

Effect of Different Sources of Biochar and Microbial Consortium on Soil Properties and Performance of Blackgram.

Y Sri Sindhu, P Ratna Prasad, P Prasuna Rani and R Lakshmi pathy

Department of Soil Science and Agricultural Chemistry, Agricultural College, Bapatla.

ABSTRACT

A pot culture experiment was conducted in Agricultural college, Bapatla, Andhra Pradesh to study the “effect of different sources of biochar and microbial consortium on growth and yield of *kharif* blackgram in black soils” during 2015-16. The experimental soil was clay loam in texture, slightly alkaline in reaction, medium in organic carbon, low in available nitrogen, medium in available phosphorus and high in available potassium. All the available micronutrients were sufficient with the values above their critical limits except manganese. Sorghum biochar was found to be a rich source of carbon and nutrients with low in pH, EC and bulk density compared to maize biochar. Powdered biochar irrespective of source, created most favorable physical properties of soils resulting in higher yield of blackgram. The microbial consortia were found to be effective in improving nutrient content and performance of blackgram crop. Combined application of powdered biochar and bacterial consortium resulted in higher yield of blackgram followed by use of coarse biochar along with bacterial consortium.

Key words: *Biochar, microbial consortium, organic carbon, growth, yield attributes.*