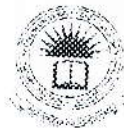


**EFFECT OF FOLIAR APPLICATION OF MORINGA  
(*Moringa oleifera*) LEAF EXTRACT ON GROWTH,  
YIELD AND FRUIT QUALITY OF CHILLI cv.  
MIPC-01 (*Capsicum annum* L.)**



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## ABSTRACT

This investigation was carried out at the Crop Farm of Eastern University, Sri Lanka during the period of January to May 2019 to study the effects of different concentrations and application frequencies of Moringa (*Moringa oleifera*) Leaf Extract (MLE) as a foliar application with recommended fertilizer on growth, yield and fruit quality of chilli cv. MIPC-1.

This experiment was laid out in a Completely Randomized Design (CRD) with seven replicates with following treatments; T0 – control (Distilled water) T1 – 10% MLE at once a week interval, T2 – 10% MLE at once in two weeks interval, T3 – 20% MLE at once a week interval, T4 – 20% MLE at once in two weeks interval, T5 – 30% MLE at once a week interval and T6 – 30% MLE at once in two weeks interval. Foliar application of MLE was started at two weeks after transplanting and the performance was recorded at 6, 9 and 11 WAT. The results showed that foliar application of MLE led to significant ( $p < 0.05$ ) effects on tested parameters over the control. MLE with 10% of foliar application at once a week interval increased plant height, number of branches/plant, number of leaves/plant, length of taproot, leaf area, leaf area index, number of flowers/plant, number of pods/plant, length of pod, girth of pod, number of seeds/pod, fresh weight of pods/plant, dry weight of pods/plant, total dry weight/plant, total yield/plant, 100 seed weight, chlorophyll content, total soluble solid and vitamin C content of pods.

This suggests that the foliar application of moringa leaf extract with 10% at once a week interval with the recommended fertilizer showed the best performance. This might be due to the presence of macro and micronutrients as well as growth promoting

substances like gibberalin and cytokinins in moringa leaf extract which regulate number of plant functions including cell division and plant growth, promote root development (Phosphorus - P), root growth (Magnesium - Mg), stimulate flowering (Pottasium - K) and ultimately enhance the growth and yield of plant by initiating robust plant growth.

From this study, it was found that the foliar application of moringa leaf extract 10% concentration at once a week interval significantly increased the growth, yield and quality of *Capsicum annuum* L. when compared to control plants. Therefore, it could be concluded that 10% moringa leaf extract with the DoA recommended inorganic fertilizer can be recommended to enhance the growth, yield and quality of *Capsicum annuum* L. as it is one of the eco-friendly ways to increase the growth, yield and quality in chilli.

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