

Research Article

Various agronomic options on available nutrient status and bulk density of soil under Rajarajan 1000 practice

■ S. SATHYA, G. JAMES PITCHAI, P. SARAVANA PANDIAN AND K. RAJENDRAN

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MEMBERS OF RESEARCH FORUM :

Corresponding author :

S. SATHYA, Department of Soil Science and Agricultural Chemistry, Tamil Nadu Agricultural University, COIMBATORE (T.N.) INDIA
Email: sathyasivanandham@rediffmail.com

Co-authors :

G. JAMES PITCHAI AND P. SARAVANA PANDIAN, Department of Soil Science and Agricultural Chemistry, Tamil Nadu Agricultural University, COIMBATORE (T.N.) INDIA

K. RAJENDRAN, Department of Agronomy, Tamil Nadu Agricultural University, COIMBATORE (T.N.) INDIA

Summary

A field experiment was conducted at Agricultural College and Research Institute, Madurai to investigate the effect of Rajarajan 1000 practice with various agronomic options such as nursery technology, age of seedling and weed management practices on availability of nitrogen, phosphorus and potassium (major nutrients) and bulk density at various growth stages of rice *var.* ADT 36. Nursery technology, age of seedling and weed management practices significantly influenced the available major nutrients and bulk density of soil irrespective of growth stage of rice. Vermicompost application to 15 days old seedling along with application of pre emergence herbicide butachlor @ 1.25 kg ha⁻¹ and mechanical weeding twice at 25 and 45 days after transplanting recorded the highest available major nutrients. Available nitrogen and potassium increased from tillering to flowering stage and thereafter decreased at harvest for all the treatments whereas available phosphorus decreased towards the maturity stage of crop growth. Bulk density of soil increased from tillering to harvest stage irrespective of treatments. Among the agronomic options, age of the seedling significantly influenced the bulk density of soil irrespective of growth stage of rice. Nursery management had a remarkable influence on bulk density at flowering and harvest stage whereas weed management practice significantly influenced the bulk density only at harvest stage of rice.

Key words : Nursery technology, Age of seedling, Weed management practice, Nutrient status, Bulk density

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