

Interactive comment on “Comparison of wheat and safflower cultivation areas in terms of total carbon and some soil properties under semi-arid climate conditions” by B. Turgut

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Thank you very much for your kind comments on our manuscript. The following are our responses to your comments:

C1: The aim of the manuscript is to compare the soils devoted to wheat and safflower cultivation in the semiarid climate zones in respect to some of their physical and chemical properties, with particular attention given to their TC content. However, TC was analyzed as the other properties and the effect of each treatment to store carbon is not clear in this manuscript.

R1: The results showed that, despite low organic matter content in the wheat cultivation area, total carbon was greater than safflower cultivation area. This situation was explained by the physiological characteristics of wheat and literature. This information was given in “Results and Discussion” and “Conclusion” sections of manuscript. While there is plenty of literature on total C of wheat cultivation areas, we did not come across any study on total C of safflower cultivated lands.

C2: In the study area, some extra information related land management in the area need to be included to understand the result and discussion.

R2: In both cultivation areas conventional tillage (moldboard plow followed disk harrowing) had been used and chemical fertilizer had been applied for 20 years. The soil at both sites is classified as Fulvic Calcisol. This information in accordance with your suggestions and will be added to “Materials and Methods” section.

C3: Figures and tables need to be improved in order to better understand the information contained.

R3: Figures and tables will be rearranged according to your suggestion.

C4: Some real photos of the study area could help to build a better mental image.

R4: It was not photographed when the soil samples was taken, but if it is necessary we can add photos of the current state of the study areas.

C5: Many properties are included in this manuscript. This could be the cause that some topics in the discussion have been treated in a superficially way and the information provided is the same as other authors have found before. I recommend to the author focalize the data in the relationship organic matter, total nitrogen and aggregate stability and analyze in depth the decomposition rate and absence of differences with soil profile.

R5: In order to identify the soil properties, soil samples were taken from 0-10cm and 10-20cm depth. Therefore differences of soil properties throughout soil profile could not identified. Also, relationship between organic matter content and total nitrogen and aggregate stability was explained with organic matter decomposition rate in “Results

and Discussion” and “Conclusion” sections.

Interactive comment on Solid Earth Discuss., 7, 1007, 2015.

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