

# ***Interactive comment on “Effects of Spent Mushroom Compost on Physicochemical Properties of Degraded Soil” by İlknur Gümüş and Cevdet Şeker***

## **Anonymous Referee #3**

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Overall evaluation Although the content of the study is relatively simple, the results were evaluated well and explanations regarding to findings successfully discussed recent literatures. Spent mushroom compost (SMC) is becoming serious waste problem in Turkey because of increasing production amounts year by year. That's why these kind of studies related to the use of SMC in agricultural soils will be benefit for sustaining agricultural fields in which low organic matter content of soils is one of the factors reduce agricultural production. Abstract Two more explanations can be added in abstract section as related to SMC's growing waste problem and explanation about EC values of mixtures added SMC. “Shows” should be show in line 12. “Plot” should be pot in line 15. Introduction In this section, the importance of organic matter on soil qual-

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ity and soil degradation has been discussed well in rain fed conditions like the study area soil. On the other hand, SMC should be emphasized that it is growing waste problem for mushroom producers. Additionally, giving information about preparation and contents of fresh compost will be useful to evaluate the findings in the manuscript. Materials and methods Percentages of sand, clay and silt should be given as integer such as 7 and 59. Initial total nitrogen content of the study soil should be presented in Table 1. Results and Discussion Finding less aggregate stability values in mixtures at 42 and 62 days compared to 21th day needs to be explained and supported with literature. Legends of figures need to be changed. They are currently difficultly understood. Instead of color, different characters can be used in bars. High EC values in mixtures added SMC results from initial high EC value of SMC. This effect cannot be attributed to organic matter degradation. SMC addition to the soil at the rate of 8% cause nearly 4 dS/m EC value. Nevertheless initial EC value of SMC is shown as 4 dS/m. That's why initial EC value of SMC needs to be checked. It is possibly over this value.

Increases in total nitrogen contents of SMC added mixtures are explained with nitrogen mineralization in mixtures in lines 218-225. But total nitrogen contents are given in manuscript and mineral nitrogen forms are not given. Increases are directly related to SMC's initial high nitrogen content (%2,61) Sentence given in line 129 and 130 is not understood. There is impairment sentence. SPM should be SMC in line 153. SPC high possibly will be SMC. If not the acronym needs to be explained. Density word should be after "particle" word in line 159. Organic matter words should be after "soil" word in line 161. "Doe" should be corrected as due in line 162. Conclusion Before SMC applying to the soil, water leaching process can be suggested by authors in this section in terms of decreasing soluble salt content of SMC, if it is used high rates. References This section is rich enough with recent literatures.

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