

DBA Vittaroi

Durum Wheat

The information in this document is current as at May 2019. For updated information after this date, please refer to NVT results.

VARIETY SUMMARY

- Early to mid maturity
- Replacement for EGA Bellaroi in irrigated cropping, alternative to DBA Aurora in S.A.
- Excellent tolerance to lodging
- Good resistance to all three rusts
- Low screenings and high protein
- Excellent semolina and pasta making quality

BREEDING

DBA Vittaroi was bred by the NSW DPI node of Durum Breeding Australia (DBA) at the Tamworth Agricultural Institute under the breeder code 280913.

Pedigree: 200856 x 980990 (both are experimental breeding lines from Tamworth DBA program).

AREA OF ADAPTATION

DBA Vittaroi is adapted to both northern and southern durum producing areas.

DBA Vittaroi is sensitive to acidic soils and it is not recommended for soil with pH (CaCl₂) below 5.5

- In QLD and NSW, including irrigation regions, DBA Vittaroi is a replacement for EGA Bellaroi.
- In SA and VIC, DBA Vittaroi is an alternative to DBA Aurora.

PLANT TYPE

DBA Vittaroi produces vigorous seedlings and has erect plant growth. It is shorter in stature than EGA Bellaroi, Caparoi and DBA Aurora with excellent straw strength.

MATURITY

DBA Vittaroi is an early-mid maturing durum. Suggested sowing time is mid/late May to end of June.

- In NSW it has a heading maturity approximately 7 days earlier than EGA Bellaroi.
- In SA and VIC its heading maturity is similar to slightly earlier than DBA Aurora.

GRAIN QUALITY

DBA Vittaroi has been classified ADR by Wheat Quality Australia for the northern and southern NSW, QLD, SA and VIC.

DBA Vittaroi produces large grain, low screenings and readily achieves 13% protein in dryland and irrigated conditions.

- In NSW trials it produces larger grain but slightly lower protein than EGA Bellaroi.
- In SA trials it produces lower screenings than DBA Aurora and generally also higher protein.

2017 NVT	Variety	Screenings %	1000 grain wt (g)	Protein %
Northern region	DBA Vittaroi	1.9	37.4	14.0
	EGA Bellaroi	2.7	37.1	15.4
SA	DBA Vittaroi	2.1	37.6	13.5
	DBA Aurora	4.5	36.6	13.5

DISEASE RESISTANCE RATINGS

NSW disease ratings for DBA Vittaroi compared with EGA Bellaroi, Caparoi and DBA Aurora (NVT May 2019).

Variety	Rust Resistance			RLN (<i>P. thorneii</i>) Resistance / Tolerance	RLN (<i>P. neglectus</i>) Resistance / Tolerance	Yellow Leaf Spot	Septoria tritici	Crown Rot	Common Root Rot	Black-point
	Stem rust	Leaf rust	Stripe rust							
DBA Vittaroi	MR	MR	MR	MR/-	MS/-	MR-MS	MS	SVS	MS-S	MS-S
EGA Bellaroi	MR	MR-MS	MR	MR/MI	MS/MI-I	MR	MR-MS	VS	MR	R-MR
Caparoi	R-MR	R-MR	MR	MR / MI	MS/ MI-I	MR	MR-MS	VS	MR-MS	MS-S
DBA Aurora	R-MR	R-MR	R-MR	R-MR/MT-T	MR-MS/-	MR-MS	MR	VS	MS-S	MS-S

GRAIN YIELD DATA

DBA Vittaroi has performed better than EGA Bellaroi in dryland and irrigated trials in the northern region over a number of years. (2016 data was not consistent with other years due to wet conditions and frost at some sites).

Summary of 2014-17 multi-environment analysis of northern durum NVT (yield expressed as a percentage of Caparoi).

Variety	Central QLD	Sth east QLD	Sth west QLD	Nth east NSW	Nth west NSW	Sth west NSW	OVERALL
DBA Vittaroi	104	103	102	105	104	104	104
EGA Bellaroi	85	94	94	93	94	101	95
Caparoi	100	100	100	100	100	100	100
DBA Lillaroi	114	106	101	101	102	100	103
DBA Bindaroi	107	106	104	104	107	105	105

In the southern region DBA Vittaroi has performed similarly to DBA Aurora over many years. (It was absent from NVT in 2013, 2015 and 2016). And compared with DBA Aurora it has shown superior grain quality traits including lower screenings compared to Caparoi.

Summary of 2017 South Australian NVT (yield expressed as a percentage of site mean)

Variety	Yorke Peninsula			Mid North		OVERALL YIELD
	Paskeville	Urania	Wokurna	Turretfield	Mintaro	
DBA Vittaroi	105	96	100	105	112	104
DBA Aurora	106	110	106	100	104	105
Hyperno	103	92	100	95	95	97
Site mean (t/ha)	3.60	3.09	4.38	2.86	4.37	3.67

END PRODUCT QUALITY

DBA Vittaroi has shown superior or similar grain and end product quality traits to EGA Bellaroi and Caparoi.

Variety	Grain quality						Milling quality			Dough quality	Pasta quality		
	TW	TGW	HVK	GP	WG	SKHI	Ash	SY	b*		Texture	Cooking	Colour
DBA Vittaroi	Excellent	Good	Fair	Good	Good	Good	Good	Good	Good	Good	Good	Good	
EGA Bellaroi	Good	Good	Fair	Good	Good	Good	Fair	Good	Good	Fair	Good	Good	
Caparoi	Good	Good	Fair	Good	Good	Good	Good	Good	Good	Good	Good	Good	

(Data: 2012-14 DBA Trials.) TW = test weight, TGW = 1000 grain weight, HVK = hard vitreous kernels (%), GP = grain protein at 11% mb, WG = wet gluten, SKHI = single kernel hardness index, Ash = semolina ash 14% m, SY = semolina yield, b* = yellow index, Cooking = cooking time and loss.

Excellent	Good	Fair
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AGRONOMIC GUIDELINES

Sowing

Aim to achieve plant densities of 100-150 plants/m² for dryland and 150-200 plants/m² for irrigation. Higher densities are essential for high yields under irrigation and high nutrition.

Seed treatments should be applied to the seed prior to sowing for the control of smuts and other seed-borne diseases. Crown rot is not likely to be a serious issue under irrigated conditions but good paddock selection as well as integrated disease management may help to minimise any impact of crown rot and maximise yield.

Nutrition

Whilst DBA Vittaroi readily achieves 13% grain protein, nitrogen management is still critical to achieving grain protein levels required for high quality durum.

Weed Control

Controlling weeds in the early stages of crop growth will remove competition and reduce yield loss. A range of pre and post-emergent herbicides are available. DBA Vittaroi has no known sensitivities to herbicides registered for durum wheat.

PLANT BREEDER RIGHTS AND END POINT ROYALTIES

DBA Vittaroi 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 \$3.63 per tonne (GST inclusive), which includes breeder royalties to support ongoing investment in durum breeding, applies to this variety.

ACKNOWLEDGEMENTS

DBA Vittaroi was bred by the NSW DPI, Tamworth Agricultural Institute, with support from growers through the GRDC under Durum Breeding Australia.



Department of Primary Industries



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

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