



SEEDS FOR SUCCESS

Key Features

- Wide adaptation
- Solid performance under drought stress but high relative yield in medium to high yield potential areas
- Mid season maturity
- Good stem, leaf and stripe rust resistance
- Boron toxicity tolerance
- APW quality in South Australia

Synonym

Espada was tested as RAC1263

Plant Characteristics

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

Adaptation and Yield

Espada has been tested for two years in the National Variety Trials (NVT). Table 1 presents the mean yield of Espada and control varieties in South Australian environments in 2006 and 2007. The data from AGT trials in 2005 are also presented. Analysis of long term yield data suggests that Espada will be best suited to medium-high rainfall districts and should be a good replacement in SA for the stripe rust susceptible variety Pugsley. Espada has similar yield potential to Pugsley in the medium-high rainfall areas, but is more reliable across years.

Grain Quality

Espada is eligible for the APW grade in South Australia. Espada has good sized grain with low screenings (similar or slightly lower than Pugsley). Due to the shape of the grain, Espada produces moderate test weights, lower than Pugsley.

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Seed enquiries: 02 6881 6210
Variety information: 08 8303 7708

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

Seed Availability

Commercial quantities of Espada seed will be available for 2008 sowing in South Australia, New South Wales and Victoria through AGT Seeds and in Western Australia through COGGO Seeds.

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.

Table 1. Regional mean yield of Espada and control varieties (% of Yitpi) in South Australian NVT (2006 - 2007) and AGT trials (2005). Varieties released by AGT are highlighted in blue text.

	Upper Eyre Peninsula			Lower Eyre Peninsula			Yorke Peninsula			Mid North			Murray Mallee		
	'05	'06	'07	'05	'06	'07	'05	'06	'07	'05	'06	'07	'05	'06	'07
ESPADA	98	117	128	102	111	111	120	105	99	114	105	96	97	109	114
Axe	92	140	136	91	123	113	107	110	96	103	109	101	91	112	108
Correll	90	116	128	92	107	108	100	101	110	98	99	99	92	98	109
Frame	98	90	90	100	90	90	93	93	93	94	91	90	94	91	88
Gladius	87	129	134	92	113	118	117	107	105	111	104	101	94	107	120
Peake	-	108	120	-	114	116	-	105	102	-	105	102	-	111	105
Pugsley	-	95	99	-	96	92	-	98	101	-	97	95	-	84	91
Wyalkatchem	99	116	111	102	110	108	111	106	96	81	106	99	86	100	100
Yitpi	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Young	89	131	125	99	111	110	105	97	89	95	104	95	87	101	109
<i>Mean Yield</i>	<i>2.2</i>	<i>0.4</i>	<i>0.5</i>	<i>3.4</i>	<i>1.8</i>	<i>1.6</i>	<i>3.7</i>	<i>1.6</i>	<i>3.0</i>	<i>3.4</i>	<i>2.0</i>	<i>3.4</i>	<i>2.4</i>	<i>0.9</i>	<i>1.2</i>
<i>Site #</i>	<i>1</i>	<i>5</i>	<i>7</i>	<i>2</i>	<i>3</i>	<i>3</i>	<i>1</i>	<i>3</i>	<i>3</i>	<i>3</i>	<i>3</i>	<i>4</i>	<i>2</i>	<i>4</i>	<i>4</i>

Disease Resistance

Espada is rated moderately resistant to resistant to stem rust and leaf rust and moderately resistant to moderately susceptible to stripe rust. Espada is moderately resistant to moderately susceptible to yellow leaf spot, and susceptible to *Septoria tritici* blotch. Espada is moderately susceptible to *Pratylenchus neglectus* and CCN. See Table 2 for detailed disease ratings.

Table 2. Disease ratings for Espada and control varieties for South Australia.

	Stem Rust	Stripe Rust	Leaf Rust	CCN	Yellow Leaf Spot	<i>Septoria tritici</i>	Black Point	
ESPADA	8	6	8	5	6	3	4	
Axe	5	7	7	3	4	4	3	1 = VS
Correll	7	6	5	7	2	6	6	2 = S-VS
Frame	5	6	5	7	2	5	5	3 = S
Gladius	7	6	5	5	5	3	7	4 = MS-S
Peake	6	6	9	9	4	3	4	5 = MS
Pugsley	4	3	5	5	3	5	5	6 = MR-MS
Wyalkatchem	5	4	9	3	7	6	5	7 = MR
Yitpi	2	6	5	7	2	5	5	8 = MR-R
Young	7	5	6	9	6	5	7	9 = R

Breeding

Espada was selected from a complex crossing involving the elite breeders' line RAC875 and the varieties Kukri, Excalibur and Krichauff and possibly a Trident derivative. Early generation yield selection was undertaken under drought stressed conditions in South Australia. The variety came from a collaborative project partly funded by the SA Grains Industry Trust and the SA Premier's Drought Relief Fund. Espada was bred and selected by AGT's Roseworthy campus wheat breeding programme led by current wheat breeder Haydn Kuchel and previous wheat breeders Steve Jefferies and Gil Hollamby in collaboration with Neil Howes, formerly with SARDI.