

Karunaratna K. A. N. K,
Premaratna K. A. K.
POSTER

Effect of Organic-inorganic Mixed Fertilizer on Paddy (*Oryza sativa* L.) Yield

K. A. N. K. Karunaratna, Department of Mathematics, Eastern University
K. A. K. Premaratna, Deputy Director of Agriculture Office, Pollonnaruwa.

This study was conducted to evaluate the effectiveness of organic-inorganic mixed fertilizer as a basal fertilizer on paddy yield using paddy variety *Bg 352* in Pollonnaruwa district, Sri Lanka during *maha* 2008/2009. The experiment was carried out in Randomized Complete Block Design with seven treatments (organic-inorganic mixed fertilizer) and sixteen blocks (fields). Treatments were no fertilizer (T1), 1.375 Kg of inorganic fertilizer alone (T2), 50 Kg hay + 1.375Kg inorganic fertilizer (T3), 50 Kg cow dung + 1.375 Kg inorganic fertilizer (T4), 25 Kg *Gliricidia* foliage + 1.375 Kg inorganic fertilizer (T5), 6 Kg rice husk ash + 1.375 Kg inorganic fertilizer (T6), 50 Kg hay + 6 Kg rice husk ash + 50 Kg cow dung + 25 Kg *Gliricidia* foliage + 1.375 Kg inorganic fertilizer (T7). Amounts of components in each treatment in Kg are for a plot of size 100 m². Yield in g/m² were analyzed using ANOVA. Minitab software (version 14) was used for the analysis.

Four different groups (G1-G4) of treatments can be identified according to the significance of yield of each treatment. They are G1-(T1), G2-(T2), G3-(T3, T4, T5) and G4-(T6, T7) in increasing order of the yield. While, there are no significant differences of effects of treatments on paddy yield, in each group, the effects of treatments in different groups are significantly different. Yield of only chemical fertilizer is less than that of organic-inorganic mixed fertilizer. Effects of some organic-inorganic mixed fertilizers are different from others. The minimum yield of 4103 Kg/ha was produced when no fertilizer was applied. The highest yield of 7808 Kg/ha and 8048 Kg/ha was recorded in T6 and T7 respectively. Because of bulky handling and cost, T6 would be a more suitable treatment than T7 to achieve the same yield.