

Comparison of wheat varieties

Key findings

- Mace, Wyalkatchem, Pugsley, Derrimut and Gladius were the highest yielding wheat varieties at Hart in 2009, averaging 3.06 t/ha.
- All varieties met the test weight, protein and screening requirements for the maximum achievable grade.

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 @ 60 kg/ha + 2% Zn Urea @ 50 kg/ha 10 th August
Seeding date	8 th May 2009		

The trial was a randomised complete block design with 3 replicates and 21 varieties.

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 ranged between 2.34 t/ha (Bullet) and 3.19 t/ha (Mace). The APW varieties Mace, Wyalkatchem, and Pugsley and hard varieties Derrimut and Gladius were the highest yielding wheat varieties at Hart in 2009, averaging 3.06 t/ha (Table 1).

Wheat grain protein levels ranged from 11.6% (Guardian and Bullet) to 13.4% (Pugsley) with an average of 12.4%.

The test weight for all varieties was greater than the required 74 kg/hL for APW and Hard classifications.

Lincoln produced the highest screenings at 2.1% followed by Guardian at 1.6%. The average screenings (%) across all varieties at Hart in 2009 was 0.9%.

Table 1: Grain yield (t/ha), protein (%), test weight (kg/hL) and screenings (%) of wheat varieties at Hart in 2009.

Quality	Variety	Grain yield (t/ha)	% of Yitpi	Protein (%)	% of Yitpi	Test weight (kg/hL)	% of Yitpi	Screenings (%)	% of Yitpi
APW	Espada (RAC1263)	2.86	106	13.0	102	75.7	97	0.9	80
	Frame	2.43	90	13.1	103	80.3	103	0.8	72
	Guardian	2.75	102	11.6	91	79.0	101	1.6	148
	Pugsley	2.98	110	13.4	104	79.2	102	0.6	58
	Wyalkatchem	3.14	116	12.2	95	79.5	102	0.4	33
	Mace (RAC1372)	3.19	118	11.7	91	79.3	102	0.6	55
	Barham	2.92	108	12.0	94	77.0	99	0.6	58
	Axe	2.58	95	13.0	102	77.5	100	0.6	52
Hard	Bullet	2.34	86	11.6	91	77.9	100	1.2	107
	Catalina	2.47	91	12.5	98	79.2	102	0.9	85
	Clearfield JNZ	2.52	93	12.0	93	79.0	102	0.7	66
	Correll	2.71	100	12.6	98	75.6	97	1.1	97
	Derrimut	3.01	111	12.1	95	79.2	102	0.8	74
	Gladius (RAC1262)	2.98	110	12.6	98	77.6	100	0.8	76
	Peake	2.87	106	11.9	93	79.6	102	0.9	82
	Yitpi	2.70	100	12.8	100	77.8	100	1.1	99
	Young	2.54	94	12.2	95	78.2	101	0.7	61
	Bolac (VQ2621)	2.94	109	13.1	102	78.3	101	1.3	122
Yet to be classified	Lincoln (LPB03-0545)	2.60	96	11.9	93	80.1	103	2.1	190
	RAC1412	2.82	104	13.4	105	79.4	102	0.5	47
	RAC1684	2.83	105	12.0	94	78.6	101	0.8	74
	Site mean	2.77	103	12.4	97	78.5	101	0.9	83
LSD (0.05)		0.21	8	0.3	2	1.2	2	0.2	18