

**EFFECT OF GROWTH REGULATORS ON *IN-VITRO* MULTIPLICATION OF *Lagenandra ovata*
AND *Lagenandra lancifolia***

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by

**WIJESUNDARA MUDIYANSELAGE ANURADHA
SENAVIRATHNE**

**Aquatic Resources Technology Degree Programme
Faculty of Animal Science and Export Agriculture
Uva Wellassa University**

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Abstract

Sri Lanka is a country which consists with number of endemic aquatic plants. These endemic aquatic plants are having high demand in aquatic plant industry. Due to the lack of effective propagation methods plant collectors collect plant from wild to fulfill the market demand. It leads to the depletion of natural plant stock and bio diversity. *Lagenandra* species only can observe in Sri Lanka, Southern India and Bangladesh. In Sri Lanka there are seven species and six species are considered as endemic. Red List of International Union for the Conservation of Nature categorized five of those endemic species under the highly threatened category. Main purpose of this study is to develop a proper method for propagation of *Lagenandra ovata* and *Lagenandra lancifolia* to overcome inadequate supply and depletion of natural plant stock. Present study was carried out to evaluate effect of different hormone concentrations in basal media for shoot initiation and multiplication of rhizome explants and plantlets, to identify the best explant of *L. lancifolia* for micro propagation and to identify the best medium *L. ovata* seed culture. Highest mean number of shoot initiation in *L. ovata* rhizomes and *L. lancifolia* plantlets were observed at 0.4 mg l^{-1} kinetin with presence of 0.1 mg l^{-1} IAA. Highest shoot multiplication of *L. ovata* and *L. lancifolia* was observed at 2 mg l^{-1} BAP level and there was a significant effect for the multiplication. Sterilized distilled water was identified as the best medium for seed germination of *L. ovata*. Plantlets were identified as the best explants for *L. lancifolia*. Survival of *L. lancifolia* rhizome was below 30%. And survival of plantlets was above 80% at the fifth week of culturing.

Key words: *Lagenandra ovata*, *Lagenandra lancifolia*, Micro propagation, Growth regulators