Comment on essd-2022-72
Anonymous Referee #2

Referees comment on "Gridded 5-arcmin, simultaneously farm-size- and crop-specific harvested area for 56 countries" by Han Su et al., Earth Syst. Sci. Data Discuss., https://doi.org/10.5194/essd-2022-72-RC4, 2022

This study tries to map the global distribution of farm size using data harmonization approach. This is an interesting topic, but there are a few major issues that need to be solved. First, there is a large gap in China, causing an unpleasant blank area in the entire East Asia. I believe China's data can be easily obtained from the annual yearbook or other statistical records, and I would suggest the authors fill this gap. Second, I have concerns about the validation in Lines 220-224. The comparisons are actually a compromise of data inconsistency. What if a different threshold value was used? Do the conclusions change if a different threshold was used? A sensitivity analysis maybe helpful here. Third, language editing is also needed.
Other minor suggestions:
1. Line 119, an extra "and"?

2. The claims in Lines 263-264 were actually not supported by the figure. There is a large drop in the >1000 category in Fig. 3a for the orange and red lines. Please also explain.

3. In line273, I don't know why the author made this claim: "This means the spatial distributions of oil palm production in our downscaled maps and Descals et al. (2020) are similar." The comparisons were about the harvested area, and why and how did the production involved here?

4. Line 328, separately?