EFFECT OF SCION LENGTH ON THE SUCCESS OF WEDGE GRAFTING IN MANGO

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Mango (*Mangifera indica* L.) is one of the widely cultivated, nutritious fruit crops in Sri Lanka. It is propagated mainly by wedge grafting in commercial scale. However, low percentage of grafting success is a concern among nurserymen. Therefore, this study was conducted to evaluate the effect of scion length on the success of wedge grafting in mango, at the Fruit Research and Development Institute, Horana from March to July, 2015. Scions of three lengths [*i.e.* 10 inch scion (T_1), 8 inch scion (T_2) and 6 inch scion (T_3)] having one centimeter diameter from high quality selected cultivar 28, were wedge grafted to rootstocks of local variety (Dampara). Treatments were arranged in Completely Randomized Design with three replicates each. Days to first bud sprouting, total number of buds, total number of leaves per plant, leaf area and mean shoot length per plant were recorded at weekly intervals. Percentage of successful grafts was recorded at the end of the experiment. Days to sprouting of first bud were significantly different among treatments ($p<0.05$) and T_1 showed the minimum number of days to bud sprouting (6) followed by 13 in T_2 and 15 in T_3. Total number of sprouted buds and number of leaves were significantly different among treatments ($p<0.05$) and higher number of buds and leaves were recorded in T_1 (5 buds and 16 leaves) compared to T_2 (3 buds and 12 leaves) and T_3 (3 buds and 8 leaves). The highest leaf area (23.53 cm^2) and shoot length (6.06 cm) were observed in T_1. Percentage of successful grafts was significant ($p<0.05$) and T_1 showed the highest percentage (100%) followed by 83% in T_2 and 60% in T_3. In conclusion, scions of 10 inch length increased the wedge grafting success in mango compared to 6 inch and 8 inch scion lengths.

Keywords: Grafting success, Mango, Scion length, Wedge grafting