

Nipper

Red Lentil

VARIETY SUMMARY

- Small seeded red lentil, similar size to Northfield
- Mid to late flowering variety
- Resistant to ascochyta blight
- Resistant to botrytis grey mould
- Best combination of ascochyta blight and grey mould resistance currently available
- Long term yields between Nugget and Northfield
- Improved tolerance to salinity
- Shorter plant height than Nugget but improved lodging resistance
- Suitable for human consumption

BREEDING

Nipper (formerly CIPAL203) was bred by Dr Michael Materne, Senior Lentil Breeder, Department of Primary Industries Victoria as part of the Coordinated Improvement Program for Australian Lentils (CIPAL).

Nipper was derived from a complex cross between Indianhead and Northfield and is the first red lentil variety to be bred in Australia for Australian conditions.

PLANT CHARACTERISTICS

Nipper is shorter in height than Nugget but has improved lodging resistance. Nipper is similar in height and pod drop to Northfield and therefore early harvesting is important. Nipper may produce low biomass and become difficult to harvest if sown too late or when grown in low rainfall areas or environments where the season may terminate quickly. Nipper has improved tolerance to salinity and similar susceptibility to sodicity and high soil boron levels compared to Northfield.

Table 4. Plant types by Victorian DPI

Type	Variety	Seed coat colour	Seed size relative to Nugget	Vigour	Plant type	Flowering*	Maturity*	Lodging*	Shattering*
Small red	Nipper	Grey	20%<	Poor-mod	Short	Mid-late	Mid	MR	MR
	Northfield	Tan	20%<	Poor-mod	Short	Mid-late	Mid	MS	MR
Medium red	Digger	Grey	Similar	Mod	Med	Mid	Mid-Late	MS	MR
	Nugget	Grey	-	Mod	Med	Mid	Mid-Late	MR-MS	MR
Large red	Aldinga	Green	20%>	Mod	Med	Mid	Mid	S	MR
Large green	Boomer	Green	50%>	Good	Tall	Early-Mid	Mid-Late	MS	MS

* Relative to Digger

Disease Terms: MR - Moderately Resistant, MS - Moderately Susceptible, S - Susceptible

AREA OF ADAPTATION

Nipper is best suited to medium rainfall areas of SA and VIC where lentils are predominately grown. Nipper is particularly suited to sowing early in situations where disease risk is high.

MATURITY

Nipper is a mid to late flowering variety, flowering later than Nugget but often maturing slightly earlier. Nipper flowers and matures similarly to Northfield.

DISEASE RESISTANCE

Table 3: Disease resistance by Victorian DPI.

Type	Variety	Salinity*	Botrytis foliage	Ascochyta foliage	Ascochyta seed
Small red	Nipper	MT	R	R	R
	Northfield	I	S	R	R
Medium red	Digger	I	MR [^]	MR	MS
	Nugget	I	MR	MR [^]	MS [^]
Large red	Aldinga	I	MS	MR	MS
Large green	Boomer	I	MR [^]	MR [^]	MS

[^]These varieties have a lower risk of developing disease than others of the same rating. Disease Terms: R - Resistant, MR - Moderately Resistant, MS - Moderately Susceptible,

 **YIELD**

Average long term yield of Nipper is between Nugget and Northfield in Victoria and South Australia. In situations of high disease pressure and absence of fungicide, Nipper has the highest yield potential of all varieties.

Table 1. Long term yield performance (2003-09) in VIC (NVT 2010)

Type	Variety	Mallee	Wimmera
		% Nugget	
Small red	Nipper	94	96
	Northfield	90	91
Medium red	Digger	95	93
	Nugget	100	100
Large red	Aldinga	96	93
Large green	Boomer	102	99

Table 2. Long term yield performance (2003-09) in SA (SARDI 2010 Harvest Report)

Type	Variety	Mid Nth	Yorke Pen	Sth East	Mallee	Lower EP
		% Site mean				
Small red	Nipper	101	98	100	98	100
	Northfield	92	94	94	90	92
Medium red	Digger	96	95	97		97
	Nugget	99	101	102	100	101
Large red	Aldinga	96	98	97		96
Large green	Boomer	104	106	107	104	105

 **SEED CHARACTERISTICS**

Nipper is a small seeded red lentil similar in size to Northfield but with a grey seed coat.

Nipper's improved ascochyta blight resistance compared to Nugget and improved botrytis grey mould resistance compared to Northfield reduces the risk of seed staining or discolouration.

Nipper is suitable for human consumption markets and is likely to be accepted into existing premium Northfield markets but full acceptance is subject to further evaluation.

 **AGRONOMIC GUIDELINES**

A detailed Variety Management Package for Nipper is available through Pulse Australia or our website www.seednet.com.au

 **PLANT BREEDER RIGHTS AND ROYALTIES**

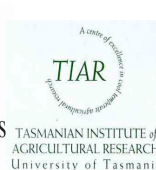
Nipper is protected by Plant Breeder Rights, any unauthorised commercial propagation or any sale, conditioning, export, import or stocking of propagating material of this variety is an infringement under the Plant Breeder's Rights Act, 1994.

Growers are allowed to retain seed from production of this variety for their own use as seed only.

An End Point Royalty of \$5.50 per tonne (GST inclusive), which includes breeder royalties, applies to this variety.

ACKNOWLEDGEMENTS

Nipper was bred by the Victorian Department of Primary Industries (Horsham) as part of the Coordinated Improvement Program for Australian Lentils (CIPAL) and with support from Grains Research Development Corporation (GRDC) and growers across southern Australia.



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