

Interactive comment on “Effects of wheat stubble on runoff, infiltration, and erosion of farmland in the Loess Plateau, China subjected to simulated rainfall” by Linhua Wang et al.

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Thanks for your suggestions. We are appreciate for anonymous referee #2 comments concerning our manuscript entitled "Effects of wheat stubble on runoff, infiltration, and erosion of farmland in the Loess Plateau, China subjected to simulated rainfall" (ID: SE-2016-163). We have studied comments carefully and have made correction. The main corrections in the paper according to the reviewer's comments are as follows:

The paper is fine and just need some improvements for the introduction to make more accessible for the readers of LDD.

Response: The introduction has been improved and added some LDD references as

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follows:

Line30-35: Soil and water losses from agricultural land, particularly sloped farmland, are regarded as major environmental threats to ecosystem sustainability on the Loess Plateau, China. Approximately 60% of the total watershed sediment and runoff is derived from sloped farmland due to natural and human factors, such as the precipitation intensity, geomorphology, and soil management practices, which all contribute to farmland degradation (Keesstra et al., 2016; Liu et al., 2012; Nishigaki et al., 2017; Zhao et al., 2016; Ziadat and Taimah, 2013).

Line 55-69: To reduce soil erosion from farmland, numerous studies have considered the roles of surface cover and soil management practices in conservation agriculture worldwide (Bescansa et al., 2006; Jordán et al., 2010; Prosdocimi et al., 2016; Swella et al., 2015; Won et al., 2012). Retaining a surface covered with a layer of crop residues is a suitable management practice for preventing soil losses and conserving rainwater on farmland. Thus, Gholami et al. (2013) and Kukal and Sarkar (2010) investigated the effects of straw mulch on soil erosion under laboratory simulated rainfall conditions, and concluded that straw mulch was effective in delaying the runoff initiation time, as well as reducing splash erosion, runoff and soil losses. Nishigaki et al. (2016) investigated the effects of vegetative residues on runoff and soil losses under field experiment condition, the results showed that surface mulch reduced soil losses caused by raindrop detachment and also suppressed runoff generation. Mwango et al. (2016) studied the effectiveness of mulching on soil erosion and nutrient losses, and found that mulches had greater potential in decreasing runoff, soil and nutrient losses and similar results were also observed by Wang et al. (2016) in the Jujube plot. Jordán et al. (2010) showed that the application of wheat straw mulch could improve the physical and chemical properties of soil, as well as reduce runoff and soil losses in cultivated land.

Interactive comment on Solid Earth Discuss., doi:10.5194/se-2016-163, 2016.

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