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Studies of different mango varieties stone on germination traits

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ABSTRACT : The present studies were undertaken to ascertain the performance of mango varieties stone on germination. The present investigation revealed that minimum and maximum days taken for mango stone germination was observed under treatment T_5 (Langra, 10.00 days) and T_3 (Totapuri, 21.67 days), respectively and for stone germination per cent highest was in Local-2 (57.18) and lowest in T_2 (Badam, 28.41) and for height of mango root stock at 30, 60 and 90 DAS was observed maximum in T_6 (Rajapuri, 25.17, 29.61 and 39.36 cm, respectively) and minimum in T_2 (Badam, 20.00, 23.50 and 29.47 cm, respectively). However, the girth of mango root stock at 30, 60, 90 DAS was observed maximum in treatment T_9 (Local-3, 2.37, 2.76 and 2.90 cm, respectively) and minimum in treatment T_5 (Langra, 1.90, 2.29 and 2.55 cm, respectively). The maximum number of leaves per plant after 30 and 60 DAS was observed maximum under treatment T_1 (Kesar, 6.33 and 10.80, respectively) and for 90 DAS T_6 (Rajapuri, 15.40) and minimum in treatment for 30 DAS was T_5 (Langra, 4.33) for 60 DAS minimum was recorded in the treatment T_4, T_5 and T_{10} (Dashehari, Langra, and Local-4, 7.13) and for 90 DAS the minimum was recorded in the treatment T_4 (Dashehari, 11.33).

KEY WORDS : Mango, Stone grafting, Germination

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Mango (*Mangifera indica* L.) is highly cross pollinated and heterozygous plant. It needs to be propagated vegetatively to maintain its genetic uniformity. Though there are various methods of grafting and budding, only some of them give a high success rate under different situations. The grafts which are prepared in the nursery often fail to establish in the field because of poor maintenance of grafts in pots and also due to transplanting stock.

RESEARCH METHODS

The present investigation was carried out at the horticultural nursery of the Department of Horticulture, Chimanbhai Patel College of Agriculture, Sardarkrushinagar Dantiwada Agricultural University, Sardarkrushinagar, from June 2009 to January 2010. Total 10 treatments were used in CRD (Completely Randomized Design) with three replications. Sardarkrushinagar represent the North Gujarat Agro-climatic zone. The place lies at 24^0 19' North Latitude and 72^0 19' East longitude at an elevation of 154.52 meters above the mean sea level. It possesses a typical sub-tropical climate characterized by semi-arid and arid condition.

RESEARCH FINDINGS AND DISCUSSION

Days taken for mango stone germination was significant. It is observed from the result (Table 1) that the minimum days taken for mango stone germination in treatment T_5 (Langra, 10.00 days) which was statistically at par with treatment T_2 (Badam, 12.00 days) and T_9 (Local-3, 11.00 days).While maximum days taken for mango stone germination was observed under treatment T_3 (Totapuri, 21.67 days). The result are in agreement with the finding of Amin (1978), Nagawekar *et al.* (1984) and Abedel Galil (1992) in mango.The highest stone germination per cent after 30 days of sowing was observed in treatment T_8 (local-2, 57.18 %) while the minimum stone germination per cent was observed under the treatment