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Supplementary Material

Stomatal conductance responses to evaporative demand conferred by rice drought-yield quantitative trait locus *qDTY*$_{12.1}$

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Table S1. Experiment season, treatment, and genotypic effects on leaf anatomical parameters measured in Field Exp 3 and Field Exp 5

	Experiment	Treatment	Genotype
		p-values	
SVWD	0.134	0.089	0.078
SVHT	0.641	0.595	0.416
SV-LFTH	0.574	0.046*	0.190
IVD-SV	0.0221*	0.648	<0.001***
SV-BSCN	0.417	<0.001***	0.124
SV-BSCA	<0.001***	0.0133*	0.180
LVWD	0.196	0.002**	0.027*
LVHT	0.992	0.017*	<0.001***
LV-LFTH	0.930	<0.001***	0.375
IVD-LV	0.667	0.750	<0.001***
LV-BSCN	<0.001***	<0.001***	0.062
LV-BSCA	<0.001***	<0.001***	0.199
LV XYLEM #	0.002 **	0.668	0.607
LV XYLEM DIAM	0.432	<0.001***	0.587
BSX #	0.002**	0.058	0.651
LV-SV MCTA	0.069	0.215	<0.001***
SV-SC MCTA	0.020*	0.642	0.135

SVWD = small vein width, SVHT = small vein height, SV-LFTH = small vein leaf thickness, IVD-SV = interveinal distance small vein, SV-BSCN = small vein bundle sheath cell number, SV-BSCA = small vein bundle sheath cell area, LVHT = large vein height, LV-LFTH = large vein leaf thickness, LVWD = large vein width, IVD-LV = interveinal distance large vein, LV-BSCN = large vein bundle sheath cell number, LV-BSCA = large vein bundle sheath cell area, LV XYLEM # = large vein xylem number, LV XYLEM DIAM = large vein xylem diameter, BSX # = bundle sheath extension cell number, LV-SV MCTA= large vein to small vein mesophyll cell total area, SV-SV MCTA= small vein to small vein mesophyll cell total area.

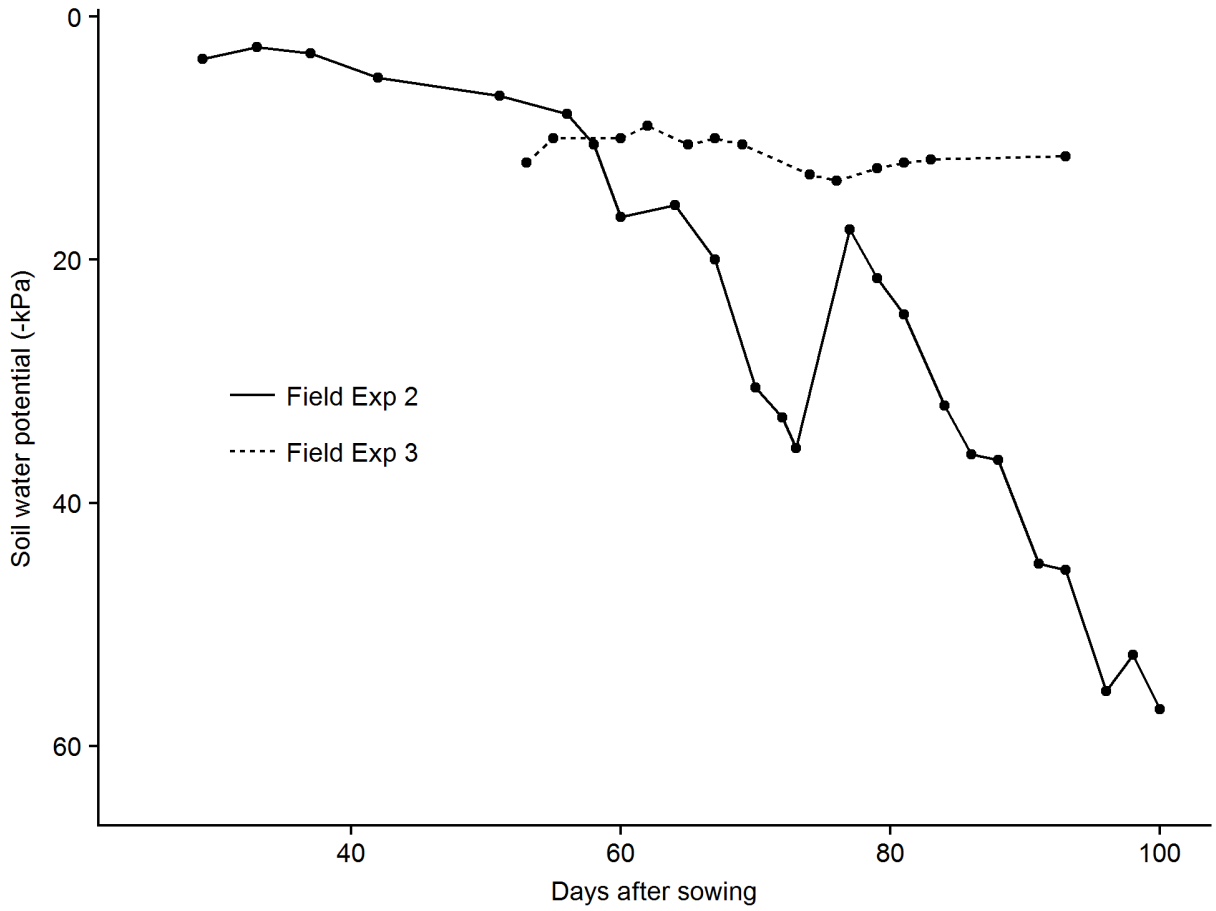

Fig. S1. Soil water potential at a depth of 30 cm across the drought stress period in Field Exp 2 and Field Exp 3, during which some of the ^{18}O (Field Exp 2) and leaf anatomy (Field Exp 3) measurements were taken.

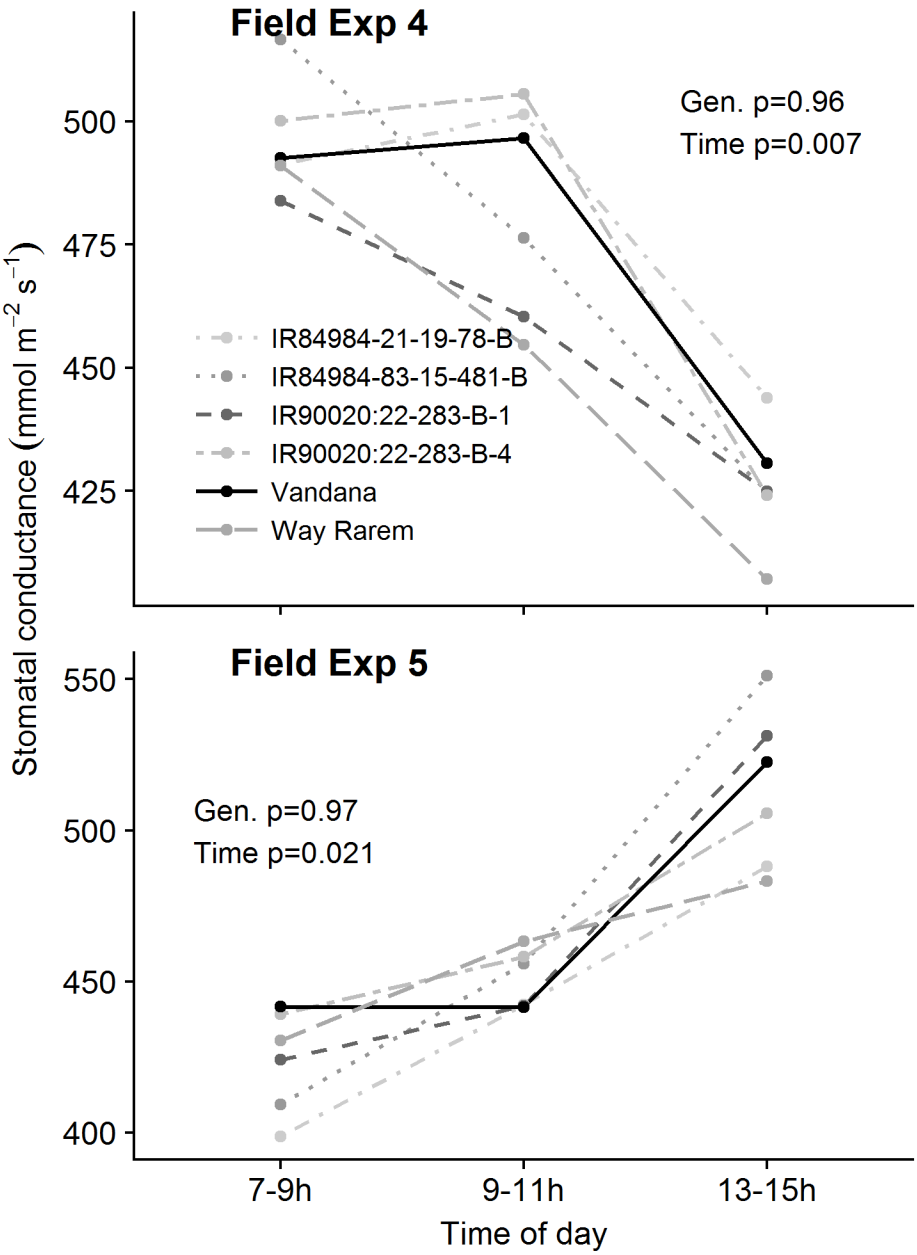

Fig. S2. Stomatal conductance in the well-watered treatments of two field experiments (A-B) of *qDTY*$_{12.1}$ NILs, the recurrent parent Vandana, and the donor parent Way Rarem at the time periods of measurement (all measurement dates averaged). Vandana is shown by the black line/symbols; the NILs and Way Rarem are shown by the grey lines/symbols.

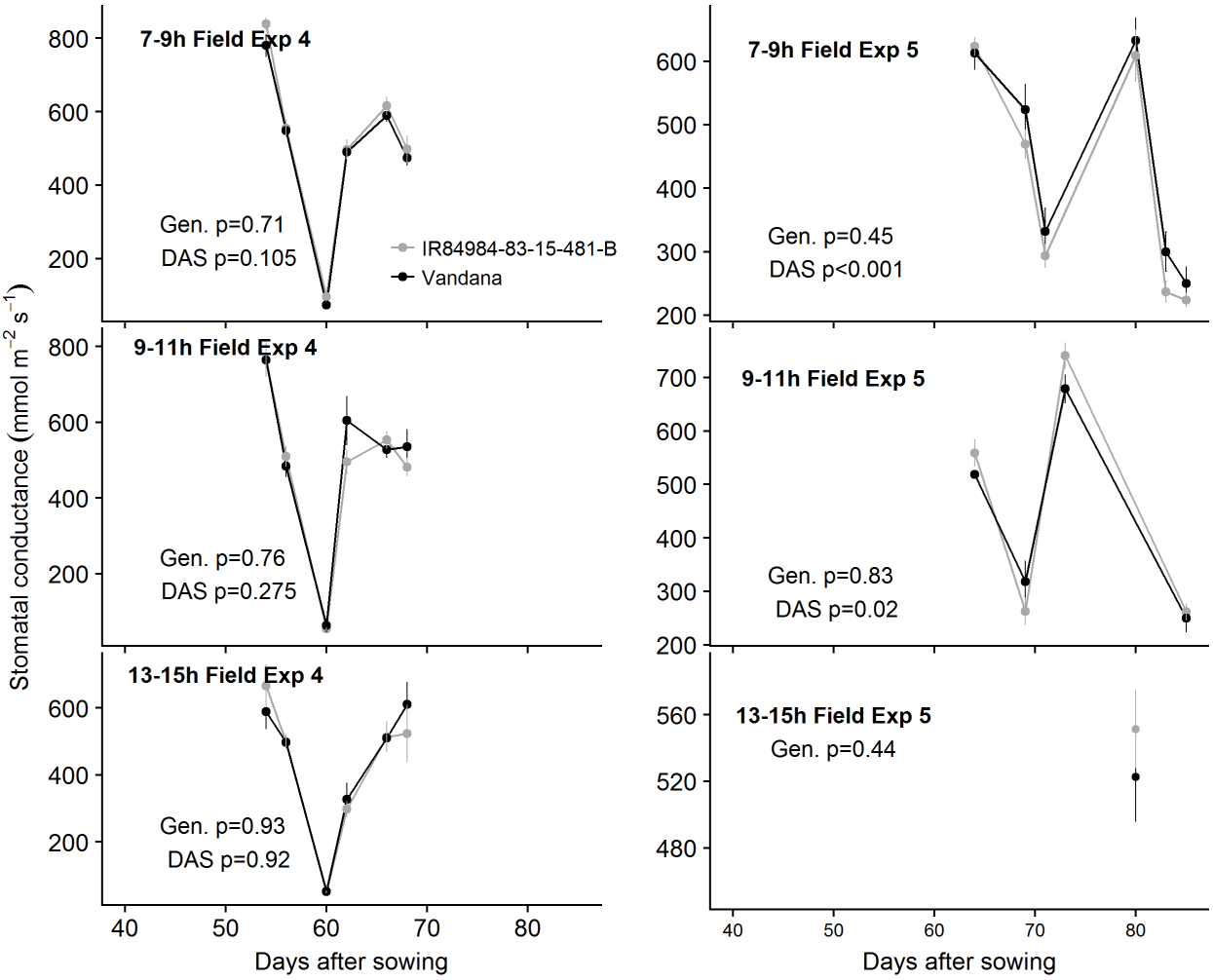

Fig. S3. Stomatal conductance in the well-watered treatments of qDTY12.1 NIL IR 84984-83-15-481-B and the recurrent parent Vandana across measurement dates at three time periods (7–9 h, 9–11 h and 13–15 h) in three field experiments (Field Exp 1, Field Exp 4, and Field Exp 5). Vandana is shown by the black line/symbols; NIL IR84984-83-15-481-B is shown by the grey lines/symbols. Only one date was measured for the Field Exp 5 13–15 h time period.

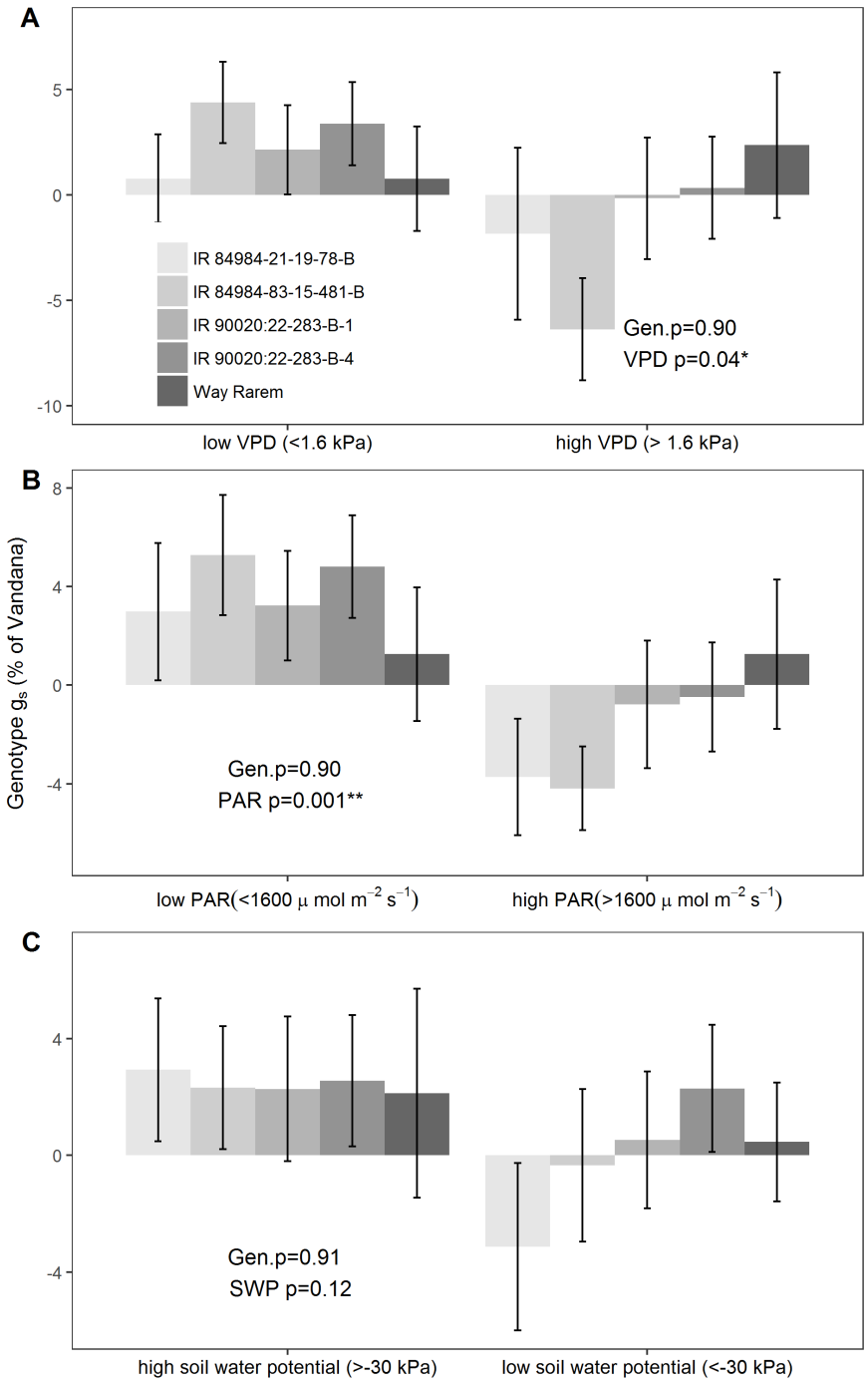

Fig. S4. The percent increase in stomatal conductance (g_s) of *qDTY*$_{12.1}$ NILs over the recurrent parent Vandana, as affected by (A) vapor pressure deficit (VPD), (B) photosynthetically active radiation (PAR), and (C) soil water potential (SWP) at a depth of 30 cm across measurement times in three field experiments under drought stress. Values shown are mean of all measurements at each time of day/environmental condition combination ± s.e.

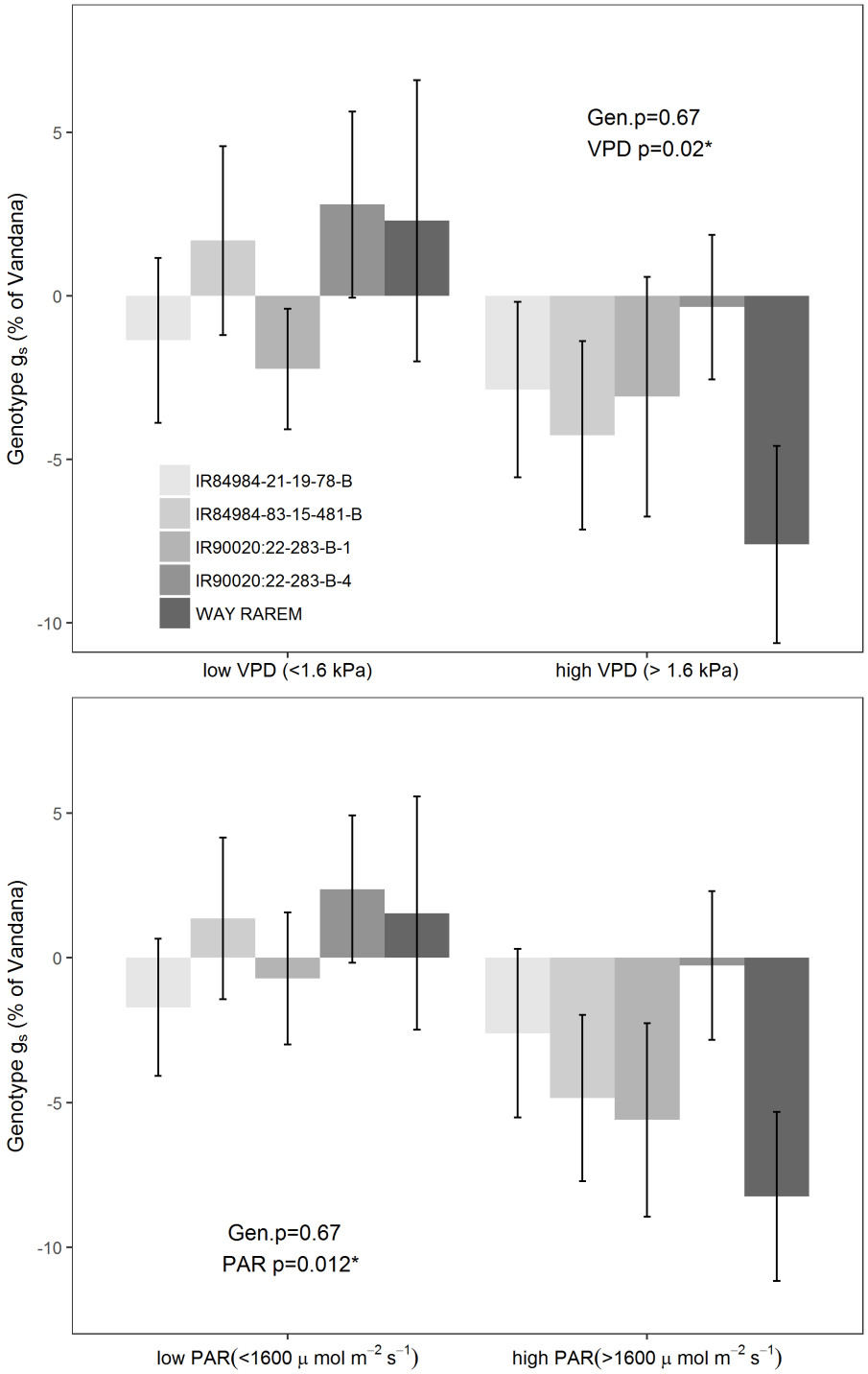

Fig. S5. The percent increase in stomatal conductance (g_s) of *qDTY*$_{12.1}$ NILs over the recurrent parent Vandana, as affected by (A) vapor pressure deficit (VPD), and (B) photosynthetically active radiation (PAR) across measurement times in three field experiments under well-watered conditions. Values shown are mean of all measurements at each time of day/environmental condition combination ± s.e.

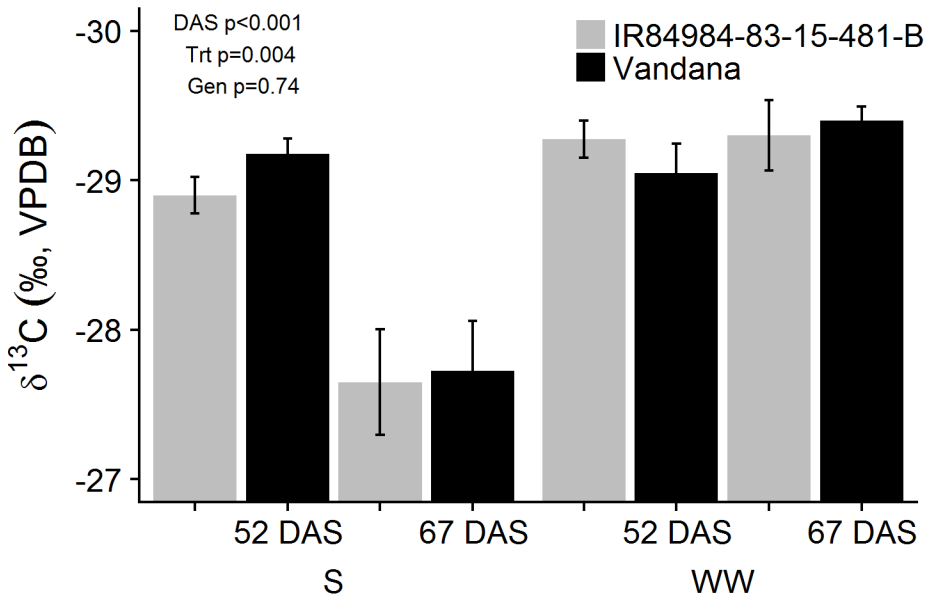

Fig. S6. Leaf $\delta^{13}C$ values at two sampling dates in the drought and well-watered treatments of Field Exp 4. Values shown are mean ± s.e.

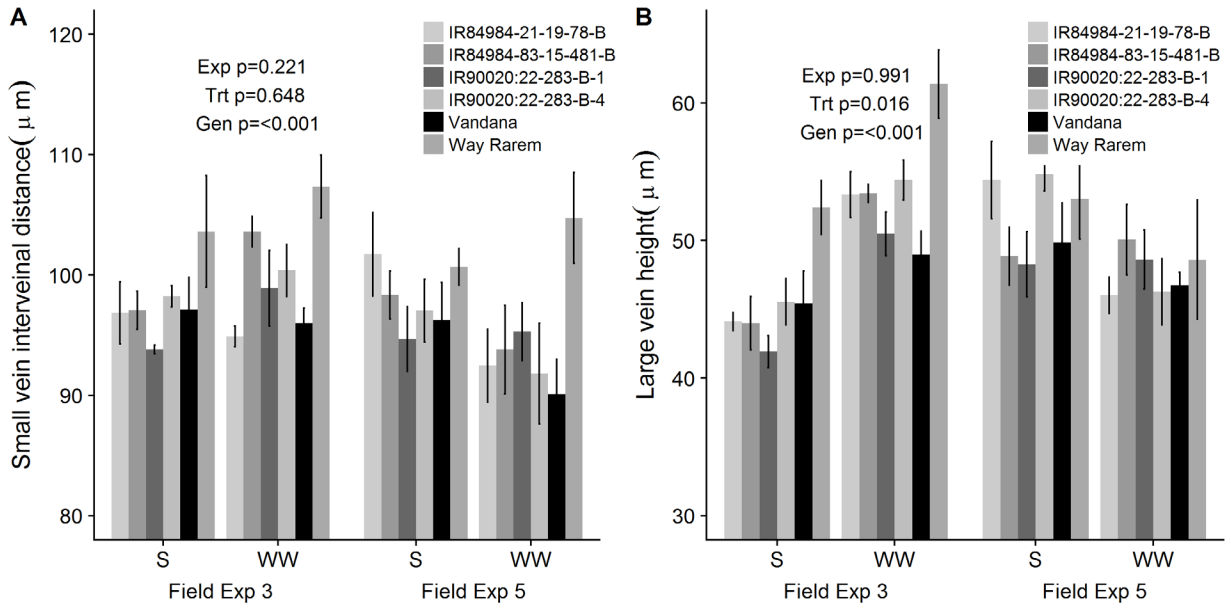

Fig. S7. Genotypic differences in leaf anatomy not attributed to *qDTY*$_{12.1}$: (A) Interveinal distance between small veins and (B) large vein height of the first fully-expanded leaf sampled at 65 and 67 DAS in Field Exp 3 and Field Exp 5, respectively. Vandana is shown by the black bars; the NILs and Way Rarem are shown by the grey bars. Values shown are mean ± s.e.