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

CID: _ SID: _

Ian Edwards (breeder), David Allen Collins (author). Variety descriptions: *Triticum aestivum*, wheat: 'GBA Hunter'. *Plant Varieties J. (AU, online)* 18 (1): 151-154,image (2005) For a correction to the pedigree of 'GBA Hunter', see *Plant Varieties J. (AU, online)* 18(2): 320 (2005).

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Plant Varieties Journal - Search Result Details**Wheat (*Triticum aestivum*)****Variety:** 'GBA Hunter'**Synonym:** N/A**Application no:** 2004/326**Current status:** ACCEPTED**Certificate no:** N/A**Received:** 02-Dec-2004**Accepted:** 18-Jan-2005**Granted:** N/A**Description****published in** Volume 18, Issue 1
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Journal:**Title Holder:** Grain Biotech Australia Pty Ltd**Agent:** N/A**Telephone:** (08) 9360 7567**Fax:** (08) 9360 7569

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Triticum aestivum

Wheat

‘GBA Hunter’

Application No: 2004/326 Accepted: 18 Jan 2005.

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

Characteristics Plant: type semi-dwarf, growth habit erect, height medium, maturity type medium. Flag leaf: length medium, width medium, tendency to be recurved strong, anthocyanin colouration of auricles present, intensity of anthocyanin colouration of auricles very weak, glaucosity of sheath present, intensity of glaucosity of sheath strong. Ear: glaucosity medium, attitude slightly curved, shape in profile tapering, density lax, colour at maturity white. Straw: pith in cross section thin. Awn: present, state fully awned, length medium. Outer glume: shoulder width medium, shoulder shape elevated, beak length medium, beak shape slightly curved, extent of internal hairs weak to medium. Lowest lemma: beak shape moderately curved. Grain: colour white, texture hard, shape ovate, germ face angle medium to shallow, germ width wide, brush length short, end profile shape blunt. Disease resistance: resistance to leaf rust high, resistance to stripe rust high, resistance to stem rust high, resistance to powdery mildew high, resistance to cereal cyst nematode susceptible. Seasonal type: spring.

Origin and Breeding Single plant selection: In 1999 a single plant selection was made at Shenton Park WA from a mixed population of, seed parent ‘Attila’//‘Altar84’/‘Aros’ x pollen parent ‘Attila’. The seed parent is characterised by early maturity, ‘GBA Hunter’ has medium maturity. The pollen parent is characterised by late maturity. The original cross was made in 1990 at CIMMYT Mexico. In 2000 two-replicate yield trials were grown at Wongan Hills and York WA. Seed was bulked over summer 00/01 for wide area testing and SARDI preliminary quality tests. Twelve lines were reselected 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 02/03 in Scott River WA and purification of breeders seed was completed at Manjimup WA. Samples from WA submitted to the 02/03 ‘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. Removal of off types was conducted in each generation to maintain uniformity. Off types (tall) are less than 0.1%. Selection criteria: grain yield, adaptation, disease resistance. Propagation: seed. Breeder: Dr Ian Edwards, Ex CEO, Grain Biotech Australia, Bull Creek, Western Australia.

Choice of Comparators Grouping characteristics used in identifying the most similar varieties of common knowledge were – Plant type: semi dwarf, Ear: fully awned, white, lax, Maturity type: medium. On the basis of these grouping characteristics the following comparator varieties were included in the trial: ‘Reeves’ and ‘Wyalcatchem’.

Comparative Trial Location: Wongamine, Avon Valley Western Australia. Sown 30/05/04 at 60 kg/ha. Conditions: plants were in red/brown sandy loam pH 5.3 CaCl₂ in open plots. The plots were treated with glyphosate at 1 l/ha on 15/05/04 and cultivated on the 20/05/04. DAP at 120 kg/ha was applied at seeding. Insecticide was applied at the 3 leaf stage for lucerne flea control and fungicide was applied at ear emergence for stripe rust protection*. 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.

*note: a late infection of stripe rust occurred in the DUS trial. After the comparative photo was taken a fungicide spray was applied to the DUS trial

Prior Applications and Sales

No prior applications. First sold in Australia in Apr 2004.

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

Table *Triticum* varieties

	'GBA Hunter'	*'Reeves'	*'Wyalcatchem'
100 SEED WEIGHT g (taken from harvest sample > 2mm)			
mean	37.32	42.25	40.00
std deviation	0.31	0.37	0.36
LSD/sig	0.99	P ≤ 0.01	P ≤ 0.01
FLAG LEAF LENGTH mm (taken from primary stem at ear emergence)			
mean	168.90	189.20	156.40
std deviation	22.73	24.98	17.18
LSD/sig	74.06	ns	ns
FLAG LEAF WIDTH mm (taken from primary stem at ear emergence)			
mean	15.05	16.89	15.40
std deviation	1.19	1.44	1.06
LSD/sig	3.18	ns	ns
FLAG LEAF LENGTH/WIDTH RATIO (taken from primary stem at ear emergence)			
mean	11.21	11.19	10.15
std deviation	1.00	0.96	0.74
LSD/sig	3.72	ns	ns
DAYS TO EAR EMERGENCE			
mean	106.53	108.85	110.70
std deviation	3.13	3.99	2.87
LSD/sig	3.24	ns	P ≤ 0.01
EAR LENGTH mm (taken from primary ear at maturity, excluding awns)			
mean	85.66	81.44	72.49
std deviation	6.68	7.23	9.03
LSD/sig	7.76	ns	P ≤ 0.01
AWN LENGTH mm (taken from tip of primary ear at maturity)			
mean	44.26	50.38	53.32
std deviation	7.40	7.30	6.72
LSD/sig	8.68	ns	P ≤ 0.01
OUTER GLUME LENGTH mm (taken from mid third of primary ear at maturity)			
mean	9.77	8.73	8.88
std deviation	0.47	0.52	0.45
LSD/sig	1.89	ns	ns
OUTER GLUME WIDTH mm (taken from mid third of primary ear at maturity)			
mean	3.94	4.29	4.20
std deviation	0.23	0.34	0.34
LSD/sig	1.89	ns	ns
OUTER GLUME BEAK LENGTH mm (taken from mid third of primary ear at maturity)			
mean	4.44	2.69	5.12
std deviation	0.69	1.07	1.16
LSD/sig	3.32	ns	ns
MATURE HEIGHT mm (stem, ear and awns)			
mean	820.30	842.10	660.90
std deviation	37.21	49.75	53.99
LSD/sig	43.11	ns	P ≤ 0.01
STRAW PITH (in cross section)			
	thin	medium	thick

RESISTANCE TO STRIPE RUST
high

susceptible

susceptible

CORRIGENDA

Triticum aestivum

Wheat

‘GBA Hunter’

Application No: 2004/326

Journal Reference: PVJ 18(1) p 152

In the **Origin and Breeding** section the correct pedigree for ‘GBA Hunter’ should be:

Attila//Altar84/Aos/3/Attila