

CONJUNCTIVE USE OF HYDROCHLORIC ACID AND GYPSUM IN RECLAMATION OF A SALINE-SODIC SOIL

Mohammad Yasin, Roshan Zada and B.H. Niazi¹

ABSTRACT

A field experiment on saline-sodic soil at Bio-saline Experimental Research Station Sadhuke, Gujranwala, was conducted on rice crop. Soil was loam in texture. Four treatments viz., hydrochloric acid, hydrochloric acid + gypsum, gypsum alone according to gypsum requirement were tried along with control (no gypsum or acid). Significantly higher paddy and straw yields were obtained with application of hydrochloric acid. It was closely followed by gypsum used in conjunction with hydrochloric acid and gypsum alone. Increase in paddy yield over control was 78, 70, and 67 % whereas increase in straw was 53, 42 and 40 % with hydrochloric acid, hydrochloric acid + gypsum and gypsum alone respectively. Ameliorative effect of hydrochloric acid on reduction of soil pH, EC, and SAR was higher than all other treatments. All the treatments decreased soil pH, EC, and SAR of the soil over control.