

Sentinel ^{3R}

Milling Wheat

VARIETY SUMMARY

- Resistant to current field strains of stem, stripe and leaf rust.
- Mid to long season wheat with good acid soil tolerance.
- High and stable yield potential.
- ASW Classification – Vic, NSW and SA.



BREEDING

Sentinel is licensed to LongReach Plant Breeders by CCBenoist S.A.S., a wholly owned subsidiary of Syngenta Seeds. CC Benoist has wheat breeding operations in Europe and South America. The materials from which Sentinel is derived have been further selected and evaluated in Australia by LongReach since 2002.



AREA OF ADAPTATION

Sentinel is ideally suited to the high rainfall areas of South Australia, Victoria, Tasmania and New South Wales.

Sentinel has also performed well under high input irrigation systems trials in the MIA & Namoi Valley. 2007 trial highlights include yields of 10t/ha without fungicide sprays at Hamilton Vic, and on irrigation at Darlington Point, NSW.



PLANT CHARACTERISTICS

Sentinel is a mid to long season variety of medium height and excellent shattering and lodging resistance.



AGRONOMIC GUIDELINES

- Sentinel generally performs best when planted in mid-May in mid-long season environments.
- Sentinel has not displayed any sensitivity to any commonly applied pre or post emergent pesticides.
- Coleoptile length is short and caution is recommended for seed dressings and pre-emergent pesticides which warn of harm to coleoptiles.



DISEASE RESISTANCE

Sentinel has been tested under a range of fungicide management and disease pressure situations in 2004 & 2005. The stripe rust resistance has held up well in all situations. Sentinel has good all-round resistance to the major foliar diseases, and the only response to fungicide was in one trial in NE Victoria in 2005 under “European” growing conditions. In this trial, all varieties showed increased green leaf retention due to fungicide, resulting in increased yields.

Table 1: Disease Resistance of Sentinel compared to selected VIC & NSW varieties.

2008 Disease ratings										
Variety	Stem rust	Stripe rust (minimum)	Leaf rust	Yellow Leaf Spot	CCN	Septoria tritici	Crown rot	Black Point	Pratylenchus neglectus	Pratylenchus thornei
VIC DPI										
Chara	MR-MS	MS-S	MS	MS-S	R	MS-S	S	MS	S	MR
EGA Wedgetail	-	MR-MS	MS	MS-S	S	MR	-	MS	-	-
Kellalac	MS-S	MR-MS	S-VS	S	MR	MS	-	-	-	S
Mitre	R	MS-S	MS	S	R	MS-S	S	S-VS	S	S
Sentinel 3R	R-MR	R-MR	R	MR-MS	S	-	MS	-	S	MS
NSW DPI										
EGA Gregory	MR-MS	R-MR	R	MS-S	S	MS	MS-S	MS	MS-S	MR-MS
Ellison	R-MR	MR-MS	R	R-MR	-	MS-S	S	MS	S	VS
Giles	R-MR	MR-MS	R	MS	-	MR-MS	MS-S	MS	MS-S	MS
Sentinel 3R	R	R-MR	R-MR	MR-MS	S	R-MR	MS	R-MR	S	MS
Strzelecki	MR-MS	R	R	MR	-	-	MS-S	MS	MS	S

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

 **YIELD****Table 2 :** Long term wheat yields for Victoria and New South Wales.

Variety	VICTORIA (DPI)				Variety	NEW SOUTH WALES (DPI)			
	2000-2007 Main season		Early sown			2000-2007 Early sown			
	Nth Cen % Yitpi	Nth East % Janz	Nth East % Kellalac	Sth West % Kellalac		Sth East % Wylah	Sth West % Wylah	Nth East %Sunbri	Nth West % Sunbri
Chara	98	99	104	103	EGA Gregory	109	106	112	108
EGA Gregory	96	101	104	101	EGA Wedgetail	103	101	105	98
EGA Wedgetail	93	96	101	101	Ellison	106	101	101	100
Kellalac	94	98	100	100	Giles	109	108	113	109
Mitre	99	98		100	Sentinel 3R	116	112	117	113
Sentinel 3R	99	103	108	106	Strzelecki	104	100	106	103
Whistler	95	100	103	102	Sunzell	110	106	114	109

 **HARVEST & GRAIN QUALITY**

Sentinel is classified ASW in SA, VIC and NSW. The *Golden Rewards payment system* means the combination of Sentinel's higher yields, lower screenings and higher grain proteins increase grower returns over varieties of higher classification.

Sentinel is resistant to Black Point and has equivalent pre-harvest sprouting resistance to Janz. Tests at Adelaide University have shown Sentinel to be free of Late Maturing Alpha—Amylase (LMA).

 **PLANT BREEDER RIGHTS AND ROYALTIES**

Sentinel is protected by Plant Breeders Rights (Part I), 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 Right 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 \$1.98 per tonne (GST inclusive), which includes breeder royalties, applies to this variety.

Table 3. Grain quality of Sentinel compared to selected VIC varieties

Average 2007 VIC Quality data (DPI) Variety	Wimmera		Nth Central & Nth East		South West	
	Protein %	Screenings %	Protein %	Screenings %	Protein %	Screenings %
		2mm		2mm		2mm
Chara	13.6	1.0	14.5	2.7	11.1	1.7
EGA Gregory	12.4	2.5	12.9	2.0	11.4	1.0
Kellalac	-	-	-	-	10.7	1.3
Sentinel 3R	13.0	2.1	12.5	1.4	11.8	0.2

ACKNOWLEDGMENTS

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For more information call **Seednet** on **1300 799 246**
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