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Evaluating the Various Soilless Potting Media for Healthy Mango Nursery Production

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Abstract

In Pakistan, traditionally mango nurseries are grown under the canopy of mango trees in soil, being highly susceptible to diseases present on mature trees. However, for healthy seedling production, different soilless potting media combinations used in the world. A study was conducted to evaluate different soilless media combinations including, sugarcane bagasse, coconut fiber, peat moss and organic compost in different ratios for healthy mango nursery production. A total of six different media combinations were tested replicated thrice, each replication contained 10 numbers of polythene containing one mango seedling. Randomised Complete Block Design was applied and various parameters including, new flushes emergence (%), plant height (cm), stem girth (mm) and numbers of leaves was recorded. Maximum percentage of flush emergence, highest plant height (52.66 cm), maximum numbers of leaves (17.33) and stem girth (9.48 mm) were recorded in media combination (Bagasse + coconut fiber + peat moss having ratio 65% + 5% + 30%). The physical and chemical characteristics of potting media also determined, media combination (Bagasse + coconut fiber + peat moss having ratio 65% + 5% + 30%) exhibited ideal preferred range; pH (7.0), electrical conductivity [(EC): 922.5 μ S/cm], water holding capacity [(WHC): (44%)] and air filled porosity [(AFP); 12.5%] as compared to other combinations. It is concluded that the soilless potting media combination of Bagasse + coconut fiber + peat moss having ratio 65% + 5% + 30% found to be most effective for vegetative parameters of seedlings and can be used to produce as soilless potting media for healthy mango nursery production.

Keywords: *Mangifera indica*, Mango nursery, peat moss