

## ***Interactive comment on “Land-use change effects on soil quality in Montilla-Moriles DO, Southern Spain” by M. Martín-Carrillo et al.***

**Anonymous Referee #1**

Received and published: 18 March 2013

This manuscript deals with land use change effects on soil organic carbon and nitrogen in a semi-arid Mediterranean agricultural area in Southern Spain, between 1965 and 2011 (46 years). Results show that land use change affected negatively to soil organic carbon and nitrogen contents. In contrast, soil quality (measured as the stratification ratio) was significantly increased. This research is interesting for the scientific community and falls into the scope of SE. However, some revision is necessary before the manuscript is ready for final publication. First of all, the title does not inform adequately of the research carried out and the important questions in the manuscript. I suggest changing the title to: “Impacts of land use change in soil carbon and nitrogen in a Mediterranean agricultural area (Southern Spain)”. In my opinion, results here are widely interesting. So, discussion of results should not stick to a particular area, although the experiments were carried out at farm scale. Results must be put in a

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more general context. The use of the stratification ratio as a quality index should be discussed by authors, as some conclusions are shocking: it is difficult to understand that soil carbon and nitrogen decrease when soil quality increases. But research is OK, so authors must insert some discussion about the limitations or controversy of this methodology.

A PDF file with detailed comments has been attached for the consideration of authors. The manuscript is good and worthy publishing in SE after revision.

Please also note the supplement to this comment:

<http://www.solid-earth-discuss.net/5/C47/2013/sed-5-C47-2013-supplement.pdf>

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Interactive comment on Solid Earth Discuss., 5, 163, 2013.