

**Comparison of Tithonia Green Manure (*Tithonia diversifolia*), Poultry Manure and Inorganic Nitrogenous Fertilizers, as a Source of Nitrogen in Growing of Kales (*Brassicae oleracea*), in Nyeri Municipality (Nyeri District).**

BY

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## ABSTRACT

The research was conducted to compare the influence of tithonia diversifolia green manure, poultry manure, calcium ammonium nitrate ammonium sulphate nitrate and urea as a source of nitrogen in growing kales (*Brassica oleracea*) in Nyeri Municipality, Nyeri district. It was carried at Wambugu Farmers' Training Centre and at Kagumo Teachers' Training College, located in Nyeri municipality and separated by a distance of five kilometers. The treatments were solely applied in two levels of 30 kgs N/ha and 60 kgs of N/ha. Except for tithonia green manure, all the other treatments were administered at the time of transplanting. The experiment was a completely Randomized Block design with five treatments in two levels replicated three times. Individual plots measured (4x3) meters at interplant and inter row spacing of 60 cms and 60 cms respectively. The interplot spacing was 50 cms and interblock spacing was 100 cms .The fresh weight of kales was compared for all the treatments as well as the control. The data collected was subjected to F-test using SPSS proprietary software (version 12.0).Treatment means found to be significantly different from each other were separated by Duncan Multiple Range Test at ( $\alpha < 0.05$ ).Results showed that tithonia applied at 60 kgs of N/ha produced the highest fresh weight of kales followed by CAN at similar rates. The difference was significant ( $\alpha < 0.05$ ) and higher by an average of 7.65 % from the two experimental sites. Nevertheless, it was not easily available during the traditional planting season in the region. Further research is needed to explore the possibility of drying and grinding tithonia green manure to produce foliar spray or organic solid fertilizer .This would solve the relatively high labour requirements required for biomass transfer.