ABS-00304

Propagation of *Impatiens subcordata* (Balsaminaceae) for restoration and utilization in the horticulture industry

D.M.D. Yakandawala[1,*], B. Gopallawa[1], G.K.I.S. Madola[2], K. Yakandawala[2], K.M.G.G. Jayasuriya[1], A.M.T.A. Gunaratne[1], and A.P.T. Jayaweera[3]

[1]Department of Botany, University of Peradeniya, Peradeniya, Sri Lanka
[2]Dept of Horticulture & Landscape Gardening, Wayamba University of Sri Lanka, Sri Lanka
[3]Hakgala Botanical Gardens, Department of National Botanical Gardens, Sri Lanka

[*]Corresponding author email: deepthiy@sci.pdn.ac.lk

Keywords: conservation, horticulture,*Impatiens subcordata,* propagation, restoration

The genus *Impatiens* is globally popular as a bedding plant. Sri Lanka is considered one of the *Impatiens* hotspots harbouring 23 natives including 17 endemics. *Impatiens subcordata* Arn., a Critically Endangered perennial which bears flowers ranging from light to mauve pink, is restricted in distribution and threatened by anthropogenic activities. This study aims to develop a propagation technique to restore plants, aiming for conservation and sustainable use in the horticulture industry. In this study, environmental parameters of the site were monitored, and seeds and cuttings of three maturity stages were used as propagules for multiplication. Seeds were sowed in trays filled with sand and a combined media of sand: compost: coir dust (4:4:1). The cuttings were planted in pots filled with the combined media and placed in plant propagators.. Experiments were conducted at the Hakgala Botanical Garden, and germination/sprouting was monitored. Sand media and combined media recorded 88% and 62% germination respectively. All the cutting types survived; top cuttings recorded the highest survival (70%), followed by bottom (45%) and middle (30%). oth seeds in sand media and top cuttings in combined media could be recommended for propagation. Presently, the plantlets are ready for hardening, followed by restoration. Long-term monitoring of the established plant populations will be carried out with the collaboration of local government authorities, the private sector and the participation of school children to ensure sustainability. Upon successful restoration, this activity would, in the long term, contribute to the species being downgraded from its present threat category in the National Red List by increasing the number of populations in different locations.

.