Dear authors,

Thank you once again for sending your interesting manuscript to SOIL.

Based on the two reviews and your answers to the reviewer comments, you should rework the manuscript. The paper needs a minor to major revision while addressing all reviewer comments.
Authors (AC): We would like to thank the Topic Editor for appreciating our work and for the valuable comments which further improved the quality and the clarity of our manuscript

In addition to the points raised by the reviewers, I would like to point out a number of aspects:

(i) Terminology: be more precise with the used “erosion” terminology, e.g. what is a “fragile soil” in the context of erosion; there is a defined term describing the soil susceptibility to soil erosion (“soil erodibility”); the term “plots” for the small soil containers used for the rainfall experiments is somewhat misleading.
AC: The “erosion” terminology used was partially modified thanks to the Referees and Scientific Community comments. In addition, we agree with the Topic Editor and we changed the terms “*plots”* and “*micro-plots*” to “*soil tray”* or simply “*tray*”

(ii) Parameters used to compare the different soils: I have some doubts if macroporosity is a good parameter for small, disturbed soil samples (even if incubated for 6 months) without any soil macro fauna. The same is true for bulk density (is this representative based on your experimental set-up?). Using these to determine potential differences between soils at least needs some discussion of the suitability of the parameters.
AC: Thanks for this point. We agree that in this experiment the comparison between soil types can be tricky. Therefore, we chose to compare the two treatments (i.e. soil contaminated or not with polyester MP fibers) only within each soil type. The comparison between soils was avoided as much as possible

(iii) In soil science literature, water-stable aggregates are typically much smaller than > 600 µm (see e.g. aggregated hierarchy Six, J. et al.). So, you need to discuss how representative these large aggregates are to represent typical water-stable aggregates. Note: In erosion research, water-stable aggregates are important to estimate the erosion, transport, and deposition behavior of soils. Mostly it is assumed the larger aggregates are either not transported with water or are destroyed due to rain drop impact etc before being eroded.
AC: We decided to use this approach since our starting soil was sieved at 600 µm and, therefore, all the aggregates above such size were built *de novo* during the incubation period. In our opinion such information can provide valuable insights into the effects of polyester MP fibers on the formation of new aggregates and their stability in water in different soil types.
In the revised manuscript we provided a justification for our choice in the “Material and Method” section as follows: “*As the soil at the beginning of the experiment was sieved at 600 µm, this metric represents the formation of new macro-aggregates (> 600 µm) certainly built from smaller size aggregates representing a shift in aggregate size distribution*”

(iv) As pointed out by one of the reviewers, it would be good if you would broaden your discussion. What do your findings imply for larger scales? Are these transferable? Are the used fiber concentrations reasonable?

AC: As suggested by the Reviewers, we widely revised the “discussion” section including parts concerning the implications and the transferability of our results to a larger scale. As far as the contamination level, we justified our choice in the “conclusion” section as follows: “*Although the current MP contamination level in agroecosystems is some orders of magnitude below the concentration applied in our experiment, in some areas, it is steadily increasing (Büks & Kaupenjohann, 2020); therefore it is of key importance to investigate such contamination levels which may represent future scenarios, as is common practice in global change biology.*”.

Best regards,
The Authors