Research Paper :

Effect of single and double rootstock on grafting success in mango

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International Journal of Plant Protection, Vol. 4 No. 2 (October, 2011) : 330-332

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SUMMARY

The studies were conducted at Central Nursery Scheme, Marathwada Agricultural University, Parbhani during June 1997 to February 1998. Five different varieties namely, Hur, Parbhani Hapus, Ratna, Neelam and Totapuri were tested on single and double rootstock separately. Variety Ratna when grafted on single as well as double rootstock gave maximum grafting success. Grafting success in field and later on in field survival are the serious bottleneck in mango cultivation and practical problems in the establishment of mango orchard. In both the cases, mortality of mango grafts in field and initial grafting success may be due to short supply of food material by single rootstock. The very objective of conducting this experiment was to overcome the problem by providing double rootstock.

Munde, G.R. (2011). Effect of single and double rootstock on grafting success in mango. *Internat. J. Plant Protec.,* **4**(2): 330-332.

Key words : Mango, Grafting, Root stock

Received :
May, 2011
Accepted :
August, 2011

The mango occupies a per-eminent place amongst the fruit crop grown in India and is acknowledge as the king of fruits.

The genus mangifera belongs to family Anacardiaceae, is orginated in South-East Asia.All most all the edible cultivars of mango belong to species Mangifera indica linn.and wild species to M.sylvatica and M.caloneura.

Mango fruit is utilised during all stage of its development,young and unripe fruit beacuse of their acidic taste are utilised for culinary purpose as well as for preparing pickels,chuteny etc.Ripe fruits are utilised in preparing squash,nector, jam and baby powder.The various plants partsare put to several other uses viz,tender leaves as vegetables in java and philippines, dried flowers have curative properties for treating diarrhea and chronic dysentry..Some of the desired horticultural varieties are more vigour when they are grafted on vigrous rootstock e.g Sweet orange grafted on rangpurlime roootstock instead of jamberi and with proper selection of rootstock some fruits can be grown in areas otherwise not suitable for certain fruitcrops.In the present investigaton grafting on single rootstock as well as double rootstock was tried to increase the percent grafting successs.

MATERIALS AND METHODS

The present investigation was undertaken at Central Nursery Scheme, Marathwada Agricultural University, Parbhani during the year 1997-98.

In this experiment, grafting was carried out by using single and double rootstock seedlings. The rootstocks used for single and double grafts were common and commercial method of stone grafting. This experiment was laid out in RED with 10 treatments and 10 replications. Effect of single and double rootstock on grafting success was tested in five different mango varieties *viz.*, Hur. Parbhani Hapus, Neelum, Totapuri and Ratna. The first grafting was undertaken by using single seedlings as a rootstock as usual in each variety. Similarly, double stock grafting was done where two seedlings were used as rootstock.

RESULTS AND DISCUSSION

The results obtained from the present investigation as well as relevant discussion have been presented under following heads:

Effect of single rootstock on grafting success in mango:

The periodic per cent success of mango