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EFFECTIVE LEVELS OF COMPOST FOR IMPROVEMENT OF GREEN LEAF PRODUCTION OF TEA IN MID COUNTRY WET ZONE

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Higher productivity and profitability of Sri Lankan tea industry can only come from a mbination of strategies; conservation of soil from degradation and restoration of soil fertility some of the major strategies practiced in order to increase the tea production. Application of mpost with the chemical fertilizer helps to improve the chemical, physical and biological perties of soil. This investigation was undertaken to study the effective levels of compost for provement of green leaf production of tea in Mid Country Wet Zone.

Compost produced from the Inclined Step Grade (ISG) system developed by the iversity of Peradeniya was used in eight treatment combinations. Three sites at the JEDB te, Hantana, were selected as three blocks, with two replicates. Treatment combinations were T1-recomended chemical fertilizer only (I), T2-compost 2 t/ha + I, T3-compost 4 t/ha + I, compost 6 t/ha + I, T5-compost 8t/ha + I, T6-compost 10 t/ha + I, T7-compost 12 t/ha + I, compost only (70 t/ha). Supplementary nutrients were provided based on the mmendation except in T8. Green leaf yield was taken at weekly intervals and soil samplings e done at 3rd 4th 6th and 8th weeks after compost application. Soil samples were analyzed for nic matter, total N, pH, available P, exchangeable K, Ca, Mg and biomass N.

Results showed that, increment of rates of compost increased soil organic matter, total N, ilable P, exchangeable K, Ca and biomass N. Treatment effect on yield was not significantly rent. Yield response was not clearly showed as data was collected only for two months. At end of two months T7 treatment-having 12 t/ha + I had higher amount of exchangeable K, Mg, biomass N than other treatments, except compost only treatment. From the results, use 12 t compost + chemical fertilizers appeared to be beneficial as an effective combination for a Mid Country Wet Zone. For better understanding of yield response, experiments should be ied out in long-term.