

LongReach Catalina wheat

VARIETY SUMMARY

- Reliable main season AH variety with high and stable yield potential
- Excellent grain size and low screenings in tight finishes
- Moderately Resistant to stem rust with an excellent gene combination for durable resistance
- Excellent CCN and good Yellow Leaf Spot resistance



BREEDING

Catalina (LPB 0268) was selected in 2001 by Dr Lindsay O'Brien, from early generation materials in the former VIDA - Horsham wheat breeding program. Since 2002, it has been further selected and evaluated by the LongReach Plant Breeders technical team, led by Dr Bertus Jacobs, in national trials network.

The line was entered in independent agronomy and NVT trials in NSW, SA, Victoria and WA in 2005. It is entered in a wider range of commercial trials and all relevant NVT regions in 2006.



YIELD

Catalina has demonstrated a high and stable yield potential in both LongReach trials and the NVT on alkaline soils of SA and Victoria, where yields have been superior to local benchmarks. Catalina has out-yielded Yitpi and Frame in LongReach trials in South Australia and the Victorian Mallee.



AREA OF ADAPTATION

Catalina has consistently performed well in trials across the southern Australian wheat belt. It is particularly suited to production in medium rainfall regions of South Australia and Victoria. Broad adaptation is a hallmark of Catalina, which has performed well in a range of regions and seasonal conditions including in Southern NSW and Western Australia.



MATURITY

Catalina performs best when planted in late May - early June in mid season environments and is early - mid in maturity. It is a few days later to start heading than Wyalkatchem with slightly later maturity.



PLANT CHARACTERISTICS

Catalina is an awned semi-dwarf variety with medium plant height at maturity. It has medium to long coleoptiles and exhibits good emergence, seedling vigour and tillering.

Catalina has strong straw, excellent lodging and shattering resistance. Excellent CCN resistance and improved Yellow Leaf Spot resistance makes it a suitable choice for Mallee wheat-on-wheat rotations. Research shows Yellow Leaf Spot causes yield losses of 5-10%, and is a management issue in stubble retained, continuous wheat rotations.

Catalina has not displayed any sensitivity to any commonly applied pre or post emergent pesticides.

Table 1: Catalina multi-site, multi-season yield comparisons.

Variety	Yield (t/ha)				Normalised Data (% of Yitpi)			
	SA NVT 2005	SA-VIC 2005	SA-VIC 2004	SA-VIC 2003	SA NVT 2005	SA-VIC 2005	SA-VIC 2004	SA-VIC 2003
Annuello	4.02	2.37	2.27	3.16	95	95	86	88
Catalina	4.18	2.69	2.77	3.27	98	108	105	91
Frame	4.00	2.65	2.50	3.27	94	106	95	91
Janz	3.94	2.60	2.49	-	93	104	94	-
Pugsley	4.77	3.18	2.51	-	112	128	95	-
Silverstar	-	2.28	2.57	-	-	91	97	-
Wyalkatchem	3.90	2.62	2.82	3.62	92	105	106	101
Yitpi	4.24	2.49	2.65	3.59	100	100	100	100
Site Mean Yield (t/ha)	4.12	2.42	2.35	3.24	4.12	2.42	2.35	3.24
No. of trials	4	7	4	2	4	7	4	2

Note: LRPB trials were not sprayed with fungicide.



DISEASE RESISTANCE

Catalina's Stripe rust resistance is a significant improvement on Wyalkatchem and is superior to Yitpi, being based on a combination of Seedling and Adult Plant Resistance genes. Under high Stripe rust pressure, as occurred in the epidemic conditions seen in many areas in 2005, Catalina may require a single foliar fungicide application at about flag leaf emergence. This application should not be required in early finishing Mallee districts where the "slow rusting" nature of the variety is expected to provide adequate protection to maximise yield.

Catalina's durable Stem rust resistance is delivered from a combination of 3 genes that are being effectively deployed in existing varieties in northern and southern Australia. The Leaf rust resistance is also multi gene and is very effective against the current races. Catalina does not rely on the "VPM" set of single gene resistances for Stem, Leaf & Stripe Rust. Growers should note that the Stem rust race prevalent in WA and SA in autumn of 2006 was the VPM attacking strain.

Table 2: Disease and Pest Resistance of Catalina

Variety	Rust			CCN		S. tritici	Yellow Spot	RLN (P. neglectus)		RLN (P. thornei)		Soil Boron	Crown Rot	Common Root Rot
	Stripe	Leaf	Stem	Res	Tol			Res	Tol	Res	Tol			
Catalina	MR	R-MR	MR	R	-	S*	MR-MS	S*	-	MS*	MT	I	S*	MR-MS*
Correll	MR-MS	MS	MR	MR	-	MR-MS	S-VS	MS-S	-	-	-	MT	MS	-
Frame	MR-MS	MS	MR-MS	MR	MT	MS	S-VS	MS-S	MT-T	S	MI	MT	S	S
Krichauff	S	S	MR	S	MT	MS	MS	MR	MT	MS	MI	MT	MS	MR
Mitre	MS-S	MR-MS	R-MR	R	MI	-	MS	MS-S	-	MS-S	-	I	MS-S	-
Pugsley	MR/S#	MR	MR#	MS	MI	MS	S	S	MT	MS	-	MT	MS	MR
Scythe	MS-S	MS-S	MR	S	-	MS-S	S	MS	-	MS-S	-	I	MS	MR
Westonia	VS	S	S	S	-	S	MS	MS-S	MT	MS	-	MT	-	MS
Wyalkatchem	MS-S	MR	MS	S	MI	MR-MS	MR	MR	MT-T	MR-MS	-	I	S	MR-MS
Yitpi	MR-MS	MS	S	MR	MT	MS	S-VS	MR-MS	MT-T	MS	-	MT	MS	S

Notes: # = may be susceptible if VPM strain is present, *Preliminary summary for 2005 (NVT 2005)

R = resistant, MR = moderately resistant, MS = moderately susceptible, S = susceptible, VS = very susceptible, T = tolerant, MT = moderately tolerant, MI = moderately intolerant, I = intolerant, VI = very intolerant.



GRAIN QUALITY

Catalina has a classification of Australian Hard (AH) for South Australia and APW in SNSW with potential for upgrade to AH. It will be classified in Victoria in November 2006.

Catalina has large plump grain and performs well in tight finishes. Screenings, test weights and grain weight over a range of seasons and environments in WA, SA and Victoria have been equivalent to Frame and Yitpi.

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



PLANT BREEDER RIGHTS AND ROYALTIES

Catalina will be protected by Plant Breeder Rights. An End Point Royalty will be payable on all grain production of the line except for seed retained by the grower for their own use as seed for planting. Unauthorised grower to grower seed sales will not be permitted. The EPR revenue will be invested directly back into the LongReach Plant Breeders program.

ACKNOWLEDGEMENTS

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For more information call **AWB Growers Service Centre** on **1800 054 433**
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