

Disclaimer:

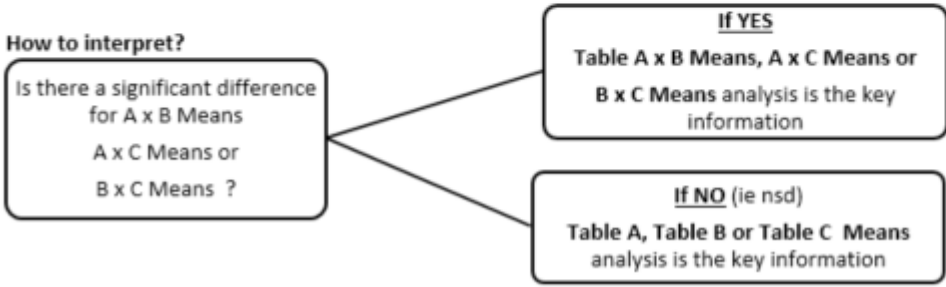
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Mungbean Nutrition

Trial ID: DK1724	Location: Gurley	Trial Year: 2017
	Investigator: Denielle Kilby	

Objective:	To evaluate the impact of nitrogen application in Mungbean	
Application Code:	A	B
Application Date:	14/09/2017	
Application Depth:	Shallow Placement – Depth 2-2.5cm	Deep Placement – Depth 15-17.5cm
Planting Date:	19/10/2017	
Planting Depth:	3cm	
Row Spacing:	32 cm	
Planting Equipment:	Small Plot Planter - Tyne	
Harvest Date:	24/01/2018	
Keywords:	Nitrogen, Mungbean	

	In Simple Terms
Table of A Means:	Mean of 'Nitrogen Placement' performance with ALL 'Nitrogen Rate' treatments and '+/- inoculation' treatments
Table of B Means:	Mean of 'Nitrogen Rate' performance with ALL 'Nitrogen Placement' treatments and '+/- inoculation' treatments
Table of C Means:	Mean of '+/- inoculation' performance with ALL 'Nitrogen Placement' treatments and 'Nitrogen Rate' treatments
Table of A x B Means:	'Nitrogen Placement' performance with EACH 'Nitrogen Rate' treatment
Table of A x C Means:	'Nitrogen Placement' performance with EACH '+/- inoculation' treatment
Table of B x C Means:	'Nitrogen Rate' performance with EACH '+/- inoculation' treatment



NB: The only interaction that resulted in a significant difference was for Nitrogen Rate x Inoculation (B x C Means). AOV tables are presented on the following page for the main effects and the B x C Means interactions.

Mungbean Nutrition

Trial ID: DK1724

Location:

Gurley

Trial Year: 2017

Crop Name Crop Variety Assessment Date Assessment Type Assessment Unit Crop Stage Majority Plant-Evaluation Interval ARM Action Codes				Mungbean Jade AU				
				3/11/2017 EMERGENCE /m ² 12 15 DP1 T1	13/12/2017 NDVI RATIO 51 55 DP1	24/01/2018 YIELD t/ha 97 DP1 TY2	5/02/2018 PROTEIN % 109 DP1	5/02/2018 N RECOVERY kg/ha 109 DP1 T3
Trt No.	Treatment	Nitrogen Rate	Appln. Code					
TABLE OF A MEANS (Nitrogen Placement)								
1	Shallow Placement		A	29-	0.73-	1.02a	16.0-	28.5a
2	Deep Placement		B	31-	0.74-	0.98b	16.1-	27.6b
TABLE OF B MEANS (Nitrogen Rate)								
1	Untreated	-		31-	0.74a	1.04a	15.8b	28.8a
2	Urea	25kg ai/ha		31-	0.75a	1.04ab	16.1a	29.1a
3	Urea	50kg ai/ha		31-	0.74a	0.99b	16.1a	27.9a
4	Urea	100kg ai/ha		27-	0.69b	0.93c	16.2a	26.3b
TABLE OF C MEANS (+/- Inoculation)								
1	No Inoculation			30-	0.73-	1.00-	16.0-	28.1-
2	Rhizobia Inoculation			30-	0.73-	0.99-	16.1-	28.0-
TABLE OF B x C MEANS (Nitrogen Rate x +/- Inoculation)								
1	Untreated No Inoculation	-		31-	0.75-	1.01a	15.8-	28.0ab
2	Urea No Inoculation	25kg ai/ha		30-	0.74-	1.02a	16.0-	28.5a
3	Urea No Inoculation	50kg ai/ha		31-	0.74-	1.04a	16.1-	29.3a
4	Urea No Inoculation	100kg ai/ha		28-	0.71-	0.94b	16.1-	26.7bc
1a	Untreated Rhizobia Inoculation	-		31-	0.73-	1.06a	15.9-	29.5a
2a	Urea Rhizobia Inoculation	25kg ai/ha		31-	0.76-	1.06a	16.1-	29.8a
3a	Urea Rhizobia Inoculation	50kg ai/ha		32-	0.74-	0.94b	16.2-	26.5bc
4a	Urea Rhizobia Inoculation	100kg ai/ha		27-	0.67-	0.91b	16.3-	26.0c

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

Mungbean Nutrition

Trial ID: DK1724

Location:

Gurley

Trial Year: 2017

FACTORIAL/POOLED ERROR AOV						
Mungbean - Jade AU						
3/11/2017						
EMERGENCE /m ² 15 DP1						
Source	DF	Sum of Squares	Mean Square	F	Prob.(F)	LSD (.05)
Total	63	2617.184700				
R	3	298.724400	99.574800	2.743	0.0541	
A	1	80.460900	80.460900	2.216	0.1436	3
B	3	177.196500	59.065500	1.627	0.1965	4
AB	3	194.231700	64.743900	1.783	0.1639	6
C	1	0.038025	0.038025	0.001	0.9743	3
AC	1	63.920025	63.920025	1.760	0.1913	4
BC	3	14.411475	4.803825	0.132	0.9403	6
ABC	3	154.343475	51.447825	1.417	0.2502	9
ERROR	45	1633.858200	36.307960			

FACTORIAL/POOLED ERROR AOV						
Mungbean - Jade AU						
13/12/2017						
NDVI RATIO 55 DP1						
Source	DF	Sum of Squares	Mean Square	F	Prob.(F)	LSD (.05)
Total	63	0.111821				
R	3	0.026487	0.008829	9.791	0.0001	
A	1	0.001871	0.001871	2.075	0.1566	0.02
B	3	0.033868	0.011289	12.520	0.0001	0.02
AB	3	0.000599	0.000200	0.221	0.8811	0.03
C	1	0.001038	0.001038	1.151	0.2891	0.02
AC	1	0.000329	0.000329	0.365	0.5486	0.02
BC	3	0.004896	0.001632	1.810	0.1589	0.03
ABC	3	0.002154	0.000718	0.796	0.5024	0.04
ERROR	45	0.040578	0.000902			

FACTORIAL/POOLED ERROR AOV						
Mungbean - Jade AU						
24/01/2018						
YIELD t/ha 97 DP1						
Source	DF	Sum of Squares	Mean Square	F	Prob.(F)	LSD (.05)
Total	63	0.980756				
R	3	0.536935	0.178978	41.926	0.0001	
A	1	0.018017	0.018017	4.220	0.0458	0.03
B	3	0.129122	0.043041	10.082	0.0001	0.05
AB	3	0.009580	0.003193	0.748	0.5292	0.07
C	1	0.001749	0.001749	0.410	0.5254	0.03
AC	1	0.000001	0.000001	0.000	0.9855	0.05
BC	3	0.060503	0.020168	4.724	0.0060	0.07
ABC	3	0.032749	0.010916	2.557	0.0670	0.09
ERROR	45	0.192101	0.004269			

Mungbean Nutrition

Trial ID: DK1724

Location:

Gurley

Trial Year: 2017

FACTORIAL/POOLED ERROR AOV						
Mungbean - Jade AU						
5/02/2018						
PROTEIN % 109 DP1						
Source	DF	Sum of Squares	Mean Square	F	Prob.(F)	LSD (.05)
Total	63	6.734375				
R	3	0.353125	0.117708	1.277	0.2936	
A	1	0.015625	0.015625	0.170	0.6825	0.2
B	3	1.400625	0.466875	5.066	0.0042	0.2
AB	3	0.183125	0.061042	0.662	0.5795	0.3
C	1	0.105625	0.105625	1.146	0.2901	0.2
AC	1	0.140625	0.140625	1.526	0.2231	0.2
BC	3	0.048125	0.016042	0.174	0.9134	0.3
ABC	3	0.340625	0.113542	1.232	0.3091	0.4
ERROR	45	4.146875	0.092153			

FACTORIAL/POOLED ERROR AOV						
Mungbean - Jade AU						
5/02/2018						
N RECOVERY kg/ha 109 DP1 T3						
Source	DF	Sum of Squares	Mean Square	F	Prob.(F)	LSD (.05)
Total	63	773.282127				
R	3	460.402167	153.467389	47.727	0.0001	
A	1	13.838013	13.838013	4.304	0.0438	0.9
B	3	73.495187	24.498396	7.619	0.0003	1.3
AB	3	10.513972	3.504657	1.090	0.3631	1.8
C	1	0.436357	0.436357	0.136	0.7143	0.9
AC	1	0.406273	0.406273	0.126	0.7239	1.3
BC	3	47.878689	15.959563	4.963	0.0046	1.8
ABC	3	21.613733	7.204578	2.241	0.0965	2.6
ERROR	45	144.697735	3.215505			

Assessment Type

NDVI = Normalized difference vegetation index

N RECOVERY = Nitrogen recovery in grain

Crop Stage Majority

12 = 2 full leaves (first leaf pair) unfolded

51 = First flower buds visible

ARM Action Codes

T1 = [C1]*.78

TY2 = 0.5952381*[C4]

T3 = ([C5]*1000)*([C6]/100)*.175

DP1 = Days after Planting

Application Description		
	A	B
Application Date:	13/09/2017	
Application Method:	DRILLED	
Application Placement:	2.5-5 cm depth	15-17.5 cm depth