Review Report Form

**Open Review**

( ) I would not like to sign my review report  
(x) I would like to sign my review report

**English language and style**

( ) Extensive editing of English language and style required  
( ) Moderate English changes required  
( ) English language and style are fine/minor spell check required  
(x) I don't feel qualified to judge about the English language and style

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| --- | --- | --- | --- | --- |
|  | Yes | Can be improved | Must be improved | Not applicable |
| Does the introduction provide sufficient background and include all relevant references? | ( ) | (x) | ( ) | ( ) |
| Are all the cited references relevant to the research? | ( ) | (x) | ( ) | ( ) |
| Is the research design appropriate? | ( ) | ( ) | ( ) | (x) |
| Are the methods adequately described? | ( ) | ( ) | (x) | ( ) |
| Are the results clearly presented? | ( ) | ( ) | (x) | ( ) |
| Are the conclusions supported by the results? | ( ) | ( ) | (x) | ( ) |

**Comments and Suggestions for Authors**

I appreciate the interesting location and the pedological assessment. The paper has several significant formal flaws. Please use only SI units in the article (do not use "Mg"; or "cm"). The text is not properly divided into chapters. Evaluation of the influence of mechanization is unacceptable. Their technical parameters determine the influence of tires on soil properties. The design of your observation does not allow this! The terms "in-the-wheel-track (IT)" and "outside-the-wheel-track" (OT) are unacceptable. You can replace "places with frequent crossing" and "places without crossing".

“Mg” and “cm” corresponds to SI units and are formed with the base unit plus a prefix that indicate “*n* to the power of 10 times” and are used to avoid the writing of very long or very short numbers.

**Abstract:**

·         It is not clear what new things you have discovered.

·         Line 12: "intensive tillage" - replace "intensive"

Thank you so much, it has been replaced for “conventional tillage”

**Introduction:**

·         Line 34: "other Mediterranean regions", what do you mean by "other"? "Mediterranean" - this term is used to refer to the region around the Mediterranean Sea. Consider replacing this term in both the text and the title. It will be good to avoid confusion.

The name comes from the Mediterranean Sea but is applied to other regions that share characteristics (mostly climatic, but with a long-term influence in vegetation and soil, among other thing) as California, Australia or as in this case, Chile. So, we decided to keep it due to that is the way how is referred in other publications of the same project.

·         Line 75 "excessive tillage" - how do you understand the term "excessive"?

Dear reviewer, we took this comment into account. The concept has been changed to “long-term repeated tillage” to improve the comprehension of the text.

·         Define hypotheses. It is not clear what you expect. The title shows that you want to evaluate the variability of selected properties. Please include it in the hypotheses. Considering your methodology, goal (i) is unacceptable.

**Materials and Methods:**

·         Lines 109 – 110: It is necessary to describe the entire technology of growing corn.

Thanks for the comment, a detailed description of the managements has been included between the lines 108 – 113 including plowing, irrigation, fertilization and the moments to do it.

·         Line 112: You cannot prove this. If you don't use GPS navigation and even then, it's questionable.

Dear reviewer, thanks for the feedback, we agree on that, and we really appreciate the suggested way to modify it, so we incorporate it. We described the treatments as “places with frequent crossing of machinery (+M) and places without crossing (-M).”

**Results and Discussion:**

·         I recommend dividing it into two chapters

Dear reviewer, thanks for the comment. We decided to take your suggestion into account, and we separated the Results and Discussion in two chapters. We kept the content, and we added some additional sentences to make the independent parts coherent by themselves.

·         The text blurs the differences between your results and the quoted data.

We hope to accomplish this comment by the separation of the text as indicated before.

**Conclusions:**

·         Write only your most important findings!

·         Line 511 – 512: "This directly affects soil functionality, limiting the ability of the roots to reach water and nutrients, reducing maize yields, but this effect could be eliminated through deep ploughing." - are these your results?

**English errors:**

**Line 40:**..making difficult an straightforward comparisons.. A straightforward

The comment has been included

Submission Date

25 August 2022

Date of this review

07 Sep 2022 17:29:56