

Interactive comment on “Influence of feedbacks from simulated crop growth on integrated regional hydrologic simulations under climate scenarios” by P. E. V. van Walsum

P. van Walsum

paul.vanwalsum@wur.nl

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A revised version of the manuscript is available at ftp://ftp.wur.nl/simgro/doc/Articles/SIMGRO-WOFOST_20120302.pdf All references to figures or tables are to the new version mentioned above.

Reviewer #2 The reactions to comments are numbered the same way as the reviewer.

- 1). We included in the Discussion section a sensitive analysis as suggested by the reviewer, using the relationship given by the suggested reference Jayantji et al. 2007
- 2). We have restructured and rephrased Section 2.

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3). P10156, L21-22. Interception evaporation is the evaporation from the canopy. We assume that when the interception evaporation is active the air moisture content will be high, and thus suppress other forms of evaporation of the transpiration. This is included in the completely revised text. The interception model is described in Appendix A of the new text.

4) P10158, L7. The use of the Makkink method is already elaborated on in our reactions to Reviewer #1.

5) P10160, L13-14. The whole procedure of obtaining parameters using WOFOST is now described in detail in Appendix B.

6) P 10161, L1-4 The description has been completely revised.

7) P10161, L6-13. This paragraph is used as justification for the used grassland interception capacity.

8) P10161, L21-23. The interception capacity is determined by calibration on the amounts mentioned in the paper, e.g. the interception of grassland. See the results reported for 0.25 mm/LAI in Appendix B. Note that we now use a rainfall sampling interval of 1 hour, which gives different calibrated capacities than the interval of 1 day that was used in the first version of the paper. Interception is a fast process.

9) This was indeed not justifiable, the capacities have now been made the same. A sensitivity analysis is reported for the uncertain capacity in Section 4.3.2 new text.

10) P10163 L2 The location of the Kromme Rijn area is indicated in the NL-map in the top left hand corner of Fig. 5. It was there before too, but rather vague.

11) P10165, L3-5. This introduction focuses on the red thread of our results.

12) P10166, L4. “ Second half of summer” has been replaced by “ mid-July - September”

13) Technical corrections - for “nett” : see our reaction to Reviewer #1. - P10188, wrong

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code in caption has been replaced, thank you for mentioning. - lines have been made more distinct.

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