Barley Variety Demonstration

Aim: To assess the yield and quality of a number of barley varieties in the medium rainfall zone.

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Company: Liebe Group

Farmer: Carlshausen Family
Location: Wubin

Background: Two new malting barley varieties have recently been endorsed by the Western Malting Barley Council. Hamelin is an early spring maturity replacement for Stirling from a Stirling/Harrington cross. The grain plumpness of Hamelin is smaller than Stirling. It is susceptible to powdery mildew, barley leaf rust and spot type net blotch. Baudin is a medium maturity variety from a Stirling/Franklin cross intended for higher rainfall areas. The grain plumpness of Baudin is smaller than both Stirling and Hamelin. It is susceptible to net and spot type net blotches, barley leaf rust and powdery mildew. The Western Malting Barley Council is currently evaluating another medium maturity crossbred WABAR2175 with a grain plumpness similar to Hamelin, but with a better disease resistance profile. Mundah is being widely adopted due to the risk of not delivering malting grade barley in medium and low rainfall areas.

Trial Details:

Plot size and replication	100m x 12.8, 2 replications
Soil type	Sand over Gravel
Sowing date	22nd May
Conditions at sowing	Sown into moist soil
Machinery	Nichols Bar, press wheels
Seeding rate	70 kg/ha, sown at 2cm depth
Fertiliser	22nd May 70 Agstar/ 40L flexi-N
Herbicides and Insecticides	22nd May: 1.7L treflan/140gram metribuzin/1.2L Spray.Seed 15th July: 1L Triadamefon/800ml Amine 625/ 5g Logran/ 1% Wetter/ 200mL Cypermetherin
Paddock History	2003 = Wheat, 2002 = Wheat, 2001= Pasture

Table 1: Grain yield, grain quality and receival grade.

Variety	Yield (t/ha)	Protein (%)	Screenings (%<2.5mm)	Colour (L)	Grade
Stirling	3.26	10.3	5	60	Malt/Shochu
Hamelin	3.29	10.9	9	61	Malt
Baudin	3.72	9.8	17	62	Malt
Gairdner	3.71	9.9	17	63	Malt
WABAR2175	3.45	9.9	8	62	Malt
Mundah	3.65	10.0	9	59	Feed
LSD	0.58				

Table 2: Gross return ($/ha) with and without Stirling Shochu premium.

	Shochu premium			No Shochu premium		
Variety	Farm gate price ($/t)	Gross return ($/ha)	Gross return rel Stirling	Farm gate price ($/t)	Gross return ($/ha)	Gross return rel Stirling
Stirling	$ 169.43	$ 552	$ 0	$ 149.43	$ 487	$ 0
Hamelin	$ 149.60	$ 492	-$ 60	$ 149.60	$ 492	$ 5
Baudin	$ 143.56	$ 534	-$ 18	$ 143.56	$ 534	$ 47
Gairdner	$ 146.56	$ 544	-$ 9	$ 146.56	$ 544	$ 57
WABAR2175	$ 150.19	$ 518	-$ 34	$ 150.19	$ 518	$ 31
Mundah	$ 119.34	$ 436	-$117	$ 119.34	$ 436	-$ 52

Assumptions – malt barley = $193/t, feed barley = $165/t. Variety premium for Baudin, Hamelin, Gairdner and WABAR2175 = $5/t. Shochu premium = $20/t. EPR of Baudin, Hamelin and WABAR2175 = $3/t. Receival standards applied as per 2004/05 harvest.

Results and Summary:

- All varieties with a malting classification were received as malting.
- The grain plumpness of the malting varieties was as expected: Stirling (5%) < Hamelin & WABAR2175 (9%) < Baudin & Gairdner (17%).
- Whilst there was no significant difference in grain yield, there was a trend towards higher yields from Baudin and Gairdner.
- Returns from growing Mundah feed barley were less than growing malting barley.
- Where a grower has CBH-QA, Stirling is the best variety option in this environment at the moment due to the $20 premium currently offered and the plumpness of its grain.
- If there was no premium for Shochu or a grower was not CBH-QA'd then Gairdner and Baudin might be options to consider for early to mid May sowing as they returned $50/ha more than Stirling in this trial. Longer-term trials suggest that Baudin is plumper than Gairdner and this may be beneficial to its success.
- If released, WABAR2175 is likely to be the best option of the new malting barley varieties for this region as its screenings are comparable to Hamelin, but it has a better grain potential and disease resistance profile. Its late maturity will not suit growers who plant barley late in their program.

Technically reviewed by: Blakely Paynter, Department of Agriculture, Northam