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**xTSE AU Jaywick Cultivar Source: University of Adelaide (Waite Campus),
Glen Osmond (South Australia) AU CID:_ SID:_**

Kath V Cooper (breeder), Jason Reinheimer (breeder), Gil Hollamby (author). Variety descriptions: triticale (xTriticosecale): 'Jaywick'. *Plant Varieties J. (AU, online)* 20 (4): 109-110,292-295 (2007)

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Triticale (*xTriticosecale*)

Variety: 'Jaywick'
Synonym: N/A

Application no: 2007/235
Current status: GRANTED
Certificate no: 3606
Received: 12-Sep-2007
Refused: N/A
Accepted: 10-Oct-2007
Withdrawn: N/A
Granted: 16-Sep-2008
Terminated: N/A



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

Description published in Plant Varieties Journal: Volume 20, Issue 4

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

Title Holder: Australian Grain Technologies Pty Ltd
Agent: N/A
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Triticale (*xTriticosecale*)



Triticale - Comparative images of 'Jaywick' and 'Tahara' at maturity, Mintaro 2007. Left: 'Jaywick' showing the evenly recurved attitude of the ears. Right: 'Tahara' showing the variable and inconsistent attitude of the ears, typical of all other triticale varieties of common knowledge. Upper: whole plants. Lower: close up of ears in a crop situation.

Details of Application

Application Number	2007/235
Variety Name	'Jaywick'
Genus Species	<i>xTriticosecale</i>
Common Name	Triticale
Synonym	Nil
Accepted Date	10 Oct 2007
Applicant	Australian Grain Technologies Pty Ltd, Glen Osmond, SA
Agent	N/A
Qualified Person	Gil Hollamby

Details of Comparative Trial

Location	Mintaro, South Australia.
Descriptor	Triticale (<i>xTriticosecale</i>) TG/83/4.
Period	2007.
Conditions	The trial was grown in a black self mulching soil which had been pasture in 2006 and wheat in 2005. The area was sprayed with Roundup Power Max (1.2L/ha) + Goal CT (75ml/ha) on 24 May 2007 and direct drilled at 2-4cm in slightly moist conditions on 25 May at 200 plants/m ² and with 90kg/ha DAP and 80kg/ha Urea. During the winter months moisture was adequate and the trial grew well. In crop weeds were controlled with 2,4-D amine 625 (1.5l/ha) on 6 Sep. Spring was dry and some moisture stress occurred. Harvest took place on 11 Dec about two weeks earlier than normal. There were no diseases of note. A similar trial was planted at Roseworthy.
Trial Design	Randomised Block Design of 3 blocks and 16 entries consisting of comparators and potential candidates. Sown in 12 ranges of 4 plots wide, block 1 being in ranges 1 to 4 and so on. Plots were 1.25m wide (5 rows) and 3.2m long. There were approx. 1000 plants per plot.
Measurements	Heading times were recorded on the same trial planted at Roseworthy 2007, but this trial later was abandoned due to a heavy infestation of Crown Rot. All other measurements and observations were recorded on plant samples taken from the Mintaro trial. At anthesis 5 primary tillers were sampled from each plot in each replicate and flag leaf measurements made. Glaucoity and leaf angle was observed at this time. After maturity plant heights to the top of the awns were recorded at 10 random locations in replicate 2 and 3 only. Twenty heads were also sampled at random from each plot in replicates 2 and 3 for head descriptions and measurements. Measurements were performed on 10 intact heads. Grain quality was measured on the grain harvested from each plot. Statistical analyses were completed using GENSTAT software.
RHS Chart - edition	N/A

Origin and Breeding

Controlled pollination: The female parent was a CIMMYT line accessioned in NSW as ISR499-62. Its pedigree is BGLB/2*RHINO_3. This line had a broad head type. This was crossed in the spring 1996 by Dr Kath V Cooper with TX93-19-2, a line bred by her and a sib to 'Tickit' and 'Speedee'. It was chosen for its shorter stature, stiff straw, high tillering habit, resistance to cereal cyst nematode, and resistance to triticale stem rust pathotype 34-2,12,13. The F₁ generation seed was allocated the number TX97-44. F₁ seed was immediately sown in pots in the glasshouse to produce F₂ generation seed, harvested May 1997, and sown as a single plot at Callington, South Australia. Single heads from plants showing the desired agronomic type were taken in Dec and sown as head hills in the Waite Campus birdcage, under irrigation. F₃ generation head hills were harvested in May 1998 and sown as single plots at Callington. One particular plot having desirable plant type, cereal cyst nematode resistance (tested by SARDI) and stem rust resistance (tested by NRCP) was given the line number TX97-44-7. TX97-44-7 was assessed in replicated trials for grain yield and plant type as an F₅ in 1999 (2 sites), F₆ in 2000 and F₇ in 2001 (4 sites). Sites used were Callington, Lameroo, Cleve and Birdwood, SA. In 2001 F₈ generation heads were selected from TX97-44-7 and sown as head hills at Waite Campus, in the birdcage under irrigation, in Dec 2001. These head hills were harvested in May 2002 and sown as F₉ generation as single plots at Birdwood in Jun 2002. One of these reselections was designated TX97-44-7-1. In May-Jun 2003, F₁₀ generation seed of TX97-44-7-1 was sown in replicated yield trials at 3 sites, and harvested in Dec 2003-Jan 2004. Seed of the F₁₁ generation was transferred to Australian Grain Technologies in March 2004, by means of a licensing agreement from Adelaide Research and Innovation. Jason Reinheimer continued with testing and reselecting TX97-44-7-1. In 2004 yield tests were carried out at 11 sites, and 50 single head selections were taken from a single plot of TX97-44-7-1. These selections were grown over summer at Roseworthy Campus, University of Adelaide. In 2005 these single selections were assessed individually for plant type, rust resistance and CCN resistance. Selections surviving were bulked as TSA0124. This line was assessed for yield, rust resistance, CCN resistance and physical grain quality at 19 sites by AGT and 15 sites by the National Variety Trial system across Australia in 2006 and 2007. Breeders: Dr Kath Cooper, The University of Adelaide and Mr. Jason Reinheimer, Australian Grain Technologies.

Choice of Comparators Characteristics used for grouping varieties to identify the most similar Variety of Common Knowledge

Organ/Plant Part	Context	State of Expression in Group of Varieties
Ear	distribution of awns	fully awned
Ear	colour	white
Plant	time of ear emergence	250 to 255 Julian days
Plant	height	105 to 120cm
Flag leaf	length of blade	180 to 230mm

Most Similar Varieties of Common Knowledge identified (VCK)

Name	Comments
'Tickit'	related variety.
'Tahara'	same adaptation.
'Kosciuszko'	Similar adaptation.

Varieties of Common Knowledge identified and subsequently excluded

Variety	Distinguishing Characteristics	State of Expression in Candidate Variety	State of Expression in Comparator Variety	Comments
'Speedee'	flag leaf blade length	193.2mm	233.1 mm	LSD=39.3(P=1%)
'Speedee'	flag leaf width	15.5mm	18.5mm	LSD=1.7(P=1%)
'Speedee'	Plant time of ear emergence	251.2 Julian days	247.0 Julian days	LSD=1.9 days(P=1%)
'Jackie'	Plant time of ear emergence	251.2 Julian days	271.0 Julian days	LSD=1.9 days(P=1%)

Variety Description and Distinctness - Characteristics which distinguish the candidate from one or more of the comparators are marked with a tick.

Organ/Plant Part: Context	'Jaywick'	'Kosciuszko'	'Tahara'	'Tickit'
<input type="checkbox"/> *Ploidy:	hexaploid	hexaploid	hexaploid	hexaploid
<input checked="" type="checkbox"/> Flag leaf: anthocyanin colouration of auricles	absent or very weak	absent or very weak	weak to medium	medium
<input type="checkbox"/> *Stem: density of hairiness of neck	strong to very strong	strong to very strong	strong to very strong	strong
<input type="checkbox"/> *Ear: distribution of awns	fully awned	fully awned	fully awned	fully awned
<input type="checkbox"/> *Awns above the tip of ear: length	short to medium	short	short to medium	short to medium
<input type="checkbox"/> *Lower glume: length of first beak	medium	medium	short	medium
<input type="checkbox"/> Lower glume: size of second beak	absent or very small	absent or very small	absent or very small	absent or very small
<input checked="" type="checkbox"/> *Lower glume: hairiness on external surface	present	absent	absent	absent
<input type="checkbox"/> Straw: pith in cross section	thin to medium	medium	thin to medium	thin
<input type="checkbox"/> Ear: colour	white	white	white	white
<input type="checkbox"/> *Grain: colouration with phenol	dark to very dark	dark	very dark	very dark
<input type="checkbox"/> *Seasonal type:	spring type	spring type	spring type	spring type

Characteristics Additional to the Descriptor/TG

Organ/Plant Part: Context	'Jaywick'	'Kosciuszko'	'Tahara'	'Tickit'
<input checked="" type="checkbox"/> Roots: reaction to cereal cyst nematode	Resistant	susceptible	resistant	resistant
<input checked="" type="checkbox"/> Roots: reaction to high boron levels	Intolerant			moderately tolerant
<input type="checkbox"/> Leaves: reaction to stripe rust pathotype 110E143A+	resistant	resistant	resistant	resistant
<input checked="" type="checkbox"/> Leaves: reaction to stripe rust pathotype 134E16A+	resistant	moderately susceptible	resistant	moderately resistant
<input type="checkbox"/> Leaves: reaction to stripe rust	Resistant			
<input checked="" type="checkbox"/> Leaves: reaction to stripe rust pathotype 134E16A+J+	resistant	susceptible	moderately resistant	mod susceptible to mod resistant
<input checked="" type="checkbox"/> Ear: attitude at maturity	recurved	mixed erect to semi-recurved	mixed erect to semi-recurved	mixed erect to semi-recurved

Statistical Table

Organ/Plant Part: Context	'Jaywick'	'Kosciuszko'	'Tahara'	'Tickit'
<input type="checkbox"/> Flag leaf: blade length (mm)				
Mean	193.20	182.40	206.90	203.30
Std. Deviation	36.10	33.00	29.10	21.70
LSD/sig	39.3	ns	ns	ns
<input type="checkbox"/> Flag leaf: blade width (mm)				
Mean	15.50	16.30	16.60	17.20
Std. Deviation	1.80	1.50	1.20	1.80
LSD/sig	1.7	ns	ns	ns
<input checked="" type="checkbox"/> Flag leaf: sheath length (mm)				
Mean	156.00	181.90	178.00	184.10
Std. Deviation	10.40	16.25	12.50	9.70
LSD/sig	15.8	P≤0.01	P≤0.01	P≤0.01
<input checked="" type="checkbox"/> Ear: length without awns (mm)				
Mean	99.70	127.90	107.40	105.70
Std. Deviation	5.60	11.10	9.50	8.30
LSD/sig	13.5	P≤0.01	ns	ns
<input checked="" type="checkbox"/> Ear: width (mm)				
Mean	13.60	12.75	11.45	11.00
Std. Deviation	0.80	0.97	0.76	0.91
LSD/sig	1.87	ns	P≤0.01	P≤0.01
<input checked="" type="checkbox"/> Ear: rachis internode length (mm)				
Mean	3.68	4.18	3.66	3.55
Std. Deviation	0.21	0.30	0.25	0.20
LSD/sig	0.38	P≤0.01	ns	ns
<input checked="" type="checkbox"/> Plant: height (cm)				
Mean	108.10	118.20	115.60	109.70
Std. Deviation	3.90	5.20	3.20	3.50
LSD/sig	8.29	P≤0.01	ns	ns
<input checked="" type="checkbox"/> Plant: time of ear emergence from boot (Julian days)				
Mean	251.20	252.00	254.70	254.30
Std. Deviation	0.29	0.00	0.60	1.10
LSD/sig	1.9	ns	P≤0.01	P≤0.01
<input checked="" type="checkbox"/> Grain: test weight (kg/hl)				
Mean	79.40	78.93	76.27	76.93
Std. Deviation	0.40	0.46	0.90	0.83
LSD/sig	1.14	ns	P≤0.01	P≤0.01
<input type="checkbox"/> Grain: screenings, grain through a 2mm sieve (%)				
Mean	2.41	4.65	7.05	4.96
Std. Deviation	0.36	0.74	3.85	0.39
LSD/sig	4.6	ns	P≤0.01	ns

Prior Applications and Sales

Nil.

Description: **Gil Hollamby**, Williamstown, SA.

‘Tammarin Rock’^ϕ

Application No: 2005/016 Grantee: **InterGrain Pty Ltd**, Victoria Park, WA.
 Certificate No: 3605 Expiry Date: 15 September, 2028.

‘YENDA’^ϕ

Application No: 2006/207 Grantee: **Agriculture Victoria Services Pty Ltd and Grains Research and Development Corporation**.
 Certificate No: 3578 Expiry Date: 31 July, 2028.
 Agent: **Australian Grain Technologies Pty Ltd**, Roseworthy, SA.

Triticum turgidum ssp *turgidum*

DURUM WHEAT

‘HYPERNO’^ϕ

Application No: 2007/300 Grantee: **Australian Grain Technologies Pty Ltd**, Roseworthy, SA.
 Certificate No: 3589 Expiry Date: 11 September, 2028.

Vaccinium hybrid

SOUTHERN Highbush BLUEBERRY

‘C97-390’^ϕ

Application No: 2005/080 Grantee: **CostaExchange Ltd**, Corindi Beach, NSW.
 Certificate No: 3568 Expiry Date: 3 July, 2028.

‘C99-42’^ϕ

Application No: 2005/082 Grantee: **CostaExchange Ltd**, Corindi Beach, NSW.
 Certificate No: 3570 Expiry Date: 3 July, 2028.

Vicia faba

FIELD BEAN

‘Doza’^ϕ

Application No: 2007/161 Grantee: **Department of Primary Industries for and on behalf of the State of New South Wales**, Orange, NSW and **Grains Research and Development Corporation**, Barton, Act.
 Certificate No: 3590 Expiry Date: 11 September, 2028.

xTriticosecale

TRITICALE

‘Hawkeye’^ϕ

Application No: 2007/234 Grantee: **Australian Grain Technologies Pty Ltd**, Urrbrae, SA.
 Certificate No: 3608 Expiry Date: 16 September, 2028.

‘Jaywick’^ϕ

Application No: 2007/235 Grantee: **Australian Grain Technologies Pty Ltd**, Urrbrae, SA.
 Certificate No: 3606 Expiry Date: 16 September, 2028.