

Online Resource 5. Results from the analysis of variance (ANOVA) of significant markers associated with QTL in the Sunco/Otis RIL population. Main effects and interaction term values represent p-values which were considered significant at p=0.05

Marker ^a	Chromosome	Terrace			Growth room			Field		
		Main Factor	MSI ^b	Screen ^c	Main Factor	MSI ^b	Screen ^c	Main Factor	MSI ^b	Screen ^c
wPt-665228	1A	0.06	ns	-	ns	ns	-	ns	ns	-
wPt-667746	1A	ns	ns	-	0.0001	0.001	1	0.03	0.01	3,4
wPt-10130	3B	ns	0.048	3	ns	ns	-	0.05	ns	-
<i>Xwmc777</i>	3B	0.28	0.034	3	0.059	ns	-	ns	ns	-
wPt-5261	3B	ns	ns	-	0.0001	0.001	1,2	0.04	0.02	3,4
wPt-7301	3B	ns	ns	-	0.04	ns	2	ns	ns	-
wPt-11029	3B	ns	ns	-	0.0001	0.0001	1,2	0.06	0.02	4
wPt-0021	3B	ns	ns	-	0.0008	0.003	1,2	0.03	0.009	1,3,4
wPt-10537	3B	ns	ns	-	0.0001	0.0001	1,2	ns	ns	-
wPt-3342	3B	ns	ns	-	0.0001	0.0002	1,2	ns	ns	-
<i>Xgwm247</i>	3B	ns	ns	-	0.0001	0.0001	1,2	ns	ns	-
<i>Xgwm181</i>	3B	ns	ns	-	0.02	ns	-	ns	ns	-
<i>Xgwm299</i>	3B	ns	ns	-	0.01	ns	-	ns	ns	-
wPt-7158	3B	ns	ns	-	0.0001	0.0001	1,2	ns	0.0001	2,3
wPt-731500	3B	ns	ns	-	0.0001	0.0001	1,2	ns	0.0001	2,3
wPt-0668	3B	ns	ns	-	0.0001	0.0001	1,2	ns	ns	-
wPt-7614	3B	ns	ns	-	0.0001	0.0001	1,2	ns	0.0001	3
wPt-0324	3B	ns	ns	-	0.0001	0.0001	1,2	ns	ns	-
wPt-5562	3B	ns	ns	-	0.0001	0.0001	1,2	ns	ns	-
wPt-8959	3B	ns	ns	-	0.0001	0.0006	1,2	ns	ns	-
wPt-1046	4B	0.06	ns	-	ns	ns	-	0.0049	ns	-
wPt-732448	4B	ns	ns	-	ns	ns	-	0.00017	ns	-
wPt-2371	7A	0.0002	0.01	3	0.07	ns	-	0.06	ns	-
wPt-3702	7A	0.0008	0.02	2	ns	ns	-	ns	ns	-

^a Individual markers were selected that were most closely associated with significant QTL across all three screening environments

^b MSI = Marker x screen interaction term (significant at p<0.05)

^c Screen = Screen number where the marker interaction was significant

^d ns = not significant. P-value was not significant at p<0.05