Narrow-Leaf Lupin

Variety guide

Western Australia

Coyote[Φ]

- Wide adaptation
- Metribuzin tolerant
- Reduced risk of seed splitting compared with PBA Jurien[Φ]
- Susceptible to stem *Phomopsis*
- Slightly slower maturity relative to PBA Jurien[Φ]

Gidgee[Φ]

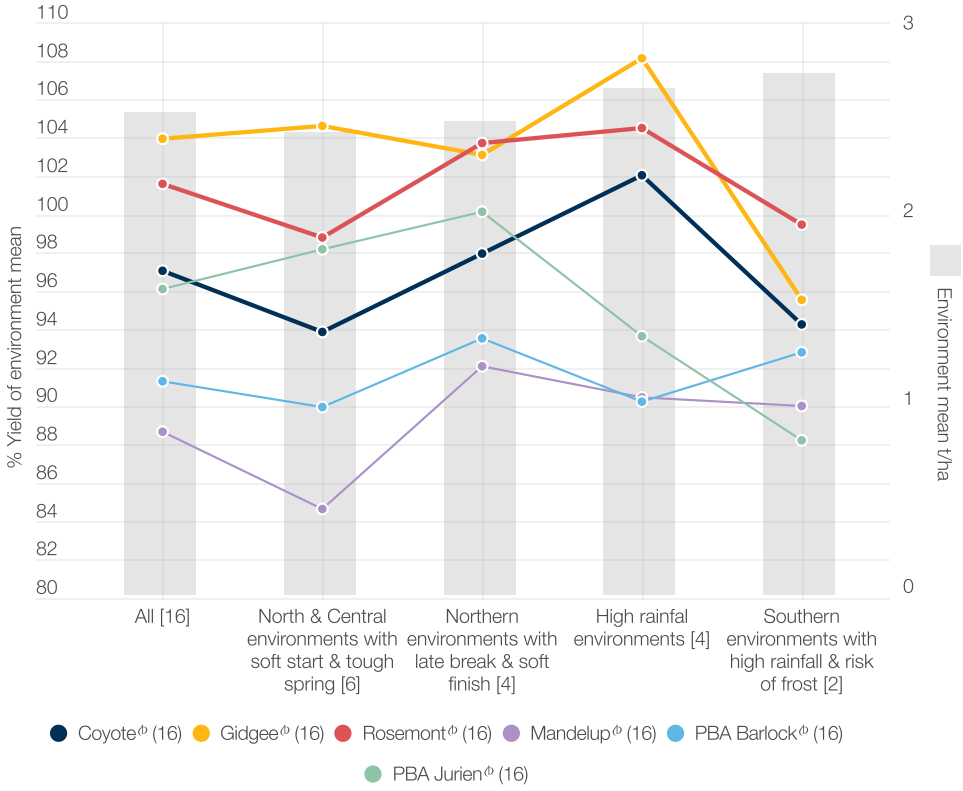
- A very high and stable yielding alternative to PBA Jurien[Φ] and Mandelup[Φ]
- Widely adapted but particularly well adapted to the northern and central wheatbelt of WA
- Metribuzin tolerant
- Reduced risk of seed splitting compared with PBA Jurien[Φ]
- Moderately resistant to stem *Phomopsis*
- Good CMV resistance
- Slightly quicker maturity relative to PBA Jurien[Φ], slightly slower than Mandelup[Φ]

- A very high yielding alternative to PBA Jurien[Φ], Coyote[Φ] and Mandelup[Φ]
- Best performance in softer finishing situations and southern WA environments
- Unique white flower and faintly speckled seed
- Metribuzin tolerant
- Excellent early vigour
- Reduced risk of seed splitting compared with PBA Jurien[Φ]
- Taller plant height, may improve harvestability
- Moderately resistant to stem *Phomopsis*
- Good CMV resistance
- Slightly slower maturity relative to PBA Jurien[Φ], slightly quicker than Coyote[Φ]

Grain yield

AGT long term yield data has shown that Gidgee$^{\Phi}$ has been the highest yielding variety across WA, with particular adaptation to northern and central WA environments; while Rosemont$^{\Phi}$ seems to perform exceptionally well in southern WA environments or regions with a softer finish. Coyote$^{\Phi}$ has been a consistent performer across a number of years and continues to yield slightly higher than PBA Jurien$^{\Phi}$ over-all.

Figure 1. AGT Long term yield data - WA

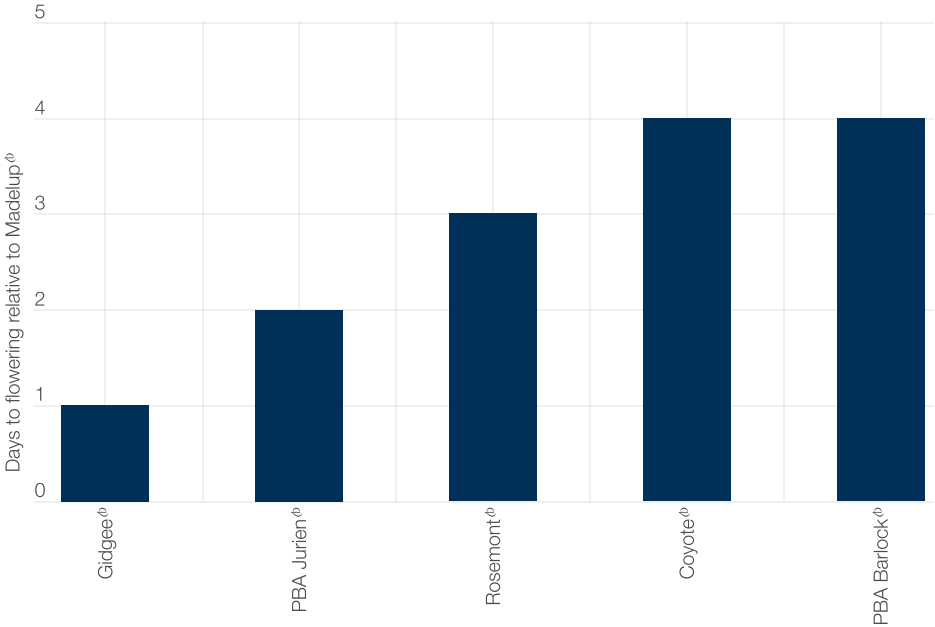


Source: AGT long term MET analysis (2018-2022), WA sites
[ ] Total number of trials per region
( ) Number of trials that each variety was present in across the WA dataset [16]

Maturity

Although the range of maturities across new and commonly grown lupin varieties is quite narrow, there are minor differences between varieties, with Mandelup[Φ] still regarded as one of the quickest maturing varieties, with Coyote[Φ] and PBA Barlock[Φ] reaching flowering slightly later.

Figure 2. Days to flowering relative to Mandelup[Φ]



Source: AGT lupin trial, Northam WA 2022

Agronomics

Table 1. Agronomic attribute comparisons

	Coyote$^{\Phi}$	Gidgee$^{\Phi}$	Rosemont$^{\Phi}$	Mandelup$^{\Phi}$	PBA Barlock$^{\Phi}$	PBA Jurien$^{\Phi}$
Metribuzin Tolerance	T	T	T	T	T	T
Split Seed	T	T	T	MTMI	MTMI	I-VI
Alkaloid Content	Very Low	Very Low	Very Low	Low-Moderate	Low-Moderate	Very Low
Plant Height	Short-Medium	Short-Medium	Tall	Medium-Tall	Short	Medium
Early Vigour	Good	Very Good	Excellent	Very Good	Good	Good
Lodging	MR	MS	MRMS	MRMS	MR	MS
Flower Colour	White-Dark Purple	White-Purple	White-Pink	White-Purple	White-Purple	White-Purple
Seed Coat	Brown Speckle	Light Speckle	White-Light Speckle	Brown Speckle	Brown Speckle	Light Speckle

Source: AGT

Disease

Table 2. Disease rating comparisons

	Coyote$^{\Phi}$	Gidgee$^{\Phi}$	Rosemont$^{\Phi}$	Mandelup$^{\Phi}$	PBA Barlock$^{\Phi}$	PBA Jurien$^{\Phi}$
Anthracnose	MRMS	MR	MRMS*	MRMS	RMR	RMR
Bean Yellow Mosaic Virus	MR	MS	MR	MS	MS	MRMS
Brown Spot	MS	MS	MS	MS	MS	MS
Cucumber Mosaic Virus	MRMS	MR*	MR*	MS	MR	MR
Grey Spot	R	R*	R*	R	R	R
Pod *Phomopsis*	MRMS	S*	MS*	S	MR	MR
Stem *Phomopsis*	S	MR*	MR*	RMR	MR	RMR

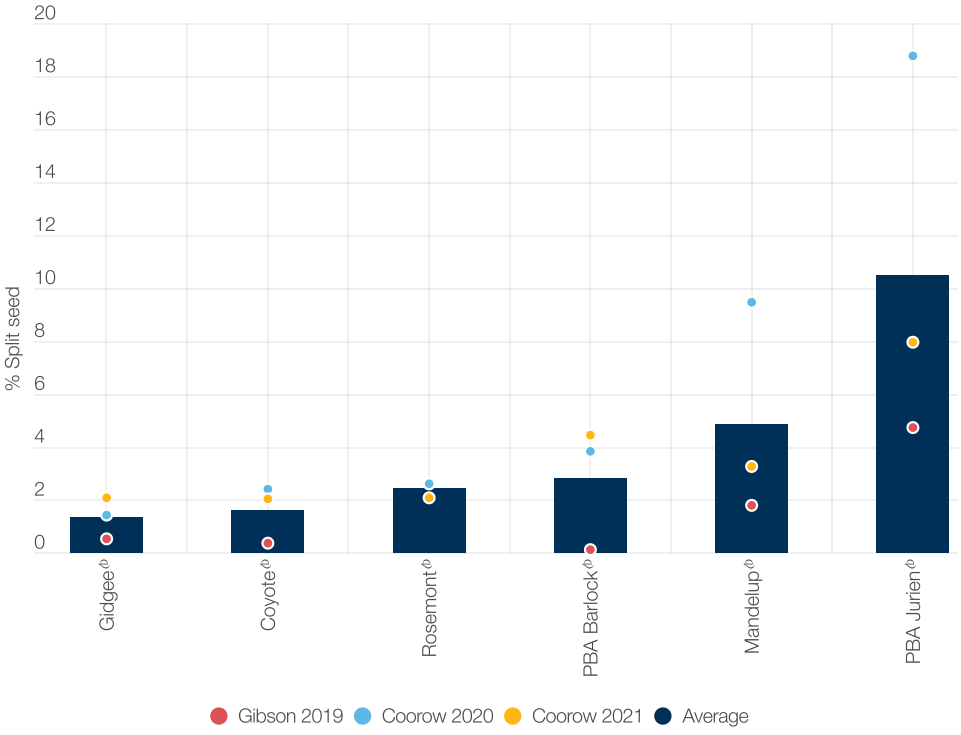
R Resistant
MR Moderately Resistant
MS Moderately Susceptible
S Susceptible
VS Very Susceptible
* Provisional rating

Source: NVT consensus ratings 2022 and AGT

Grain Quality

Split seeds can be a contributing factor to poor germination and crop establishment. AGT trials have demonstrated that seed of Gidgee$^{\Phi}$, Coyote$^{\Phi}$ and Rosemont$^{\Phi}$ is less likely to split compared to PBA Jurien$^{\Phi}$, which is at a significantly higher risk (Figure 3).

Figure 3. Split seed comparisons



Source: AGT breeding sites where split seed was observed, WA 2019-2021

Seed Availability, PBR and EPR

Table 3. Variety comparisons

	Coyote$^{\Phi}$	Gidgee$^{\Phi}$	Rosemont$^{\Phi}$
Tested as	WALAN2546	AGTP0013	AGTP0054
Released	Spring 2019	Spring 2023	Spring 2023
EPR rate per tonne	$3.00 + GST	$4.50 + GST	$4.50 + GST
Seed Availability	Affiliates, Retailers & Seed Sharing™		

Varieties denoted by the Φ symbol are protected by Plant Breeders Rights (PBR) and all production (except seed saved for planting) is liable to an End Point Royalty (EPR), which funds future plant breeding. Growers of PBR protected varieties will be subject to a Growers License Agreement that acknowledges that an EPR must be paid on all production other than seed saved for planting.

Commercial quantities of AGT lupin varieties may be available through AGT Affiliates, or your local retailer. AGT lupin varieties can be traded between growers upon the completion of a License Agreement as part of AGT's Seed Sharing™ initiative.

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