



FIG. 1. Relationship between the distribution of heterochromatin and recessive visible mutation; on the X chromosome. (y, yellow; sc, scute; cx, curlax; cm, carmine; v, vermillion; m, ministures f, forked; os, outstretched; car, carnation; sw, short wing.)

Heterochromatic regions are known to be late replicating compared to the euchromatic portions¹¹. This difference in the phase of replication may somehow make the genes at the junctions more prone to the action of mutagens. Further studies are required to explain the role of heterochromatin in induction of mutations.

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A NEW APPROACH TOWARDS DOUBLE GRAFTING IN MANGO

DOUBLE grafting or double working has been done successfully in temperate fruit-plants with a view to overcoming incompatibility between a desired variety and a good rootstock, transferring resistance to diseases and frost or inducing dwarf character and a strong framework without impairing the yield and quality of fruits¹.

Mango propagation although considered to be easy as compared to other tropical fruits, great difficulty was felt while preparing the plants for interstock trial using intermediate stem pieces. Some reports^{2,3} have been published on double grafting/interstock trials on mango, but no attempts were made to

TABLE I

Sl. No.	Treatments				Final success		Time taken in preparing plants (months)
	First grafting		Second grafting				
	Method	Time	Method	Time	No.	(%)	
1.	Inacch	March	Inarch	July	20	80	7
2.	"	July	"	September	21	84	5
3.	"	"	"	July	15	60	3
4.	"	March	Veneer	"	12	48	7
5.	"	July	"	"	10	40	3
6.	"	"	"	September	8	32	5
7.	"	March	Soft wood	March	13	52	3
8.	"	"	"	July	18	72	7
9.	"	July	"	"	21	84	3
10.	"	"	"	September	20	80	5
11.	Veneer	March	Veneer	July	5	20	7
12.	"	July	"	"	1	4	3
13.	"	March	Soft wood	"	8	32	7
14.	Soft-wood	"	"	"	17	68	7
15.	"	July	"	September	19	76	5

Simplify the method for general use. The present report deals with the results obtained on the basis of the trials carried out to make this method easy within a limited period.

Three grafting methods, viz., inarching, veneer grafting and soft wood grafting employed during three different months of the year (March, July and September) were chosen for this study. Dashehari was used as the scion cultivar and rootstocks used were selected from mixed seedlings. The interstock (intermediate) pieces were collected from one tree of Cv. Bapakkai observed to have dwarfing characters as reported on the basis of our preliminary observations⁴. Separately for a long range interstock trial 10 interstocks (Pahutan, Olour, Nakkare, Kalapady, Willard, Goa, Kurikkan, Ambalavi, Latra, Moovandan Chandrakaran and ST-9) possessing dwarfing characters were used during 1978 and the trial is in progress⁴. Finally 15 combinations (as given in Table I) were tried keeping 25 plants under each.

The results indicated that the maximum success was recorded under Inarching-Soft wood grafting (both grafted in July), Inarching-Inarching (grafted in July and September respectively) followed by Inarching-Soft wood grafting (grafted in July and September) and Inarching-Inarching (grafted in March and July). But

when we consider the period of operation, it was found that inarching-soft wood grafting (grafted in July-July) was better because under this procedure the maximum number of plants (double grafted) were prepared within three months and thereby required minimum time in the production of double-grafted plants as given in Table I.

The above observations offer a way for the easy propagation of mango plants by double-grafting within a short period. This will enable an orchardist to combine the good effects of a particular rootstock as given earlier (para one of this note) while propagating a scion variety of his choice.

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