RESEARCH ARTICLE

Effect of season of grafting on percentage graft – take and growth of scion shoot of sapota on khirni rootstock

S.R. PATIL, A.B. SURYAWANSHI AND G.N.PHAD

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SUMMARY

Softwood grafting of sapota during the month of July was proved to be superior, followed by August in Vidarbha condition. Highest graft take (63.33%), maximum height of scion shoot (16.06 cm) and highest number of leaves on scieon shoot (15.08) were obtained when the grafting was done during the month of July with new seedling of Khirni (rootstocks). Similarly the highest graft take (60.00%), maximum height of scion shoot (17.47 cm) and highest number of leaves on scion shoot (14.83) were obtained when the grafting was done during the month of July with invigorated seedlings of Khirni (rootstock). There was nor much difference between two types of seedlings (rootstocks) with respect to graft take and growth of grafts.

Key words : Graft take percentage, Growth season, New seedlings, Invigorated seedlings

Support is mainly valued for its sweet and delicious fruits. It has a high sugar content (20%) in addition to vitamins A, B_1 , B_2 , B_6 , C and also rich in useful minerals.

A number of processed products such as jam, jelly, Marmalade, Toffee, Preserved, Fruit bar and flakes are prepared. Another important feature of this crop is the ease in post handling. Of late, sapota cultivation has attracted by many farmers of Vidarbha region on account of its better adoption to diversified soil and climatic conditions. Hence, there is scope for increasing the area under this crop.

Though the scope is much, the expansion of area under sapota is limited because of non-availability of genuine planting material. The major problem in this regard is difficulties in rapid clonal multiplication. Nurserymen aim at the production of maximum number of grafts within available resource and time. The season is one of the most important factors, which limits the grafting period, because of long unfavourable weather conditions. So there is a need to fix the proper time of grafting to get the maximum survival and growth of the grafts. Therefore, present study was undertaken at RFRS, Katol, Dist. Nagpur.

MATERIALS AND METHODS

Softwood wedge grafting was carried out at monthly interval on 15 th of each month from January viz., new seedling (rootstocks) and invigorated seedlings (rootstocks). Each month served as a treatment. Totally 30 grafts were prepared in each month taking 10 grafts per replication. Randomized Block Design (RBD) was adopted.

Section of rootstock :

New seedlings (rootstock) :

Two-years old, healthy Khirni rootstock seedlings of uniform height (30 cm) with stem thickness of about 6-9 mm were selected.

Invigorated seedlings (rootstock) :

Two- years old Khirni rootstock seedlings, which were used previously for grafting and failed, were deheaded leaving 4-5 cm stump to get new shoots. Such seedlings with 5-6 month old invigorated shoots were used as a invigorated seedlings (rootstock) for grafting.

Selection of scion :

Scion sticks were taken from Cricket ball variety. For scion 15 years old single Cricket ball tree was selected. Every month terminal, current season, about 5-6 month old, healthy, 6-8 mm thick, greenish brown coloured, round shaped and un-sprouted scion sticks with well developed buds were detached from the selected mother tree in the morning on the day of grafting with help of sharp secateur and were collected in the bucket containing water in order to avoid desiccation. Later leaves on the scion were removed with a sharp secateur without damaging the buds. Soft wedge grafting was done to prepare the grafts and kept in 70% shaded net house.

RESULTS AND DISCUSSION

The results obtained from the present investigation

Correspondence to:

S.R. PATIL, Department of Horticulture, Dr. Panjabrao Deshmukh Krishi Vidyapeeth, AKOLA (M.S.) INDIA Authors' affiliations:

A.B. SURYAWANSHI AND G.N. PHAD, Department of Horticulture, Dr. Panjabrao Deshmukh Krishi Vidyapeeth, AKOLA (M.S.) INDIA