- Brief summary

The article is presented in the form of a Technical Note, referring to a tool for automating the processing and treatment of drone images, with the aim of simplifying and automating the creation of information.

- General concept comments

The Introduction section presents the state-of-the-art of the topic, the gaps in knowledge, and the objectives of the study.

The Materials and Methods section need to be revised in terms of the order of reference for Figures and Tables.

The authors presented five case studies: i) thresholding; ii) evolution of vegetation indices over time; iii) detection of lodging; iv) combining multiple sensors and index optimization; v) leveraging a deep.

According to:

i) Thresholding

In the case study they present, they explicitly state that working with field images (such as barley) is different from identifying green tobacco leaves on a table.

They do not make it clear whether automation is completely possible in the case of field images or not. Various GLI index value hypotheses are presented, but it is not known whether DRONE2REPORT chooses the best GLI value, whether it is the operator who chooses (and has to make several attempts), and whether the best image is generated in the end. The final result is very much open!

Reorganising the text will greatly improve the manuscript.

ii) evolution of vegetation indices over time

This subchapter is very poor, not only in terms of the content explaining the process itself and the interpretation of the results, but also from an agronomic point of view.

This subchapter is very poor, not only in terms of the content explaining the process itself and the interpretation of the results, but also from an agronomic point of view.

It could benefit from further study, for example, of the two approaches to calculating vegetation indices.

iii) detection of lodging

The results are presented in a very vague manner! More specifically, the fact that the height begins to decrease does not mean that the crop is lodging. Especially in the case of barley, the peak height may signify the moment when the flag leaf and spike is erect, but the subsequent decrease may signify the moment when the spike begins to fall over. Barley crops are known to “hide” the spike in the vegetation. The way the results are presented also does not allow us to distinguish between points where lodging occurred and those where it did not.

This subchapter could benefit from a review of the text from an agronomic perspective, and the inclusion of results linking crop height data with varieties and different results. I am unable to analyse this data and “predict lodging”.

iv) combining multiple sensors and index optimization

In this subchapter, the text needs to be reorganised. The order in which equations and figures appear must be considered.

The content should also be improved to provide more information about the task itself.

v) leveraging a deep

Like the previous ones, this subchapter is very vague. It ends with the following sentence: “Given the demonstrative nature of the task, the model achieved a perfect classification score on the test set.”. However, the results presented were exclusively data on model training. The content of these subchapters is very poor. They need to be explored in greater depth.

Discussion

In subchapter 4.1, the authors present various tools and software packages in a very descriptive manner, disconnected from their own solution. For easier interpretation by readers, they should create a table or diagram summarising the main characteristics of their solution and the other tools and software packages, comparing them.

Conclusion

The manuscript does not include a Conclusion section. Authors should consider writing one, otherwise the manuscript will not meet the criteria established by the journal, at: https://www.mdpi.com/about/article_types#Technical_Note

- Specific comments

Introduction

1. In line 66, remove "(e.g. [2])", and keep only the reference.
2. The second paragraph is very long... Please consider splitting it into two.
3. Between lines 71 and 76, the text is written in the form of a presentation of results. This is not the most appropriate manner for this part of the manuscript.
4. The sentence in lines 79-80 should be removed. This sentence is referred to in Materials and Methods.

Material and Methods

5. In subchapter 2.2, Listings 1 and 2 are referenced throughout the text in reverse order. So, the text first refers to "Box" 2 and only then refers to Listing 1. This should be corrected so that Listing 1 is the first to be referenced in the text, appearing immediately afterwards, and only then should Listing 2 be referenced. The manuscript should also be standardised so that the same term is always used. In this case, it would be more correct to use Listing rather than Box.

Results

6. In line 183, delete the word "see".
7. In line 185, reference should be made to the equation number.
8. In the caption for Figure 3, the acronym GLI appears with its explanation in brackets. This should only happen the first time the acronym appears in the manuscript. This situation should be corrected, as well as all other acronyms in the manuscript.
9. In the case of Figures 3 and 4, they do not appear after being referred to in the text. Figures should only appear after being referred to in the text, and must be

placed immediately at the end of the paragraph in which they are referred to. The same applies to Table 1, for example. This situation should be reviewed in all Figures and Tables in the manuscript.

10. Lines 231-232: “However, instead of using one single plot (one single barley variety), the images cover 20 plots (20 barley varieties) for 10 flights.”. Clarify the way it is written, to better understand the distinction between fields and plots.
11. In line 233, HUE appears in the manuscript without any explanation of its meaning. This is not clarified anywhere. It needs to be clarified.
12. In line 241, “drone2report” appears in lowercase, while throughout the manuscript it appears in uppercase.
13. Figure 6 B should be completed with the dates or times of flight, to clarify matters for readers.