PBA Noosa$^{\phi}$
Blue seeded field pea

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Blue seeded field pea

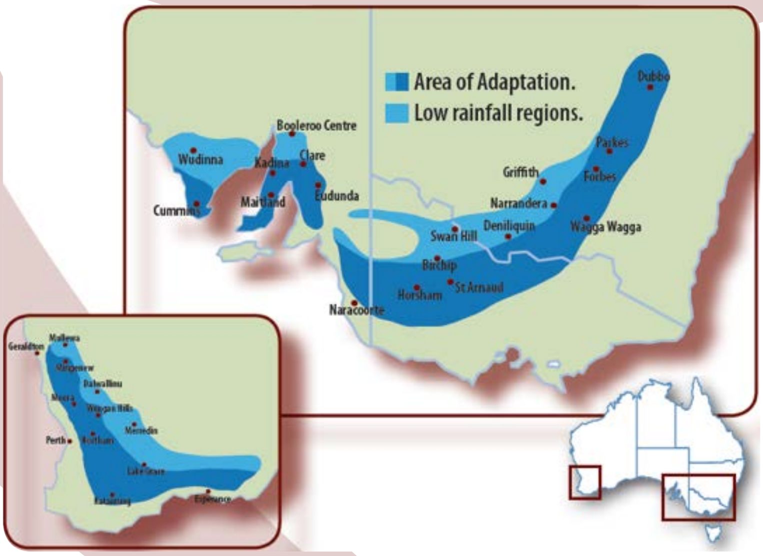
KEY FEATURES

- Blue pea with improved bleaching tolerance suited to niche marketing opportunities.
- Grain yields 20-30% higher than Excell and similar to kaspa type varieties such as PBA Wharton$^{\phi}$.
- Good early vigour with early-mid flowering and maturity
- Improved harvestability with its semi-dwarf, semi-leafless growth habit and shatter resistant pods
- Moderately tolerant to salinity
- Improved downy mildew resistance (MS)

MAIN ADVANTAGES

PBA Noosa$^{\phi}$ (tested as OZB1308) is the first blue pea with high grain yield, shatter resistant pods and improved resistance to bleaching. It will enable growers to potentially capture a premium price for this niche seed type. PBA Noosa$^{\phi}$ replaces older blue pea varieties such as Excell, which was most commonly grown in southern NSW. PBA Noosa$^{\phi}$ has improved bleaching tolerance compared to Excell. It yields 20-30% higher than Excell and is equivalent to the high yielding Kaspa type varieties, such as PBA Wharton$^{\phi}$. It is a semi-dwarf, semi-leafless erect variety making it easy to harvest. Its early to mid-flowering and maturity, and improved salinity tolerance makes it suited to some of the drier field pea growing regions.

AREA OF ADAPTATION



SEED PROTECTION & ROYALTIES

PBA Noosa$^{\phi}$ is protected under Plant Breeder's Rights (PBR) legislation. A PBR bag license applies to the seed. Authorised growers can retain seed from production of PBA Noosa$^{\phi}$ for their own use. An End Point Royalty (EPR) of $6.50/t (excluding GST) applies to this variety when delivered to authorised EPR collectors. Seed is commercialised by PB Seeds and will be available in limited quantities from 2022 for growers.

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PBA Noosa(b)
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YIELD & ADAPTATION

PBA Noosa(b) has high yield potential and competes well with all other top performing varieties in field pea production zones throughout Australia. It is an early-mid flowering and maturing line with high early vigour, making it suited to some of the drier field pea environments. It has performed well in southern NSW NVT trials over several years and will be an excellent replacement for Excell growers in this region (Figure 1). It has also performed well in NVT trials in the mid-North of SA and in the Wimmera in Victoria over the past 2 years (Table 1). Its yield in all other regions is comparable to most other varieties. It is moderately tolerant to salinity, a significant improvement over other semi-dwarf semi-leafless varieties.

(Figure 1) Field pea NVT trial results from southern New South Wales. Yields are presented as percentage of mean yield of the environment.

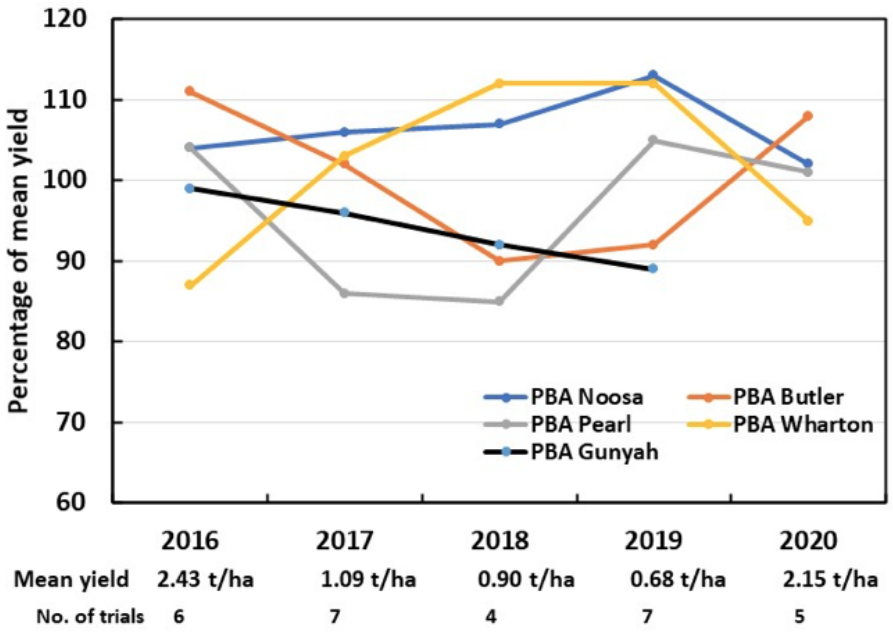

Table 1: 2019-2020 NVT yield of field pea varieties (expressed as % of Kaspa)

Variety	NSW		SA						VIC		WA			
	S/E	S/W	Lower EP	Mid North	Murray Mallee	South East	Upper EP	Yorke P	Mallee	Wimmera	Agzone 1	Agzone 2	Agzone 3	Agzone 5
Mean yield (t/ha)	2.41	2.18	2.27	2.03	0.23	2.82	1.84	1.40	1.99	2.89	0.93	0.92	2.00	1.01
No. of trials	3	6	4	9	1	2	6	4	13	6	1	1	1	7
Blue Type														
PBA Noosa(b)	100	103	104	110	97	107	102	100	103	110	97	92	111	106
Kaspa Type														
Kaspa	100	100	100	100	100	100	100	100	100	100	100	100	100	100
PBA Butler(b)	113	108	104	107	106	120	103	108	108	110	98	110	109	101
PBA Gunyah(b)	97	99	104	101	113	95	99	99	100	106	101	101	97	104
PBA Twilight(b)	95	98		100			99	97	99	99	101	99	95	105
PBA Wharton(b)	96	102	103	110	91	105	99	97	101	111	96	97	101	106
Dun Type														
PBA Oura(b)	95	100	103	107	98	102	99	96	101	109	98	98	99	106
PBA Percy(b)	91	99	99	106	73	97	97	94	97	102	96	90	99	102
White Type														
PBA Pearl(b)	104	104	109	111	132	113	103	103	108	119	99	110	101	112

Data courtesy of NVT, PBA, SARDI, Agriculture Victoria, NSW-DPI. The empty cell indicates that the variety was not grown in the region.

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AGRONOMY

PBA Noosa(D) is an early to mid flowering line, similar to PBA Gunyah(D) and PBA Wharton(D), with early to mid maturity, making it slightly later to finish in longer seasons than these varieties (Table 2). The sugar pod trait effectively reduces harvest losses due to shattering and the semi-dwarf, semi-leafless trait improves standability and harvesting.

Moderate tolerance to salinity should enable broad adaptation to a wider range of soil types than most other varieties. PBA Noosa(D) requires similar crop management practices to other field pea varieties. A premium product will require a strong focus on management of pea weevil and timely harvest to maintain grain quality.

Table 2. Comparison of physiological traits of field pea varieties

Variety	Plant habit	Plant vigour	Erect growth habit	Flowering time	Maturity time	Pod shattering	Soil tolerance		
							Boron	Salinity	100 Seed weight
Blue pea type									
PBA Noosa(D)	**SD-SL**	**High**	**Fair-Good**	**Early-Mid**	**Early-Mid**	**R (SP)**	**S**	**MT**	**19**
Excell	SD-SL	Moderate	Fair-Good	Early	Early	MR (NSP)	S	S	21
Kaspa type									
PBA Butler(D)	SD-SL	Very high	Good	Mid-Late	Early-Mid	R (SP)	S	S	18
PBA Gunyah(D)	SD-SL	High	Fair-Good	Early-Mid	Early	R (SP)	S	S	19
PBA Twilight(D)	SD-SL	High	Fair-Good	Early	Early	R (SP)	S	S	19
PBA Wharton(D)	SD-SL	High	Fair-Good	Early-Mid	Early	R (SP)	T	MS	18
Kaspa	SD-SL	High	Fair-Good	Late	Mid	R (SP)	S	S	20
Australian dun type									
PBA Oura(D)	SD-SL	High	Fair-Good	Early-Mid	Early	MR (NSP)	S	S	20
PBA Percy(D)	C	High	Poor	Early	Early	MR (NSP)	S	MT	25
Niche grain type									
PBA Pearl(D)	SD-SL	High	Fair-Good	Early-Mid	Early	MR (NSP)	S	MS	20
Sturt	C	High	Poor	Early-Mid	Mid	MR (NSP)	S	MS	

SD-SL, semidwarf-semileafless; C, conventional type; R, resistant; M moderate; SP, sugar pod; NSP, non-sugar pod; T, tolerant; S, susceptible. It is important to note that seed weight varies with growing environment.

DISEASE MANAGEMENT

PBA Noosa(D) has a comparable disease rating to a range of diseases to most other semi-dwarf, semi-leafless varieties (Table 3). It has better performance against downy mildew (MS) when compared to all current varieties and is resistant to bean leaf roll virus.

Table 3. Disease ratings of field pea varieties

Variety	Blackspot (Ascochyta)	Bacterial blight	Downy mildew	Powdery mildew	PSbMV	BLRV
Blue pea type						
PBA Noosa(D)	**MS**	**S**	**MS(p)**	**S**	**S**	**R**
EXCELL(D)	MS	S	S	S	S	S
Kaspa type						
PBA Butler(D)	MS	MS	S	S	S	S
PBA Gunyah(D)	MS	S	S	S	S	S
PBA Twilight(D)	MS	S	S	S	S	S
PBA Wharton(D)	MS	S	S	R	R	R
Kaspa	MS	S	S	S	S	S
Australian dun type						
PBA Oura(D)	MS	MS	S	S	S	MR
PBA Percy(D)	MS	MRMS	S	S	S	S
Niche grain type						
PBA Pearl(D)	MS	MS	S	S	S	R
Sturt(D)	MS	MS	S	S	S	S

Key: S=Susceptible, M=moderately, R=Resistant, p=provisional rating, PSbMV=Pea seed borne mosaic virus, BLRV=Bean leaf roll virus.

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MARKETING

PBA Noosa$^{(b)}$ is a blue pea suited to domestic consumption through local packers and will support the development of the international blue pea market. Prior to growing, growers should make themselves aware of the marketers they may sell to, the quality specifications required and be prepared to store in silos on farm if necessary.

The grain may require fumigation if pea weevil is present in the grain.

Blue peas are used in the domestic market, but only bought/traded by a limited number of marketers.

It is a niche product, often achieving higher prices than other pea types, if high quality standards are achieved.

Should supply exceed quantities bought by the domestic market, there is an opportunity for traders to initiate export sales. There is currently a well established international trade in blue peas (known as green peas). Canada, USA and New Zealand export high quality products, and would be major competitors.

The grain is also suited to stockfeed, as are all field peas.

PBA Noosa$^{(b)}$ Excell

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PBA is an unincorporated joint venture between the GRDC, University of Adelaide, University of Sydney, SARDI, Agriculture Victoria, NSW DPI, DAF (QLD), DPIRD WA and Pulse Australia. It aims to deliver better pulse varieties faster.

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PBSeeds are leaders in the production of fine quality seed and grains, with a strong history and passion for the pulse industry. We take great care and pride in ensuring we meet our customer's requirements. PBSeeds aims to distribute seed locally to growers via a national network of over 200 members. PBSeeds is proud to partner with PBA and invests in fast tracking the delivery of improved pulse varieties to growers and industry.

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