Review of: "Integration and Implementation of Multiple Soil Sensors for Automated and Regulated Irrigation"

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Potential competing interests: No potential competing interests to declare.

This manuscript addresses a relevant topic as multiple soil sensors arranged in a wireless system in view of managing irrigation practices in crop plants. Much of the manuscript is dedicated to the description of the data acquisition and transmission components, fields in which I do not feel sufficiently competent to comment. However, once the performances of this system are described in a comparison with standard soil sample laboratory analysis, major inconsistencies arise. For several soil parameters, the comparisons rely on a limited number of coupled data (7 in moisture, 12 in temperature, and 4 in pH, total N, available P, available K, and ECa). Except for R^2, the other comparison metrics (RMSE, NRMSE, and MAE; MBE and MSE need to be described in the Materials and Methods) with the given datasets return different values with respect to those shown in Tables 3, 5, 7, 9, 11, 13, and 15. In the case of soil pH, data ranging from 38.69 to 71.84 are shown, which are absolutely inconsistent with the pH of any substance. Lastly, in the Discussion, a new series of figures (Figure 26a - h) is shown, which is based on the same data previously shown in tables and appears, therefore, substantially redundant.

Owing to this, this manuscript, in my opinion, cannot be published as a scientific work and shall be rejected. However, in case the authors succeed in amending the above-described main drawbacks and some minor mistakes reported in the annotated PDF, manuscript re-submission may be envisaged for the peer review process to assess the strength and the value of the new manuscript.