



## Research Paper

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# Effect of mixture of growing media on germination and seedlings growth of different mango (*Mangifera indica* L.) cultivars under net house conditions

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**ABSTRACT :** An experiment on effect of mixture of growing media on germination and seedlings growth of different mango (*Mangifera indica* L.) cultivars under net house conditions was carried out at Horticultural research farm, Department of Horticulture, B. A. College of Agriculture, Anand during the year 2011-12. The experiment was laid out in Completely Randomized Block Design (Factorial) with twelve treatment combinations and replicated thrice. The treatments comprised of four growing media (M<sub>1</sub>-Soil + sand + farm yard manure (1:1:1), M<sub>2</sub>- Soil + sand + vermicompost (1:1:1), M<sub>3</sub>- Soil + sand + farm yard manure (2:1:1) and M<sub>4</sub>- Soil + sand + vermicompost (2:1:1)) and three cultivars (V<sub>1</sub>- Amrutang, V<sub>2</sub>- Kesar and V<sub>3</sub>- LSM-12 Master royal). At 60 DAS, significantly minimum days (27.11) were taken to germinate as well as maximum germination percentage of mango stone (77.33 %) were noted in M<sub>3</sub> media *i.e.* soil + sand + farm yard manure (2 : 1 : 1). The height of seedling (51.13 cm), number of leaves per plant (15.22), length of shoot (51.13 cm), length of root (36.17 cm), root : shoot ratio (0.70), stem girth (4.07 cm), fresh weight of seedling (28.79 g), dry weight of seedling (18.90 g) and maximum survival (79.67 %) were recorded by M<sub>3</sub> medium *i.e.* soil + sand + farm yard manure (2 : 1 : 1) at 180 DAS. Among different cultivars significantly minimum days (30.83) were taken to germinate as well as maximum germination percentage of mango stone (70.75) was obtained in cultivar V<sub>3</sub> (LSM-12-Master royal) at 60 DAS. Significantly maximum height of seedling (46.95 cm), number of leaves per plant (13.17), length of shoot (46.95 cm), length of root (31.05 cm), stem girth (3.18 cm), fresh weight of seedling (24.63 g) and dry weight of seedling (14.63 g) and maximum survival (72.17 %) were recorded in cultivar V<sub>3</sub> (LSM-12-Master royal) at 180 DAS. Interaction of M<sub>3</sub>V<sub>3</sub> (Soil + sand + farm yard manure (2 : 1 : 1) + LSM-12-Master royal) recorded significantly minimum days (24.33) as well as maximum germination percentage of mango stone (81.00 %) at 60 DAS. Significantly maximum number of leaves per plant (17.67), length of shoot (52.30 cm), stem girth (4.53), fresh weight of seedling (33.23 g), dry weight of seedling (23.23 g) and maximum survival (82.67 %) were noted in combination of M<sub>3</sub>V<sub>3</sub> (Soil + sand + Farm yard manure (2 : 1 : 1) + LSM-12 Master-royal) at 180 DAS.

**KEY WORDS :** Growing media, Mango cultivars, Net house conditions, Growth of seedlings

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**M**ango (*Mangifera indica* L.) is grown almost in 63 countries around the world and occupies a unique place among the fruits in India. It belongs to genus *Mangifera* and family Anacardiaceae, originated in South-east Asia at early date. Mukherjee (1953) reported that this genus had its origin in the continental region of Burma,

Thailand, Indo-China and Malaysia peninsula. Mangoes possessing the pride position in tropical and subtropical regional, between 23° North and South latitude.

It is considered as best fruits of the world by virtue of its flavour, delicious taste, delicate fragrance, attractive colour, so it is also known as “king of fruit”. There are 41 valid species