

## ***Interactive comment on “Lime and zinc application influence soil zinc availability, dry matter yield and zinc uptake by maize grown on Alfisols” by S. K. Behera et al..***

**Anonymous Referee #1**

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The article is of limited scientific merit for publication in "SOIL".

Some suggestions are given below:

1. Introduction. - It is not clear as to where the research is leading to: the problem of soil acidity regarding to crop production? Zinc-deficient soils for crops? the combination of acid soils and zinc-deficient soils? You should clearly define the starting situation that generates the need for research and avoid redundancy in drafting the text. - The evaluation of the different Zn-extractants is not relevant for this research, although this assessment could be the subject of another more specific work. - Objectives should be reworked once the problem has been well defined (and also the title of the article, according to them). What relevance does the assessment have of the effect of the

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application of farmyard manure on the soil OC content (since OM was added)? (as well as the influence of lime application in pH). This is not relevant.

2. Materials and methods The experiment was in pots, of which the diameter was not indicated, although the weight of soil was. However, the added amount of farmyard manure was expressed in t/ha. You should indicate the amount (g) of FYM applied to each pot for to know the nutrients (i.e., Zn) added to the soil with FYM as you are evaluating Zn extraction by crop (and by extractants) by varying Zn and lime doses. What type of farmyard manure is it? The results of chemical analysis indicate FYM: OC 0.12

3. Results - Irrelevant results were included (e.g., adding farmyard manure increased the soil OC, the addition of lime increased soil pH, ..., adding Zn (and FYM) to soil increased Zn concentration in plant) - No critical levels of Zn in soil and/or plant tissues were indicated. Was the concentration of Zn in plants for unfavorable treatment below the critical values (literature)? Was there observed Zn deficiency symptoms in the plants with lower Zn concentration? - The Figures presented are redundant (and unnecessary), since data are also shown in tables. The Tables do not clarify the results of statistical analysis (comparison of means). The differences observed between means of the different treatments should be indicated by adding the corresponding letter (a, b, c...) to each mean value.

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