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**Research Article**

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# Effect of simulated soil erosion and organic manures on soil properties

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## Summary

A field experiment was carried out to evaluate the effects of simulated erosion and the impact of organic manures on soil physico-chemical properties. The experiment was conducted in split- plot design which comprised of three levels of simulated erosion depths *viz*., 0, 5 and 10 cm used as the main plot. Organic manures (vermicompost, poultry manure and pig manure @ 5, 3 and 3 $t^{-1}$ ha, respectively) were used as the sub plot treatment. There was a significant effect on the physico-chemical properties of soil due to erosion. The available nitrogen decreased at a rate of 2.86 and 7.81 per cent; available P decreased at a rate of 9.09 and 17.18 per cent; available K decreased at a rate of 9.52 and 15.12 per cent; organic carbon decreased at a rate of 0.07 and 0.15 per cent; CEC decreased at a rate of 2.81 and 5.48 per cent; water holding capacity decreased at the rate of 4.07 and 7.29 per cent while bulk density increased at a rate of 3.49 and 9.30 per cent and soil pH decreased at a rate of 4.12 and 7.20 per cent, respectively with subsequent removal of 5 and 10 cm topsoil as compared to control. Addition of organic manures improved the soil properties but could not entirely compensate the loss due to simulated erosion.

**Key words :** Simulated erosion, Organic manures, Soil physico-chemical properties

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