

Supplementary Table 3: List of *per se* and heterotic QTL identified in RILs and RIL-TCs.

Trait	QTL	Peak <sup>a</sup>	SI <sup>b</sup>	Marker <sup>c</sup>	LOD <sup>d</sup>	pR <sup>2e</sup>	StdEff <sup>f</sup>	R <sup>2g</sup>	SD <sup>g</sup>
DW15	per se	1/10	4-14	MASC03758	2.21	2.35	0.15	20.2	3.5
		1/90	82-94	MASC03684	1.83	1.95	-0.13		
		3/8	4-12	MASC05312	6.41	6.65	0.26		
		3/60	52-68	MASC01171	3.41	3.60	-0.21		
		4/4	0-8	MASC04123	5.03	5.25	-0.22		
		4/54	46-58	MASC02548	3.61	3.80	-0.20		
		5/86	82-92	MASC04576	3.23	3.40	0.19		
	aMPH <sub>C24</sub>	1/24	20-28	MASC03911	2.36	2.55	-0.15	20.6	3.5
		1/92	84-96	MASC03684	4.72	5.02	-0.22		
		2/46	42-54	MASC09221	3.84	4.10	-0.20		
		3/56	52-64	MASC04819	6.52	6.87	-0.29		
		4/4	2-13	MASC04123	1.92	2.08	0.13		
	aMPH <sub>Col</sub>	4/4	2-6	MASC04123	17.96	18.03	0.44	18.0	3.4
	Z <sub>1</sub>	1/90	86-94	MASC03684	8.37	8.95	-0.30	18.9	3.5
		3/54	50-58	MASC04819	2.66	2.93	-0.18		
		4/4	2-10	MASC04123	7.32	7.87	0.27		
		4/56	50-62	MASC04642	2.96	3.26	-0.17		
	Z <sub>2</sub>	1/12	8-16	MASC03758	4.60	5.03	-0.20	30.5	3.8
2/56		52-62	MASC09222	4.88	5.32	-0.20			
3/33		32-38	MASC04516	2.14	2.37	-0.14			
3/62		58-68	MASC01171	5.04	5.50	-0.26			
4/4		2-6	MASC04123	10.45	11.05	-0.30			
LA06	per se	1/10	4-14	MASC03758	2.43	2.59	0.16	17.6	3.3
		1/90	82-94	MASC03684	1.76	1.88	-0.13		
		3/2	2-10	MASC03001	2.63	2.79	0.16		
		4/2	0-4	MASC07015	2.32	2.47	-0.15		
		4/42	36-48	MASC03275	5.99	6.26	-0.27		
		5/90	86-92	MASC09211	2.08	2.22	0.16		
	aMPH <sub>C24</sub>	3/56	52-56	MASC04819	2.15	2.42	-0.18	2.4	1.5
	aMPH <sub>Col</sub>	4/4	2-6	MASC04123	12.16	13.22	0.37	13.2	3.2
	Z <sub>1</sub>	1/90	84-94	MASC03684	4.38	5.03	-0.23	11.3	3.0
		4/4	2-10	MASC04123	5.65	6.44	0.25		
	Z <sub>2</sub>	3/62	54-70	MASC01171	3.35	3.87	-0.23	10.9	3.0
4/4		2-10	MASC04123	4.57	5.24	-0.23			

		5/38	32-40	MASC04983	2.50	2.90	-0.16		
<b>LA08</b>	per se	1/8	4-12	MASC07014	2.86	3.03	0.17	15.2	3.2
		3/6	2-10	MASC05312	5.62	5.87	0.24		
		4/40	30-46	MASC09213	6.05	6.30	-0.26		
		5/90	86-92	MASC09211	3.06	3.24	0.19		
	aMPH <sub>C24</sub>		96-					5.4	2.2
		1/100	102	MASC03765	2.54	2.86	-0.18		
		3/52	50-54	MASC05045	2.45	2.76	-0.18		
	aMPH <sub>Col</sub>	4/4	2-8	MASC04123	11.93	12.99	0.37	13.0	3.2
	Z <sub>1</sub>	1/88	84-94	MASC03631	4.45	5.10	-0.23	10.8	3.0
		4/6	2-10	MASC04123	5.08	5.81	0.25		
	Z <sub>2</sub>	3/62	56-70	MASC01171	4.03	4.64	-0.26	11.0	3.0
		4/6	2-10	MASC04123	4.25	4.88	-0.23		
5/38		32-42	MASC03559	2.24	2.60	-0.16			
<b>LA10</b>	per se	1/10	4-14	MASC03758	2.08	2.22	0.15	14.7	3.2
		1/86	82-92	MASC03631	2.47	2.62	-0.17		
		3/6	0-12	MASC05312	4.77	5.00	0.22		
		3/86	82-86	MASC04925	3.25	3.43	-0.19		
		4/54	48-58	MASC02548	3.35	3.54	-0.19		
	aMPH <sub>C24</sub>		94-					5.1	2.1
		1/96	102	MASC03631	2.80	3.14	-0.19		
		3/52	50-54	MASC05045	1.94	2.19	-0.16		
	aMPH <sub>Col</sub>	4/4	2-8	MASC04123	11.20	12.24	0.36	12.2	3.1
	Z <sub>1</sub>	1/88	84-94	MASC03631	5.60	6.38	-0.26	14.1	3.3
		4/6	2-10	MASC04123	5.53	6.31	0.26		
		4/66	64-72	MASC03154	2.06	2.40	-0.15		
Z <sub>2</sub>	3/64	56-72	MASC01171	3.40	3.92	-0.23	11.5	3.0	
	4/4	2-10	MASC04123	4.75	5.45	-0.23			
	5/38	34-42	MASC03559	3.03	3.50	-0.18			

aMPH<sub>Col</sub>, aMPH<sub>C24</sub>, Z<sub>1</sub>, Z<sub>2</sub> represent QTL for absolute mid-parent-heterosis in crosses with Col-0 or C24, augmented additive and augmented dominance effect for each trait, respectively.

<sup>a</sup> Peak gives position of the highest LOD score in the QTL region as chromosome/cM.

<sup>b</sup> SI indicates support interval with a LOD decrease of 1.0.

<sup>c</sup> Marker names closest marker to the left of the QTL region.

<sup>d</sup> LOD is the log<sub>10</sub> of the likelihood odds ratio and the test statistic.

<sup>e</sup> pR<sup>2</sup> (in %) is contribution of individual QTL to the phenotypic variation.

<sup>f</sup> Std.eff is standardized effect of the QTL i.e. effect divided by the phenotypic standard deviation of the trait. A negative value signifies an increasing effect of the Col-0 allele.

<sup>g</sup>  $R^2$  and SD give explained phenotypic variation in % and associated standard deviation obtained from the final simultaneous fit of all putative QTL in PLABQTL.