

The authors would like to thank the reviewer and editor again, for their quick reply on our revised manuscript submission.

**Please address the following comments from a second review by one of the original reviewers. I agree with the reviewer's comment about extra figures in response letters. Please include these figures in either the main text or in supplementary material.**

Answer: The two extra figures have now been added to the manuscript (Fig. 4 and Fig. 7).

**Many of my original concerns have been addressed adequately by the authors, but a few points remain.**

**A) I'm still not convinced by the generic crop approach. I understand the reasoning given in the answer (page 4 of the response letter), but the modifications of the text do not even mention the choice of a generic crop in the model setup. Also, I do see a mismatch between the evaluation (performance analysis) done here (which suffers from mismatches in crop parameterization) and a – hypothetically anticipated – data assimilation (where such mismatches may be eliminated by parameter updating or state updating). So how is this addressed here? I see no clear justification of this choice in the introduction/methods nor a discussion of the implications later on.**

Answer: Clarifications have been added in the abstract, methods and discussion, to emphasize our choice for the generic crop.

L8-9

“The setup with a generic crop is chosen as a baseline for a future satellite-based data assimilation system.”

L73:

“The assumption of a generic crop will for example lead to inevitable biases.”

L196-197

“Spatial and temporal gaps of information at the ~1-km resolution prevent the inclusion of a more detailed crop parameterization. Furthermore, this research is focused on capturing relative temporal variation in biomass (not yield) for future use in a data assimilation system, a generic crop was developed and used for the entire domain. It is expected that regional differences of crop productivity from different crops will be corrected for via future data assimilation.

L414-415

“Furthermore, applying crop specific parameters to the crop file would most likely result in better biomass and yield simulations, which would mainly improve the temporal bias and spatial performance metrics.”

**B) The tuning to 30% (L187-190) needs to be either clearly declared as value arbitrarily chosen or a reference for the recommended range that is hinted at needs to be provided (and then the 30% need to be deduced from that).**

Answer: This value was chosen in discussion with AquaCrop developer Dirk Raes after manual calibration. It is therefore not completely arbitrary but supported by expert knowledge. The explanation in the text has been changed to:

L191-192

“..., which is a setting recommended by expert knowledge of the AquaCrop source code developers

**C) I generally disagree with the strategy to provide extra figures in response letters only. Assuming that other readers may have similar questions, they should be presented the same evidence not only the reviewer who is able to ask for it. If you deem these figures too unimportant to be included in the main text, please supply them in a supplement (or similar).**

Answer: The two extra figures have now been added to the manuscript (Fig. 4 and Fig. 7).