

SUITABILITY OF *MELOMPODIUM DIVARICATUM*, *CHLOROPHYTUM TUBEROSUM* AND *ALTERNANTHERA AMOENA* FOR ‘LIVING WALLS’

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Vertical garden or living wall is a wall partially or completely covered with vegetation that includes soil or a growing medium. This modern system is most suitable for urban areas where the pollution is high and the space is limited. Vertical gardens can be established in any place such as living rooms, hotels or libraries. It helps to reduce air pollution, heat island effect and provides more comfortable places for living. Even though several studies have been conducted worldwide in relation to living walls, still this is a new concept to Sri Lanka.

In the present study, three species (*Melompodium divaricatum*, *Chlorophytum tuberosum*, *Alternanthera amoena*) were selected to grow in two different angles (90° and 45° from vertical line). Altogether, there were six treatments with four replicates per each. Over the experimental period (five months), the variation in leaf length, leaf area, number of leaves per plant and covering percentage of each species were evaluated on a tailor-made, low-cost green wall system. By comparing leaf appearance, the most suitable and attractive species were selected. From the results, leaf length of *Chlorophytum tuberosum* showed a significant difference ($p < 0.05$) in the two different angles. Other two species did not show a significant difference in the two angles. *C. tuberosum* displayed a higher growth of leaf length in angled gutter. There was a significant difference in number of leaves with the angle. However, leaf area and covering percentage were not significantly different. Flowering behavior of *Melompodium divaricatum* showed a significant difference between the two angles. It produced a higher number of flowers in 45° angled gutter. *Melompodium divaricatum* showed a stronger negative geotropism which did not give a better appearance in green wall systems. Other two species were able to cover the vertical surfaces while giving an attractive appearance. Among the tested species, *Chlorophytum tuberosum* and *Alternanthera amoena* are the most suitable species for vertical garden or living wall systems.