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Interactive comment on "Relation of aggregate stability and microbial diversity in an incubated sandy soil" *by* F. Büks et al.

Anonymous Referee #3

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General Comments

1. The introduction to the discussion paper focusses too greatly on biofilms, composition and formation and bacterial composition with little or no discus of aggregate stability (the aim of the paper being to relate the former to the la Aggregate stability is determined by both biotic and abiotic factors and this sh

be commented upon.

2. The authors use sonication to disperse aggregates and then measure the rel of organic carbon (OC) as a measure of aggregate stability. I am not familiar any studies which state that aggregate stability can be measured by the q tity of OC released. The authors refer to Kaiser & Berhe as the basis for method, but in this paper Kaiser & Berhe do not state their approach is a m to measure aggregate stability. Aggregate stability is typically measured by cessive reduction in particle size (typically mean weight diameter) of aggreg not by reference to the quantities of OC released. If it were possible to sh strong linear relationship between aggregate size and OC released then it n be possible to infer aggregate stability, but I do not consider the current appr in the discussion paper to be a measure of aggregate stability. The authors n to justify their approach in the context of the published literature on aggre stability.

3. The language and grammar used in the paper requires a considerable am of revision before the paper could be accepted for publication. I have sugge several amendments in the technical corrections but there are many more this.

3. I was not convinced by the evidence that biofilms are formed as a reactic ecological stress - the citation referred does not relate to this. Please prc clear evidence/citation to this association.
4. What statistical significance can we place on results with only three replicate
5. Line 219 - 'were separated' - how were the aggregates separated?

Technical Corrections

1. Correct spellings are: therefore, proteins,
2. use mineral, not inanimate
3. line 177; create, not receive
4. line 206; addition, not add-on
5. line 217; it is not clear what soil parallels are - please clarify
6. line 264; statistical analysis
7. line 340-341; it is not clear what is meant by 'but between the two and SP_{pu}
8. line 480; Our hypothesis was not supported by the data.