Review of: "Assessment of Quality, Bacterial Population and Diversity of Irrigation Water in Selected Areas of Minna, Niger State, Nigeria"

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Potential competing interests: No potential competing interests to declare.

As a reviewer for the article entitled "Assessment of Quality, Bacterial Population, and Diversity of Irrigation Water in Selected Areas of Minna, Niger State, Nigeria," I have some comments and suggestions for this paper.

1. The abstract needs to be improved following the scientific method of writing (introduction, purpose, method, results & discussion, conclusions, and recommendations) since it is a short summary of your paper.
2. The impacts of bacteria on agriculture need more clarification in the introduction.
3. Please try to improve your paper, particularly the introduction section, using recent studies and avoid the old references by replacing them with nearly recent references.
4. You use FAO (1995) to set a standard for irrigation water, and you put it in the aims and objectives section. However, there are more recent and detailed scholars and standards for irrigation water, even by FAO. Therefore, replace it with a more recent study and put it in the materials and methods section.
5. Map your study area, land use types of your study area, location points for your water samples, and describe the type of water sources.
6. Water sampling and analysis need to be improved because there are some water parameters that need to be measured in the field (in situ) and some parameters that can be obtained from the relation (association) of other parameters' concentration (for example, Total Hardness-TH, T.A…). But your sampling and analysis didn't mention the method/equation you applied.
7. In your abstract, ‘’**… Kpakungu, where water samples were collected at 3 points from the water sources and mixed together to represent the locations’’,** in this sentence, the sample from the mixed water may not necessarily be representative of the three water samples; instead, it may form mixed water that is quite different from those previous waters in its physical and chemical characteristics due to the mixing effects.
8. Improve the results and discussion section by supporting it with recent references.