

Efficiency of Processed Farm Wastes on Structure and Oba Super 11 Grain Yield on Condemned Oil Stressed Soil in Southeastern Nigeria

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ABSTRACT

Condemned oil causes a lot of change in the soil structural stabilization leading to significantly loss of its capacity to support crop yield. As a result of this, a research was done in 2015, 2016 and 2017 to evaluate condemned oil stress soil and assess effectiveness of different processed farm wastes in attenuating negative structural changes on soil structure and influence on grain yield. Four treatments: Ash = 15 t ha⁻¹ of rice mill ash; Fresh = 15 t ha⁻¹ of fresh rice mill waste; Timber = 15 t ha⁻¹ of timer mill waste; Control = Non-application of amendment. These treatments were applied on a condemned oil stressed soil. The treatments showed higher significant improvement in Ash with respect to attenuating contamination stress soil structure and higher Oba Super 11 grain yield. Therefore, higher significant structural stabilization and sustainable grain yield of Oba Super 11 can be achieved by application of rice mill ash on condemned oil stress soil.

Keywords: Condemned oil stress, Physical properties, Processed farm wastes, Oba Super 11, Soil structure, Yield