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Site specific major nutrient variation maps through GIS and recommendations for coconut gardens of farmers in different agro climatic situations

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Karnataka state stands third in India for coconut accounting 13.83 per cent of the country's production. At present, there is uniform recommendation of major nutrients (170:120:400 and 330:200:800 g NPK for young and old palm) across soils of various agro-climatic zones. Farmers are practicing blind application of fertilizers based on many other considerations than plants requirement leading to mismatch of fertilizers, loss of resource management also higher incidence of pests and diseases. A study was undertaken to assess the nutrient variability in the farmer's field to derive site specific recommendations for readdressing the major nutrient recommendations for improving the garden fertility status for sustainable yields. Spatial distribution of nitrogen, phosphorus and potassium were studied from 99 coconut farmers covering 195 acres of 20-25 years old representing different irrigation situations. The standard technique of grid method with a spacing of 50x50 m was employed to draw soil samples from the selected study area in 0-30 and 30-60 cm depth with geographical identity by GPS. The standard lab techniques are used to find major nutrients in samples and mapped on GIS environment. Across all locations nitrogen status remained low, phosphorus shared medium to high status in equal proportion and top soil depth of 0-30 cm remained high status with 68 percent for potassium. Based on these site specific variations, rescheduling of major nutrients emphasized slightly higher application of nitrogen, less application of potassium with almost no perceptible change in application of phosphorus. Re-allocation of major nutrients based on site specificity in different study area encourages sustainability production.

Biography

Malligenahalli Dinesh Kumar is working as a Professor and Head in Department of Agronomy. He has been serving for the university for the past 30 years. He got vast experience in research and teaching along with extension work. He has expertise in nutrient management aspects and guided more than 10 students. Presently, he is working in precision aspects of inputs for crop management. He has published 100+ papers in national, international journals and also participated in national and international symposiums.

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