Dedication

To my greatness the history

To my all martyr satiation of land of bloody

To my all widow of loss partner lifely from reason the fatherland

To my all Sudanese satiation heart of affection the homeland and the humanity

To my population the struggler from reason of the fatherland

To my father spirit the pure.....

Mather fountain the warm and compassion

To my colleagues, teachers, friends, and personal first
...... personal she.

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Abstract

Afield experiment was conducted for one season 2009/2010 at demonstration farm of department of agronomy, college of agricultural studies, Sudan University of science and technology to study the effect of seed rate on growth and yield of three cultivars of soybean. Treatment was the two factor combinations of seed rate three levels SR1= 48.000, SR2=195.000 and SR3= 146.000 and three cultivars (Egyptian, 1448 and 1905) arranged in split-plot design with four replications. The results showed that the seed rate no significant differences on vegetative stage

In soybean enough the significant effect on vegetative stage between cultivars and cultivar 1905 recorded as highest characters vegetative. The seed rate had significant effect on grain yield in the presence of treatment V_2SR_3 recorded as higher yield comported with other treatments

Forage seed rate was not significant on dry weight forage. the difference between the three cultivars was significant in most parameters measured by cultivars 1448.

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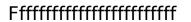
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Soure of d.f Variation	Red1 P.H	Red 2 P.H	Red3 P.H	Red4 P.H	Red 1 No of lev es	Red2 No oflaves	Red3 No of leves
Reps.	21.35 ns	3.2	35.4 ^{ns}	109.1 ^{ns}	1.7 8 ^{ns}	15.5 ^{ns}	81.63 _{ns}
Genotype 2	129.4 0*	82.6	492.2	1472.4*	50. 14**	324.7**	339.61 ^{ns}
Error(a) 6	13.79	15.3	29.9	138.0 ^{ns}	3.7 5 ^{ns}	17.55 ^{ns}	105.42 ^{ns}
Seed rate 2	30.26 ns	85.7	63.3 ^{ns}	159.1*	1.3 7 ^{ns}	23.24 ^{ns}	83.65 ^{ns}
GSR 4	71.07 ns	9.1	8.6 ^{ns}	47.5 ^{ns}	0.4 9 ^{ns}	15.47 ^{ns}	76.49 ^{ns}
Error(b) 18	-	-	-	-	-	-	-
Total 35	-	-	-	-	-	-	-
VC%	2.49	2.50	2.54	1.83	2.2 8	2.26	8.12
LSD G	7.21	11.0	14.48	14.20	3.3	8.11	40.31

		3			9		
LSD RS	8.40	12.8 4	16.86	16.53	3.9 4	9.45	46.95
LSD GSR	3.17	4.85	6.37	6.25	1.4 9	3.58	17.75

Appendix I. summary of ANVA table of guar seed rat:

NS= not significant

*= significant

** = highly significant

Soure of d.f	Wet weight of	Dry weight of forage	Yield (kg/ha)	Harvesting index (kg/ha)
Variation	forage(kg/h a)	(kg/ha)		
Reps.	213201.6 ^{ns}	41597.4 ^{ns}	621657.1 ^{ns}	15.1 ^{ns}
Genotype 2	7130576.8**	988316.0*	756074.6 ^{ns}	587.2**
Error(a) 6	77391.7 ^{ns}	97672.0 ^{ns}	413327.1 ^{ns}	23.4 ^{ns}
Seed rate 2	1426636.2*	42585.3 ^{ns}	10549721. 4*	341.4*
GSR 4	1103245.1**	100967.2 ^{ns}	647781.4*	185.9**
Error(b) 18	-	-	-	-
Total 35	-	-	-	-
VC%	2.4	4.8	3.7	6.4
LSD G	733.9	532.6	1362.4	8.7
LSD SR	854.8	620.3	1586.8	10.1
LSD GSR	323.2	234.6	600.0	3.8

Appendix III. summary of ANVA table of guar seed rat:

NS= not significant

*= significant

** = highly significant

			1				-
Soure of d.f	50% flowerin	100% flowin	No.of pod	Weight of	No.of seed	Weight of	No.
Variation	g	g	Per plant	pod/pla nt	Per pod	Seed/pl ant	Per
Reps. 3	1.4	1.5 ^{ns}	423.2 ^{ns}	57.0 ^{ns}	11.9 ^{ns}	12.6 ^{ns}	966
Genotype 2	931.3**	4268. 2**	2636.0 ⁿ	530.0 ^{ns}	14.6 ^{ns}	252.9*	149
Error(a) 6	4.4 ^{ns}	1.88 ^{ns}	3123.1 ⁿ	108.0 ^{ns}	16.1 ^{ns}	38.2 ^{ns}	216
Seed rate 2	3.0 ^{ns}	0.2 ^{ns}	6065.3*	32.7 ^{ns}	9.4ns	23.0 ^{ns}	898
GSR 4	1.2 ^{ns}	0.9 ^{ns}	880.2 ^{ns}	109.6 ^{ns}	1.4 ^{ns}	22.6 ^{ns}	155
Error(b) 18	-	-	-	-	-	-	-
Total 35	-	-	-	-	-	-	-
VC%	0.31	0.2	2.70	2.61	10.9	3.3	3.8
LSD G	3.5	3.1	67.70	19.4	4.4	13.0	131
LSD RS	4.0	3.7	78.85	22.7	5.2	15.1	153
LSD GSR	1.5	1.4	29.81	8.6	1.9	5.7	57.9

Appendix II. summary of ANVA table of guar seed rat:

NS= not significant

- *= significant
- ** = highly significant