



GROWTH CYCLE CHARACTERISTICS OF SELECTED WILD PLANTS TO ENHANCE BIODIVERSITY

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Provision of floral resources of wild plants is one of most commonly used strategies in developed countries to conserve and maximize biodiversity in neglected areas. However, scarcity of information on potential wild plants hinders the utilization of such species in Sri Lanka. Hence, the objective of the study was to identify growth cycle characteristics of six wild plants to promote them in biodiversity conservation. Based on previous studies on insect visitation and seed germination, *Leucaszeylanica*(L.) R. Br. (*Geta-thumb*), *Tridaxprocumbens* (L.) (*Kurunagala daisy*), *Merremiatridentata*Linn, (*Heen-madu*), *Emilia sonchifolia*(L.) DC. Ex Wight, (*Kadupahara*), *Ipomoea triloba*(L.)(*Walthalkola*)and *Vernoniacinerea*(L.) Less. (*Monarakudumbiya*)were selected and 16 individuals were planted and height, spread at maturity, growth habit and life span were recorded in weekly intervals for 10 weeks. Data were subjected to ANOVA and analyzed by Minitab (version 16).

There were significant differences in plant height ($p=0.00$) and spread of canopy ($p=0.00$) among all the species. *Merremiatridentata* and *I. triloba* showed a creeping habit and branching was observed at the heights of 2.8 ± 0.9 cm and 5.2 ± 1.3 cm respectively. While other species showed a vertical growth habit and they attain their maximum height and spread within 7 weeks. Among them, the height was significant (65.3 ± 12.4 cm) in *V. cinerea*. The height difference of species could be effectively combined to use in an aesthetically pleasing planting designs. *Ipomoea triloba* recorded the significantly higher spread (238.3 ± 54 cm) followed by *M. tridentata* (230.5 ± 25.7 cm). As they produced a well spread canopy with prostrate branches, a lower seed rates can be used when establishing plants in the field. Among other species, maximum spread was not significantly different. All the vertical growers completed their life cycle within 4 months period. While creepers required more than 4 months. Hence once combined, creepers will perform even after the vertical growers complete their life cycle. All these species are naturally occurring in all the three major climatic zones in Sri Lanka. Hence, special agronomic practices are not required in maintenance. Therefore, the selected species can be recommended to use in establishing low- maintenance planting designs to conserve and maximize biodiversity.

Keywords: *Biodiversity, Growth cycle characteristics, Planting designs, Wild plants*