

We highly appreciate the reviewer's careful reading and good comments. Below we provide point-by-point answer to comments and action taken to improve the manuscript.

1. Lines 9-11 - please add space before "(W.S)" and "(J.Z.)", etc.

Response: We have corrected them in the revised manuscript.

2. Please add space before "°C", e.g., "10 °C"; "mM"

Response: We have corrected them in the revised manuscript.

3. Please change "ml" for "mL" (Lines 118)

Response: We checked the manuscript and have corrected them in the revised manuscript.

4. Lines 14, 42, 96 - please add "LT" in sentence "L/low temperature (LT) ..." and "NT" in "... normal temperature (NT) ..." (line 96)

Response: We have corrected them in the revised manuscript.

5. Lines 45, 72, 74, 75, 78, 80, 179, 258, 262, 265, 338, 342, 401, 425, 433, 442 - please space before references number "damage[5, 6]."; "homeostasis[11]"; "Citrullus lanatus[12]"; "activity[13]."; "tobacco[14]."; "plants[15]."; "inbred[16]", etc.

Response: All spaces had been added before the references in the revised manuscript.

6. Lines 58-59 - "... APX, glutathione reductase (GR), monodehydroascorbate reductase (MDHAR), and dehydroascorbate reductase (DHAR)." As previously, see lines 51-55.

Response: We have changed the order of abbreviations in Lines 58-59 to make a consistent with that in lines 51-55.

7. Lines 64, 65 - "... monodehydroascorbate (MDHA) recycled..."; "... dehydroascorbate (DHA)." similar as in line 65 "photosystem I (PSI)" and lines 51-55.

Response: We have changed the order of abbreviations in Lines 64 and 65 to make a consistent with that in lines 51-55.

8. Line 68 - "... to oxidized glutathione (GSSG) that ..."

Response: We have corrected that in the revised manuscript.

9. Line 103 - please add space between "7day"

Response: We have corrected that in the revised manuscript.

10. Line 152 - "... mM AsA))."

Response: We have corrected that in the revised manuscript.

11. Line 164 - "2 µg total RNA per ...". Using oligo(dT) or hexamer primers? It could be described in methods.

Response: oligo(dT) primers were used in the synthesis of cDNA. We have described it in the revised manuscript.

12. Line 166 - Please add the name of the kit used for qPCR, reactions parameters, the final volume of reactions. Expression was calculated from delta Ct (please add the efficiency of reactions) or copy number of the gene (please add data about standard curve preparation, melt, reaction efficiency)

Response: Detail information about qPCR had been added to the Method section, including the kit name, reaction parameters, melting curve detection, etc. This section of manuscripts list below:

"2.7. RNA extraction and expression analysis

Total seedlings at LT or NT were sampled from inbred Jing72464 and JingX201. Whole seedlings with the first expanded true leaf were scissored from the upper ground, wrapped in the foil paper, then were directly frozen in the portable liquid nitrogen container in the field. Total RNA was isolated using the Plant RNA Purification Kit (Thermo Fisher Scientific, K0801). Full-length cDNA was generated from 2 µg total RNA per sample using oligo(dT) primer (cDNA synthesis kit, Thermo Fisher Scientific, K1622). The resulting cDNA were made a 1:10 dilution for the following quantitative RT-PCR (qRT-PCR). qRT-PCR was conducted using TB Green® Premix Ex Taq™ II Real-Time PCR System (Takara, Japan, RR820A) in a typical 20 µl PCR mixture that included 10 µl of premix, 3 µl of template cDNA, and 0.4 µM of each PCR primer. Cycling conditions were 95 °C for 2 min, followed by 40 cycles at 95 °C for 20 s, 56 °C for 1min, and 72 °C for 30 s, and samples were run on the LightCycler 480 Real-Time PCR System (Roche). The melt curve data were utilized in every experiment to verify that the appropriate PCR product was being amplified. *ZmUBI2* was used as the internal control to monitor sample uniformity of initial RNA input and reverse transcription efficiency. The expression of the genes of interest under each experimental condition was calculated by using the standard curve method [16], while the $2^{-\Delta\Delta C_t}$ method was used to calculate the expression. The relevant primer sequences are in Table S2."

13. Lines 293, 299 - please add space between "JingX201(Figure 4B)"; "JingX201(Figure 4F and 4G)."

Response: We have corrected that in the revised manuscript.

14. Line 298 - please write 1.2-fold higher, because 1-fold couldn't be higher, it's the same or similar as a control. Similarly, please complete the information in line 228. In line 344, please describe "4.x-fold higher ...". Similarity in 375 and 378 lines: 2.x-fold higher" or "4.x-fold higher", respectively. Lines 445 "2.x-fold", also.

Response: We have made a more accurate description about the magnitude of the change fold of some data according to your suggestion.

15. Please change "kernels" in supplementary materials for "seed" as is used in the main manuscript.

Response: We have corrected that in the revised supplementary materials.