

National Variety Trial – Mingenew Main Season Wheat (WMaA23MING6).

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Key Messages

- The 2023 season in the region began with a challenging dry start with reasonable follow up rainfall in June and July to promote valuable germination and enabled beneficial growth. Although the current dry conditions are unfavourable.

Aim

The aim of the National Variety Trials (NVT) is to generate independent information for growers and industry about newly released varieties of field crops to the current commercial varieties grown in the area.

Background

The NVT program has been designed to identify the highest yielding varieties, free from the constraints of nutrition and disease. As a result, the nutrition and crop protection packages applied to NVT trials are typically higher than may be applied by the average grower. Management is the same for all plots with no differences in timing for crop protection or nutrition.

All trials have 3 replicates of each variety, and all plots are sown (and subsequently harvested) on the same day. Timing of sowing is dependent upon the season but is typically done within an average district “best practice” window and located on a typical soil type for the area.

Trial Details

| | |
|--|---|
| Plot size & replication | 10 m x 1.75 m x 3 replicates. |
| Soil type | Sandy Loam. |
| Paddock rotation: | 2022 Canola. |
| Sowing date | 17/05/2023 – Germinating rainfall 31/05/2023. |
| Sowing rate | 200 seed/m ² . |
| Fertiliser | 17/05/2023: Urea (100 kg/ha) and K Till Extra (130 kg/ha). 05/07/2023: Flexi N (150 L/ha). |
| Herbicides, insecticides & fungicides | 17/05/2023: Knockdown pre-seeding spray. 05/07/2023: Broadleaf & grass spray. 22/08/2023: Insecticide & fungicide spray. Details of chemicals used and rates available at nvtonline.com.au |
| Growing season rainfall until 31st August 2023 | 181.2 mm (01/04/2023 – 31/08/2023). |

Table 1. Mingenew NVT Cereals Trial Site Total Rainfall (mm).

Source Long Paddock Patch Point Data (Retrieved from <https://www.longpaddock.qld.gov.au/silo/point-data/#>).

| Jan | Feb | Mar | April | May | June | July | August |
|-----|-----|-----|-------|------|------|------|--------|
| 2.1 | 0 | 5.1 | 9.5 | 15.2 | 91.5 | 41.3 | 23.7 |

Soil Composition

Table 2. Soil composition of the Mingenew NVT Cereals Trial Site at 0 – 10 cm and 10 – 30 cm compiled from CSBP test results.

| Depth (cm) | Texture (1 sand, 2 sandy loam, 3 loam, 4 loamy clay, 5 clay) | Total Nitrogen (mg/kg) | Phosphorus (mg/kg) | P Test Type | Organic Carbon (%) | pH (H ₂ O) | pH (CaCl ₂) | Conductivity (EC) (dS/m) |
|------------|--|------------------------|--------------------|-------------|--------------------|-----------------------|-------------------------|--------------------------|
| 0-10 | 2 | 21 | 15 | Colwell | 0.48 | 6.9 | 6.4 | 0.061 |
| 10-30 | 2 | 3 | | | | 7.0 | 6.2 | 0.040 |

Variety Entry List

Table 3. List of wheat varieties included into the Mingenew Main Season Wheat (WMaA23MING6) NVT Trial for the 2023 season.

| | | | | | | | |
|----|---------------|----|---------------------|----|---------------|----|-----------------|
| 1 | 17Q2H1081 | 14 | Filler | 27 | LRPB Avenger | 40 | Scepter |
| 2 | 18Q4H0262 | 15 | H16Q3x0138.SCI-102D | 28 | LRPB Havoc | 41 | Sting |
| 3 | Ballista | 16 | H16Q3x0336.SCI-011D | 29 | LRPB Matador | 42 | Supreme |
| 4 | Borlaug 100 | 17 | H16Q3x0336.SCI-097D | 30 | Mace | 43 | Valiant CL Plus |
| 5 | Brumby | 18 | Hammer CL Plus | 31 | Magenta | 44 | Vixen |
| 6 | Calibre | 19 | IGW6783 | 32 | Ninja | 45 | Yitpi |
| 7 | Catapult | 20 | IGW6884 | 33 | OAGT0049R | 46 | Zen |
| 8 | Chief CL Plus | 21 | IGW8192 | 34 | OD2965-001 | | |
| 9 | Cutlass | 22 | Kinsei | 35 | RAC3146 | | |
| 10 | Denison | 23 | LPB18-3055 | 36 | RAC3260 | | |
| 11 | Devil | 24 | LPB19-12826 | 37 | RAC3261 | | |
| 12 | EDGE16Q-0155 | 25 | LPB19-12888 | 38 | Razor CL Plus | | |
| 13 | Emu Rock | 26 | LRPB Anvil CL Plus | 39 | RockStar | | |

Variety Descriptions

For variety descriptions and information on the best choice of variety to grow this season see the 2022 WA Crop Sowing Guide at

<https://grdc.com.au/resources-and-publications/all-publications/nvt-crop-sowing-guides>

Field Plan

Table 4. Field plan of the Mingenew Main Season Wheat (WMaA23MING6) NVT Trial for the 2023 season.

| | Range 1 | Range 2 | Range 3 | Range 4 | Range 5 | Range 6 |
|--------|---------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| Row 1 | EDGE16Q-0155 | LRPB Havoc | H16Q3x0336.SC I-097D | Yitpi | Supreme | RAC3260 |
| Row 2 | RockStar | LPB19-12826 | Filler | Cutlass | Mace | Ballista |
| Row 3 | LPB18-3055 | Borlaug 100 | H16Q3x0138.SC I-102D | Brumby | Denison | IGW6884 |
| Row 4 | Emu Rock | IGW6783 | Catapult | Chief CL Plus | RAC3146 | Sting |
| Row 5 | RAC3261 | Magenta | Kinsei | Vixen | IGW8192 | OD2965-001 |
| Row 6 | OAGT0049R | 18Q4H0262 | Ninja | H16Q3x0336.SC I-011D | Hammer CL Plus | Razor CL Plus |
| Row 7 | 17Q2H1081 | LRPB Avenger | LRPB Anvil CL Plus | Devil | Valiant CL Plus | Zen |
| Row 8 | LRPB Matador | Scepter | LPB19-12888 | Calibre | LRPB Avenger | H16Q3x0138.SC I-102D |
| Row 9 | Calibre | H16Q3x0336.SC I-097D | RAC3146 | OD2965-001 | H16Q3x0336.SC I-011D | IGW6783 |
| Row 10 | Chief CL Plus | IGW6884 | Scepter | RAC3260 | Catapult | 17Q2H1081 |
| Row 11 | Mace | Vixen | Hammer CL Plus | RockStar | Yitpi | LPB19-12888 |
| Row 12 | IGW8192 | LRPB Anvil CL Plus | Magenta | Denison | 18Q4H0262 | EDGE16Q-0155 |
| Row 13 | Kinsei | Razor CL Plus | Valiant CL Plus | LRPB Havoc | Emu Rock | Brumby |
| Row 14 | Devil | Cutlass | LPB18-3055 | OAGT0049R | LPB19-12826 | Ninja |
| Row 15 | Sting | Zen | Ballista | Borlaug 100 | LRPB Matador | RAC3261 |
| Row 16 | Filler | Supreme | IGW6783 | RAC3261 | Devil | Scepter |
| Row 17 | Valiant CL Plus | Ninja | LRPB Matador | Supreme | H16Q3x0336.SC I-097D | Cutlass |
| Row 18 | Yitpi | Ballista | LRPB Avenger | Sting | OAGT0049R | Kinsei |
| Row 19 | H16Q3x0336.SCI-011D | LPB19-12888 | Zen | 18Q4H0262 | Chief CL Plus | Borlaug 100 |
| Row 20 | H16Q3x0138.SCI-102D | OD2965-001 | Emu Rock | 17Q2H1081 | Magenta | RockStar |
| Row 21 | Denison | Catapult | IGW8192 | Razor CL Plus | LPB18-3055 | Calibre |
| Row 22 | RAC3260 | Hammer CL Plus | IGW6884 | Mace | LRPB Havoc | LRPB Anvil CL Plus |
| Row 23 | RAC3146 | Brumby | LPB19-12826 | EDGE16Q-0155 | Vixen | Filler |

Acknowledgements

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