

Influence of different Organic Mulching Materials on Soil Fertility and Performance of Okra in New Alluvial Soil of West Bengal

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Abstracts—A Field experiments was conducted to evaluate the effect of different types of organic mulches on soil physico-chemical properties and productivity of okra crop in an intensely cultivated new alluvial gangetic soils (sandy-loam) of Nadia, West Bengal taxonomically classified as Typic Hapludalf of West Bengal in the year 2010-11 during pre-kharif season (March-June). The aim of the present study was to improve in crop performance by identifying suitable mulching practices during the growing season. Five treatment combinations with four replications were arranged in randomized block design. i.e. T₁: Vermicompost (2 t ha⁻¹, 3mm thick), T₂: straw (4 t ha⁻¹, 5mm thick), T₃: saw dust (2 t ha⁻¹, 3mm thick) T₄: cow dung (2 t ha⁻¹, 3mm thick), T₅: control. It can be concluded that among the mulching materials, treatment receiving straw mulch (T₂) gives best result regarding soil physical properties which directly influences greater soil moisture content but vermicompost (T₁) gives highest yield (5.4 t ha⁻¹) followed by cowdung i.e. T₄ (4.95 t ha⁻¹), straw mulch i.e. T₂ (4.4 t ha⁻¹), saw dust i.e. T₃ (3.98 t ha⁻¹).

Keywords: organic mulch, soil properties, crop yield
