

Disclaimer:

This document is based on the results from an individual trial and may contain experimental use patterns that are currently off-label. **This document does not provide any interpretation and should not be taken as an endorsement of any unregistered use pattern.**

Professional advice should be sought for specific recommendations to ensure access to the most up to date information and knowledge.

Any product referred to in this document must be used strictly as directed, and in accordance with all label or permit instructions. Always consult the label prior to use.

Chickpea Rhizobia Inoculation

Trial ID: CFT1010

Location: Bellata

Trial Year: 2010

Investigator: Clare Felton-Taylor

Objective:	To evaluate the impact of inoculation product and method of application on chickpea nodulation and yield
Planting Date:	11/06/2010
Variety:	PBA HatTrick

Trt No	Inoculum Product	Fungicide Seed Treatment	Inoculation Method	Emergence 13/07/2010 32 DAP Plants/m ²	Nodulation 6/10/2010 117 DAP (flowering to pod set)			Yield 21/12/2010 193 DAP t/ha
					Nodule Rating around Crown	Nodule Rating Beyond Crown	Viable Nodules %	
1	Untreated	P-Pickle T	-	21	4.8de	2.2	83a	2.00
2	Untreated	Thiram	-	27	3.7e	2.1	83a	2.25
3	Nodulaid	Nil	Seed applied 6 hrs pre-sowing	27	9.5a	3.2	58bc	2.26
4	Nodulaid	P-Pickle T	Seed applied 6 hrs pre-sowing	29	8.7ab	2.3	73abc	2.04
5	Nodulaid	Thiram	Seed applied 6 hrs pre-sowing	26	8.9ab	2.6	65abc	2.06
6	Nodulaid WI	P-Pickle T	Water Injection @ 100 L/ha	25	8.2ab	3.2	55cd	2.04
7	Nodulaid WI	Thiram	Water Injection @ 100 L/ha	23	7.3bc	2.2	65abc	2.02
8	Nodulaid WI + Liquid starter	Thiram	Water Injection @ 100 L/ha	25	8.4ab	2.0	65abc	2.24
9	EasyRhiz	P-Pickle T	Water Injection @ 100 L/ha	29	6.3cd	1.7	33d	2.26
10	EasyRhiz	Thiram	Water Injection @ 100 L/ha	29	9.1a	3.4	73abc	2.28
11	Nodulator	P-Pickle T	Granules applied in furrow	25	8.2ab	4.0	80ab	2.10
12	Nodulator	Thiram	Granules applied in furrow	26	7.4bc	2.5	73abc	1.94
13	Untreated	Untreated	-	24	5.9cd	2.2	63abc	2.16
14	Nodulaid WI + Liquid starter	P-Pickle T	Water Injection @ 100 L/ha	26	8.3Ab	2.7	63Abc	2.12
				P =	0.44	0.00	0.16	0.16
				LSD =	nsd	1.74	nsd	22.89 (10%)

Treatment means followed by the same letter are not significantly different at P = 0.05

nsd= No significant difference DAP = Days after Planting WI = Applied by water injection

Yield cv 8%

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Factorial Analysis

		Emergence 13/07/2010 32 DAP Plants/m ²	Nodulation 6/10/2010 117 DAP (flowering to pod set)			Yield 21/12/2010 193 DAP t/ha
			Nodule Rating around Crown	Nodule Rating Beyond Crown	Viable Nodules %	
Fungicide Seed Treatment	P-Pickle T	25.9	7.4	2.7	64	2.09
	Thiram	26.0	7.5	2.5	70	2.13
	P =	0.94	0.90	0.45	0.25	0.42
	LSD =	nsd	nsd	nsd	nsd	nsd
Inoculum Product	Nil	24.1	4.2b	2.1	83a	2.12ab
	Nodulaid	27.3	8.8a	2.4	69abc	2.05b
	Nodulaid WI	24.4	7.7a	2.7	60bc	2.03b
	Nodulaid WI + Liquid Starter	25.5	8.4a	2.3	64bc	2.18ab
	EasyRhiz WI	28.9	7.7a	2.5	53c	2.27a
	Nodulator	25.3	7.8a	3.2	76ab	2.02b
		P =	0.33	0.00	0.31	0.03
	LSD =	nsd	1.30	nsd	18.6	166
Fungicide x Inoculum						
	P =	0.43	0.04	0.03	0.12	0.25
	LSD =	nsd	1.84	1.40	nsd	nsd

Treatment means followed by the same letter are not significantly different at P = 0.05

nsd= No significant difference DAP = Days after Planting WI = Applied by water injection

Nodule rating: 10 plants/plot carefully dug out and soil washed off the roots. Rated on a 0 - 10 scale. 0 = No nodules. 10 = 10 plus nodules. Crown considered within 5 cm of seed.

Viable nodules: 10 nodules per plot checked. % of nodules that were pink was recorded

Yield cv 7.7%

The factorial analysis allows the clearest interpretation of product performance.

There was no impact on crop emergence from any inoculum product or seed treatment.

There was no significant difference between any inoculum product and the untreated in this situation. EasyRhiz recorded significantly increased yield compared to Nodulaid alone or Nodulator.