

Wheat Variety Demonstration

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Aim

To determine the yield and quality performance of different wheat varieties when sown on a small paddock scale using farmer equipment.

Background

These small paddock scale demonstrations were conducted using farmer equipment. Farmer scale demonstrations are a valuable way to explore new varieties, products or practices, complementing results which are produced through more scientifically rigorous, small plot trials. The varieties tested are varieties that are widely grown in the area.

Varieties

- Calingiri: ASWN class, long maturity, intermediate tolerance to black point
- EGA Bonnie Rock: AH class, mid maturity, low screenings, useful sprouting tolerance, good black point tolerance
- Espada: APW class, mid maturity, yields comparable to Wyalkatchem, poor tolerance to black point
- Magenta: APW class, mi-long maturity, long coleoptile
- Mace: AH class, short-mid maturity, bred from cross with Wyalkatchem, superior yield and rust resistance
- Wyalkatchem: APW class, short-mid maturity, very good grain size, acid and boron tolerant (Christine Zaicou-Kunesch et al, 2010)

Trial Details - Watheroo

Property	Keamy property, Watheroo
Plot size & replication	35ha plots, non-replicated
Soil type	Sandy Gravel
Soil pH	4.4
Sowing date	20/6/10
Seeding rate	Bonnie Rock at 72 kg/ha, Wyalkatchem at 80 kg/ha
Seeding equipment	DBS-Knife point
Fertiliser	78kg K-Till Extra, 40L Flexi-N (banded), 40L Flexi-N (post-emergent)
Paddock rotation	08 Pasture, 09 Pasture
Herbicides, Insecticides & Fungicides	Glyphosate at 1 L/ha, Trifluralin at 1.5 L/ha, Flutriafol at 0.35 L/ha, Logran at 40g/ha
Growing Season Rainfall	175.2mm

Results

Table 1: Yield and quality of wheat sown at Watheroo.

Variety	Yield (t/ha)	Protein (%)	Screenings (%)	Hectolitre weight (kg/hL)
Bonnie rock	1.4	12.2	4.5	80
Wyalkatchem	1.6	12.5	4	80

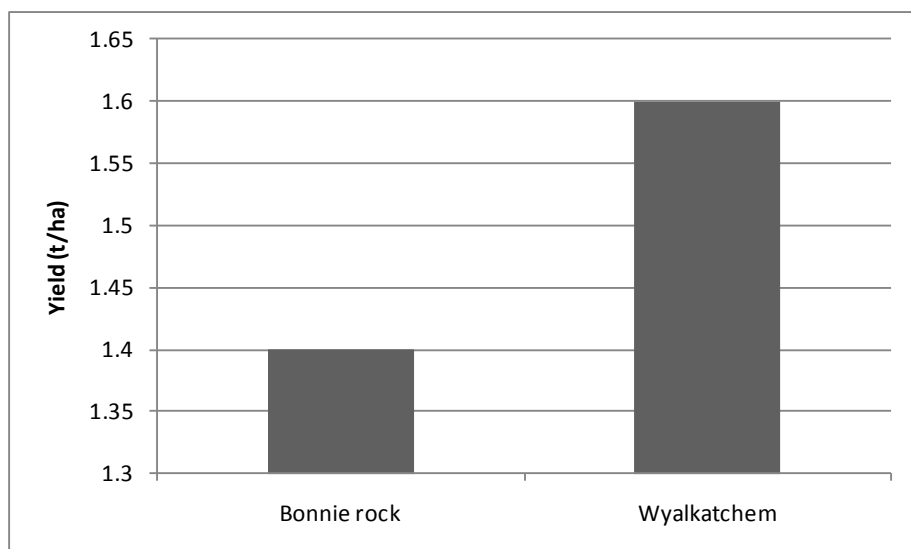


Figure 1: Yield of wheat sown at Watheroo

Trial Details – East Maya

Property	Nankivell property, East Maya
Plot size & replication	20ha plots, non-replicated
Soil type	Red Sandy Loam
Soil pH	5.2
EC	0.05 dS/m
Sowing date	27/5/10
Seeding rate	50 kg/ha
Seeding equipment	DBS – Knife point
Fertiliser	65 MAP
Paddock rotation	08 Lupins, 09 Field peas
Herbicides, Insecticides & Fungicides	Glyphosate at 1 L/ha, Trifluralin at 1.5 L/ha, Triasulfuron at 25 g/ha, MCPA LVE at 0.4 L/ha, Diflufenican at 15 ml/ha, 1% Ammoniumsulfate, 0.5% Hasten
Growing Season Rainfall	141mm

Results

Table 2: Yield and quality of wheat sown at East Maya.

Variety	Yield (t/ha)	Protein (%)	Screenings (%)
Wyalkatchem	1.5	11	4.8
Mace	1.5	10.1	8.9
Espada	2.3	10.1	4.8
Calingiri	1.5	11.1	5.8

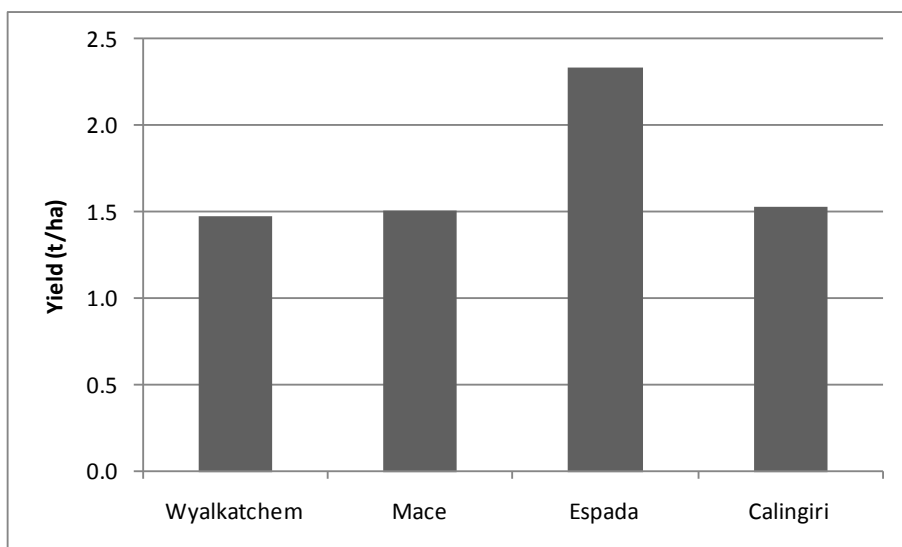


Figure 1: Yield of wheat sown at East Maya.

Trial details – West Buntine

Property	Dodd's property, West Buntine
Plot size & replication	3 ha strips, non-replicated
Soil type	Sandplain
Soil pH	5.1
Sowing date	16/5/10
Seeding rate	50 kg/ha
Fertiliser	AgStar at 80 kg/ha, MOP at 20 kg/ha, Flexi-N at 60 L/ha
Paddock rotation	07 Wheat, 08 Wheat, 09 Canola
Herbicides, Insecticides & Fungicides	1.5 L/ha Treflan, 30 g/ha Logran, 0.4 L/ha Paragon
Growing Season Rainfall	160mm

Results

Table 3: Yield and screenings of wheat sown at West Buntine.

Variety	Yield (t/ha)	Screenings (%)
Mace	Magenta yielded 7 % higher than Mace	2.5
Magenta		6

Comments

Please note that Wyalkatchem at Watheroo was seeded at a higher rate than Bonnie Rock which may have influenced the yield results. The yields and quality of the varieties presented here need to be interpreted carefully. Use numerous sources of data to make decisions regarding varieties.

Acknowledgements

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References

Christine Zaicou-Kunesch, Steve Penny, Brenda Shackley, Sarah Ellis, Shahajahan Miyan (2010, April). Wheat variety guide 2010 Western Australia. Retrieved January 13, 2011, from Department of Agriculture and Food, WA: <http://www.agric.wa.gov.au>

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