

Table S1. Summary of JIP-test parameters and formulae.

Measured parameters from the OJIP transient	
F_o	Minimum reliable fluorescence intensity (20 μ s)
F_J	Fluorescence at the J-step (2 ms)
F_I	Fluorescence at the I-step (30 ms)
F_P	Maximum fluorescence intensity at the P step
Specific energy flux and phenomenological flux	
$ABS/RC = [M_o/V_J][1/(F_V/F_M)]$	The absorption of antenna chlorophyll per PSII reaction center
$DI_o/RC = (ABS/RC) - (TR_o/RC)$	Dissipation per Reaction Center
$ET_o/CS_M = (F_M - F_o) \times (1 - V_J) \times (RC/CS_M)$	Electron transport rate per unit area
$TR_o/CS_M = (F_M - F_o) \times (RC/CS_M)$	The rate of primary photochemical capture per unit cross-sectional area (CS_m)
Quantum yields and performance index	
$F_V/F_M = (F_M - F_o)/F_M$	The maximum photochemical efficiency of PSII
$\phi D_o = F_o/F_M$	The quantum efficiency of energy dissipation
$\phi E_o = [1 - (F_o/F_M)](1 - V_J)$	The quantum yield for electron transport
$\Psi_o = (1 - V_J)/(1 - V_I)$	The probability that an electron moves further than Q_A^-
$\delta R_o = (1 - V_I)/(1 - V_P)$	The efficiency of an electron beyond Q_A^- that reduced PSI acceptors
$PI_{ABS} = (RC/ABS \times \phi P_o \times \Psi_o)/(1 - \phi P_o)$	The performance index on an absorption basis

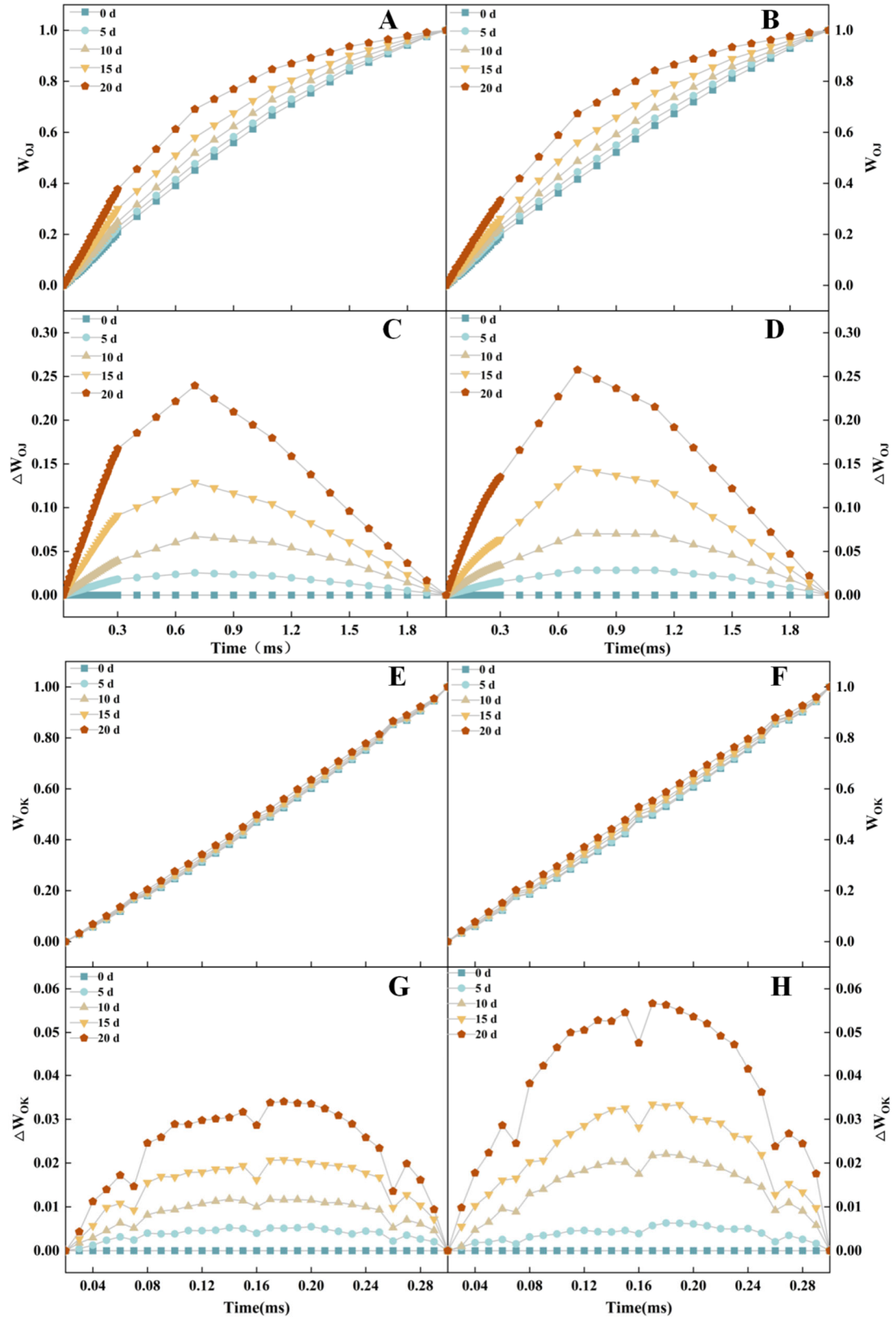


Figure S1. Effect of drought treatment on the shape of the K-band and L-band. (A-D) The PF transient curves normalized between F_0 and F_J , and their difference kinetics (K-band). (E-H) The PF transient curves normalized between F_0 and F_K , and their difference kinetics (L-band). Note: the left panels indicate JXJJ, the right panels indicate FJSM. Data are the mean of six biological replicates.