

Reviewer Report

Title: Label3DMaize: toolkit for 3D point cloud data annotation of maize shoots

Version: Original Submission **Date:** 12/30/2020

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Reviewer Comments to Author:

The authors give a practical tool for maize organ segmentation by an interactive way. The ideas and methods presented in this paper are straightforward and make sense for me. The Figs. and language are also sufficiently good and the obtained segmented results of the maize shoots show a clear, practical applicability as well. I recommend the paper to be accepted after minor revision. Below are some detail suggestion:.

- 1) The authors need to provide the contributions of the work at the end of the introduction to enhance the innovations of the paper.
- 2) In the workflow of the segmentation, the initial segmentation is the key step, however, the descriptions of this part (pages 9 and 10) are not clear. I suggest the authors rephrase this part. It is enough to introduce the general ideas of the algorithm based on the transportation distances. The details of the algorithm can be put into the pseudocode.
- 3) In some cases, the multiple maize shoots are hardly to separate. Does the Label3DMaize have the capability to segment multiple instances simultaneously? I mean whether the tool support multiple maize shoots as inputs? If you confront this situation, how do you process?
- 4) The authors mentioned that point clouds scanned by 3d scanners have much random noise than MVS point cloud. To the best of our knowledge, I think the maize shoot point clouds derived by the TLS or other similar scanners should have higher accuracy, precision, and less noise than MVS point clouds. The related sentences need to be reconsidered.
- 5) In the experiments, the authors should conduct comparisons with at least one or two state-of-the-art methods.

Methods

Are the methods appropriate to the aims of the study, are they well described, and are necessary controls included? Choose an item.

Conclusions

Are the conclusions adequately supported by the data shown? Choose an item.

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