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Blue green algae as biofertilizers dry matter yield of paddy (*Oryza sativa* L.)

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Abstract
"Nineteen seventies was the decade that witnessed escalating petroleum crises, there by enormously increasing the organic prices. To mitigate the problem, biologist came out with biological substitutes to organic fertilizers the so called 'biofertilizer'.

Keywords: biofertilizer, enormously, *Oryza sativa*

Introduction

The term bio fertilizers or which can be more appropriately called microbial inoculants, can be generally defined as the preparations containing live or latent cells of efficient strains of nitrogen fixing, phosphate solubilising or cellulolytic microorganisms used for application to seed, soil or composting areas with objective of increasing the members of such microorganisms and accelerate certain microbial processes to augment the extent of the availability of nutrients in a form which can be easily assimilated by plants. In a larger sense, the term may be used to include all organic resources (manures) for plant growth which are rendered in available from, for plant absorption through microorganism or microorganism plant association or interactions. Such microbiological processes may be as complex as that of nitrogenous mediated reactions in nitrogen-fixing microorganisms which reduce elemental nitrogen into ammonia or as simple as the organic acid secretion by phosphate dissolving bacteria. Bio fertilizers is the term to denote all the nutrient and input of biological origin that serve as manure for crop plants.

With the increase in bga (blue green algae) supply level up to 250g bga/kg soil level, increased dry matter yield of tops of 30 and 90 days old plants and grains of paddy plants.

Over control, each level of bga supply showed highly significant (P=0.01) increase in dry matter yield of both 30 and 90 days old tops and grains of plants.

Except at 150g bga/kg soil supply level over 100g bga/kg soil supply level in grains, the difference was found to be significance (P=0.05) and in tops of 90 days old plants 200g bga/kg soil over 150 g bga/kg soil and 250g bga/kg soil over 200g bga/kg soil failed to show.

Effect of organic and bio fertilizers on the plant growth green and were observed Desuki *et al*., (2010) [2], sharma *et al.*, (2006) [7], Uhar *et al.*, (2006) [10], Sushila *et al.*, (2007) [9], Deore *et al*., (2010) [3].

Effect of bio fertilizer and chemical fertilizer on sepal yield and chemical composition of Hibiscus sabdariffa at new reclaimed soil of south valley area faso *et al*., (2005) [4], Hann *et al.*, (2009) [5], Abodaber *et al*., (2011) [1].

Table 1: Effect of blue green algae as bio fertilizers on dry matter yield of paddy (oryza sativa, L.var saket) plants.

Plant				G blue green algae/kg soil			
Age (days)	part	nil	50	100	150	200	250
30	tops	0.273	0.314	0.336	0.351	0.374	0.432
90	tops	10.990	17.400	19.200	25.020	25.460	26.040
120	grains	1.250	1.530	1.730	1.820	1.930	2. 050

ANOVA: (analysis of variance)

Table 2

Source	D.F.	S.S	M.S.S	F
For tops at 30 days:				
Treat	5	0.05874	0.01175	359.963
Error	18	0.00059	0.00009	
Total	23	0.05933		
SE=0.0029	L.S.D at 0.0085	L.S.D at 0.01p=0.0116		
For top 90 days:				
Treat	5	708.83105	141.76620	322.916
Error	18	7.90234	0.43902	
Total	23	716.73340		
SE=0.3313	L.S.D at 0.05p=0.9844	L.S.D at 0.01p=0.13484		

For grains at 120 days:				
Treat	5	1.70675	0.34135	121.782
Error	18	0.0504	0.00280	
Total	23	5		
SE=0.0265	L.S.D at 0.05p=0.0787	L.S.D at 0.01p=0.1077		

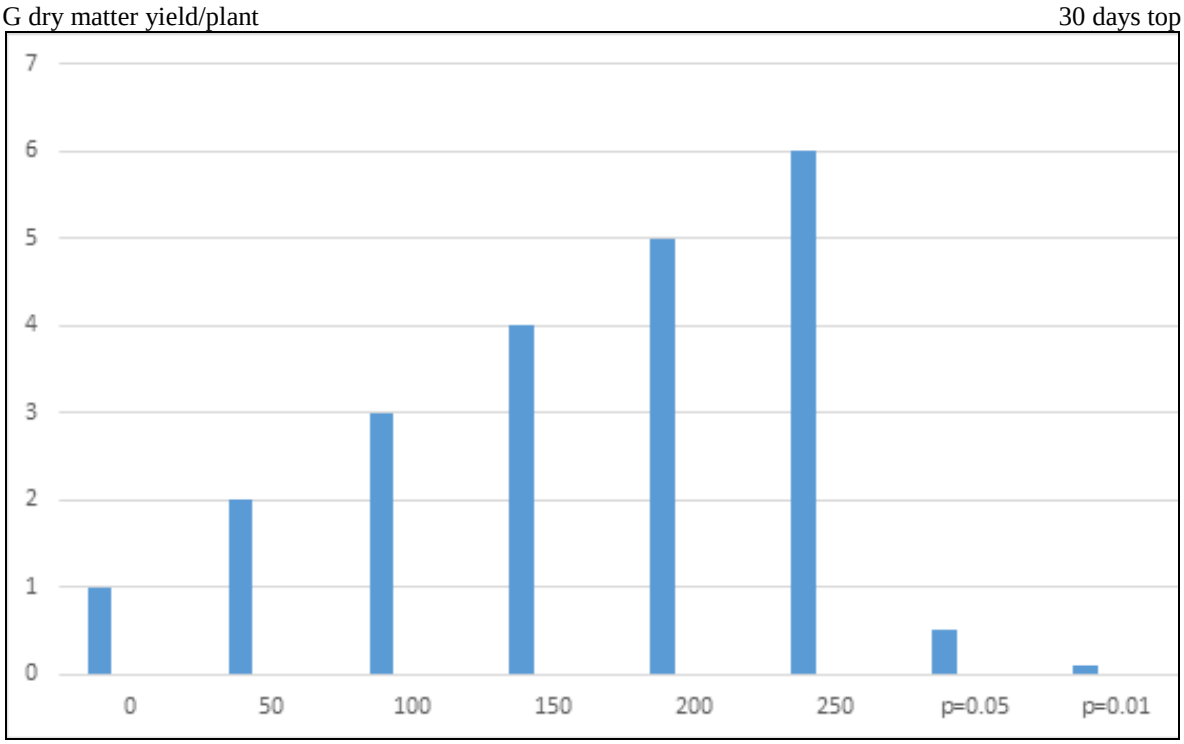

Fig 1: Effect of blue green algae was bio fertilizers on dry matter yield of paddy (oryza sativa, L. var. Saket) plants

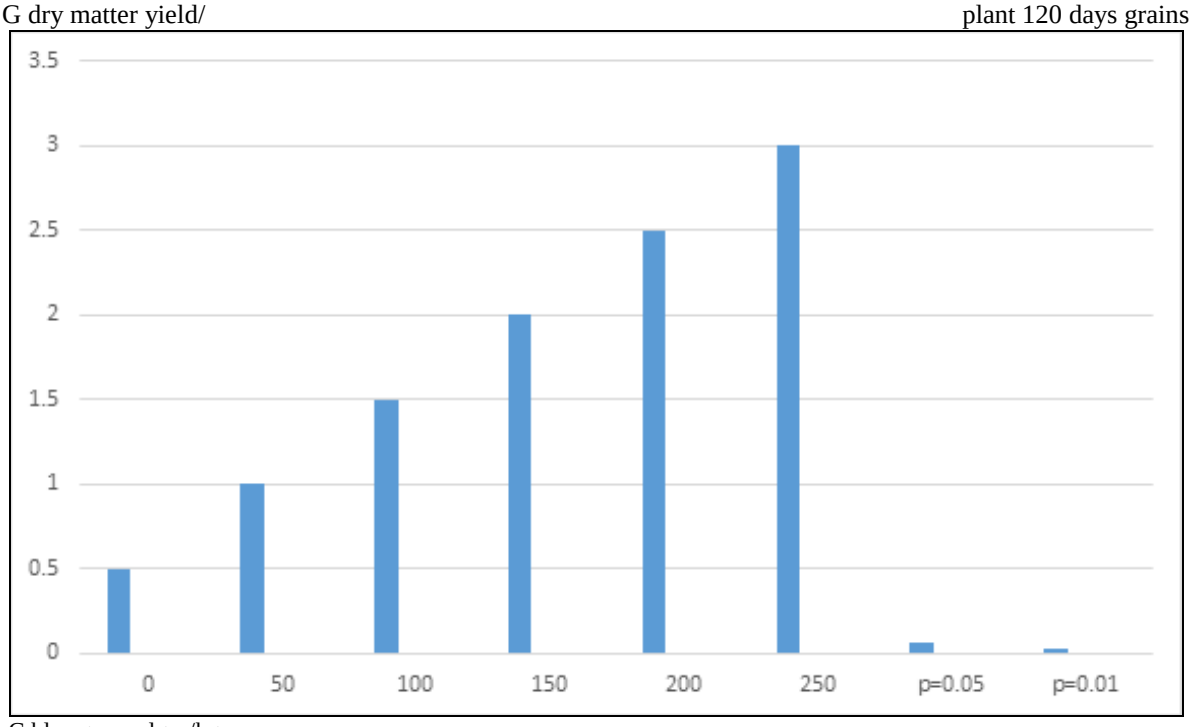

Fig 2: effect of blue green algae as bio fertilizers on dry matter yield of paddy (oryza sativa, L. Var. Saket) plants

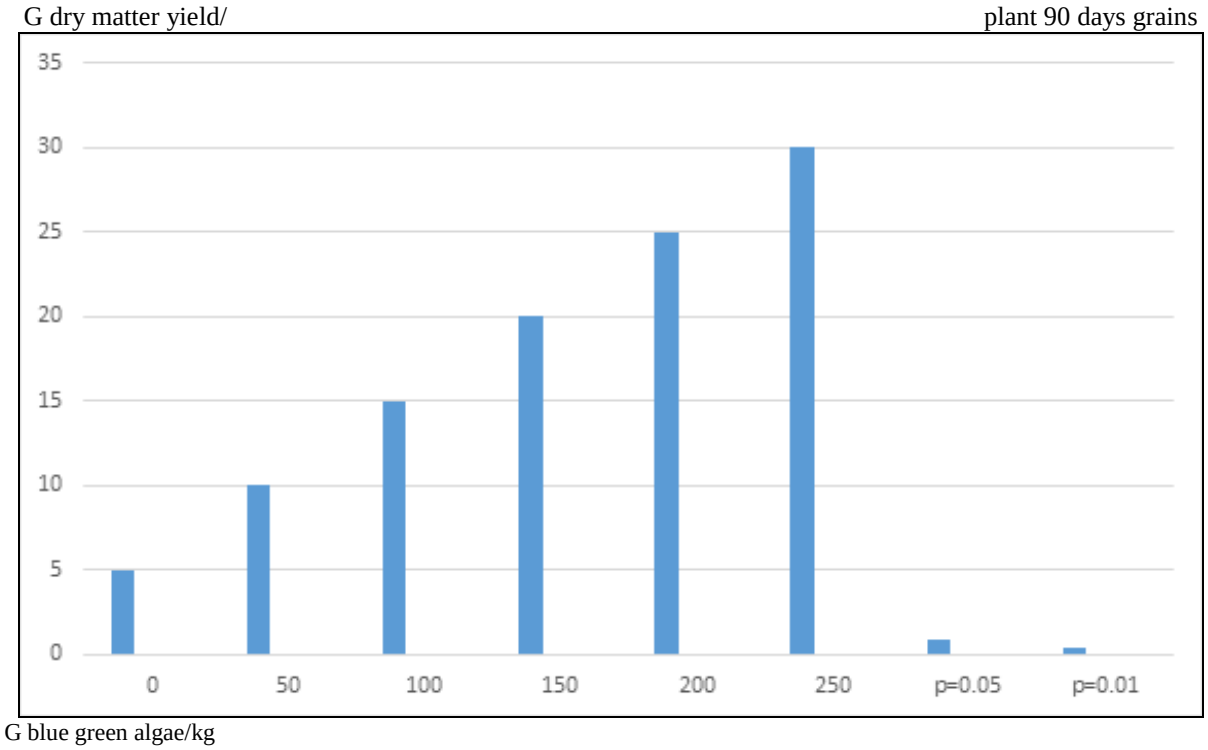

Fig 3: Effect of blue green algae as bio fertilizers on dry matter yield of paddy (Oryza sativa, L.Var. Saket) plants

Influence of bio fertilizer and chicken manure on the growth of Nigella sativa shalan (2005) [8]. Growth yield and essential oil content is finding of Mahfouz and Aldin (2007) [6]. The increase in dry matter yield was found to be highly significant (p=0.01) at 100g bga/kg soil over 50g bga/kg soil over 100g bga/kg soil over 150g bga/kg soil and 250g bga/kg soil level in tops of 30 days old plants and in grain. Maximum dry matter yield of tops of both 30 and 90 days old plants in grains of paddy plants at 250g bga/kg soil supply.

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