‘Kaspa type’ for low to medium rainfall zones

**KEY FEATURES**
- Higher yielding in low to medium rainfall zones
- Early to mid flowering and early maturing
- Similar plant type to Kaspa
- Disease resistance is similar to Kaspa
- Suitable for crop topping
- Grain marketable as ‘Kaspa type’

**MAIN ADVANTAGES**
PBA Gunyah® (tested as OZP0602) is an early flowering field pea with high yield potential. It is better adapted to low and medium rainfall climates than Kaspa®. It is more broadly adapted than PBA Twilight® (tested as OZP0601) with a relative yield advantage over PBA Twilight® in the more favourable lower rainfall areas.

Growers in low rainfall regions have the option of growing both PBA Gunyah® and PBA Twilight® to manage the risk of low seasonal rainfall or paddock variability and still market grain from either variety as ‘Kaspa type’. Both varieties are better suited than Kaspa®, to the practices of delayed sowing for disease management and crop topping to control annual ryegrass.

**SEED PROTECTION & ROYALTIES**
PBA Gunyah® is protected under Plant Breeder’s Rights (PBR) legislation. Growers can only retain seed from their production of PBA Gunyah® for their own seed use.

An End Point Royalty (EPR) of $2.75 per tonne (GST inclusive), which includes breeder royalties, applies upon delivery of this variety.

Seed is available from the commercial partner Seednet.

**AREA OF ADAPTATION**

**WA:** Adapted to all cropping regions for field peas across the northern, central and southern cropping zones. PBA Twilight® will be a superior option in lower rainfall areas.

**SA:** Adapted to all cropping regions across SA. PBA Twilight® may be a better option in the lower rainfall areas.

**VIC:** Adapted to all Mallee and Wimmera regions. PBA Twilight® may be a better option in the lower rainfall areas of the Mallee.

**NSW:** Adapted to short season climates of southern and central west regions. PBA Twilight® may be a better option in the lower rainfall areas.
YIELD & ADAPTATION

- Broader adaptation across lower-medium rainfall regions than Kaspa®.
- Reliably higher yielding than Kaspa® when yield potential is below 2.25 t/ha.
- Higher yielding than PBA Twilight® in low rainfall regions with cooler or typically longer growing seasons with yield potential above 1.5 t/ha.
- Lower risk option when sowing is delayed for disease management or following a late season break compared to Kaspa®.

The relative grain yields of cultivars PBA Gunyah®, PBA Twilight®, Parafield and Kaspa® are represented in Figure 1. Comparative yields are based on extensive evaluation across southern Australia between 2005 and 2009. The relative yield advantages of PBA Gunyah® and PBA Twilight® have been highly consistent across cropping regions, particularly in shorter growing seasons. Growers can use prior knowledge relating to performance of Kaspa® or Parafield (e.g. on farm or regional NVT location grain yield performance) to estimate the yield advantage of growing PBA Gunyah® on farm. Growers should consider variety choice together with agronomic options to minimise risk from seasonal drought, frost and disease as well as marketability of grain type.

Figure 1: Graph of average relative grain yields of PBA Gunyah® compared to Parafield, Kaspa® and PBA Twilight® in southern Australia.

SOURCE: Trial results from Pulse Breeding Australia (PBA) and National Variety Trials (NVT) programs.
AGRONOMY

- Follow the same sowing rate and harvest recommendations as for Kaspa for your region.
- PBA Gunyah commences flowering at least 2 weeks earlier than Kaspa in most cropping regions and is better adapted to shorter growing season climates or when delayed sowing is used to manage disease risk.
- PBA Gunyah has a longer flowering duration than PBA Twilight and Kaspa particularly in shorter growing seasons.
- Sensitivity to recommended rates of registered herbicides has been similar to Kaspa in 2 years of testing on calcareous-alkaline soils.
- Follow regional pesticide recommendations for control of pea weevil and budworm.
- PBA Gunyah matures earlier than Kaspa and is better suited to the practice of crop-topping to manage weeds.

DISEASE MANAGEMENT

Disease management is needed to maximise yield potential. PBA Gunyah has a similar disease reaction to Kaspa. However it is generally less prone to powdery mildew disease late in the season, due to its relatively earlier flowering and maturity. Compared to Kaspa, PBA Gunyah has shown less blackspot symptoms early in the season, but a better yield response when foliar fungicide is applied or sowing is delayed. The better response is associated with the earlier and longer flowering regime of PBA Gunyah rather than less disease.

- Sow within regionally recommended time periods.
- Follow recommended crop rotation practices.
- Use predictive models to manage blackspot (e.g. blackspot manager).
- Avoid sowing disease infected seed.
- Use regionally recommended seed and foliar fungicides to control downy mildew and blackspot.

<table>
<thead>
<tr>
<th>Variety</th>
<th>Plant habit</th>
<th>Plant vigour, early season</th>
<th>Flowering time</th>
<th>Maturity time</th>
<th>Plant lodging, at maturity</th>
<th>Pod shattering, at maturity</th>
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<tbody>
<tr>
<td>Kaspa type</td>
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<td>Kaspa</td>
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<td>PBA Oura</td>
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<td>Excell</td>
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<td>Maki</td>
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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.

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<th>Blackspot (Ascochyta)</th>
<th>Bacterial blight (Field rating)</th>
<th>Downy mildew (Parafield strain)</th>
<th>Downy mildew (Kaspa strain)</th>
<th>Powdery mildew</th>
<th>PSbMV*</th>
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Key: S=susceptible, MS=moderately susceptible, MR=moderately resistant, R= resistance. *PSbMV= Pea seed borne mosaic virus.
PBA Gunyah®
‘Kaspa type’ field pea

**GRAIN QUALITY**
PBA Gunyah® produces spherical grain with a yellow split and a tan seed coat colour similar to Kaspa®. It has high seed size uniformity and excellent processing efficiency for the yellow split pea market (i.e. similar to Kaspa®) and is also suitable for stock feed industries. PBA Gunyah® generally produces grain of higher quality in terms of size and uniformity in lower rainfall regions or short growing seasons compared to Kaspa®.

**MARKETING**
PBA Gunyah®, PBA Twilight® and Kaspa® all produce grain, marketable as ‘Kaspa type’. This grain type is preferred by major importing markets in the Indian sub-continent, particularly for snack foods. Contamination with other field pea types such as dimpled or white grain varieties will reduce the value for human consumption markets.

**BREEDING**
PBA Gunyah® (tested as OZP0602) was identified by the PBA field pea team and is derived from a line bred at Horsham DPI Victoria, from a targeted crossing selection program to improve yield reliability in low rainfall cropping regions. The final cross made in 2001 was between two high yielding and erect growing lines PS1594 and PS1535 varying in flowering time. PBA Gunyah® is named after Gunyah Beach on the Eyre Peninsula of South Australia.

**PULSE AGRONOMY**
Agronomy 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 as well as the South Australian Grains Industry Trust (SAGIT) funded project ‘Exploring opportunities for improving pea management practices’.

**FOR MORE INFORMATION**

**SEED ENQUIRIES**
Seednet
National Production and Logistics Office
Corner Jeparit Rd & Western Hwy
PO Box 17, Dimboola Vic 3414
Ph: 03 5389 0150
Fax: 03 5389 1121
admin@seednet.com.au
www.seednet.com.au

Central & Southern NSW
Robert Gill
Ph: 0428 122 465
robert.gill@seednet.com.au

South Australia & Western Australia
Sam Densley
Ph: 0417 891 436
sam.densley@seednet.com.au

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**
Victoria
Jason Brand, DPI Victoria, (03) 5362 2341
Wayne Hawthorne, Pulse Australia, 0429 647 455

South Australia
Mick Lines, SARDI, (08) 8842 6264
Wayne Hawthorne, Pulse Australia, 0429 647 455

New South Wales
Kurt Lindbeck, NSW-DPI, (02) 6938 1608
Trevor Bray, Pulse Australia, 0428 606 886

Western Australia
Ian Pritchard, DAFWA, (08) 9368 3515
Alan Meldrum, Pulse Australia, 0427 384 760

Field pea Blackspot Sowing Guides;
www.agric.wa.gov.au/cropdisease