

Interactive comment on “Sensitivity of water stress in a two-layered sandy grassland soil to variations in groundwater depth and soil hydraulic parameters” by M. Rezaei et al.

Anonymous Referee #1

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This is a very interesting paper focusing on the sensitivity analysis of modelling tools used in agricultural studies and applications. The manuscript is well-written and clearly structured and perhaps a bit lengthy and with a possibility to be reduced in size in some areas; language used is appropriate for the scope and scientific context on which this study belongs to. The objectives of the paper are clearly set and the materials and methods adopted in the study are also well-described. Some suggestions I have for the consideration of the authors to further improve their manuscript before it is accepted for publication include:

• In model calibration: o Include a justification of why this particular period was
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included for the model calibration. Also, make a statement (in the results section perhaps?) of the effect it could have on the final study results the selection of a different time period. Similarly also for the time interval selection of 2h which was chosen. • Model evaluation and statistical analysis: o Why only those specific statistical metrics were selected? I feel a stronger justification needs to be provided there. • In results & discussion: o I would like to have seen a more in-depth discussion on the potential implications of this study results in regards to the models' use in the future and also on how those results here agree with previous SA studies on the same models. Also, I think it would be of great value if the authors could underline a bit more the limitations inherited in their LSA (e.g. in contrast to a GSA, e.g. how about interactions between input parameters?) and on the potential impact of that on generalising the results reported in this study in regards to the models' future use by the users community of those models.

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