EVALUATION OF P-SOURCES IN ACID AND ACID SULPHATE SOILS OF BANGLADESH

M. EAQUB[1], S.K. DE DATTA[2],

1. Prof. Dept. of Soil Science, Bangladesh Agricultural Univ. Mymensingh, Bangladesh
2. Principal Scientist and Head, Agronomy Dept. IIRI, Philippines

ABSTRACT

Experiments at farmers fields were laid out in completely randomized block design in two acid soils (pH 5.5) and one acid sulfate soil (pH 4.5) of Bangladesh. One experiment was started from Autumn rice season of 1987 with three P-sources (TSP, PARP, 27% and PARP 29%) at the rate of 190, 20 and 30 kg P/ha and other two from the same season of 1988 with four P-sources (TSP, HRP, PARP 15% and PARP 30%) at the rate of 10, 20, 30 and 40% kg P/ha. One unfertilized control and another fertilized control (no fertilizer-P) were included in the experiments.

The acid sulfate soil has more P-fixing capacity than acid soils. Other fertilizers were also applied as per local recommendation. Soil samples were analyzed in detail.

In 1987 experiment in acid soil, three rice crops were grown to evaluate the direct and residual effects of P-sources and in 1988 experiments in acid and acid sulfate soils, one Autumn rice was grown. The data on yield and yield contributing characters show the superiority of PARPs in both acid and acid sulfate soils over other P-sources. However, HRP was least effective followed by TSP in acid sulfate soil and the reverse was true in acid soil.