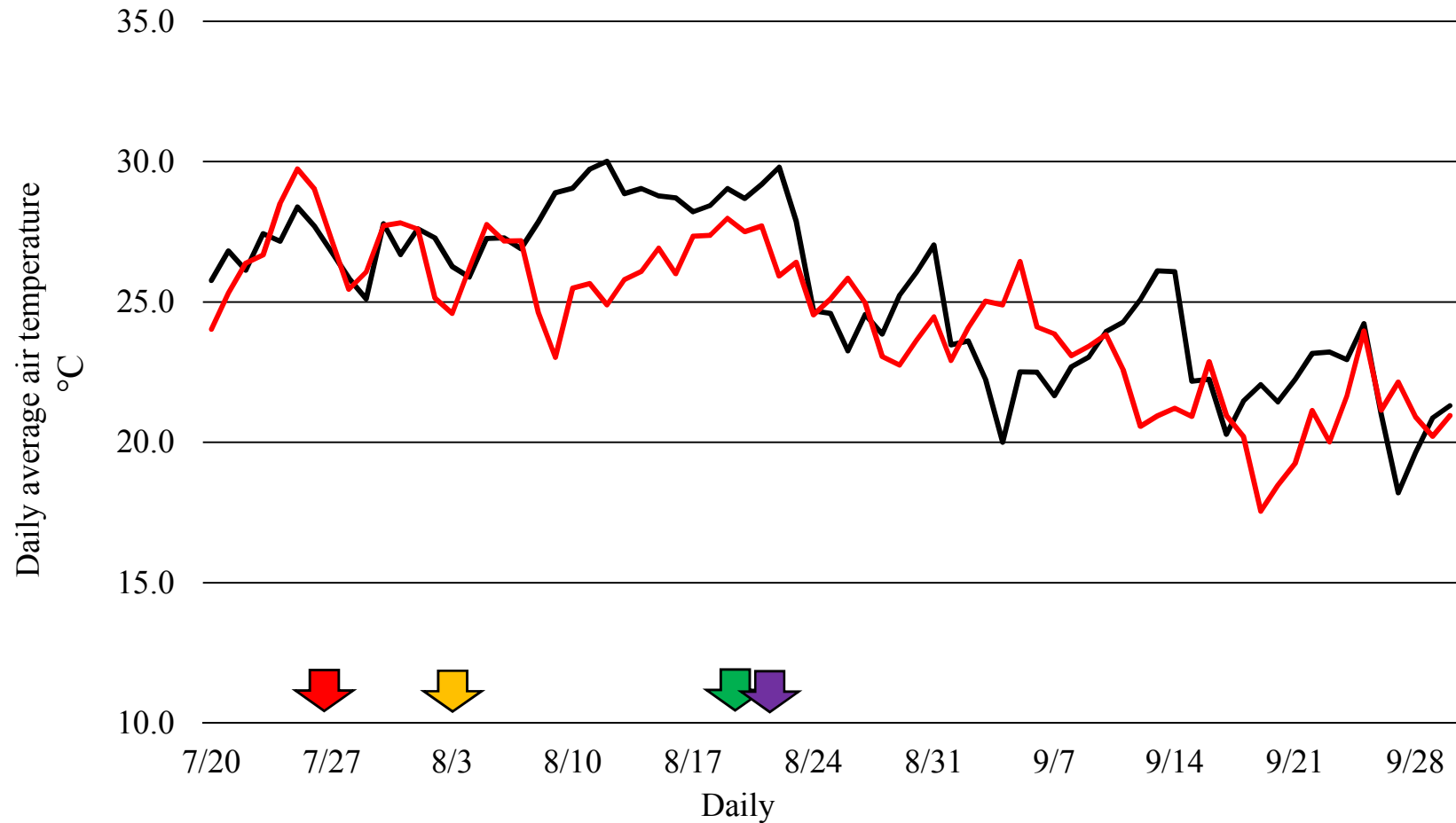


Supplemental Fig. 1. Grain length (a) and width (b) of Second RHLs

On the horizontal axis, K, H, and Y represent the *qWCE6* genotype for Koshihikari homozygous, Koshihikari heterozygous, and Yamadanishiki homozygous, respectively. The letters above each boxplot indicate the statistical differences between groups using five plants selected at random per each genotype (Tukey-Kramer method, $P < 0.05$).



Supplemental Fig. 2. Daily average air temperature in 2013 (black line) and 2014 (red line)
 The red, yellow, green, and purple arrows indicate the averaged heading dates for Koshihikari, VL_E,
 Yamadanishiki, and VL_L, respectively.



2013 Koshihikari



2013 Yamadanishiki



2013 VL_E



2013 VL_L



2014 Koshihikari



2014 Yamadanishiki



2014 VL_E



2014 VL_L

Supplemental Fig. 3. Grain images of lines and parents used in the validation of *qWCE6*