

Lupin CVT Trial, Badgingarra

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Purpose:	Field evaluation of the stage 3 lupin cultivars and breeding lines
Location:	Badgingarra
Soil Type:	Yellow sand over gravel
Growing Season Rainfall (April- October 2012):	approx 340mm

BACKGROUND SUMMARY

Assessment of lupin cultivars for their applicability to the region, prior to their naming and release.

TRIAL DESIGN

Plot size: 1.8m x 18m

Machinery: Knife point and press wheel

Replications: 3

Crop type and varieties used: 63 Lupin cultivars, including PBA Gunyidi, Jenabilup and Tanjil.

Seeding rates and dates: approx 100kg/ha where seed amount allows, sown 15th May

Fertilizer rates and dates: 80kg/ha Big Phos, 50kg/ha Muriate of potash

Herbicide rates and dates:

15/05/2012	Talstar – 200 mL (IAS)
	Dominex 100 mL (IAS)
	Gesatop – 1.7 L (IBS)
	Treflan – 1.5 L (IBS)
29/06/2012	Simazine – 0.5 L
	Brodal – 150 mL
08/08/2012	Simazine – 0.4 L
	Brodal – 100 mL
	Eclipse – 7 gm
14/08/2012	Select – 500 mL

RESULTS/STATISTICS

Table 2. Plot yield for each of the named varieties and WALAN2325, to be released 2013.

Variety	Yield (tonnes/ha)	SE	Site ranking
Tanjil	3.65	0.18	63
Danja	3.87	0.18	60
Mandelup	4.11	0.18	54
Jenabilup	4.39	0.19	34
WALAN2325	4.39	0.18	33
PBA Gunyidi	4.56	0.18	17

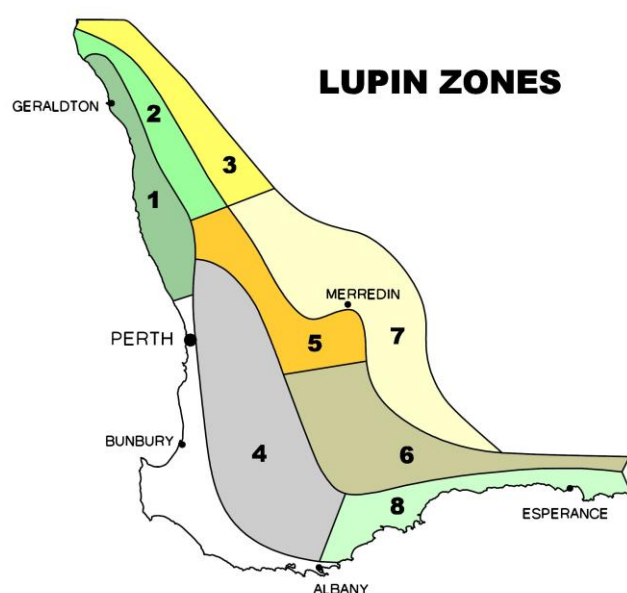


Figure 1. The wheatbelt broken into lupin zones, useful for classification of new varieties as represented in table 3.

Table 3. Accumulated lupin CVT results from 2008 until 2012, providing yield of new varieties as a percentage of Mandelup.

WA lupin zones	1	2	3	4	5	6	7	8
Coromup	98	88	101	85	97	78	86	93
Danja	82	82	81	84	89	63	74	82
Jenabillup	102	104	101	103	104	80	93	99
Mandelup	100	100	100	100	100	100	100	100
PBA Gunyidi	103	103	103	106	99	96	90	102
Quilinock	93	90	93	101	91	74	91	99
Tanjil	92	93	84	90	91	70	81	91
WALAN2325	104	105	102	102	100	84	91	100
WALAN2333	108	111	112	111	111	86	100	106
WALAN2383	111	114	106	109	100	91	97	107
WALAN2385	104	110	124	105	112	103	112	101
WALAN2388	99	99	106	107	101	75	99	103
WALAN2392	109	108	106	101	107	89	98	109
WALAN2413	101	103	132	95	101	76	94	93
WALAN2428	91	102	84	90	93	66	83	71

WALAN2325 is likely to be named and released in 2013 as a replacement for Tanjil, specifically for the northern, high rainfall, coastal region. It is a tall robust variety with Mandelup level of metribuzin tolerance and Tanjil level of anthracnose resistance. Yields of

WALAN2325 is far superior to Tanjil in lupin zones 1 and 2. 30 ton of seed is being bulked up this season for commercially available seed in 2014.

WALAN2333 is being further reviewed in 2013 for potential release in 2014. It is moderately susceptible to anthracnose which discounts its applicability for the West Midland region where anthracnose potential is high.

Keep your eye on WALAN2385 as it shows potential but requires another season of testing before it can be considered for release.

OBSERVATION

A number of plots were impacted by water erosion from a cloud burst after sowing, an erosion channel running through a section of the trial. Yield of these plots was impacted. As a result yield outliers were removed during analysis of the trial.

REVIEW

Martin Harries

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