

PBA Nasma[Ⓛ]

Faba bean



PBA

PULSE BREEDING AUSTRALIA

Better pulse varieties faster

Larger grain size, northern variety



MAIN ADVANTAGES

PBA Nasma[Ⓛ] has a larger seed size than other varieties grown in the northern region. It is superior to PBA Warda[Ⓛ] with uniform seed size and colour. PBA Nasma[Ⓛ] is readily accepted in the human consumption market.

PBA Nasma[Ⓛ] is well adapted to northern New South Wales where it has out-yielded PBA Warda[Ⓛ] by 3% in both rain fed and irrigated trials.

PBA Nasma[Ⓛ] has a similar level of resistance to faba bean rust and tolerance to Bean Leaf Roll Virus (BLRV) as that of PBA Warda[Ⓛ].

SEED PROTECTION & ROYALTIES

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

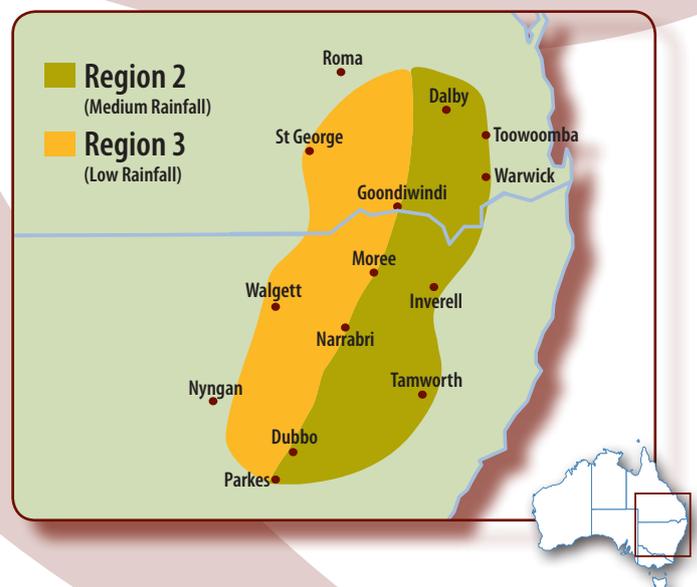
An End Point Royalty (EPR) of \$3.85 per tonne (GST inclusive), which includes breeder royalties, applies upon delivery of this variety.

Seed is available from the commercial partner, Seednet.

KEY FEATURES

- Superior yield to all currently grown faba bean varieties in northern New South Wales and southern Queensland
- Suggested as an alternative to PBA Warda[Ⓛ]
- Moderately resistant to faba bean rust (slightly less than PBA Warda[Ⓛ])
- Moderately tolerant to Bean Leaf Roll Virus (BLRV), equivalent to PBA Warda[Ⓛ]
- Similar flowering and maturity times to PBA Warda[Ⓛ]
- Larger seed size than PBA Warda[Ⓛ] with uniform seed size and colour

AREA OF ADAPTATION



YIELD & ADAPTATION

- PBA Nasma[®] is an early maturing variety, similar to PBA Warda[®]. It is well adapted to the growing season in northern New South Wales and southern Queensland.
- Extensive yield evaluation of PBA Nasma[®] in northern New South Wales, at Pulse Breeding Australia (PBA) and National Variety Trial (NVT) sites, shows that its yield is on average 3% greater than PBA Warda[®]. This yield advantage has been obtained in both rain fed and irrigated trials.
- PBA Nasma[®] is suggested as an alternative to PBA Warda[®] for growers in northern New South Wales and southern Queensland who are targeting larger seed size for premium markets.
- PBA Nasma[®] is moderately resistant to faba bean rust, the major fungal disease in northern New South Wales and southern Queensland.
- PBA Nasma[®] is moderately susceptible to chocolate spot. It has a similar level of tolerance to BLRV as that of PBA Warda[®], which will benefit growers in areas prone to virus infection.
- PBA Nasma[®] is susceptible to Ascochyta blight, but this is not considered to be a major disease in northern New South Wales.
- PBA Nasma[®] is not recommended for southern New South Wales where Ascochyta blight and chocolate spot are significant diseases.

Long term (2007–2014) yield of faba bean varieties in northern New South Wales

(yields expressed as % of Doza[®])

Variety	North/East New South Wales	Number of trials	North/West New South Wales	Number of trials	Overall yield	Total number of trials
PBA Nasma[®]	108	18	107	38	108	56
Cairo [®]	95	22	96	45	95	67
Fiesta VF	97	17	97	33	97	50
Fiord	90	17	93	33	91	50
PBA Warda [®]	105	22	105	45	105	67
Doza [®] (t/ha)	2.71	22	2.06	45	2.38	67

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

Agronomic features and disease rating of faba bean varieties in northern New South Wales

Variety	Plant height	Flower time	Maturity	Lodging resistance	Rust	Chocolate spot	BLRV
PBA Nasma[®]	Medium	Early	Early	MR	MR	MS	MT
Cairo [®]	Tall	Mid/Late	Mid/Late	MS	MS	VS	S
Doza [®]	Medium	Early	Early	MR	MR/R	MS	MT
Fiesta VF	Medium	Mid/Late	Mid/Late	MS	S	S	S
Fiord	Medium	Mid	Mid	MR/MS	S	VS	S
PBA Warda [®]	Medium	Early	Early	MR	MR/R	MS	MT

Source: Pulse Breeding Australia (PBA) trials program 2007-2014

R = Resistant, MR = Moderately Resistant, MT = Moderately Tolerant, MS = Moderately Susceptible, S = Susceptible, VS = Very Susceptible

DISEASE MANAGEMENT

Faba bean rust

- PBA Nasma[®] is moderately resistant to faba bean rust, slightly less than PBA Warda[®].
- For northern New South Wales and southern Queensland, this level of resistance will provide adequate protection against rust and there will be no or minimal yield loss in most seasons.
- However, foliar fungicide application may be required if rust appears early in the season followed by warm and frequent rain events.
- In disease favourable seasons, a prophylactic mancozeb spray prior to canopy closure is recommended. This will be effective for both rust and chocolate spot.

Chocolate spot

- PBA Nasma[®] is moderately susceptible to chocolate spot, but this disease is generally not a significant problem in northern New South Wales. However, it can be a problem in wet and humid years.
- Effective crop monitoring is required to determine if chocolate spot is present. If the disease is detected, apply mancozeb at the recommended rate. This will minimise the pressure of chocolate spot as well as rust.
- Carbendazim is more effective than mancozeb against chocolate spot and preferable with high chocolate spot pressure, but will not control rust.



Chocolate spot on susceptible variety.

Ascochyta blight

- PBA Nasma[®] is susceptible to Ascochyta blight, similar to PBA Warda[®] and Doza[®]. However, this disease is not prevalent in northern New South Wales and southern Queensland, where PBA Nasma[®] is recommended.

Bean leaf roll virus (BLRV)

- PBA Nasma[®] is moderately tolerant to BLRV. Good yields have been obtained in the presence of severe BLRV pressure in the target region.
- Its level of BLRV tolerance is similar to PBA Warda[®].



Faba bean rust on susceptible variety.

AGRONOMY

Plant characteristics

PBA Nasma[®] has significantly larger seed than PBA Warda[®]. Growers are advised to check compatibility with their seeder and make adjustments as necessary.

There is no other requirement for adjusting agronomic practices for growing PBA Nasma[®]. Paddock selection and agronomic management is similar to current varieties.

- Flowering and maturity time is similar to PBA Warda[®].
- Plant height is medium, similar to PBA Warda[®].
- Lodging resistance is similar to PBA Warda[®].
- PBA Nasma[®] can withstand mild frost at the vegetative stage, similar to PBA Warda[®] and better than Doza[®]. Severe frost at flowering/early pod set may cause yield losses.

Sowing

- Early sowing is recommended to achieve maximum yield potential.
- Sowing later than mid-May is likely to cause a reduction in yield.
- Grow seed crops of PBA Nasma[®] in isolation of other faba bean varieties to prevent cross-pollination.
- Calculate seeding rates to achieve a plant population of 15–20 plants/m². Note that seeding rates will be higher due to the larger seed size.
- Inoculation with the commercial faba bean rhizobium Group F is essential for effective nodulation.

Herbicide tolerance

- PBA Nasma[®] has been extensively tested in PBA and NVT trials with the application of recommended herbicides. No adverse reactions have been observed in these trials.
- Limited herbicide testing has shown that PBA Nasma[®] has no increased sensitivity to any of the recommended herbicides compared with commonly grown faba bean varieties.

REFER TO DETAILED INFORMATION AT www.pulseaus.com.au
Ute guides, crop and disease management bulletins

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GRAIN QUALITY

PBA Nasma[®] has a larger seed size than other varieties grown in the northern region. It is superior to PBA Warda[®] with uniform seed size and colour.

PBA Nasma[®] produces medium sized beige to brown seeds, in the range of 61–79 g/100 seed which is approximately 15–20% larger than PBA Warda[®].

Darkening of seed colour under storage is similar to PBA Warda[®].

Seed weight (g/100 seeds) of faba bean varieties		
Variety	Dry land (2014 NVT)	Irrigated (2014 Narrabri)
PBA Nasma [®]	61–66	71–79
Cairo [®]	47–56	62–66
Doza [®]	46–51	57–60
PBA Warda [®]	50–55	58–66

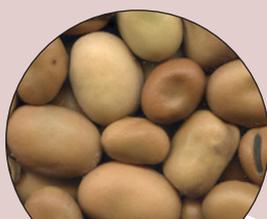
Source: Pulse Breeding Australia (PBA)



PBA Nasma[®]



PBA Warda[®]



Doza[®]

MARKETING

PBA Nasma[®] is suitable for the medium seed size human consumption market. Its uniform seed size and colour will be attractive to the Middle Eastern market. PBA Nasma[®] provides an alternative to growers who wish to grow a large seeded variety without compromising yield and other quality aspects.

BREEDING

PBA Nasma[®] (evaluated as IX220d/2-5) was developed by the northern PBA faba bean breeding program, led by the University of Adelaide.

'Nasma' means 'morning breeze' in Arabic. The name was chosen to be familiar and easy to remember for customers in the Middle Eastern market.



Better pulse varieties faster

PBA is an unincorporated joint venture between the GRDC, University of Adelaide, University of Sydney, SARDI, DEDJTR Victoria, NSW DPI, DAF QLD, DAFWA and Pulse Australia.

FOR MORE INFORMATION

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PBA Faba bean

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SEED ENQUIRIES

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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 faba bean varieties.

AGRONOMIC ENQUIRIES

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