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The Effect of the Rain Intensity on the Hydrodynamic Behavior of the Low-Floor ChéLiffe

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Abstract : Land degradation in the Lower Cheliff region leads to loss of their fertility, physical and chemical properties by secondary salinization and film forming surface or surface crust. The main factor related to runoff and soil erosion is their susceptibility to crusting caused by the impact of raindrops, which causes the reduction of the filterability of the soil. The present study aims to investigate the hydrodynamic behavior of five types of soil taken from the plain of low Cheliff under simulated rainfall by using two intensities, one moderate, and others correspond to heavy rains at low kinetic energies. Experimental results demonstrate the influence of chemical and mechanical physical properties of soils on their hydrodynamic behavior and the influence of heavy rain on the modality of the reduction in the filterability and the amount of transported sediment.

Keywords : erosion, hydrodynamic behavior, rain simulation, soil
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