Fiesta VF

Faba Bean

VMP 2011 #03

KEY FEATURES of Fiesta VF

- **Fiesta VF is still widely grown, but does not have the improved resistance to ascochyta of Farah$^{\Phi}$.**
- **It is well adapted to southern areas where beans are grown, but provides a higher ascochyta risk than the newer variety alternatives.**
- **Seed size and colour of Fiesta VF is not quite as uniform as with Farah$^{\Phi}$ or Nura$^{\Phi}$, but fits the quality standard in bean marketing.**
- **All other variety and management attributes of Fiesta VF are similar to Farah$^{\Phi}$ which is deemed as its direct replacement.**
- **Its chocolate spot resistance is not as good as Nura$^{\Phi}$.**
- **Plant height is similar to Farah$^{\Phi}$, being taller than Nura$^{\Phi}$, but stem strength and lodging resistance are less than Nura$^{\Phi}$.**
- **Fiesta VF and Farah$^{\Phi}$ are less affected by delays in sowing date than Nura$^{\Phi}$, but still need to be sown relatively early to optimise their yield.**
- **Fiesta VF and Farah$^{\Phi}$ are early - mid flowering varieties. Their long term yields are very similar in most areas.**

Where Fiesta VF fits into the farming system

Fiesta VF became the standard faba bean variety for southern and western region farming systems as a replacement for Fiord, especially where chocolate spot was a risk. It still remains the preferred variety for some growers over Farah$^{\Phi}$, its ascochyta resistant successor, where ascochyta is low risk or well managed. It also remains as an option over Nura$^{\Phi}$ where chocolate spot and ascochyta risk is low to medium, sowing time is delayed or in low rainfall areas where beans are not expected to grow very tall. Neither Fiesta VF nor Farah$^{\Phi}$ are the preferred variety over Nura$^{\Phi}$ when chocolate spot risk is high, sowing is early in high rainfall areas or the beans are expected to grow tall and lodge.

Fiesta VF it is no longer the recommended variety for central and northern NSW because of increased rust, frost and seed quality risks compared with Cairo$^{\Phi}$ and Doza$^{\Phi}$.

Variety Characteristics

Breeding: Fiesta VF (tested as 483) was released by Dr Jeff Paull, University of Adelaide as part of the National Faba Bean Breeding Program, now part of Pulse Breeding Australia. It was a Spanish accession with chocolate spot resistance obtained from ICARDA and reselected for evaluation in Australia.

Agronomic characteristics: Fiesta VF is very similar to Farah$^{\Phi}$, but needs to be managed differently in some situations to overcome its ascochyta susceptibility.

Agronomic and Disease Features of Faba Bean Varieties*

Variety	Plant height	Flowering time	Lodging	Seed colour	Seed size	Ascochyta	Chocolate spot	Rust	Cercospora
Ascot	Very Short	Early	MR	Light brown -brown	Small	R	VS	S	S
Cairo$^{\Phi}$	Medium-tall	Early	MR	Light brown -brown	Medium	VS	VS	MS-MR	S
Doza$^{\Phi}$	Medium	Early	MR	Buff	Small	VS	MS	R	S
Farah$^{\Phi}$	**Medium**	**Early-Mid**	**MS**	**Light brown – brown**	**Medium**	**MR-R**	**S**	**S**	**S**
Fiesta VF	Medium	Early-Mid	MS	Light brown -brown	Medium	MS-MR	S	S	S
Fiord	Short	Early	MR	Light brown -brown	Small	MS	VS	S	S
Manafest	Medium	Mid	MR-MS	Light brown	Medium-large	VS	MS	MS	S
Nura$^{\Phi}$	Short	Mid	R	Light buff	Medium-small	MR-R	MS	MR	S
PBA Kareema$^{\Phi}$	Tall	Late	MR	Light brown	Large	MR-R	MS	MR	S
Aquadulce	Tall	Late	MR	Light buff	Largel	MR-R	MS	MS	S

Key: **VS** = very susceptible, **S** = susceptible, **MS** = moderately susceptible, **MR** = moderately resistant, **R** = resistant.
* Pulse Breeding Australia national disease ratings

Quality Characteristics

Seed of Fiesta VF is very similar to that of Farah$^{\Phi}$ except that it is less uniform in size and colour. Seed size of Fiesta VF and Farah$^{\Phi}$ is 5-10% larger than Nura$^{\Phi}$ and 35-45% larger than Fiord. The grain is light buff in colour and considered ideal for size and colour for the Egyptian market. Large beans may need to be graded from the sample.

Yield and adaptation:

Fiesta VF is grown in areas that have either a low risk of ascochyta or have it well under control with crop hygiene and fungicide strategies. Like Farah$^{\Phi}$, it is less likely to be grown in areas that are perhaps better suited to Nura$^{\Phi}$ because the risk from chocolate spot and rust disease is higher.

- Fiesta VF is suited to medium and high rainfall areas of SA, Vic, southern NSW and Western Australia. It is also suited to low rainfall areas provided it is sown early.
- It is less suitable for all areas where there is a high risk of ascochyta and medium to high risk of chocolate spot.
- Being a taller variety, the lower pods of Fiesta VF can be more easily harvested than Nura$^{\Phi}$ and Fiord in low rainfall districts or seasons, or with late sowings.
- In central and northern NSW, Fiesta VF is more susceptible to frost risk and rust than Cairo$^{\Phi}$ and Doza$^{\Phi}$, is later flowering and maturing, and has increased seed quality risks.

Long–term Relative Grain Yield (as percentage of Fiesta VF) South Australia 2004-2010*

	Lower EP		Mid North		Murray Mallee		South East		Upper EP		Yorke P	
Cairo$^{\Phi}$	**96**	*5*	**95**	*22*	**-**	*-*	**98**	*16*	**100**	*4*	**99**	*6*
Doza$^{\Phi}$	**91**	*7*	**89**	*18*	**87**	*3*	**92**	*17*	**-**	*-*	**92**	*8*
Farah$^{\Phi}$	**98**	*10*	**100**	*33*	**100**	*5*	**99**	*32*	**101**	*4*	**101**	*12*
Fiesta VF	**100**	*10*	**100**	*34*	**100**	*5*	**100**	*32*	**100**	*4*	**100**	*12*
Fiord	**98**	*9*	**94**	*32*	**94**	*4*	**94**	*24*	**94**	*4*	**97**	*10*
Manafest	**85**	*6*	**85**	*23*	**90**	*4*	**89**	*27*	**-**	*-*	**88**	*6*
Nura$^{\Phi}$	**98**	*10*	**97**	*34*	**98**	*5*	**97**	*32*	**98**	*4*	**100**	*12*
yield of Fiesta (t/ha)	*2.00*		*2.33*		*1.49*		*2.64*		*0.99*		*3.03*	

* = BLUP figure; data courtesy NVT data base, with Adelaide University and SARDI data.

Long–term Relative Grain Yield (as percentage of Fiesta VF) Victoria 2004-2010*

	Mallee$^{\#}$		North Central		North East		South West$^{\#}$		Wimmera	
Cairo$^{\Phi}$	**-**	*-*	**97**	*3*	**97**	*5*	**-**	*-*	**96**	*12*
Doza$^{\Phi}$	**-**	*-*	**-**	*-*	**90**	*4*	**-**	*-*	**91**	*14*
Farah$^{\Phi}$	**-**	*-*	**98**	*6*	**100**	*7*	**-**	*-*	**101**	*14*
Fiesta VF	**100**	*3*	**100**	*6*	**100**	*7*	**100**	*3*	**100**	*22*
Fiord	**99**	*3*	**98**	*6*	**95**	*6*	**-**	*-*	**96**	*20*
Manafest	**85**	*3*	**85**	*4*	**86**	*4*	**90**	*3*	**86**	*14*
Nura$^{\Phi}$	**-**	*-*	**94**	*6*	**96**	*7*	**-**	*-*	**94**	*22*
yield of Fiesta (t/ha)	*1.88*		*4.10*		*1.90*		*3.59*		*2.54*	

* = BLUP figure; data courtesy NVT data base, with Adelaide University and DPI Vic data. $^{\#}$ = 2000-2009

Long–term Relative Grain Yield (as percentage of Fiesta VF) New South Wales 2004-2010*

	North East		North West		South East		South West	
Cairo$^{\Phi}$	**99**	*26*	**99**	*46*	**98**	*19*	**97**	*6*
Doza$^{\Phi}$	**103**	*23*	**103**	*22*	**92**	*16*	**91**	*5*
Farah$^{\Phi}$	**-**	*-*	**-**	*-*	**100**	*27*	**100**	*8*
Fiesta VF	**100**	*25*	**100**	*45*	**100**	*27*	**100**	*8*
Fiord	**94**	*26*	**99**	*45*	**95**	*24*	**95**	*7*
Manafest	**-**	*-*	**-**	*-*	**87**	*16*	**87**	*5*
Nura$^{\Phi}$	**79**	*19*	**77**	*27*	**95**	*27*	**97**	*8*
yield of Fiesta (t/ha)	*2.70*		*2.12*		*2.60*		*3.82*	

* = BLUP figure; data courtesy NVT data base, with Adelaide University and NSW DPI data.

Long–term Relative Grain Yield (as percentage of Fiesta VF) Western Australia*

	Esperance-Scadden area		Kataning-Kojonup area		Moora-Dongara-Mingenew area	
Cairo$^{\Phi}$	**108**	7	**108**	9	**99**	7
Doza$^{\Phi}$	**93**	3	**96**	5	**-**	-
Farah$^{\Phi}$	**107**	**7**	**102**	**9**	**98**	**7**
Fiesta VF	**100**	7	**100**	9	**100**	7
Fiord	**93**	7	**103**	9	**101**	7
Manafest	**-**	-	**-**	-	**-**	-
Nura$^{\Phi}$	**109**	5	**109**	6	**87**	4
yield of Fiesta (t/ha)	*1.98*		*1.71*		*2.39*	

* = average figure from individual trial BLUP figures to 2008; data courtesy DAFWA and Adelaide University.

Management Package

(Consult local grower guides for more detailed information)

Despite it being very similar to Farah$^{\phi}$, Fiesta VF should be managed differently in some situations.

Maintain purity of seed crops:

Do not let Fiesta VF seed crops out-cross with other varieties. A minimum 400m isolation from other bean varieties is needed. Ensure that there are no self-sown beans in the Fiesta VF seed crop. Avoid physical contamination with other beans.

Sowing date and seeding rate:

Fiesta VF yield declines with delays in time of sowing. Target a sowing date and plant population to minimise chocolate spot, ascochyta blight and lodging. Fiesta VF should be sown later than Farah$^{\phi}$ if ascochyta risk is high. Similarly sow Fiesta VF later than Nura$^{\phi}$ if either or both of chocolate spot and ascochyta are major risks.

Improving pod set:

Fiesta VF, like other faba beans, tolerates dry sowing as a means of early sowing and fitting into the farming system. However, in higher rainfall areas or on fertile, well drained soils, sowing Fiesta VF too early may result in excessive vegetative bulk, leading to poorer early pod set and increased risk of foliar disease.

Bee hives placed through the bean crop along with correct hive management can ensure that bees act as pollinators to help improve early pod set in beans. Wider row spacings (greater than 25cm) are being commercially used now by some bean growers, especially with early sowing. Limited trial work indicates that using wider row spacing can assist early pod set in situations of high vegetative bulk.

Herbicide Sensitivity:

Herbicide testing by SARDI on SA alkaline soils has shown Fiesta VF performs similarly to Farah$^{\Phi}$ and Nura$^{\Phi}$ at label recommended rates of most PSPE herbicides recommended in beans. Results at twice label rates indicate:

- FiestaVF and Farah$^{\Phi}$ may be more tolerant to Spinnaker® than Nura$^{\phi}$, particularly in low biomass situations.
- Fiesta VF and Farah$^{\Phi}$ may show greater visual symptoms of damage and higher yield loss to simazine than Nura$^{\phi}$.
- Fiesta VF may be slightly less tolerant of metribuzin PSPE than Farah$^{\phi}$.

Crop Rotation:

Ascochyta is a major limitation in beans when grown in close rotation. Due to its lack of ascochyta resistance, the longer interval between bean crops needs to be maintained when growing Fiesta VF. Risk of cercospora will also increase in paddocks with a frequent history of beans in the rotation, and so early fungicide treatments will likely be required for both ascochyta and cercospora. Risk of chocolate spot may also increase with closer stubble proximities from close bean rotations.

Disease Management with Fiesta VF:

Fiesta VF is more susceptible (MS-MR) to ascochyta blight than Farah$^{\phi}$ (MR-R). Both are susceptible (S) to chocolate spot, rust and cercospora.

Continue to place emphasis on ascochyta control with Fiesta VF, both early and then during podding when it is necessary to concentrate on chocolate spot as well.

- Fungicide seed dressing for ascochyta in beans is not usual as protection runs out after 6-8 weeks.
- Use a foliar fungicide that targets ascochyta control at 6-8 weeks post-sowing, particularly where there is a severe ascochyta risk.
- Foliar fungicide control at 6-8 weeks for cercospora may be required as well, using different products or mixtures to those used for ascochyta.
- At early flowering, concentrate on foliar chocolate spot control if required.
- At late flowering and pod fill, concentrate on chocolate spot control and ascochyta and rust protection where required

Harvest:

Harvest time is similar with Fiesta VF, Farah$^{\phi}$ and Nura$^{\phi}$. Failure to meet the minimum receival standard for seed coat colour can be an issue with Fiesta VF because of its greater susceptibility to ascochyta seed staining. In medium to high risk ascochyta situations, ascochyta needs to be controlled, but other environmental factors can also discolour the grain (eg chocolate spot, sunburn).

Marketing:

Fiesta VF, Farah$^{\phi}$ and Nura$^{\phi}$ grain can be co-mingled for human food markets. There is open marketing and no end-point royalty paid on Fiesta VF deliveries.

Seed Availability and PBR:

Fiesta VF is no longer protected by PBR. Growers can retain seed from production of Fiesta VF for their own seed use. Commercial seed is no longer available through Seedmark, but may be available through local seed suppliers or growers. Farah$^{\phi}$ is regarded as the direct replacement for Fiesta VF.

Agronomic enquiries: Contact:

Wayne Hawthorne, Pulse Aust. 0429 647455;
Alan Meldrum, Pulse Aust. 0427 384 760;
Larn McMurray, SARDI 08 8842 6265;
Ian Pritchard, DAFWA 08 9368 3515;
Trevor Bray, Pulse Aust. 0428 606 886
Jeff Paull, Univ. Adelaide 08 8303 6564;
Peter Matthews, NSW DPI 02 6977 3333;
Jason Brand DPI Vic 03 5362 2341.

Acknowledgements:

The contribution of the following people to either the extensive field testing, or the production of this and the original publication is gratefully acknowledged: Dr Jeff Paull, Plant Breeder (Faba beans), Univ. Adelaide; Rohan Kimber, Plant Pathologist, SARDI; Trevor Bretag, formerly Plant Pathologist, DPI Vic; Jim Egan, formerly Research Agronomist, SARDI; Eric Armstrong, formerly Pulse Research Agronomist, NSW DPI; Larn McMurray, Pulse Research Agronomist, SARDI; Peter Matthews, District Agronomist, NSW DPI; Mary Raynes, formerly Pulse Research Agronomist, DPI Vic ; Sandra Nitschke, formerly Research Agronomist, SARDI; Jenny Davidson, Plant Pathologist, SARDI; Wayne Hawthorne, Pulse Australia.

Other Reading:

For Faba bean management guidelines, see:

- Grain Legume Handbook 2008
- Pulse Australia publications: "Meeting faba bean quality demanded by markets", "Faba bean disease management strategy for southern region GRDC" and supplements, and "Pulse seed treatments and foliar fungicides" (www.pulseaus.com.au)
- SARDI fact sheet "Faba bean variety sowing guide 2011" www.sardi.sa.gov.au/pdfserve/fieldcrops/research_info/sowing_guide/fababeans.pdf)
- NSW DPI publications (www.agric.nsw.gov.au): "Winter Crop Variety Sowing Guide 2011" ; Pulse Point 20 "Germination testing and seed rate calculation"; "Weed Control in Winter Crops 2011"; "Insect and Mite Control in Winter Crops";
- DPI Vic "Winter Crop Summary 2011" and fact sheets (www.dpi.vic.gov.au).