

Reviewer comments to author

The paper presents significant contributions to the field and demonstrates substantial effort. However, there are still a few areas for improvement in the methodology and accuracy evaluation sections.

Methodology: While the paper provides additional explanations on the calculation and application of the WTCI, the threshold calculation for the index remains unclear. The authors mention relying on provincial or state-level statistics to set the threshold but fail to detail how these statistics are used. It is unclear how the consistency between statistical data and threshold products is determined, whether a single year's data is used to set thresholds for other years, or if yearly statistical data is directly used for threshold determination. Detailed explanations are needed for the index threshold determination. Additionally, the paper uses $NDVI > 0.4$ to identify potential crop areas, based on a study from a small region in Sichuan, China. It is questionable if this threshold can be globally applicable. The authors should provide more references or experiments to validate the reliability of this threshold.

Accuracy assessment: The paper dedicates significant space to demonstrating high agreement between the product and statistical data. However, since the methodology relies on statistical areas to set thresholds, the evaluation does not convincingly reflect the product's accuracy. The authors should elaborate on the index threshold determination method and consider using crop reference layers in regions with such data to further verify the product's accuracy through consistent area distribution.

Figures and Tables: The design of figures and tables requires improvement. For instance, Fig. 3(a) shows texture features of different land types, which is not mentioned anywhere in the paper. The authors should reconsider the necessity of this figure. In Fig. 6, adding results from crop reference layers could provide a clearer and more intuitive presentation of data quality to the readers.

Overall, the paper is well-conceived and the work is substantial. However, there are issues in the presentation of the methodology and accuracy evaluation that need addressing. Therefore, I recommend major revisions before reconsidering the paper for publication.