



SDI Review Form 1.6

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| Journal Name: | International Journal of Plant & Soil Science |
| Manuscript Number: | Ms_IJPSS_27701 |
| Title of the Manuscript: | Analysis of hydraulic resistance of soil surface seals in relation to sediment particle size |
| Type of the Article | Original Research Article |

General guideline for Peer Review process:

This journal's peer review policy states that **NO** manuscript should be rejected only on the basis of '**lack of Novelty**', provided the manuscript is scientifically robust and technically sound.

To know the complete guideline for Peer Review process, reviewers are requested to visit this link:

(<http://www.sciencedomain.org/page.php?id=sdi-general-editorial-policy#Peer-Review-Guideline>)



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PART 1: Review Comments

| | Reviewer's comment | Author's comment (if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here) |
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| <u>Compulsory</u> REVISION comments | <p>general comments :</p> <p>It's a short and interesting papers largely inspired from the 2015 Tuffour and Bossu paper but nevertheless with some too approximate descriptions of the methods and some amazing results or calculations.</p> <p>Theory.</p> <p>Equation 5 need to be completed by definitions of the different parameters ρ_f, ρ_γ, g, w ...</p> <p>In equation 6, can V_s be calculated or measured and how?</p> <p>In equations 6 and 7, definition of D.</p> <p>Materials and methods</p> <p>lines 82 to 88, some sentences are directly copied/ from Tuffour and Bossu. The parameters of infiltration tests and suspension characteristics may be presented in a recapitulative table.</p> <p>In fact there is no description, no quantitative characteristics and no origin details about the soil used (or column) for the infiltration test whatever about measurement in situ or simple modeling. This is the main lack of the method description. we need to have indications about density, (mineralogy) texture, and porosity network or at least distribution of pore sizes...Independently of the viscosity of the infiltrating suspensions, the shapes and sizes of the "porosity network" constitute the basic parameters of (1) infiltration</p> | <p>Parameters in equations 5, 6 and 7 as spelt out have been duly defined.</p> <p>Sentences in lines 82 to 88 have been paraphrased. Soil samples collected for the study have been described.</p> |



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| | <p>rates and (2) particle deposit.</p> <p>Try to inform the lector about these characteristics of natural or modeled media and about the initial hydraulic conductivity of the media.</p> <p>Results and discussions</p> <p>Table 1 : It is amazing to have exactly the same results in the Clay suspension and silt suspension parts.</p> <p>What about the infiltration rates ? (Tuffour and Abubakari (2015) [Effects of. water quality on infiltration rate and surface ponding/runoff. Applied Reseach Journal]. The calculation of the infiltration rates evolution with time might be a good transition to reach your hydraulic resistance diagrams (and may be to explain the mechanisms of surface sealling.)</p> <p>In fact the paper is lacking of relationship between material description and results : lack of particle size domain of clay, silt and sand suspensions and lack porosity characteristics of infiltrated soil. It would constitute some arguments about the very small seal thickness obtained.</p> | <p>Reference has been made to Tuffour and Abubakari (2015) on the issue of infiltration rates.</p> |
| Minor REVISION comments | | |
| Optional/General comments | | |