

**SELECTION OF AN EFFECTIVE BIOFILMED
BIOFERTILIZER FORMULATION AND BEST
POTTING MEDIUM FOR ANTHURIUM**

(Anthurium andreanum)

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By
**RATHNAYAKE MUDIYANSELAGE DILANI CHATHURIKA
RATHNAYAKE**

**Export Agriculture Degree Programme
Faculty of Animal Science and Export Agriculture
Uva Wellassa University of Sri Lanka**

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ABSTRACT

Biofilmed biofertilizers (BFBFs) have been introduced recently and they consist of beneficial rhizospheric microbial isolates. Application of developed biofilmed biofertilizer reduced the use of chemical fertilizer (CF) by 50 % on most of the crops. This study was focused to select an effective BFBF formulation and suitable potting medium for Anthurium. There were two separate experiments. First experiment was conducted under shade house conditions with different fertilizer treatments; 50 % CF, 50 % CF + BFBF and 100 % CF recommended for Anthurium used as the control. In second experiment, four different potting media were used; inert particle mixture, coir chips, leaf litter with sand and the existing potting medium at the Royal Botanic Gardens, Peradeniya was taken as the control. Treatments were arranged in Complete Randomized Design (CRD). Initial and final vegetative growth parameters were measured in both experiments and data were analyzed by using Minitab 16 software. Plant height (cm), plant weight (g), total root length (cm), leaf number, leaf area, root number and the chlorophyll content were considered as the vegetative growth parameters. Results showed that BFBF alone treatments were the better treatments for growth and development of *Anthurium andraeanum* in the first experiment and indicated the BFBF enhanced nutrient availability in the soil and enhanced the plant growth and development. BFBF combined with half strength chemical fertilizer also notably contributed to increment of the growth of Anthurium plants over the 100 % CF. Apparent the half strength chemical fertilizer significantly contributed to increment of plant growth and development than full strength chemical fertilizer in the first experiment. This indicated, reduction of 50 % CF not negatively affected to vegetative growth parameters in Anthurium. Potting media rich in nutrient promote vegetative growth and also provide courage to the plant withstand. Thus, results of second experiment rivaled that inert particle mixture (charcoal, bricks particles, sand and coir dust (1:1:1:1) can be recommended as a standard potting medium for *Anthurium andraeanum* plant growth.

Key words: Biofilms, Biofilmed biofertilizers, Anthurium, Vegetative growth parameters, Potting medium