

Microbial Biodiversity of Arabica and Robusta Coffee Ecosystem of Coorg Region – Karnataka, India

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SUMMARY

Samples of rhizosphere, phyllosphere, caulosphere and pomosphere of coffee; rhizosphere of pepper and shade tree were collected for microbial analysis from five arabica and robusta farms in Coorg district, Karnataka. The total CFU's, bacteria, fungi, yeast and actinomycetes and other beneficial microorganisms like *Pseudomonas*, *Azotobacter*, Phosphorous solubilizing bacteria and carbohydrate utilizing microbes were enumerated for their quantitative and qualitative nature in coffee ecosystem. Soil samples were also subjected for physico-chemical properties. In general, higher microbial population was recorded in arabica farms compared to robusta farms. Bacterial and yeast population was normal in all the farms, but the population of fungi and actinomycetes was found to be very low. The bacterial population in arabica farms was found to be higher as compared to robusta farms and in the case of fungi it was vice versa. pH of soil had negative relationship with the total microbial population. There was no definite relationship between organic carbon and phosphorous status of soil to the microbial load. Higher coarse sand, fine sand and silt content in soil was found to affect the microbial population, where as higher clay content found to have positive relationship.