EFFECTS OF DIFFERENT PRUNING HEIGHTS ON GROWTH AND CUT FLOWER PRODUCTION OF ROSE (*Rosa hybrida* L.) VAR. 'WHITE SUCCESS'

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ABSTRACT

An open field experiment was conducted to evaluate the effects of different pruning heights on growth and flower production of rose (*Rosa hybrida* L.) var. 'White Success' at the Regional Agricultural Research & Development Centre, Bandarawela, Sri Lanka from January to April 2019. One year old budded rose plants were hard pruned at 6 inches from the ground level before the commencement of experiment and allowed to grow for a period of one month and following treatments were imposed thereafter T1 (removal of terminal or flower buds), T2 (pruning of shoots 3 leaves above bud union), T3 (pruning of shoots 4 leaves above bud union), T4 (pruning of shoots 6 leaves above bud union), T5 (pruning of shoots 5cm from bud union), T6 (pruning of shoots 10cm from bud union), T7 (pruning of shoots 15cm from bud union) and T8 (No pruning - Control). Experiment was laid out in a Randomized Complete Block Design with four replicates. Measurements were taken from one month after pruning following non-destructive sampling method. Plant height was measured at weekly interval. Number of shoots per plant, number of leaves in a flower stem, bud length and diameter, dry weight of flower buds, number of flowers per plant and vase life of flowers were measured at seven weeks after pruning. Analysis of variance was performed to determine the effect of treatments on measured parameters and treatment means were separated by Duncan's Multiple Range test ($p<0.05$). Results revealed that mild pruning positively influenced on the growth and flowering of roses than hard pruning. Highest performances in measured parameters were observed in mild pruned treatments. Based on the results, it can be concluded that mild pruning increases growth and flowering of roses. Pruning of new stems at 15 cm above the bud union is the best method to get higher production of quality flowers from 'White success'.

Key words: Higher production, Flower quality, Plant height, Pruning, Rose, Vase life

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