Response to Jesús Rodrigo-Comino (RC3) to

preprint egusphere-2025-5908: "Comparative Analysis of Compact Portable and Indoor Rainfall Simulators"

As the third reviewer, and having read the previous reviews from my colleagues, I will not repeat the comments made by Prof. Dunkerley, with most of which I agree. I think these points need to be better justified in the manuscript in order for the paper to be published with solid scientific support. In addition, having worked with some of the authors in the past, and with some of these or similar equipment, I trust the effort made by the authors when carrying out each rainfall simulation, especially those using large-size simulators. However, I believe that in its current form the paper cannot be published in a high-impact specialized journal and requires major revisions.

Reviewer comments	Authors responses
"The title is too broad: what type of soils, rainfall intensity, and geomorphological conditions are being addressed?"	Thank you, we will consider. We did not address geomorphological conditions because the scope of the work was limited to evaluating the rainfall simulators, not measuring erosion on the plot.
"Regarding the abstract, the very first sentence is too strong. Rainfall simulators are useful, but not indispensable."	Thank you, we will rephrase it.
"I do believe there are standardized methods, but not globally for all simulators. The authors state that they aim to clarify aspects of field work with rainfall simulators, but they do not specify what exactly is still unclear."	Thank you, we will consider.
"Several statements about disdrometers and calibration procedures refer to well-known issues and do not seem novel."	Do you suggest we be more concise about these procedures?
"I miss references to studies where these simulators have been applied in real conditions, in order to better understand how they perform and what results they produce."	Thank you, we will incorporate the following studies: Gall et al. (2025); Riveras-Muñoz et al. (2025); Gall et al. (2024b); Gall et al. (2024a); Seitz et al. (2019); Seitz et al. (2017); Gall et al. (2022)
"I do not find it appropriate to include figures taken far from the simulator, as they do not show its components, the fieldwork, or schematic diagrams with its characteristics. I would even consider including videos as supplementary material to validate the work and address some of the issues rightly pointed out by other reviewers. For example, in Figure 3, neither the simulator nor the soil surface can be seen."	Thank you for the input. This is very helpful insight.
"Not describing the soil type and its initial conditions is, in my opinion, a major flaw, as it	We did not describe the soil type because the scope of the work was limited to

prevents a full understanding of the experimental setup."	evaluating the rainfall simulators, not measuring erosion on the plot.
"The statistical analysis could be expanded slightly, including information on the libraries used and even the code to reproduce the figures, since the paper is presented as a study that should be reproducible by other researchers"	Thank you, these will be included.
"I do not fully understand why the figures are not properly numbered, for example Figure 8 (a, b, c)."	Thank you, we will revise them.
"There are many citation typos, likely related to Zotero or Mendeley, including missing references."	Yes, this has been noted by the other reviewers. Thank you.
"Personally, I do not like the black-and-white figures, particularly for the heatmaps, and I wonder whether this could be improved."	We initially prepared coloured figures for a heatmap of rainfall intensities, but after deciding to present it as deviation from the mean, we thought a coloured scale could be misleading.
"The discussion relies heavily on old references, and I do not clearly see the development of what is stated in the abstract and objectives, namely guiding authors towards standardized work and protocols. The objectives may need to be reformulated."	Thank you. We will consider this to better align with the proposed objectives.
"I have included additional comments and annotations in the PDF, specifically in the sections where I believe changes are necessary."	Thank you, we will note those.

.Gall, C., Nebel, M., Scholten, T., and Seitz, S.: The effect of mosses on the relocation of SOC and total N due to soil erosion and percolation in a disturbed temperate forest, Frontiers in Forests and Global Change, 7, 1–11, https://doi.org/10.3389/ffgc.2024.1379513, 2024a.

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Riveras-Muñoz, N., Seitz, S., Gall, C., Rodríguez, V., Witzgall, K., Kühn, P., Mueller, C. W., Oses, R., Seguel, O., Wagner, D., and Scholten, T.: Biocrusts as Climate-Dependent Regulators of Erosion, Water and Nutrient Cycling, Available as Preprint at SSRN, https://doi.org/10.2139/ssrn.5188208, 2025.

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