EFFECT OF LIME, SUPER PHOSPHATE, POWDERED OYSTERSHELL, ROCK PHOSPHATE AND SUBMERGENCE ON SOIL PROPERTIES AND CROP GROWTH IN COASTAL SALINE ACID SULPHATE SOILS OF SUNDERBAN

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ABSTRACT

Effect of lime, super phosphate and their alternate sources like oystershell and rock phosphate on soil properties and growth of rice is reported. Lime and phosphate increased the growth of rice crop in coastal saline acid sulphate soils of Sunderban. However, oystershell powder and rock phosphate are also found to be highly beneficial in this acid sulphate soils for improving crop production. Keeping the soils submerged for one year could not improve the soil properties.

The choice of amendment for coastal saline acid sulphate soils depends on the cost and availability of liming materials in a particular area. Economic response to application of water soluble source of phosphorus like single super phosphate and triple super phosphate has been limited. It is also not economically feasible to satisfy the absorptive capacity of these soils by application of processed phosphatic sources. Addition of whole amount of phosphorus through citrate insoluble sources like rock phosphate can help minimizing phosphorus fixation in these soils.

Experiments were therefore, conducted to find out alternate sources of lime, like powdered oystershell which is found in plenty in Sunderban area and rock phosphate in place of super phosphate for increased agricultural production.