

# Flagship<sup>®</sup>

## Malting Barley

### FEATURES AND BENEFITS

- **High yielding – up to 7% higher when compared to Schooner and Sloop varieties across all areas of SA**
- **Exceptional and unique export malting quality**
- **Improved range of disease resistance against competing malt varieties. Most notably resistant to CCN and *Pratylenchus neglectus*, improved Spot form of net blotch and improved rust resistance**
- **Improved head retention resulting in improved harvestability**
- **Excellent early vigour and weed competitiveness**

### AGRONOMIC OVERVIEW

Flagship is a tall, early to mid maturing variety that is similar in plant type to both Schooner and Sloop. Flagship offers excellent early vigour and weed competitiveness. It has reasonable straw strength, and provides lodging resistance that is similar to Schooner and superior to the Sloop varieties.

Flagship is free threshing and has good resistance to head loss, a significant improvement over Schooner. Flagship exhibits good adaptation in the low to medium rainfall areas of southern Australia cereal production zones.

A significant point of difference of Flagship is its unique breeding. Flagship has beneficial malting quality drawn from European and Canadian genetics, applied to a robust Australian feed variety. This distinguishes Flagship from its Australian malting variety predecessors. Flagship's unique combination of characteristics allows bulk handlers, marketers and customers the ability to ensure varietal purity through established variety testing methods.

### INDUSTRY COLLABORATION

The release of Flagship barley heralds a watershed in the process of delivering quality malting barley cultivars to Australian growers. Representatives of the malting barley supply chain including breeders, maltsters, grain accumulators, marketers, distributors and growers have all been involved in the development of Flagship.

Flagship was bred by the University of Adelaide with the assistance of the Malting Barley Quality Improvement Program. ABB Grain, Joe White Maltings, Barrett Burston Malting and International Malting Company have worked together to develop international markets for Flagship. During 2006 over 1,000 tonnes of Flagship produced from contracted commercial crops will be evaluated by domestic and international customers to promote rapid international demand for Flagship in 2007 and beyond.

### GRAIN AND CROP DESCRIPTION

Flagship grain shows indications of being noticeably different to other major Australian barley varieties. This results in surety of visual identification when grain is delivered. Flagship appears to have a unique rachilla hair configuration with medium hair lengths sparsely populated along the grain's rachilla. This particular feature is noticeably different to that of Schooner, all Sloop varieties, Buloke, Gairdner and common feed varieties.

Furthermore Flagship, unlike Schooner, Buloke and all Sloop varieties has purple tinted awns, very similar to that of Gairdner. This makes crop identification much simpler compared to other varieties in the marketplace.



*"I have been growing Flagship for 4 years now and it's the best thing I have done on my farm for a long time."*

**Ian Westbrook,  
Arthurton, SA.**



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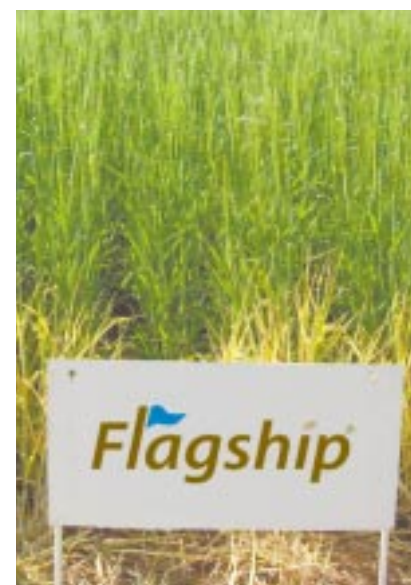
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## YIELD ANALYSIS

**Table 1: SA Barley Variety Yield Performance**  
(long term, 1999 - 2005, expressed as % of Schooner's yield)

VARIETY	LEP	UEP	MM	YP	MN	SE
Long Term Average (1999 - 2005)						
	Avg over 2 sites	Avg over 5 sites	Avg over 4 sites	Avg over 5 sites	Avg over 3 sites	Avg over 2 sites
Baudin	103	105	105	104	103	103
Buloke	107	113	115	109	106	107
Flagship	104	109	111	107	105	106
Gairdner	103	107	108	105	104	104
Schooner	100	100	100	100	100	100
Sloop	100	101	102	101	100	102
Sloop SA	101	103	104	102	102	102
Sloop VIC	99	100	101	101	100	100



**TRIAL SITES:** LEP = Lower Eyre Peninsula (Cummins and Wanilla), UEP = Upper Eyre Peninsula (Elliston, Mangalo, Minnipa, Streaky Bay, Wharminda), MM = Murray Mallee (Borrika, Cooke Plains, Lameroo, Paruna), YP = Yorke Peninsula (Arthurton, Brentwood, Bute, Port Clinton, Warooka), MN = Mid North (Crystal Brook, Salters Springs, Turretfield), SE = South East (Keith, Mundulla) **Source** – SARDI / GRDC & NVT (long term data based on weighted analysis of sites).

**Table 2: Long Term Yield Performance Data for 2000 - 2005 for Victorian Regions**  
(expressed as a percentage of the yield of Schooner or Gairdner)

Region	Mallee		Wimmera		North Central		North East	
Schooner t/ha	2.44							
Gairdner t/ha			2.99		3.14		4.37	
	Yield	Obs No	Yield	Obs No	Yield	Obs No	Yield	Obs No
	% Schooner		% Gairdner		% Gairdner		% Gairdner	
Baudin	102	35	97	24	97	19	97	11
Buloke	108	29	98	19	100	7	98	6
Flagship	102	22	93	15	97	7	92	5
Gairdner	104	44	100	29	100	11	100	12
Schooner	100	46	88	29	92	11	91	12
Sloop	102	46	92	29	96	9	94	11
Sloop SA	102	46	92	29	95	9	93	11
Sloop Vic	102	46	92	29	97	9	93	11



## DISEASE RESISTANCE

In comparison to other benchmark malting varieties within Australia, Flagship demonstrates significant improvement in disease resistance, (most notably resistance to CCN and improved net blotch spot form rating). Table 3 shows disease resistance ratings for key barley varieties in the Australian market.

Burston Malting and International Malting Company have all worked extremely hard to ensure significant demand for Flagship not only in 2007 but in the years to come. This high demand is likely to result in multiple receival points for Flagship once established within the southern regions of Australia. Despite Flagship not having domestic brewing classification,

**Table 3: Disease Reaction Results of Selected Barley Varieties**

	CCN		Powdery Mildew	Leaf Scald	Leaf Rust	Net blotch	
	Resistance	Tolerance				Spot Form	Net Form
Baudin	S	T	S	MS/S	VS	MS/S	MR
Buloke	S	T	-	MR	MS/S	MS/S	MR
Flagship	R	T	-	MS	MS	MR/MS	MR
Gairdner	S	T	R/MR	R/S*	MS	S/VS	MR
Schooner	S	T	S	MS/S	S	MS/S	MR
Sloop	S	T	S	S	S	S/VS	MR
Sloop SA	R	T	S	S	S	S/VS	MR
Sloop Vic	R	T	MR	S	MS/S	S	MR
Barque	R	T	MR	S/VS	MS	R/MR	MS
Capstan	R	T	MR	MR/S*	MS	MS/S	MR
Keel	R	T	MR/MS	MR/MS	VS	R/MR	MR/MS
Maritime	R	T	S	MS/S	MS	MR/MS	R
Yarra	R	T	S	S/VS	R	MS	MS

**Disease rating codes:** R = resistant; MR = moderately resistant; MS = moderately susceptible; S= susceptible; VS = very susceptible. \* = previously resistant varieties now susceptible to new races (in some areas) Information on disease reaction was supplied by the Field Crop Pathology Unit (SARDI)

## MALTING QUALITY

Flagship is set to be the number one provider of quality export malting barley and malt. Its outstanding malting quality profile displays a significant quality increase over all other Australian barley varieties, as well as being at minimum on par with leading international malting varieties.

The high diastatic power and fermentability of Flagship makes it unsuitable for Australian domestic brewing. However it is ideally suited to the high volume export market in China and South East Asia.

## GRAIN MARKETING

With the whole of industry involved in establishing international interest and demand for Flagship, opportunity for Australian grain growers is high. ABB Grain, Joe White Maltings, Barrett

there should be no effect on Australian growers finding a suitable channel to market it, because the international barley and malt demand and interest in Flagship is already high due to its superior malting quality.

*'I've found Flagship to have excellent early vigour and tillering while being very easy to harvest. I believe the biggest positive for Flagship is how it can be used to manage disease issues in our crop rotation'*

**David Jochinke – Murra Warra, Victoria**

# Flagship<sup>®</sup>

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### VARIETAL INTEGRITY

PlantTech and ABB Grain are both committed to the supply of quality seed to farmers throughout Australia. PlantTech's Seed Integrity Preservation (SIP) Quality Assurance Scheme is the only Government audited QA seed scheme in Australia. SIP involves crops being inspected by trained and independently audited Production Managers, specifically SIP ensures varietal identity maintenance is assured and the resultant seed is fully tested in accordance with International Seed Testing Authority (ISTA) rules.

Once Field Crops have been produced, processed, sampled and passed the relevant SIP standards, a highly visible, individually numbered SIP tag is attached to the bags, readily identifying that the seed has met all the required standards. Seed certificates for all seed tested by Seed Services are available online [www.planttech.com.au](http://www.planttech.com.au) (click on Seed Certificates menu bar and follow the directions), or contact PlantTech Customer Service toll free on 1800 112 400.

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### END POINT ROYALTY

End Point Royalties will be payable on Flagship barley. The collection manager for Flagship will be ABB Grain Ltd. For a copy of ABB's End Point Royalty seed license terms and conditions go to [www.abb.com.au](http://www.abb.com.au) or contact ABB toll free on 1800 018 205.

End Point Royalties are a type of levy on the total grain produced from the seed and replaces the seed royalty. Breeders are now electing to apply End Point Royalties on newly released varieties as a more equitable mechanism for generating a revenue stream back to the breeder.

Grain Quality	Breeders Royalty	Collection Fee	Total EPR
Malting	\$1.40	\$0.40	\$1.80
Feed	\$1.00	\$0.50	\$1.50

*Prices exclusive of GST*



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