

Compass 

Version : Dec 2016

Barley

VARIETY SUMMARY

- Exceptional grain yield
- Domestic and export malt quality profile (malt accreditation decision expected March 2018)
- Low screenings and high retention package
- CCN resistance
- Mid to early maturity
- Medium - tall plant height with good head retention

Yield tables: Long term (2009-2015) analysis of grain yield from NVT trials % Regional MET.

Northern New South Wales & Queensland

Variety	New South Wales		Queensland		
	North West	North East	Central	South East	South West
Compass	111	114	115	112	114
Commander	109	107	109	109	101
Hindmarsh	104	105	-	-	-
LaTrobe	104	106	109	101	109
Shepherd	-	-	105	105	106
Regional MET	3.42	3.44	3.15	3.83	3.12

Victoria and Southern New South Wales

Variety	Victoria					New South Wales	
	Mallee	Wimmera	North Central	North East	South West	South West	South East
Compass	120	123	114	115	105	117	113
Commander	104	106	105	103	104	101	104
Hindmarsh	112	114	104	106	100	112	106
LaTrobe	113	115	107	108	103	112	108
Regional MET	2.64	3.18	3	3.6	5.05	3.24	3.59

South Australia

Variety	Lower Eyre Peninsula	Upper Eyre Peninsula	Yorke Peninsula	Mid North	Murray Mallee	South East
Compass	113	120	117	116	121	115
Commander	103	106	105	105	107	105
Hindmarsh	108	111	110	110	106	107
LaTrobe	110	113	112	111	108	109
Regional MET	4.11	2.85	3.61	4.05	2.37	4.11

Western Australia

Variety	AgZone 1	AgZone 2	Agzone 3	Agzone 4	AgZone 5	AgZone 6
Compass	109	111	117	117	111	103
Bass	103	92	101	96	97	100
Hindmarsh	108	113	107	121	113	105
LaTrobe	111	111	115	117	112	108
Regional MET	2.66	2.51	4.06	1.61	2.91	3.00


AREA OF ADAPTATION & GRAIN YIELD

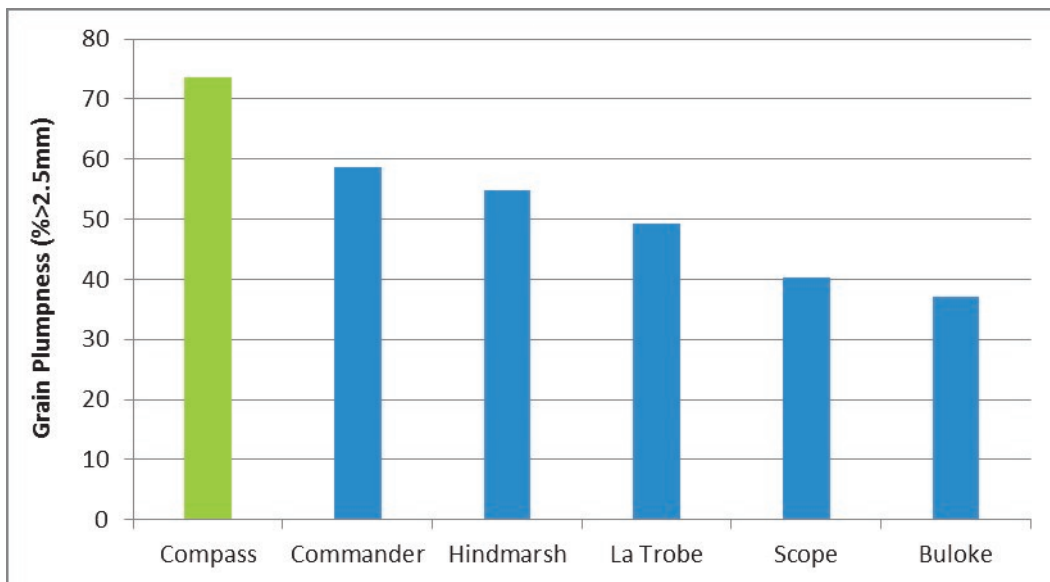
Compass is a broadly adapted variety that is suited to all barley growing areas of Australia, including QLD, NSW, VIC, TAS, SA and WA.


BREEDING

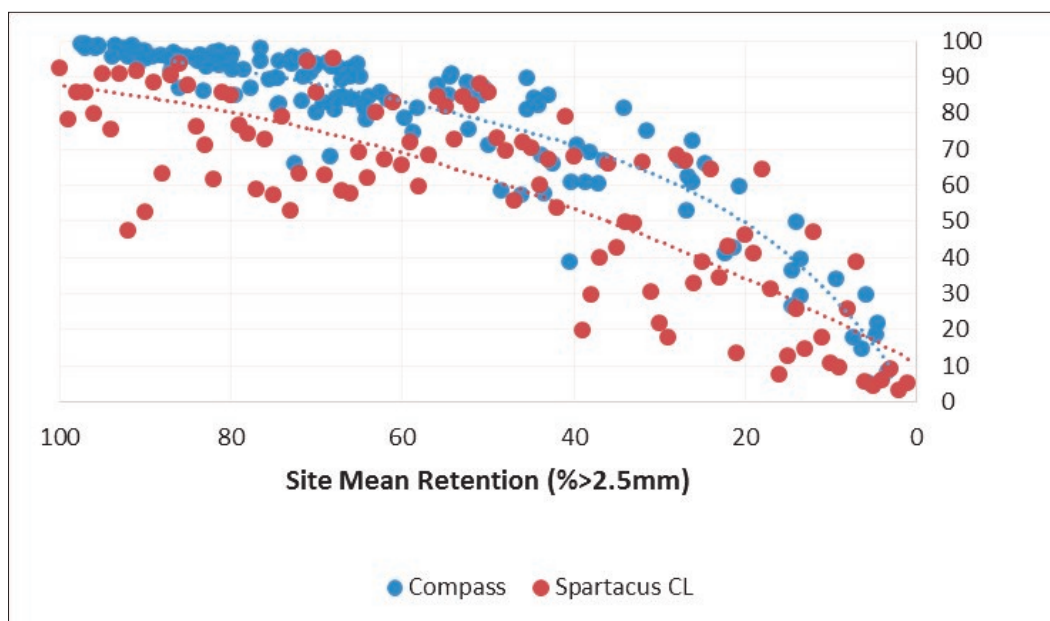
Compass was developed by the University of Adelaide with support from Viterro and GRDC. Its pedigree includes Commander and a European variety named County.

 **GRAIN QUALITY**

Compass is the new standard for grainsize, with lower screenings and superior grain plumpness. The graph below shows mean grain plumpness (% > 2.5mm) from National Variety Trials in the Upper Eyre Peninsula of SA in 2015. This group of trials experienced significant moisture stress during grain filling with Compass standing out as the only variety meeting the 70% retention limit for malting barley.



The grain plumpness (%>2.5mm) of Compass compared to Spartacus CL is shown in the graph below. Grain plumpness is plotted as a function of the trial site mean retention for each of 139 NVT conducted in 2014 and 2015. Compass has significantly better grainsize and the advantage increases in more stressed conditions. Across 2014 and 2015 Compass exceeded the 70% retention standard for malting grade in 76% of the trials, whereas Spartacus CL exceeded the retention standard in 55% of the trials evaluated.



The higher yield potential of Compass means crop nutrition must be appropriately considered. In trials where a single nitrogen regime is applied, Compass is typically 0.4% lower in grain protein than Commander.

DISEASE RESISTANCE

Compass offers a strong disease resistance profile. Compass has superior net form net blotch resistance than Commander and Fleet, although the nature of this disease means all varieties should be monitored in high risk situations. Compass provides resistance to CCN and compared to Hindmarsh, it also offers improvements in resistance to powdery mildew, black point and spot form net blotch.

The ratings for Compass in the table below are based on NVT field reactions where natural and mixed field pathotype infections have occurred and observations from the Elite Barley Disease Nurseries (EBDSN) conducted by each of the state cereal pathologists.

Table: Regional disease ratings for Compass

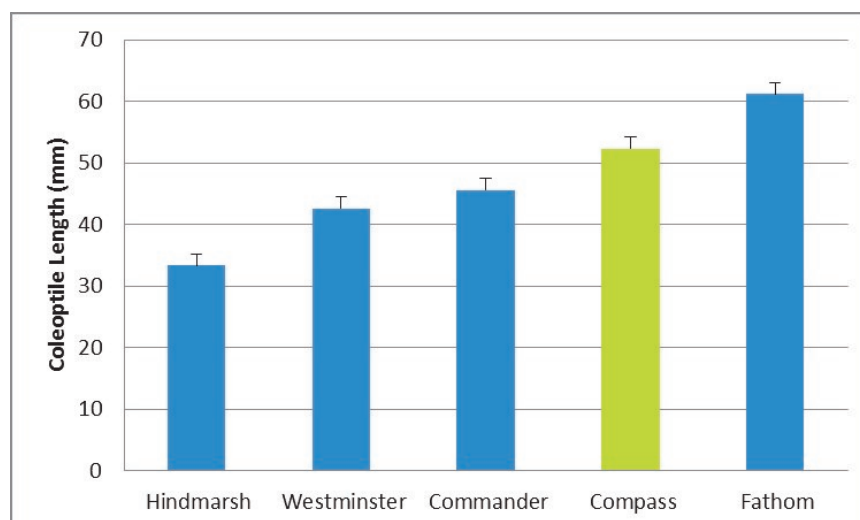
	Queensland	New South Wales	Victoria	South Australia	Western Australia	Tasmania
CCN	-	-	-	R	-	-
Powdery Mildew	MR-S	MR-S	RMR#	MR	MRMS	MS
Leaf Scald	-	SVS	SVS	MS-SVS	-	-
Leaf Rust	VS	VS	VS	MR-VS	MSS	-
Spot Form Net Blotch	MRMS	MSS	MSS	MR-MSS	MSS	-
Net Form Net Blotch	MRMS	MRMS	MR#	MR-MRMS	MRMS	-
BYDV	-	-	-	-	S*	MR*
Black Point	-	-	-	MSS	-	-

Indicates that regional differences in pathotypes are likely and therefore the Compass may perform better than the rating allocated. *These ratings are provisional – treat with caution. (-) Not tested in that region.

PLANT CHARACTERISTICS

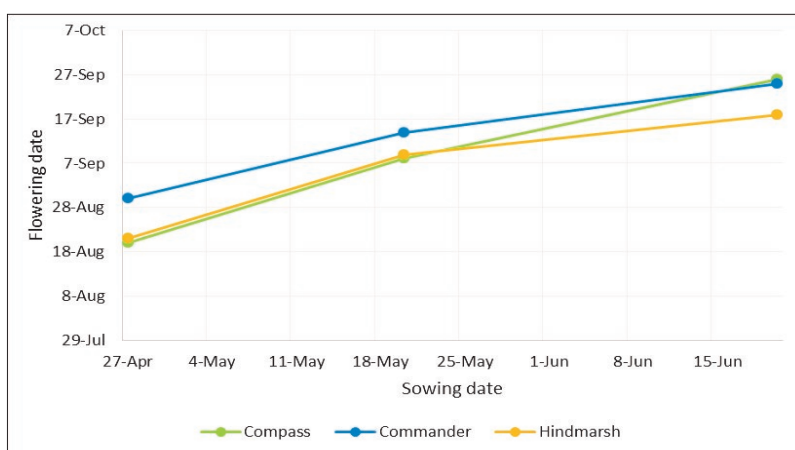
Compass is similar in plant architecture to Commander, but in some seasons and locations Compass can lodge more than Commander. In situations where early sowing and high fertility result in high biomass Compass crops, growth regulators can be used to reduce lodging.

Compass has good coleoptile length which improves potential crop establishment particularly with variable or deliberate deep sowing. Compass typically exhibits slightly longer coleoptile length than Commander and is considerably longer than Hindmarsh and LaTrobe.

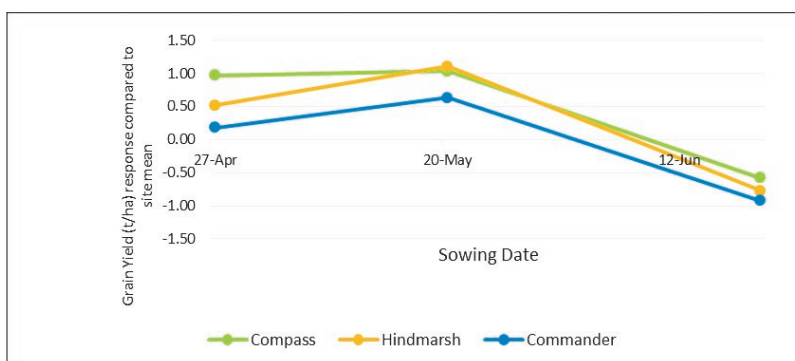


 **VARIETY MATURITY**

Compass is an early flowering spring barley. When sown in late April - early May, Compass typically flowers at a similar time to Hindmarsh (see graph below) and up to 10 days earlier than Commander. This difference becomes less as sowing is delayed and the further north it is grown, due to Compass being slightly less sensitive to day length than Commander. Growers need to consider their regional frost risk if sowing Compass early due to its early flowering behaviour. With delayed sowing Compass will flower more similar to Commander.



Compass has demonstrated superior adaptation and yield stability across multiple sowing dates. Compass shows consistent yield improvement over both Commander and Hindmarsh sown from late April on (see graph below) in typical growing conditions experienced in SA.

 **PLANT BREEDER RIGHTS AND ROYALTIES**

Compass is protected by Plant Breeder Rights, any unauthorised commercial propagation or any sale, conditioning, export, import or stocking of propagating material of this variety is an infringement under the Plant Breeder's Rights Act, 1994.

Growers are allowed to retain seed from production of this variety for their own use as seed only.

An End Point Royalty of \$3.80 + GST per tonne which includes breeder royalties, applies to this variety.

ACKNOWLEDGEMENTS

Compass was bred by the University of Adelaide with support from Viterra and GRDC.



For more information call **Seednet** on **1300 799 246** or visit **www.seednet.com.au**

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