



Studies on splash erosion under simulated rainfall

VIRENDRA N. BARAI*, GAJANAN U. SATPUTE¹ AND ATUL A. ATRE

Department of Soil and Water Conservation Engineering, Mahatma Phule Krishi Vidyapeeth, Rahuri,
AHMEDNAGAR (M.S.) INDIA (Email : vnbarai@gmail.com)

Abstract : Splash erosion is recognized as the first stage in a soil erosion process. Quantification of splash erosion for various combinations of land slopes and rainfall intensities with the help of rainfall simulation system and modified Morgan's splash cup was tried in this study. The clay soil was used to study the splash erosion. The directional splash soil loss rate (kg ha^{-1}), *i.e.* upslope and down slope were found increasing with increase in rainfall intensity and land slope. The rate of increase in down slope splash was comparatively more than upslope. The highest soil splash *i.e.* 16369 kg ha^{-1} was observed for combination of 10 per cent land slope and 7.75 cm h^{-1} rainfall intensity in clay soil. The results obtained showed that maximum average vertical movement of splashed material was 83 cm in clay soil, for the combination of rainfall intensity 7.75 cm h^{-1} and land slope 10 per cent. The maximum average horizontal movement of splashed material was found 100.5 cm for the combination of rainfall intensity 7.75 cm h^{-1} and land slope 10 per cent. The Splashed soil material was spread near about 100.5 cm in the down slope direction and 69.0 cm in the upslope direction which highlights the need to modify the size of splash cup to study the realistic soil movement during splash erosion.

Key Words : Clay soil, Morgan's Splash cup, Splash erosion, Simulated rainfall

View Point Article : Barai, Virendra N., Satpute, Gajanan U. and Atre, Atul A. (2014). Studies on splash erosion under simulated rainfall. *Internat. J. agric. Sci.*, **10** (2): 786-790.

Article History : Received : 01.05.2014; Revised : 08.05.2014; Accepted : 20.05.2014

* Author for correspondence

¹Department of Soil and Water Conservation Engineering, Dr. Panjabrao Deshmukh Krishi Vidyapeeth, AKOLA (M.S.) INDIA