

Interactive comment on “Ecohydrological effectiveness of litter crusts in sandy ecosystem” by Yu Liu et al.

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The effect of Litter crusts on hydrological process in dry sandy ecosystem in China has not been well illustrated till now. This manuscript suggested that litter crusts had a significant effect on soil water holding capacity, water interception capacity, and infiltration through changing soil organic matter, soil porosity and bulk density. The importance of litter crusts is confirmed in this study. The experiments were well designed and data was thorough analyzed and interpreted.

The specific comments and suggestions are listed as follows:

Line 14-15: Please keep the decimal number in one form.

Line 36-41: Please add more restoration techniques including afforestation that could

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result biocrusts in this paragraph.

Line 49-53: Please change the sentences as “Afforestation can not only produce biocrusts, but litter crusts, which form by the litter . . .” I think this may be easy to follow the logic.

Line 78-79: Please use the same expression to describe the study area, i.e., arid areas, dry sandy, or wind-water crisscross erosion region. If use different expression, please give a clear explanation.

Line 114-116: Please move the definition to the place firstly used in the Introduction section.

Line 239-240: The phrases of “all these properties” and “all the changes” were not appropriate here. Please change them.

Line 298: what about other plant litter in the literatures, such as locust and pine? If possible, more information related to litter crusts could be discussed here.

Line 315: what is the relationship between percolate flux and rainfall intensity? Please make it clear.

Table 1: Please add the difference note among different depth.

Table 2: Please give a clear description of crust types and amount of water supply in the caption or as notes.

Figure 1: Please provide the location in figure caption.

Figure 4: What is the meaning of the ns in Figure A and B? It seemed that the dashed lines represent the average values or the changing pattern.

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