# OPTIMISING IRRIGATED GRAINS

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Summit Ag Agricultural Consulting

# Two irrigated trials in 2022

- Irrigated durum trial had PGR were applied to two durum varieties to gauge the difference in yield and quality.
- Irrigated barley trial had 2 PGR's applied at 2 growth stages to observe influences in standability, yield and quality.
- Aim of the trials are to demonstrate real world agronomic practises to the broader farming community.

# Irrigated Durum Trial

| DBA Mataroi | | | | | | DBA Vittaroi | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| -PGR | +PGR | +PGR | -PGR | -PGR | +PGR | +PGR | -PGR | -PGR | +PGR | +PGR | -PGR |
| 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 |
| 1 | 1 | 2 | 2 | 3 | 3 | 1 | 1 | 2 | 2 | 3 | 3 |
| 101 | 102 | 103 | 104 | 105 | 106 | 107 | 108 | 109 | 110 | 111 | 112 |

# Irrigated Barley Trial

- PGR trial applied to an irrigated barley field.
- Field was planted post cotton and established late in the window.
- Promote and Moddus applied at Z31 and Z37. Timing of PGR was comprised due to seasonal conditions.
- Treatment yield average was 4T/ha, which is too low to demonstrate yield manipulation from PGR application.

# 3 main irrigated scenarios

**Scenario 1. Fallow – early.**

**Scenario 2. Post summer - crop on time.**

**Scenario 3. Post summer crop – Late.**

- Sowing date
- Sowing rate
- Nitrogen applied
- Nitrogen Timing
- Yield Potential

# Scenario 1. Fallow on Time

| Sowing Date | | | | | |
|---|---|---|---|---|---|
| May | | Jun | | Jul | |
| **Sowing Rate** | | | | | |
| 75 | 100 | 125 | 150 | 175 | 200 |
| **Nitrogen Timing** | | | | | |
| Planting | | Stem Elongation | | Flag Leaf | |
| **Total Nitrogen Input Kg N/ha** | | | | | |
| 100 | | 200 | | 300 | |
| **Yield Potential T/ha** | | | | | |
| 4 | 5 | 6 | 7 | 8 | 9 |

# Scenario 2. Post summer crop on time

| Sowing Date | | | | | |
|---|---|---|---|---|---|
| May | | Jun | | Jul | |

| Sowing Rate | | | | | |
|---|---|---|---|---|---|
| 75 | 100 | 125 | 150 | 175 | 200 |

| Nitrogen Timing | | | | | |
|---|---|---|---|---|---|
| Planting | | Stem Elongation | | Flag Leaf | |

| Total Nitrogen Input Kg N/ha | | | | | |
|---|---|---|---|---|---|
| 100 | | 200 | | 300 | |

| Yield Potential T/ha | | | | | |
|---|---|---|---|---|---|
| 4 | 5 | 6 | 7 | 8 | 9 |

# Scenario 3. Post Cotton late

| Sowing Date | | | | | |
|---|---|---|---|---|---|
| May | | Jun | | Jul | |

| Sowing Rate | | | | | |
|---|---|---|---|---|---|
| 75 | 100 | 125 | 150 | 175 | 200 |

| Nitrogen Timing | | | | | |
|---|---|---|---|---|---|
| Planting | | Stem Elongation | | Flag Leaf | |

| Total Nitrogen Input Kg N/ha | | | | | |
|---|---|---|---|---|---|
| 100 | | 200 | | 300 | |

| Yield Potential T/ha | | | | | |
|---|---|---|---|---|---|
| 4 | 5 | 6 | 7 | 8 | 9 |

**Fallow**

| Sowing Date | | | | | |
|---|---|---|---|---|---|
| May | | Jun | | Jul | |

| Sowing Rate | | | | | |
|---|---|---|---|---|---|
| 75 | 100 | 125 | 150 | 175 | 200 |

| Nitrogen Timing | | | | |
|---|---|---|---|---|
| Planting | | Stem Elongation | Flag Leaf | |

| Total Nitrogen Input Kg N/ha | | | | | |
|---|---|---|---|---|---|
| 100 | | 200 | | 300 | |

| Yield Potential T/ha | | | | | |
|---|---|---|---|---|---|
| 4 | 5 | 6 | 7 | 8 | 9 |

**Ex Summer on Time**

| Sowing Date | | | | | |
|---|---|---|---|---|---|
| May | | Jun | | Jul | |

| Sowing Rate | | | | | |
|---|---|---|---|---|---|
| 75 | 100 | 125 | 150 | 175 | 200 |

| Nitrogen Timing | | | | |
|---|---|---|---|---|
| Planting | | Stem Elongation | Flag Leaf | |

| Total Nitrogen Input Kg N/ha | | | | | |
|---|---|---|---|---|---|
| 100 | | 200 | | 300 | |

| Yield Potential T/ha | | | | | |
|---|---|---|---|---|---|
| 4 | 5 | 6 | 7 | 8 | 9 |

**Ex Summer Late**

| Sowing Date | | | | | |
|---|---|---|---|---|---|
| May | | Jun | | Jul | |

| Sowing Rate | | | | | |
|---|---|---|---|---|---|
| 75 | 100 | 125 | 150 | 175 | 200 |

| Nitrogen Timing | | | | |
|---|---|---|---|---|
| Planting | | Stem Elongation | Flag Leaf | |

| Total Nitrogen Input Kg N/ha | | | | | |
|---|---|---|---|---|---|
| 100 | | 200 | | 300 | |

| Yield Potential T/ha | | | | | |
|---|---|---|---|---|---|
| 4 | 5 | 6 | 7 | 8 | 9 |