



SDI Review Form 1.6

Journal Name:	Journal of Experimental Agriculture International
Manuscript Number:	Ms_JEAI_42681
Title of the Manuscript:	Adjustment of Sampling Grids for Soil Penetration Resistance, Bulk Density, and Soil Moisture Mapping
Type of the Article	Original Research Article

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This journal's peer review policy states that **NO** manuscript should be rejected only on the basis of '**lack of Novelty**', provided the manuscript is scientifically robust and technically sound. To know the complete guideline for Peer Review process, reviewers are requested to visit this link:

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PART 1: Review Comments

	Reviewer's comment	Author's comment (if agreed with the reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)
Compulsory REVISION comments	Lines 11-26, 104-108 and 115-120 are a direct translation from Cherubin et al 2015 http://www.scielo.br/pdf/pab/v50n2/0100-204X-pab-50-02-00168.pdf It would be appropriate to give credit to the work that is being quoted even if the current authors are the same as those from 2015. Indeed, in line 260 a shorter translation erroneously has kept the Portuguese acronym CDR instead of the English RDC. It would be interesting to know the reason for the choice of 0-20 cm depth. The variation of penetration resistance with depth was quite variable dependent on the crop used: https://www.researchgate.net/publication/285420197_RESISTENCIA_DO_SOLO_A_PENETRACAO_EM_AREAS_SOB_O_SISTEMA_DE_INTEGRACAO_LAVOURA-PECUARIA-FLORESTA_NA_REGIAO_AMAZONICA?enrichId=rgreg-ccfc10f0c7f5088202541b5c12b23181-XXX&enrichSource=Y292ZXJQYWdlOzI4NTQyMDE5NztBUzozMDE5ODcxMzkxMjkzNTFAMTQ0OTAxMDc1Mjc4MA%3D%3D&el=1_x_2&esc=publicationCoverPdf How would that influence the generality of the conclusions? In line 137, the term "size of sampling grid" is equivocal. Find a better term e g sampling point density. The difference min-max can hardly be statistically significant across sampling point density which will be shown if a test is applied to that difference; for instance the double standard error of the mean value for 60*60 m is respectively .0.24, 0.05, and 0.42 while the difference of means to 40*40 m is respectively 0,27, 0.03, and 0,51. The text thus is not supported by the data. Reuse of texts probably from the same authors is suggested under Compulsory comments above. This would be acceptable if the reference in some form is made to the previous text.	All suggestions were accepted and the author's name (Cherubin et al 2015) was included as a reference in these sections. Soil sampling was performed at the 0 – 20 cm layer depth due to the highest volume of the root system of annual crops, and the greatest physical and chemical changes in soils under conventional tillage system take place at this depth. Thus, in case of high levels of SPR at this depth, it would decrease the rate of water infiltration, and consequently, affect root development, and reduce the yield potential of the agricultural system. Regarding the third topic ("The difference min-max) there was a misunderstanding on the text as we were trying to say that denser grids show a more detailed representation of the SPR spatial variability, whereas less dense grids tended to soften up the map by approaching to the mean values
Minor REVISION comments	The weblinks of all references should be checked. On my sample checking, links could not be established for references 2 and 3, and no link was given for reference 5 even though it is available There is some error in the reference list where an extra digit 1, 2, or 3 is added for references 7, 14, and 42, respectively. Please remove In Equation 1 explain Z. In Equation 2 state the summation range (1 to n?) In Table 1, Sk values are entered but kurtosis is explained as Ck The English is very good but there are some small errors, for instance in lines 282 where "between" is ambiguous and line 285 where there is both unclarity about the back reference of "which" and about what is really meant by the second "area". A careful proof reading could reduce the number of these minor errors.	All suggestions were accepted and the changes were made by the authors. However, no link (DOI) for reference 5 (6 now) is available on the web. If the reviewers need to access the manuscript, it is available at: https://www.udc.es/files/iux/almacen/articulos/cd36_art10.pdf
Optional/General comments		