

**Table S27 Fixed effects for physiological traits within years.** F values for fixed effects from an analysis of variance (ANOVA) for the TM-1×NM24106 recombinant inbred line (RIL) population, its two parents, and commercial check varieties for physiological traits for each individual year from 2010-12 at the Maricopa Agricultural Center located in Maricopa, AZ.

Trait	Year	Source		
		Genotype	Irrigation Regime	Genotype*Irrigation Regime
ABA conc.	2011	1.32*	10.86**	0.93 <sup>NS</sup>
	2012	1.50**	0.88 <sup>NS</sup>	1.36*
Sugar conc.	2011	1.40*	0.37 <sup>NS</sup>	1.07 <sup>NS</sup>
	2012	1.65**	11.93**	0.93 <sup>NS</sup>
$\Delta^{13}\text{C}$	2010	5.64****	1.04 <sup>NS</sup>	1.48**
	2011	3.40****	2.89 <sup>NS</sup>	1.35*
	2012	5.16****	40.80****	1.57**

NS Not Significant at the < 0.05 level.

\* Significant at the < 0.05 level.

\*\* Significant at the < 0.01 level.

\*\*\* Significant at the < 0.001 level.

\*\*\*\* Significant at the < 0.0001 level.