

EFFECT OF DESURFACING ON SOIL PRODUCTIVITY AND RESTORATIVE EFFECTS OF FERTILIZATION

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ABSTRACT

Few attempts have been made to identify the effect of soil erosion on soil productivity. The objective of the study was to determine the effect of artificial desurfacing on the productivity of soil and restorative effects of fertilizer application. Five, 10 and 15 cm soil layers were desurfaced artificially. Maize (*Zea mays*) was sown as a test crop. The composite soil samples were collected from two depths (0-15 cm and 15-30 cm) before desurfacing, after desurfacing and after harvest of crop. Various physico-chemical characteristics were observed. In general, 10 and 15 cm desurfaced soil had higher clay contents, higher bulk density, higher pH, lower soil moisture contents, lower organic matter contents and lower fertility status. It was observed that corn yield was lower in the desurfaced treatments. However 05 cm desurfaced soil had not significant variation with that of surface soil. Desurfacing (erosion) substantially decreased the productivity of soil and application of fertilizer @ 90-60 kg NP ha⁻¹ compensated some of the loss.