Faba bean – notes and NVT entries 2019

December 2019

Notes on main varieties and lines

Northern NSW

Doza. Released in 2008 by Pulse Breeding Australia's (PBA) northern faba bean breeding node at Narrabri. It is better adapted to warmer spring temperatures than Barkool, Cairo and Fiord; higher yielding than Cairo, with improved rust resistance. Smaller seed than Cairo, but more uniform; coloured light buff. Not generally recommended for southern NSW where *Ascochyta* is a major constraint. Licensed to Seednet; available through local seed suppliers.

PBA Warda. Released in 2012 for the northern region with higher yield and bigger seed than Doza. Best adapted to eastern areas with higher rainfall. Similar to Doza for earliness, chocolate spot and rust resistance, but has better tolerance than Doza to *Bean leafroll virus* and vegetative frost damage. Its seed is more uniform and bigger than Doza making it suitable for the human food market. Licensed to Seednet.

PBA Nasma. Released in spring 2015 for northern NSW and southern Queensland with a higher yield than PBA Warda. Larger and more uniform seed than PBA Warda, making it readily acceptable into the human consumption market. Flowering, maturity time, resistance to chocolate spot and frost tolerance are similar to PBA Warda. It also has improved resistance to *Bean leafroll virus over* PBA Warda. Rust resistance is slightly inferior to Doza. S to *Ascochyta*. Licensed to Seednet.

PBA Nanu. Released in spring 2018. A new variety for the northern region and highest yielding in the state's north-west. It has good overall resistance to disease and is MR/R to rust and MR to *Bean leafroll virus*. It is similar to other northern varieties and is MS to chocolate spot. PBA Nanu seed is smaller than PBA Nasma, but is larger than PBA Warda so more suited to Middle East markets. Licensed to Seednet.

Southern NSW

Farah. Selected from Fiesta VF with improved resistance to *Ascochyta*. Similar agronomic characteristics and yield to Fiesta VF. Improved *Ascochyta* resistance will lower the level of *Ascochyta*-stained seed compared with Fiesta VF. Reduced environmentally stained seed and improved seed size uniformity. Licensed to Heritage Seeds; available through local seed suppliers.

Nura. Released in 2005 from the southern node of the National Faba Bean Breeding Program. Produced from a cross between Icarus and Ascot and selected for improved resistance over Fiesta VF to both chocolate spot and *Ascochyta*. Later flowering than Fiesta VF, however, it has similar

maturity. Suited to the medium–high rainfall areas of southern NSW; not recommended for northern NSW. Shorter height than Farah and Fiesta VF and less likely to lodge. Seed is slightly smaller than Farah and coloured light buff. Licensed to Seednet; available through local seed suppliers.

PBA Rana. Released in 2011. Suited to the higher rainfall, longer season growing areas. Mid−late flowering, with improved resistance to chocolate spot compared with Farah and R to *Ascochyta*. Large, plump, light-brown seed that is bigger than current varieties. Investigate marketing options as PBA Rana needs to be segregated to achieve a premium for its larger seed size. Licensed to Seednet.

PBA Samira. Released in spring 2014. Adapted to a wide range of environments in the southern region. It is mid–late flowering, but matures at the same time as Farah and Fiesta VF. Resistant to *Ascochyta*, including the new strain that was recently identified in the Mid North of South Australia. Seed is slightly larger than Farah and Fiesta VF, but the same colour and should be suitable for co-mingling with other varieties for human consumption. Licensed to Seednet.

PBA Zahra. Released in spring 2015. Selected for the southern region where it has shown very high yield potential and is particularly responsive to high-yielding situations. Resistant to ascochyta blight in most districts in the southern region, although MS–MR to a new pathotype in the Mid North region of South Australia. Less susceptible to chocolate spot and rust than Fiesta and Farah. Flowers at the same time as Nura and PBA Samira, but can mature slightly later under conducive seasonal conditions. Large, plump seed, similar to PBA Rana. The two varieties could be co-mingled for a large-seeded category for the Middle East market. Licensed to Seednet.

PBA Bendoc. Released in spring 2018. The first faba bean variety with tolerance to imidazolinone herbicides. A minor use permit is currently available for applying imazamox and a further permit for an additional herbicide is being sought for 2019. PBA Bendoc is adapted to southern NSW, Victoria and SA. It is MR–R to both pathotypes of ascochyta blight, but susceptible to chocolate spot. It is later than Fiesta VF and Farah. and flowers at the same time as Nura and PBA Samira. Seed is a similar size to Nura. and suited to the Middle East market. PBA Bendoc. is not recommended for northern NSW as it is not adapted to the short growing season and is S to rust. Very limited data for southern NSW and irrigation. Licensed to Seednet.

PBA Marne. PBA Marne$^{\phi}$ is adapted to the lower rainfall or shorter season environments of southern NSW, Victoria and SA. It is MR–R to the old pathotype of ascochyta blight, but MR–MS to the new pathotype found in SA. It is more resistant to rust than other southern varieties and is classified as MR. However it is S to chocolate spot. PBA Marne$^{\phi}$ has good stem strength and standing ability. Seed is similar in size to PBA Samira$^{\phi}$ and should be suitable to co-mingle with other major varieties for the Middle East market.

PBA Amberley. New release. PBA Amberley is adapted to the high rainfall areas of southern NSW, Victoria and SA. It is also suited to southern irrigation areas. It is mid-season flowering, medium plant height and maturity is similar to PBA Samira and PBA Zahra. It is R to pathotypes 1 and 2 of ascochyta blight, and is the most resistant of all varieties to chocolate spot. Excellent standing ability and low level of “necking” in most situations. Seed size is similar to PBA Samira and suited to the Middle East market. Commercialised by Seednet.

Notes on disease control

While the newly released varieties have steadily improved disease resistance, none have complete resistance to rust, chocolate spot or ascochyta blight. In a disease favourable environment (due to frequent rain or high inoculum loads) yield losses will occur. Growers are therefore advised to adhere to the recommended disease management package and apply foliar fungicide early in the season, at 6−8 weeks post-emergence and at canopy closure. These early applications can control the establishment of the disease in the crop and will therefore have a season-lasting effect. Crops of Farah should be monitored carefully for the presence of ascochyta blight. A new pathotype of *Ascochyta fabae* emerged in the Mid North region of SA in 2013 and has overcome the resistance within Farah. This new pathotype has not been reported in NSW to date, but growers of Farah should be vigilant. Nura and PBA Samira remain resistant while PBA Rana and PBA Zahra are MS/MR to the new pathotype.

Faba bean variety performance 2013–2018 Northern NSW

	Yield (trial no.)	
	NE	NW
Variety	**% PBA Warda 3.05 t/ha**	**% PBA Warda 2.30 t/ha**
Cairo	93 (18)	94 (34)
Doza	94 (19)	95 (35)
PBA Warda	100 (21)	100 (37)
PBA Nasma	102 (20)	99 (36)
PBA Nanu	103 (15)	100 (28)

Faba bean variety performance 2014–2018 Southern NSW

	Yield (trial no.)	
	SE	SW (Irrigated)
Variety	**PBA Samira 2.65 t/ha**	**PBA Samira 4.80 t/ha**
Farah	97 (11)	89 (6)
Fiesta VF	98 (11)	92 (6)
Nura	93 (11)	85 (6)
PBA Nasma	103 (8)	100 (5)
PBA Rana	89 (11)	94 (6)
PBA Samira	100 (11)	100 (6)
PBA Warda	100 (11)	98 (3)
PBA Zahra	100 (11)	97 (6)
PBA Amberley	100 (5)	106 (3)
PBA Bendoc	103 (3)	88 (2)
PBA Marne	102 (11)	99 (6)

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

More information

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