



## Comment on **essd-2021-34**

Anonymous Referee #2

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Referee comment on "The RapeseedMap10 database: annual maps of rapeseed at a spatial resolution of 10□m based on multi-source data" by Jichong Han et al., Earth Syst. Sci. Data Discuss., <https://doi.org/10.5194/essd-2021-34-RC2>, 2021

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High-resolution rapeseed maps are still lack in many countries or regions, which significantly hinder the related studies on food and energy security in the world. Generating annual high-resolution maps of rapeseed over a larger region is a big challenge. The authors produced high-resolution rapeseed maps and verified their high accuracy in three different ways. The topic of this study is interesting, falling closely within the scope of ESSD. The classification method used is innovative and robust, and the workload is very heavy. Moreover, the dataset is publicly available. If the author can update this dataset regularly, this dataset will be more potential for applying widely. Overall, I think this work is valuable and well qualified for publication in ESSD.

General Comments:

- The authors have done a lot of verification work, and the results show that the accuracy of the rapeseed map is reasonable. I noticed that there is a land cover map of France with a spatial resolution of 10m on Theia (<https://www.theia-land.fr/en/2018-land-cover-product/>). I hope that the author will compare their results with French land cover map at pixel-level comparison in their revised manuscript. In addition, the comparisons between FAO's statistics and existing products will largely confirm the robustness and improvement of their study. Although the workload may be heavy, it is helpful to evaluate the accuracy of rapeseed map more comprehensively.
- I suggest that the authors revise the title, showing clearly the name of their data. For example, "The RapeseedMap10 database: a map of rapeseed with10m-spatial

resolution based on multi-source data".

3i¼ □ The introduction should add content about crop rotation.

- Should include some quantitative results into their conclusion.

Specific comments:

- Line 58: "Fortunately" > not a good way of academic writing.
- I suggest that the authors consider putting the confusion matrix of Table 2 in the attachment, and present the accuracy indicators (PA, UA and F1) more intuitively in the form of graphs.

3i¼ □ Add the names of the 33 countries to the caption of Figure 1.

4i¼ □ Consider to remove the color bar on bottom of Figure 2e.

5i¼ □ The caption and vertical axis label of Figure 3d are not clearly described, need more details.

- "n" and "connected domain" are not defined in Figure 5, more details needed.
- "others" in figure 6 is not clearly understood for me, need more details.
- The authors should give more explanations why the class  $\geq 2$  meaning for a crop rotation in the manuscript. I guess it might be explained by the changes of more than twice at the same pixel can be observed in their study.

9i¼ □ Line 370: "the algorithm does not need training sample data..." should be revised to "the algorithm does not need a large number of training samples."

- Line 14: It would be better to replace "... ranged from 0.84 to 0.92..." with "... ranged 0.84-0.92..."
- Line 93: "...such as climate and temperature...", remove "and temperature"
- Line 179: "The rapeseed parcels without high-quality available time-series imagery..."
- Line 337: revise "a latitude of 45~56°N" to "latitudes of 45~56°N", The same for others throughout the manuscript.