

**D-25 : EFFECT OF AGROFORESTRY PRACTICE ON SOIL FERTILITY,
MICROFLORA AND SOME SOIL PROPERTIES**

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An agroforestry system is made up of trees and crop plants, each occupying a certain proportion of space and/or time. In this study *Gliricidia maculata* was the tree crop and *Zea mays* was the crop plant. Soils of the above two systems were compared, with respect to soil characters, such as soil-chemical, physical and biological properties. The available nitrates, phosphates, exchangeable potassium, calcium, organic matter content, cation exchange capacity, electrical conductivity and soil moisture content were higher in the tree plot. The pH level of the tree plot was more neutral than the monoculture plot. The maximum soil temperature of the tree plot was 35°C whereas in the monoculture plot it was 45°C, during dry weather.

Bacterial and fungal colony counts were higher in the tree plot and 12 fungal isolates were found to be common to both plots. The results show that high population of microorganisms present in the tree plot, which may be due to continuous adding of organic matter by lopping of tree branches. The activity of microorganisms on the litter layer would have contributed to high levels of nutrients in the tree plot.