

## IDENTIFICATION OF PROMISING VEGETATIVE PROPAGATION TECHNIQUES FOR SOURSOP

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Soursop (*Annona muricata* L.) is an underutilized fruit crop in Sri Lanka. Production of planting materials through vegetative propagation helps to overcome the problems of extended vegetative growth, low productivity and quality associated with the propagation by seeds origin. Therefore, this study was undertaken at the Fruit Crop Research and Development Station at Gannoruwa from April to August 2017, to identify promising vegetative propagation techniques for Soursop by evaluating six grafting/budding methods viz: wedge grafting, H budding, T budding, chip budding, patch budding and inverted T budding. All the grafted/budded plants were arranged in a Completely Randomized Design with four replicates for each method. Number of successful grafts, days to first bud sprouting, increment of the shoot length, number of total shoots, number of fully open leaves and number of survived grafts were recorded. Number of successful grafts at 21 days after grafting was significantly high ( $p < 0.05$ ) in wedge grafting (13/15) and patch budding (10/15). Days to first bud sprouting (25 days) was significantly low ( $p > 0.05$ ) in patch budding. Increment of the shoot length (25.46 cm) was significantly high in patch budding at 13 weeks after grafting. Fully open leaf number per graft was significantly high in patch budding (10) and H budding (10). Number of total shoots per graft was not significant ( $p > 0.05$ ) among treatments. Number of survived grafts was significantly high in wedge grafting (13/15) and patch budding (10/15). Therefore, the results of this study reveal that patch budding and wedge grafting as promising techniques for vegetative propagation in Soursop.

**Keywords:** Budding, Grafting, Soursop, Vegetative propagation