

KEY FEATURES of Farah^ϕ

- Farah^ϕ has improved resistance to ascochyta over Fiesta VF.
- It is adapted to areas where Fiesta VF is grown and provides a low ascochyta risk alternative.
- Uniform seed size and improved quality over Fiesta VF assist marketing.
- All other variety and management attributes are similar to Fiesta VF.
- Its chocolate spot resistance is not as good as Nura^ϕ.
- Plant height is similar to Fiesta VF in being taller than Nura^ϕ, but stem strength and lodging resistance are less than Nura^ϕ.
- Farah^ϕ is less affected by delays in sowing date than Nura^ϕ, but still needs to be sown relatively early to optimise its yield.
- Farah^ϕ is early - mid flowering, and its long term yields are similar to Fiesta VF in most areas.
- Access to human consumption markets continues.

Where Farah^ϕ fits into the farming system

Farah^ϕ fits as a faba bean variety for southern and western region farming systems as a replacement for Fiesta VF and Fiord, especially where ascochyta is a risk. It may be the preferred variety over Nura^ϕ where chocolate spot risk is low to medium, sowing time is delayed or in low rainfall areas where beans are not expected to grow very tall. It may not be the preferred variety over Nura^ϕ where chocolate spot risk is high, sowing is early in high rainfall areas or the beans are expected to grow tall and lodge.

It is not the recommended variety for central and northern NSW because of increased rust, frost and seed quality risks compared with Cairo^ϕ and Doza^ϕ.

Variety Characteristics

Breeding: Farah^ϕ (tested as 483-1) 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 produced from a bulk of single plant selections from Fiesta VF chosen for their improved resistance to ascochyta and their uniformity of seed colour (buff) and size. It is similar to Fiesta VF in other attributes.

Agronomic characteristics: Farah^ϕ is very similar to Fiesta VF, but can be managed differently in some situations to exploit its difference in ascochyta resistance.

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 ^ϕ	Medium-tall	Early	MR	Light brown -brown	Medium	VS	VS	MS-MR	S
Doza ^ϕ	Medium	Early	MR	Buff	Small	VS	MS	R	S
Farah^ϕ	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 ^ϕ	Short	Mid	R	Light buff	Medium-small	MR-R	MS	MR	S
PBA Kareema ^ϕ	Tall	Late	MR	Light brown	Large	MR-R	MS	MR	S
Aquadulce	Tall	Late	MR	Light buff	Large	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 Farah^ϕ is very similar to that of Fiesta VF except that it is more uniform in size and colour. Seed size of Farah^ϕ is 5-10% larger than Nura^ϕ and 35-45% larger than Fiord. The grain is light buff in colour and considered ideal size and colour for the Egyptian market.

Yield and adaptation:

Farah[Ⓞ] can be grown in similar areas to Fiesta VF with the benefit that ascochyta risk is minimised.

Farah[Ⓞ] can also be grown in similar areas to Nura[Ⓞ], but the risk from chocolate spot and rust disease is higher.

- It 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.
- Farah[Ⓞ] is suitable for all areas where there is a high risk of ascochyta and medium risk of chocolate spot.
- Being a taller variety than Nura[Ⓞ], the lower pods of Farah[Ⓞ] could be more easily harvested in low rainfall districts or seasons, or with late sowings.
- In central and northern NSW, Farah[Ⓞ] is more susceptible to frost risk and rust than Cairo[Ⓞ] and Doza[Ⓞ], 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 [Ⓞ]	96	5	95	22	-	-	98	16	100	4	99	6
Doza [Ⓞ]	91	7	89	18	87	3	92	17	-	-	92	8
Farah [Ⓞ]	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 [Ⓞ]	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 [Ⓞ]	-	-	97	3	97	5	-	-	96	12
Doza [Ⓞ]	-	-	-	-	90	4	-	-	91	14
Farah [Ⓞ]	-	-	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 [Ⓞ]	-	-	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 [Ⓞ]	99	26	99	46	98	19	97	6
Doza [Ⓞ]	103	23	103	22	92	16	91	5
Farah [Ⓞ]	-	-	-	-	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 [Ⓞ]	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		Katanning-Kojonup area		Moora-Dongara-Mingenew area	
Cairo [Ⓞ]	108	7	108	9	99	7
Doza [Ⓞ]	93	3	96	5	-	-
Farah [Ⓞ]	107	7	102	9	98	7
Fiesta VF	100	7	100	9	100	7
Fiord	93	7	103	9	101	7
Manafest	-	-	-	-	-	-
Nura [Ⓞ]	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 Fiesta VF, Farah^ϕ can be managed differently in some situations.

Maintain purity of seed crops:

Do not let Farah^ϕ 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 Farah^ϕ seed crop. Avoid physical contamination with other beans.

Sowing date and seeding rate:

Faba bean yield declines with delays in time of sowing. Farah^ϕ and Fiesta VF respond similarly to delays in time of sowing, but on some occasions Nura^ϕ yields decline more markedly. Target the same sowing date and plant population as Fiesta VF to minimise chocolate spot and lodging. Farah^ϕ should only be sown earlier than Fiesta VF if sowing had previously been delayed solely because of ascochyta risk.

Improving pod set:

Farah^ϕ, 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 Farah^ϕ 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 Farah^ϕ performs similarly to Fiesta VF and Nura^ϕ at label recommended rates of most PSPE herbicides recommended in beans. Results at twice label rates indicate:

- Farah^ϕ, like FiestaVF, may be more tolerant than Nura^ϕ to Spinnaker[®], particularly in low biomass situations.
- Farah^ϕ, like Fiesta VF, may show greater visual symptoms of damage and higher yield loss to simazine than Nura^ϕ.
- Farah^ϕ may be slightly more tolerant of metribuzin PSPE than Fiesta VF.

Crop Rotation:

Ascochyta has been a major limitation in beans when grown in close rotation. Due to its improved ascochyta resistance, the interval between bean crops could be reduced using Farah^ϕ. Risk of cercospora may increase in paddocks with a frequent history of beans in the rotation, and so early fungicide treatments may still be required. Risk of chocolate spot may also increase with closer stubble proximities from close bean rotations.

Disease Management with Farah^ϕ:

Farah^ϕ is moderately resistant to resistant (MR-R) to ascochyta, similar to Nura^ϕ, and slightly less resistant than Ascot VF. It is susceptible (S) to chocolate spot, rust and cercospora, similar to Fiesta VF.

Place less emphasis on ascochyta with Farah^ϕ, without ignoring the risk, and concentrate more on chocolate spot control.

- No fungicide seed dressing for ascochyta is needed.
- No foliar fungicide that targets ascochyta control at 6-8 weeks post-sowing unless a severe ascochyta risk.
- Early foliar fungicide control for cercospora using different products to those used for ascochyta may be required at 6-8 weeks.
- At early flowering, concentrate on foliar chocolate spot control if required.
- At late flowering and pod fill, concentrate on chocolate spot control and rust protection where required. Ascochyta protection is only needed in high risk situations.

Harvest:

- Harvest time is similar to Fiesta VF and Nura^ϕ. Delivering grain that meets the receival standard minimum for seed coat colour is more easily achieved with Farah^ϕ because of its reduced ascochyta seed staining compared with Fiesta VF. This is provided the high risk ascochyta situations are controlled or avoided, and other environmental factors do not discolour the grain (eg chocolate spot, sunburn).

Marketing:

- Farah^ϕ grain can be co-mingled with Fiesta VF and Nura^ϕ grain for human food markets. Segregation may be desirable for the container trade or to achieve canning grades. Open marketing provided an end-point royalty of \$3.30/t (including GST) is paid on Farah^ϕ deliveries.

Seed Availability and PBR:

Farah[®] is protected by PBR. Growers can retain seed from production of Farah[®] for their own seed use. Seed is commercialised through Seedmark and available through local seed suppliers.

Farah[®] Seed Supply enquiries:		Phone 1800 112 400
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Agronomic enquiries: Contact:

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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).

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This VMP has been jointly prepared by: Wayne Hawthorne, Pulse Australia, Jeff Paull, University of Adelaide; Jim Egan, SARDI; on information and data supplied by Univ of Adelaide, SARDI, Vic DPI, DAFWA, NSW DPI and NVT. Reproduction of this VMP in any edited form must be approved by Pulse Australia © 2005.

