Comments to the author:
Dear authors,

I read the revisions and your replies to the review reports and am satisfied with the improvements you made to the paper - both in the content (especially Appendix F), and in the organization of the paper.

Dear Editor,
Thank you for the fast handling of the manuscript and the helpful suggestions. Please find our answers below as blue indented text.

I have the following minor comments that I would ask you to take into consideration:

l. 42: Plant water status is not a scalar. It can therefore be changed, but not increased.
We changed it to: "NRW inputs can increase the amount of water in plants (Limm et al., 2009; Munné-Bosch and Alegre, 1999) and change thereby the plant water status, which can lower plant water stress."

l. 93: Soils are unsaturated most of the time, otherwise they would not be soils.
We deleted "unsaturated soils".

l. 234: Comma after completely?
We added a comma after completely.

l. 354: A wet soil can be nearly or fully saturated. I have never seen 'heavily saturated' before.
We changed it to: "fully saturated".

l. 519: When you fix the origin of a linear fit, the correlation coefficient looses its meaning (although I cannot easily explain why – but you have a mathematician among you)
We agree, and the reason for not mentioning the R^2 in this context is due to the fact, that Pearson's linear correlation coefficient assumes normal distribution of both variables for which the correlation coefficent is calculated, and when forcing a regression through the origin, the origin is mostly too far away from the data that the assumption that the data points (including the origin) ist not necessarily fullfilled. In our application the origin was close enough to report R^2 (but we agree that it shows an artificially high R^2 of 0.98 and we do not object to remove that information.

l. 911: volumic -> volumetric
We changed it to: "volumetric".

l. 912: When a soil becomes unsaturated, the pressure head becomes the matric potential.
We added: "The relation between the unsaturated hydraulic conductivity k, the volumetric water content θ and the pore-water pressure head ψ (matrix potential) can be described by the following formula." In Zhan et al. 2016 they used "pore-water pressure head" and we picked up this terminology.

l. 913: You do not declare gamma until much later in the appendix. What do the asterisks of z and t signify?

We added: “Where γ is the slope angle (0° with our ML), z_* is the axis perpendicular to the slope, and t is time.”
z is the vertical axis; the calculation was performed perpendicular to the surface and thus z_* was used as surface-normal axis (or perpendicular to the slope).
The asterisk of the “t” was a wrong punctuation mark. We deleted it.

l. 916 and below: I think the air-entry value should be subtracted from the matric potential. You want the term exp(psi – psi_sub_ae) to be equal to one at the air-entry value.

We agree and that is also how we modeled the drainage flow. In Eq. (F6) the air entry point is subtracted from the matric potential (in the denominator), thus in line with what the Editor expects.

Appendix F. You switch fonts at some point and use upper case Greek. From the text it appears this is not intentional.

Thank you, we corrected it.

When you have addressed these, the paper shoud be ready for publication.

Yours sincerely,

Gerrit de Rooij
Editor