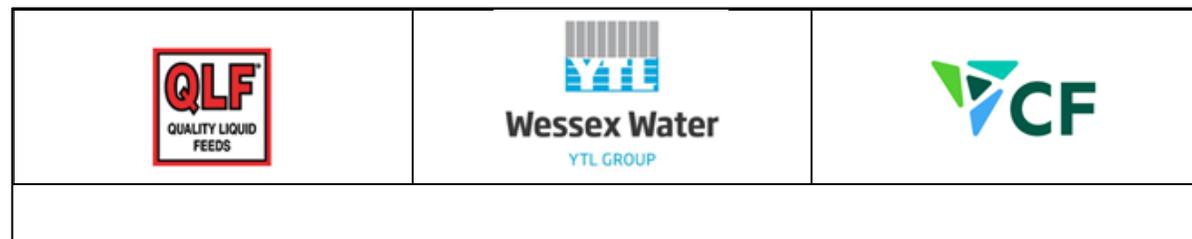


# MGA South West Trial Site 2020,21&22



# Why?

SW Trial Site, Pilton



# Questions

- Starter fertiliser
  - Do I need starter fert on high P index soils?
- Nitrogen
  - How much nitrogen should I apply on high soil nitrogen supply soils?
  - What type of inorganic nitrogen should I use?
- Drilling Date
  - What is the impact of drilling date on maize production?
- Drilling Depth
  - What is the impact of drilling maize at different depths?
- Undersowing
  - What is the impact on maize production of Undersowing?
- Mechanical Weed control
  - Does it work?
- Maize & Beans
  - What are the lessons to learn?

# Starter P Fertiliser

## Was there a benefit?

- 2022 – No
- 2021 – Yes – (32kg product/ha)
- 2020 – No
  - Costly and potentially polluting phosphorus was not needed on:
    - very high (>6) P status fields.
  - Lower rates (1/4 rate) of phosphorus possible on:
    - High (>4) P status soils
  - Boost + Rise P gave similar yield levels to DAP with no phosphorus.
    - 2022 Boost + Rise P gave significant yield benefit (one of three replicates)

# Nitrogen Response Curve

## Do I need nitrogen on high fertility field?

- 2022 – No
- 2021 – Yes (trend but not significant) No difference above 50 kg/ha
- 2020 – Yes – No difference above 50 kg/ha
  - 2020 and 2022 in same field
  - Additional Available Nitrogen calculators appear to under estimate soil organic matter supply of nitrogen to maize.

# Nitrogen response curve

Does over application of nitrogen impact maturity (DM%)

- 2022 – Yes – downward trend for 0-40, significant 0-60
- 2021 – No
- 2020 – Yes – all higher DM% than 0!
  - 2020 and 2022 in same field
  - No consistent impact on DM% at harvest

# Type of Nitrogen

Were there any differences between different types of nitrogen?

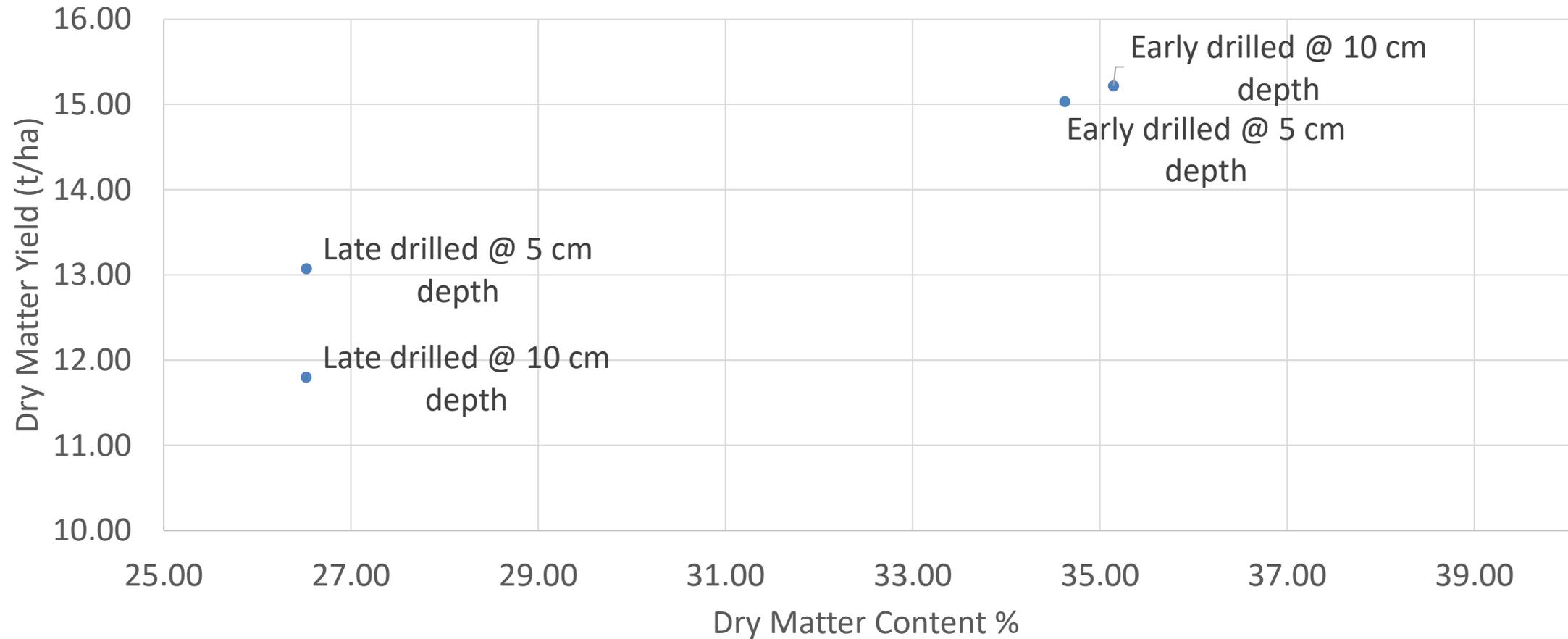
- 2022 – No - likely that all received too more nitrogen than was required
- 2021 – No – likely that all received too more nitrogen than was required
- 2020 – No treatments
  - Folia (Efficient 28) offers potential to use less nitrogen overall. (7 kg/ha compared to 40 kg/ha from the bag)
  - Agrecote (slow release) offers potential to apply at drilling (save a pass of machine)

# Drilling Date

## Does drilling date impact harvest date?

MGA & Wessex Water Somerset 2020

Drilling Date Trial

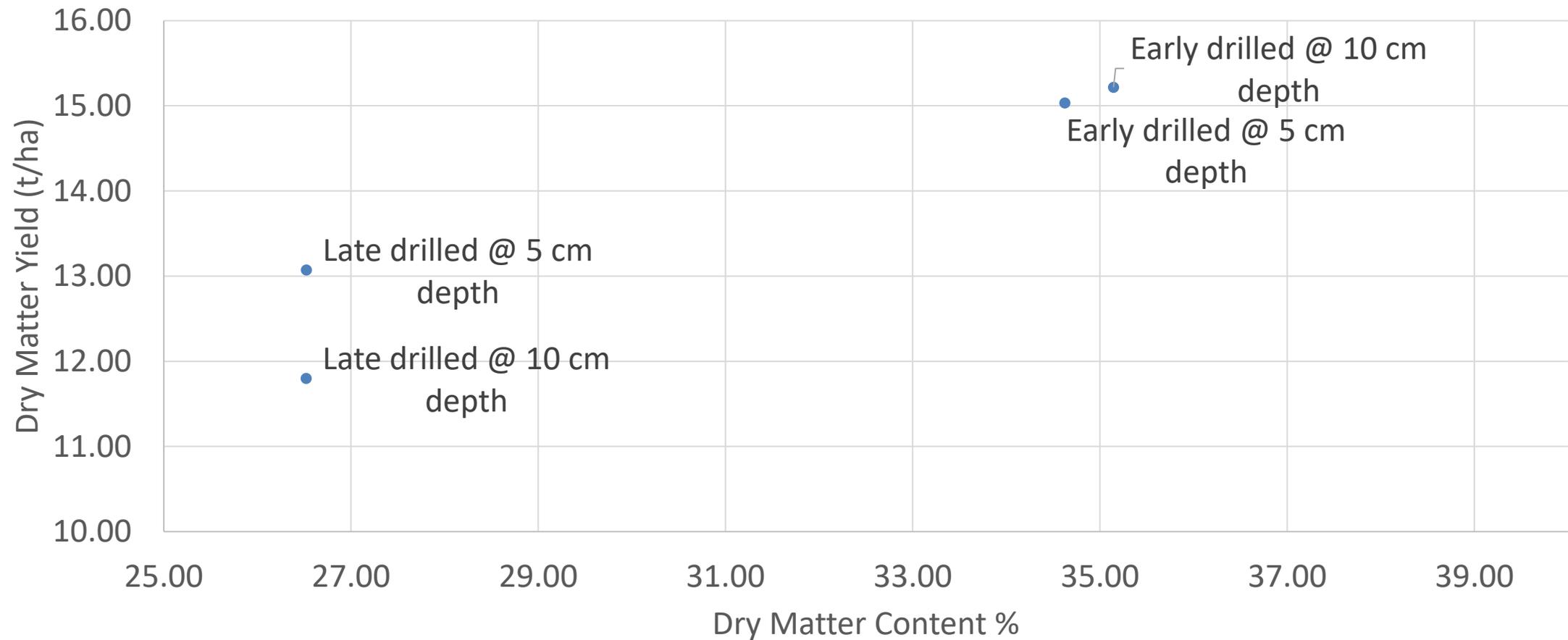


# Drilling Date

## What is the impact of drilling depth?

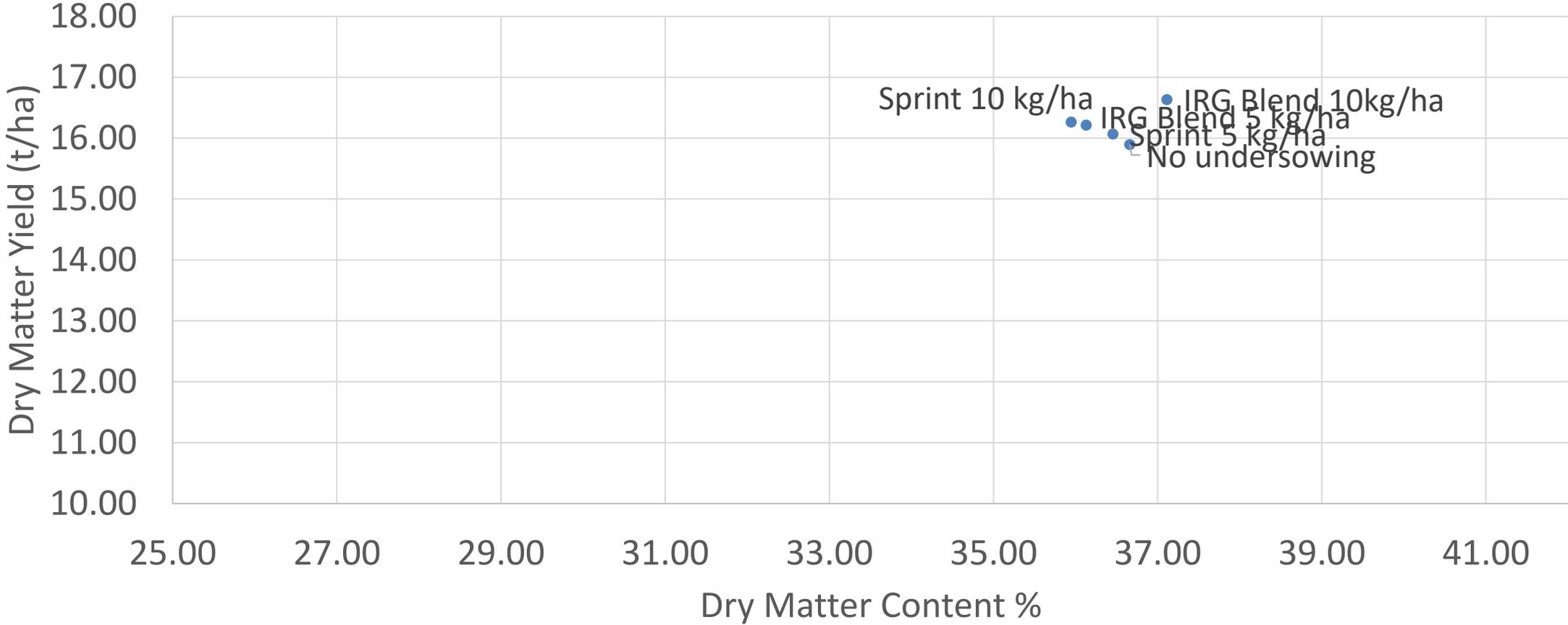
MGA & Wessex Water Somerset 2020

Drilling Date Trial



# Undersowing

MGA & Wessex Water Somerset 2020  
Undersowing Trial



**2022 Undersown maize (IRG 10 kg/ha) yielded significantly more maize**

# Mechanical Weed Control & Beans

## Did mechanical (interrow hoeing) work?

- 2022 – No – yield and DM% penalty
- 2021 – Yes – no yield or DM% penalty
  - Two different trial fields which visually looked as though impacted by weed competition.
  - Very time specific as to when to ‘weed’
  - Multiple passes likely required
  - Much more complicated

# Maize & Beans

- 2022 – No – very poor germination – not taken to harvest
- 2021 – No – poor germination – significant weed competition
- Challenge
  - Mixing seed – Korit treated
  - Weed control – lack of herbicide options
  - Poor germination – depth? Moisture? Temperature?
  - Harvest entanglement

# MGA South West Trial Site 2020,21&22

