

Disclaimer:

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Pratylenchus thornei Resistance Screen - Summer Dicotyledon Crops

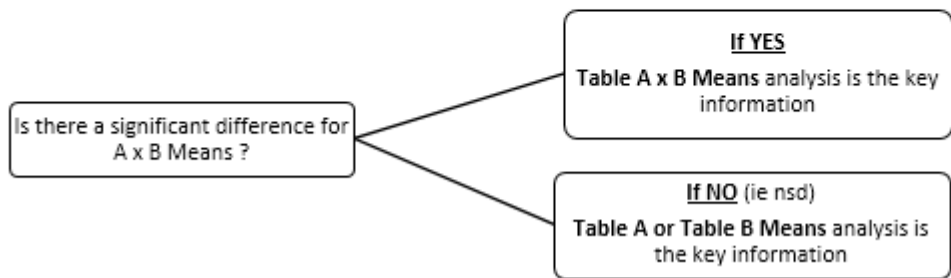
Trial ID: LB1543 **Location:** Macalister **Trial Year:** 2015
Investigator: Linda Bailey

Planting Date:	7/12/2015
Row Spacing:	81cm
Planting Equipment:	Small Plot Tyne Planter
Harvest Date:	Not Harvested
Low <i>P thornei</i> (ex-Caparoi 2013):	2.4 Pt/g soil (12/08/2015)
High <i>P thornei</i> (ex-Strzelecki 2013):	29 Pt/g soil (12 /08/2015)

Granulock Z Extra (at Planting):	40kg/ha
Total Soil N:	150kg N/ha (18/02/2015)
Colwell P:	21mg/kg (0-10cm) 8mg/kg (10-30cm)
BSES P:	24mg/kg (0-10cm) 10mg/kg (10-30cm)

Trial designed and analysed as a Split Plot

	In Simple Terms
Table of A Means:	Mean of 'Nematode Population' performance with ALL 'Crop/Variety' treatments
Table of B Means:	Mean of 'Crop/Variety' performance with ALL 'Nematode Population' treatments
Table of A x B Means:	'Nematode Population' performance with EACH 'Crop/Variety' treatment



***Pratylenchus thornei* Resistance Screen - Summer Dicotyledon Crops**

Trial ID: LB1543

Location: Macalister

Trial Year: 2015

Scientific Pest Name		<i>Pratylenchus thornei</i>			
Pest Name		Root-lesion Nematode			
Rating Date		29/12/2015	9/02/2016	23/02/2016	7/03/2016
Rating Type		EMERGENCE	NDVI	PAW	COUNT
Rating Unit		/m ²	RATIO	mm	Pt/g soil
Plant-Evaluation Interval		22 DP1	64 DP1	78 DP1	91 DP1
ARM Action Codes		T1			AL
Trt No.	Treatment				
TABLE OF A MEANS (Nematode Population)					
1	Low RLN population	20.2-	0.800-	132.9-	2.8tb
2	High RLN population	21.1-	0.802-	133.3-	18.4ta
TABLE OF B MEANS (Crop/Variety)					
1	Blackgram cv. Regur	22.7b	0.876ab	133.2bcd	14.1ta
2	Mungbean cv. Jade	18.4c	0.879ab	132.3bcd	7.6tbc
3	Soybean cv. A6785	12.0d	0.868bc	133.1bcd	6.6tbc
4	Cowpea cv. Black stallion	40.9a	0.887a	119.5d	8.8tb
5	Navybean cv. Spearfelt	10.5d	0.869bc	129.4bcd	7.9tbc
6	Navybean cv. Arwan	12.0d	0.818d	136.7bc	7.2tbc
7	Pigeon Pea	16.9c	0.854c	139.3b	7.0tbc
8	Cowpea cv. Red Caloona	40.5a	0.881ab	125.0cd	6.6tbc
9	Dolichos Lab Lab cv. Highworth	12.0d	0.890a	126.4bcd	6.9tbc
10	Fallow	.	0.190e	156.0a	6.1tc
TABLE OF A x B MEANS (Nematode Population x Crop/Variety)					
1	Low RLN population	22.7-	0.876-	127.6-	7.4t-
1	Blackgram cv. Regur				
2	High RLN population	22.7-	0.876-	138.8-	26.2t-
1	Blackgram cv. Regur				
1	Low RLN population	15.6-	0.876-	136.1-	3.0t-
2	Mungbean cv. Jade				
2	High RLN population	21.1-	0.881-	128.6-	17.2t-
2	Mungbean cv. Jade				
1	Low RLN population	11.9-	0.871-	134.6-	2.2t-
3	Soybean cv. A6785				
2	High RLN population	12.2-	0.865-	131.5-	16.6t-
3	Soybean cv. A6785				
1	Low RLN population	41.3-	0.888-	118.4-	3.5t-
4	Cowpea cv. Black stallion				
2	High RLN population	40.6-	0.885-	120.6-	20.4t-
4	Cowpea cv. Black stallion				
1	Low RLN population	8.4-	0.861-	125.2-	2.6t-
5	Navybean cv. Spearfelt				
2	High RLN population	12.7-	0.877-	133.7-	20.7t-
5	Navybean cv. Spearfelt				
1	Low RLN population	12.5-	0.819-	136.2-	2.4t-
6	Navybean cv. Arwan				
2	High RLN population	11.4-	0.817-	137.3-	18.6t-
6	Navybean cv. Arwan				
1	Low RLN population	17.3-	0.857-	131.0-	2.9t-
7	Pigeon Pea				
2	High RLN population	16.4-	0.850-	147.6-	15.5t-
7	Pigeon Pea				
1	Low RLN population	39.7-	0.882-	129.3-	2.0t-
8	Cowpea cv. Red Caloona				
2	High RLN population	41.4-	0.881-	120.7-	18.2t-
8	Cowpea cv. Red Caloona				

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Scientific Pest Name					<i>Pratylenchus thornei</i>
Pest Name					Root-lesion Nematode
Rating Date		29/12/2015	9/02/2016	23/02/2016	7/03/2016
Rating Type		EMERGENCE	NDVI	PAW	COUNT
Rating Unit		/m ²	RATIO	mm	Pt/g Soil
Plant-Evaluation Interval		22 DP1	64 DP1	78 DP1	91 DP1
ARM Action Codes		T1			AL
Trt No.	Treatment				
1	Low RLN population	12.2-	0.889-	131.6-	2.3t-
9	Dolichos Lab Lab cv. Highworth				
2	High RLN population	11.9-	0.891-	121.2-	17.6t-
9	Dolichos Lab Lab cv. Highworth				
1	Low RLN population	.	0.187-	158.6-	2.0t-
10	Fallow				
2	High RLN population	.	0.193-	153.4-	15.4t-
10	Fallow				

Means followed by same letter do not significantly differ (P=.05, LSD)

Rating Type

NDVI = Normalized difference vegetation index

ARM Action Codes

AL = Automatic log transformation of X+1

T1 = [1]/1.6

DP1 = Days after Planting

COMPLETE SPLIT-PLOT AOV						
29/12/2015						
EMERGENCE /m ² 22 DP1 T1						
Source	DF	Sum of Squares	Mean Square	F	Prob.(F)	LSD (.05)
Total	71	9774.913194				
R	3	26.866319	8.955440	1.178	0.3278	
A	1	17.013889	17.013889	2.754	0.1956	
ERROR A	3	18.532986	6.177662			
B	8	9258.116319	1157.264540	152.290	0.0001	
AB	8	89.626736	11.203342	1.474	0.1916	
ERROR B	48	364.756944	7.599103			

COMPLETE SPLIT-PLOT AOV						
9/02/2016						
NDVI RATIO 64 DP1						
Source	DF	Sum of Squares	Mean Square	F	Prob.(F)	LSD (.05)
Total	79	3.367550				
R	3	0.000150	0.000050	0.189	0.9035	
A	1	0.000024	0.000024	0.048	0.8405	
ERROR A	3	0.001509	0.000503			
B	9	3.350692	0.372299	1404.299	0.0001	0.016
AB	9	0.000858	0.000095	0.360	0.9491	
ERROR B	54	0.014316	0.000265			

COMPLETE SPLIT-PLOT AOV						
23/02/2016						
Dual EM 150cm 78 DP1						
Source	DF	Sum of Squares	Mean Square	F	Prob.(F)	LSD (.05)
Total	79	6476.822000				
R	3	508.690000	169.563333	3.111	0.0337	
A	1	1.300500	1.300500	0.006	0.9416	
ERROR A	3	616.681500	205.560500			
B	9	1982.214500	220.246056	4.041	0.0005	7.4
AB	9	424.997000	47.221889	0.866	0.5602	
ERROR B	54	2942.938500	54.498861			

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Location: Macalister

Trial Year: 2015

COMPLETE SPLIT-PLOT AOV						
23/02/2016						
PAW						
mm 78 DP1						
Source	DF	Sum of Squares	Mean Square	F	Prob.(F)	LSD (.05)
Total	79	23033.363875				
R	3	1812.899375	604.299792	3.119	0.0334	
A	1	4.465125	4.465125	0.006	0.9424	
ERROR A	3	2177.264375	725.754792			
B	9	7070.640125	785.626681	4.055	0.0005	13.9
AB	9	1505.676125	167.297347	0.863	0.5628	
ERROR B	54	10462.418750	193.748495			

COMPLETE SPLIT-PLOT AOV						
<i>Pratylenchus thornei</i> – Root-lesion Nematode						
7/03/2016						
COUNT Pt/g 91 DP1 AL						
Source	DF	Sum of Squares	Mean Square	F	Prob.(F)	LSD (.05)
Total	79	11.670188				
R	3	0.185716	0.061905	4.392	0.0078	
A	1	9.902064	9.902064	558.627	0.0002	0.1t
ERROR A	3	0.053177	0.017726			
B	9	0.633532	0.070392	4.994	0.0001	0.1t
AB	9	0.134503	0.014945	1.060	0.4066	
ERROR B	54	0.761196	0.014096			

Crop Description		
Scientific Crop Name	Crop Name	Variety
<i>Phaseolus mungo</i>	Blackgram	Regur
<i>Phaseolus aureus</i>	Mungbean	Jade
<i>Glycine max</i>	Soybean	A6785
<i>Vigna unguiculata cylindrica</i>	Cowpea	Black Stallion
<i>Phaseolus sp.</i>	Navy Bean	Spearfelt
<i>Phaseolus sp.</i>	Navy Bean	Arwan
<i>Cajanus cajan</i>	Pigeon Pea	
<i>Vigna unguiculata cylindrica</i>	Cowpea	Red Caloona
<i>Dolichos lablab</i>	Hyacinth Bean	Highworth