

Comparison of wheat varieties

Key Findings

- Axe was the highest yielding commercially available hard wheat at 2.47t/ha
- Corack was the highest yielding APW variety at 2.34t/ha
- All wheat varieties were above the 11.5% level required for Hard 2

Why do the trial?

To compare the performance of new wheat varieties and lines against the current industry standards.

How was it done?

Plot size	1.4m x 10m	Fertiliser	DAP + Zn 2% @ 70kg/ha
Seeding date	1 st June 2012		UAN @ 80L/ha, 24 th July

The trial was a randomised complete block design with 3 replicates and 27 varieties. Fungicides were applied as necessary to keep the crop canopy free of disease ie. stripe rust.

Plot edge rows were removed prior to harvest. All plots were assessed for grain yield, protein, test weight and screenings with a 2.0 mm screen.

Results

Grain yields at Hart in 2012 ranged from 1.55t/ha for Lincoln, up to 2.47t/ha for Axe (Table 1). The average wheat yield at Hart in 2012 was 1.94t/ha.

Emu Rock, Corack, Mace and AGT Katana also performed well and were not significantly different to Axe.

Wheat grain protein levels ranged from 11.5% (Phantom) to 13.6% (Estoc) with an average of 12.5%.

Screening levels ranged from 2.4% (Axe) to 10.6% (Shield) with a trial average of 5.6%. These results are higher than grower screening levels in the district and it is unknown what might have contributed to this. There were a significant number of varieties with screening levels above the maximum for APW and Hard of 5%.

The varieties producing test weight values lower than 74kg/hL, the minimum required for maximum grade, were Correll, Lincoln and Orion. The varieties that were just under 74kg/hL included Shield, Yitpi and Magenta. Test weight values for the overall site averaged only 76.1kg/hL and so could be considered lower than normal and need to be viewed with some caution.

Table 1. Grain yield (t/ha), protein (%), test weight (kg/hL) and screenings (%) of wheat varieties at Hart in 2012.

Quality	Variety	Grain yield (t/ha)	% of Gladius	Protein (%)	% of Gladius	Test weight (kg/hL)	% of Gladius	Screenings (%)	% of Gladius
	Axe	2.47	125	11.8	93	75.0	100	2.4	69
	Catalina	1.89	96	12.9	102	78.5	104	4.9	140
	Clearfield JNZ	1.73	88	12.3	97	76.1	101	7.4	211
	Correll	1.83	93	12.5	98	72.9	97	6.9	197
	Emu Rock (IGW3167)	2.36	120	11.6	91	77.2	103	3.4	97
	Derrimut	1.99	101	12.5	98	78.2	104	4.7	134
	Gladius	1.97	100	12.7	100	75.2	100	3.5	100
	Grenade CL Plus (RAC1689R)	1.81	92	12.5	98	77.2	103	3.7	106
AH	AGT Katana	2.16	110	12.1	95	78.4	104	5.2	149
	Lincoln	1.55	79	12.4	97	73.1	97	8.2	234
	Mace	2.22	113	12.9	101	77.1	102	3.4	97
	Peake	2.08	106	12.7	100	77.5	103	4.4	126
	Phantom (LPB07-1040)	1.80	92	11.5	90	76.6	102	7.3	209
	Shield (RAC1718)	2.04	104	12.0	94	73.9	98	10.6	303
	Wallup (VV4978-1)	2.04	104	12.5	98	77.2	103	6.9	197
	Yitpi	1.82	92	13.0	102	73.6	98	9.1	260
	Cobra	1.83	93	12.8	101	75.8	101	4.8	137
	Espada	1.86	94	12.5	98	74.8	99	4.2	120
	Estoc	1.83	93	13.6	107	80.2	107	5.4	154
APW	Impose CL Plus	1.65	84	13.3	104	76.6	102	3.2	91
	Kord CL Plus	1.79	91	12.9	101	76.8	102	3.4	97
	Scout	2.03	103	12.1	95	76.7	102	6.5	186
	Corack (VW2316)	2.34	119	11.7	92	78.2	104	3.7	106
ASW	Magenta	1.69	86	12.7	100	73.9	98	8.8	251
SOFT	Impala (C51021)	1.77	90	13.0	102	74.4	99	8.7	249
	Orion	1.74	89	13.0	102	71.1	94	5.9	169
Unclassified	LPB08-1799	2.04	104	12.5	98	78.6	105	5.2	149
	Site mean	1.94	98	12.5	98	76.1	101	5.6	161
	LSD (0.05)	0.33	17	1.3	10	3.4	5	4.6	131