

Effects of Hog Manure on the Growth and Nutrient Uptake of Luffa

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Abstract

This study was to investigate the effect of hog manure on luffa yield and qualities. There were five treatments which included: (1) H0C4; the check plot, only chemical fertilizers were applied ($\text{N-P}_2\text{O}_5\text{-K}_2\text{O} = 100\text{-}100\text{-}150 \text{ kg ha}^{-1}$); (2) H5C4; hog manure 5 Mg ha^{-1} associated with the same amount of chemical fertilizers of the check plot; (3) H10C3; hog manure 10 Mg ha^{-1} in combination with three fourths of chemical fertilizers of the check plot; (4) H15C2; hog manure 15 Mg ha^{-1} in combination with half of chemical fertilizers of the check plot; and (5) H20C1; hog manure 20 Mg ha^{-1} in combination with one fourth of chemical fertilizer of the check plot. The results showed that the yield of the H10C3 treatment was the highest, $35,313 \text{ kg ha}^{-1}$ and was 7.0% higher than that of check treatment. The length, radius, and fresh weight of fruit of H10C3 treatment were greater than those of the other treatments.

Key words: Luffa(*Luffa aegyptiaca* Mill), Nutrient concentration, Hog manure

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