

PBA Pearl[®]

White field pea



PBA

PULSE BREEDING AUSTRALIA

Better pulse varieties faster

Superior grain yield potential



KEY FEATURES

- Semi-leafless, semi-dwarf plant type
- High yield potential and broad adaptation
- Early to mid season flowering
- Early maturing: suitable for crop topping
- Good lodging resistance at maturity
- White seed marketable for human consumption

MAIN ADVANTAGES

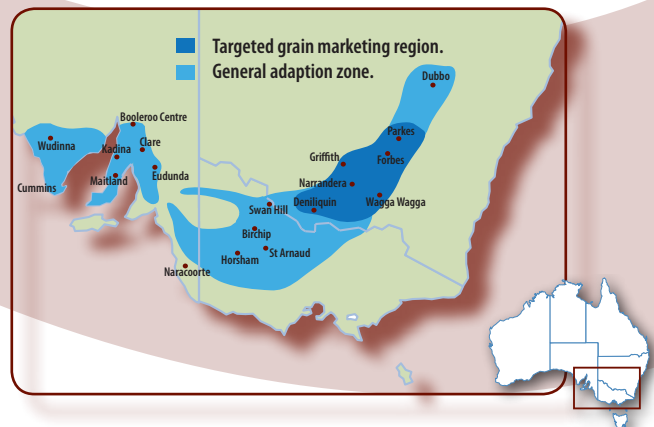
PBA Pearl[®] (tested as OZP0819) has superior grain yield potential and is the first broadly adapted white seeded field pea variety released for Australia.

PBA Pearl[®] is a semi-leafless, semi-dwarf, erect growing variety. It has good early season plant vigour, flowers early to mid season and produces a high number of pods per plant. Crop maturity is uniform, early and suitable for crop topping. At maturity PBA Pearl[®] has superior lodging resistance compared to other semi-dwarf varieties.

Disease management for PBA Pearl[®] is similar to other field pea varieties. Specifically it is a low risk option for regions prone to bacterial blight compared to Kasper[®], but is not as tolerant as PBA Percy[®]. It also has good resistance to downy mildew and bean leaf roll virus.

PBA Pearl[®] produces medium to large spherical white pea seed suitable to market for human consumption or for stockfeed. PBA Pearl[®] is initially recommended for regions where growers can deliver white pea seed for export or for domestic sale.

AREA OF ADAPTATION



PBA Pearl[®] is initially recommended for regions with potential to market white pea grain for domestic stockfeed or human consumption export.

However, PBA Pearl[®] is broadly adapted across all the major field pea production regions.

SEED PROTECTION & ROYALTIES

PBA Pearl[®] is protected under Plant Breeder's Rights (PBR) legislation. Growers can only retain seed from their production of PBA Pearl[®] for their own seed use.

An End Point Royalty (EPR) of \$2.97 per tonne (GST inclusive), which includes breeder royalties, applies upon delivery of this variety.

Seed is available from the commercial partner Seednet.

YIELD & ADAPTATION

PBA Pearl[®] has high yield potential and has broad adaptation.

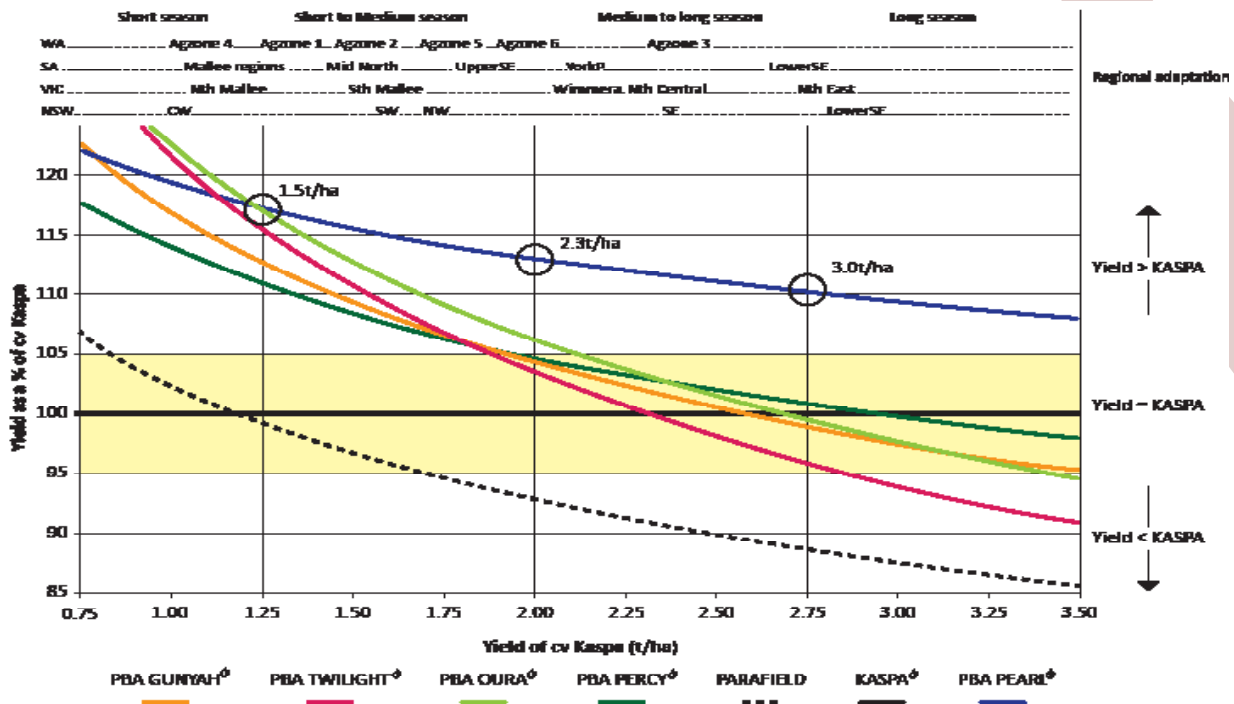
PBA Pearl[®] is the highest yielding field pea variety available to growers in medium to long growing season climates.

In low rainfall or short season regions PBA Pearl[®] has similar yield potential to other short season varieties recently released such as PBA Gonyah[®].

The relative experimental grain yield for recent field pea variety releases are graphically presented in Figure 1. This graph is based on yield data from 173 experiments grown across Australia's southern cropping zone from 2006 to 2011.

Growers can use the graph (Figure 1) to estimate the yield advantage of growing PBA Pearl[®] on their farm compared to recent releases or older varieties such as Kasper[®] or Parafield.

FIGURE 1: Relative yields compared to the variety Kasper[®] from 2006 to 2011 from 173 field experiments.



Long-term Multi Environment mean yield predictions for field pea (% of Kasper[®]) (2005-2011)

Variety	Victoria		New South Wales			Western Australia	South Australia		
	Mallee	Wimmera	North/West	South/East	South/West	Agzone 5	Mid North	Yorke P	South/East
Yellow pea type									
PBA Pearl [®]	110	106	117	106	110	101	109	107	111
Sturt [®]	107	106	107	100	109	95	102	99	105
Kasper type									
Kasper [®]	100	100	100	100	100	100	100	100	100
PBA Twilight [®]	103	101	107	100	100	102	100	97	103
PBA Gonyah [®]	103	101	105	102	102	105	101	98	104
Australian dun type									
PBA Oura [®]	104	104	113	107	106	103	105	100	108
PBA Percy [®]	99	102	111	107	109	101	103	98	104
Parafield	95	96	97	99	102	91	92	92	94
Yarrum [®]	98	98	116	105	106	98	103	101	112
Kasper [®] (t/ha)	1.57	2.32	1.60	2.40	1.75	1.76	2.15	2.32	2.28

Source: Trial results from Pulse Breeding Australia (PBA)

AGRONOMY

Growers should follow the recommended regional crop management guidelines for semi-dwarf field pea varieties;

- Optimal sowing time periods and sowing rates
- Optimal harvest time periods and practices
- Optimal weed management

PBA Pearl[®] is soft seeded in crop rotations.

PBA Pearl[®] matures early and uniformly making it suitable for crop-topping.

PBA Pearl[®] has superior crop lodging resistance at harvest.

PBA Pearl[®] has moderate resistance to pod shattering, but is not as resistant as sugar pod type varieties such as Kaska[®].

Variety	Relative seed size, % of cv Kaska	Plant habit	Flowering time	Maturity time	Plant lodging, at maturity	Pod shattering, at maturity
Niche grain type						
PBA Pearl [®]	M-L (105%)	SD-SL	Early-Mid	Earl	Good	MR (NSP)
SW Celine [®]	M-L (105%)	SD-SL	Early	Early	Fair-Good	S (NSP)
Sturt [®]	S-M (85%)	C	Early-Mid	Mid	Poor	MR (NSP)
Kaska type						
Kaska [®]	M (100%)	SD-SL	Late	Mid	Fair-Good	R (SP)
PBA Twilight [®]	M (102%)	SD-SL	Early	Early	Fair-Good	R (SP)
PBA Gonyah [®]	M (102%)	SD-SL	Early-Mid	Early	Fair-Good	R (SP)
Australian dun type						
PBA Oura [®]	M (100%)	SD-SL	Early-Mid	Early	Fair-Good	MR (NSP)
PBA Percy [®]	M-L (110%)	C	Early	Early	Poor	MR (NSP)
Morgan [®]	S-M (80%)	Tall-SL	Late	Late	Poor-Fair	MR (NSP)
Parafield	M-L (110%)	C	Mid	Mid	Poor	MR (NSP)
Yarrum [®]	M (100%)	SD-SL	Late	Mid	Poor-Fair	MR (NSP)

Key: SD=semi-dwarf, C=conventional, SL=semi-leafless, S=susceptible, MS=moderately susceptible, MR=moderately resistant, R=resistant, SP=sugar pod type pod, NSP=non sugar pod type pod.
 Relative seed size: S = Small, M = Medium, L = Large

DISEASE MANAGEMENT

Growers should follow the regional disease management guidelines for field pea to minimise risk of yield loss;

- Sow within recommended time periods
- Follow recommended crop rotation practices
- Avoid sowing disease infected seed
- Use predictive models to manage blackspot
- Use recommended seed and foliar fungicides to control fungal mildews and blackspot
- Follow pesticide recommendation for control of pea weevil and budworm

PBA Pearl[®] has good resistance to bean leaf roll virus (BLRV) and downy mildew.

PBA Pearl[®] is moderately susceptible to bacterial blight and a lower risk option compared to susceptible varieties such as Kaska[®], for regions prone to this disease.

PBA Pearl[®] is susceptible to blackspot, powdery mildew and Pea seed borne mosaic virus (PSbMV), similar to Kaska[®].

Variety	Blackspot (Ascochyta)	Bacterial blight (Field rating)	Downy mildew (Parafield strain)	Powdery mildew	PSbMV	BLRV (Field rating)
Yellow pea type						
PBA Pearl [®]	MS	MS	R	S	S	R
SW Celine [®]	MS	S	S	S	S	S
Sturt [®]	MS	MS	MS	S	S	MS-MR*
Kaska type						
Kaska [®]	MS	S	MR	S	S	S
PBA Twilight [®]	MS	S	R	S	S	S
PBA Gonyah [®]	MS	S	R	S	S	S
Australian dun type						
PBA Oura [®]	MS	MR	MR	S	S	MS-MR*
PBA Percy [®]	MS	R	S	S	S	S
Morgan [®]	MS	MS	MR	S	S	S*
Parafield	MS	MS	S	S	S	S
Yarrum [®]	MS	MS	S	R	R	R

Key: S=susceptible, MS=moderately susceptible, MR=moderately resistant, R=resistance. PSbMV=Pea seed borne mosaic virus. BLRV = Bean leaf roll virus * Requires validation

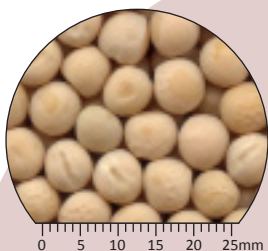
PBA Pearl[®]

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GRAIN QUALITY

PBA Pearl[®] produces a medium to large sized white field pea seed with a yellow split.

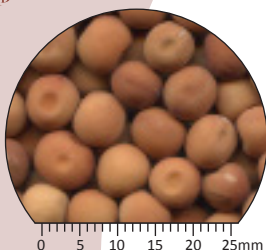
The grain has a clear seed coat and is smooth and spherical.



PBA Pearl[®]



PBA Oura[®]



Kaspera[®]

MARKETING

PBA Pearl[®] produces grain that is marketable as a white or yellow pea and can be exported to Asian countries for production of yellow split dhal, pulse flour, roasted snack food or for pea noodles.

The grain is also suitable for stockfeed.

BREEDING

PBA Pearl[®] is released by the PBA Field pea program. The line was bred from a complex crossing program completed in 2002 and pedigree based selection conducted at VICDPI-Horsham.

The line was extensively evaluated across Australia by PBA and promoted for variety release on the basis of its superior yield potential and broad adaptation.

The variety is named after Pearl beach on the central coast of NSW.

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, DPI Victoria and NSW-DPI.

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Better pulse varieties faster

PBA is an unincorporated joint venture between the GRDC, University of Adelaide, University of Sydney, SARDI, DPI Victoria, NSW-DPI, DAFF QLD, DAFWA and Pulse Australia. It aims to deliver better pulse varieties faster.

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 is proud to partner with Pulse Breeding Australia and invest in the improvement of Australian field pea varieties.

AGRONOMIC ENQUIRIES

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Field pea Blackspot Sowing Guides;

www.agric.wa.gov.au/cropdisease