

Interactive comment on “Impact of climate, vegetation, soil and crop management variables on multi-year ISBA-A-gs simulations of evapotranspiration over a Mediterranean crop site” by S. Garrigues et al.

Anonymous Referee #1

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The authors use the ISBA-A-gs land-surface model to address the question of the impact of different forcing variables on the simulated evapotranspiration. In this study the impact of cropland management by irrigation is considered additionally to the climate and surface characteristics. The number of performed simulations for a time period of 12 years allows to evaluate the sensitivity of the evapotranspiration from the land-surface model for the Mediterranean crop site.

Overall assessment of the manuscript: Scientific significance: Good (2), Scientific quality: Good (2), Scientific reproducibility: Fair (3), Presentation quality: Fair (3).

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The paper could be improved if the following concerns are addressed by the authors:

1. Please remove the unnecessary duplication of descriptions in the introduction, the model section, results and discussion sections.
2. A small map of the field site helps the reader to get an impression of the location.
3. I suggest to summarize the ISBA model properties in a table.
4. The evaluation metrics with table 4 alone is too abstract for the reader. Here some scatter plots could help to see the distribution of ET values in the different simulations. It would be nice to see also other time scales, e.g. monthly and seasonal values.
5. The results section "Impact of soil texture" is rather short. It could be enlarged by a comparison of the results with results of other long-term simulations (e.g., Smiatek et al., 2015, DOI: 10.1127/metz/2015/0594).
6. Furthermore I suggest to combine the sections "Results" and "Discussion" to avoid duplication and to extend the discussion of the results in comparison with long-term simulations, e.g. Guillod et al., 2013 (<http://dx.doi.org/10.1007/s00382-012-1395-z>)

Minor comments:

1. Please check spelling in Table 1. "radiation"
2. The fonts in figures 4 and 6 are rather small compared to the other figures

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