

KEY FEATURES OF NURA[Ⓟ]

- Nura has improved resistance to ascochyta, chocolate spot and rust over Fiesta.
- It provides a low disease risk alternative to other varieties in southern Australia.
- Plant height is shorter than Fiesta and Farah, but stem strength, and lodging resistance is improved.
- Nura needs to be sown early to optimise its yield.
- It has broad adaptation, provided early sowing is achieved in low rainfall areas.
- Nura is a mid flowering variety. Its long term yields are similar to Fiesta and Farah in most areas.
- Its tolerance to soil boron is better than other current bean varieties.
- Seed is slightly smaller size than Farah, and light buff in colour with minimal ascochyta seed staining.
- Continued access to human-consumption markets is expected.

Breeding: Nura[Ⓟ] (tested as Ic*As/7/3) was bred by Dr Jeff Paull, University of Adelaide as part of the National Faba Bean Breeding Program. It was produced from a cross between Icarus and Ascot and selected for its buff seed and improved resistance to both chocolate spot and ascochyta.

Variety Characteristics: Nura is a medium sized faba bean that has achieved similar yields to Fiesta and Farah. It has improved resistance to ascochyta and chocolate spot over Fiesta. It also has moderate resistance to rust. Its combination of disease resistances is better than all current varieties. Nura is shorter in height than Fiesta and Farah, more similar to Fiord, and is less likely to lodge, but its bottom pods may be closer to the ground.



Nura flowers about 7 days later than Fiesta, but their maturities are similar. It is the most tolerant of Australian faba bean varieties to high concentrations of soil boron. Grain size is about 5-10% smaller than Farah, with a similar lighter colour, and it is suitable for all existing human-consumption and livestock feed markets.

Agronomic and Disease Features of Faba Bean Varieties

Variety	Plant height	Flowering time	Lodging	Seed colour	Seed size	Ascochyta	Chocolate spot	Rust	Cercospora
Nura	Short	Medium	R	Light buff	Medium-small	MR-R	MS-MR	MR	S
Farah	Medium	Early	MS	Light buff	Medium	MR-R	S	S	S
Fiesta	Medium	Early	MS	Buff	Medium	MS-MR	S	S	S
Fiord	Short	Very early	MR	Buff	Small	MS	VS	S	S
Ascot	Very Short	Very early	MR	Buff	Small	R	VS	S	S

Key: VS = very susceptible, S = susceptible, MS = moderately susceptible, MR = moderately resistant, R = resistant.

Yield and adaptation:

Nura can be grown in similar areas to Farah and Fiesta, but the overall risk of disease is lower.

- It is suited to medium and high rainfall areas of SA, Vic and southern NSW. It is also suited to low rainfall areas provided it is sown early enough. Its adaptation in WA is being determined.
- Nura is particularly suitable for all areas where there is a high risk of ascochyta and chocolate spot
- Being a slightly shorter variety, the lower pods of Nura could be more difficult to harvest in low rainfall seasons or with late sowings.
- In central and northern NSW, Nura is more susceptible to frost risk compared with Cairo, is later flowering and maturing, and has seed quality risks.

Long-term Relative Grain Yield (as percentage of Fiesta)

Variety	SA 1998-2004*	Number of Experiments	Vic 2001-2004	Number of Experiments	Sthn NSW 1998-2004	Number of Experiments
Nura	100	66	97	29	94	17
Farah	100	49	94	21	99	17
Fiesta	100	86	100	28	100	33
Fiord	94	82	96	26	97	33
Ascot	84	77	81	28	92	10
Fiesta yield (t/ha)	2.41	-	2.62	29	2.92	-

* = BLUP figure; data courtesy Adelaide University, SARDI, DPI Vic, DPI NSW.

Grain quality: Seed size of Nura is 5-10% smaller than Fiesta and Farah, but 30-40% larger than Fiord. The grain is light buff in colour and considered ideal for the Egyptian market.

(consult local grower guides for more detailed information)

Isolation of Seed Crops:

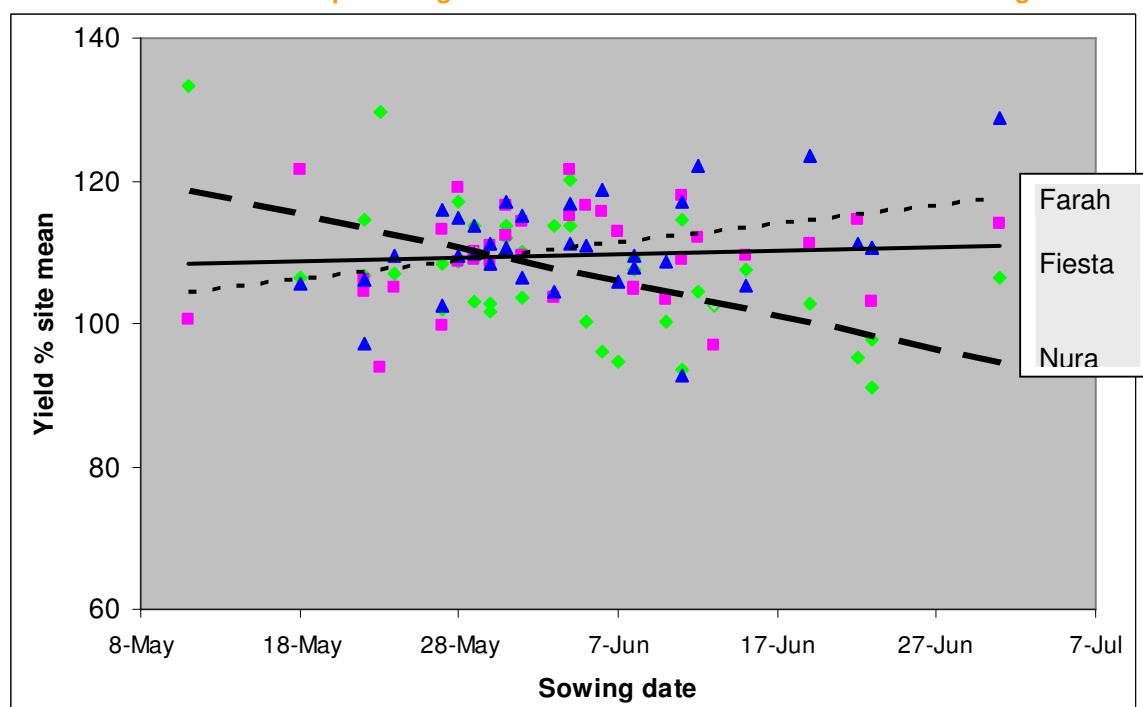
Do not let Nura seed crops out-cross with other varieties. A minimum 200-400m isolation from other bean varieties is needed. Ensure that there are no self-sown beans in the Nura seed crop. Avoid physical contamination with other beans.

Sowing Date:

Target at least the same sowing date as Fiesta and Farah, but preferably earlier.

- Nura achieves maximum yield potential when sown early (Figure 1).
- Yield decline with delays in sowing time may be greater in Nura than other bean varieties.
- Nura does not suffer the same lodging problems as Fiesta or Farah when sown early.
- The increased risk of chocolate spot with earlier sowing must still be considered with Nura, despite its improved chocolate spot resistance.
- Avoid sowing Nura late, particularly in lower rainfall areas. Its relative short height, reduced vigour, later flowering and possible lower pod height can mean reduced yield potential and more harvesting losses.

Figure 1: Yield of bean varieties as a percentage of trial mean for sites 2000-2004 in Central Region of SA.



Data from University of Adelaide and SARDI bean trials, Lower to Upper North and Yorke Peninsula of SA.

Herbicide Sensitivity:

Over two years of SARDI herbicide testing on alkaline soils, Nura has performed similar to Fiesta and Farah at label recommended rates of most PSPE herbicides recommended in beans. Testing is on-going, however preliminary results at twice label rates indicate that compared with Fiesta and Farah:

- Nura may be less tolerant to Spinnaker[®], particularly in low biomass situations.
- Nura may show fewer visual damage symptoms and less yield loss to simazine.

Crop Rotation:

Ascochyta is a major limitation in beans when grown in close rotation. Due to an increase in resistance, the interval between bean crops could be reduced using either Nura or Farah. However, be aware that the risk of cercospora may increase in beans grown in paddocks with a frequent history of beans grown in the rotation, and so early fungicide treatments may still be required.

NURA[®] Management Package (cont.)

Disease Resistance and Management:

Nura is resistant (MR-R) to ascochyta, similar to Ascot and Farah. It is moderately susceptible to moderately resistant (MS-MR) to chocolate spot, moderately resistant (MR) to rust and susceptible (S) to cercospora.

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

- No fungicide seed dressing for ascochyta is needed.
- No foliar fungicide for ascochyta control at 6-8 weeks post-sowing unless in a severe ascochyta risk situation. Cercospora may however need controlling.
- At early flowering, concentrate on foliar chocolate spot control if required.
- At late flowering – pod-fill, concentrate on chocolate spot control protection where required. Ascochyta and rust protection are only needed in high risk situations.

Harvest:

Harvest time is similar to Fiesta and Farah. Producing grain that meets the receival standards for poor colour seed coat is more easily achieved with Nura because of its reduced ascochyta seed staining compared with Fiesta. This is providing the high risk ascochyta situations are controlled or avoided, and other environmental factors do not discolour the grain.

Marketing:

- Nura grain can be co-mingled with Farah and Fiesta 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/t (excluding GST) is paid on Nura deliveries.

Seed Availability and PBR:

Nura[®] is protected by PBR. Growers can retain seed from production of Nura[®] for their own seed use. Seed is commercialised through AWB Seeds and available through local seed suppliers from 2006.

Nura[®]
Seed Supply enquiries:



Phone 1800 054 433

Agronomic Enquiries: Contact Wayne Hawthorne, Pulse Australia, SA & S-Vic, (08) 8764 7455; Trevor Bray, Pulse Australia; S-NSW & N-Vic, (02) 6963 6926; Jeff Paull, Univ. of Adelaide 08 8303 6564.

Other Reading: For faba bean management guidelines, see:

- Pulse Australia brochures “Faba bean disease management strategy for southern region GRDC 2004”, and “Pulse seed treatments and foliar fungicides” (www.pulseaus.com.au)
- SARDI fact sheet “Faba bean variety sowing guide 2006” (www.sardi.sa.gov.au/pdfserve/field_crops/cropimprove/variety_guides/fababeansfs.pdf)
- NSW DPI publications (www.agric.nsw.gov.au): “Winter Crop Variety Sowing Guide 2005”; Pulse Point 20 “Germination testing and seed rate calculation”; “Weed Control in Winter Crops 2005”; “Insect and Mite Control in Winter Crops”; Pulse Point 9 “Windrowing faba beans”; Pulse Point 12 “Seeding equipment problems with faba beans”
- Vic DPI “Winter Crop Summary 2004” (www.dpi.vic.gov.au).

Disclaimer: The information contained in this brochure is based on knowledge and understanding at the time of writing (14/10/2005). Growers should be aware of the need to regularly consult with their advisors on local conditions and currency of information.



This Nura VMP was prepared by the University of Adelaide, Pulse Australia and SARDI on information and data supplied by Univ of Adelaide, SARDI, Vic DPI and NSW DPI. Reproduction of this Pulse VMP in any edited form must be approved by Pulse Australia © 2005.



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