

**STUDY ON PERFORMANCE OF ARECA CATECU AND ZINZIBER OFFICINALIS AS AN INTER CROP UNDER ORGANIC CONDITION IN TUMKAR DISTRICT OF KARNATAKA – INDIA**

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**ABSTRACT:** An experiment was conducted during 2012 to 2014 in the organic condition areca nut garden at Tumkur district in Karnataka. The data revealed that organic system significantly improved the organic matter (3.29) at the end of third year, 1.91 in the second year, 0.92 in the first year, which was the lowest (0.63) before the project. The soil quality and the sustainability index of the soil were the maximum with condition as compared to inorganic after three years of study. Mixed cropping under organic condition brought the B : C ratio for areca nut farmers compared to farmers of traditional mono cropping system could get Rs 2.24 to Rs 2.47 in 2013-14 and Rs 1.95 to Rs 2.10 in 2012-13 against the every rupee invested. Whereas in 2013-14 increasing yield of areca nut and ginger Lilly was 7529.2kg of matured whole nut and 7344 flowers of ginger Lilly per acre compared to 6868.8kg of matured whole nut and 5484 flowers of ginger Lilly per acre in 2012-13 respectively. There is a significant increase in yield of 9.61 % in areca nut, 33.91 % more ginger Lilly flowers yield recorded in mixed cropping system under organic system. The tremendous potentialities of multiple cropping in areca nut plantations are there to generate employment opportunities for improving the quality of rural life. Apart from increasing the production of additional crops and employment potential, multiple/ mixed cropping system can acts as a social security against instability of yield such as crops loss due to severe incidence of Mahali.

**Keywords:** *Organic carbon, ginger Lilly, banana, mixed cropping system, areca nut*

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