

Interactive comment on “Influence of slope aspect on the microbial properties of rhizospheric and non-rhizospheric soil on the Loess Plateau, China” by Ze Min Ai et al.

Anonymous Referee #1

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General comments The manuscript investigated the influence of slope aspects (south-facing, north-facing, and northeast-facing slopes, all with *Artemisia sacrorum* as the dominant species) on RS and NRS microbial biomass carbon (MBC) and phospholipid fatty acid (PLFA) contents, and the rhizospheric effect (RE) of various microbial indices. Using redundancy analysis (RDA) and path analysis, the authors quantified the driving factors controlling the rhizospheric soil (RS) and non-rhizospheric soil (NRS) microbial properties. I think the study is quite interesting, however, I think a total of 18 soil samples (3 sites × 3 plots per site × 2 soil types) were not enough for redundancy analysis, and the number of soil samples is not enough for evaluating the influence of slope aspect on the microbial properties of rhizospheric and non-rhizospheric soil, it

will be perfect to take more soil samples at different slope gradient. Overall I think the paper will be of interest to soil readers. However, it needs considerable work, though, before it's ready for publication in the field. That work includes better organization of manuscript (especially Introduction section) and more sampling for the results. More importantly, The English in the paper needs considerable editing. Here are some more specific suggestions to improve the manuscript in a revised version. Specific comments Lines 35: the first word "Slope aspect is an important topographic factor," is not incomplete. Line 55: the sentence "the angle between the ground and wind direction, which is defined as the orientation faced by a slope" can be deleted. Line 61-65: the sentences move to the behind of the first sentence of this paragraph, or suggest delete. Line 64- 69: the two sentences don't connect well. Line 68-72: suggest summarize these sentences. Line 70: unclear statement. Line 108-109: unclear statement. Line 121-122: unclear statement. Line 185: suggest "Impacts of slope aspects on. . ." Line 192: suggest "Impacts of slope aspects on. . ." Line 186-188: place the "Fig" in order. Line 232-235: unclear statement. Line 239, 245: "standardised path coefficients are shown in" suggest delete. Line 702: please give the full name of WSOC, SOC, SAP...

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Discussion paper

