

# Supplemental Information

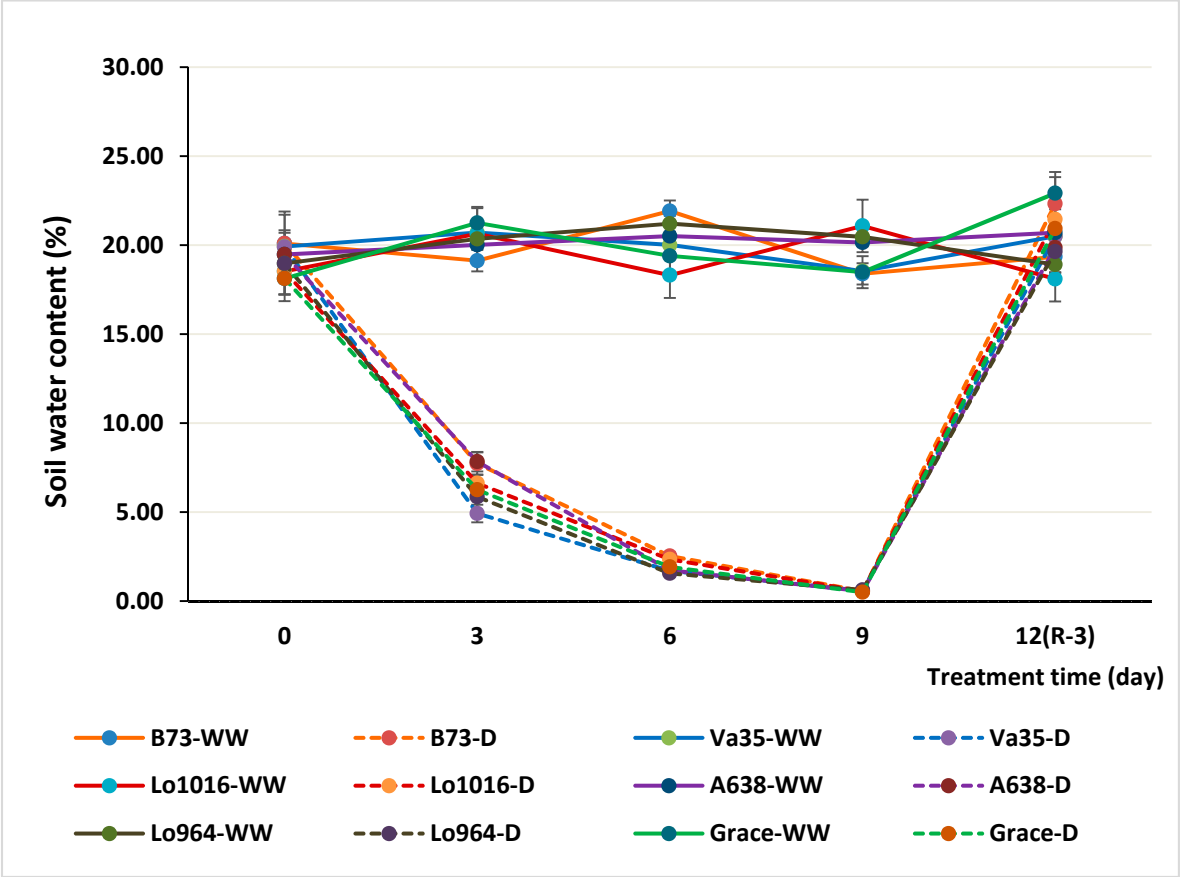


Figure S1. Soil water content at over time under well-watered (WW) and drought (D) conditions.

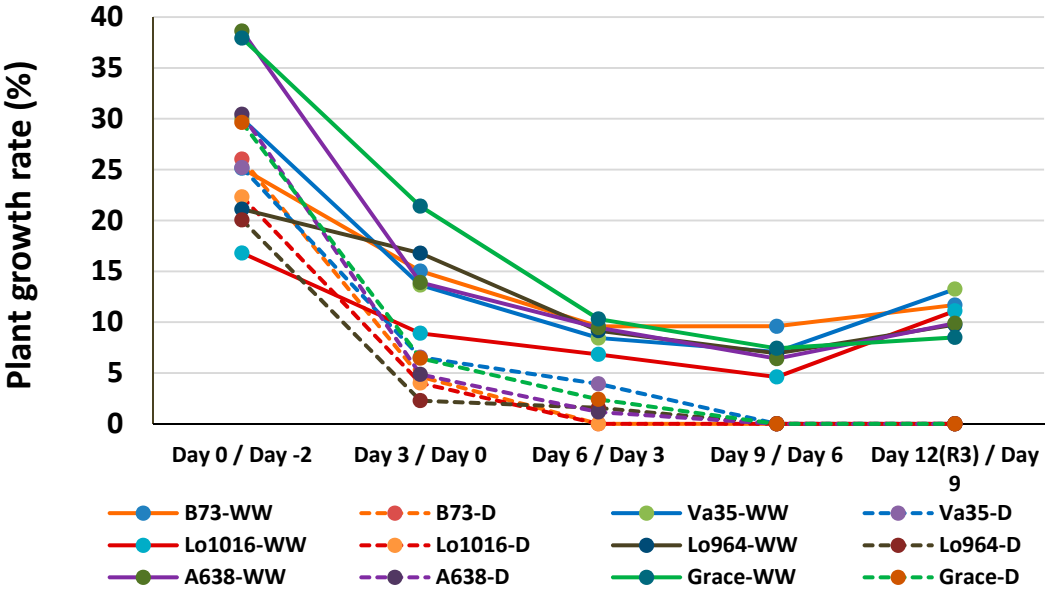
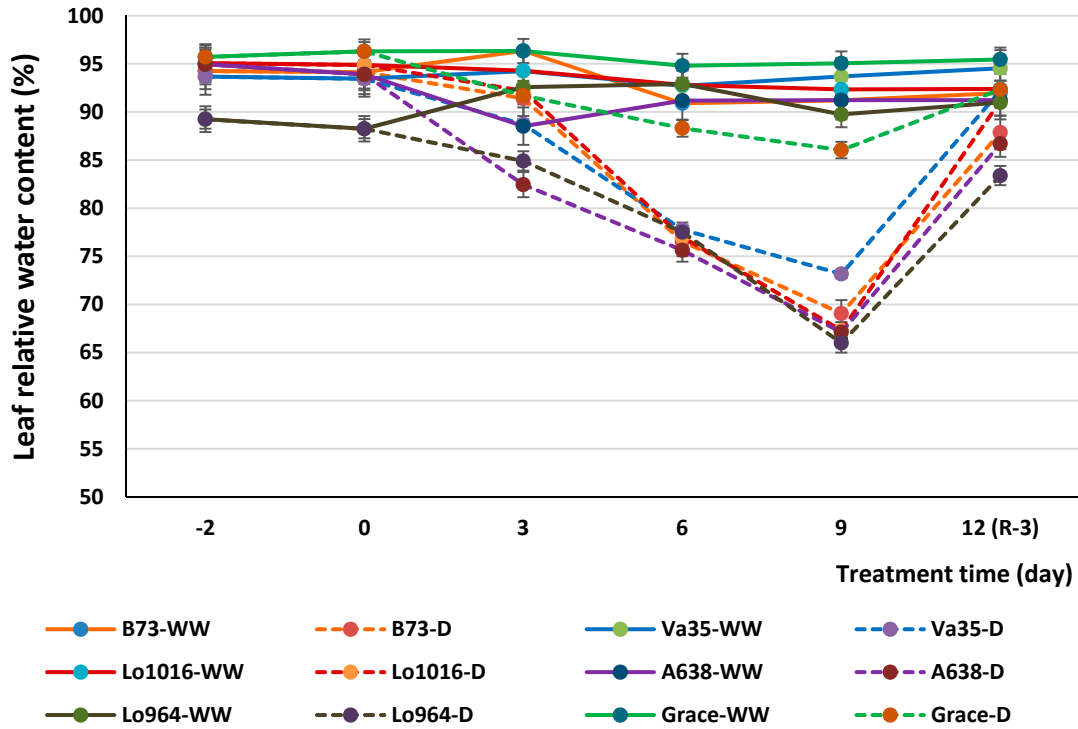
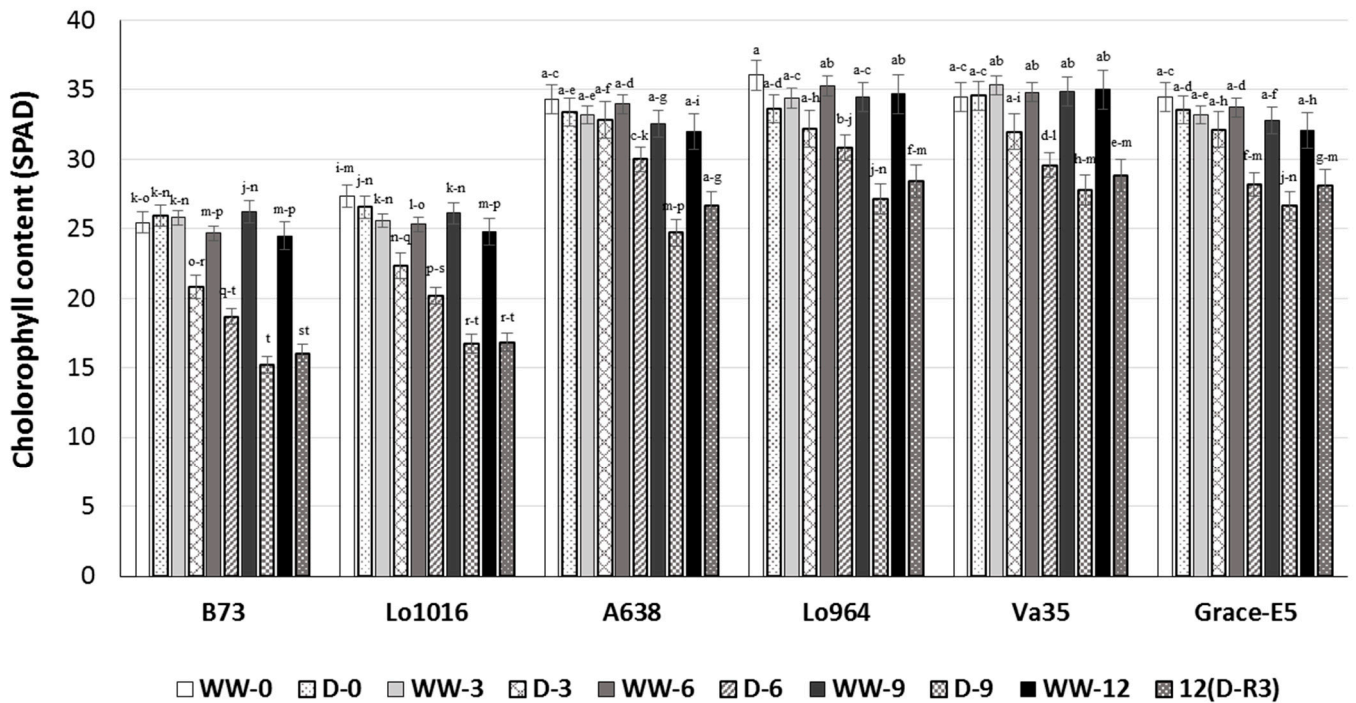


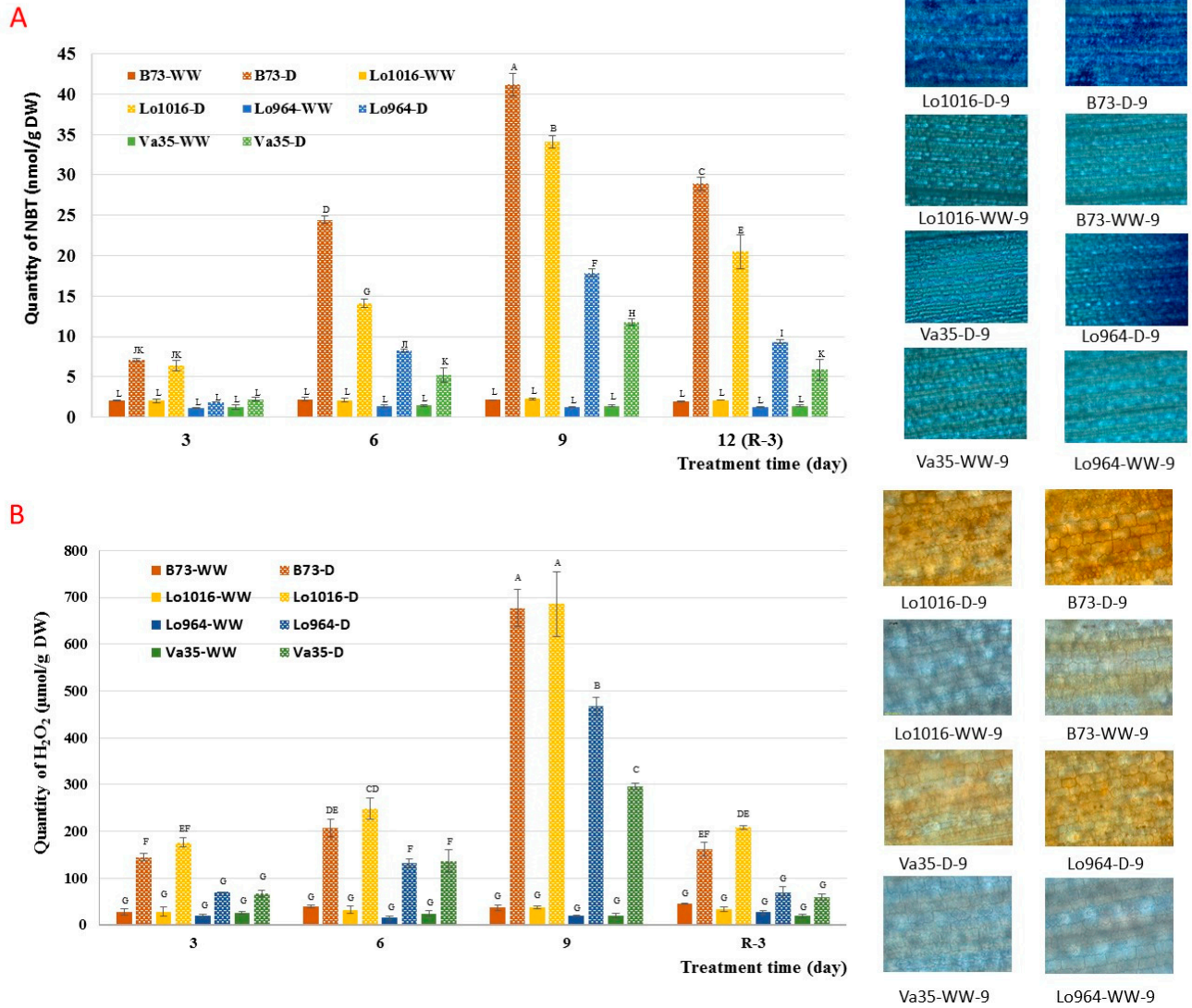
Figure S2. Growth rates of maize seedlings under well-watered (WW) and drought (D) conditions over time.



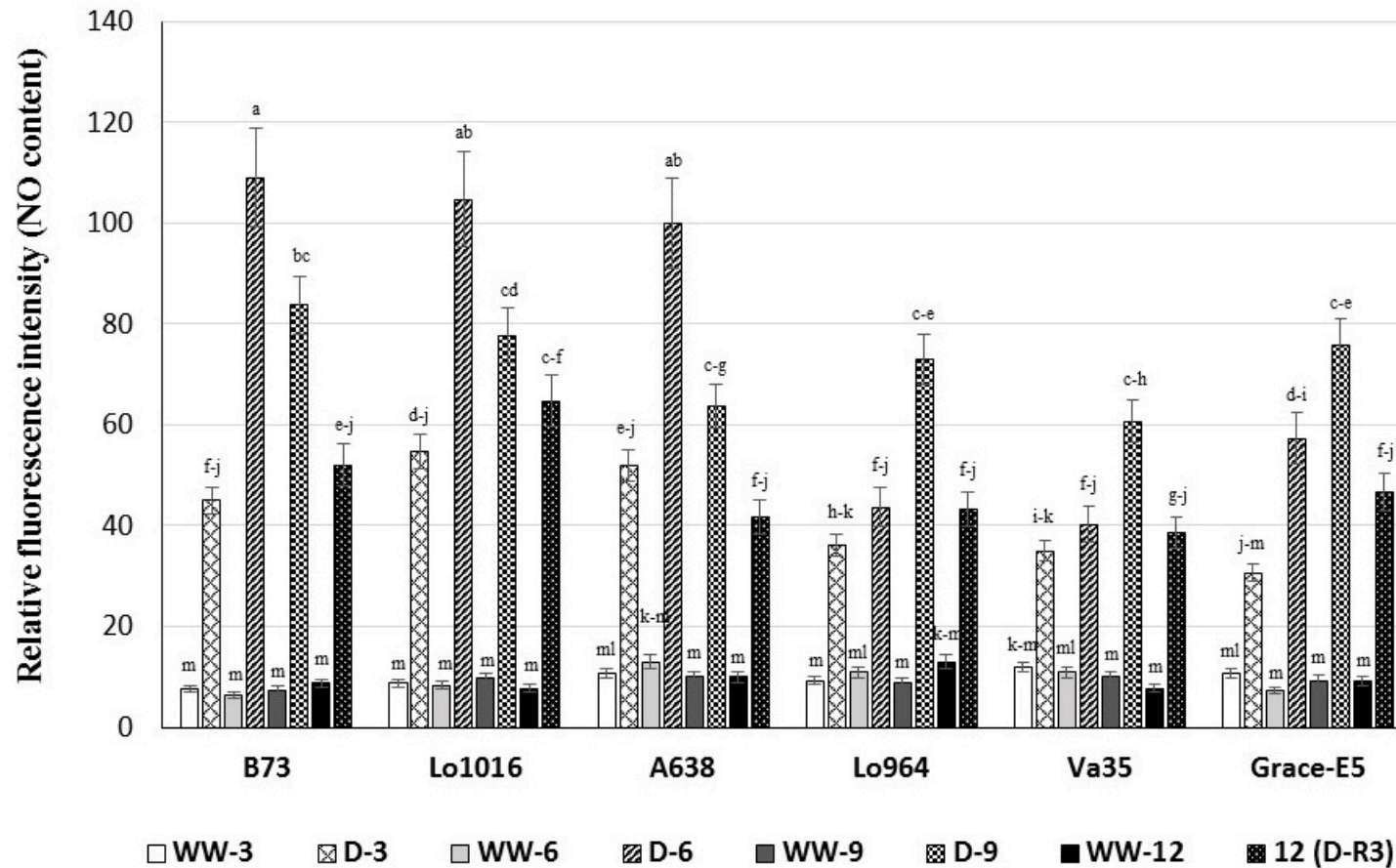
**Figure S3.** Leaf relative water content (LRWC) of maize seedlings under well-watered (WW) and drought (D) conditions over time.



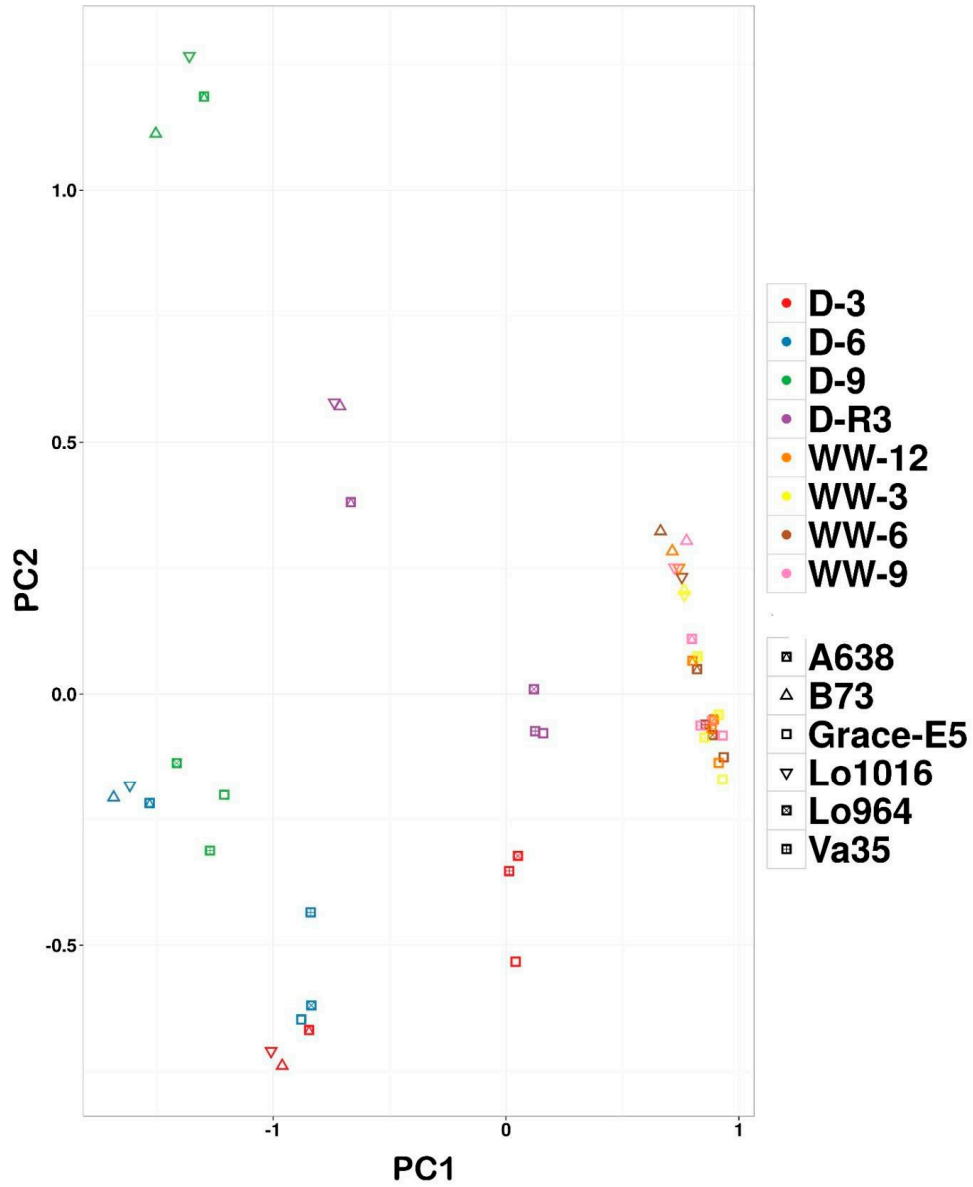
**Figure S4.** Chlorophyll content of maize seedling leaves. Different letters indicate significant differences ( $p < 0.05$ ) based on Tukey's test between control and treatments and between different treatment times. Data represent the mean  $\pm$  SD of three or more replicates.



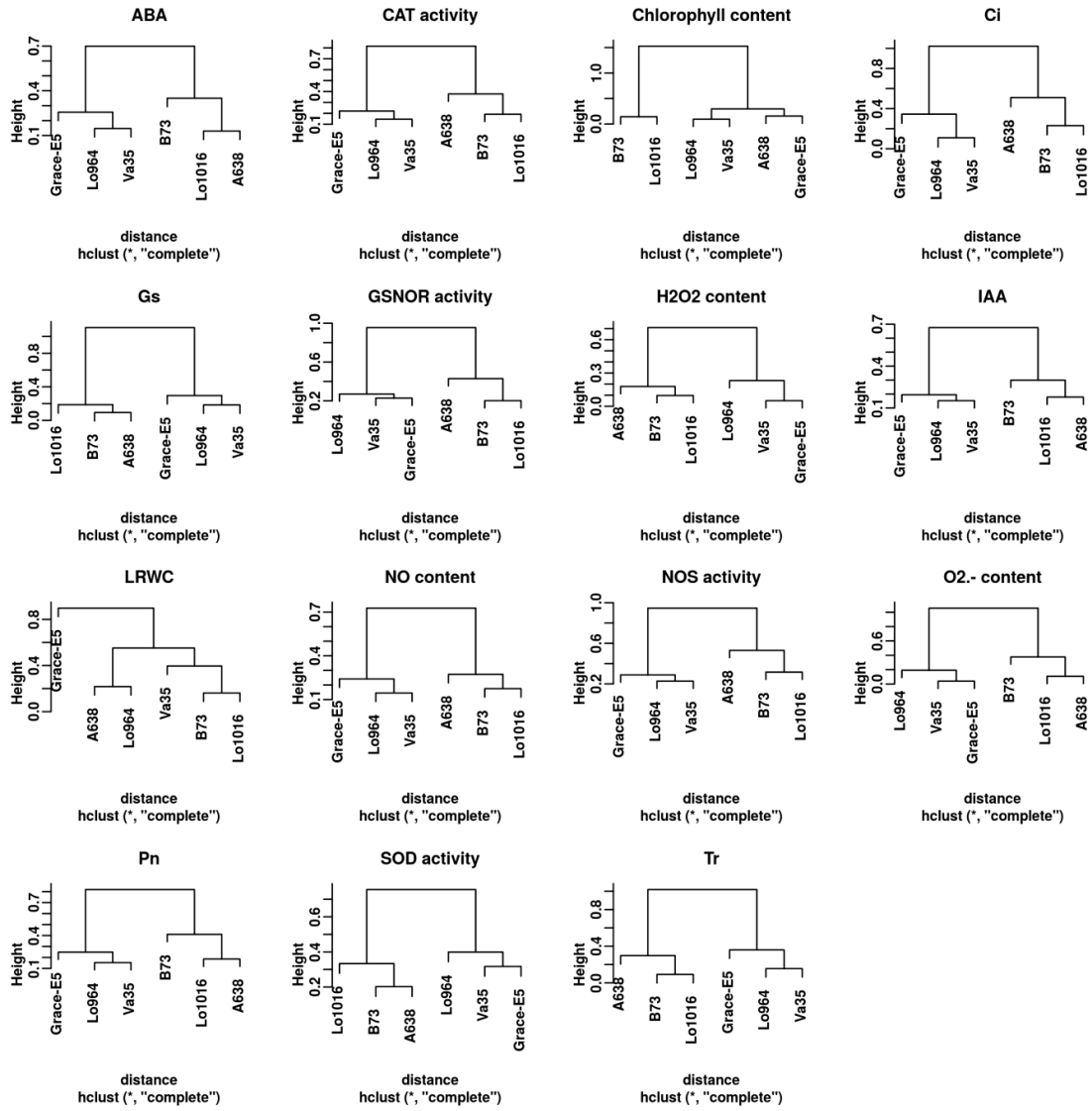
**Figure S5.** Quantification of superoxide radical (A) and hydrogen peroxide (B) in leaves of maize plants subjected to drought stress. WW refers to well-watered leaves; DT refers to drought treated leaves. The right figure in (A) or (B) shows the staining difference in superoxide radical or hydrogen peroxide accumulation observed under microscopy. Different letters indicate significant differences ( $p < 0.05$ ) based on Tukey's test between control and treatments and between different treatment times. Data represent the mean  $\pm$  SD of three or more replicates.



**Figure S6.** Quantification of nitric oxide (NO) in leaves of maize plants subjected to drought stress. WW refers to well-watered leaves, DT refers to drought treated leaves. Different letters indicate significant differences ( $p < 0.05$ ) based on Tukey's test between control and treatments and between different treatment times. Data represent the mean  $\pm$  SD of three or more replicates.



**Figure S7.** Time-series principal component analysis (PCA) of all test traits in six different lines under well-watered and drought conditions. WW-3, -6, -9 and -12 refers to maize plants under well-watered conditions for 3, 6, 9 and 12 days; D-3, -6, -9 and -R3 refers to maize plants subjected under drought treatments for 3, 6 and 9 days, and then recovery watering for additional 3 days.



**Figure S8.** Time-series clustering of all tested traits in all six maize genotypes.