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An economic analysis of arecanut and pepper cropping system in Karnataka

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The present study was conducted to estimate the cost and returns of arecanut + pepper mixed crop cultivation under organic and inorganic methods in Uttara Kannada District. In organic orchards, the per hectare total annual maintenance cost of arecanut + pepper mixed cropping orchards under organic and inorganic methods was Rs.1,27,135.05 and Rs. 1,45,031.52, respectively of which labour component accounted for 26.28 and 29.77 per cent, respectively in that order. It was observed that amortized establishment cost was more in case of cultivation under inorganic system than that of organically cultivated arecanut and pepper. This might be due to higher establishment cost. In the study area the per hectare average yield of arecanut and pepper from arecanut + pepper mixed cropping orchards obtained was more in case of inorganic orchards (arecanut – 21.96 qtls/ha and pepper – 2.31 qtls/ha) than that of organic orchards (arecanut – 19.94 qtls/ha and pepper – 2.08 qtls/ha). It might be due to higher doses of fertilizer and plant protection chemicals application by inorganic orchard farmers. The per hectare gross returns realized was found to be higher in case of organic orchard than that of inorganic orchards. This marginal difference in returns could be attributed to the higher price realization for organic pepper by selling to the organic agencies and health conscious consumers. It was also found that the average annual maintenance cost per hectare incurred by organic farmers was lower. The lower cost coupled with higher returns realized by the organic farmers resulted in higher net returns for organic orchards than that of inorganic orchards. The per hectare maintenance cost of arecanut + pepper mixed cropping orchards under organic method was found to be lower as compared to inorganic methods. Though, initially low yield levels are compensated by higher premium prices coupled with higher net returns and produce fetches more demand under organic farming system. Hence, the farmers are advised to produce more and more arecanut and pepper organically. As per the farmers opinion, the organic farming practices leads to improvement in soil health, it is environment friendly and further, it leads to production of quality pepper at a lower cost and hence, the farmers should be motivated to cultivate pepper under organic methods to the larger extent on a commercial scale.

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Inductive approach of fertiliser prescription for realizing sustainable agri-horticultural productivity

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The fertilizer recommendations based on qualitative/semi-quantitative approaches or methods do not give expected yield responses. Therefore, inductive approach, a refined method of fertilizer recommendation for varying soil test values has been developed by All India Coordinated Research Project Soil Test Crop Response (AICRP-STCR) for different crops under different agroecological subregions. Soil Test Crop Response studies have used the targeted yield approach to develop relationship between crop yield on the one hand, and soil test estimates and fertilizer inputs, on the other. Considerable agronomic and economic benefits were accrued when farmers applied fertilizer nutrient doses based on soil test. Lately, the calibrations are being developed under integrated supply of organics and fertilizers keeping into account the nutrient contribution of organics, soil and fertilizers. The technology of fertilizing the crops based on initial soil test values for the whole cropping system is also being generated. Ready reckoners in the form of fertilizer prescription equations have been developed by different centres for facilitating users for profitable use of fertilizers based on soil test values and the same has been demonstrated through various multi-location / verification follow up trials as well as front line demonstrations. AICRP-STCR has also developed an expert system in collaboration with NIC, Pune which calculates the amount of nutrients required for specific yield targets of crops based on farmers' soil fertility. It is accessible on Internet (<http://www.stcr.gov.in/>). This system has the ability to input actual soil test values of the farmers' fields to obtain optimum dose of nutrients.

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