Drought stress modify cuticle of tender tea leaf and mature leaf for transpiration barrier enhancement through common and distinct modes

Mingjie Chen^{1,3*#}, Xiaofang Zhu^{2,3#}, Yi Zhang³, Zhenghua Du³, Xiaobing Chen³, Xiangrui Kong², Weijiang Sun⁴, Changsong Chen^{2*}

¹Henan Key Laboratory of Tea Plant Biology, College of Life Sciences, Xinyang Normal University, Xinyang 464000, China

²Tea Research Institute, Fujian Academy of Agricultural Sciences, Fuan, Fujian 355000, China

³Horticultural Plant Biology and Metabolomics Center, Haixia Institute of Science and Technology, Fujian Agriculture and Forestry University, Fuzhou, Fujian 350002, China

⁴Anxi College of Tea Science, Fujian Agriculture and Forestry University, Fuzhou, Fujian 350002, China

*Correspondence authors:

Email: mjchen@xynu.edu.cn; ccs6536597@163.com

Figure S1. Chain length distributions of esters and glycols during the course of drought treatment. D-1, D-8, and D-15 represent the first day, the eighth day, and the fifteenth day of water deprivation, respectively; D-15C: the well-watered control plants at day 15. * indicates D-8 or D-15 was statistically significant compared with D-1 (p<0.05); + indicates D-15 was statistically significant compared with D-8 (p<0.05).

Figure S2. Chain length distributions of terpenoids during the course of drought treatment. D-1, D-8, and D-15 represent the first day, the eighth day, and the fifteenth day of water deprivation, respectively; D-15C: the well-watered control plants at day 15. * indicates D-8 or D-15 was statistically significant compared with D-1 (p<0.05); + indicates D-15 was statistically significant compared with D-8 (p<0.05).

Figure S3 Diagram presentation of the drought treatment. D-1, D-8 and D-15 represent the first day, the eighth day and the fifteenth day of water deprivation, respectively; D-15C: the fifteenth day of well-watered control plants.

Figure S4 Greenhouse temperature and humidity changes during water-deprivation treatment. 1d, 8d and 15d represent the first day, the eighth day and the fifteenth day of water deprivation, respectively.





Supplementary information



