

Interactive comment on “Soil organic carbon in the Sanjiang Plain of China: storage, distribution and controlling factors” by D. Mao et al.

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This paper reported the storage of SOC in the Sanjiang Plain of Northeast China by averaging the data of 419 soil profiles. This study should be interesting for some readers. What I concern is how authors evaluate the influence of fertilization on SOC. In the section of Materials and methods, authors did not show detailed information. I guess that authors just compare the data of SOC with the application rate of fertilizer on the county scale. This may mislead because the history of cropland also significantly affected the level of SOC. How authors excluded such effects. Meanwhile, English grammar is poor and English native speaker should be invited to improve the text. Also please write in concise sentences. Anyway, this paper is worthy to be published. Thus, I recommend it for publication after revision.

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Some comments are as follows: 1. In the section of Abstract, authors should give some data to support the findings; 2. P14767, L9, "to be 70.31 PgC (1 Pg=1015 g)". This value is too low, please cite data from GCB paper (Xie et al., 2007); 3. P14767, L20-23, add references; 4. P14773, L5, "for the three depths (30, 60, and 100 cm) were". These are wrong, should be 0-30, 0-60, 0-100 cm. 5. P14772, L5, "The SOC content at a given depth is calculated from the soil organic matter in individual layers and by use of the Bemmel index (0.58). T_i is the thickness of the i th soil layer." I can not understand this sentence because authors measure the SOC rather than SOM. So authors do not need first convert "SOC" into "SOM" and then convert "SOM" into "SOC". Please delete it. 6. P14775, L12-15, this paragraph should be moved to the section of Discussion; 7. P14776, L5-, these sentences are necessary here? 8. P14781, L7-9, please discuss about the influence of fertilizer on SOC more detailedly.

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