



SDI Review Form 1.6

Journal Name:	Journal of Agriculture and Ecology Research International
Manuscript Number:	Ms_JAERI_21622
Title of the Manuscript:	Prediction of unsaturated hydraulic conductivity of agricultural soils using artificial neural network and c#
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>)



SDI Review Form 1.6

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)
Compulsory REVISION comments	By considering the number of selected input parameters for ANN, 8 total data is too low to have an accurate model. Considering 3 data used for test of the model, only 5 has been left for training purpose. I recommend to run more tests. It can also be considered to reduce the number of selected effective parameters. Based on the data shown in Table 6, you can decide which parameters had less effect on hydraulic conductivity and may possibly not be included for next analysis.	First, we would like to thank the Reviewer for his valuable comments. Due to limitations of the experiment, only, 9 data points were utilized to train ANN model and 3 data point not used in the training process was utilized in testing ANN model. We think all used parameters are effective as they are affecting hydraulic conductivity as recommended in literature.
Minor REVISION comments	- The corresponding data of Figure 2 is not provided in the paper. I recommend removing this figure since it is not providing any information. - The intervals of the reading of water level during the mini-disc infiltrometer test should be specified and the reason for selecting them needs to be explained. - Order of the equation's numbers should be corrected. Equations 1 and 2 are misplaced. Also equation 12 is missing. - Please provide more explanation and a reference for equation 13. - Not all of the data provided in table 2 is clear. - In page 6, it says 9 data were gathered which should be corrected to 8 data.	- The corresponding data of figure 2 is not provided in the paper. I recommend removing this figure since it is not providing any information. <u>Answer:</u> This figure indicates how the parameter C1 is calculated. So, we recommend including this figure since in the manuscript. - The intervals of the reading of water level during the mini-disc infiltrometer test should be specified and the reason for selecting them needs to be explained. <u>Answer:</u> We follow the mini-disc infiltrometer manual in the experiment for such soil textures.



SDI Review Form 1.6

		• Order of the equation's numbers should be corrected. Equations 1 and 2 are misplaced. Also equation 12 is missing. <u>Answer:</u> We re-arrange the numbers of equations in the manuscript to be 15 instead of 16. • Please provide more explanation and a reference for equation 13. <u>Answer:</u> This formula was used to normalize all inputs and output data to be in the range of 0.15-0.85 and it is provided by the software. • Not all of the data provided in table 2 is clear. <u>Answer:</u> Table (2) described minimum, maximum, standard deviation, coefficient of variation to describe the variables (inputs and output) as listed in Table (2). • In page 6, it says 9 data were gathered which should be corrected to 8 data. <u>Answer:</u> The training data set was consisted of 9 data appoints and this clear in the manuscript
<u>Optional/General</u> comments	• The grammar of the paper needs to be improved. • Quality of some of the figures need to be improved.	• We re-check the grammar of the paper. • All figures are clear except Figure (4) due to it extracted from the used software.