

Choosing a Barley variety for the Malt Market

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Take home messages:

- Henley was the highest yielding variety across the 3 sites.
- Gairdner was the only variety to meet malt requirements at all three sites.

Background

Growing barley for the malt market requires different management than that required for the feed market. Choosing an appropriate variety is an integral part of maximising performance for this grade. This trial aims to evaluate the commonly grown malt varieties against varieties that are pending malt accreditation.

Method

The trial was sown on the 30th of May at Westmere following Canola, 2nd June at Inverleigh following wheat and 14th June at Dunkeld following peas. Varieties sown were Westminster, Bass, Henley and Grange (malt accreditation pending), Commander and Gairdner. Grange was grown at Westmere only.

The trials were sown using the SFS cone seeder on 20cm row spacing's using 2.5cm knife points. The trials were harvested on the 19th, 20th and 22nd of December.

Results & Discussion

Henley was the highest yielding variety at each site in 2012, performing at 108% of the average site mean. Westminster and Commander performed similarly, yielding an average of 101 and 102% of the average site mean respectively.

At Westmere there was no significant difference between any of the varieties.

At Dunkeld, Henley produced a significantly higher yield than Bass - which was the lowest yielding variety. Gairdner was the lowest yielding variety at both Inverleigh and Westmere.

Table 1 Variety performance across all sites

Variety	Inverleigh		Westmere		Dunkeld		% site means across all sites
	Yield (t/ha)	% of Site mean	Yield (t/ha)	% of Site mean	Yield (t/ha)	% of Site mean	
Henley	6.29 a	108	8.33 a	107	8.17 a	107	108
Westminster	5.98 a	103	7.65 a	99	7.69 ab	101	101
Commander	5.83 a	107	7.41 a	96	7.84 ab	103	102
Grange			7.67 a	99			99
Gairdner	5.38 b	98	7.25 a	93	7.73 ab	101	98
Bass	5.82 a	107	7.42 a	96	6.71 b	88	97
Site mean	5.46	100	7.76	100	7.628	100	
LSD (p=0.05)	0.8		1.12		1.15		
CV	8.6		8.69		8.86		

Means followed by same letter do not significantly differ ($P=0.05$). All yields treated with fungicide.

Table 2 below allows us to compare quality performance in relation to grade and therefore gross income. Generally speaking, low proteins were observed suggesting that there was more yield potential for all varieties.

All varieties met receival standards for retention and screenings at all sites.

Table 2 Yield and quality of all varieties at Inverleigh, Westmere and Dunkeld

Inverleigh								
Variety	Intended grade	Yield treated (t/ha)	Protein (%)	Test Weight (kg/hl)	Retention (%)	Screenings (%)	Actual Grade	Gross Income (\$/ha)
Henley	Feed	6.29	10.7	62.6	96.0	1.0	Feed	1699
Westminster	Malt	5.98	11.4	63.6	98.0	0.3	Feed	1615
Bass	Feed	5.82	10.4	64.8	97.7	1.0	Feed	1571
Commander	Malt	5.83	10.4	64.7	96.7	1.0	Feed	1574
Gairdner	Malt	5.38	10.8	65.4	92.0	2.0	Malt	1506

Westmere								
Variety	Intended grade	Yield treated (t/ha)	Protein (%)	Test Weight (kg/hl)	Retention (%)	Screenings (%)	Actual Grade	Gross Income (\$/ha)
Henley	Feed	8.33	9.9	64.4	97.7	1.0	Feed	2249
Westminster	Malt	7.65	10.4	67.5	97.0	1.0	Malt	2141
Bass	Feed	7.42	10.4	66.6	98.7	1.0	Feed	2003
Commander	Malt	7.41	9.4	67.3	97.0	1.3	Malt	2076
Gairdner	Malt	7.25	9.4	66.8	94.7	1.3	Malt	2031
Grange	Feed	7.67	10.2	67.1	97.7	1.0	Feed	2071

Dunkeld								
Variety	Intended grade	Yield treated (t/ha)	Protein (%)	Test Weight (kg/hl)	Retention (%)	Screenings (%)	Actual Grade	Gross Income (\$/ha)
Henley	Feed	8.17	10.3	62.3	93.5	1.8	Feed	2206
Westminster	Malt	7.69	10.9	63.6	87.0	3.7	Feed	2077
Bass	Feed	6.71	10.7	66.7	96.7	1.0	Feed	1812
Commander	Malt	7.84	10.2	66.5	94.7	2.3	Malt	2194
Gairdner	Malt	7.73	11.4	66.9	87.7	3.3	Malt	2164

Gairdner, Commander and Bass were the only true malt barley varieties grown in this trial. All other varieties are pending malt accreditation in 2013. Gairdner was the most consistent performer, meeting receival standards at all 3 sites. Commander produced a higher grain yield than Gairdner and only just missed out on meeting test weight specifications at Inverleigh which would have qualified it for malt receival at all three sites. Westminster made malting quality at Westmere but was let down by low test weights at Dunkeld and Inverleigh.

Henley made the highest gross income out of all the varieties at all three trial sites. At Inverleigh, Gairdner received the lowest gross income, despite receiving the higher price due to its malting quality. Commander received a higher gross income than Gairdner, but was still lower than Henley and Westminster which both only qualified for feed barley.

At Westmere, Bass received the lowest gross income. Westminster and Commander, both of which met malting requirements, produced the second and third highest gross incomes respectively. Gairdner produced the second lowest gross income.

Bass again brought in the lowest gross income at Dunkeld. Commander brought in the second highest gross income with Gairdner coming in third.

Commercial application - what does this mean for the grower?

Figure 1 illustrates data collected by NVT in the Southwest of Victoria over a number of years. Westminster, over 11 trials, has produced the highest yielding variety with an average yield of just over 5t/ha.

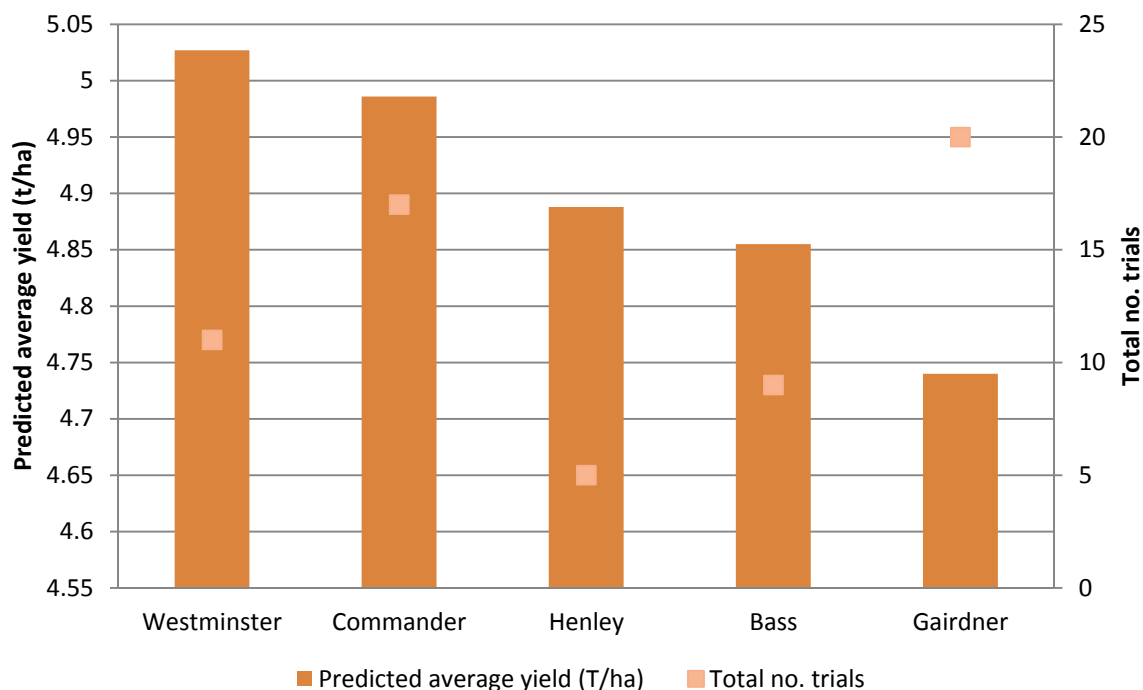



Figure 1 Long term NVT data taken from Southwest Victorian trials.

Henley, which was our highest yielding variety across the three sites, is ranked 3rd, below Westminster and Commander.


Gairdner, in 20 trials in the district, has the lowest average yield of these 5 varieties. It has, on average, produced 0.29t/ha less than Westminster. Gairdner produced the lowest grain yield in 2012 at 2 out of our 3 sites it was grown.

Westminster, Henley, Bass and Grange are all promising varieties for the malt market. Westminster already in 2012 was received by Malteurop as a malt variety in some areas despite not yet being properly accredited.

In 2012 growing a malt variety over a feed variety did not have much of an economic benefit. With the price difference between feed and malt only being \$10 in January, in hindsight there wasn't a lot of incentive to grow a malt variety over a feed variety.



*“from little things,
big things grow”*



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