

Effect of Different Planting Methods on Growth and Yield of Paddy Variety BG 360

Subaraj, R., Pradheeban, L. and *Thanusan, K.

Department of Agronomy, Faculty of Agriculture, University of Jaffna, Sri Lanka.

*kthanusan28@gmail.com

Rice is the staple food in Sri Lanka. Bg 360 is currently considered the best improved paddy variety cultivated by farmers in Mannar. In Mannar district, different planting methods are practiced by farmers and number of effective tillers obtained are varied which caused yield variation and different cost of production in paddy cultivation. To solve this issue, and find out the better method of cultivation an experiment was carried out in randomized complete block design with three replications by adopting five different methods of planting as treatments, namely broadcasting (T1), drum row seeding (T2), SRI method of planting (T3), manual transplanting (T4), and machine transplanting (T5). Growth parameters such as plant height, leaf area index and tillers and yield parameters such as number of grains, panicle numbers and yield per plots were measured. Data were analyzed in SAS 9.4 version and mean separation was performed in DMRT to identify the best treatment. The results of the experiment showed that the planting methods have significant effects on the plant height, effective tillers and grain yield. The high number of effective tillers (between 6 – 20 per plant), 1000 grain weight (12.72) and number of panicle per plant (19.89) were observed in SRI methods and low value received from broadcasting method. and number of grains per panicle was observed high in broadcasting method (270.47), also had significant effect on the time of crop maturity (by two weeks). Direct seeded rice matured early (110 days) while transplanting took 120 days. Further, transplanted rice especially in SRI method showed low seed requirement, low weeds and pest diseases incidence and low cost of production. However, farmers are not adopting SRI method for cultivation because of high time consuming with high labour requirements. Based on the study, it can be concluded that transplanted rice especially SRI Method is more beneficial than other methods of planting and awareness should be given to farmers regarding SRI method of planting and its benefits.

Keywords: Rice, SRI, Tillers, Transplanting