

**B-20 : PHOSPHORUS RELEASE EFFICIENCY OF TWO
INDIGENOUS SOURCES OF FERTILIZER MATERIALS**

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An incubation experiment was conducted to investigate phosphorus (P) release efficiency of 4 phosphate fertilizer materials in 3 soils, viz: Alfisol (RBE), a Low Humic Gley (LHJ) soil and Non Calcic Brown soil (NCB), at field capacity. The phosphatic fertilizer materials were Eppawela rock phosphate (ERP), Filter press mud (FPM) triple superphosphate (TSP) and an imported rock phosphate (IRP, Jordan). ERP was mixed with sulphur powder and incorporated into soils as another treatment. P released and soil pH were estimated at 56, 88, 121 and 180 days of incubation.

Solubility of IRP in citric acid was low, but nearly double that of ERP, while almost all the P in FPM and TSP were soluble in citric acid. The maximum value of

available P was in the NCB soil in contrast to the other two soils. TSP showed the maximum release of available P and the difference was highly significant in all soils. FPM gave the second highest quantity of available P which was significantly different from others in all soils. At the 88, 121 and 180 days of incubation, in the NCB soil, only the ERP with sulphur showed significantly higher available P than ERP alone, IRP and the control and the same was observed in other soils at 121 and 180 days of incubation. ERP + S, ERP and IRP showed continuous increase of available P with time. TSP and FPM showed increase at 56 and 88 days of incubation and then decreased.