



Coorow Seeds

CLEAN • SEED • EXPORT • FEED • FOOD

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Pootallong

Pootallong is released as an experimental variety of yellow lupin for Western Australia. This is primarily released for growers in UK where it has yielded 115% of Wodjil. It maintains all quality parameters of Wodjil with a high quality seed and high protein content that offer a great promise for the aquaculture and stockfeed industries.

POOTALLONG:

- is adapted to acidic sands of the WA wheatbelt, especially Al-toxic soils
- has higher protein content of seed than all other lupins and most pulses
- has higher sulphur amino acids and lysine than all other lupins and most pulses
- is resistant to brown spot, Pleiochaeta root rot & Eradu patch
- is immune to cucumber mosaic virus
- is highly efficient at extracting P from soil

Breeding

Pootallong (tested as WALLU2009, 94D017-6-8) was bred by Drs Kedar Adhikari, Bevan Buirchell and Wallace Cowling, in collaboration with the Department of Agriculture's lupin breeding team. It was registered in 2005 and is protected by Plant Breeders Rights.

Pedigree: Teo – 101/K3041

Pootallong inherits its early flowering from Teo – 101 (a sister line of Wodjil) and bright orange flower colour from K3041 (a Russian breeding line).

Plant Characteristics and Disease Resistance

Pootallong has pale green leaves with scented bright orange flowers. It flowers about the same time as Wodjil. Height at maturity and harvest height are also similar to Wodjil. It has excellent pod setting on the main stem, but bears few pods on the laterals in WA's moisture limited environments.

Pootallong is resistant to brown spot, Pleiochaeta root rot and Eradu Patch diseases. It is immune to cucumber mosaic virus, but is infected by bean yellow mosaic virus. Pootallong is very susceptible to lupin anthracnose, but can tolerate transient water logging similar to other yellow lupins.

Pootallong is only marginally better than Wodjil for aphid tolerance and timely treatment with aphicide is highly recommended. Red-legged earth mites should also be monitored early in the growing season.

Yield

Pootallong has yielded 112% of Wodjil in trials conducted from 2001 to 2004. In drier years of 2001 and 2002 it has yielded more than 20% of Wodjil, but in wetter years of 2003 and 2004, it yielded similar to Wodjil. In UK conditions it has yielded 15% higher than Wodjil.

Herbicide Reaction

Simazine may be incorporated pre-seeding at no more than 2 L/ha when growing yellow lupins on sandplain soils. Simazine as a top-up increases leaf burn and decreases height and early vigour. Metribuzin reduces yellow lupin growth. Diuron and Eclipse® severely damaged yellow lupins post-seeding and should not be used. Brodal® is considered the safest post-emergent broad leaf herbicide for yellow lupins, but causes leaf yellowing. Grass selective herbicides may be used at least 10 days after applying Brodal®.

Seed Quality

Pootallong contains 38 – 40% protein and 6 – 6.5% oil. The content of the sulphur amino acids cystine and methionine, and another essential amino acid lysine, is higher and ileal digestibility of these amino acids in pigs appears to be greater than in narrow-leafed lupins. On this basis, animal researchers suggest that yellow lupins will be a superior quality feed as compared with narrow-leafed lupins for the pig industry.

Seed alkaloid content is below the industry recommended threshold (0.02%), and the alkaloid gramine is at trace levels. Its seed size, seed colour and protein and oil content are similar to Wodjil.

Pootallong is considered a premium grain for aquaculture and stockfeed markets and use for human consumption is under review.

Name

Pootallong is named after the Nyoongar name for Pelican, any of various large web-footed birds of the family Pelecanidae, with a large fish-catching bill (Ref: “A Nyoongar Wordlist from the South-West of Western Australia” Ed. P. Bindon and R. Chadwick).

Seed quality of Pootallong shown as a percentage of Wodjil.

	Seed weight	Seed protein	Seed oil	Seed alkaloid
WALLU2009	101	99	100	73
Wodjil	100	100	100	100
Teo	101	99	101	712

Wodjil	134 mg	45% db	6.5% db	0.023% ar
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The alkaloid results are from greenhouse grown trials (because of outcrossing) and other quality results from CVT trials 2002-2003. Data presented on % dry basis(db) or % as received (ar).

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