

Improving nutrient recovery of *Zea Mays* L. using paddy husk compost and clinoptilolite zeolite

ABSTRACT

Co-application of inorganic fertilizers and paddy husk compost at different rates amended with clinoptilolite zeolite using maize as a test crop were tested in a pot study to determine their effects on: (i) selected soil chemical properties and (ii) nutrients recovery of maize. A pot study was carried out for 45 days (tasselling stage). The treatments evaluated were: Soil only (T0), 7.40 g urea + 5 g TSP + 3.80 g MOP (T1), 7.40 g urea + 5 g TSP + 3.80 g MOP + 192 g zeolite + 192 g compost (T2), 5.55 g urea + 3.75 g TSP + 2.85 g MOP + 192 g zeolite + 385 g compost (T3), 3.70 g urea + 2.50 g TSP + 1.90 g MOP + 192 g zeolite + 577 g compost (T4) and 3.70 g urea + 2.50 g TSP + 1.90 g MOP + 577 g compost (T5). Co-application of inorganic fertilizers with paddy husk compost and clinoptilolite zeolite improved soil total N, exchangeable Ca, Mg, K, available P, and recovery of P and K. Soil chemical properties and productivity of maize can be improved by adopting co-application of inorganic fertilizers with paddy husk compost and clinoptilolite zeolite.

Keyword: Chemical fertilizers; Organic amendment; Nutrients availability; Nutrients efficacy