

Studies on storage life of bud-sticks in soft wood grafting of mango

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ABSTRACT

An experiment was conducted to study the storage life of bud-sticks with different materials in soft-wood grafting of mango was carried out at Department of Horticulture, MAU, Parbhani. Storing the bud sticks for 24 hours when cut ends of bud sticks dipped in wax, wrapped in wet sphagnum moss and covered with polythene sheet showed the best results and followed by treatment in which bud-sticks wrapped in wet moss and covered with polythene paper.

Key words : Wrapping material, Polythene, Wax, Sphagnum moss, Softwood grafting, Bud sticks

In recent study on storage life of mango particularly storage of scion bud-sticks and wrapping material used for prolonging the storage life of bud sticks is very scanty use of different wrapping materials for covering the bud-sticks are arbitrary and vague. Standardization of suitable wrapping material and finding the appropriate time within which bud-sticks should be used, will be of great importance to the growers, extension workers and nursery men. The bud sticks of desirable scion varieties are to be brought from different distant sources and operating them for grafting purpose needs much more time. Therefore, knowledge of proper time for storing the bud sticks and suitable wrapping materials used for storing the bud-sticks is a must for getting higher success.

MATERIALS AND METHODS

In this experiment the scion sticks used were 4 to 6 months old and 10 cm length were taken from cv. NEELAM. The bud sticks were eight days pre defoliated prior to grafting. The grafting was done using 11 month old seedling raised from stones collected from the local healthy seeding trees. The grafting was done in the month of February because very poor results were reported in past by several workers during the rainy season under Parbhani condition. The conducted experiment work is divided into two parts.

Storage period :

Under this set of an experiment five treatment were kept with three replications and ten bud-sticks were used in each treatment under each replications after 24 hours from the detachment of scion tree.

Wrapping material :

In this experiment for wrapping of bud-sticks following wrapping materials were used.

Polythene :

Bud sticks when removed from the mother tree were wrapped in polythene sheet of 200 gauge.

Polythene and moss :

Immediately after detachment of scions from mother plant, these scions were wrapped in moist sphagnum moss and them covered by polythene sheets.

Quick dip of cut ends in liquid paraffin wax :

The proximal cut ends of scions were dipped in liquid paraffin wax for a few second soon after their detachment from the mother tree. These were tied in bundles and kept open at room temperature.

Wax + Moss + Polythene :

Cut ends of bud sticks dipped in liquid paraffin wax and then wrapped in wet sphagnum moss covered in perforated polythene sheets and then stored at room temperature and used as per treatments.

Factorial randomized block design was followed in the experiments. In each treatment 10 grafts were prepared and the treatments were replicated twice.

RESULTS AND DISCUSSION

Sprouting of scion buds started from second week and completed within four weeks of grafting. When the grafting was done immediately after excision of bud sticks from scion mother tree it took maximum number of days