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Effect of intercropping on plant and soil of Dashehari mango orchard under low productive environments

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ABSTRACT : An intercropping trial was conducted on 7-years old mango cv. DASHEHARI orchard planted at spacing of 7.0 m x 7.0 m spacing and growing under rainfed medium black clay loam of average fertility and well drained soil to identify the suitable and profitable intercrops. The intercrops were grown with different intercropping systems like mono, companion and sequential are pigeon pea, tomato, cluster bean, okra, black gram, soybean, cowpea, maize, mustard, coriander and bengal gram. The results of two years of investigation indicated that number of fruits was maximum in mango with companion intercropping system of pigeonpea + soybean followed by sequential intercropping system of cowpea - bengal gram did not differ significantly. Fruit length, fruit diameter and fruit weight was also highest with companion intercropping system of pigeon pea + soybean closely followed by sequential intercropping system of cowpea-bengal gram. Fruit quality of mango did not significantly differ among the intercrops treatment. Highest net return was calculated from mango + (pigeonpea + tomato) combination (Rs. 81077.50) followed by mango + cowpea-bengal gram (Rs. 71677.13) and mango + tomato (Rs. 67034.38). Nitrogen concentration in the orchard soil was improved due to growing of leguminous crops while phosphorus and potassium were depleted in all the cases.

KEY WORDS : Inter-cropping, Mango, Rainfed

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