Review of: "Determination of Evapotranspiration and Crop Coefficients of Irrigated Legumes on Different Soil Types Using the FAO56 Approach"

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Potential competing interests: No potential competing interests to declare.

In the abstract portion it is better to include a sentence stating key management practice, data collection and key methods

2.2, and 2.4 can be merged

In 2.3, text highlighted should be removed in the material and methods and could have some place in the introduction part or result and discussion.

In 2.6, the first paragraph “Among all methods, the Penman-Monteith equation has been recommended by the Food and Agriculture Organisation (FAO) as the standard method for the computation of ETo, especially under arid conditions (Allen et al., 1998). Adesogan and Sasanya (2023) also recommended the method, since the PET values obtained from it closely related with measured PET values from class A pan” should be removed and can use result and discussion.

In 2.7.1 the first sentence is unnecessary and sentences after the foot note” I was considered to be equal to zero before and after irrigation as at when needed, P is zero during the cultivation period, the groundwater table in the study area is not close to the soil surface, therefore capillary rise from groundwater G was zero. Runoff and deep drainage were zero, since the right amount of irrigation water without permitting excesses.” Seems misplaced .It shall be better to put in the result section,

In 2.7.2 , equation 15 needs citation

In 2.8, the first paragraph” The crop coefficients (Kc) values represent the integrated effects of changes in leaf area, plant height, crop characteristics, irrigation method, rate of crop development, crop planting date, degree of canopy cover, canopy resistance, soil and climate conditions, and management practices (Allen et al., 1998). Each crop will have a set of specific crop coefficient and will predict different water use for different crops for different growth stages (Irkman, 2008).” Shall be removed here and optimized in introduction part and equation 16needscitation.

Result and Discussion

2.5, 2.6, and 2.7.1 needs some kind of result

In 2.3, nothing is said about particle size analysis, moisture content, and last paragraph” The investigation on total

nitrogen, total phosphorus, cation exchange capacity, calcium, magnesium, and potassium content were carried out on collected soil samples to determine the soil nutrient level and to inform the need for fertilizer application to planted crops. The total nitrogen was determined according to the O'Dell (1993) method. The total phosphorous was determined using the colorimetric, ascorbic acid, two reagents (1978) method was used. The Cation Exchange Capacity (CEC) is a measure of the number of ions that can be adsorbed in an exchangeable fashion, on the negative charge sites of the soil (Bache, 1976). The Cation Exchange Capacity was determined according to (Bache, 1976) method which is known as the ammonium acetate extraction Method. Calcium, magnesium and potassium were determined using the calcium chloride extraction method described by Houba et al. (2000).”

Conclusion

There is no developmental stage in table 5 and it creates an ambiguity on conclusion of paragraph two

REFERENCE

(Djaman et al., 2020). Is not referenced

“Galvack, R., D. Horneck, and R. Miller. 2005. Plant, soil and water reference methods for Western Region. Western Region Extension Publication (WREP) 125, WERA-103 Technical committee” is not cited in text

Nedumaran, S., Abinaya, P., Jyosthnaa, P., Shraavya, B., Rao, P., & Bantilan, C. (2015). Grain legumes production, consumption and trade trends in developing countries. Working Paper Series, 60, 64. is not cited in text

Vallejos, 2018 is not found in the reference section.may be to be said “Vallejos, J. (2008). Hydrostatic compression model for sandy soils. Canadian Geotechnical Journal, 45(8), 1169–1179. doi:10.1139/t08-048” ?

Finaly i recomend the paper to be published with modifying the issue listed above!!!!