EFFECT OF DIFFERENT BANDAGE MATERIALS ON THE SUCCESS PERCENTAGE OF VENEER AND T-GRAFTING IN MANGO

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Effect of three bandages, namely sanhemp fibre, polyethylene strips and plastic tape on the efficiency of two grafting techniques, veneer grafting and T-grafting in mango were envisaged. The sprouted grafts with different bandages showed superiority of T-grafting (85.4%) over veneer grafting (80.6%). Veneer grafting with sanhemp fibre (89.65%) and T-grafting with plastic tape (93.7%) showed maximum success. Veneer grafting also gave higher number of leaves (12.9 plant^{-1}) and length of shoots (13.2 cm) than those for T-grafting.

INTRODUCTION

Mango is commercially propagated through asexual methods. Among the vegetative methods of propagation, veneer grafting and T-grafting are the successful ones. Jagirdar and Bhatti (1968) obtained success as high as 98.75% in mango with veneer grafting while Riaz and Khan (1986) observed T-grafting better for success percentage and growth of scion shoots.

To get the higher success of grafted plants, the bandage material plays an important role. A suitable bandage material helps the union between stock and scion. Said and Anayatullah (1965) observed that the use of plastic tape and rubber strips for tying the buds, increased bud take to 90% and 86%, respectively compared with sanhemp fibre (31%). Mian (1988) recorded maximum success percentage with plastic ribbon (80%) followed by sanhemp fibre (75%) and rubber strips. Defoliation of scion budwood for veneer grafting also enhance the success percentage and shoot length. Dhakal and Hoda (1986) used shoots of mango cv. Langra after 5 to 15 days of defoliation. The length of scion shoot was greatest (17.63 cm) taken 10 days after defoliation.

The present study was carried to see the effect of different bandage materials on the success percentage of veneer and T-grafting.

MATERIALS AND METHODS

Bandage materials sanhemp fibre, polyethylene strips and plastic tape were used for veneer and T-grafting in mango. The seedlings selected were of uniform height, stem girth and age (1.5 years). The budwood having 0.5" diameter of variety Aman Dusehri was used for grafting in all the cases. The scion shoots with terminal buds were prepared by clipping the leaves, leaving petiole stubs, 12 days before the grafting operation for veneer grafting. Fresh mature sticks were collected in case of T-grafting. Effect of different bandage materials on veneer and T-grafting success percentage, number of leaves and length of shoots were recorded. Treatment means were compared following Duncan's Multiple Range (DMR) test (Duncan, 1955).

RESULTS AND DISCUSSION

The T-grafting reveals maximum success percentage over veneer grafting (Table 1). These results are in conformity with Riaz and Khan (1986). Veneer grafting with sanhemp fibre showed maximum (89.6%) success while T-grafting with plastic tape bandage material gave the maximum (93.7%) success. The results are corroborated with the findings of Mian (1988).

eration of graftage. The present results fully support the findings of Srivastava (1975) who observed that removing the leaf blades 15 days prior to detaching the bud sticks from scion plants resulted in swelling of buds and these buds gave better results.

Veneer grafting expressed more shoot length (13.2 cm) than T-grafting (Table 2). Actually, it is the lead advantages of veneer grafting over T-grafting in relation to the preparation of scion budwood. These results

Table 1. Grafting success percentage in mango

Grafting operation	Bandage material			
	Sanhemp fibre	Polyethylene strips	Plastic tape	S.E.
Veneer grafting	89.6 a	79.2 ab	72.9 b	11.50
T-grafting	75.0 b	87.5 a	93.7 a	11.50

Figures having same letter(s) are significantly different at P = 0.05.

Table 2. Effect of grafting operations and bandage materials on growth parameters in mango

Parameters	Grafting operations		
	Veneer grafting	T-grafting	S.E.
Number of leaves	12.9 a	9.3 b	2.5
Length of shoots (cm)	13.2 a	9.6 b	2.5

Figures having same letter(s) are significantly different at P = 0.05.

The number of leaves plant^{-1} are significantly higher for veneer grafting (12.9) over T-grafting (9.3) (Table 2). This could be due to the time lag which involved preparation of the scion wood by removing the leaf blades about 12 days prior to actual op-

are in line with Dhakal and Hoda (1986) who observed in mango the greatest length of scion shoot (17.6 cm) taken 10 days after defoliation.

The results suggest that veneer grafting with sanhemp fibre and T-grafting with

polyethylene bandage material was successful. Veneer grafting also expressed maximum number of leaves and length of shoot and T-grafting.

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