

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.

Overall: It is an important research article, but necessary improvements are required. This paper can probably be substantially improved by addressing the following issues:

Abstract: Looks fine, but authors should reduce the last 6-7 lines and provide a very concise statement about the outcomes and implications of the study.

Introduction: Looks fine as well, but a few matters should be addressed:

1. The objective of the research probably should not be stated in the first paragraph of this section.
2. The line above Figure 1 should be merged with the text of the next paragraph.
3. The statement of the first specific objective (a) is not presented clearly. It needs to be replaced with a clear sentence.

Methodology: This section is probably larger than the reader's expectation, possibly due to the inclusion of large figures and their general descriptions. However, I have a few general and specific suggestions for the authors as follows:

General comments:

1. Authors probably can put all these figures, especially the hardware information, into a newly created appendix section.
2. They should also reduce the descriptions of the hardware, as this information is most probably available from the manufacturers.
3. If they do so, this section would be concise, and readers can easily understand what was done and how it was done.

Specific comments:

1. In the first paragraph, all three sentences start with "The System"; please revise if possible.
2. In the first paragraph, authors only mention the system's operation mode about irrigation, but the question is how about the other parameters?
3. The quality and size of the diagrams/flowcharts need to be checked and replaced with better ones.
4. In section 2.6, authors stated "would be developed or would be collected, or would be taken" for the description of their test and evaluation strategies. This study has already been conducted, and it is the methodology section of this study; therefore, the use of the phrase "would be" probably needs to be avoided.

Results: In general, the presentation of the results section needs to be revised. It appears to be merely a section with a

few tables. Most importantly, these tables, such as various "error matrix" tables, can easily be merged to produce a much better and consolidated table, along with explanations for improved presentation. The authors can also produce figures for their results.

Discussion: Overall, it looks much better; however, there are still a few minor mistakes in the figures that need to be adjusted. For example, " moisture content," the use of brackets for the word "measured," and the use of capital or lowercase letters, such as "Measured" or "measure."

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