Responses to reviewers' comments on the manuscript

We would like to thank the reviewers for their valuable comments. We have revised the manuscript on the basis of their comments.
Our responses have been inserted in blue, and all amendments are highlighted in the revised manuscript.

Reviewer: 2

I have compared the previous version with this revised version of this paper. I think the authors have made great efforts to supplement the deficiency according to the comments from different reviewers. The following are some more suggestions for the authors:

(1) Convolution+ Morphology is one of the important issues in this manuscript. However, in the abstract, there is no any description concerning combining convolution. I suggest adding some descriptions about the importance of combining convolution.

Answer: revised. We added the following sentence into abstract.

> "When the image GSD was reduced to 1 m, the overall accuracy decreased by approximately 10%. To solve this problem, we introduce the convolution method into the proposed method, which can ensure the recognition accuracy of tobacco field is above 90% when GSD is less than or equal to 1 m."

(2) In Figure 6, please revise the typo: UVA image -> UAV image

Answer: revised.

(3) Please provide the number of images utilized for the orthophoto generation in the manuscript. I thought this information could be helpful for practical authorities.

Answer: there are 400 images utilized for the orthophoto generation. We added this information in line 133-134.

(4) Please supplement the software or the methods used to produce orthophotos in the manuscript.

Answer: Pix4Dmapper. We added this information in line 134-135 in the revised manuscript.

(5) The authors have provided the number of training samples. However, I suggest the number of validating samples should also be provided. Besides, I also suggest that the authors may indicate the locations of training and validating samples with points or polygons on the orthophoto map.

Answer:

1) The validation data is the tobacco field of whole study area by visual interpretation and digitization. It is already shown in Figure5 (c).
2) We tied to show the study area with the locations of training samples. However, the polygons of training samples are too small to see. An example is given below.

