

Influence of biochar derived from Maize stover and Maize cobs on growth and yield of sweet corn in Sandy Loam Soils

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ABSTRACT

The experiment was conducted at Agricultural College Farm, Bapatla using sweet corn hybrid maize Sugar-75 as a test crop. The experimental soil was sandy loam in texture, slightly alkaline, low in organic carbon (0.49 g kg^{-1}), available nitrogen (182.7 kg ha^{-1}), low in available P_2O_5 (16.7 kg ha^{-1}), medium in available K_2O (171.5 kg ha^{-1}). All the micronutrients were sufficient in the soil with values above their critical limits. The experiment was laid out in Split Plot Design with 3 main plots (M_1 - 50% RDF, M_2 - 100% RDF, M_3 - 50% RDF+ Microbial consortium) and 5 sub plot treatments (S_1 - Control, S_2 - Biochar derived from maize stover @ 2 t ha^{-1} , S_3 - Biochar derived from maize cobs @ 2 t ha^{-1} , S_4 - Biochar derived from powdered maize stover @ 2 t ha^{-1} , S_5 - Biochar derived from powdered maize cobs @ 2 t ha^{-1}) with three replications. The plots those received 100% RDF along with the fine powdered biochar derived from maize stover @ 2 t ha^{-1} were significantly influenced on growth parameters (plant height and dry matter production at knee high, tasseling and harvest) and yield attributes (length and girth of the cob, number of kernels and rows per cob, test weight) which were superior to control.

Key words: *Biochar, Maize cobs, Maize stover, Sandy loam soils*