

**EFFECT OF DIFFERENT SOIL AMENDMENTS ON  
GROWTH AND YIELD OF RICE (*Oryza sativa.L*)  
GROWN IN SALINE SOIL**

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## ABSTRACT

Rice (*Oryza sativa*) is widely consumed staple food in many part of the world. Growth and yield of rice was adversely affected by salinity in past years. There is lack of researches conducted about reclamation of saline soil by adding of amendments. Therefore the aim of this study was to investigate the effect of soil amendments on growth and yield of rice grown in saline soil. A pot experiment conducted during *maha* season during November 2015 to February 2016 in the crop farm, Eastern university of Sri Lanka. The experiment was complete randomized design (CRD) with 5 replications. Soil was artificially salinized by NaCl solution to above the EC 4 dSm<sup>-1</sup>. Totally 25 pots examined with 4 type of soil amendments such as compost (1t/ha), green manure (1t/ha) and gypsum (0.08t/ha), ground lime stone (0.03t/ha) were used and no application of soil amendment considered as a control. Variety Bg-300 was used in the experiment. All the agronomical practices followed as recommended by department of agriculture. Growth and yield parameters were taken by destructive sampling method. In this experiment, Gliciridia amended soil had highest plant height (84.76cm), Leaf area per plant (769.24cm<sup>2</sup>), dry weight per plant (2.4g), highest Panicle length (25.6cm), Total spikelet per plant (374), Hundred seed weight per plant (2.36g) and Yield (1.5Ton/ha). Further, Gypsum amended saline soil gave highest Number of tillers per plant (7). It is concluded gliciridia suitable amendment that can be applied for saline soil to increase the growth and yield performance of rice (variety Bg 300).

**Key words: Gliciridia, Gypsum, salinity, Sodium adsorption ratio, green manure**

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