



Research Paper

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Nutrient management strategies for coffee based cropping system in Wayanad district of Kerala

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ABSTRACT : The present investigation was carried out at Krishi Vigyan Kendra, Kerala Agricultural University, Wayanad, Kerala to develop the nutrient management strategies for coffee based cropping system in Wayanad district of Kerala. Coffee is grown as mono crop in the homesteads of more than 80 per cent of small and marginal farmers of the Wayanad district. The overall nutrient status of Wayanad district indicated that the soil was strongly acidic to moderately acidic with medium status of organic carbon and medium to high level of phosphorus and potassium. Application of lime based on soil test has to be followed. Sustained crop productivity can be ensured with the use of recommended levels of organic manures. In the case of N, application rate can be reduced to 60-83% depending on the organic C status. High levels of available P can have negative influence on uptake of other nutrients especially calcium magnesium and zinc. In areas where available P was very high the application can be either skipped for two years or reduced to 25% of the package of practices (POP) recommendation depending upon the soil status and crop needs for all the crops. In the areas where K content was high the dose can be reduced to 25% of POP and it can be increased to 125 % where K is low. This will intern help the farmers to reduce the cost on fertilizer input, help the Government to have a saving on imported fertilizers and also to sustain soil health and protect human health.

KEY WORDS : Coffee based cropping system, Nutrient management

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Wayanad, a region of the Western Ghats, lying at an altitude of 800 to 1200 m above mean sea level, enjoys a mild subtropical climate. The district is endowed with rich forest cover (37%) to suit the national standards. The gross cropped area is 97.82 per cent of the geographical area, mainly dominated by the cash crops. The major plantation crops coffee, tea, pepper and arecanut together constitute 38 per cent of the cropped area. Coffee, with a total area of 67,429 ha, is grown as mono crop in the homesteads of more than 80 per cent of small and marginal farmers of the Wayanad district (Indira Devi *et al.*, 2012). The main cropping system of Wayanad is coffee based cropping system. The land resources of district suffer from serious land degradation due to human intervention and other unscientific cultivation practices. This situation evoked the need for conservation and rejuvenation of the resource trinity *i.e.*, soil, water and biomass. Considering the issues faced by

the farming community, KVK, Wayanad has prepared a comprehensive project on integrated farming system for the district under the project Rashtriya Sama Vikas Yojana (RSVY) funded by Planning Board, Govt. of India. As part of this project soil samples were collected and analyzed. The soil test information obtained was compiled area wise and a soil fertility map was prepared. Nutrient management strategies for the district were also prepared.

RESEARCH METHODS

The present study was undertaken at Krishi Vigyan Kendra, Kerala Agricultural University, Wayanad, Kerala to develop the nutrient management strategies for coffee based cropping system in Wayanad district of Kerala. The Wayanad district lies between northern latitude 11027' and 15058' and east 75047' and 70027'. The district is divided into three blocks, one municipality and 25 Panchayats. A total of 7000 soil