Poster

SEEDLINGS TREATED WITH P FERTILIZER TO SAVE FERTILIZER IN RICE CULTIVATION

D. N. SIRISENA AND W. M. N. WANNINAYAKE

Rice Research and Development Institute, Batalagoda, Ibbagamuwa, Sri Lanka

ABSTRACT

An experiment was conducted at the Rice Research and Development Institute, Batalagoda and field validation were done at farmers' field in Kurunegala to find out the possibility of reducing P fertilizer in rice cultivation by treating the rice seedling with P fertilizer at the nursery stage. Number of TSP particles per seedling hole of the Parachute tray was selected as treatments. Accordingly, there were five treatments in the experiment as seedling treated with 0, 1, 2, 4 and 6 particles of TSP fertilizer. Comparison was done with the basal application of DOA recommended P levels. Soils for this experiment were collected from a P deficient soil (available P < 1 ppm). Average weights of TSP particle were measured to quantify the weight of TSP added. TSP particles were added to each hole of parachute tray as one tray per one treatment before placing the soil and rice seeds. Fifteen days old seedlings were planted in pots filled with 5 kg P deficient soil (available P < 1 ppm). Numbers of panicles per plants and seed weight per pot at maturity were recorded. Average weight of 1000 TSP particles was 25 g. Accordingly, conversion of 0, 1, 2, 4 and 6 particles per hole into weight per hectare based on number of seedlings per hectare was 0, 10, 20, 40 and 60, respectively. The highest number of panicles (4/ plant) and the highest seed weight per pot (13.3 g/pot) were recorded when seedlings were treated with 4 particles per hole. Seedlings treated with TSP particles performed better than TSP added as basal at DOA recommended rates. Practicability of seedlings treated with TSP particles is proven under farmer managed conditions. Above results reveal that it can be suggested that TSP requirement can be reduced by minimum of 15 kg/ha from the recommended level of 55 kg TSP/ha when seedlings were treated with P at nursery stage.