

**EVALUATION OF AN EFFICIENT SOURCE OF PHOSPHOROUS FERTILIZER
AND ITS RESIDUAL EFFECT UNDER RICE-WHEAT CROPPING SYSTEM**

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ABSTRACT

A field experiment was conducted during 1986-87 on a sandy clay loam calcareous soil, relatively high in available P (12 mg/kg in 0-15 cm soil layer), to find out an efficient source and dose of P fertilizer on rice cultivar IRRI-6 and its residual effect on succeeding wheat cultivar LU-31 and to see the effect of rock phosphate applied to wheat. Paddy yield remained unaffected by P application, possibly because the soil was not deficient in P. However, single superphosphate @ 60 kg P_2O_5 /ha increased the rice straw yield significantly. The residual effect on wheat grain yield of P applied to preceding rice crop and of rock phosphate applied to wheat was significant. Rock phosphate @ 60 kg/ha P_2O_5 proved as good as the residual effect of 60 and 80 kg/ha P_2O_5 of ordinary superphosphate (OSP) and highly reactive superphosphate (HRP) respectively. Rock phosphate proved better than the residual effect of all P applications in increasing total dry matter yield.