

EFFICIENCY OF THREE PHOSPHATE FERTILIZERS FOR GROWTH OF SOYBEAN

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The efficiencies of Eppawela apatite, fused magnesium phosphate and concentrated superphosphate in supplying phosphorus to soybean plants, grown on a sandy loam soil from the University Farm, Meewatura, was studied in a greenhouse pot experiment, at Peradeniya. All plants received the same levels of nitrogen and potassium.

It was found that concentrated superphosphate and fused magnesium phosphate supplied the highest amounts of phosphorus to plants, where the tops contained 2.55 and 2.45% of P respectively while Eppawela apatite was inferior to these as plants contained only 1.83% of the element, which difference was highly significant. However, Eppawela apatite did supply more phosphorus to plants compared to those in control pots which received no phosphorus fertilizer.

The superiority of concentrated superphosphate was also seen in growth parameters such as average fresh and dry weights of plant tops and plant height. Dry weight differences were significant and so were differences between the control and the concentrated superphosphate, and fused magnesium phosphate treated plants, indicating the importance of phosphorus for optimum growth of soybean on this soil.