



The effect of length of scion stick on success of epicotyl grafting in mango (*Mangifera indica* L.) cv. KESAR

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ABSTRACT

Propagation studies in mango with epicotyl grafting were carried out with three lengths of scion stick. The maximum number of sprouted grafts, maximum sprouting percentage, minimum days for leaf emergence, maximum number of leaves per graft, minimum mortality (%) and maximum survival (%) of grafts were recorded in grafts when they were made using 10 cm long scion sticks. The maximum growth in terms of height and girth (above the union) were recorded in grafts made with use of 20 cm long scion sticks.

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Key words : Epicotyl grafting, Mango, Length of scion stick

Mango (*Mangifera indica* L.) is considered as the King of fruits. It is the national fruit of our country and seems to be under cultivation well over 4000 years (De Candolle, 1984). It is undoubtedly the most delicious and popular fruit of the tropical and sub-tropical regions of the world. It enjoys the status of being India's national fruit from time immemorial and forms an integral part of the life and culture of her people. Mango is not only the principal fruit crop of Indian sub-continent, but also of many adjacent countries of South East Asia.

In couple of years, epicotyl method has been found the easiest, cheapest and less time consuming method for mango grafting. Epicotyl grafting has a good promise as it is easy to operate and very cheap (Bhan *et al.*, 1969). One of the striking advantages of this method is that the scion shoot of desired varieties can be collected from distant places, because it can be stored up to 4 days with good result up to some days by providing favourable conditions. The cost of production of seedling rootstock is minimized upto a great extent. It is a scion detached method, very easy, simple and rapid (Majumder and Rathore, 1970). The research work carried out during the last few years have clearly shown that this technique can be adopted for large-scale multiplication of mango in Western India. Epicotyl grafting method is being employed for massive production of mango grafts in the Kokan region of Maharashtra (Gunjate, 1989).

MATERIALS AND METHODS

Scion sticks:

Defoliation was carried out to the selected scion ticks seven days prior to grafting process. These defoliated scion sticks were collected and stored with care until grafting. The healthy scion sticks were taken for further procedure and length of scion stick was L₁-10cm, L₂ - 15cm and L₃ - 20cm. The cut was made according to the length and grafting was done on the same day. The grafts were observed for initial success (sprouting) at 45, 60, 75 and 90 days of age of grafts. The observations on survival percentage were recorded at after 90 days of grafting. The height, girth (above and below the union) and total number of leaves were recorded at one month interval.

RESULTS AND DISCUSSION

From the Table 1, it is seen that the highest numbers of sprouted grafts were recorded at 45, 60, 75 and 90 days after grafting recording 15.56, 13.75, 12.56 and 11.88, respectively, when scion sticks of 10 cm length (L₁) were used for grafting. The lowest numbers of sprouted grafts were recorded as 10.63, 8.31, 7.13 and 6.31 at 45, 60, 75 and 90 days of grafts, respectively, when scion sticks of 20 cm length (L₃) were used for grafting. Similarly, the data related to sprouting percentage of grafts as influenced by length of scion sticks revealed that the maximum sprouting percentage were recorded at 45, 60,