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.

Congratulations on your hard work. There was too much effort to achieve this research, indeed.

There is a table called (**Standard for Irrigation Water**). You should check the unity values (EC dS/m^3; nitrate, total dissolved solids, and chloride mg/l^3).

Also, I think it is confusing in the study area in this: “The average annual temperature is 27^{0}C (80.7^{0}F) with an average monthly temperature of 5.3^{0}C (9.5^{0}F).” Average annual 27°C and monthly average 5.3°C? This data must be confirmed.

During your research, bacterial cultures were biased to obtain enteric or pathogenic bacteria instead of any bacterial strain. It is not a negative issue, but you may point to this fact. I understand you used untreated wastewater and this kind of water has lots of pathogenic bacteria, but you may search for nitrogen-fixing bacteria, or phosphorus-solubilizing bacteria, or any soil-beneficial bacteria like *Pseudomonas putida* or saprophytic ones.

Anyway, you should inform the reader that you are studying pathogenic bacteria.

Please look at Table 4:

Mechanic Village instead of “mechanic village”

TDS instead of (TDS)

Total hardness (mg/l) instead of Mg/l

EC mS/cm instead of mohms/cm

Total alkalinity (mg/l) instead of Total alkalinity(mg/l) (Same in Chloride)

About the conclusion:

No bacterial qualities were mentioned; you are discussing about quantity.

Which is the water with less pathogenic bacteria? Why is Soje A sample the less populated with pathogenic bacteria (Table 3)?

“In conclusion, the highest bacteria population was recorded at Fadikpe, and it was significantly different from the bacteria population at other locations (Table 3). The location with the highest bacteria diversity was Chanchaga, followed by Mechanic Village and Soje-A (Table 3). Chanchaga irrigation water was the most suitable, recording the lowest values of water properties measured, apart from the Biochemical Oxygen Demand.”

This data is very interesting, but it is not the conclusion; those are results. What do those data mean?