



Aggregation effect of movement and fate of eroded organic matter in agricultural watersheds

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Selective erosion of soil has received substantial attention since it largely accounts for the enrichment of substances such as soil organic carbon (SOC) or phosphorous in sediments. However, recent research recognized the necessity to distinguish properties of eroded soil particles, even after non-selective mobilization by raindrop impact and runoff, according to their potential transport distances through a catchment. In theory, particle transport distance declines with increasing settling velocity. Settling velocity itself is determined by size, density and shape of particles. For eroded soil particles, these properties vary not only due to texture, but also aggregation and aggregate stability. The properties of the eroded aggregates (or their fragments) in turn are influenced by aggregation, e.g. the content of organic matter of individual particles. This leads in theory to a specific pattern of redistribution of the eroded aggregates according to their settling velocity in an agricultural landscape.