National Faba Bean Breeding Program

Fede Ribalta

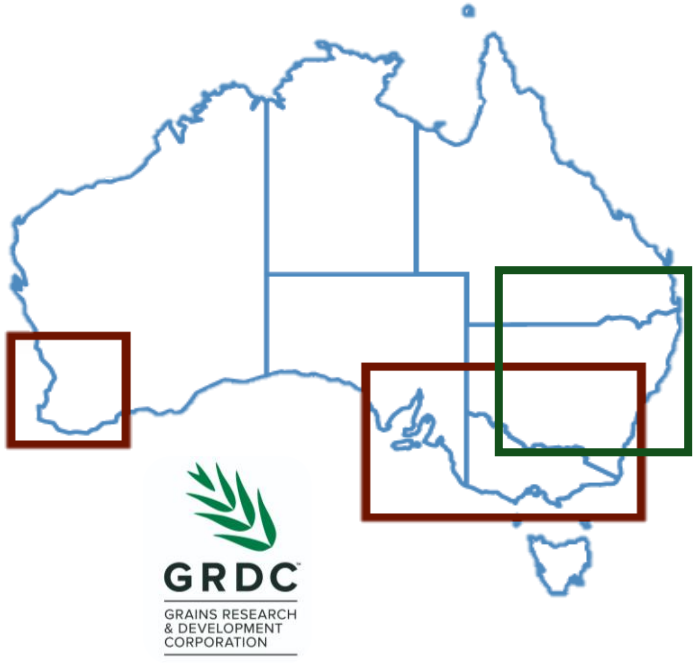
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Faba bean breeding in Australia 1980-2025

- Established in the 1980s in SA – release of cv. ‘Fiord’
- MRZ/HRZ - higher yield potential, better disease and WL tolerance
- Since mid-1990s two breeding nodes targeting two population environments:







New National Faba Bean Program

To deliver improved faba bean varieties that increase **grower profitability**, strengthen Australian **export competitiveness**, and support **expansion** into new production zones

INTERGRAIN

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Adelaide University

Faba bean program: Strategic goals

Modernise



- State of the arts statistics
- Advanced MET analytics
- Integration of HTP genomics/ phenomics technologies

Enhance



- Operational efficiencies
- Quality assessments
- Industry engagement
- Commercialisation pathway

Scale



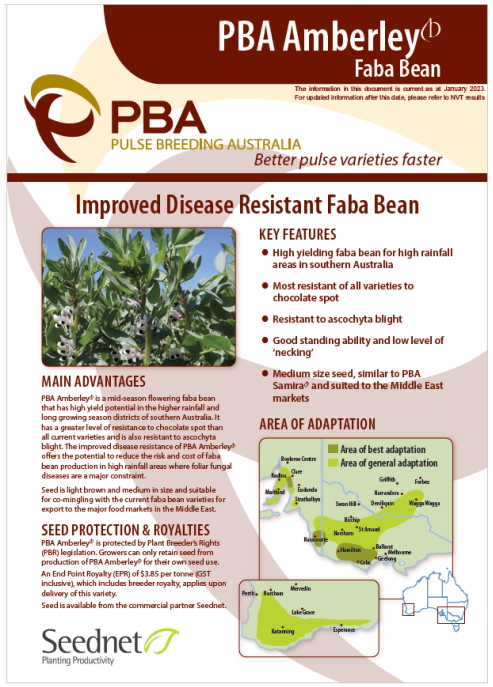
- Strategic growth
- Population throughput
- Infrastructure
- National trial distribution
- New production zones

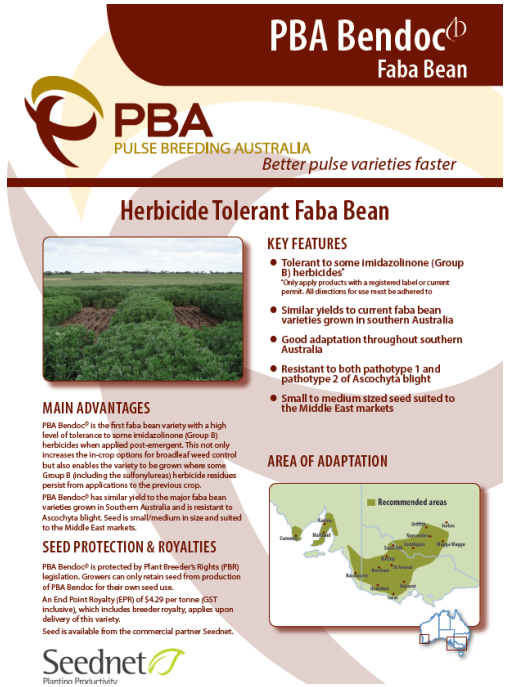
Current faba bean varieties – southern region

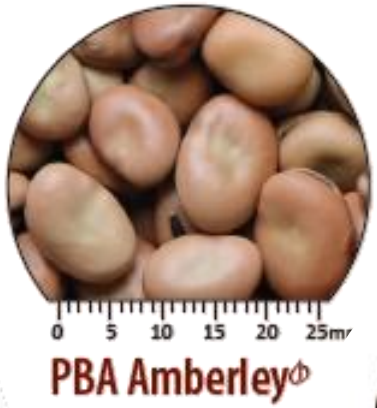
Variety	Plant height	Flower time	Maturity	Lodging resistance	Necking resistance	Ascochyta blight*	Chocolate spot	Cerco-spora	Rust	P. thornei
PBA Amberley$^{\Phi}$	Medium	Mid	Mid	MR	R	RMR	MRMS	S	VS	MS
PBA Marne$^{\Phi}$	Med/Short	Early	Early/ Mid	MR	MR	MS(P)	S	S	MRMS	MS
PBA Bendoc$^{\Phi}$	Medium	Mid	Early/ Mid	MS	MS	MR	S	S	VS	MRMS
PBA Samira$^{\Phi}$	Medium	Mid	Early/ Mid	MR	MS	RMR	MS	S	S	MRMS
PBA Zahra$^{\Phi}$	Med/Tall	Mid	Mid	MR	S	MRMS	MS	S	S	MRMS

Seed weight (g/100 seeds) of faba bean varieties		
Variety	Average	Range
PBA Amberley$^{\Phi}$	72	60–84
PBA Marne$^{\Phi}$	72	57–87
PBA Bendoc$^{\Phi}$	62	50–71
PBA Samira$^{\Phi}$	73	58–87
PBA Zahra$^{\Phi}$	78	58–91











New faba bean varieties for 2027 – Southern Region

Adelaide University

FBA Coorong (AF14092)

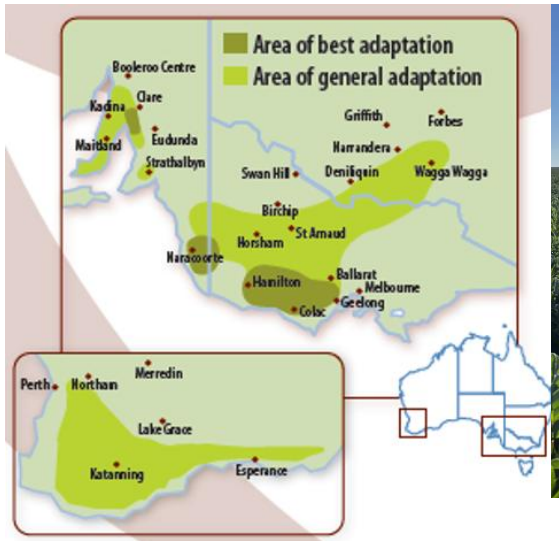
- Conventional type (Samira/ Amberley replacement)
- High yield potential
- Early/Mid flowering, mid maturing
- Medium height
- Strong disease resistance
- M-L seed size

FBA Barmah (AF15283)

- PBA Bendoc replacement - IMI
- E/M flowering, E/M maturing
- Medium height
- M seed size
- Improved resistance to CS and AB

	Variety	Group	2021	2022	2023	2024	2025
		Mean Yield	3.69 t/ha	3.93 t/ha	2.58 t/ha	2.63 t/ha	3.19 t/ha
		Trials	13	13	14	14	18
1	FBA Coorong	72	104	105	103	99	105
2	FBA Barmah	72	104	103	102	100	102
3	PBA Samira	72	98	103	97	100	102
4	PBA Amberley	71	99	101	97	101	97
5	PBA Bendoc	72	96	89	99	97	100

Overall yield performance of Southern Region lines (NVT, 2021 – 2025)





Adaptation map from PBA Amberley brochure – Jan 2023

Faba bean varieties from 2027 – Southern Region

Variety	Plant height	Flower time	Maturity	Lodging resistance	Necking resistance	Ascochyta blight	Chocolate spot	Cercospora	Rust	P. thornei
	Source: Adelaide University breeding trials 2016-2025					NVT disease ratings				
FBA Barmah	Medium	Early/Mid	Early/Mid	MR	R	MR(p)	MS	-	S	MRMS
FBA Coorong	Medium	Early/Mid	Mid	RMR	MS	MRMS(p)	MRMS	-	VS	MRMS
PBA Amberley	Medium	Mid	Mid	MR	R	MR	MRMS	S	VS	MRMS
PBA Marne	Med/Short	Early/Mid	Early/Mid	MR	MR	MS	MS	S	MRMS	MS*
PBA Bendoc	Medium	Mid	Early/Mid	MS	MS	MRMS(p)	S	S	VS	MRMS
Farah	Medium	Early/Mid	Early/Mid	MS	MS	MS	S	S	VS	MRMS*
Nura	Short	Mid	Early/Mid	MS	MS	MR(p)	MS	S	VS	MS*
PBA Rana	Med/Tall	Mid	Mid	MR	MR	MS(p)	MS	S	VS	MS*
PBA Samira	Medium	Mid	Early/Mid	MR	MS	MRMS(p)	MS	S	S	MRMS*
PBA Zahra	Med/Tall	Mid	Mid	MS	S	MRMS	MS	S	S	MRMS*

		2021	2022	2023	2024	2025
	Mean Yield	3.93 t/ha	4.07 t/ha	3.10 t/ha	2.53 t/ha	2.93 t/ha
Variety	Trials	14	13	14	14	18
FBA Barmah	73	103	103	102	100	102
FBA Coorong	73	103	105	103	99	105
PBA Amberley	72	100	101	97	101	97
PBA Marne	73	102	100	105	103	94
PBA Samira	73	98	103	97	100	102
PBA Zahra	72	99	104	98	103	97
Farah	73	97	97	100	103	94
Fiesta VF	57	97	94	100	100	97
PBA Bendoc	73	97	89	99	97	100
Nura	73	95	87	94	96	99
PBA Rana	57	87	85	86	90	112

Seed weight (g/100 seeds) of faba bean varieties		
Variety	**Median**	**Range***
FBA Barmah	72	65-78
FBA Coorong	81	73-89
PBA Amberley	71	66-75
PBA Marne	68	61-73
PBA Bendoc	62	57-68
Farah	68	62-72
Nura	64	58-68
PBA Rana	79	72-84
PBA Samira	74	67-79
PBA Zahra	76	67-82
Source: https://app.nvt.grdc.com.au/lty/table/faba-bean/		
*Interquartile range		

Thank you

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