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**Development of a Method to Enhance the Growth and to Recover the Diseased
Anthurium andraeanum L. Using Beneficial Microbial Communities (Biofilm
Biofertilizers)**

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Present study attempted to enhance the growth and disease recovery of *A. andraeanum* under both *in-vitro* and *ex-vitro* conditions using an environmental-friendly method. *In-vitro* grown healthy plants in 95 g of sterilized growth medium were experimented with three types of Biofilm Biofertilizer-BFBB (BV, BR and BT), chemical fertilizer (N:P:K;20:20:20) with 50% and 100% concentration and combination of three types of BFBB with 50% chemical fertilizer. Distilled water was used as the control. The initial growth parameters (total fresh weight, total shoot length, total number of leaves) were recorded. They were established using the nine treatments each consists of five glass jars having 5 plants in each jar (9x5x5). They were kept under continuous florescent light and 24 °C with 85% relative humidity. Ten milliliters of each treatment were applied with two-week intervals up to two months. The same procedure was carried out for *in-vitro* grown diseased plants as well. Total number of leaves and number of infected leaves were counted before the establishment and initial disease severity was calculated. Not only *in-vitro* grown plants, but also *ex-vitro* grown healthy and diseased plants were tested under the same procedure. Four months after establishment, the same growth parameters were recorded. Final disease severity index was calculated for diseased plants. Obtained data were statistically analyzed using one-way ANOVA and the experimental design of Completely Randomized Design (CRD). Mean separation was carried out using Tukey's HSD test. The statistical software was SAS 1998. Combination of BFBB type BT with 50% chemical fertilizer recorded the highest growth enhancement among other treatments for both *in-vitro* and *ex-vitro* grown *A. andraeanum*. Better disease recovering of *in-vitro* grown plants was accomplished using BFBB type BV alone. However, it was difficult to recover the disease in *ex-vitro* grown plants using any treatment.

Keywords: *Anthurium andraeanum*, biofilm Biofertilizer, fertilizer, diseases