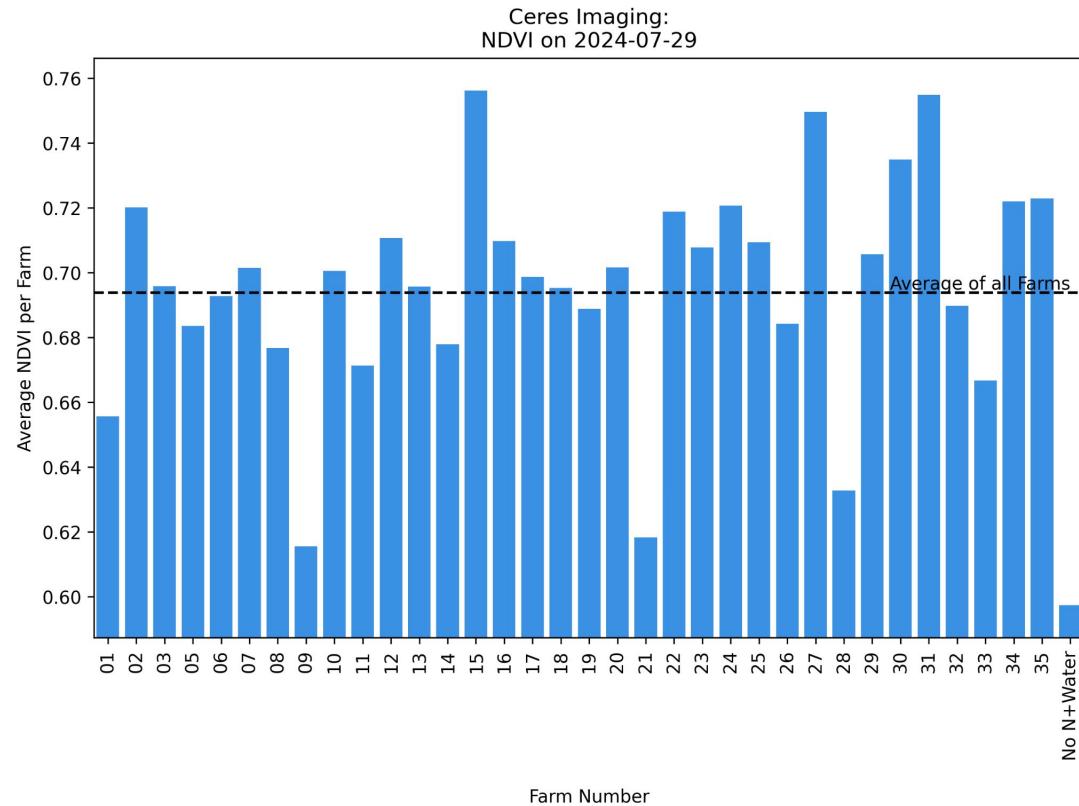
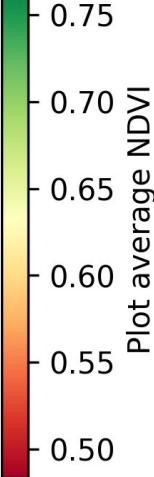
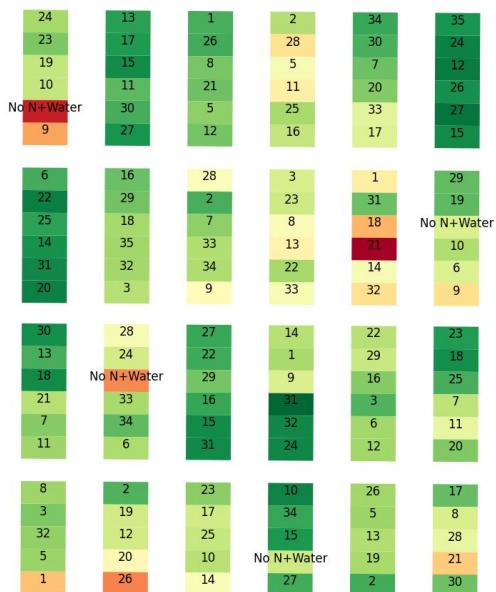
## July 29, 2024



# NDVI Map

## Sprinkler Corn Competition

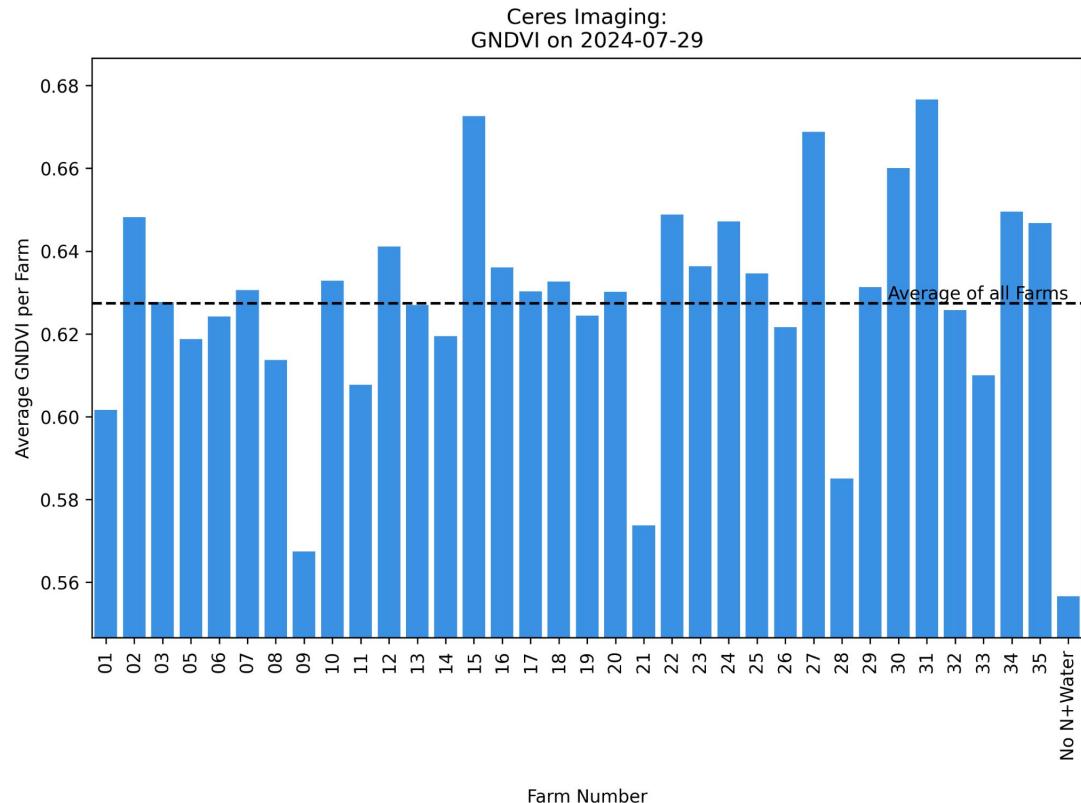
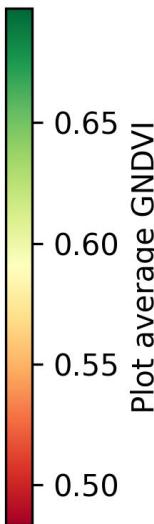
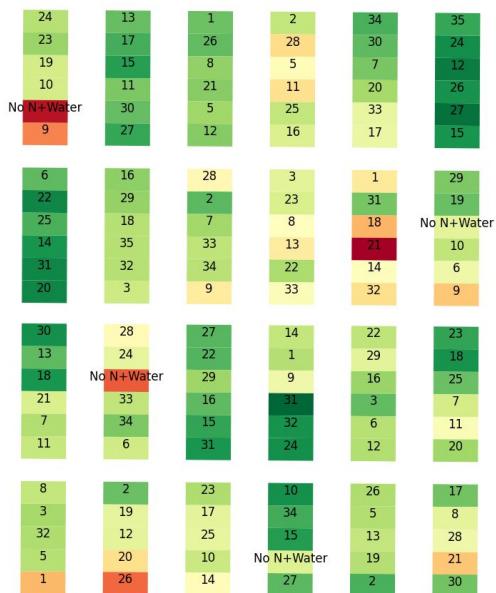
Ceres Imaging:  
NDVI on 2024-07-29



# Green NDVI Map

## Sprinkler Corn Competition

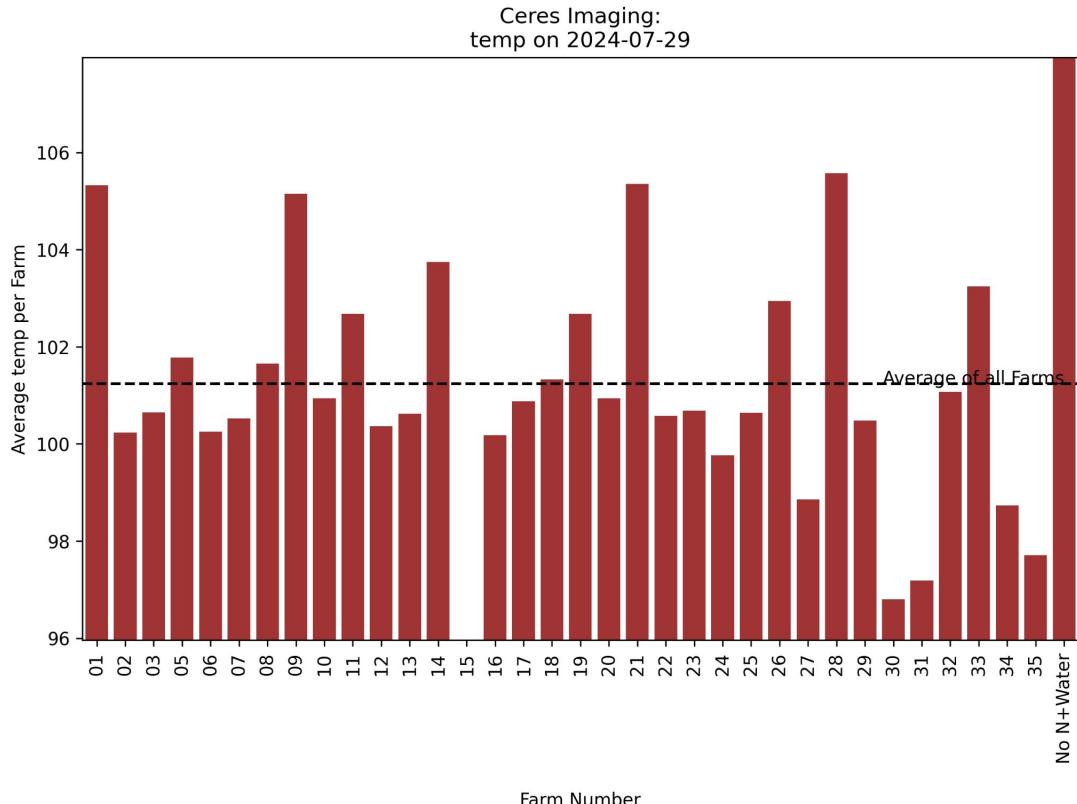
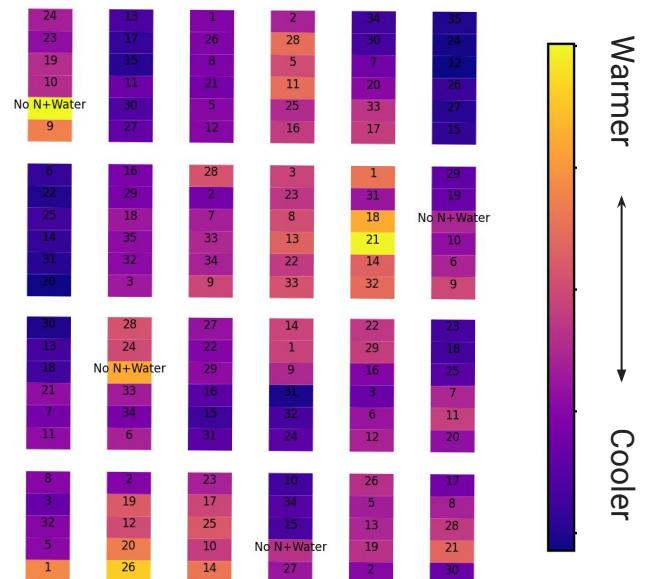
Ceres Imaging:  
GNDVI on 2024-07-29



# Temperature Map

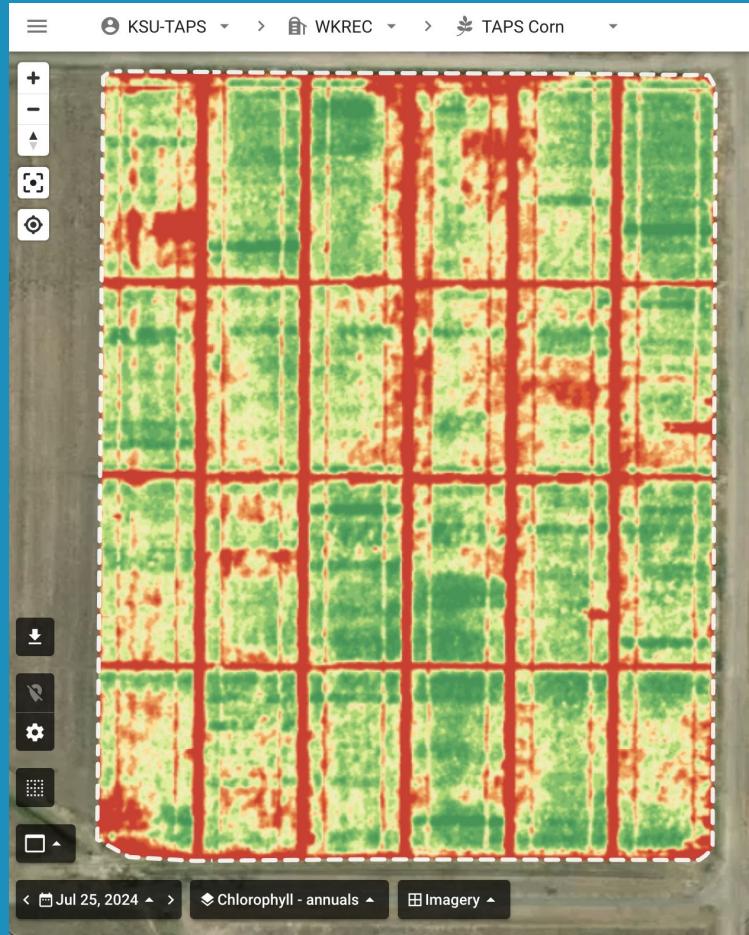
## KSU-TAPS Corn Competition

Ceres Imaging:  
Temperature on 2024-07-29



# Flight #3

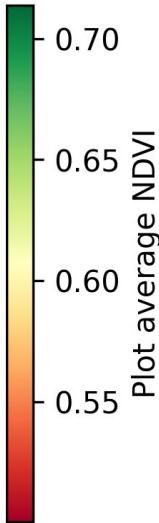
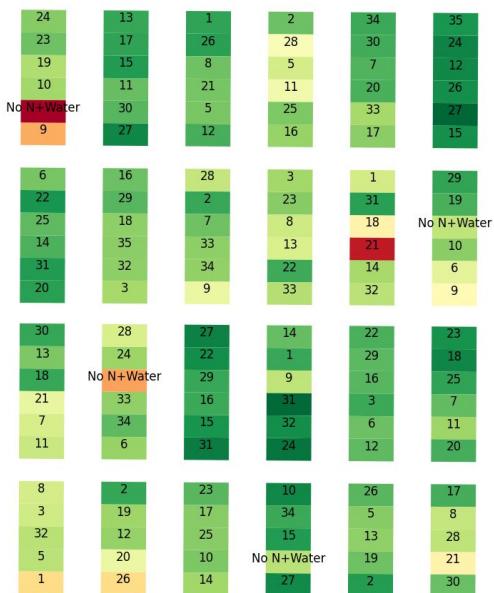
## July 25, 2024



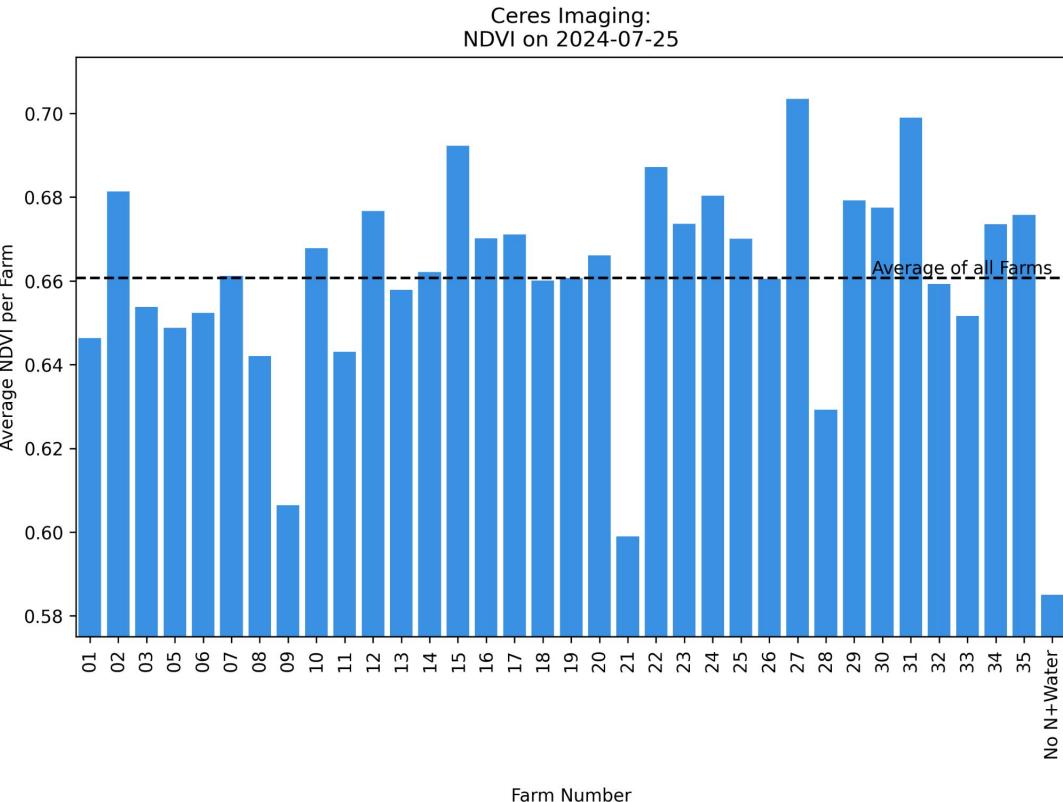
# NDVI Map

## Sprinkler Corn Competition

Ceres Imaging:  
NDVI on 2024-07-25



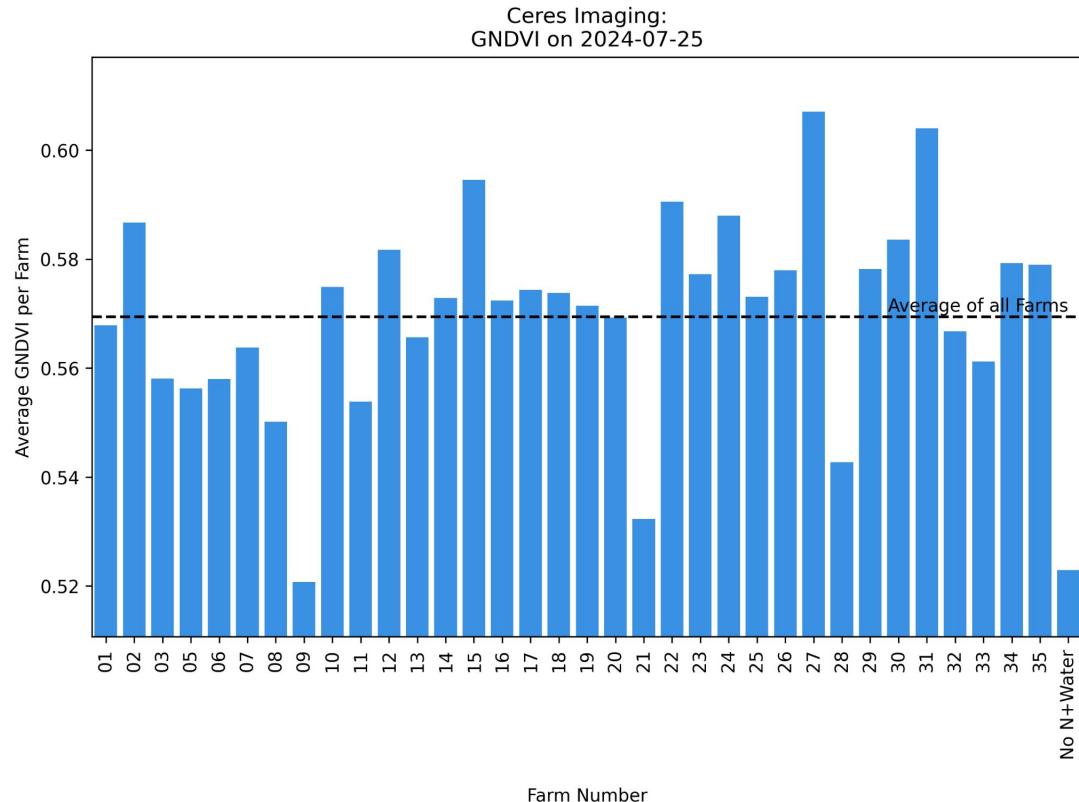
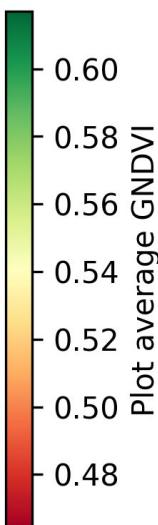
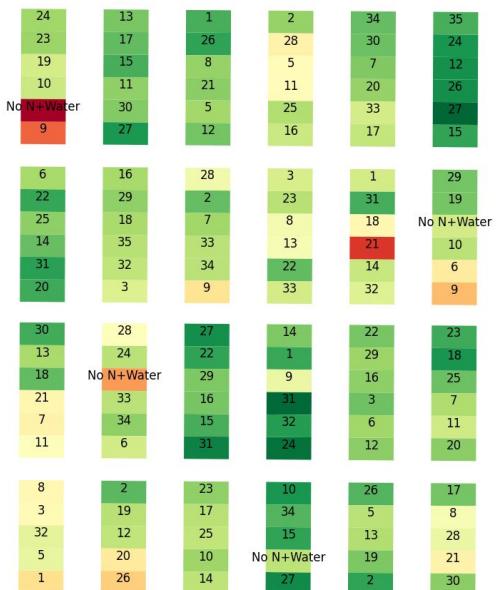
Plot average NDVI



# Green NDVI Map

## Sprinkler Corn Competition

Ceres Imaging:  
GNDVI on 2024-07-25

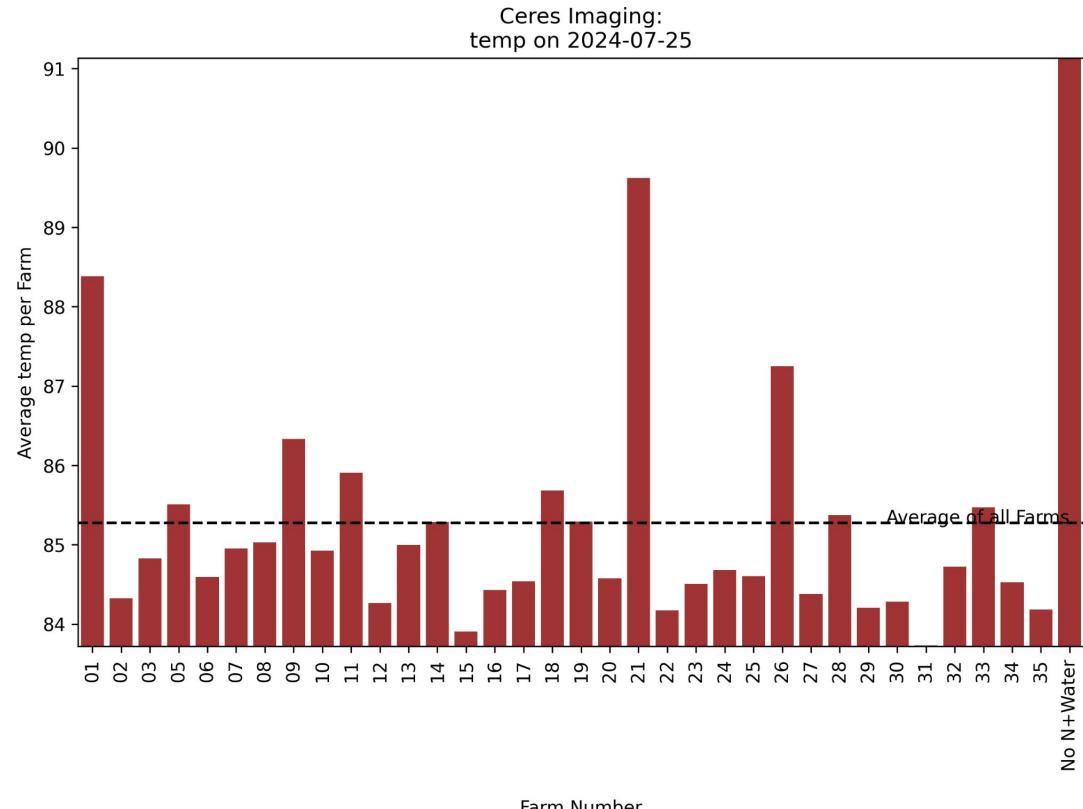
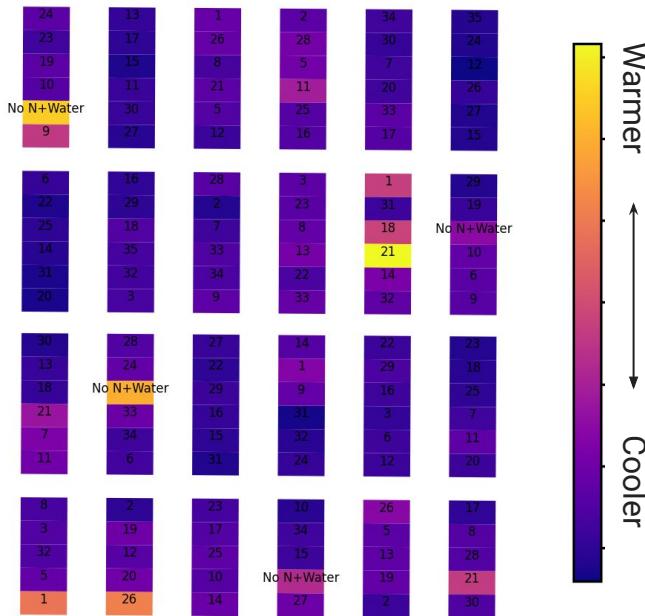


# Temperature Map

## KSU-TAPS Corn Competition

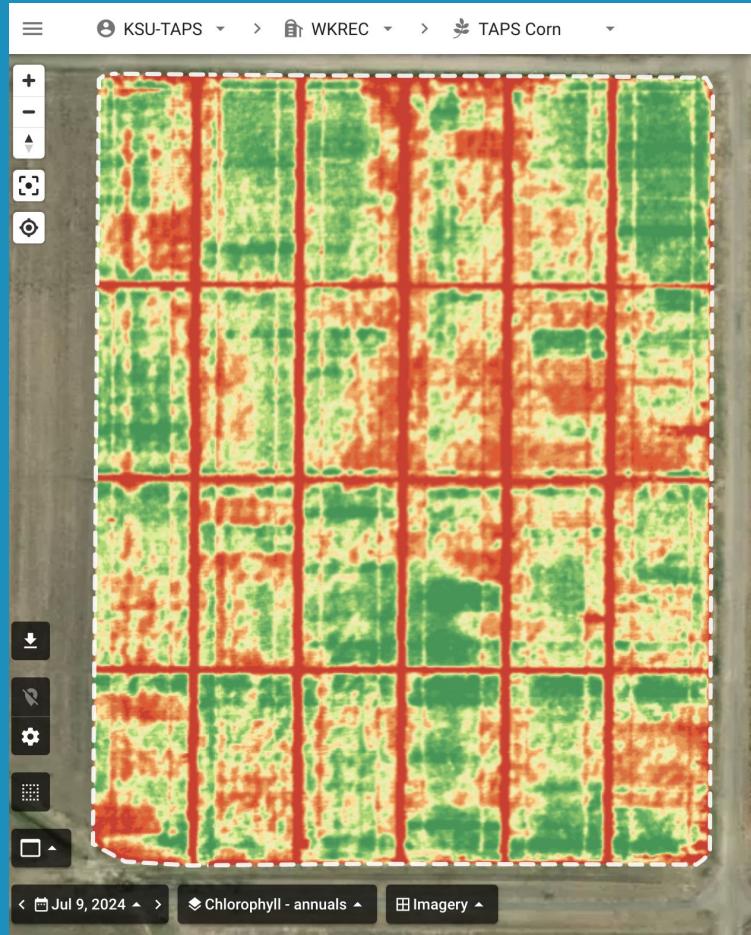
Ceres Imaging:

Temperature on 2024-07-25



# Flight #2

July 9, 2024

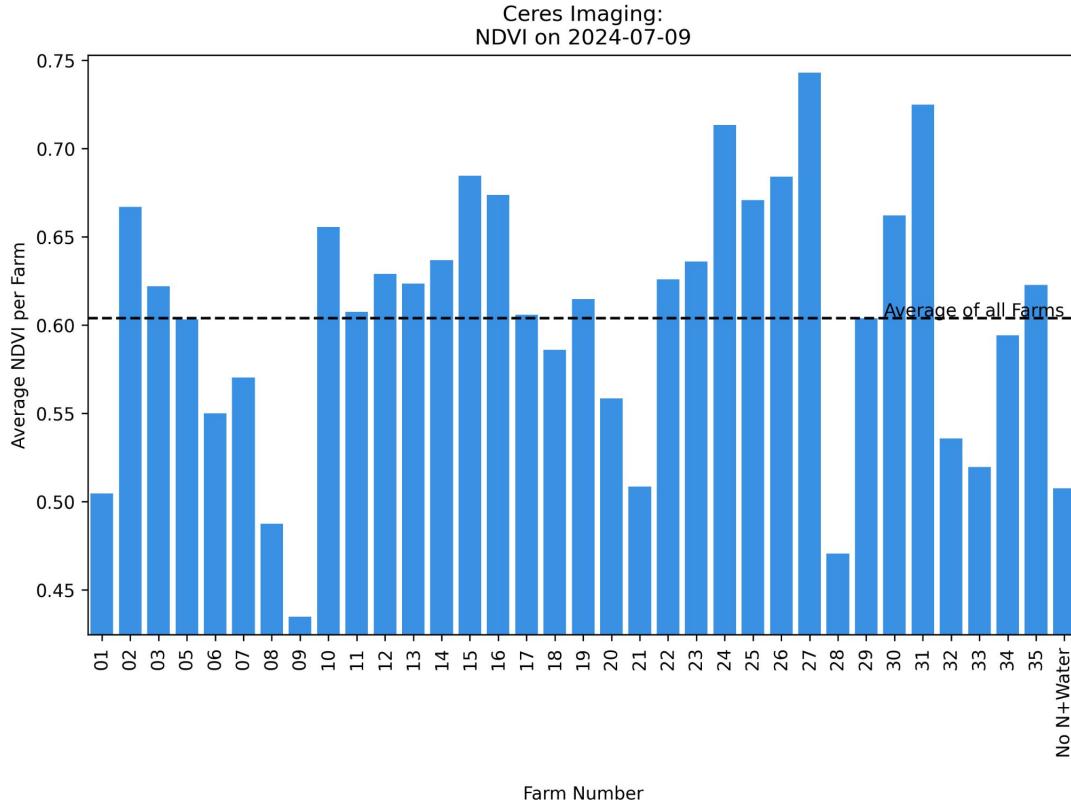
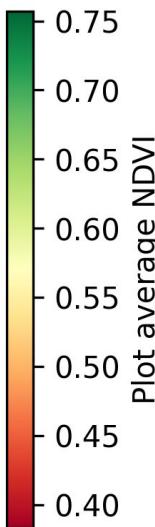
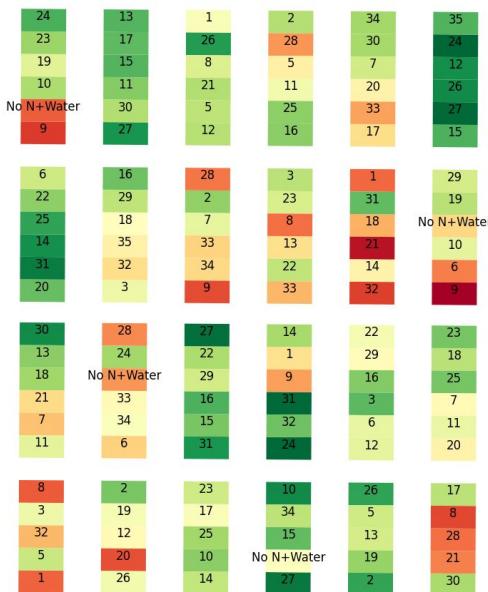


## Flight #2: July 9

# NDVI Map

## Sprinkler Corn Competition

Ceres Imaging:  
NDVI on 2024-07-09



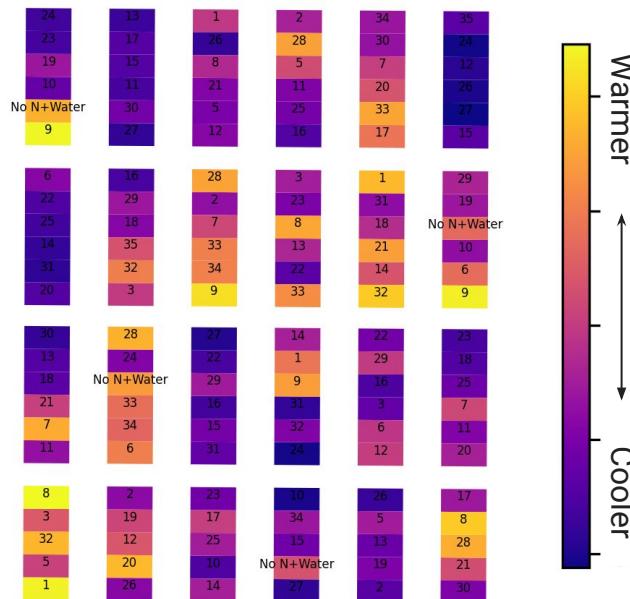
Average of all Farms

No N+Water

# Temperature Map

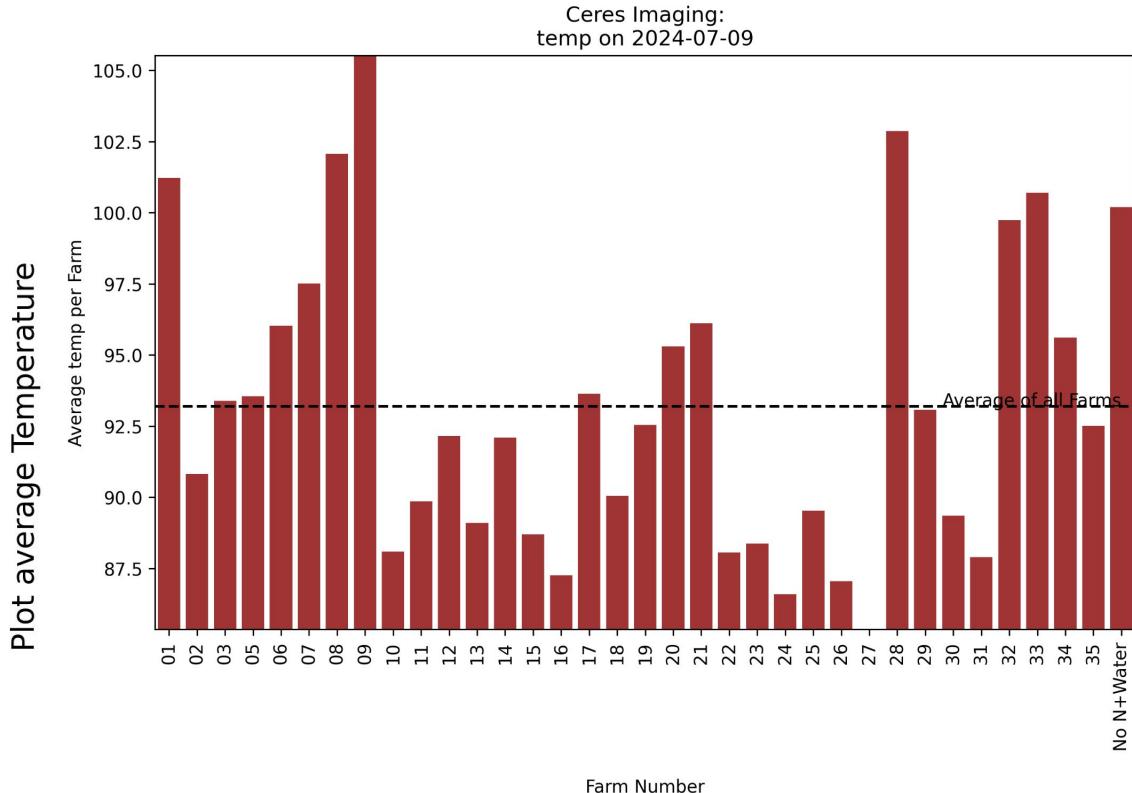
## KSU-TAPS Corn Competition

Ceres Imaging:  
Temperature on 2024-07-09



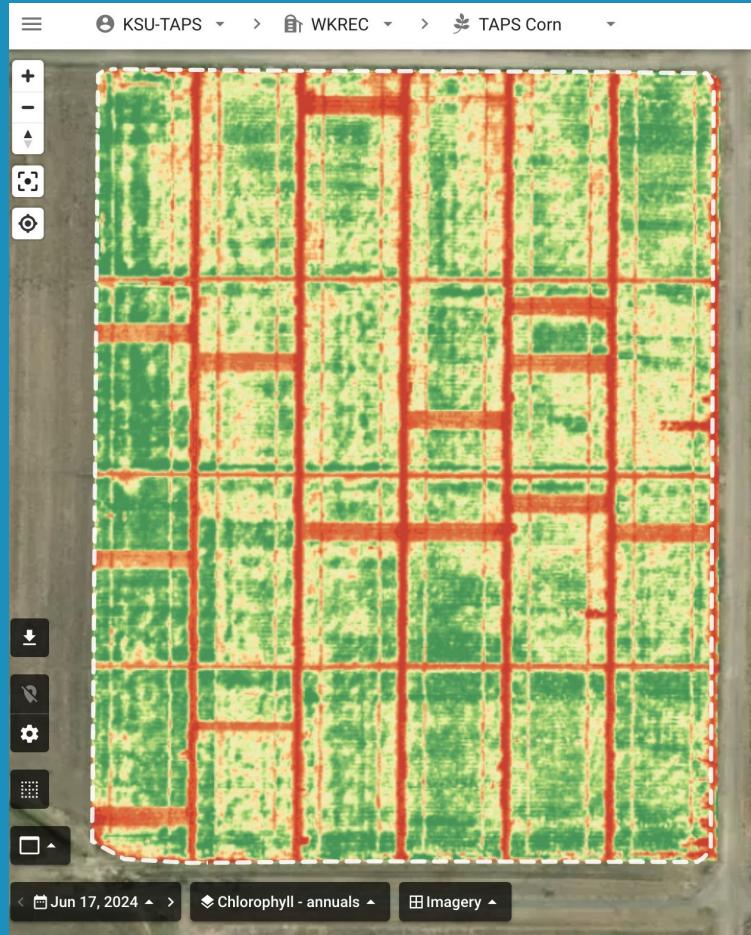
## Flight #2: July 9

Cooler temperatures are associated with better water use-efficiency (greater transpiration efficiency and stomatal conductance during photosynthesis). It can also be a sign of more vegetation, since bare soil is much hotter than vegetated soil.



# Flight #1

## June 17, 2024

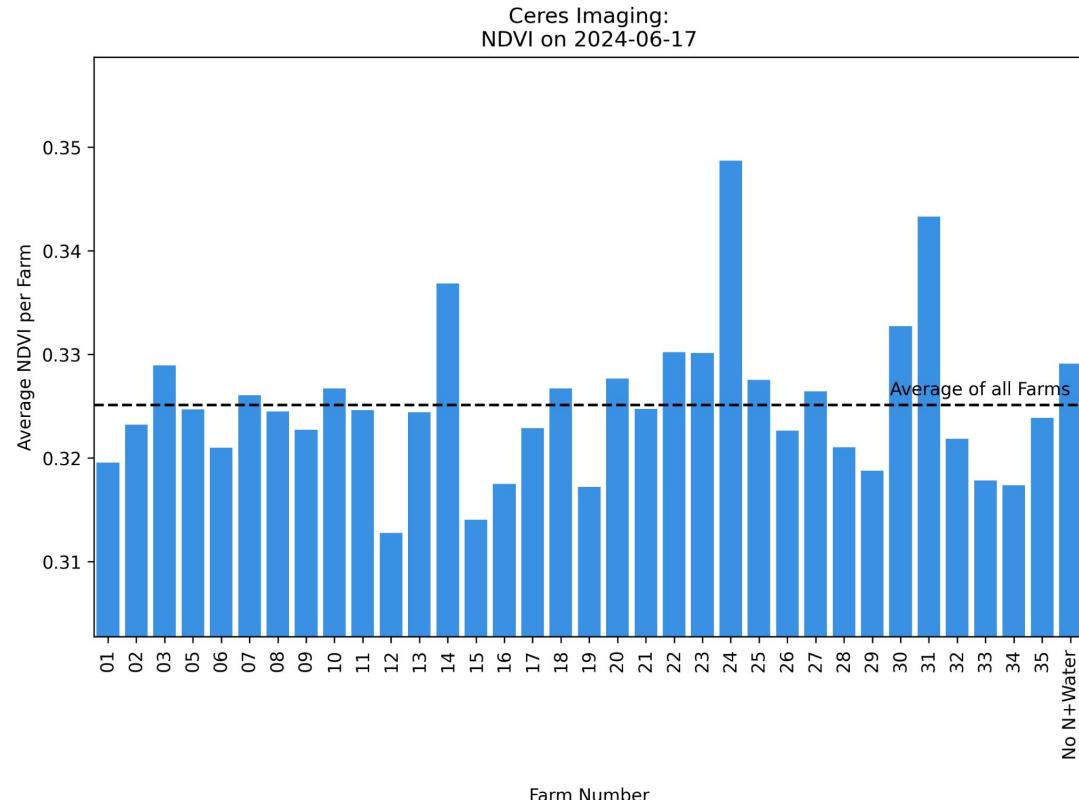
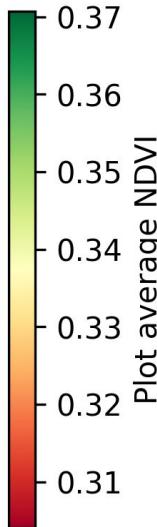
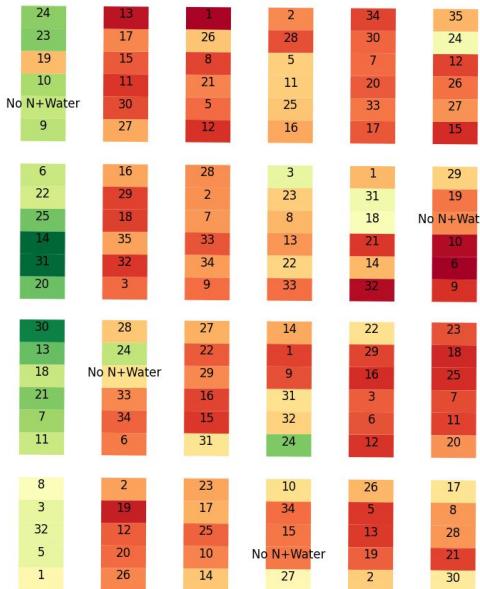


## Flight #1: June 17

# NDVI Map

## Sprinkler Corn Competition

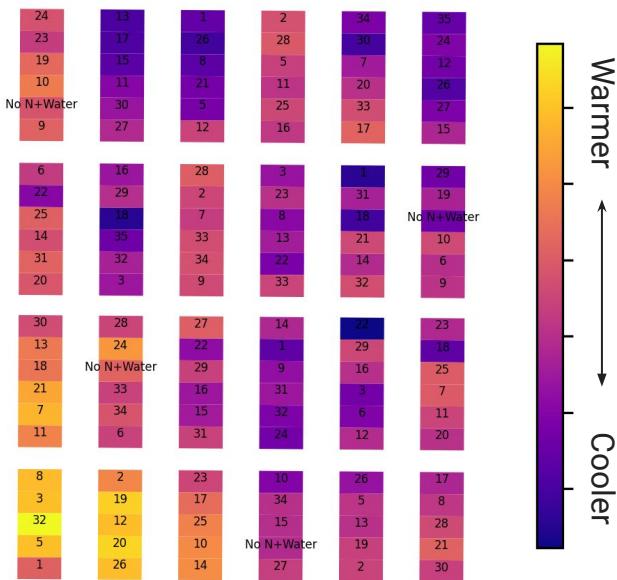
Ceres Imaging:  
NDVI on 2024-06-17



# Temperature Map

## KSU-TAPS Corn Competition

Ceres Imaging:  
Temperature on 2024-06-17



### Flight #1: June 17

Canopy temperatures are lower in areas with more vegetation, primarily due to transpiration (more vegetation = more gas exchange through stomata during photosynthesis) and shading (which reduces the amount of direct sunlight reaching the ground). Lower canopy temperatures are favorable.

