

Initial response to CC1

Qianjin Liu (Community 1)'s original text in black with our initial response in blue.

This manuscript presented an important information on the change of soil and water loss in the mixed-cultivated grass land in alpine degraded hillsides, and the influencing factors were identified and interpreted in a detail. A minor revision needs to be performed before acceptance.

The detailed comments and suggestions are listed as follows:

We thank Qianjin Liu for his constructive comments on our manuscript.

Line 45: Please add the main human activities.

The main human activities are grazing, and this information will be added in the resubmitted manuscript.

Line 59: considered may be better than viewed.

The word “viewed” will be replaced with “considered” in the resubmitted manuscript.

Line 76: Please use promote instead of active.

The wording “living roots in topsoil resistance against concentrated runoff flow that activates soil loss (Zhang et al., 2013)” will be replaced by “living roots in decreasing soil detachment capacity by runoff (Zhang et al., 2013)” in the resubmitted manuscript.

Line 82: Please delete solid.

The word “solid” will be deleted in the resubmitted manuscript.

Line 104: Please provide a statement on mixed artificial grasslands and on temporal variations in soil and water loss after planning or seeding at other regimes.

The following information will be added to the end of the paragraph in the resubmitted manuscript: “This study aimed to (1) assess the temporal variations in soil and water loss of *DE*, *PE* and *PD* grasslands during the growing season and under natural rainfall; and (2) determine the key factors influencing the mixed-cultivated grasslands in controlling runoff and soil erosion.”

Line 125-126: Please move these kind of contents to the instruction section.

The sentence will be moved to the Introduction section in the resubmitted manuscript.

Line 154: solely?

This should have been “only” and will be corrected in the resubmitted manuscript.

Line 355: please give the temporal change of soil and water loss and the main reason.

The following information will be added at the end of the paragraph in the resubmitted manuscript:

“Planting the mixed-cultivated grasslands after ploughing loosened the soil structure and thus increased sediment concentration in runoff during the first stage after planting. Subsequently, sediment concentration decreased with the growth of the root system of the mixed-cultivated grasslands, strengthening the sloping soils due to the root architecture.”

Fig. 2b: Please have a check the capital letter for PE.

We have carefully checked and will revise the capital letter in **Figure 2** in the resubmitted manuscript.