

Figures

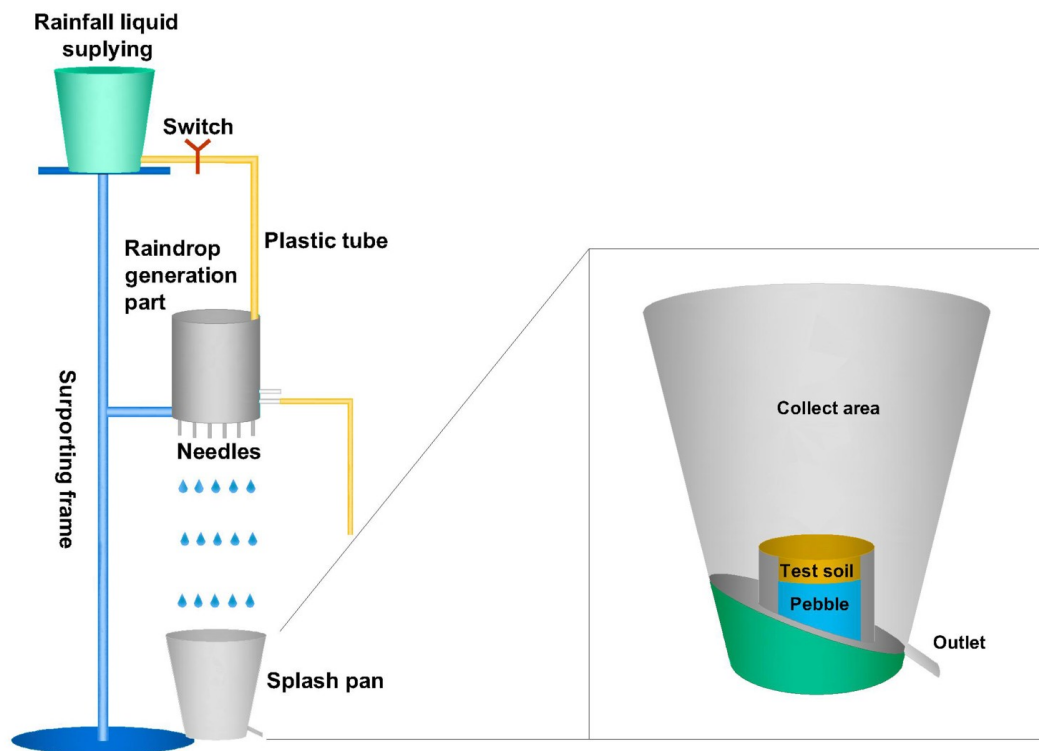


Fig. 1 Schematic representation of the experiment device

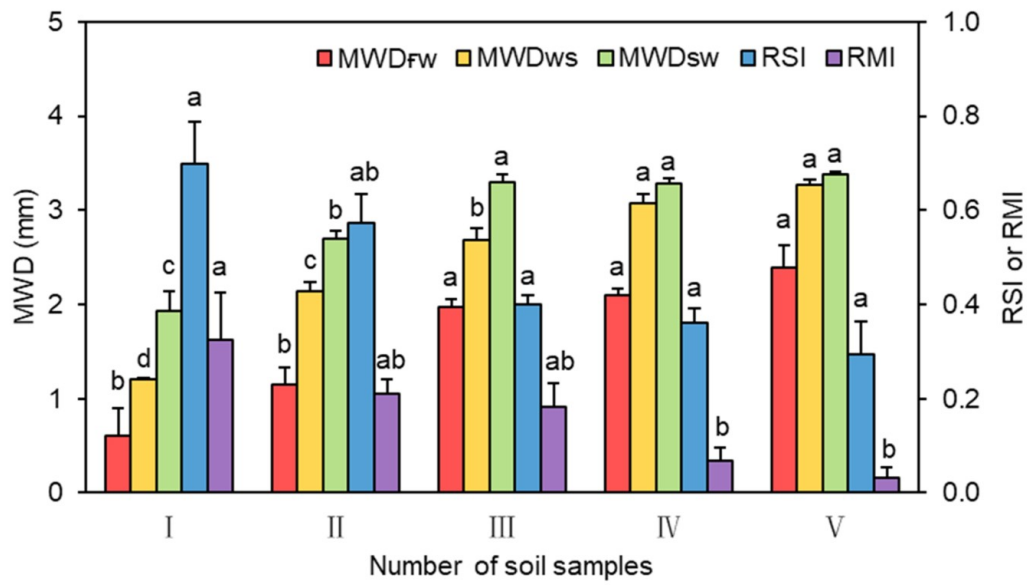


Fig. 2 Aggregates water-stability of five loessial soils developed from same parent material with different soil organic carbon (SOC) contents. The SOC contents of I, II, III, IV, and V is 7.54, 13.34, 14.85, 18.39, 21.69 g kg⁻¹, respectively. Different letters in the same set of data of the same color indicate significant differences at 5% level.

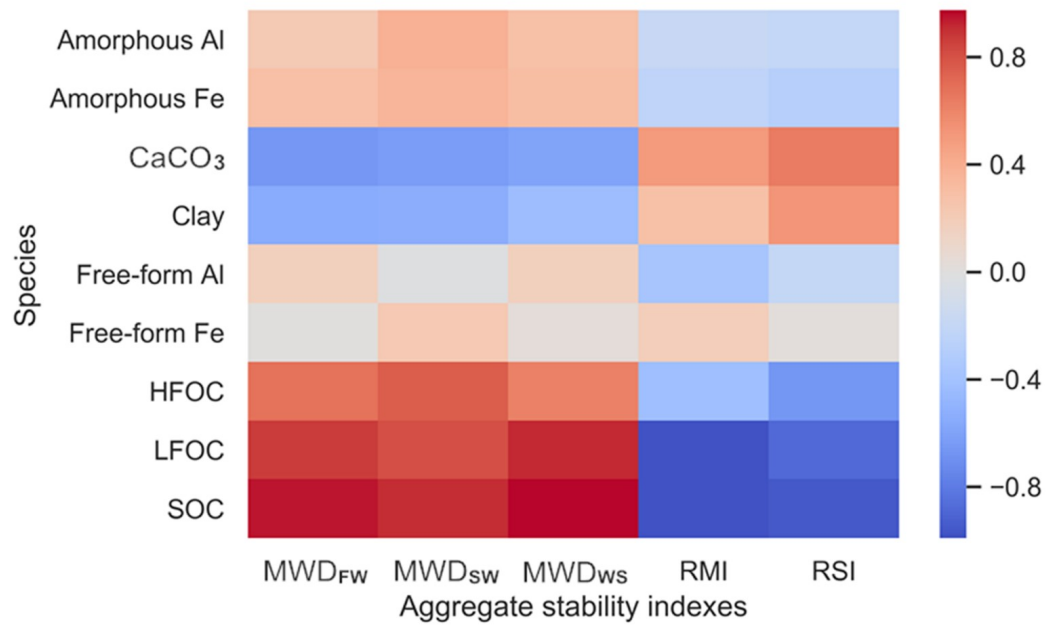


Fig. 3 Heatmap for the relationships between soil aggregate stability indexes and soil

properties. MWD_{FW} , MWD_{SW} and MWD_{WS} denote the mean weight diameters

obtained after the fast-wetting (FW), pre-wetting and stirring (WS) and slow

wetting (SW), respectively; RSI and RMI denote relative slaking index and

relative mechanical breakdown index, respectively; SOC, LFOC and HFOC

denote soil organic carbon, light fractions organic carbon and heavy fractions

organic carbon content, respectively.

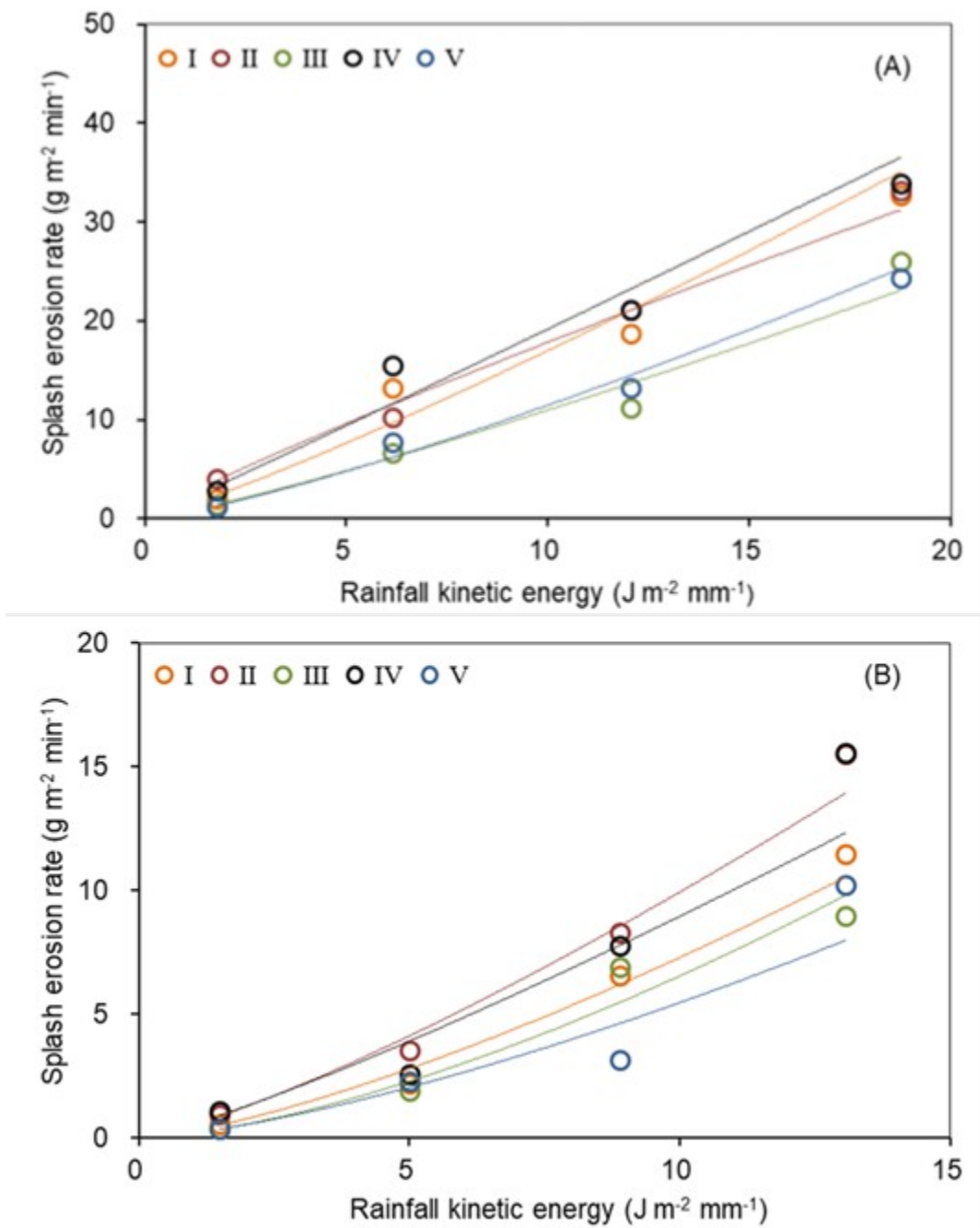


Fig 4 Relationships between rainfall kinetic energy of two kind of raindrops (A is deionized water; B is ethanol) and splash erosion rate. I, II, III, IV and V were five different tested soils, which were developed from the same 1 physicochemical properties and different organic carbon content because of different vegetation restoration time.

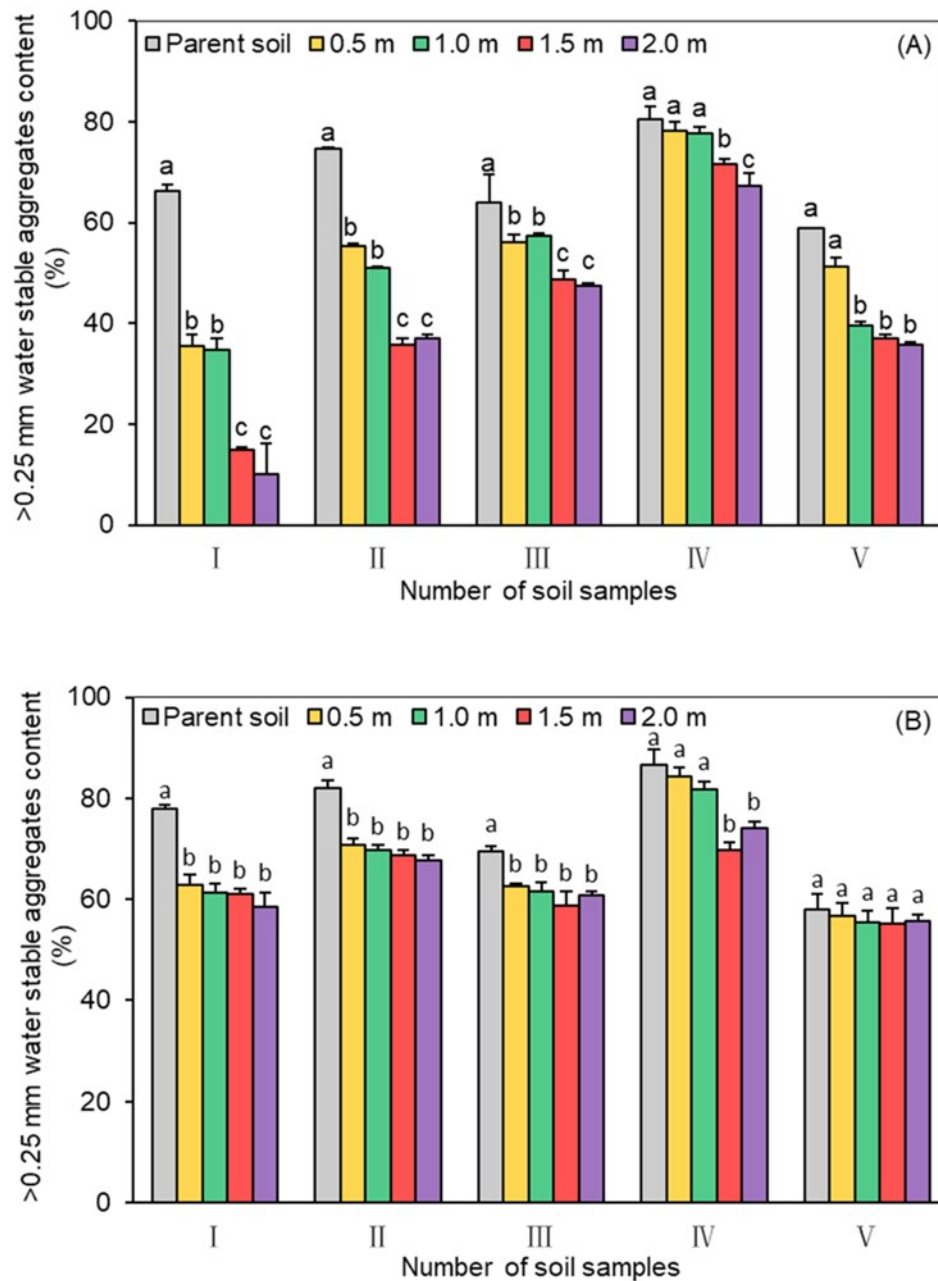


Fig. 5 The contents of macroaggregates (>0.25mm) in parent soil and topsoil remained in splash pan after rainfall at different height (0.5, 1.0, 1.5, and 2.0 m) with different raindrops (A is deionized water; B is ethanol). Different letters in the same group of each soil sample indicate significant differences at the 0.05 level.

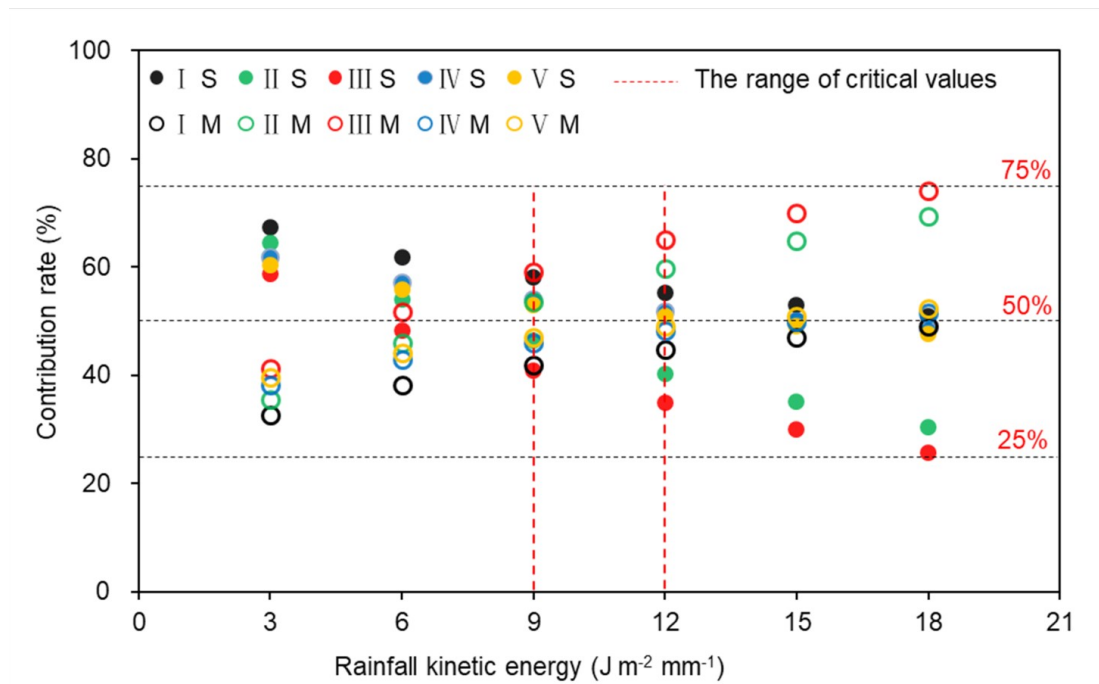


Fig. 6 Changes of contribution rate of slaking and mechanical striking (S is the contribution rate of slaking; M is the contribution rate of mechanical striking) to splash erosion with rainfall kinetic energy. I, II, III, IV and V were five different tested soils, which were developed from the same loess with similar physicochemical properties and different organic carbon content because of different vegetation restoration time.