

Shepherd[®]

Feed Barley

VARIETY SUMMARY

- High yielding medium quick maturing variety.
- Good levels of foliar disease resistance particularly leaf rust, powdery mildew and net form net blotch.
- Good hectolitre weights and plump grain.
- Ideal for maximising yield from a quick maturing line.
- Very good straw strength for a tall variety.



BREEDING

Shepherd (formerly NRB03470) was selected by Queensland Primary Industries and Fisheries (QPIF) as the Northern Node of Barley Breeding Australia (BBA) from material introduced from Western Australia as a Baroness and Cheri cross.



AREA OF ADAPTATION

Shepherd is a high yielding and reliable performer across the various geographical areas of the northern grain belt from central NSW to central Queensland. It has also shown promise in high yield irrigated sites in SNSW but more trials are required before recommendations can be made.



PLANT CHARACTERISTICS

Shepherd is a taller plant but has good straw strength and moderate tillering ability. It is a vigorous seedling with a longer than average coleoptile suited to deeper planting situations.

Good standability and post ripe straw strength make it a good choice for higher yielding environments.

Variety	Standability	Post ripe straw strength
Shepherd	Medium	Good
Grout	Medium	Medium
Fitzroy	Good	Medium
Grimmett	Medium-poor	Very good
Gairdner	Medium-good	Good
Mackay	Medium	Good
Hindmarsh	Good	Medium
Commander	Medium-poor	Medium-poor
Fleet	Poor	Poor



MATURITY

A medium-quick maturity variety, Shepherd is a day or two later than Grout and maintains this through most planting times and regions.

It is a good selection for later planting in eastern sites.



GRAIN QUALITY CHARACTERISTICS

Shepherd represents a further improvement on grain size and quality. Results over a number of seasons demonstrate a lower level of screenings and improved hectolitre weights with an attractive bright coloured grain. Shepherd is able to maintain grain quality in stressed environments better than most varieties. To enable this it may display tip sterility in stressed environments but no yield loss has been observed due to this characteristic.

Shepherd entered Barley Australia's commercial malting and brewing evaluation program in 2009.



YIELD

Over 4 years and 51 trials conducted by BBA throughout the northern grains region there is very little difference between the top 4 varieties for yield. Good straw strength means Shepherd will maintain standability for harvest in high yield conditions better than other tall varieties e.g. Grout and Commander, resulting in easier harvest.

Variety	Average BBA yield data 2005 - 2008				Average quality data	
	Yield All Trials t/ha	%Fitzroy	Yield Trials >3.5t/ha (17 trials)	%Fitzroy	BBA screenings All trials 2005 2008	Pork CRC screenings 2008 (8 trials)
Shepherd	3.08	108	4.38	106	5.7%	9.1%
Grout	3.16	111	4.29	103	9.6%	11.2%
Fitzroy	2.85	100	4.15	100	12.2%	21.7%
Grimmett	2.63	92	3.76	91	13.3%	na
Tallon	2.58	91	3.72	90	14.5%	na
Gairdner	2.58	91	3.84	93	11.8%	22.7%
Skiff	2.79	98	3.89	94	13.9%	33.9%
Binalong	2.71	95	3.89	94	17.5%	na
Mackay	2.87	101	4.24	102	12.0%	na
Hindmarsh	3.12	109	4.22	102	7.6%	10.8%
Commander	3.14	110	4.45	107	5.9%	15.9%

BBA Northern program replicated trials & Pork CRC strip trials

 **DISEASE RESISTANCE**

Shepherd shows very good levels of disease resistance for the northern grains region. In particular the level of leaf rust resistance is seen as a strategic advantage in the more eastern sites where leaf rust caused some losses in 2008.

Variety	Leaf Rust	Stem Rust	Net Blotch		Spot Blotch	Powdery Mildew	Crown Rot	Common Root Rot	Covered Smut
			Net Form	Spot Form					
Shepherd	MR	S	MR-MS	S-VS	MS-S	R	S	MS	R
Grout	VS	S	R-MR	S	S	R	MS	MS	S
Fitzroy	R	S	MR	S	S	S	S	MR	VS
Grimmett	S	S	S-VS	S	S-VS	S	MS	MR-MS	VS
Tallon	S	S	S	S	S-VS	MR-R	S	MR	MS-S
Gairdner	S	S	MR	S-VS	S	S	S	MR-MS	S
Schooner	S	MS-S	R	MS-MR	S	S	S	VS	R
Binalong	S	S	VS	S	S	R	S	MR	S
Mackay	MR	S	MR-MS	S-VS	S	MR	MS-S	MR-MS	MS-S
Hindmarsh	MS	S	MR-MS	S-VS	S	MR	-	-	-
Commander	S	S	MR	MR-MS	S	MR-MS	MS-S	-	-
Fleet	MS-S	S	MR	MR	S	MR	-	-	-

Disease terms: R – Resistant, MR – Moderately Resistant, MS – Moderately Susceptible, S – Susceptible, VS – Very Susceptible

 **AGRONOMIC GUIDELINES**

Shepherd is a high yielding variety which offers growers extra yield potential and better grain quality in higher yield situations. It's medium quick maturity makes it highly adapted to a wide range of planting times and conditions across the northern grain belt of Northern NSW, southern, central and northern Queensland. Good levels of leaf rust resistance make Shepherd an ideal alternative to Grout in the eastern and northern regions where leaf rust has been an issue.

It has shown consistent yield across planting times and has also demonstrated good dry matter yields making it suited to hay or silage production. Although standability is above average, avoid very

high plant populations (over 120 plants/ metre square) as this may increase lodging.

 **PLANT BREEDER RIGHTS AND ROYALTIES**

Shepherd 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 \$2.53 per tonne (GST inclusive), which includes breeder royalties, applies to this variety.

ACKNOWLEDGMENTS

Shepherd was bred by the Queensland Department of Primary Industries and Fisheries with support from growers through the GRDC and the Pork CRC.



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