

## Investigation of a Suitable Fertilizer Mixture to Enhance Growth and Flowering Frequency of *Anthurium andreanum* var. 'Avo Red'

P. V. A. G. K. Perera<sup>1</sup>, H. K. L. K. Gunasekera<sup>1\*</sup> and Y. M. U. Anjali<sup>2</sup>

<sup>1</sup> Department of Agricultural and Plantation Engineering, Faculty of Engineering Technology, The Open University of Sri Lanka

<sup>2</sup> Floriculture Research and Development Unit, Department of National Botanical Gardens, Peradeniya, Sri Lanka

### ABSTRACT

*Anthurium andreanum* is a major cut flower species in the floriculture industry in Sri Lanka. However, currently used fertilizer mixture for *Anthuriums* was recommended many years ago, hence diverse fertilizers have been used by commercial growers. In the light of this situation, it is important to upgrade the existing fertilizer recommendation to enable growers to optimize their production capacity in local as well as in commercial scale. Hence present study was designed to identify the most suitable fertilizer mixture to enhance growth and flowering frequency of *Anthurium andreanum* in commercial cultivation. Avo Red variety of *Anthurium andreanum* plantlets were grown in the net house (80% shade) at Floriculture Research and Development Unit, at Department of Royal Botanical Gardens peradeniya were selected for the study. The experiment was laid out in a Completely Randomized Design (CRD) with five treatments randomized in fifteen replicates. Different ratios of fertilizer mixtures were taken as treatments, i.e. 5g of balanced fertilizer N: P: K 20:20:20 (T1), 5g of slow release granule fertilizer N: P: K 10:11:18 + water soluble fertilizer N: P: K 14:14:21 (T2), 5g of slow release granule fertilizer N: P: K 10:11:18 + water soluble fertilizer N: P: K 20:20:20 (T3), 5g of fast release granule fertilizer N: P: K 12:12:17 + water soluble fertilizer N: P: K 14:14:21 (T4), 5g of fast release granule fertilizer N: P: K 12:12:17 + water soluble fertilizer N: P: K 20:20:20 (T5) and standard crop management practices were done during the study period. Once in two weeks measurements were taken on plant height, number of leaves, area of new leaves, spathe size and flowering frequency. Significantly higher ( $p=0.05$ ) flowering frequency was recorded from T2 whilst the lowest was recorded from T3. However, the large spathe size as well as the export quality standards flowers were manifested from T2. Hence, 5g of slow release granule fertilizer (N: P: K 10:11:18) + water soluble fertilizer (N: P: K 20:20:20) can be considered as the most effective treatment to enhance growth and flowering frequency of *Anthurium andreanum* var. Avo Red in commercial cultivation.

**Key words:** *Anthurium andreanum* var Avo Red, slow release fertilizer, water soluble fertilizers, fast released fertilizer, flowering frequency

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1\* - Corresponding Author: hkgun@ou.ac.lk