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**TrAE AU GBA Shenton Cultivar Source: Grain Biotech Australia Pty Ltd.,
Shenton Park (Western Australia) AU and CIMMYT, Mexico (DF) MX
CID:84706 SID:203**

Ian Edwards (breeder), David Allen Collins (author). Descriptions: Triticum aestivum, wheat: 'GBA Shenton'. *Plant Varieties J. (AU, online)* 16 (4): 240-241, image (2003) On 2004-08-19, plant breeders' rights for this cultivar were awarded to Grain Biotech Australia Pty Ltd..

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Plant Breeders Rights - Search Result Details

Wheat (*Triticum aestivum*)

Variety:	'GBA Shenton'
Synonym:	N/A
Application no:	2003/173
Current status:	GRANTED
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Description

published in **Plant Varieties Journal:** Volume 16, Issue 4

Title Holder: Grain Biotech Australia Pty Ltd

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Date of effect: 24-May-2005



[full image and caption](#)
(click to enlarge)

The detailed description of this variety is available in [Word](#) format.

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Triticum aestivum

Wheat

‘GBA Shenton’

Application No: 2003/173 Accepted: 24 Sep 2003.

Applicant: **Grain Biotech Australia Pty Ltd**, Perth, WA.

Characteristics Plant: type semi-dwarf, growth habit erect, height medium, maturity early. Flag leaf: length long, width wide, tendency to be recurved strong, anthocyanin colouration of auricle present, intensity of anthocyanin colouration of auricle medium to strong, glaucosity of sheath present, intensity of glaucosity of sheath strong. Stem: pith in cross section medium to thick. Ear: glaucosity medium to weak, attitude slightly curved, shape in profile tapering, colour at maturity white, density lax, awns present, fully awned. Awn: length medium to long. Outer glume: shoulder width narrow to medium, shoulder shape elevated, beak length long, beak shape slightly curved, extent of internal hairs weak. Lowest lemma: beak shape slightly curved. Grain: colour white, texture hard, shape ovate, germ face angle medium to steep, germ width medium, brush length long, end profile shape pointed. Disease resistance: highly resistant to *Septoria nodorum*, highly resistant to leaf rust (APR), stripe rust (*Yr 27*) and stem rust (*Sr 30*) and powdery mildew. Quality grade: Australian Premium White (APW) and potential for Australian Hard (AH). Seasonal type: spring

Origin and Breeding Single plant selection: In 1999 a single plant selection was made at Shenton Park, WA from an advanced line originated from the cross, seed parent ALTAR84/AE.SQUARROSA//SERI x pollen parent SERI. The seed parent is characterised by tall mature height, ‘GBA Shenton’ has medium mature height. The pollen parent is characterised by medium maturity. The original cross was made in 1991 at CYMMYT Mexico. In 2000 seed was bulked at Shenton Park WA and 2 replicate yield trials were grown at Wongan Hills and York WA. Seed was bulked over summer 2000-01 for wide area testing and SARDI preliminary quality tests. Twelve lines were selected for maturity type, ear type, plant health and disease resistance. In 2001, yield trials were grown at six locations in WA, four in NSW and four in SA. Date of sowing trials were also conducted in WA. Screening was also conducted by the Australian Cereal Rust Control Program. In the summer 2001-02 three lines were selected for uniformity to produce 200 kg of breeders seed. In 2002, comparative yield trials were grown in four states at a total of sixteen locations and parent seed was produced. Seed was multiplied in summer of 2002-03 in Scott River, WA and purification of breeder’s seed was completed at Manjimup, WA. Samples from WA submitted to the 2002-03 National Wheat Quality Evaluation Program (NWQEP). In January 2003, samples from NSW and WA were analysed by Agrifood Technology on behalf of AWB Ltd and quality data were submitted to AWB for classification. Selection criteria: grain yield, adaptation, disease resistance and grain quality. Propagation: seed. Breeder: Dr Ian Edwards, Grain Biotech Australia, Bullcreek, Western Australia.

Choice of Comparators Grouping characteristics used in identifying the most similar varieties of common knowledge were – Plant: type semi-dwarf, mature height medium, maturity early. Ear: fully awned, colour white, density lax. On the basis of these grouping characteristics the following comparator varieties were included in the trial: ‘Kalannie’ and ‘Westonia’.

Comparative Trial Location: Wongamine, Avon Valley Western Australia. Sown 02/06/03 at 60 kg/ha. Conditions: plants were in red/brown sandy loam pH 5.2 CaCl₂ in open plots. The plots were treated with glyphosate at 1 l/ha on 10/05/03 and cultivated on the 16/05/03. DAP at 80 kg/ha was applied at seeding and Urea at 75 kg/ha was topdressed on the 02/07/03. Trial design: plants sown in randomised complete blocks 10 meters long by 1.42 meters wide (8 rows) by 2 replications. Measurements: taken from 10 specimens per replicate selected at random from approximately 2000 plants. One sample was taken per plant.

Prior Applications and Sales nil.

Description: **David Allen Collins**, David Collins Consulting, Northam, WA.

Table *Triticum* varieties

	'GBA Shenton'	*'Kalannie'	*'Westonia'
FLAG LEAF: LENGTH (taken from primary stem at ear emergence) (mm)			
mean	247.53	245.30	224.45
std deviation	35.21	26.79	25.40
LSD/sig	29.39	ns	ns
FLAG LEAF: WIDTH (taken from primary stem at ear emergence) (mm)			
mean	19.96	17.18	18.08
std deviation	1.89	1.61	2.15
LSD/sig	1.78	P≤0.01	P≤0.01
FLAG LEAF: LENGTH/WIDTH RATIO (taken from primary stem at ear emergence)			
mean	12.38	14.30	12.53
std deviation	1.07	1.06	1.71
LSD/sig	1.14	P≤0.01	ns
DAYS TO EAR EMERGENCE			
mean	96.43	93.30	93.65
std deviation	2.75	1.22	1.31
LSD/sig	2.03	P≤0.01	P≤0.01
EAR: LENGTH (taken from primary ear at maturity, excluding awns) (mm)			
mean	118.14	88.22	100.79
std deviation	14.83	9.12	11.63
LSD/sig	11.57	P≤0.01	P≤0.01
AWN: LENGTH (taken from tip of primary ear at maturity) (mm)			
mean	63.19	71.13	63.12
std deviation	9.40	8.67	10.53
LSD/sig	9.34	ns	ns
OUTER GLUME: LENGTH (taken from mid third of primary ear at maturity) (mm)			
mean	10.70	9.34	9.77
std deviation	0.45	0.39	0.37
LSD/sig	0.38	P≤0.01	P≤0.01
OUTER GLUME: BEAK LENGTH (taken from mid third of primary ear at maturity) (mm)			
mean	6.06	4.08	4.11
std deviation	1.32	0.78	0.95
LSD/sig	1.07	P≤0.01	P≤0.01
PLANT: MATURE HEIGHT (stem, ear and awns) (mm)			
mean	998.00	956.20	911.65
std deviation	65.25	67.71	58.39
LSD/sig	58.75	ns	P≤0.01
STEM: PITH (in cross section)			
	medium to thick	thin	thick
100 SEED WEIGHT (taken from harvest sample > 2mm) (g)			
mean	45.04	41.79	39.71
std deviation	3.54	3.57	2.93
LSD/sig	3.16	P≤0.01	P≤0.01



Plant Breeders Rights - Search Result Image
Wheat (Triticum aestivum)



Wheat - 'GBA Shenton' (centre) showing resistance to stem and leaf rust compared to 'Kalannie' (top) and 'Westonia' (bottom) which are susceptible.