

Efficacy of liquid organic fertilizers on growth of *Anthurium andraeanum* L.

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Liquid organic fertilizers (LOFs) are considered as important alternatives to synthetic fertilizers which cause negative implications on human health and environment. This study aimed at developing LOFs using widely abundant weeds in combinations with poultry manure or fish waste and to evaluate the potential of formulated LOFs in meeting nutrient requirements of *A. andraeanum*. Six combinations (F₁: Poultry manure + *Tithonia diversifolia* + coconut husk ash, F₂: Poultry manure + *Gliricidia sepium* + coconut husk ash, F₃: Poultry manure + *Leucaena leucocephala* + coconut husk ash, F₄: Fish waste + *Tithonia diversifolia* + coconut husk ash, F₅: Fish waste + *Gliricidia sepium* + coconut husk ash, F₆: Fish waste + *Leucaena leucocephala* + coconut husk ash) were prepared as water extractions. In each combination 360 g of leaves, 240 g of poultry manure or fish waste and 100 g of coconut husk ash were mixed with 6.0 L of well-water in closed plastic containers. Combinations were aerated for two hours daily for a six week period to facilitate decomposition. Based on the highest nutrient contents (N, P, K, Ca, Mg and Zn), F₁, F₂ and F₄ were selected for the foliar application. Control plants were treated with well-water and commercial LOF "Maxicrop" was used as the standard. The pot trial was conducted in a complete randomized block design maintaining four replicates. Original, half and quarter strengths were applied on three months old *A. andraeanum* plants to evaluate the growth performance in terms of number of flowers, leaf area, shoot height and number of tillers. Growth parameters were compared by one way analysis of variance. The MINITAB 16 software was used for all analyses. The results revealed significant ($p < 0.05$) difference in growth performance with different fertilizer treatments. The highest shoot height (26 ± 0.3 cm), number of flowers (2 ± 0.4) and number of tillers (2 ± 0.4) were observed with F₂ treatment. Therefore, F₂ proved to be the best for *A. andraeanum*. Application of half and quarter strengths of F₂ recorded 2 ± 0.0 and 1 ± 0.2 number of flowers respectively. Similarly half and quarter strengths of F₂ recorded 1 ± 0.4 and 1 ± 0.2 number of tillers respectively. These values were comparatively lower than the values obtained for undiluted F₂. Therefore, original or undiluted F₂ LOF was the best strength for foliar application.