Comparison of barley varieties

Key findings

- Feed varieties Capstan, Fleet, and Yarra and malting varieties Buloke, Commander and Oxford were the highest yielding barley varieties at Hart in 2010, averaging 5.59 t/ha.
- Capstan (9.5%) and the hull-less variety Finniss (12.1%) were the only varieties to produce screenings above 5%.

Why do the trial?

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

How was it done?

Plot size	1.4m x 10m	**Fertiliser**	32:10 (DAP/Urea) @ 70 kg/ha UAN @ 100 L/ha 10th August
Seeding date	14th May 2010		

The trial was a randomised complete block design with 3 replicates and 18 varieties. Fungicides were applied as necessary to keep the crop free of disease i.e net blotch.

Plot edge rows were removed prior to harvest. All plots were assessed for grain yield, protein, test weight, screenings with a 2.2 mm screen and retention with a 2.5 mm screen.

Results

The feed varieties Capstan (5.66 t/ha), Fleet (5.66 t/ha) and Yarra (5.44 t/ha) and malting varieties Commander (5.67 t/ha), Buloke (5.55 t/ha) and Oxford (5.55 t/ha) were the highest yielding barley varieties at Hart in 2010 (Table 1).

The average grain yield across all feed varieties was 5.37 t/ha compared to 5.22 t/ha for the malting varieties.

The malting variety Oxford and the hull-less variety Finnis produced an average protein of 9%. All other named varieties produced statistically similar protein with an average of 10.5%.

Malt varieties Commander, Baudin and Gairdner produced test weights of 64 kg/hL, just below the required 65 kg/hL for malting specification. Capstan and the hull-less variety Finnis were the only feed varieties not to meet the test weight specifications for the maximum grade.

Capstan (9.5%) and Finniss (12.1%) were the only varieties to produce screenings above 5%. All malting varieties produced retention greater than the required 86%.

Table 1: Grain yield (t/ha), protein (%), test weight (kg/hL) and screenings (%) of barley varieties at Hart in 2010.

Quality	Variety	**Grain yield (t/ha)**	% of Sloop SA	**Protein (%)**	% of Sloop SA	**Test weight (kg/hL)**	% of Sloop SA	**Screenings (%)**	% of Sloop SA	**Retention (%)**	% of Sloop SA
Feed	Capstan	5.66	111	10.4	95	61.4	93	9.5	318	78.3	81
	Fleet	5.66	111	11.0	100	63.3	96	1.6	52	96.0	100
	Hannan	5.07	100	10.4	95	67.0	102	2.6	88	93.7	97
	Hindmarsh	5.30	104	10.5	96	67.4	102	4.8	159	88.7	92
	Keel	5.16	101	10.4	94	63.0	96	3.0	99	96.4	100
	Maritime	5.25	103	10.7	98	64.3	98	0.9	30	97.8	102
	Scope (VBHT0805)	5.40	106	10.6	96	67.4	103	1.5	51	93.3	97
	Yarra	5.44	107	10.5	95	64.2	98	2.2	73	96.4	100
Malting	Baudin	4.93	97	10.4	94	64.3	98	2.4	80	94.6	98
	Buloke	5.55	109	10.2	92	65.1	99	2.1	69	90.9	94
	Commander	5.67	112	10.6	96	64.3	98	4.3	144	93.3	97
	Flagship	4.94	97	10.6	96	67.2	102	2.5	83	92.8	97
	Gairdner	5.18	102	10.3	93	64.4	98	5.0	166	86.3	90
	Oxford	5.55	109	8.7	79	68.3	104	2.6	86	88.3	92
	Schooner	4.84	95	10.2	93	64.8	99	2.2	72	93.4	97
	SloopSA	**5.09**	**100**	**11.0**	**100**	**65.7**	**100**	**3.0**	**100**	**96.2**	**100**
Hull-less	Finnis (WI3930)	4.99	98	9.3	85	60.6	92	12.1	403	65.2	68
Yet to be classified	WI4262	5.60	110	9.2	83	65.1	99	1.2	40	95.5	99
	Site mean	5.29	104	10.3	93	64.9	99	3.5	117	90.9	95
	LSD (0.05)	0.26	6	0.8	7	1.9	3	1.1	110	2.9	3