Development of an Appropriate Micro Propagation Protocol for *Nymphaea* × *erangae*

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ABSTRACT

The *Nymphaea* × *erangae* Yakandawala, Guruge & Yakandawala is one of the most conspicuously attractive and eye catching aquatic plant which has high demand in local and export markets. However the production of these plants takes a long time where wild collection is not sustainable and cannot cater the demand. Micro propagation is one of the best techniques which can be practiced in commercial production of *Nymphaea* × *erangae* plants. The studies on *Nymphaea* × *erangae* are very limited and the contamination rates is very high when the mother plants are collected from muddy soil media. This research study focuses to investigate the ability to use soil less culture system for mother plants of *Nymphaea* × *erangae* to minimize contamination in micro propagation. Three treatments (duration of 1, 2, and 4 weeks maintenance of mother plants in soil less culture system treated by 0.5g/1L Albert solution and 1g/10L Fungicide in twice a week) were tested and plants were maintained in muddy soil were used as the control. The leaf blade and rhizome buds were used as explants. The results revealed that *Nymphaea* × *erangae* tissue culture in MS media, which were placed for a week in the soil less culture system showed significantly higher ($p<0.05$) survival rate and 25 % of non contaminated surviving culture vessels after two months, compared to control and other treatments, which is suitable for micropropagation of *Nymphaea* × *erangae* in commercial scale.

Keywords- *Nymphaea* × *erangae* Yakandawala, Guruge & Yakandawala, soil less culture system, MS medium, Albert solution, Fungicide