

## **Effects of Integrated Sawdust and Poultry Manure on Soil Chemical Properties**

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### **Abstract**

The study was conducted to evaluate the effects of integrated sawdust and poultry manure on soil chemical properties in a forest-derived savanna transition zone was conducted at the Ambrose Alli University Teaching and Research Farm, Main Campus, Ekpoma, Edo State. The treatments consisted of four poultry manure levels (0, 2, 4, and 6 t/ha) and three levels of sawdust (0, 2, and 4 t/ha), which were combined in a factorial experiment laid out in randomized complete block design, replicated three times. The experimental soil was deficient in plant nutrients; with N contents of 0.49g/kg, P 8.72 mg/kg, K 0.10 cmol/kg, OC 9.0 g/kg, Ca 1.03 cmol/kg and Mg 0.78 cmol/kg. Results showed that the application of 4 t/ha sawdust plus 4 t/ha poultry manure increased soil N, P, Ca, organic carbon, and ECEC significantly relative to the controls. However, for the consideration of single applications, poultry manure is preferred to sawdust treatment.

**Keywords:** fertilizer, plant nutrients, savanna, soil fertility, treatment