THE EFFECT OF DIFFERENT SEED RATES ON GROWTH AND YIELD OF DIRECT SEEDED RICE

(*Oryza sativa* L)

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ABSTRACT

A field experiment was conducted to study the effect of different seed rates on growth and yield of direct seeded rice (cv.BG 94-1) in the Ampara District of Sri Lanka during the period November 2013 to March 2014.The treatments were arranged in a randomized complete block design (RCBD) with three replications. The seed rates were 61.5 (3bu/ha), 102.5 (5bu/ha), 143.5 (7bu/ha), 184.5 (9bu/ha) and 205 (10bu/ha) kg/ha. Recommendation by Department of Agriculture (102.5 kg/ha - 5bu/ha) was used as control.

The results, at harvest, showed that rice yield was higher (57%) at the seed rate of 143.5 kg/ha (7bu/ha) compared to the seed rate of 61.5 (3bu/ha). A further increase in seed rate from 143.5 kg/ha had decreased the yield by 77%. Optimum seed rate for rice yield was 6.65 Mt/ha. Similar results were obtained with plant height, number of tillers, LAI, dry weight of leaves and yield. On per plant basis, however, above growth indices were highest at the lowest seed rate (61.5 kg/ha or 3bu/ha) tested.

The results suggest that under the conditions in this experiment yield could be increased by 35% by increasing the seed rate from the presently recommended seed rate of 102.5 kg/ha (5bu/ha) to 143.5 kg/ha (7bu/ha).

Keywords: Seed rate, Plant density ,Leaf area index, Grain yield

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