JUSTICA CL PLUS PBR wheat

AGT Australian Grain Technologies

fact sheet for Western Australia

Key Features

- Tolerant of imidazolinone herbicides
- Mid season maturity, 2-3 days later than Wyalkatchem
- Derived from the Spear and Espada families of wheat
- Tolerant of boron toxicity
- Eligible for APW grade in Western Australia

Clearfield® Plus
Production System for Wheat

Justica CL Plus carries two genes for Clearfield ® resistance, providing improved levels of tolerance to imidazolinone herbicides, and offering more options for in-crop weed management. Clearfield ® Plus wheat varieties are registered to be used with Intervix ® herbicide. Please refer to the Crop Care Australia website for further information on the Clearfield Production System. www.cropcare.com.au/TheSystem

Plant Characteristics

Justica CL Plus is a fully awned spring wheat with a mid season maturity, later than Wyalkatchem but earlier than Magenta.

Adaption and Yield

Justica CL Plus has displayed broad adaptation, 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. Table 1 presents the long term yield predictions of Justica CL Plus and control varieties across WA Agzones, and shows that Justica CL Plus offers a yield advantage over existing Clearfield varieties Clearfield STL and Clearfield JNZ.

Grain Quality

Justica CL Plus has an APW quality classification in WA. Preliminary 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 a little lower than Westonia.

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. Predicted yields of Justica CL Plus and control varieties (yield % of Clearfield STL) in WA Agzones from NVT long term MET analysis (2005-2010).

Variety	Agzone 1	Agzone 2	Agzone 3	Agzone 4	Agzone 5	Agzone 6
Justica CL Plus	**102**	**102**	**103**	**104**	**105**	**101**
Clearfield JNZ	97	97	98	96	97	98
Clearfield STL	100	100	100	100	100	100
Kord CL Plus	103	103	102	105	105	99
Mace	115	113	111	119	114	110
Magenta	112	112	110	116	111	106
Westonia	111	110	110	113	108	106
Wyalkatchem	112	110	108	114	112	109
Yitpi	105	106	105	112	110	104

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

Variety	Stem Rust	Stripe Rust	Leaf Rust	Yellow Leaf Spot	Black Point
Justica CL Plus	**R-MR p**	**MR-MS p**	**MS-S p**	**S-VS p**	**-**
Clearfield JNZ	R-MR	MS-S	R	MS-S	MS
Clearfield STL	MR	S	S-VS	MS-S	MR-MS
Kord CL Plus	R-MR	MR-MS	MS	MS-S	-
Mace	MR	R	R	MR-MS	MR-MS p
Magenta	R-MR	MS	R	MR	MS
Westonia	S-VS	VS	MS	MS-S	MS
Wyalkatchem	S/MR	S	R	MR	MS
Yitpi	S	MR-MS	MS	S-VS	MS

R = Resistant, MR = Moderately Resistant, MS = Moderately Susceptible, S = Susceptible, VS = Very Susceptible, - = Insufficient Data. p = provisional data, to be confirmed, / = Scores separated by a '/' indicate the response to the 'currently predominant' and 'alternate' strains of stem rust existing in Western Australia. Source: Department of Agriculture and Food WA Wheat Variety Guide 2011, and AGT disease data.

Seed Availability

Commercial quantities of Justica CL Plus seed will be available through an AGT Affiliate: Australian Seed & Grain, Moora: (08) 9651 1069, EDSCO, Kellerberrin: (08) 9045 4036, Melchiorre Seeds, Narrogin: (08) 9881 1155, Multiseed Productions, Esperance: (08) 9071 1053, 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 Growers 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).

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.

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Disclaimer: The information contained in this brochure is based on knowledge and understanding at the time of writing. Growers should be aware of the need to regularly consult with their advisors on local conditions and currency of information.