Dear Editor:

We appreciate your insightful comments on our manuscript. The comments offered have been immensely helpful. The point-to-point responses to your comments are listed below in blue.

Point 1: Authors must do a thorough re-write with guidance and assistance from a competent English-language technical writer.

Response: Thank you a lot for the suggestion. We have revised the text with the assistance from a native English speaker who is a competent technical writer. The language has been improved in the manuscript. Also, we provided the certificate for the language editing below. Please see the revised manuscript for more details.

Certificate of Editing

Edited provisional title
The RapeseedMap10 database: annual maps of rapeseed at a spatial resolution of 10 m based on multi-source data

Client name and institution
Jichong Han, State Key Laboratory of Earth Surface Processes and Resource Ecology/ MoE Key Laboratory of Environmental Change and Natural Hazards, Faculty of Geographical Science, Beijing Normal University, Beijing 100875, China

Date Completed
2021-05-05

Identification code
96504

Certificate issued by
Koji Yamashita
Managing Director and CEO

Expert Editor: Barbara Goodson
2007 PhD Botany
University of Texas
Ecology, Genetics, Plant Biology

www.liwenbianji.cn
While this certificate confirms the authors have used Edanz's editing services, we cannot guarantee that additional changes have not been made after our edits.

Figure R1. Certificate of editing

Point 2: Take a goal of reducing total text by 10%; those reductions will help these authors focus on clear messages.

Response: We have reduced about 1000 words in the text as requested.

Point 3: In particular, authors use of geographic country designations remains confusing, often conflicting and occasionally wrong.

Response: Thank you for your careful comments. We have revised the names of the countries in the text and figures to be more clear. The full names and abbreviations of the countries are provided by the Statistics Division of the United Nations Secretariat (https://unstats.un.org/unsd/methodology/m49/).

Comments in the attached file

Point 4: Line 123, slope not slop.

Response: We have modified the word (Line 114).

Point 5: Line 129, please write US or USA instead of 'America'. By geographic definition, 'America' includes Canada already mentioned. Search and replace all use of term 'America' where warranted.

Response: We thank you for the suggestion. We have replaced "America" with "USA" in the text and diagrams. Also, we have revised the names of other countries in the manuscript according to the country names provided by the Statistics Division of the United Nations Secretariat (https://unstats.un.org/unsd/methodology/m49/).

Point 6: Line 130 - check punctuation.

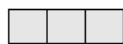
Response: We have modified the punctuation (Line 121).

Point 7: Line 140, in-situ rather than In-situ

Response: We have modified this sentence (Line 131).

Point 8: Line 281, edges and corners?

Response: Many thanks for your careful check. "edges or corners" is right (Line 284).

We used a diagram to explain it.

(a) Edges of the pixels are connected   (b) Corners of the pixels are connected

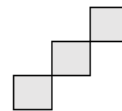



Figure R2. The illustration of "edges or corners".

Point 9: Line 318, datasets do provide benefit by

Response: We have modified the sentence (Line 323).

Point 10: Lines 334 and 335 - please fix conjunctions and punctuation

Response: We have modified the punctuation (Line 339-340).

Point 11: Line 343 "different availability of high-quality images" - you mean of the high-res Google Earth images used for validation? Or differences in coverage of S1 or S2? Please specify and clarify. Later authors provide example of too-few cloud-free image over France. In that case they refer to S1/S2. Here, reader gets no idea?

Response: Thank you for your careful comments. The "different availability of high-quality images" refer to the S1/S2 and we revised it in the manuscript (Line 352).

Point 12: Line. 344: useful rather than satisfying

Response: We deleted the sentence as you suggested in **Point 14** since it is redundant with another sentence (Lines 363-364).

Point 13: Line 351, starting with "Fragmentation" - not a complete sentence, please correct and clarify.

Response: We have rewritten this sentence (Lines 360-362).

Point 14: Lines 354, 355: "Thus, the rapeseed maps based on S-1/2 data can effectively identify the fields in detail with high spatial resolution and clear field boundaries." Redundant with sentence at end of Section 3.1. Why do we need both?

Response: Thank you for your careful comments. We have deleted the sentence at the end of Section 3.1.

Point 15: Line 376: "North America" technically refers to Mexico, USA and Canada. Again, please clarify then search and replace accordingly.

Response: We have revised the sentences and diagrams containing "North America" to be clear in the manuscript and supplementary material.

Point 16: This reader found it very inconvenient and confusing going back-and-forth between main narrative and supplement. Some materials in supplement probably not needed; otherwise put more material in the main text and less in supplement. Authors to decide. Also, figure S13 and S14 very difficult to read. Unlike most other figures, those two use red for failure and yellow for positive. In most other figures red/orange indicates positive. Change one or the other color scheme for consistency. Fix S13, S14. Country names in S19 very hard - in some cases, impossible - to read.

Response: Many thanks for your constructive comment.

(1) We have put some materials in the main text. For example, Figure 3 and Figure 11 were moved from the original supplement into the revised manuscript. Also, we have removed some tables and figures in the supplement.

(2) We have revised Figures S13 and S14 in the original supplement. We used red for positive and blue for failure. Please see the new Figures S7 and S8 in the revised supplement.

(3) We have removed Figures S19 in the original supplement to avoid redundancy since it conveys similar information to Figure 9 in the revised manuscript and Figure S6 in the revised supplement.

Point 17: Line 400 - Rapeseed rotations does not benefit insects. Please rewrite.

Response: We have rewritten this sentence (Lines 403-404).