

ESPADA

wheat



Key Features

- Very wide adaption
- Performs well under drought stress but higher relative yield in mid-high yield potential areas
- Mid season maturity
- Good stem, leaf and stripe rust resistance
- Boron toxicity tolerance
- Eligible for APW grade in South Australia

Plant Characteristics

Espada is a mid season maturing, fully awned spring wheat. Espada is moderate to moderately short in plant height and produces broad erect leaves with a very heavy wax cover after exposure to high temperatures and/or drought stress.

Adaption and Yield

Espada has been tested for four years in the National Variety Trials (NVT). Table 1 presents the long term yield of Espada and control varieties in South Australian environments. Analysis of this data suggests that Espada shows a significant and consistent yield advantage over many currently grown varieties in South Australia. Espada yields particularly well in medium to high yield potential areas, however will still perform well under less favourable conditions.

Grain Quality

Espada is eligible for the APW grade in South Australia. Espada has good sized grain with low screenings (slightly lower than Yitpi). Due to the shape of the grain, Espada produces moderate test weights, lower than Pugsley. Espada has shown susceptibility to pre-harvest sprouting.

Disease Profile

Espada has excellent levels of resistance to stem and leaf rust, and shows good resistance to stripe rust. While Espada is moderately susceptible to CCN infection, it has adequate levels of resistance to yellow leaf spot. Espada is tolerant of boron toxicity. See Table 2 for detailed disease ratings.

Breeding

Espada was tested as RAC1263, and was selected from a complex cross involving the elite breeding line RAC875, and the varieties Kukri, Excalibur, Krichauff and a Trident derivative. Early generation yield selection was carried out under drought stressed conditions in South Australia.

fact sheet for South Australia



SEEDS FOR SUCCESS

Table 1. Predicted yields of Espada and control varieties (yield % of Wyalkatchem) in SA regions from NVT long term MET analysis (2000-2009).

Variety	Upper EP	Lower EP	Yorke Pen.	Mid North	Mallee	South East
Espada	102	100	102	101	104	104
Axe	97	95	96	99	104	97
Catalina	94	94	95	96	98	97
Correll	100	97	99	99	103	100
Derrimut	96	98	100	100	101	101
Frame	90	88	91	92	93	93
Gladius	102	99	103	102	106	103
Guardian	98	98	100	100	98	103
Mace	100	100	103	103	102	105
Peake	97	97	98	99	102	100
Wyalkatchem	100	100	100	100	100	100
Yitpi	97	93	97	96	100	99

Table 3. Disease ratings for Espada and control varieties.

Variety	Stem Rust	Stripe Rust WA Pathotype	Stripe Rust WA Yr17 Pathotype	Leaf Rust	CCN	Yellow Leaf Spot	Septoria tritici Blotch	Black Point	RLN (<i>Prat. neglectus</i>)
Espada	R-MR	R	MR-MS	R-MR	MS	MR-MS	S	MS	MS
Axe	MS	R-MR	R-MR	MR	S	S	S-VS	MS-S	MS
Catalina	MR-MS	MS	MS	R-MR	R	MS-S	MS	S	MS
Correll	MR-MS	MR-MS	MR-MS	MS	MR	S-VS	MR-MS	MS	S
Derrimut	MR	R	MS	R	R	MS-S	MS-S	S	S
Frame	MS	MR-MS	MR-MS	MS	MR	S-VS	MS	MS	MS-S
Gladius	MR	R	MR-MS	MS	MS	MS	MS-S	MR-MS	MS-S
Guardian	R-MR	MS	MS	MS	R	S	MS-S	-	MS-S
Mace	MR	R-MR	S-VS	R	MR-MS	MR-MS	MR	MS	MR-MS
Peake	MR-MS	MR-MS	MR-MS	R	R	MS-S	S	MS-S	S
Wyalkatchem	MS	S	S	R	S	MR	MR	MS	MR-MS
Yitpi	S	MR-MS	MR-MS	MS	MR	S-VS	MS	MS	MS-S

R = Resistant, MR = Moderately Resistant, MS = Moderately Susceptible, S = Susceptible, VS = Very Susceptible, - = Insufficient Data. Source: SARDI Cereal Variety Disease Guide 2010.

Seed Availability

Commercial quantities of Espada will be available for 2010 through:
 Modra Seeds
 Ungarra SA: (08) 8688 8094



Plant Breeders Rights

Espada 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. Espada growers will be subject to a Growers Licence Agreement that acknowledges that an EPR of \$2.50/tonne plus GST has to be paid on all production other than seed saved for planting.

Acknowledgements

The variety came from a collaborative project partly funded by the SA Grains Industry Trust, and the SA Premiers Drought Relief Fund. Espada was bred and selected by AGT's Roseworthy Campus wheat breeding program led by current wheat breeder Haydn Kuchel, and previous wheat breeders Steve Jefferies and Gil Hollamby, in collaboration with Neil Howes, formerly with SARDI. The name Espada continues in the tradition of naming wheats bred at Roseworthy Campus after bladed weapons.

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