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A FUSED PHOSPHATE FERTILIZER FROM EPPAWALA ROCK APATITE

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The citric acid solubility of Eppawela apatite used by the Department of Agriculture for its field experiments has been in the range 2-4% P_2O_5, whereas that of imported saphos phosphate has been about 10% P_2O_5. Field experiments conducted with

rice in many parts of Sri Lanka have shown that Eppawala apatite is not as good a source of phosphorus fertilizer as imported rock phosphate or concentrated superphosphate.

By fusing Eppawala apatite (analysing 27% Total P_2O_5 and 3.4% citric acid soluble P_2O_5) with sodium carbonate and powdered quartz at about 1100°C a product was obtained with a citric acid solubility of 20% P_2O_5.

In a greenhouse experiment with rice on an acidic soil fused Eppawala apatite was found to be superior to Eppawala apatite and to imported rock phosphate but was not quite as good as concentrated superphosphate and Rhenania phosphate (a fused phosphate made in West Germany).