

# Effect of Organic Manures on Soil properties in Saline Soil with Sub-Surface Drainage System

S Balaji Nayak, V Sankara Rao and P Prasuna Rani

Department of Soil Science and Agricultural Chemistry, Agricultural College, Bapatla 522 101

## ABSTRACT

A field experiment was carried out during kharif, 2005 to study the effect of different organic manures (FYM, poultry manure, pressmud, green manure (Dhaincha) and green leaf manure (*Calotropis* sp)) on Salinity, bulk density, hydraulic conductivity, dehydrogenase activity and nutrient availability in saline soil with sub-surface drainage system, using rice (var: BPT 1768) as test crop. The experiment was laid out in randomized block design (RBD) with four replications. The results showed that addition of organic manures did not influence soil pH. However, E<sub>c</sub> decreased with the addition of FYM, green leaf manure and green manure. Organic carbon content increased with the addition of organic manures. Addition of organic manures decreased the bulk density and increased the hydraulic conductivity of soils. Dehydrogenase activity was high due to the addition of FYM followed by green leaf manure, green manure, pressmud and poultry manure. Availability of nitrogen, phosphorus, potassium and DTPA extractable zinc, iron, manganese and copper increased with the application of organic manures following the order: FYM, green leaf manure, green manure, pressmud and poultry manure treatments, except available phosphorus, which was high in poultry manure treatment.

**Key words :** Organic manures, Rice, Saline soils.