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Availability of P and K during reclamation of the Gandhra (Saline-Sodic) Soil Series

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ABSTRACT

A farm-level study was carried out on the saline-sodic Gandhra sandy clay/sandy clay loam soil during 1980 to 1983. The reclamation treatments (control subsoiling, gypsum and subsoiling + gypsum) were replicated nine times in randomized complete block design. Rice-wheat crops were grown in rotation and irrigated with saline-sodic tubewell water.

Labile P was significantly more for the 0-15 cm than that for 15-30cm soil depth. The availability of P was much higher after rice than that after wheat. However, the P contents in soil remained higher than that of the original soil, and even higher than the critical level for both the crops.

Analysis of the wheat grain and straw indicated nonsignificant differences for P content, though the uptake was significantly higher for treatments receiving gypsum which appeared to be due to increased crop yields. The response of K availability to reclamation treatments, as indicated by soil and plant analyses, remained inconsistent during this experiment.