

This manuscript investigates the evolutionary dynamics of the *Liriodendron chinense*, analyzing its genetic diversity and spatial genetic structures using SSR primers. In my opinion, this research is crucial and helps perpetuate the *L. chinense* tree species while benefiting from it ecologically. I have added a few minor comments below:

1. BASIC REPORTING

There are minor English usage revisions needed throughout the manuscript

- In Lines 30-31, authors might need to revise the sentence and ensure the intended meaning is retained (*L. chinense* with a large diameter can reproduce and can be considered potential parents).
- In Line 35, does the 41 resemble the female parent part of the 201? This sentence requires a clear description.
- The authors have used the term '*L. chinensis*' in Line 84. I advise them to maintain *L. chinense*.
- Lines 82-86 should be rephrased may be too wordy and long, and a reader might lose the intended meaning.
- In Line 96, the authors might need to observe the use of a period. In addition, in this sentence to line 98; the sentence structure might be rephrased. Maybe to something like this;
We measured the breast height (DBH)... to record the../ To record the ..., we measured...
- Still, the authors might need a thorough review of several sentence structures on this above note.
- Is Line 130 a subheading or complete sentence?

2. EXPERIMENTAL DESIGN

- The last three subsections of the Methodology section are lengthy and wordy. If these subsections can not be reduced, I suggest to the others to further make more subsections of each or restructure them.
- One of the major delimits in the methodology description is most sentences lacked connectivity; information dissemination was not flowing. Felt like a simple stating of each statement. The authors should revise and disseminate the information to flow.
- In Lines 116-124, is the PCR procedure needed in this part? To reduce content in this section, the authors can add this procedure in the Additional file.
- In Lines 146, 148, and 195 the authors make mention of the olive tree, is it still the *L. chinense*?
- In Line 164, the Class distributions can be better presented as a table.

3. VALIDITY OF THE FINDINGS

- In my opinion, the Result section is well-elaborated, although some parts are too wordy. Maybe some descriptions like
- Line 229 lacks reference.
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4. General comments

Overall, while the manuscript presents interesting findings, addressing the methodological concerns outlined above is crucial before publication. I recommend 'Minor Revisions' to improve clarity and reproducibility.

All the Best!