

Field pea – notes and NVT entries 2018

November 2018

Notes on main varieties and lines

(All varieties susceptible to blackspot, bacterial blight, pea seed-borne mosaic virus (PSbMV) and powdery mildew unless otherwise stated)

PBA Butler. Developed by Pulse Breeding Australia (PBA) released spring 2017 and marketed by Seednet. Kasper-type seeded variety rated moderately resistant/moderately susceptible (MR/MS) to bacterial blight, equal to PBA Oura. Mid-late flowering with early-mid maturity, erect, semi-dwarf, semi-leafless type. Moderately susceptible to downy mildew. High biomass production and excellent yields in good environments.

Kaspa. Victorian breeding line jointly developed by the previous Ag Victoria and NSW Agriculture and licensed to Seednet. Released in 2002. Seeds round (no dimples) and light brown/red in colour (not green/brown). Kaspa has distinctive pink flowers, is semi-leafless, medium in height and has vigorous growth. Non-shattering pods (sugar pod) reducing or eliminating seed losses. Susceptible (S) to a Kaspa strain of downy mildew. VS to bacterial blight. Erect vigorous growth habit. Now outclassed by PBA Wharton in northern and southern NSW for yield potential, earliness and disease tolerance.

Maki. Bred by Plant Research NZ Ltd, evaluated by Sydney University, Narrabri. Licensed to AGT and released for northern NSW in 2009. Higher yielding, better disease resistance and better seed quality compared to Excell. Blue pea, green cotyledons, white-flowered, semi-leafless, medium height. Good resistance to bleaching, mid maturity. R to powdery mildew, PSbMV and BLRV viruses. Will require management for blackspot, bacterial blight and downy mildew in disease-prone areas.

Morgan. Released by the previous NSW Agriculture in 1998. Licensee Hart Bros. Seeds, June. Tall semi-leafless dun-type with excellent vigour, bulky upright growth habit. Late flowering, purple flowered with dimpled, dun-coloured seed. Seed size approx 25% smaller than PBA Percy. MR to bacterial blight. Best choice for hay, forage, silage and green/brown manure. Lodges at maturity. Holds up well in dry seasons and tight finishes because of its height.

PBA Gunyah. Developed by Pulse Breeding Australia (PBA), released 2010 and marketed by Seednet. Introduced earliness into a Kaspa-type pea. Very similar to PBA Twilight, 1–2% higher yielding, a few days later flowering and slightly longer flowering

period. VS to bacterial blight. Now outclassed by PBA Wharton in northern and southern NSW for yield potential, earliness and disease tolerance

PBA Oura. Developed by PBA, released 2011 and marketed by Seednet. Early-mid flowering, erect, semi-dwarf, semi-leafless type with good resistance to bacterial blight (*P. syringae pv. syringae*). Note, PBA Oura does develop bacterial blight but is quicker to recover compared to more susceptible varieties. Purple flowers, dimpled dun seed. Early uniform maturity, suited to crop topping. Conventional pods, moderate resistance to pod shattering. Broad adaptation and is one of the highest yielding varieties across all environments.



PBA Pearl. Developed by PBA, released 2012 and marketed by Seednet. Early-mid flowering, erect, semi-dwarf, semi-leafless type. White flowered, white seeded pea with broad adaptation and the highest yielding commercial variety across southern Australia. Early uniform maturity, suited to crop topping. Produces spherical white pea seed suited to human consumption or for stockfeed. Conventional pods, moderate resistance to pod shattering. Soft seeded, therefore no self-sown plants in following crops.

PBA Percy. Developed by PBA, released 2011 and marketed by Seednet. Very early flowering, tall, scrambling, conventional type with excellent resistance to bacterial blight (*P syringae pv syringae*), better than PBA Oura. Can develop some bacterial blight but is quicker to recover compared to more susceptible varieties. Purple flowers, dimpled dun seed. Conventional pods, moderate resistance to pod shattering. Broad adaptation and is one of the highest yielding varieties across all environments.

PBA Twilight. Developed by PBA, released 2010 and marketed by Seednet. Introduced earliness into a Kaspa-type pea, extending adaptation and performance into drier parts of the cropping belt. Kaspa-type plant with pink flowers, round seeds and shatter-resistant pods, similar disease profile. Very susceptible (VS) to bacterial blight. Now outclassed by PBA Wharton in northern and southern NSW for yield potential, earliness and disease tolerance.

PBA Wharton. Developed by PBA, released across all zones in 2013. Marketed by Seednet. Kaspa plant and seed type with the added advantages of earliness, resistance to PSbMV and BLRV viruses. R to powdery mildew and higher tolerance to soil boron toxicity. Widely adapted across southern Australia and northern regions of NSW.

Sturt. Victorian bred, released in 2005. Conventional tall plant type, scrambling growth habit, early to mid-season flowering, small smooth round white seeds. A high yielding white pea in the drier production zones of NSW. MR-MS to bacterial blight.

SW Celine. Private variety licensed to Nuseed. Bred in Europe and introduced into Australia by Access Genetics in 2003. Semi-leafless, medium height, white flowers, large creamy-white seeds and an upright growth habit. Main feature is its early flowering, early maturity and superior pod set, giving it superior drought tolerance and a distinct yield advantage in dry seasons. SW Celine is the best suited variety to crop-topping. Conventional pods requiring timely harvest to prevent shattering. MR-MS to downy mildew.

For southern and central NSW, preferred varieties are **PBA Oura**, **PBA Percy** or **PBA Wharton**. In areas prone to bacterial blight, choose **PBA Percy** or **PBA Oura**. In areas prone to powdery mildew, choose **PBA Wharton**. For white peas, choose **PBA Pearl** or **Sturt**.

Morgan is the preferred forage/brown manure variety.

Maki is the variety for blue pea, but Excell is still grown in certain areas.

For the northern region, **PBA Wharton** is powdery mildew resistant and the highest yielding variety.

Disease update. The high incidence of frosts in 2018 has favoured the development of bacterial blight in some crops. Crops sown into cereal stubble mulch are more prone to frost injury, due to lower soil temperatures. Lower levels of blackspot have been observed in crops compared with previous years, due to drier winter and spring conditions.

Field pea variety performance 2013–2017.

Southern data is expressed as a % of Kaspa, northern data as a % of Wharton.

	% Kaspa		% Wharton
	S/E	S/W	N/W
Variety	1.62 t/ha	1.38 t/ha	1.79 t/ha
<i>Kaspa-type dun</i>			
Kaspa	100 (20)	100 (26)	80 (10)
PBA Butler	111 (15)	116 (17)	91 (8)
PBA Gunyah	106 (12)	107 (18)	90 (8)
PBA Twilight	103 (12)	104 (18)	91 (8)
PBA Wharton	108 (20)	112 (25)	100 (10)
<i>Dimple-type dun</i>			
Morgan	102 (13)	103 (9)	85 (7)
PBA Oura	106 (20)	116 (25)	97 (10)
PBA Percy	101 (18)	110 (19)	91 (10)
<i>White Peas</i>			
PBA Pearl	110 (20)	122 (25)	98 (10)
Sturt	103 (17)	114 (17)	90 (6)

Note: Yields are a combined across sites analysis using NVT and PBA data.

More information

Babu Pandey, Breeder, DEDJTR, Horsham, 03 4344 3332; Mark Richards, Research Agronomist, NSW DPI, Wagga Wagga, 02 6938 1831

Acknowledgments

Don McCaffery, Technical Specialist (Pulses and Oilseeds), NSW DPI, Orange; Kurt Lindbeck, Plant Pathologist, NSW DPI, Wagga Wagga; Leigh Jenkins, Research and Development Agronomist, NSW DPI, Trangie

© State of New South Wales through the Department of Industry, 2018. You may copy, distribute and otherwise freely deal with this publication for any purpose, provided that you attribute the NSW Department of Primary Industries as the owner.

Disclaimer: The information contained in this publication is based on knowledge and understanding at the time of writing (November 2018). However, because of advances in knowledge, users are reminded of the need to ensure that information upon which they rely is up to date and to check currency of the information with the appropriate officer of the Department of Primary Industries or the user's independent adviser.