

KEY FEATURES of Yarrum[Ⓟ]

- Consistently high yielding variety across northern NSW and in some southern regions.
- Best suited to medium to longer growing season environments.
- Has fair lodging resistance at maturity and rolling after sowing is recommended.
- Downy mildew control is required in susceptible areas of South Australia & Victoria
- Resistant to powdery mildew and foliar fungicide is not required.
- Resistant to Pea Seed-borne Mosaic Virus
- It has moderate resistance to Bacterial Blight and can be grown in high risk areas.
- Suited to Crop topping and desiccation

Where Yarrum[Ⓟ] fits into the farming system:

Yarrum[Ⓟ] was released in 2003 for Northern NSW because of its resistance to powdery mildew and PSbMV and has shown high yields in long term trials in both northern and southern regions. Yarrum will need to be managed for blackspot and downy mildew in disease prone areas. Yarrum can lodge at maturity and will require rolling and may need specialised pea fronts. Yarrum will be of most interest to areas with consistently high levels of PSbMV and high risk Bacterial Blight regions. It has to be considered carefully against alternatives in low rainfall areas or areas prone to early high temperatures and drought stress.

Variety Characteristics:

Breeding: The original cross was made in 1991 by New Zealand Institute for Crop and Food Research Limited, Lincoln, New Zealand. The seed parent is a white seeded breeding line. The pollen parent is a purple flowered breeding line. Selection and seed multiplication were conducted from F2-F5. In 1996 F6 yield experiments were conducted in New Zealand. From 1999 – 2002 Yarrum was evaluated in central and northern NSW and southern QLD as one of a number of Crop and Food lines. Selection criteria were grain yield and disease resistance.

Agronomic Characteristics: Yarrum[Ⓟ] is a semi-dwarf, semi-leafless dun type that has an erect habit during early growth, but can lodge at maturity when high yielding or weather conditions are unfavourable. It has mid maturity and will often commence flowering slightly earlier than Parafield[Ⓟ], but maturation date is similar.

Agronomic features & disease resistance

	Seed Type	Leaf Type	Plant height	Relative flowering time	Maturity	Standing at maturity	Pod shatter resistance	Black Spot	Downy Mildew (1)	Downy Mildew (2)	Powdery mildew	*Bacterial Blight (<i>P. Syringae pv. syringae</i>)	PSbMV#
Parafield [Ⓟ]	Dun	C	T	Mid-Late	Late	Poor	S	S	S	S	S	MR-MS	S
Morgan [Ⓟ]	Dun	SL	T	Late	Late	Poor	S	MS-MR	S	R	S	MR	S
Yarrum[Ⓟ]	Dun	SL	M-S	Mid	Late	Fair	S	S-MS	S	S	R	MS-MR	R/R#
PBA Twilight [Ⓟ]	Dun-Kaspa	SL	M	Early	Early	Fair	R	MS-MR	MR	S	S	S	S
PBA Gonyah [Ⓟ]	Dun-Kaspa	SL	M	Early-Mid	Mid	Fair	R	MS-MR	MR	S	S	S	S
Kaspa [Ⓟ]	Dun-Kaspa	SL	M	Late	Late	Fair	R	MS-MR	MR	S	S	S	S
SWCeline [Ⓟ]	White	SL	M	Early	Early	Good	S	S	MS-MR	-	S	S	-
Sturt [Ⓟ]	White	C	T	Mid	Mid	Poor	S	MS	MS	S	S	MR-MS	S

*Bacterial Blight testing is based on screening over the last 2 years for *Pseudomonas syringae pv. syringae* and further screening trials will continue. # is variation depending on pathogen var.

Shattering: R = resistant; S = susceptible. Leaf type: C = conventional, SL = semi-leafless. Disease ratings: R = resistant; MR = moderately resistant; MS = moderately susceptible; S = susceptible.

Yield and adaptation

Yarrum[Ⓛ] has shown widespread adaption and high yield potential across a range of environments, but has shown its best relative long-term advantage in the medium to higher rainfall southern regions where it's powdery mildew and PSbMV resistance may be beneficial.

National Variety Trials – NSW, SA Regional Long Term Yields as % of Kaspa: 2004-2010

	NSW		SA					
	South-east	South-west	Lower EP	Upper EP	Mid North	Yorke P	South East	Mallee
Parafield [Ⓛ]	99 (73)	101 (40)	97 (19)	96 (09)	93 (44)	90 (26)	95 (26)	99 (07)
Morgan [Ⓛ]	90 (64)	92 (32)	-	89 (03)	84 (07)	-	86 (03)	-
Yarrum[Ⓛ]	106 (45)	106 (28)	104 (13)	102 (07)	104 (34)	101 (20)	109 (17)	110 (05)
SW Celine [Ⓛ]	106 (16)	108 (13)	104 (07)	-	101 (08)	99 (08)	102 (09)	-
Sturt [Ⓛ]	99 (65)	104 (36)	102 (13)	101 (09)	99 (38)	95 (20)	100 (21)	109 (05)
PBA Twillight [Ⓛ]	97 (16)	97 (14)	99 (8)	99 (04)	97 (22)	93 (13)	98 (11)	97 (03)
PBA Gunyah [Ⓛ]	100 (16)	100 (14)	102 (09)	99 (04)	99 (24)	96 (15)	100 (11)	103 (03)
Kaspa[Ⓛ]	2.482 (72)	1.748 (40)	2.107 (19)	1.741 (09)	2.523 (44)	2.584 (26)	2.976 (26)	1.507 (07)

Numbers in () = site years. Yield data courtesy of Aust Crop Accreditation System – National Variety Trials.
Data also courtesy of SARDI, DPI Vic, NSW DPI before 2005

National Variety Trials – Vic, WA Regional Long Term Yields as % of Kaspa: 2004-2010

	Vic				WA				
	Wimmera	Mallee	North-East	South-West	Agzone 1	Agzone 2	Agzone 3	Agzone 4	Agzone 5
Parafield [Ⓛ]	94 (28)	95 (49)	97 (3)	92 (03)	90 (11)	90 (21)	89 (28)	87 (29)	89 (42)
Dunwa [Ⓛ]	94 (11)	96 (17)	-	-	95 (11)	97 (17)	95 (22)	96 (24)	97 (32)
Morgan [Ⓛ]	91 (04)	89 (08)	-	-	-	-	-	-	-
Yarrum[Ⓛ]	100 (10)	-	-	99 (03)	100 (6)	96 (12)	97 (14)	94 (15)	98 (26)
SW Celine [Ⓛ]	106 (05)	105 (08)	-	-	-	-	-	-	-
Sturt [Ⓛ]	105 (28)	104 (48)	100 (3)	100 (3)	98 (06)	102 (17)	97 (19)	94 (20)	97 (29)
PBA Twillight [Ⓛ]	100 (10)	100 (22)	-	-	98 (03)	99 (09)	98 (12)	98 (08)	100 (15)
PBA Gunyah [Ⓛ]	102 (10)	101 (21)	-	-	-	104 (05)	101 (11)	102 (08)	103 (13)
Kaspa[Ⓛ]	1.891 (28)	1.775 (49)	2.505 (3)	1.652 (4)	2.005 (08)	1.259 (19)	1.685 (22)	1.199 (22)	1.639 (35)

Numbers in () = site years. Yield data courtesy of Aust Crop Accreditation System – National Variety Trials.
Data also courtesy of SARDI, DPI Vic, NSW DPI before 2005



Management Package

(Consult local grower guides for more detailed information)

This VMP updates and reinforces those management issues with Yarrum[Ⓢ] peas that may be different to other pea varieties. Refer to existing guides for other general pea management issues.

Seeding Rate: Target 40–60 plants/m² relative to the region and sowing time. Yarrum[Ⓢ] may suffer yield reduction at less than 40 plants/m², mainly due to decreased harvesting efficiency. Do not reduce seeding rates to allow a more open canopy for crop-topping. Early canopy closure is critical to control herbicide resistant ryegrass.

Sowing Date: The sowing date to target for Yarrum[Ⓢ] is similar to Parafield in most areas, aimed at:

- Minimising black spot and other diseases. Early sowing is possible but the potential for disease is increased.
- Consult regional publications and the “Blackspot Manager” computer model for recommended sowing times in your district see: http://www.agric.wa.gov.au/content/PW/PH/DIS/crop_disease_forecast.htm.
- In frost prone areas Yarrum[Ⓢ] can be sown one to three weeks later than Parafield to avoid late frosts during flowering and early pod fill.

Row Spacing: Recent NSW I&I trials have shown it is safe to widen field pea row spacing to 30 cm, however at the wider (50 cm) rows yields were lower and lodging would be greater with an erect variety such as Yarrum[Ⓢ].

Herbicide Sensitivity: Yarrum has good herbicide tolerance to most commonly used herbicides.

- Yarrum[Ⓢ] suffers less yield loss than Parafield to Broadstrike, Raptor and Spinnaker.
- Yarrum[Ⓢ] shows a similar level of susceptibility as Parafield to metribuzin (PSPE and Post), Brodal, Brodal+MCPA, Simazine+Diuron and MCPA-Na treatments.

Disease Management: Yarrum[Ⓢ] is resistant to Powdery Mildew and will not need to be managed for this disease in high incidence areas.

- Yarrum[Ⓢ] has shown medium resistance to Bacterial Blight and can be grown in high risk areas but prevention management is still required by sowing clean seed, and avoid damaging the crop with herbicides or physical practices such as rolling or wheel tracks during cold, frosty or wet periods.
- Yarrum[Ⓢ] is susceptible to Black spot and Downy mildew and will need to be managed for these diseases. Follow best management guidelines for your region (see ‘Other reading’ below).

Rolling: Yarrum[Ⓢ] paddocks will need to be rolled post sowing to enhance harvest efficiency, or avoid contamination with dirt, stones etc, particularly in areas or seasons where pod height is low or lodging occurs. Beware of rolling after emergence as crop damage can increase bacterial blight risk.

Insect control: Monitoring and early budworm control is important with Yarrum[Ⓢ] as later maturity and quick pod set can coincide with higher moth numbers and grub pressure compared with varieties with earlier and more extended flowering podfill. Sweep netting is more difficult in erect semi leafless peas because of tendrils and their erect biomass. Threshold levels may need to be lowered, or use of a beat-sheet to be more accurate in assessing actual grub numbers and size.

Frost and heat: The later flowering of Yarrum[Ⓢ] may assist to escape normal frost periods; however a late frost or heat event may cause significant yield loss compared to conventional varieties such as Parafield or Sturt[Ⓢ].

Crop topping: Yarrum[Ⓢ] matures early enough to be crop-topped to prevent weed seed set, particularly ryegrass. Even in high yielding bulky crops, ryegrass seed heads will emerge above the canopy.

Windrowing, Desiccation and Harvest: Windrowing can occur with Yarrum[Ⓢ], but windrows must be rolled immediately afterwards to prevent wind movement.

Desiccate when seed moisture drops to around 30%. Collect seed samples by randomly picking 10-20 stems or more across the paddock. See Other Reading.

Harvest as soon as seed moisture falls to 14% and avoid cool damp conditions. It does not possess the sugar pod trait and is not shatter resistant. Harvest when ready to reduce the risk of lodging and seed loss from shedding, and low moisture that can lead to cracking and seed quality decline. Crop lifters may be required for harvesting Yarrum[Ⓢ] particularly if the crop lodges. A flex front is ideal.

Marketing:

Yarrum[®] produces a uniform large dun pea that is suitable for human consumption, split pea markets and for use in livestock rations. It can be co-mingled with other dun types if intended for stockfeed use. It will need to be segregated from white, blue or Kaspa pea types for specific food market requirements.

Seed Availability and PBR:

Yarrum[®] is protected by Plant Breeders Rights and has an End Point Royalty of \$4.40 per tonne (GST inclusive). Any unauthorised commercial propagation or any sale, conditioning, export, import or stocking of propagating material of his variety is an infringement under the Plant Breeder's rights Act, 1994. Growers are allowed to retain seed from production of this variety for their own use as seed.

Yarrum[®]

Seed Supply enquiries:

Seeds office: 02 6881 6210

www.ausgraintech.com



Agronomic Enquiries:

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Other Reading:

For field pea management guidelines see:

- Pulse Australia publications: "Field pea disease management strategy Southern & Western region" and "Pulse seed treatments and foliar fungicides" (www.pulseaus.com.au)
- SARDI fact sheet "Field pea variety sowing guide" (www.sardi.sa.gov.au)
- NSW DPI publications (www.dpi.nsw.gov.au): "Winter Crop Variety Sowing Guide"; Pulse Point 20 "Germination testing and seed rate calculation"; "Weed Control in Winter Crops"; "Insect and Mite Control in Winter Crops"; "Desiccation and harvest of field peas".
- Vic DPI "Winter Crop Summary" and fact sheets (www.dpi.vic.gov.au).

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This VMP has been jointly prepared by: Trevor Bray and Alan Meldrum (Pulse Australia) from information published on field peas and Yarrum

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