

# PBA Amberley<sup>®</sup>

## Faba Bean



# PBA

PULSE BREEDING AUSTRALIA

*Better pulse varieties faster*

## Improved Disease Resistant Faba Bean



### MAIN ADVANTAGES

PBA Amberley<sup>®</sup> is a mid-season flowering faba bean that has high yield potential in the higher rainfall and long growing season districts of southern Australia. It has a greater level of resistance to chocolate spot than all current varieties and is also resistant to ascochyta blight. The improved disease resistance of PBA Amberley<sup>®</sup> offers the potential to reduce the risk and cost of faba bean production in high rainfall areas where foliar fungal diseases are a major constraint.

Seed is light brown and medium in size and suitable for co-mingling with the current faba bean varieties for export to the major food markets in the Middle East.

### SEED PROTECTION & ROYALTIES

PBA Amberley<sup>®</sup> is protected by Plant Breeder's Rights (PBR) legislation. Growers can only retain seed from production of PBA Amberley<sup>®</sup> for their own seed use.

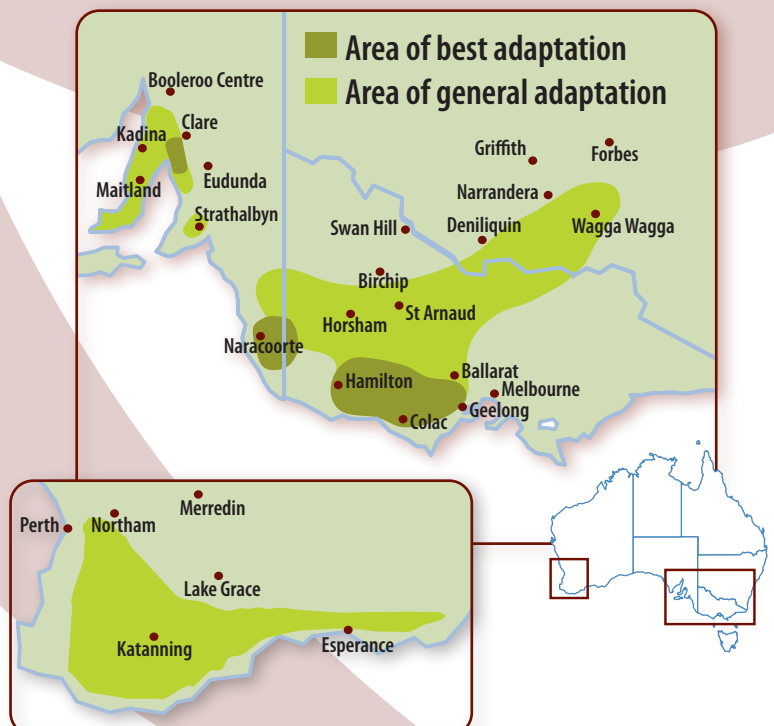
An End Point Royalty (EPR) of \$3.85 per tonne (GST inclusive), which includes breeder royalty, applies upon delivery of this variety.

Seed is available from the commercial partner Seednet.

### KEY FEATURES

- High yielding faba bean for high rainfall areas in southern Australia
- Most resistant of all varieties to chocolate spot
- Resistant to ascochyta blight
- Good standing ability and low level of 'necking'
- Medium size seed, similar to PBA Samira<sup>®</sup> and suited to the Middle East markets

### AREA OF ADAPTATION



## YIELD & ADAPTATION

PBA Amberley<sup>®</sup> is a mid-flowering faba bean variety that is very well suited to higher rainfall or long growing season districts of southern Australia. It has produced its highest yields, relative to other varieties, in trials where the yield has been greater than 3.0 t/ha, including the Western Districts of Vic, Lower South East SA, higher rainfall areas of the mid-north of SA and southern WA, and in some irrigated trials in Vic and southern NSW. Please see <https://app.nvt.grdc.com.au> for location specific yield data. The overall disease resistance profile of PBA Amberley<sup>®</sup> is better than all other

Southern Region faba bean varieties, and in particular has the best available level of resistance to chocolate spot. As PBA Amberley<sup>®</sup> is targeted to regions where there is a high risk of foliar fungal diseases, crops should be monitored regularly and diseases managed when present.

PBA Amberley<sup>®</sup> is not recommended for growing in Northern NSW or Southern Qld as it is lower yielding than varieties that have been released for the Northern Region and it is susceptible to rust.

**Table 1.** Long term (2017–2021) predicted yield (% of trial mean) of PBA Amberley<sup>®</sup> and other faba bean varieties in National Variety Trials (NVT) across southern Australia.

		2017	2018	2019	2020	2021
	Mean yield	2.74 t/ha	2.17 t/ha	1.90 t/ha	3.35 t/ha	3.61 t/ha
Variety	Trials	10	9	10	14	15
PBA Amberley <sup>®</sup>	58	100	99	99	104	100
PBA Bendoc <sup>®</sup>	58	100	101	101	98	100
PBA Marne <sup>®</sup>	58	99	99	99	90	101
PBA Zahra <sup>®</sup>	58	104	101	102	98	101
PBA Samira <sup>®</sup>	58	101	99	99	106	99
PBA Rana <sup>®</sup>	44	91	89	86		89
Nura <sup>®</sup>	58	94	96	95	102	97
Farah <sup>®</sup>	58	96	97	96	102	97

Source: <https://app.nvt.grdc.com.au/lty/table/faba-bean/>

## DISEASE MANAGEMENT

### Ascochyta blight

- PBA Amberley<sup>®</sup> is rated as RMR to pathotype 2 of ascochyta blight which is now widespread and predominant throughout the Southern Region.
- Foliar fungicides that target ascochyta blight control should be applied at 6–8 weeks post-sowing in high risk situations. Crops should be monitored and managed if significant disease occurs.
- Ascochyta blight protection during podding should be applied if significant disease occurs on foliage earlier in the season.

### Chocolate spot

- PBA Amberley<sup>®</sup> is rated as MRMS to chocolate spot, and is more resistant than all other varieties.
- Crops should be monitored regularly and managed accordingly, with strategic fungicide applications that target chocolate spot, particularly in higher rainfall situations.

- In high risk situations, disease will be minimised by the application of fungicides prior to canopy closure, during flowering and at pod fill.

### Cercospora leaf spot

- PBA Amberley<sup>®</sup> is rated as S to cercospora leaf spot, similar to all other Australian faba bean varieties.
- The risk of cercospora leaf spot is greatest in paddocks with a long history of faba/broad bean production and when bean crops are grown in tight rotations.
- A foliar fungicide that targets cercospora leaf spot is recommended to be applied at 5–8 weeks post-sowing.

### Rust

- PBA Amberley<sup>®</sup> is rated as VS to rust.
- A foliar fungicide that targets rust is required in high risk situations, and management should be similar to that used for Fiesta VF and Farah<sup>®</sup>.

## AGRONOMY

### Plant characteristics

- Mid-season flowering and maturity, similar to varieties PBA Samira<sup>®</sup> and PBA Zahra<sup>®</sup>.
- Medium height plant, generally similar to most other varieties.
- Lodging and necking resistance better than other faba bean varieties but can experience some degree of lodging in very high biomass conditions.

### Sowing

- **Seed crops of PBA Amberley<sup>®</sup> should be isolated from other faba bean varieties by at least 200 m to prevent cross-pollination.**
- Paddock selection and basic requirements for production are similar to other faba bean varieties.
- PBA Amberley<sup>®</sup> is similar to other faba bean varieties and generally benefits from early sowing, particularly in lower rainfall or short season environments. Delaying sowing until late May or early June can result in significant reduction in yield.

- Very early sowing can cause excessive canopy growth and increase the risk of foliar fungal disease and excessive canopy growth for all faba bean varieties.
- Seed of PBA Amberley<sup>®</sup> is similar in size to PBA Samira<sup>®</sup> and seeding equipment must be able to handle the larger seed to reduce the risk of blockages.
- Inoculation with the commercial faba bean Group F Rhizobium is essential for proper nodulation.

### Herbicide tolerance

- PBA Amberley<sup>®</sup> is a conventional variety and in breeding yield trials has shown no specific adverse reactions to any registered products used.

**Table 2.** Agronomic and disease resistance ratings of faba bean varieties in southern Australia.

Variety	Plant height	Flower time	Maturity	Lodging resistance	Necking resistance	Ascochyta blight*	Chocolate spot	Cercospora	Rust	P. thornei
PBA Amberley <sup>®</sup>	Medium	Mid	Mid	MR	R	RMR	MRMS	S	VS	MS
PBA Marne <sup>®</sup>	Med/Short	Early	Early/Mid	MR	MR	MS(P)	S	S	MRMS	MS
PBA Bendoc <sup>®</sup>	Medium	Mid	Early/Mid	MS	MS	MR	S	S	VS	MRMS
Fiesta VF	Medium	Early/Mid	Early/Mid	MS	MS	S	S	S	VS	MS
Farah <sup>®</sup>	Medium	Early/Mid	Early/Mid	MS	MS	S	S	S	VS	MS
Nura <sup>®</sup>	Short	Mid	Early/Mid	MR	MS	RMR	MS	S	VS	MS
PBA Rana <sup>®</sup>	Med/Tall	Mid	Mid	MR	MR	MRMS	MS	S	VS	MS
PBA Samira <sup>®</sup>	Medium	Mid	Early/Mid	MR	MS	RMR	MS	S	S	MRMS
PBA Zahra <sup>®</sup>	Med/Tall	Mid	Mid	MR	S	MRMS	MS	S	S	MRMS

\* Ascochyta blight ratings are for pathotype 2, the predominant and widespread strain present in the Southern Region.

R = resistant, RMR = resistant-moderately resistant, MR = moderately resistant, MRMS = moderately resistant-moderately susceptible, MS = moderately susceptible, S = susceptible, VS = very susceptible, (P) = provisional ratings and subject to change when additional data becomes available through the NVT.

Source: Pulse Breeding Australia trials program 2014–2022 and NVT disease ratings (<https://nvt.grdc.com.au/nvt-disease-ratings>).

# PBA Amberley<sup>®</sup>

## Faba Bean

### SEED QUALITY

PBA Amberley<sup>®</sup> produces medium size seeds that are comparable in size to PBA Samira<sup>®</sup>. The seed size varies between locations and seasons and larger seed is produced under more favourable conditions.

The overall colour of seeds is similar to other major faba bean varieties and seeds of PBA Amberley<sup>®</sup> have a black hilum.

Seed weight (g/100 seeds) of faba bean varieties

Variety	Average	Range
PBA Amberley <sup>®</sup>	72	60–84
PBA Marne <sup>®</sup>	72	57–87
PBA Bendoc <sup>®</sup>	62	50–71
Fiesta VF	67	51–78
Farah <sup>®</sup>	69	56–78
PBA Rana <sup>®</sup>	79	62–94
PBA Samira <sup>®</sup>	73	58–87
PBA Zahra <sup>®</sup>	78	58–91

Source: NVT. Data derived from 25 rainfed trials in SA, Vic and th NSW in 2016–2018



PBA Amberley<sup>®</sup>



PBA Zahra<sup>®</sup>



PBA Samira<sup>®</sup>

### MARKETING

The seed of PBA Amberley<sup>®</sup> should be suitable to co-mingle with similar varieties for export to the major food markets in the Middle East.

### BREEDING

PBA Amberley<sup>®</sup>, evaluated as AF11023, was developed by the PBA Faba bean breeding program led by University of Adelaide. It is the result of an inter-cross between PBA Rana<sup>®</sup>, Farah<sup>®</sup> and accession 1322/2. It was selected for response to ascochyta blight, chocolate spot, yield, adaptation, standing ability and seed quality.

PBA was an unincorporated joint venture between the GRDC, University of Adelaide, University of Sydney, SARDI, Agriculture Victoria Research, NSW DPI, DAF (Qld), DPIRD WA and Pulse Australia.

### PULSE AGRONOMY

Agromony and disease management information has been developed with the assistance of the 'Southern region pulse agronomy project' co-funded by GRDC, SARDI, DEDJTR Victoria and NSW DPI.

### FOR MORE INFORMATION

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Seednet's mission is:

*"To deliver high performance seed based genetics to Australian grain growers and end user customers via superior product and service delivery channels."*

**Seednet**  
Planting Productivity

Seednet is proud to invest in the improvement of Australian faba bean varieties.

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