

Dear editor and authors,

The m.s. by Gümüő and Őeker is an important attempt to utilize SMC improving soil physicochemical properties. The importance lies in re-use of SMC to reduce its negative environmental impacts as disposals, and also in improving soil properties. The authors detected significant changes in soil properties in the significant region of central Anatolia, Turkey which suffered from soil degradation. I appreciate the work done. After reading this m.s., I suggest to give hypotheses based on the information listed in the Introduction, separate the result and discussion part, and formulate the discussion by telling people if the hypotheses were supported or rejected. Only in this case, the story would be clear, and the m.s. would be cohesive as a whole. Below are my specific comments, and please feel free to follow or ignore them.

Title

Maybe better to re-phrase into ‘Effects of spent mushroom compost application on...’?

Abstract

Line 13: aims to explore

Line 14: properties of a weak-structured and degraded soil

Line 15-17: maybe better if rewrite as ‘The approach involved establish a pot experiment with spent mushroom compost applications into soil (control, 0.5%, 1%, 2%, 4% and 8%). The soils were incubated at ...for 21, 42, and 62 days under laboratory conditions’.

Line 15: plot or pot?

Line 16: use abbreviation of SMC

Line 17: what does ‘field capacity’ mean?

Line 20: delete ‘were’

Line 21: at all sampling date?

Line 23: ‘ameliorates the increase of’ is a wrong expression. Also, information of soil aggregation was not concluded in here.

Line 24: replace ‘spent mushroom compost’, better not use the same words as the ones occurred in title

Introduction

Line 27: to sustain

Line 39: what do you mean by ‘soil are among the degradation factors....’?

Line 43: suggest to remove ‘and structural’ as physical properties of soil include soil structure.

Line 59-60: why give the number of 2009 instead of 24 years ago?

Line 68-69: grammar issue for ‘the effects of SPM application to degraded soil with ...’

Line 69: lack related information why you study ‘the modulus of rupture’ and ‘electrical conductivity’ in the Introduction.

Line 68-70: better to come up with hypotheses based upon the information provided in Introduction. And let us know if hypotheses were proved or rebutted in the Discussion. In this context, you can make your paper cohesive.

Materials and methods

Line 72: suggest to delete ‘problematic’ as it’s confusing

Line 78: double check if Fulivent is the right name

Line 99: So these three soil samples of each treatment were from three respective pots?

Line 120: Maybe, the statistical analyses should be embedded into the Materials and methods section.

Results and Discussion (not sure if Solid Earth require the separation of Results and discussion)

Line 125: Delete this sentence.

Line 126-127: ‘after 21, 42, and 62 days incubation periods’, weird expression

Line 125-127: The description of AS measurements should be mentioned in the Materials and methods section.

Line 127-128: Only say significant is like telling people nothing. Is it increase or decrease? I suggested delete this kind of sentences when depicting your results.

Line 129-131: I am sure that your readers won’t buy this kind of explanation for enhanced AS as affected by SMC.

Line 132: 'as those studied was expected to follow...' unclear expression

Line 133-135: it's an interesting result as listed, but what's the reason for it?

Line 136: better not use 'seem', may replaced by 'was suggested to'

Line 137: 'factor in determining soil aggregate stability'

Line 137-139: maybe better if combined these two sentences into 'Soil organic matter was suggested to be the most important factor in determining soil aggregate stability as significant positive relationships between these two parameters (Refs.).'

Line 139: what you mean by 'after the incubation period'?

Line 141-143: this statement is similar to what? You're stating mechanical mixing decreased AS in the previous sentence. So, a logical leap here between these two sentences.

Line 149: delete

Line 151: 'In general,...' why you come up with this statement. It contradicted with your previous sentences as the 62nd was exceptional.

Line 155: what's SPC?

Line 154-156: do you mean the formation of soil aggregates was inhibited? This contradicted to previous result of the increase of AS (which means increase of soil aggregation). If not, please clarify you statement.

Line 161: what you mean by decrease particle in soil? The free primary particles, like clay and silt particles?

Line 164: 'breakdown of soil decomposition' is incorrect.

Line 171: delete the 1st sentence

Line 172: elevated with increased SMC application

Line 172: delete 'according to investigation soil'. Also please indicate the figures or tables that you are referring to.

Line 188: again, useless sentence

Line 189: 'investigation performed at incubation periods' this kind of phrases could be deleted, as readers would know these statements were based on your results. But please label the text of which figure you were mentioning.