

Effect Of Cultivars And Time Of Grafting On Per Cent Success And Survival Percentage Of Veneer Grafting In Mango (*Mangifera Indica* L.)

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ABSTRACT

In an investigation conducted to study the effect of cultivars and time of grafting on per cent success and survival percentage of veneer grafting, it was found that veneer grafting in the September took minimum number of days for sprouting and also exhibited maximum percentage of sprouting and survival percentage. Cv. Khader showed significantly higher success (65.30%) and survival percentage (43.60%). December grafting showed poorest in respect of sprouting and survival of grafts.

INTRODUCTION

Inarching is most common method of vegetative propagation of mango in almost all the government and private nurseries. This is an expensive, tedious method. In order to accomplish a large scale and commercial method of vegetative propagation of plants, the method should be relatively simple, highly successful, low in cost and the plant should be vigorous in growth. With these objectives, veneer grafting has been tried for mango propagation by various workers (Mukherjee and Majumdar, 1964 and Taotia and Maurya, 1970) indicated the possibilities for replacing the inarching by veneer grafting in mango. It is a scion detached, simple and rapid method. It has shown definite possibilities of replacing inarching. The veneer grafting has given promising results all over the country. Therefore, a detail statistically laid out trial was conducted during 2000-2001 to standardize the time of veneer grafting method for different cultivars in mango under Northeastern dry zone of Karnataka.

MATERIAL AND METHODS

The present investigation was carried out at the Regional Research Station, Raichur during the year 2000-2001. Three cultivars of mango viz., Mallika, Khader, and Baneshan were veneer grafted on fortnight intervals of August, September, October, November and December. Thus there were 27 treatments replicated thrice in a factorial randomized block design. Grafting operations was done on one year-old healthy and uniform rootstocks. Observations with regard to per cent success/ sprouting percentage were recorded after their complete sprouting and survival percentage were recorded six months after operation.

RESULTS AND DISCUSSION

Days taken for sprouting

The results are significant for cultivars, time of grafting and interaction effect. With respect to cultivars, the minimum number of days was taken for sprouting in Khader (32.85 days) as against Mallika (33.43 days) and Baneshan (34.25 days). This may be attributed to the variation in genetic character of different cultivars and good callus formation due to stimulation of cambium activity because of favorable weather conditions. As for as time of grafting is concerned, veneer grafting in the I fortnight of September took minimum number of days for sprouting. The maximum number of days taken for sprouting was in II fortnight of December (Table 1). It can be presumed that early sprouting in I fortnight of September may be due to favorable diurnal variation in temperature particularly mean minimum temperature of 22.05°C and mean maximum temperature of 32.73 °C with optimum humidity (72.67%) and good precipitation (Appendix I) which in turn encourages the higher meristematic activity. Due to interaction, all the three cultivars took less number of days for sprouting when the grafting operation was done with I fortnight of September. It varied from 24.53 to 28.42 days. The results are in agreement with Asante and Barnette (1997) who reported favorable temperature coupled with precipitation and optimum Relative Humidity encouraged graft union.

Sprouting percentage and Graft take:

The time of veneer grafting affected the success significantly. Grafting in II fortnight of September has recorded maximum sprouting percentage (74.82 %) followed by I fortnight of September and I fortnight of October. The minimum sprouting percentage (27.04 %)

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