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TrAE AU GBA Ruby Cultivar Source: Grain Biotech Australia Pty Ltd., Shenton Park (Western Australia) AU and CIMMYT, Mexico (DF) MX CID:59245 SID:63

Ian Edwards (breeder), David Allen Collins (author). Descriptions: Triticum aestivum, wheat: 'GBA Ruby'. *Plant Varieties J. (AU, online)* 16 (4): 232-234, image (2003) On 2004-08-19, plant breeders' rights for this cultivar were awarded to Grain Biotech Australia Pty Ltd..

Australian Government
Department of Agriculture, Fisheries and Forestry

Plant Breeders Rights

Plant Breeders Rights - Search Result Details

Wheat *(Triticum aestivum)*

Variety:	'GBA Ruby'
Synonym:	N/A
Application no:	2003/171
Current status:	GRANTED
Certificate no:	2563
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Accepted:	24-Sep-2003
Withdrawn:	N/A
Granted:	19-Aug-2004
Terminated:	N/A
Description published in Plant Varieties Journal:	Volume 16, Issue 4

full image and caption
(click to enlarge)

The detailed description of this variety is available in Word format.

Title Holder: Grain Biotech Australia Pty Ltd
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Date of effect: 24-May-2005

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Triticum aestivum

Wheat

‘GBA Ruby’

Application No: 2003/171 Accepted: 24 Sep 2003.
Applicant: **Grain Biotech Australia Pty Ltd,** Perth, WA.

Characteristics Plant: type semi-dwarf, growth habit semi-erect, height tall, maturity medium. Flag leaf: length medium, width medium, tendency to be recurved weak, anthocyanin colouration of auricle present, intensity of anthocyanin colouration of auricle weak to medium, glaucosity of sheath present, intensity of glaucosity of sheath strong. Stem: pith in cross section thin. Ear: glaucosity medium, attitude semi-erect, shape in profile tapering, colour at maturity light brown, density lax, awns present, fully awned. Awn: length medium. Outer glume: shoulder width medium, shoulder shape straight to elevated, beak length medium, beak shape slightly curved, extent of internal hairs weak. Lowest lemma: beak shape straight to slightly curved. Grain: colour white, texture hard, shape ovate, germ face angle steep, germ width wide, brush length medium, end profile shape blunt. Disease resistance: highly resistant to *Septoria nodorum* and *Septoria tritici* blotch, highly resistant to leaf and stripe rust (*Yr 27* and *Yr 7*), immune to stem rust (*Sr 9* and *Sr 30*) and powdery mildew, resistant to yellow spot. Quality grade: Australian Premium White (APW). 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 ‘Irena’ x pollen parent ‘Weaver’. The seed parent is characterised by early maturity, ‘GBA Ruby’ has medium maturity. The pollen parent is characterised by late maturity. The original cross was made in 1990 at CYMMYT Mexico. In 2000 seed was bulked at Shenton Park WA. Seed was bulked over simmer 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 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 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, maturity medium. Ear: fully awned. Disease resistance: resistant to stem, stripe and leaf rust. On the basis of these grouping characteristics the following comparator varieties were included in the trial: ‘Yitpi’[A] and ‘Annuello’[A].

Comparative Trial Location: Wongamine, Avon Valley Western Australia. Sown 26/05/03 at 60 kg/ha. Conditions: plants were in red/brown sandy loam pH 5.2 $CaCl_2$ 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 taken per plant.

Prior Applications and Sales nil.

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

Table *Triticum* varieties

	'GBA Ruby'	***'Yitpi'**[A]	***'Annuello'**[A]
FLAG LEAF: LENGTH (taken from primary stem at ear emergence) (mm)			
mean	203.63	230.95	233.35
std deviation	27.08	30.93	32.04
LSD/sig	24.74	P≤0.01	P≤0.01
FLAG LEAF: WIDTH (taken from primary stem at ear emergence) (mm)			
mean	15.57	17.28	15.74
std deviation	1.41	1.53	1.44
LSD/sig	1.29	P≤0.01	ns
FLAG LEAF: LENGTH/WIDTH RATIO (taken from primary stem at ear emergence)			
mean	13.07	13.39	14.86
std deviation	1.27	1.52	1.86
LSD/sig	1.30	ns	P≤0.01
DAYS TO EAR EMERGENCE			
mean	103.43	116.20	110.75
std deviation	1.49	1.47	2.67
LSD/sig	1.75	P≤0.01	P≤0.01
EAR: LENGTH (taken from primary ear at maturity, excluding awns) (mm)			
mean	94.19	81.07	89.71
std deviation	11.04	12.74	11.90
LSD/sig	10.43	P≤0.01	ns
AWN: LENGTH (taken from tip of primary ear at maturity) (mm)			
mean	58.37	59.66	58.69
std deviation	5.14	8.17	6.85
LSD/sig	6.98	ns	ns
OUTER GLUME: LENGTH (taken from mid third of primary ear at maturity) (mm)			
mean	10.07	9.3	9.19
std deviation	0.33	0.55	0.41
LSD/sig	0.37	P≤0.01	P≤0.01
OUTER GLUME: BEAK LENGTH (taken from mid third of primary ear at maturity) (mm)			
mean	3.41	3.99	5.91
std deviation	0.60	0.77	0.79
LSD/sig	0.68	ns	P ≤ 0.01
PLANT: MATURE HEIGHT (stem, ear and awns) (mm)			
mean	1069.94	993.40	898.25
std deviation	57.27	72.46	48.53
LSD/sig	54.63	P≤0.01	P≤0.01
STEM: PITH (in cross section)			
	thin	thin	medium
EAR: COLOUR			
	light brown	white	white
OUTER GLUME: SHOULDER WIDTH			
	medium	wide	narrow

OUTER GLUME: SHOULDER SHAPE			
	straight	straight	elevated
OUTER GLUME: BEAK LENGTH			
	medium	medium	long
GRAIN: SHAPE			
	ovate	elongated	elongated
GRAIN: BRUSH LENGTH			
	medium	medium to long	short
100 SEED WEIGHT (taken from harvest sample > 2mm) (g)			
mean	40.67	38.47	36.15
std deviation	3.12	2.82	2.54
LSD/sig	2.52	ns	P≤0.01

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Wheat *(Triticum aestivum)*

Wheat - two generations of 'GBA Ruby' (centre) showing distinct mature height differences to comparator 'Yitpi' (left) and 'Annuello' (right).