

Effect Of Cultivars And Time Of Grafting On Per Cent Success And Survival Of Grafts In Epicotyl Grafting In Mango (*Mangifera Indica* L.) In North-Eastern Dry Zone Of Karnataka

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ABSTRACT

A trial was conducted to ascertain the optimal period of epicotyl grafting in Khader, Mallika, and Baneshan cultivars of mango in the Northeastern dry zone of Karnataka out of the 3 months viz., June, July and August fortnight intervals. The I fortnight of June grafting exhibited the earliest sprouting 28.71 days, but it was late by 6.39 days in I fortnight of August grafting. Khader took minimum number of days for sprouting (27.30 days). Grafting in II fortnight of June has given maximum percentage (75.50) of sprouting. August grafting proved very poor. Cv. Khader showed the higher percentage of survival (46.60), Similarly I fortnight of June grafted plants expressed maximum take, whereas August grafting showed poorest.

Key words : Time of grafting, survival of grafts, Epicotyl grafting in Mango.

INTRODUCTION

The easy availability of good quality plant material shall go a long way in increasing the area under mango manifold. The farmers are interestingly taking up mango cultivation because it is one of the most important fruit crops of sub tropical zone of the region. The area under mango is, therefore increasing steadily. However, the rate of development is far from satisfactory. Non-availability of quality mango grafts in sufficient number has become one of the most important bottleneck in mango development. Although, several vegetative methods have been tried such as inarching, chip bubbling, air layering, cuttings, still there is a scope for a more efficient and cheaper method. In recent past, epicotyl grafting has gained considerable popularity because of its ease of operation, less expenditure and time required and high per cent success. Grafting of promising cultivars by epicotyl grafting has been attempted by various workers under different agroclimatic conditions and periods with varying degree of success. A field experiment was, therefore, designed to find out the optimum period of epicotyl grafting in three commercial cultivars of mango i.e., Khader, Mallika and Baneshan in North eastern dry zone of Karnataka.

MATERIALS AND METHODS

The present investigation was carried out at the Regional Agricultural Research Station, Raichur during the year 2000-2001. Three Cultivars of mango Viz., Mallika, Baneshan and Khader were epicotyl \ stone grafted on fortnight intervals of June, July and August. Thus there are

12 treatments replicated thrice in a factorial RCBD. Local mango stones were allowed to germinate in nursery bed, about a week old emerged seedlings with stone attached and copper coloured stem and leaves were used for stone grafting. Observations with regard to sprouting percentage were recorded after their complete sprouting and survival percentage recorded six months after operations.

RESULTS AND DISCUSSION

Days taken for sprouting

The data reveal that the time taken by different cultivars for sprouting varied from 27.30 days in Khader to 37.68 days in Baneshan and time taken by Mallika is 29.29 days (Table 1). This may be attributed to variation in genetic character of different cultivars. With respect to time of grafting, the earliest sprouting was with I fortnight of July grafting (28.71 days) and it was late by 6.39 days in delayed grafting i.e., I fortnight of August (35.10 days). This may be attributed to weather conditions prevailing during I fortnight of July. Further, availability of sufficient moisture might have kept the cells more turgid, leading to rapid proliferation of callus and speedy healing of grafts. The results are in agreement with Maiti and Biswas (1980) and Gupta et al, (1988).

Sprouting percentage and Graft take

The time and cultivars affected the success significantly. As for as time of grafting is concerned, grafting in II fortnight of June has given maximum percentage (75.50%) followed by I fortnight of July. The

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