B-11 : EFFECT OF MINERALIZATION OF TEA PRUNINGS ON SOIL FERTILITY UNDER UPCOUNTRY CONDITIONS

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An experiment was carried out to study the effect of retention of prunings on soil fertility in relation to the release of plant available nutrients such as ammonium nitrogen, nitrate nitrogen, potassium, phosphorus, magnesium and also to find out the effect of mulching of tea prunings on organic carbon content, cation exchange capacity, pH of the soil and soil moisture status; during the period of first to ninth months after pruning in a field planted with TRI 2024, at St. Coombs, Talawakelle.

Six plots of 30 bushes were randomly selected (3 rows of 10 plants). Three plots were under mature levels and twigs as a mulch, while the other three plots were allowed without mulch.

Fresh soil samples were collected at fortnightly intervals, and chemical analysis was carried out in the laboratory.

Results have shown that the soil where prunings were retained, contained increased quantities of all the nutrients compared to control. The amount of nutrients liberated seems to be sufficient for the recovery of the plants during the period of the experiment. The retention of prunings has also helped to improve the soil moisture status and cation exchange capacity of the soil. The only disadvantage of the mulching is that it reduces the pH of the soil.

An assessment of the recovering shoots, at the end of the experiment showed that the recovery from prunings was better under the mulch and the stems and leaves contained relatively a higher concentration of all the nitrogen, phosphorous, potassium nutrients.