



Growth and Yield of Pineapple (*Ananascomosus*) in Response to Poultry Manure and Palmfrond Ash

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Introduction

The use of inorganic fertilizer is a threat to the soil and human health. It causes soil erosion, saline soil and can eradicate beneficial soil microbes thereby decreasing the soil organic matter in the soil. Poultry manure and palm frond ash are good sources of nutrient needed by pineapple and it is capable of enriching the soil with organic matter. A field experiment was conducted at the organic agricultural skills development farm of the Federal university of Agriculture, Abeokuta Nigeria. It was aimed at determining the best combination of poultry-palm frond ash on pineapple (*Ananascomosus*) and to evaluate the effects of different levels of poultry manure-palm frond ash combinations for the growth and yield of pineapple.

Material and methods

A field experiment was conducted at the organic agricultural skills development farm of the Federal University of Agriculture, Abeokuta Nigeria. Poultry manure collected from the institution poultry farm and palm frond were sourced and burnt into ashes. The experiment was carried out in a randomized complete block design (RCBD) with threereplicates and six treatments. The treatment includes; untreated (control), poultry manure only (PM), palm frond ash only (ash), PM + Ash (1:1, w/w), PM +Ash (1:4, w/). Poultry manure-palm frond ash combinations were applied at 1.5kg/plant. The rooted sugarloaf pineapple slips were planted 60×30cm in paired rows separated by a 1.5m corridor, on well-drained sandy loam soil.

Results and discussion

PM + Ash (1; 2, w/w) produced the tallest plant height, the longest D-leaf length, and the largest canopy diameter and fruit as well as leaf area compared to others. The result of the experiment emerged significant at the application of 1 ratio of poultry manure and 2 ratio of palm frond ash combinations (1; 2, w/w). Therefore, it is suggested that soil amendment with poultry manure and palm frond ash in a ratio of 1:2 is suitable for the growth and yield of pineapple. The poultry manure palm frond ash combination in ratio of 1:4, w/w gave the second highest parameters.

Keywords: *Ananascomosus*, poultry manure, palm frond ash, plant growth and yield