

NITROGEN MANAGEMENT IN A DENSE SALINE-SODIC SOIL

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A field experiment was conducted to study the rice growth and N utilization under saline conditions. Thirty-day old rice seedlings were transplanted in a dense saline sodic soil. Two N level (100, 200 kg ha⁻¹) were applied at four different times. Yield and yield components were increased significantly by increasing rate of N. As regards the time of N application, the maximum yield was obtained with 3 split application (1/3 N after 10, 20, 40 days of transplanting). Total N uptake and N losses both increased with increasing N level while efficiency of N fertilizer decreased at higher level of N applied. The significance of rate and time of N application in relation to rice growth and N utilization on dense saline sodic soils is discussed.

INTRODUCTION

Rice is cultivated on 1.89 million hectares, out of which about one million hectares salt affected land is under rice cultivation (Aslam, 1992). Rice being moderately sensitive to salinity (Aslam, *et al.*, 1988) is usually cultivated during the reclamation of salt-affected lands (Chhabra and Abrol, 1977). However, under high salinity, its growth is drastically reduced (Verama and Neue, 1985; Aslam *et al.*, 1993) but with proper use of plant nutrients and other soil management practices better production can

Table 1. Physical and chemical characteristics of the soil used

Properties	Unit	Value
Sand	%	41.00
Silt	%	36.00
Clay	%	23.00
Texture class	-	Clay loam
Saturation percentage	%	39.50

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