

**Influence of carbonized rice husk on the growth and
yield of paddy (*Oryza sativa* L.) cultivation in Ampara
district.**

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ABSTRACT

There is several soil types exist in Ampara district among these non-calcic brown soil, LHG and regosols along the coastal belt are identified. Rice is cultivated in LHG and non-calcic brown soil but prolonged cultivation resulted decreases soil physical, chemical and biological properties which ultimately results in lower yield. Therefore, it is time to focus the attention of improving soil properties by introducing environmentally friendly way to address the above issue. To improve this situation crop residue can be reused to amend the soil of rice field. A research was conducted in different quantities of rice straw and Carbonized Rice Husk (CRH) to amend the soil and evaluated the growth and yield of rice.

To carry out the above experiment, the CRH was produced by using barrel method and decayed rice straw applied to the plots and incorporated to the soil and allow one month for decomposition. Experiment was conducted with the following treatments. T1- recommended chemical fertilizer , T2- rice straw at the rate of 1 ton/ha ,T3-CRH 1 ton /ha, T4-rice straw 0.5 ton/ha + CRH 0.5 ton/ha,T5-rice straw 1 ton/ha + CRH 0.5 ton /ha and T6-rice straw 1 ton /ha +CRH 1 ton/ha . All the treatments were included recommended chemical fertilizer.

During the vegetative period, the growth parameters were recorded and finally yield analysis was done. Soil sample were collected in each plot and the following were measured pH, EC and TSS and there is no significant change occurred during one month. After 60 DAP, canopy height showered significant different among

treatments, T1(52.66cm) and T6 (56.67cm) showered significant different with T2, number of leaves was high in T1,T6 after 30 DAP.

In case of leaf area at 60 DAP T1, T4, T5 and T6 were similar in their performance, T6 showered high leaf area than T1. Number of tillers, maximum number of roots were similar performance between T1 and T6. In dry weight of shoots ,dry weight of roots were similar performance between T1, T4, T5 and T6. Among these parameters, T6 was in higher mean value when comparing T1.

Number of grains /panicle for T6 (227.66), filled grains/panicle, T6 (5.42) and T1(3.7), 100 seed weight also high in T6 but there were no significant different among them. So it can be concluded rather than applying T1, T6 and T5 is possible approach to increase the seed weight for better yield under local conditions.

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