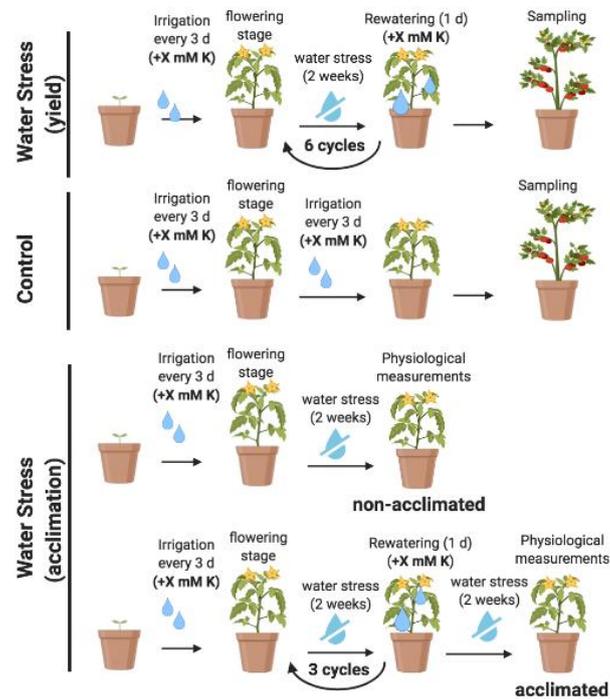
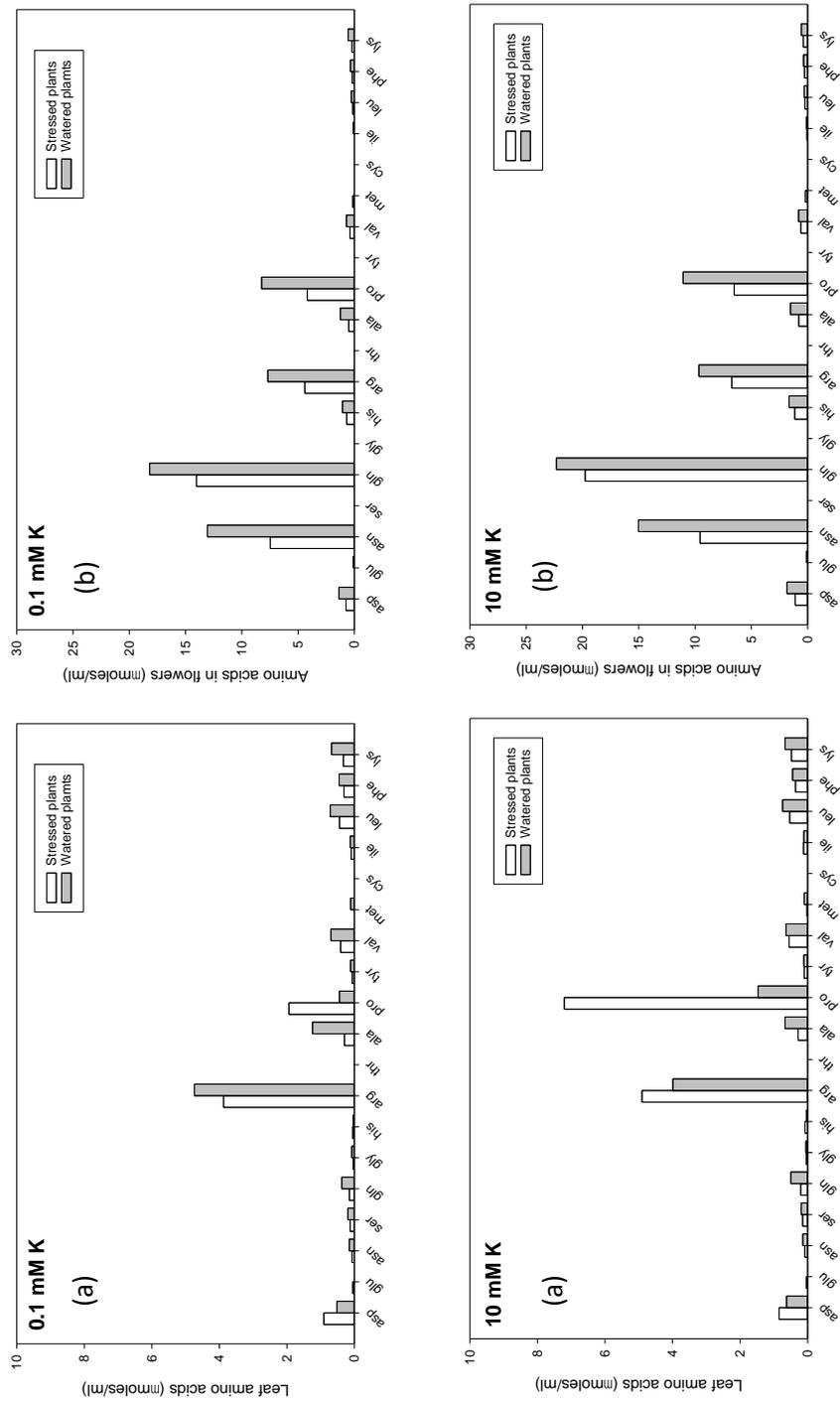


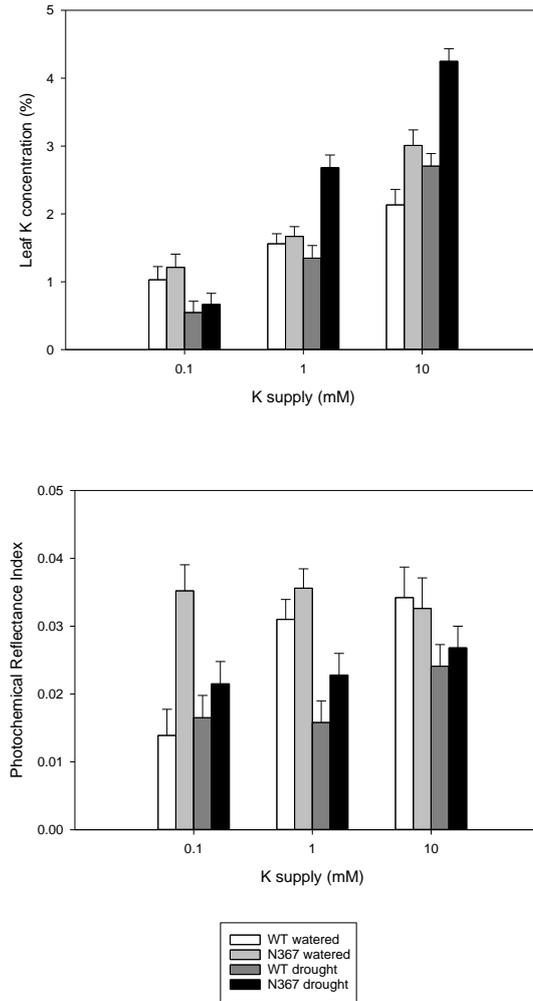
## Supplementary Materials



**Figure S1.** Experimental designs to assess the effect of K supplements in the yield of tomato plants submitted to recurrent water stress treatments (top), and the ability of K supplements to improve the acclimation of tomato plants to water stress (bottom). The nutrient solution contained 0.1, 1 or 10 mM KCl ( $+X$  mM K). Each drying/re-watering cycle consisted of 2-week water withholding followed by 1-d re-watering with nutrient solution with the corresponding K supplement. Control plants for each experiment (middle) were watered with the corresponding nutrient solution every three days. See main text for further details.



**Figure S2.** Free amino acids in (a) leaves and (b) flowers from WT tomato plants with or without water stress when grown at low (0.1 mM K) or high K (10 mM K). Water-stressed plants were submitted to two cycles of drying and re-watering.



**Figure S3.** Effect of K and watering treatments on leaf K concentration (top) and photochemical reflectance index (bottom) in two tomato lines (WT and N367). For each leaf parameter, means of different sequential leaf measurements are presented. Bars on columns represent standard error of the mean.