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SDI FINAL EVALUATION FORM 1.1

PART 1:

Journal Name:	**International Journal of Plant & Soil Science**
Manuscript Number:	**2013_IJPSS_6870**
Title of the Manuscript:	**Irrigation strategies for optimizing water table contribution to soil moisture storage and water use of pepper in a humid tropical zone of Nigeria**

PART 2:

FINAL EVALUATOR'S comments on revised paper (if any)	**Authors' response to final evaluator's comments**
I think the MS in writing has improved a lot, but there are still many misunderstandings in calculation of the ET and each components of the water balance, which lead to the unreliable results in the MS. I suggest that the author could just write a paper about the irrigation scheduling on the yield performance of this crop, not involving the crop water use. You didn't have enough data to do such calculations. 1. Table 2a, what's the unit of the root length? Is it cm/plant? If so, the root length data is not correct, with a root weight of over 60 g/plant, the root length would be much higher than the some 20 cm. 2. Table 2a, from the value of the water use efficiency (WUE) in the table, it was the irrigation WUE. But for irrigation water use efficiency calculation, it shoulb be IWUE=(yield with irrigation-yield without irrigation)/irrigation amount. 3. What's the unit of the Leaf area? Is it cm2/plant? If so, the plant had a very small leaf, only with a leaf area several cm2. When did the data collected? The errors are regretted. The unit is m^2 4. Table 2b, how the water use efficiency for the non-irrigated treatment was calculated? 5. Table 3, what's the unit for the ET, was it daily value or for a growing period? The values of ET reported were daily values 6. If ET0 was the reference ET in this MS, the ratio of ETa/ETo was the crop coefficient (Kc). The values in the table 3 and table 4 were not correct. 7. The MM section didn't provide information about the measuring some parameters in the tables. **New comments:** **1. I think the MS didn't revise as my previous suggestions. You have two paramters ETa and Cg unknown in the water balance equation, how could they be calculated correctly? In the paper sometime ETa was calculated from ET0 multiplied by Kc, some time it was said calculated from the water balance equation. How exactly was it estimated? From the available data, it would be better just delete all the eqations, and simply say that ETa was estimated by ETo multiplied by Kc, and Cg was estimated use the water balance equation. Equation 1-8 could be just simplified as one equation.** **2. ETa/ETo could not be defined as relative water use.** **3. What's the unit of SWD? Please carefully check all the units in the tables. (Table 2b, units were misplaced for the last two parameters).** **4. Soil water potential data need to be carefully checked.**	**Thank you** The length of the tap root was measured and the unit of the root length is cm/plant The error is regretted The errors are regretted. The unit of leaf area measured is m^2 Irrigation water use efficiency (WUE)

Note: Anonymous Reviewer