



tested  
as  
RAC1683

# Justica CL Plus



**Clearfield<sup>®</sup> Plus**

Production System for Wheat

*Justica CL Plus carries two genes for Clearfield<sup>®</sup> resistance, providing improved levels of tolerance to imidazolinone herbicides, and offering more options for in-crop weed management.*

*As of February 2011, Clearfield<sup>®</sup> Plus wheat varieties are registered to be used with Intervix<sup>®</sup> herbicide. Please refer to the Crop Care Australia website for further information on the Clearfield Production System.  
[www.cropcare.com.au/TheSystem](http://www.cropcare.com.au/TheSystem)*

## Key Features

- Tolerant of imidazolinone herbicides
- Mid season maturity, similar to Correll
- Derived from the Spear and Gladius families of wheat
- Performs well under most conditions, but like the Spear family, shows its highest relative yields in the medium to high rainfall areas
- Tolerant of boron toxicity
- Preliminary APW/AH quality classification, to be confirmed in April 2011

## Plant Characteristics

Justica CL Plus is a fully awned spring wheat with a mid season maturity, similar to Correll.

## Adaptation and Yield

Justica CL Plus has been tested in AGT internal trials since 2008, and was tested in the National Variety Trials (NVT) across South Australia in 2010. Table 1 presents the AGT yield performance data of Justica CL Plus and control varieties across a range of years and environments. Justica CL Plus yields well under most conditions, but seems to show its highest relative yields when grown in medium to high yield potential areas. This reflects the adaptation pattern of its Spear parentage.

## Grain Quality

Justica CL Plus has a preliminary quality classification of APW/AH. The final classification will be confirmed by April 2011. Early data suggests that Justica CL Plus possesses sprouting tolerance similar to Yitpi, and better than Wyalkatchem. Justica CL Plus has moderately sized grain with test weights lower than Gladius and higher than Correll.

## Disease Profile

Justica CL Plus carries excellent stem rust and stripe rust resistance, and a useful level of leaf rust resistance. See Table 2 for detailed disease ratings.

## Breeding

Justica CL Plus was tested as RAC1683, and is derived from a cross between Gladius, a Spear derivative, and the imidazolinone tolerance donor. Throughout the breeding of the variety, imidazolinone herbicides were used to confirm the presence of tolerance.

**Table 1. Regional mean yield of Justica CL Plus and control varieties (% of site mean) in AGT trials.**

Variety	SA 2008	SA 2009	SA 2010	SA 2008-2010	Mallee 2009-2010	Mid North/Yorke Pen 2009-2010	Eyre Pen 2009-2010
<b>Justica CL Plus</b>	<b>113</b>	<b>106</b>	<b>100</b>	<b>105</b>	<b>104</b>	<b>101</b>	<b>104</b>
Axe	106	95	97	98	108	97	94
Gladius	105	105	100	102	105	101	101
Mace	-	108	109	-	114	106	111
Wyalkatchem	108	107	105	107	100	106	106
Yitpi	103	105	100	102	96	100	105
mean t/ha	2.0	3.1	4.6	3.2	2.2	4.6	3.8

**Table 2. Disease ratings for Justica CL Plus and control varieties.**

Variety	Stem Rust	Stripe Rust	Leaf Rust	CCN	Yellow Leaf Spot	Septoria tritici Blotch	Powdery Mildew
<b>Justica CL Plus*</b>	<b>R/MR</b>	<b>MR/MS</b>	<b>MS</b>	<b>MS</b>	<b>S</b>	<b>S</b>	<b>S</b>
Axe	MS	R/MR	MR	S	S	S/VS	MR
Gladius	MR	MR/MS	MS	MS	MS	MS/S	S
Mace	MR/MS	S/VS	R	MR/MS	MR/MS	MR/MS	MS/S
Wyalkatchem	MS	S	R	S	MR/MS	MR	S/VS
Yitpi	S	MR/MS	MS	MR	S/VS	MR/MS	MR/MS

R = Resistant, MR = Moderately Resistant, MS = Moderately Susceptible, S = Susceptible, VS = Very Susceptible, - = provisional ratings subject to change. Source: SARDI Cereal Variety Disease Guide 2011 and AGT disease data.

## Seed Availability

Limited quantities of Justica CL Plus will be available for 2011/2012 through an AGT Affiliate: Booleroo Centre Seeds: (08) 8667 2286, Breona Farming: (08) 8836 7238, Colrae Seeds: (08) 8538 5017, Minnipa Ag. Centre: (08) 8680 6206, Modra Seeds: (08) 8688 8094, Tatiara Seeds: (08) 8752 0054, RH Verner: (08) 8520 2181, or your local retailer.

## Plant Breeders Rights

Justica CL Plus is protected by PBR and all production (except seed saved for planting) is liable to an End Point Royalty (EPR), which funds future plant breeding. Justica CL Plus growers will be subject to a Grower Licence Agreement that acknowledges that an EPR of \$3.55/tonne\* plus GST has to be paid on all production other than seed saved for planting.

(\* \$3.00/tonne AGT Breeder Royalty, \$0.55/tonne BASF Technical Fee).

Growing of AGT varieties is subject to the terms and conditions of the Industry Standard PBR Licence Agreement and its Schedules (as amended by AGT), the combination of which forms the AGT Grower Licence. A full copy of the AGT Grower Licence is available at [www.ausgraintech.com](http://www.ausgraintech.com)

## Acknowledgements

Justica CL Plus was bred and selected by AGT's Roseworthy Campus wheat breeding program led by current wheat breeder Haydn Kuchel. The name Justica continues in the tradition of naming wheats bred at Roseworthy Campus after bladed weapons, Justica being a Portugese word for sword.