

The information, sourced from the NVT website (www.grdc-nvt.com.au) and from internal NSW DPI/DBA trials and laboratory tests, compiled in this document has been provided to Seednet by NSW DPI in good faith and is current as at April 2020. For updated information after this date, please refer to NVT results.

DBA Vittaroi

Durum Wheat

VARIETY SUMMARY

- Early to mid maturity
- Replacement for EGA Bellaroi in irrigated cropping, alternative to DBA Aurora in SA
- Excellent tolerance to lodging
- 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.

DISEASE RESISTANCE RATINGS

A new strain of stripe rust with an increased virulence on durum varieties was detected in eastern Australia during 2019. Growers should regularly check their durum crops for stripe rust and if infection is found please send leaf samples to the Australian Cereal Rust Control Program (grdc.com.au/resources-and-publications/groundcover/groundcover-july-august-2018/new-stripe-rust) and consider spraying (see table below for resistance rating).

NSW Disease ratings for DBA Vittaroi compared with EGA Bellaroi, Caparoi and DBA Aurora (NSW DPI 2020)

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

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 generally produces larger grain size but slightly lower protein than EGA Bellaroi (results have differed in some trials in some years)
- In SA trials it generally produces lower screenings and slightly higher protein than DBA Aurora (results have differed in some trials in some years)

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.

Summary Of 2017-2019 Multi-Environment Analysis Of Northern Durum NVT

(Yield Expressed As Percentage Of Caparoi)

Variety	QLD		QLD Overall	NSW			NSW Overall	OVERALL Northern
	SEQ	SWQ		Nth east	Nth west	Sth west		
DBA Vittaroi	92.0	108.8	100.5	98.5	90.5	96.7	96.0	96.7
DBA Bindaroi	99.9	106.5	103.2	102.6	100.4	101.2	101.4	101.7
DBA Lillaroi	93.6	109.1	101.4	102.0	93.8	97.8	98.2	98.8
Caparoi	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
EGA Bellaroi	85.1	112.4	98.8	82.5	74.7	92.4	85.9	88.1
Jandaroi	87.0	75.1	83.0	94.8	83.7	93.5	91.9	91.4

In the southern region DBA Vittaroi generally yields less than DBA Aurora.

Summary Of 2017-2019 Multi-Environment Analysis Of Southern Durum NVT

(Yield Expressed As Percentage Of DBA Aurora)

Variety	SA Mid North	SA Yorke Pen	SA Total	VIC Wimmera	SOUTHERN OVERALL
DBA Vittaroi	101.0	98.3	99.4	88.9	95.6
Caparoi	93.6	89.2	91.0	94.6	91.8
DBA Artemis	96.0	97.3	96.7	98.2	97.1
DBA Spes	96.6	97.2	96.9	98.3	97.2
DBA Aurora	100.0	100.0	100.0	100.0	100.0
Saintly	102.7	97.3	99.5	99.4	99.5
WID802	100.4	102.5	101.6	101.2	101.5
Bitalli	104.6	105.6	105.2	103.2	104.7

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	Excellent	Good	Good	Good	Good	Good	Excellent	Good	Good	
EGA Bellaroi	Excellent	Good	Fair	Excellent	Good	Good	Good	Good	Good	Excellent	Good	Good	
Caparoi	Excellent	Good	Fair	Excellent	Good	Good	Good	Good	Good	Excellent	Good	Good	

(Data: 2012-14 DBA Trials. Once off data provided to Wheat Quality Australia by NSW DPI) 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

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Department of Primary Industries



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