The background of the slide is a photograph of a rice field at sunset. The foreground shows several stalks of rice with golden-brown panicles. In the background, there are silhouettes of trees against a sky with orange, yellow, and blue hues from the setting sun.

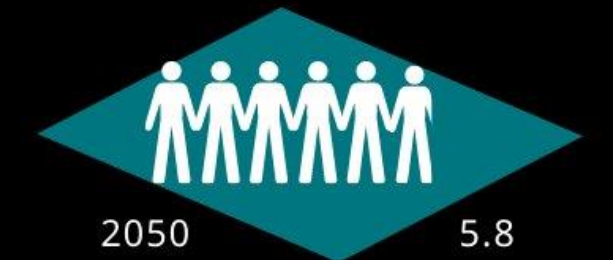
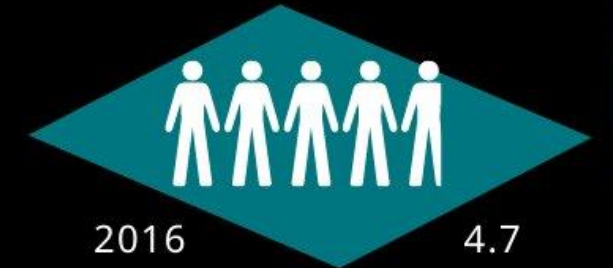
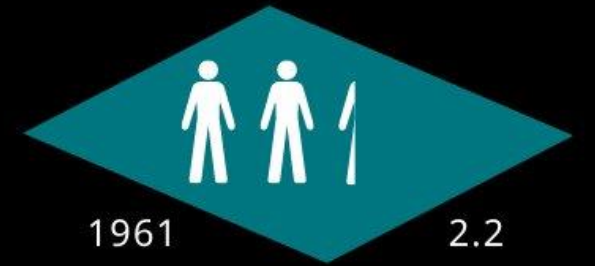
IREC R & D Update
Rice 2023

What have we learnt from 2023?

A Growing Challenge



With nearly 10 Billion people to feed by 2050,
the need to increase yield using
existing land and water
has never been greater
in human history

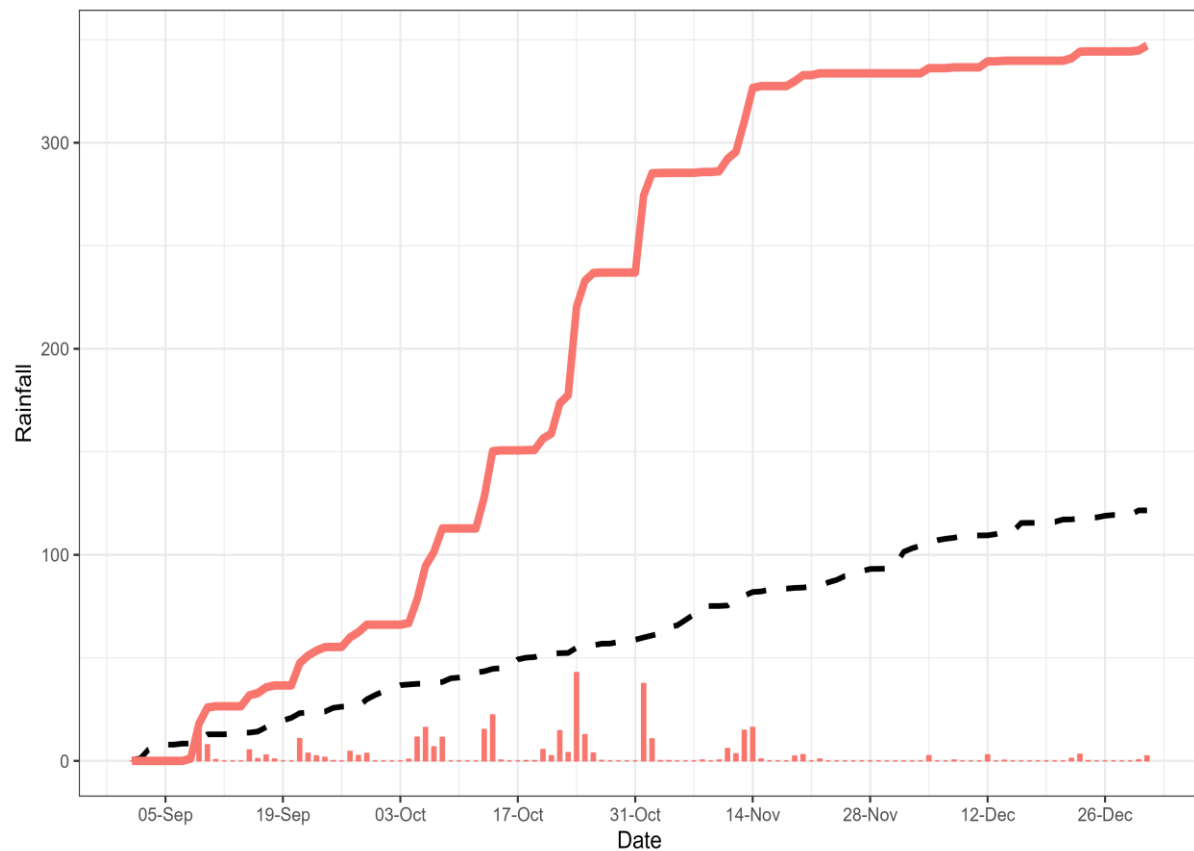


Persons to feed per hectare

Wet Spring



CY23 Cumulative Rainfall and Rain Events (Bars)
Plotted Against the Previous 10 Year Average (Black Line) - Benerembah

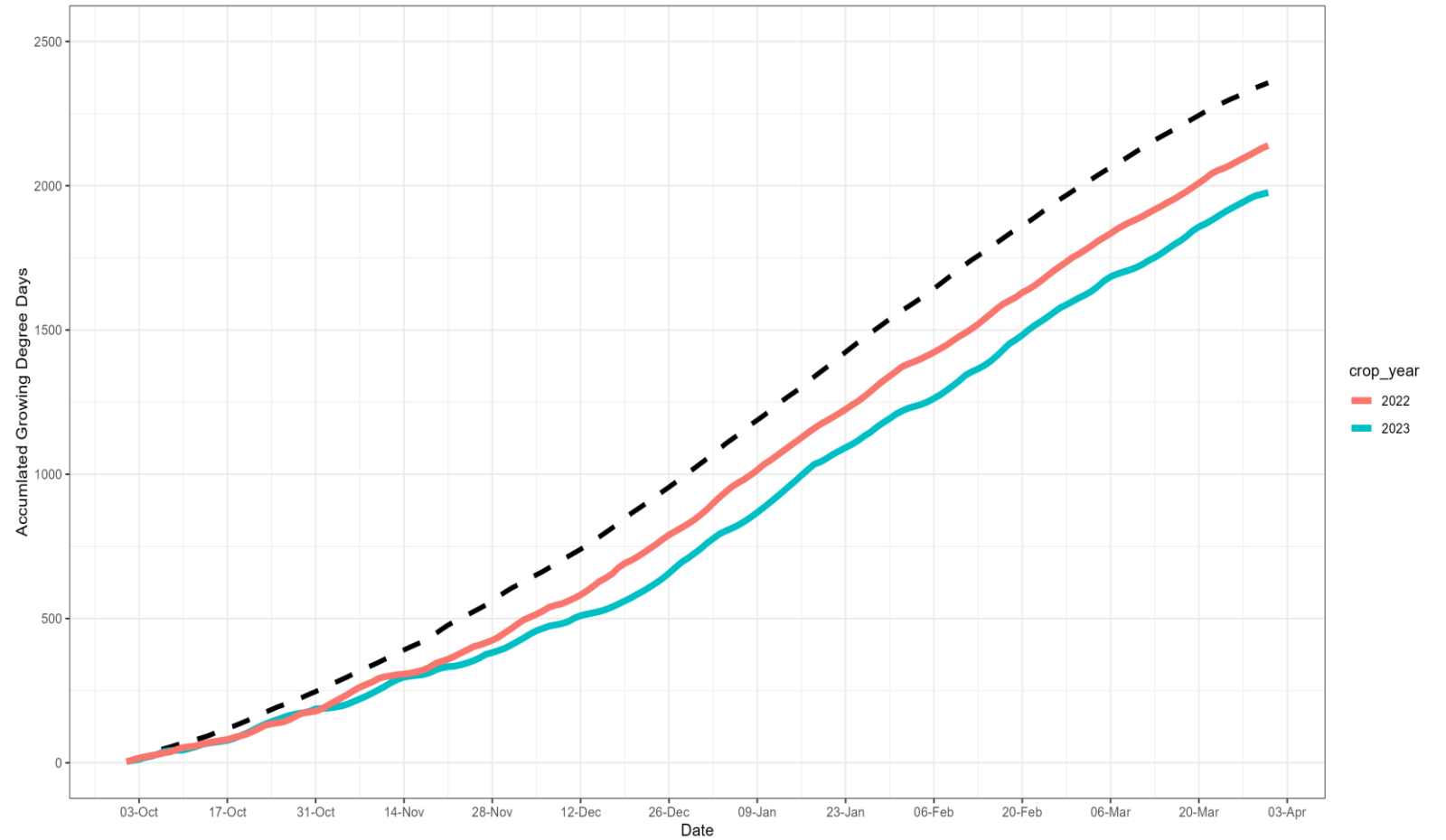


- 8% of crops planted within ideal planting window
- 20% planted extremely late - December



Cool Summer

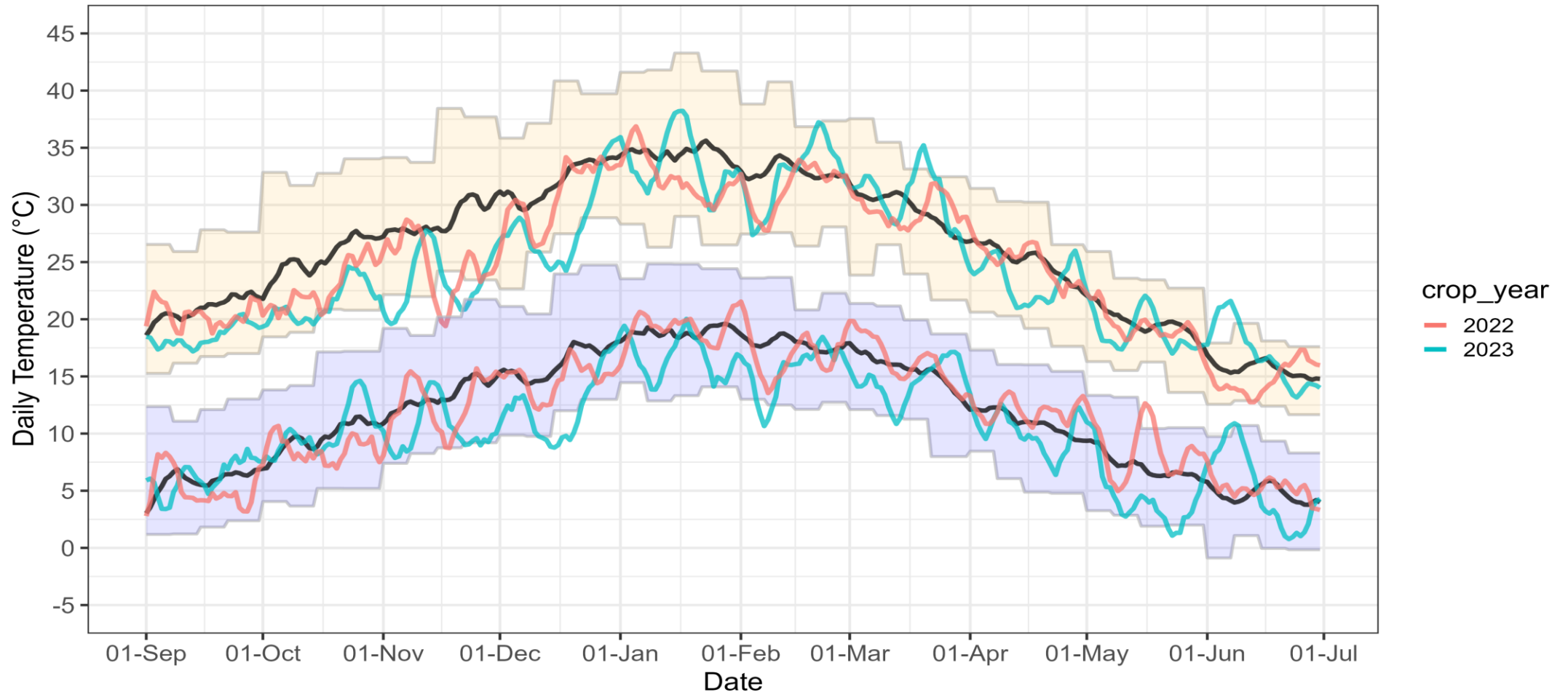
CY23 & CY22 - Accumulated Growing Degree Days
Plotted Against the Previous 10 Year Average (Black Line) - Griffith



Cool Summer



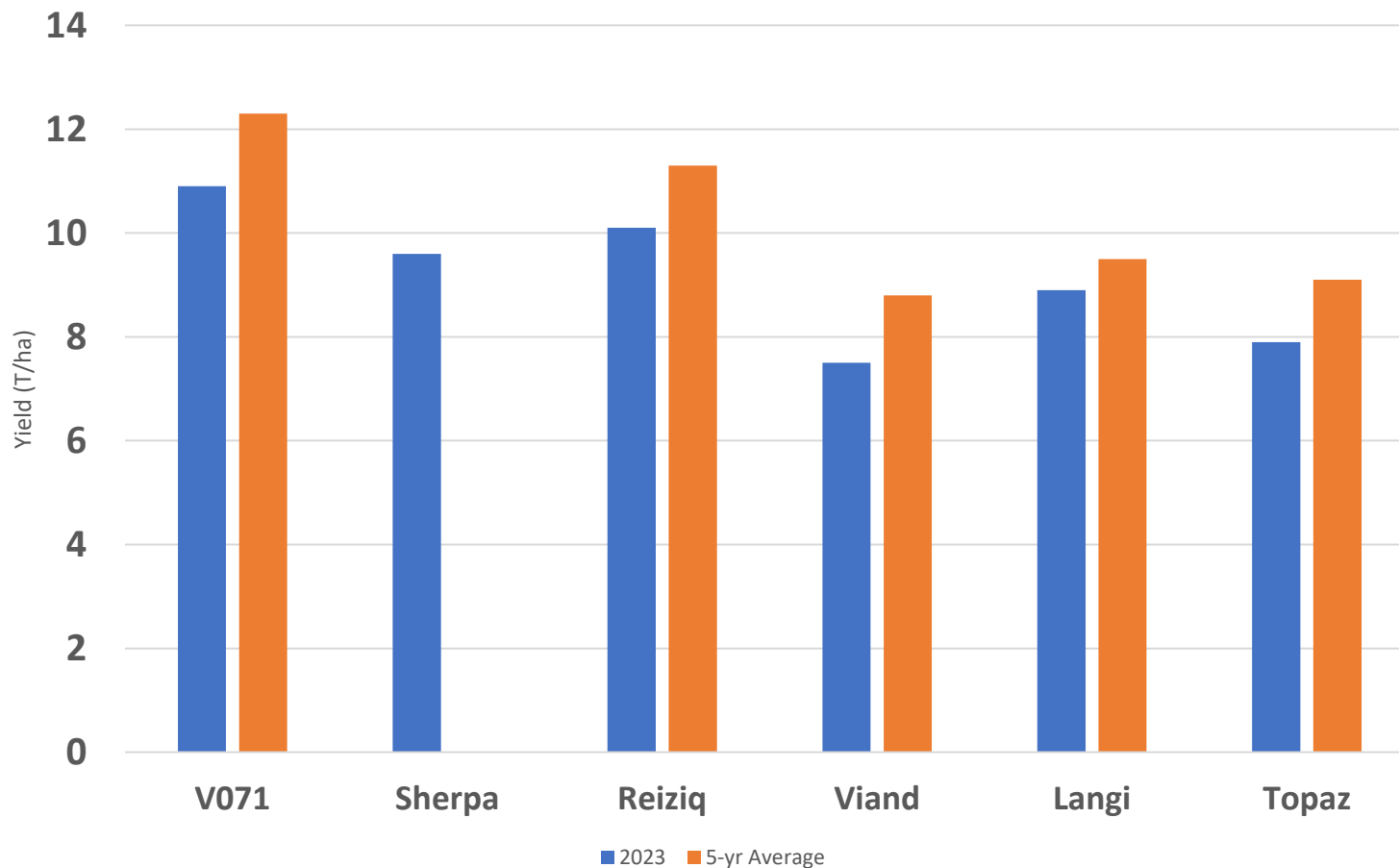
CY23 & CY22 - 7-Day Rolling average Maximum and Minimum Temperatures
Plotted Against the Previous 10 Year Average (Black Line) & 80% Confidence Interval - Griffith



Yield Summary

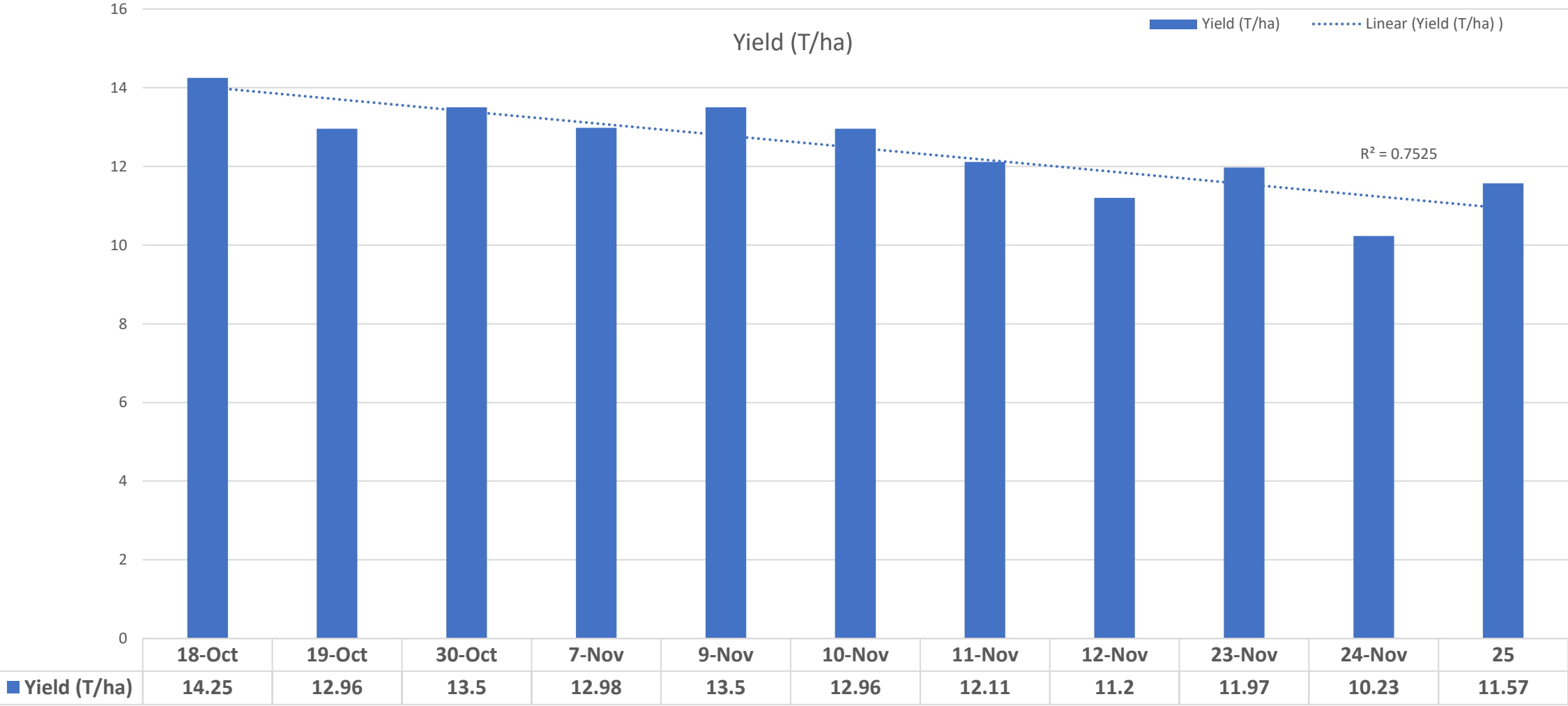


2023 Variety Yield compared to 5-year average - MIA



- 8 – 12% lower yield
- V071 compared to Topaz
- Still had some excellent crops
 - Top 20% 13.1T/ha
 - Top Yield 15.1T/ha
 - Key points as per summary page

Case Study - MIA

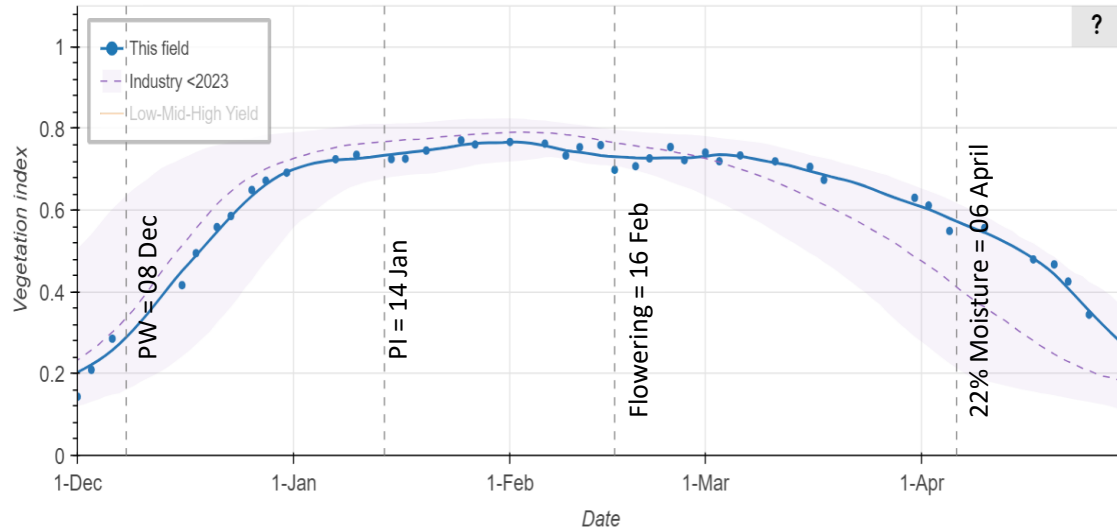


Real Time Remote Sensing

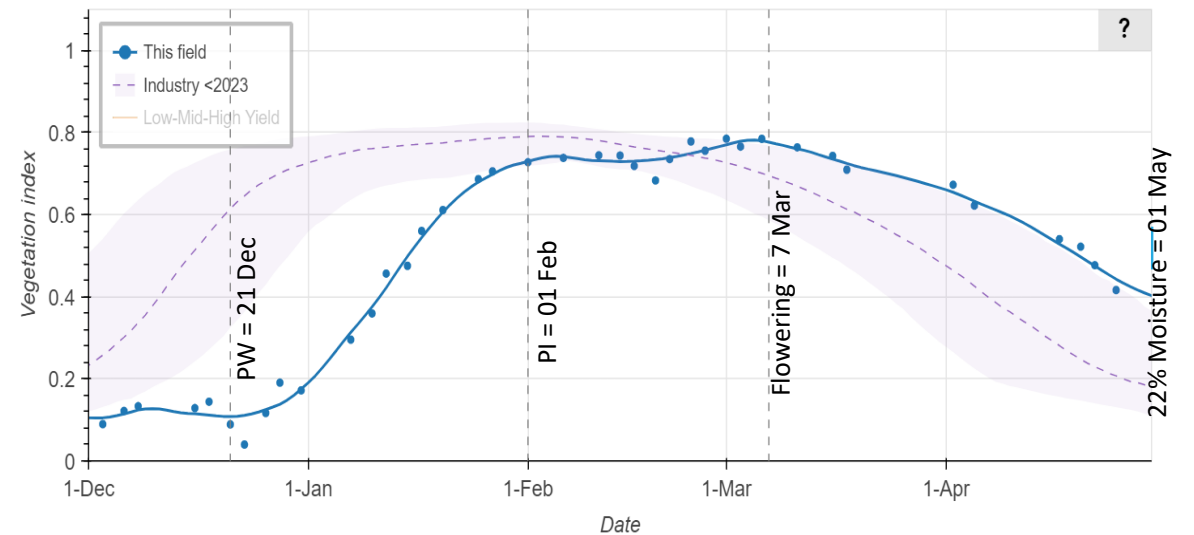
James Brinkoff - University of New England



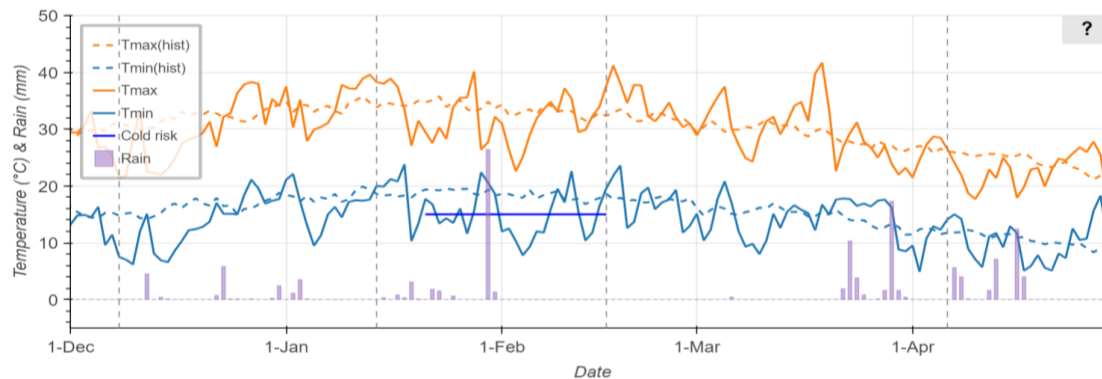
Vegetation index Growth rate Variability N index Grain moisture



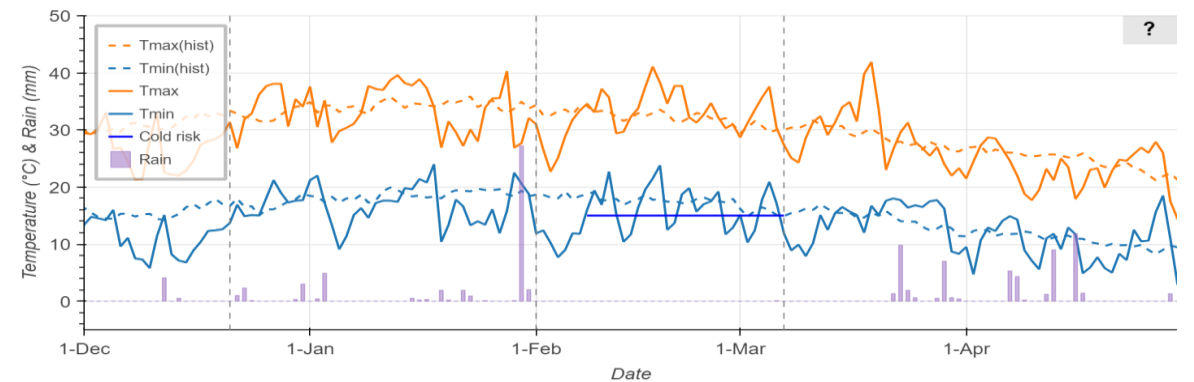
Vegetation index Growth rate Variability N index Grain moisture



Weather

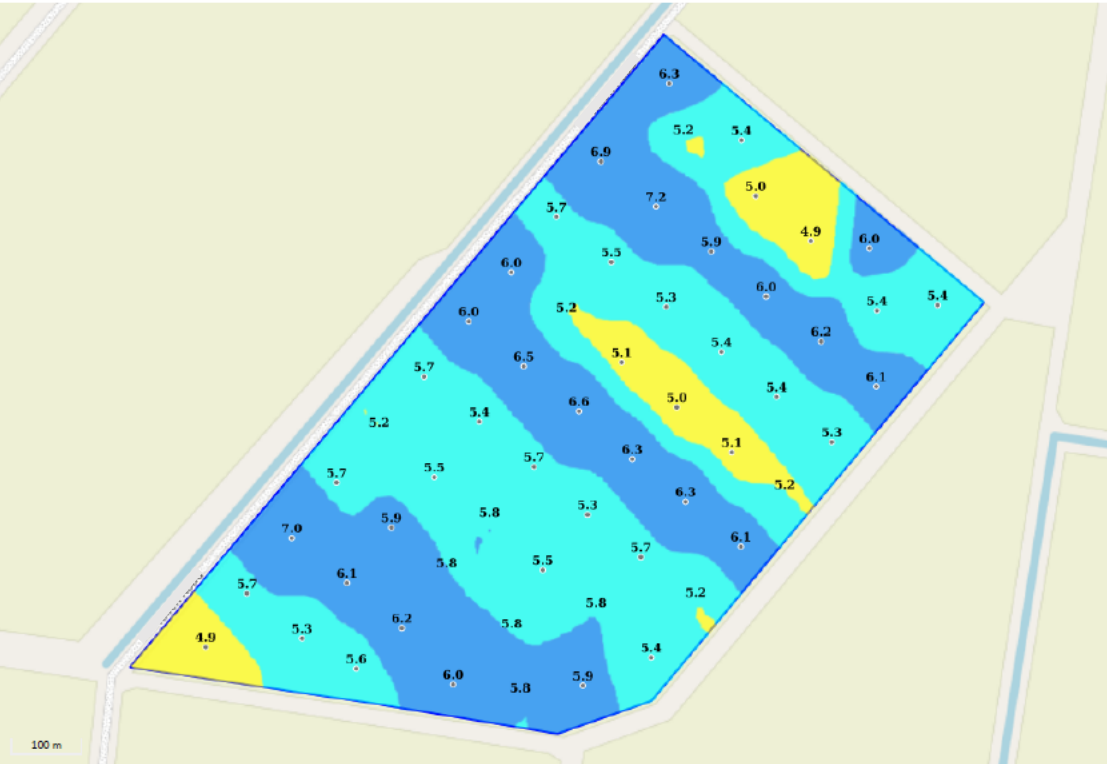


Weather

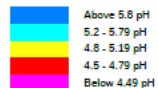


Optimised Best Management Sites

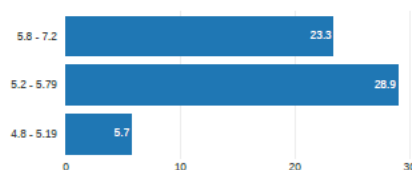
MIA Grid Sampling: Soil Test
Soil pH (CaCl₂)



Client: SUNRICE
Farm: SUNRICE
Paddock: MIA Grid Sampling
Name: MIA Grid Sampling
Type: Soil Test
Date: 21/06/2023
Min: 4.9 pH
Max: 7.2 pH
Avg: 5.7 pH



pH (CaCl₂) Distribution (Ha)



- Grid Soil Test
- Deep Soil Test
- EM Mapping
- Historical Yield Maps
- Cut/Fill Maps
- VR Soil Amelioration
- VR Nutrition
- Optimum seeding / Plant population
- Optimum Timing of Operations
- Yield
- Nutrient Use Efficiency
- Water Use Efficiency
- \$ Returns (Rotation)