Response to Reviewer 3 Comments

Point 1: In the section 2.1, could authors explain little about the B73, Huangzaosi, and W22. Why did authors use these maize lines to conduct cross experiment?

Response 1: You requested that we provide more information about why B73, Huangzaosi, and W22 were used in the cross experiment. We selected B73 and Huangzaosi as two inbred lines for the mapping population because their genetic backgrounds differ significantly from the mutant; We utilized W22 as the wild-type for 916C and conducted backcrossing to achieve a purified genetic background. We have added further clarification on these issues in section 2.1.

Point 2: In line 159, please add the full name of V3.

Response 2: Thank you for the reminder. We have added the written-out name of V3 throughout the entire manuscript.

Point 3: Please try to make the Figure 1E and 1F clearer, they are fuzzy.

Response 3: We appreciate your feedback on the quality of Figure 1E and 1F, and have improved the resolution and quality of these figures in the revised version of the manuscript.

Point 4: I noticed that mu-J1862, mu-J184, 916C, mu-J1862/916C, mu-J1862/mu-J184 have more white points in the cross section of leave's vein, are there some relationships between the white point with the brittle of maize?

Response 4: Unfortunately, we do not have enough data to explictly link these white points with the brittleness of maize, and thus did not address this observation in our manuscript. However, we will take your suggestion into consideration in further experiments to investigate any potential correlations between these features and maize brittleness.

Point 5: I suggest authors to explain Figure5A and Figure5B in the result section, because you have mentioned the heatmap and volcanic plot of differently expressed genes.

Response 5: Thank you for this suggestion. We have added a detailed explanation of both figures at line 283 in the revised manuscript, which we hope provides a clear and concise description of our results.

Thank you again for your time and valuable comments. We believe the suggested changes have enabled our study to better meet the needs of the readers.