

Interactive comment on “The effects of tillage methods on soil aggregation and crop yields in a wheat-corn rotation under semi-arid conditions” by Hossein Tabiehzad et al.

Anonymous Referee #2

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Review comments on solid Earth Discuss10.5194-2017-13 The effects of tillage methods on soil aggregation 1 and crop yields in a 2 wheat-corn rotation under semi-arid conditions Dear Editor, This study has merit but I'm afraid this present document needs to be thoroughly reworked before publication is granted. There are many issues for this paper to reach the level of international publications but I feel this is feasible providing the authors dedicate enough effort on it. The first issue concerns the fact that any new research should convince on its novelty and this can only be done by (1) acknowledging the existing literature on the subject; (2) discussing the existing finding and identifying research gap(s); (3) clearly stating the research objectives. From the first few sentences of the abstract, it can easily be seen that the papers does not provide this kind

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of information. The introduction section is also lacking presenting what has been done on the impact of tillage on grain yield and soil properties. The writing is not precise enough with main grammatical issues. The first sentence of the abstract below does not sound scientific: “wheat-corn two-course rotation system on the some soil aggregation properties and yields were investigated” what is “on the some soil aggregation properties” what type of “yields” is it about? Below are some tips With best regards

Abstract Abstract 14 In this study, the effects of different tillage methods under wheat-corn two-course rotation 15 system on the some soil aggregation properties and yields were investigated. Experiment 16 was laid out in a split plot design with three replications during four crop years. Subsoiler, 17 moldboard, sweep and chisel as main plots and rotary tiller and disc harrow as sub-plots 18 have been used in this study. The results showed that tillage methods were significant at 19 ($P < 0.01$) as regards crop yields, and the highest yields as 6249 and 11720 kg/ha for wheat 20 and 9891 and 73080 kg/ha for corn grain and biomass were produced in subsoiler treatment, 21 respectively. Subsoiler+rotarytiller treatment was significant at ($P < 0.05$) with 2.063 mm as 22 to mean weight diameter (MWD) value. The subsoiler and chisel were statistically in the 23 same group with regard of water stable aggregates (WSA) value, and it was significant at 24 ($P < 0.05$) with 67,83%. Bulk density, total porosity and air porosity values were significant at ($P < 0.01$), and 1.38 grcm-325 , 51.2% and 12.5% values were determined in rotary tiller 26 application, respectively. Field capacity (FC) and permanent wilting point (PWP) were 27 significant at ($P < 0.05$) and ($P < 0.01$) with 31.89% and 17.21% values in the chisel 28 treatment, respectively. Crop yields and positive effects on the physical properties were 29 considered subsoiler+rotary tiller treatment was the most successful, and it was followed by 30 chisel+rotary tiller treatment according to four-year study results.

Tips for scientific writing There are many different ways of writing an abstract and an Introduction. This depends on the academic subject involved, the journal itself and the specific topic of the article. It is important for the purpose of the research that

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authors can identify the patterns used in abstracts of comparable articles published in the same area, and for journals that authors might write for. Abstract A. Topic sentence (s) on the subject (its importance) and research question(s): what is(are) the research gaps in this field of research? B. Objectives of the study C. Materials and methods used in the study D. Main results (with quantitative information, tests of significance) E. Conclusions: how these results respond to the objectives; general implications of the research

Introduction sections A. Presenting the background of the subject; B. Indicating the importance of the research on the subject; C. Acknowledging what has been done so far on the subject by referring to existing research studies and reporting ones; referring to methods and ideas associated with other researchers; D. Pointing to a gap in knowledge of the subject; E. Selecting research objectives F. Explaining the organisation of the research;

Discussion section may fulfil one or more of the following functions: A Presenting background information B Summarising what was (not) done C Explaining why it was (not) done D Evaluating the method(s) or model used E Statement of result(s) F Explanation of result(s) – why and how it happened G Implication of the result(s) – what it does, or does not, imply H Making reference to previous research I General statement of interpretation J Elaboration of interpretation K Discussing implication(s) of the interpretation L Rejection of interpretation M Acceptance of interpretation N Making a recommendation O Stating the limitations of the data P (other)

Conclusions A. Remind of research objectives B. Statements of general findings C. Statements of specific and significant finding D. Statement of overall trends with respect to what was known prior to the study E. How well do results respond to initial gaps, research questions F. Making predictions; recommendations.

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