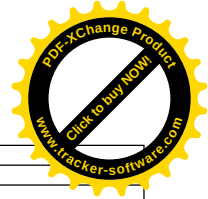
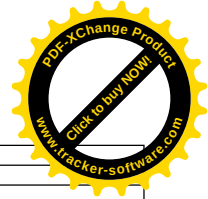


Supplemental Table 2 Summary of GWAS results for exocarp color (EC), mesocarp color (MC), testa color (TC), and tannin content (TC) in the four environments by four analytical models

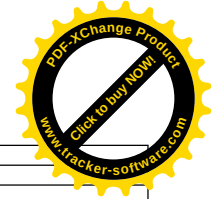
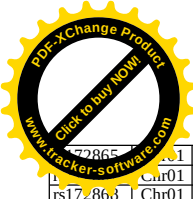
SNP	Chrom	Position	-LogP	MAF	effect	Trait	Model	Enviroment	Colocalized Gene	Map Location (bP)	Homologous Gene	Similarity	Putative Fuction
rs4806	Chr01	1602446	16.71	0.14	0.19	TA	Farm CPU, Blink	20GY	Sobic.001G019300	1591350..1594430	LOC_Os03g62370	89.20%	WD40-like Beta Propeller Repeat family protein
rs13897	Chr01	4286318	8.52	0.21	0.30	MC	FarmCPU	20LD	Sobic.001G056000	4195290..4197336	AT5G35550 (TT2)	62.70%	MYB-like DNA-binding protein
rs25522	Chr01	9032158	7.60	0.06	-0.64	EC	FarmCPU	18GY					
rs38403	Chr01	14999653	7.97	0.04	0.88	EC	FarmCPU	20LD					
rs81821	Chr01	31581182	9.02	0.49	NA	EC	Blink	18GY					
rs82323	Chr01	31651417	8.76	0.16	NA	EC	Blink	18GY					
rs111875	Chr01	48823265	8.82	0.22	NA	EC	Farm CPU, Blink	20LD					
rs151736	Chr01	61599835	8.94	0.30	0.43	TC	FarmCPU	20LD	Sobic.001G328500	61601409..61602643	AT5G41220	48.40%	glutathione S-transferase
rs160697	Chr01	63968796	7.67	0.07	1.19	EC	GLM	19GY					
rs160701	Chr01	63974806	7.95	0.06	1.30	EC	GLM	18GY, 19GY					
rs160702	Chr01	63974872	7.74	0.06	-1.24	EC	GLM	19GY					
rs160707	Chr01	63975074	8.16	0.07	1.26	EC	GLM	19GY	Sobic.001G349900	63976582..63979207	AT5G07990 (TT7)	61.60%	flavonoid 3'-monooxygenase
rs160724	Chr01	63976698	7.76	0.07	1.23	EC	GLM	19GY					
rs160728	Chr01	63976926	7.82	0.06	1.23	EC	GLM	19GY					
rs160729	Chr01	63976990	7.82	0.06	-1.23	EC	GLM	19GY					
rs160730	Chr01	63976991	7.82	0.06	1.23	EC	GLM	19GY					
rs160734	Chr01	63977759	8.06	0.07	1.25	EC	GLM	19GY					
rs160746	Chr01	63980318	8.09	0.06	-1.33	EC	GLM	18GY, 19GY					
rs160764	Chr01	63982418	8.13	0.08	-1.23	EC	GLM	19GY, 20LD					
rs160765	Chr01	63982471	7.90	0.07	-1.10	EC	GLM	19GY, 20LD					
rs160770	Chr01	63982722	7.95	0.07	1.17	EC	GLM	18GY,19GY					
rs160812	Chr01	63993288	8.02	0.10	0.97	EC	GLM	19LD, 20LD					
rs160813	Chr01	63993575	7.63	0.07	-1.00	EC	GLM	20LD					
rs160816	Chr01	63994453	7.64	0.07	-1.04	EC	GLM	20LD					
rs160823	Chr01	64004473	7.64	0.07	-1.10	EC	GLM	18GY					
rs160824	Chr01	64004715	8.20	0.08	1.02	EC	GLM	20LD	Sobic.001G350300	64007828..64018246	AT4G20970	53.70%	bHLH DNA-binding superfamily protein
rs160825	Chr01	64004744	7.88	0.08	1.01	EC	GLM	20LD					
rs160834	Chr01	64007511	8.68	0.08	1.09	EC	GLM	18GY, 19GY, 20LD					
rs160836	Chr01	64007614	8.00	0.07	-1.09	EC	GLM	18GY, 20LD					
rs160837	Chr01	64007617	8.40	0.07	-1.20	EC	GLM	18GY, 19GY, 20LD					
rs160840	Chr01	64008149	7.94	0.08	1.16	EC	GLM	18GY, 19GY					
rs160850	Chr01	64008808	8.43	0.08	1.15	EC	GLM	18GY, 19GY					
rs160852	Chr01	64009126	9.42	0.08	1.15	EC	GLM	19GY, 20LD					
rs160853	Chr01	64009908	7.90	0.09	0.98	EC	GLM	20LD					
rs160870	Chr01	64010370	8.38	0.08	-1.08	EC	GLM	18GY, 19GY, 20LD					
rs160871	Chr01	64010376	8.60	0.08	-1.15	EC	GLM	18GY, 20LD					
rs160872	Chr01	64010393	8.48	0.08	-1.14	EC	GLM	18GY					
rs160873	Chr01	64010396	8.27	0.08	-1.12	EC	GLM	18GY					
rs160874	Chr01	64010397	8.27	0.08	-1.12	EC	GLM	18GY					
rs160875	Chr01	64010399	8.27	0.08	1.12	EC	GLM	18GY, 19GY, 20LD					
rs160876	Chr01	64010405	8.13	0.09	-1.02	EC	GLM	18GY, 19GY, 20LD					
rs160877	Chr01	64010410	8.13	0.09	1.02	EC	GLM	18GY, 19GY, 20LD					
rs160878	Chr01	64010418	7.93	0.09	1.00	EC	GLM	19GY, 20LD					
rs160879	Chr01	64010430	8.27	0.08	-1.12	EC	GLM	18GY, 19GY, 20LD					
rs160880	Chr01	64010436	7.92	0.09	-1.09	EC	GLM	18GY, 20LD					
rs160881	Chr01	64010486	7.72	0.08	1.09	EC	GLM	18GY					
rs160883	Chr01	64010494	7.72	0.08	1.09	EC	GLM	18GY					
rs160893	Chr01	64010668	7.63	0.09	1.13	EC	GLM	19GY					
rs160895	Chr01	64010692	7.63	0.09	-1.13	EC	GLM	19GY					
rs160896	Chr01	64010737	7.81	0.08	1.09	EC	GLM	18GY					
rs160900	Chr01	64010808	7.63	0.09	1.03	EC	GLM	18GY					
rs160903	Chr01	64010907	8.94	0.08	-1.11	EC	GLM	18GY, 19GY, 20LD					
rs160909	Chr01	64011079	7.80	0.08	-1.06	EC	GLM	18GY					
rs160912	Chr01	64011146	7.62	0.08	0.96	EC	GLM	20LD					
rs160915	Chr01	64011169	7.76	0.09	1.04	EC	GLM	18GY, 19GY, 20LD					
rs160925	Chr01	64011280	8.03	0.09	1.02	EC	GLM	18GY, 19GY, 20LD					
rs160926	Chr01	64011286	8.53	0.08	1.16	EC	GLM	18GY, 19GY, 20LD					
rs160927	Chr01	64011294	8.12	0.09	1.02	EC	GLM	18GY, 19GY, 20LD					
rs160928	Chr01	64011297	8.12	0.09	-1.02	EC	GLM	18GY, 19GY, 20LD					
rs160929	Chr01	64011301	8.20	0.08	-1.11	EC	GLM	18GY, 19GY, 20LD					
rs160930	Chr01	64011328	8.16	0.08	-1.03	EC	GLM	18GY, 19GY, 20LD					



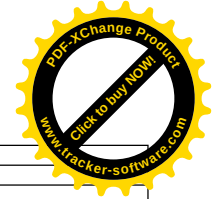
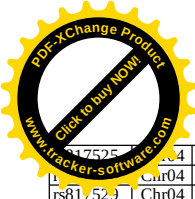
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rs160940	Chr01	64011476	7.82	0.08	1.07	EC	GLM	18GY					
rs160945	Chr01	64011481	7.66	0.08	1.05	EC	GLM	18GY					
rs160945	Chr01	64011564	7.62	0.09	-1.04	EC	GLM	18GY					
rs160946	Chr01	64011566	7.62	0.09	1.04	EC	GLM	18GY					
rs172699	Chr01	68357286	14.21	0.06	-2.66	EC,TA	GLM, MLM	18GY, 19GY, 20GY, 20LD					
rs172706	Chr01	68363156	9.52	0.36	1.34	EC	GLM	18GY, 19GY, 20LD					
rs172710	Chr01	68363489	11.69	0.40	-1.51	EC, MC, TA	GLM	18GY, 19GY, 20GY, 20LD					
rs172711	Chr01	68363501	13.27	0.40	-1.67	EC, MC, TA	GLM	18GY, 19GY, 20GY, 20LD	Sobic.001G397900	68362756..68367370	Y1	100%	
rs172712	Chr01	68363504	13.31	0.41	1.70	EC, MC, TA	GLM, MLM	18GY, 19GY, 20GY, 20LD					
rs172713	Chr01	68363535	12.84	0.39	-1.68	EC, MC, TA	GLM	18GY, 19GY, 20GY, 20LD					
rs172715	Chr01	68370435	12.90	0.30	-0.82	EC,TA	GLM, MLM	18GY, 19GY, 20GY, 20LD					
rs172725	Chr01	68376954	19.40	0.15	-1.37	EC, MC, TA	GLM, MLM, FarmCPU, Blink	18GY, 19GY, 20GY, 20LD					
rs172726	Chr01	68377164	11.82	0.39	-0.77	EC,TA	GLM	18GY, 19GY, 20GY, 20LD					
rs172727	Chr01	68377216	11.27	0.39	-0.74	EC,TA	GLM	18GY, 19GY, 20GY, 20LD					
rs172736	Chr01	68381803	13.68	0.37	-0.85	EC,TA	GLM, MLM	18GY, 19GY, 20GY, 20LD					
rs172737	Chr01	68382224	18.26	0.23	-1.22	EC, MC,TA	GLM, MLM, Blink	18GY, 19GY, 20GY, 20LD					
rs172745	Chr01	68385325	17.36	0.22	-1.18	EC, MC, TA	GLM, MLM	18GY, 19GY, 20GY, 20LD					
rs172746	Chr01	68385611	16.36	0.23	1.30	EC, MC, TA	GLM, MLM	18GY, 19GY, 20GY, 20LD					
rs172747	Chr01	68385632	17.10	0.22	-1.16	EC, MC, TA	GLM, MLM	18GY, 19GY, 20GY, 20LD					
rs172748	Chr01	68385970	16.29	0.25	-1.12	EC, MC, TA	GLM, MLM	18GY, 19GY, 20GY, 20LD					
rs172749	Chr01	68386062	16.02	0.24	-1.12	EC, MC, TA	GLM, MLM	18GY, 19GY, 20GY, 20LD					
rs172750	Chr01	68386440	16.16	0.23	-1.30	EC, MC, TA	GLM, MLM	18GY, 19GY, 20GY, 20LD					
rs172751	Chr01	68386798	16.90	0.23	-1.34	EC, MC, TA	GLM, MLM	18GY, 19GY, 20GY, 20LD					
rs172752	Chr01	68387237	16.31	0.22	-1.32	EC, MC, TA	GLM, MLM, FarmCPU	18GY, 19GY, 20GY, 20LD					
rs172753	Chr01	68387257	18.15	0.15	1.28	EC, MC, TA	GLM, MLM	18GY, 19GY, 20GY, 20LD					
rs172754	Chr01	68387435	15.80	0.26	1.19	EC, MC, TA	GLM, MLM	18GY, 19GY, 20GY, 20LD					
rs172755	Chr01	68387538	16.82	0.28	1.32	EC, MC, TA	GLM, MLM	18GY, 19GY, 20GY, 20LD					
rs172756	Chr01	68387541	16.82	0.28	-1.32	EC, MC, TA	GLM, MLM	18GY, 19GY, 20GY, 20LD					
rs172757	Chr01	68387551	16.04	0.28	1.28	EC, MC, TA	GLM, MLM	18GY, 19GY, 20GY, 20LD					
rs172758	Chr01	68387601	14.73	0.28	-1.22	EC, MC, TA	GLM, MLM	18GY, 19GY, 20GY, 20LD					
rs172759	Chr01	68387649	16.22	0.26	1.32	EC, MC, TA	GLM, MLM	18GY, 19GY, 20GY, 20LD					
rs172760	Chr01	68387676	15.42	0.24	1.29	EC, MC, TA	GLM, MLM	18GY, 19GY, 20GY, 20LD					
rs172761	Chr01	68387749	16.39	0.24	-1.31	EC, MC, TA	GLM, MLM	18GY, 19GY, 20GY, 20LD					
rs172762	Chr01	68387751	16.39	0.24	-1.31	EC, MC, TA	GLM, MLM	18GY, 19GY, 20GY, 20LD					
rs172763	Chr01	68387760	16.29	0.25	-1.29	EC, MC, TA	GLM, MLM	18GY, 19GY, 20GY, 20LD					
rs172764	Chr01	68387762	16.29	0.25	1.29	EC, MC, TA	GLM, MLM	18GY, 19GY, 20GY, 20LD					
rs172765	Chr01	68387807	16.70	0.25	-1.31	EC, MC, TA	GLM, MLM	18GY, 19GY, 20GY, 20LD					
rs172766	Chr01	68387860	16.26	0.26	1.29	EC, MC, TA	GLM, MLM	18GY, 19GY, 20GY, 20LD					
rs172767	Chr01	68387980	16.12	0.25	-1.30	EC, MC, TA	GLM, MLM	18GY, 19GY, 20GY, 20LD					
rs172768	Chr01	68388024	15.30	0.27	1.23	EC, MC, TA	GLM, MLM	18GY, 19GY, 20GY, 20LD					
rs172769	Chr01	68388167	17.28	0.24	1.33	EC, MC, TA	GLM, MLM	18GY, 19GY, 20GY, 20LD					
rs172770	Chr01	68389148	14.88	0.26	-1.22	EC, MC, TA	GLM, MLM	18GY, 19GY, 20GY, 20LD					
rs172772	Chr01	68389741	15.22	0.27	1.08	EC, MC, TA	GLM, MLM	18GY, 19GY, 20GY, 20LD					
rs172773	Chr01	68389801	17.00	0.25	-1.17	EC, MC, TA	GLM, MLM	18GY, 19GY, 20GY, 20LD					
rs172774	Chr01	68390203	15.33	0.25	1.23	EC, MC, TA	GLM, MLM	18GY, 19GY, 20GY, 20LD					
rs172775	Chr01	68390796	16.86	0.24	-1.35	EC, MC, TA	GLM, MLM	18GY, 19GY, 20GY, 20LD					
rs172778	Chr01	68392001	13.90	0.24	-1.21	EC, MC, TA	GLM, MLM	18GY, 19GY, 20GY, 20LD					
rs172779	Chr01	68392382	16.49	0.24	1.17	EC, MC, TA	GLM, MLM	18GY, 19GY, 20GY, 20LD					
rs172780	Chr01	68392608	15.30	0.24	1.09	EC, MC, TA	GLM, MLM	18GY, 19GY, 20GY, 20LD					
rs172781	Chr01	68392800	15.91	0.24	1.09	EC, MC, TA	GLM, MLM	18GY, 19GY, 20GY, 20LD					
rs172782	Chr01	68393003	17.00	0.23	-1.23	EC, MC, TA	GLM, MLM	18GY, 19GY, 20GY, 20LD					
rs172783	Chr01	68393453	16.19	0.25	-1.27	EC, MC, TA	GLM, MLM	18GY, 19GY, 20GY, 20LD					
rs172784	Chr01	68393818	16.24	0.28	-1.07	EC, MC, TA	GLM, MLM	18GY, 19GY, 20GY, 20LD					
rs172785	Chr01	68394108	16.54	0.26	-1.30	EC, MC, TA	GLM, MLM	18GY, 19GY, 20GY, 20LD					
rs172786	Chr01	68395140	16.31	0.26	1.30	EC, MC, TA	GLM, MLM	18GY, 19GY, 20GY, 20LD					
rs172787	Chr01	68395184	15.29	0.28	-1.06	EC, MC, TA	GLM, MLM	18GY, 19GY, 20GY, 20LD					
rs172788	Chr01	68395186	15.29	0.28	-1.06	EC, MC, TA	GLM, MLM	18GY, 19GY, 20GY, 20LD					
rs172789	Chr01	68395259	15.19	0.27	-1.24	EC, MC, TA	GLM, MLM	18GY, 19GY, 20GY, 20LD					
rs172790	Chr01	68395320	16.61	0.26	1.28	EC, MC, TA	GLM, MLM	18GY, 19GY, 20GY, 20LD					
rs172791	Chr01	68395379	15.80	0.27	1.25	EC, MC, TA	GLM, MLM	18GY, 19GY, 20GY, 20LD					
rs172792	Chr01	68395391	15.60	0.28	-1.22	EC, MC, TA	GLM, MLM	18GY, 19GY, 20GY, 20LD					
rs172793	Chr01	68395393	15.42	0.28	-1.21	EC, MC, TA	GLM, MLM	18GY, 19GY, 20GY, 20LD					
rs172794	Chr01	68395411	15.01	0.28	-1.19	EC, MC, TA	GLM, MLM	18GY, 19GY, 20GY, 20LD					
rs172795	Chr01	68395478	16.14	0.25	1.25	EC, MC, TA	GLM, MLM	18GY, 19GY, 20GY, 20LD					



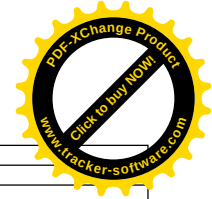
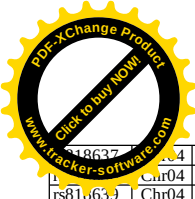
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rs172798	Chr01	68395560	16.16	0.26	-1.09	EC, MC, TA	GLM, MLM	18GY, 19GY, 20GY, 20LD						
rs172799	Chr01	68395575	16.05	0.27	-1.09	EC, MC, TA	GLM, MLM	18GY, 19GY, 20GY, 20LD						
rs172800	Chr01	68395592	15.25	0.28	1.06	EC, MC, TA	GLM, MLM	18GY, 19GY, 20GY, 20LD						
rs172801	Chr01	68395595	15.25	0.28	-1.06	EC, MC, TA	GLM, MLM	18GY, 19GY, 20GY, 20LD						
rs172802	Chr01	68395597	15.25	0.28	-1.06	EC, MC, TA	GLM, MLM	18GY, 19GY, 20GY, 20LD						
rs172803	Chr01	68395619	16.83	0.28	-1.12	EC, MC, TA	GLM, MLM	18GY, 19GY, 20GY, 20LD						
rs172804	Chr01	68395647	15.87	0.28	-1.25	EC, MC, TA	GLM, MLM	18GY, 19GY, 20GY, 20LD						
rs172805	Chr01	68398529	17.91	0.21	-1.35	EC, MC, TA	GLM, MLM	18GY, 19GY, 20GY, 20LD						
rs172806	Chr01	68398800	18.50	0.22	-1.41	EC, MC, TA	GLM, MLM	18GY, 19GY, 20GY, 20LD						
rs172807	Chr01	68399129	14.51	0.27	-1.05	EC, MC, TA	GLM, MLM	18GY, 19GY, 20GY, 20LD						
rs172808	Chr01	68400156	16.80	0.21	-1.17	EC, MC, TA	GLM, MLM	18GY, 19GY, 20GY, 20LD						
rs172809	Chr01	68400490	14.64	0.32	-0.92	EC, MC, TA	GLM, MLM	18GY, 19GY, 20GY, 20LD						
rs172810	Chr01	68400503	14.90	0.32	-0.92	EC, MC, TA	GLM, MLM	18GY, 19GY, 20GY, 20LD						
rs172811	Chr01	68401660	13.45	0.32	-0.83	EC, MC, TA	GLM, MLM	18GY, 19GY, 20GY, 20LD						
rs172812	Chr01	68401888	14.38	0.31	0.86	EC, MC, TA	GLM, MLM	18GY, 19GY, 20GY, 20LD						
rs172813	Chr01	68403111	14.84	0.32	0.90	EC, MC, TA	GLM, MLM	18GY, 19GY, 20GY, 20LD						
rs172814	Chr01	68404242	12.96	0.33	-0.84	EC	GLM	18GY, 19GY, 20LD						
rs172815	Chr01	68404416	15.54	0.31	0.91	EC	GLM, MLM	19GY, 20LD						
rs172816	Chr01	68404774	14.53	0.29	0.88	EC, MC, TA	GLM, MLM	18GY, 19GY, 20GY, 20LD						
rs172817	Chr01	68404914	11.56	0.43	-0.82	EC	GLM	18GY, 19GY, 20LD						
rs172819	Chr01	68405137	14.65	0.32	-0.88	EC	GLM, MLM	18GY, 19GY, 20LD						
rs172820	Chr01	68405225	13.69	0.31	0.86	EC,TA	GLM, MLM	18GY, 19GY, 20GY, 20LD						
rs172821	Chr01	68405292	14.80	0.30	0.90	EC,TA	GLM, MLM	18GY, 19GY, 20GY, 20LD						
rs172823	Chr01	68405972	13.60	0.35	-0.85	EC	GLM	18GY, 19GY, 20LD						
rs172824	Chr01	68406021	13.30	0.30	-0.86	EC,TA	GLM	18GY, 19GY, 20GY, 20LD						
rs172825	Chr01	68406172	14.02	0.33	-0.85	EC	GLM, MLM	18GY, 19GY, 20LD						
rs172826	Chr01	68406705	13.82	0.32	0.89	EC,TA	GLM, MLM	18GY, 19GY, 20GY, 20LD						
rs172827	Chr01	68406991	13.92	0.34	0.88	EC,TA	GLM, MLM	18GY, 19GY, 20GY, 20LD						
rs172828	Chr01	68407240	13.43	0.34	-0.85	EC,TA	GLM, MLM	18GY, 19GY, 20GY, 20LD						
rs172829	Chr01	68407339	13.40	0.31	0.96	EC,TA	GLM, MLM	18GY, 19GY, 20GY, 20LD						
rs172830	Chr01	68407345	13.95	0.32	-0.85	EC	GLM, MLM	18GY, 19GY, 20LD						
rs172831	Chr01	68407923	11.98	0.35	0.90	EC, MC, TA	GLM, MLM	18GY, 19GY, 20GY, 20LD						
rs172832	Chr01	68408021	13.70	0.34	-0.84	EC,TA	GLM, MLM	18GY, 19GY, 20GY, 20LD						
rs172833	Chr01	68408026	12.98	0.36	0.83	EC,TA	GLM, MLM	18GY, 19GY, 20GY, 20LD						
rs172834	Chr01	68408185	12.05	0.38	-0.78	EC, MC	GLM, MLM	18GY, 19GY, 20GY, 20LD						
rs172835	Chr01	68408186	11.63	0.41	0.90	EC, MC	GLM	18GY, 19GY, 20GY, 20LD						
rs172836	Chr01	68408237	13.59	0.38	-0.84	EC	GLM, MLM	18GY, 19GY, 20GY, 20LD						
rs172837	Chr01	68408507	15.46	0.37	0.93	EC, MC, TA	GLM, MLM	18GY, 19GY, 20GY, 20LD						
rs172838	Chr01	68408513	15.40	0.36	-0.92	EC,TA	GLM, MLM	18GY, 19GY, 20GY, 20LD						
rs172839	Chr01	68408528	14.28	0.36	0.86	EC,TA	GLM, MLM	18GY, 19GY, 20GY, 20LD						
rs172840	Chr01	68408534	13.89	0.35	-0.85	EC,TA	GLM, MLM	18GY, 19GY, 20GY, 20LD						
rs172841	Chr01	68408557	13.26	0.36	0.84	EC,TA	GLM, MLM	18GY, 19GY, 20GY, 20LD						
rs172842	Chr01	68408639	13.83	0.36	0.88	EC,TA	GLM, MLM	18GY, 19GY, 20GY, 20LD						
rs172843	Chr01	68408648	13.83	0.36	0.88	EC,TA	GLM, MLM	18GY, 19GY, 20GY, 20LD						
rs172844	Chr01	68408700	12.30	0.36	0.83	EC,TA	GLM, MLM	18GY, 19GY, 20GY, 20LD						
rs172845	Chr01	68408727	13.84	0.23	0.90	EC,TA	GLM, MLM	18GY, 19GY, 20GY, 20LD						
rs172846	Chr01	68408729	13.79	0.35	1.00	EC, MC, TA	GLM, MLM	18GY, 19GY, 20GY, 20LD						
rs172847	Chr01	68409324	12.98	0.35	0.81	EC, MC	GLM	20LD						
rs172850	Chr01	68410025	11.33	0.39	-0.84	EC	GLM	18GY, 19GY, 20LD						
rs172851	Chr01	68410043	11.79	0.37	0.86	EC, MC	GLM	18GY, 19GY, 20GY, 20LD						
rs172852	Chr01	68410049	11.94	0.37	-0.87	EC, MC	GLM	18GY, 19GY, 20GY, 20LD						
rs172853	Chr01	68410056	11.56	0.38	-0.84	EC, MC	GLM	18GY, 19GY, 20GY, 20LD						
rs172854	Chr01	68410080	11.55	0.38	-0.84	EC, MC	GLM	18GY, 19GY, 20GY, 20LD						
rs172855	Chr01	68410162	10.01	0.38	0.67	EC, MC, TA	GLM	18GY, 19GY, 20GY, 20LD						
rs172856	Chr01	68410298	10.58	0.39	0.71	EC	GLM	18GY, 19GY, 20LD						
rs172857	Chr01	68410859	11.57	0.39	-0.85	EC, MC, TA	GLM	18GY, 19GY, 20GY, 20LD						
rs172858	Chr01	68411957	11.22	0.36	0.73	EC, MC, TA	GLM	18GY, 19GY, 20GY, 20LD						
rs172859	Chr01	68412492	12.15	0.36	-0.76	EC, MC, TA	GLM, MLM	18GY, 19GY, 20GY, 20LD						
rs172860	Chr01	68412661	11.84	0.37	0.75	EC, MC, TA	GLM	18GY, 19GY, 20GY, 20LD						
rs172861	Chr01	68413115	9.53	0.38	-0.74	EC, MC, TA	GLM	18GY, 19GY, 20GY, 20LD						
rs172862	Chr01	68413292	8.65	0.38	0.69	EC	GLM	19GY, 20LD						
rs172863	Chr01	68413350	8.49	0.39	0.68	EC	GLM	19GY						
rs172864	Chr01	68413475	8.04	0.42	-0.67	EC	GLM	19GY						



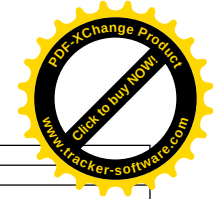
rs172865	Chr01	68413485	7.80	0.41	-0.66	EC	GLM	19GY					
rs172866	Chr01	68413985	8.24	0.40	0.67	EC	GLM	19GY, 20LD					
rs172868	Chr01	68414294	8.43	0.40	0.68	EC, MC	GLM	19GY, 20GY, 20LD					
rs172869	Chr01	68415299	8.48	0.29	0.62	EC	GLM	19GY, 20LD					
rs172871	Chr01	68429859	9.08	0.27	-0.66	EC	GLM	18GY, 19GY, 20LD					
rs172872	Chr01	68429869	8.75	0.28	-0.65	EC	GLM	18GY, 19GY, 20LD					
rs172873	Chr01	68437672	8.21	0.34	-0.68	EC	GLM	19GY, 20LD					
rs172874	Chr01	68450115	8.10	0.41	-0.68	EC	GLM	19GY					
rs173029	Chr01	68628974	16.47	0.10	-1.41	EC, MC, TA	GLM, MLM	18GY, 19GY, 20GY, 20LD					
rs173274	Chr01	68704498	15.92	0.12	1.33	EC, MC, TA	GLM, MLM	18GY, 19GY, 20GY, 20LD					
rs173467	Chr01	68754628	13.35	0.17	-1.28	EC, MC, TA	GLM, MLM	18GY, 19GY, 20GY, 20LD					
rs173468	Chr01	68754796	11.13	0.20	-1.08	EC, MC	GLM	18GY, 19GY, 20GY, 20LD					
rs173469	Chr01	68755178	12.43	0.19	-1.18	EC, MC, TA	GLM, MLM	18GY, 19GY, 20GY, 20LD					
rs173470	Chr01	68755336	12.30	0.21	-1.14	EC, MC, TA	GLM, MLM	18GY, 19GY, 20GY, 20LD					
rs173471	Chr01	68755590	11.36	0.23	-1.13	EC, MC	GLM	18GY, 19GY, 20LD					
rs173472	Chr01	68755712	13.09	0.21	1.18	EC, MC, TA	GLM, MLM	18GY, 19GY, 20GY, 20LD					
rs173473	Chr01	68755796	12.74	0.20	-1.20	EC, MC, TA	GLM, MLM	18GY, 19GY, 20GY, 20LD					
rs173474	Chr01	68756278	11.25	0.21	1.09	EC, MC, TA	GLM	18GY, 19GY, 20GY, 20LD					
rs173475	Chr01	68756305	12.44	0.21	-1.13	EC, MC, TA	GLM, MLM	18GY, 19GY, 20GY, 20LD					
rs173476	Chr01	68756969	13.58	0.21	-1.30	EC, MC, TA	GLM, MLM	18GY, 19GY, 20GY, 20LD					
rs173477	Chr01	68757235	14.04	0.19	-1.16	EC, MC, TA	GLM, MLM	18GY, 19GY, 20GY, 20LD					
rs173478	Chr01	68757890	9.96	0.21	1.04	EC	GLM	18GY, 19GY, 20LD					
rs173479	Chr01	68759556	12.29	0.23	1.13	EC, MC	GLM, MLM	18GY, 19GY, 20GY, 20LD					
rs173480	Chr01	68759795	12.45	0.19	-1.19	EC, MC, TA	GLM, MLM	18GY, 19GY, 20GY, 20LD					
rs175419	Chr01	69348713	12.48	0.08	1.47	EC, TA	GLM, MLM	18GY, 19GY, 20GY, 20LD					
rs175422	Chr01	69373131	13.18	0.08	1.52	EC, MC, TA	GLM, MLM	18GY, 19GY, 20GY, 20LD					
rs175430	Chr01	69382861	12.50	0.09	-1.50	EC, TA	GLM, MLM	18GY, 19GY, 20GY, 20LD					
rs176633	Chr01	70103759	9.28	0.09	1.14	EC	GLM	18GY, 20LD					
rs177162	Chr01	70328309	10.12	0.06	-1.31	EC	GLM, MLM	18GY, 19GY, 20GY, 20LD					
rs177716	Chr01	70458834	8.13	0.07	-1.09	EC	GLM	19GY, 20LD					
rs179164	Chr01	70976530	9.77	0.06	-1.24	EC	GLM	18GY, 19GY, 20LD					
rs242540	Chr02	7379337	9.10	0.07	-1.21	EC	GLM	19GY, 20LD	Sobic.002G072400	7359871..7365189	AT3G04870 / OsZDS	90.7% / 94.8%	zeta-carotene desaturase
rs243522	Chr02	7607813	9.38	0.06	-1.31	EC, TC	GLM	19GY, 20GY, 20LD					
rs245034	Chr02	7963441	8.22	0.06	-1.22	EC	GLM	20LD					
rs245075	Chr02	7983859	43.92	0.09	NA	EC, MC, TC, TA	GLM, MLM, FarmCPU, Blink	18GY, 19GY, 20GY, 20LD	Sobic.002G076600	7975936..7985221	TAN2	100%	
rs245202	Chr02	8119757	8.10	0.16	-0.88	EC	GLM	20GY					
rs245206	Chr02	8120785	7.66	0.14	-1.02	EC	GLM	20LD					
rs245925	Chr02	8300524	13.06	0.10	0.98	EC, MC, TC, TA	GLM, MLM	18GY, 19GY, 20GY, 20LD					
rs246877	Chr02	8464859	9.59	0.13	1.19	EC, TC	GLM, MLM	19GY, 20GY, 20LD	Sobic.002G080500	8474347..8475455	AT5G23260 (TT16)	74.50%	protein transparent testa 16
rs250585	Chr02	9115870	11.58	0.06	-1.45	EC, TC	GLM, MLM	18GY, 19GY, 20GY, 20LD					
rs250711	Chr02	9147004	11.08	0.11	1.20	EC, TA	GLM	18GY, 19GY, 20GY, 20LD					
rs251285	Chr02	9341745	10.59	0.07	1.26	EC, MC, TA	GLM	18GY, 19GY, 20GY, 20LD	Sobic.002G087500	9262731..9268709	AT3G51240(TT6) /AT4G22880 (TT18)	52.8% / 54.8%	flavanone 3-hydroxylase / leucoanthocyanidin dioxygenase
rs261082	Chr02	11310647	8.45	0.07	NA	EC	Blink	19GY					
rs269950	Chr02	13453215	8.97	0.32	NA	EC	Blink	20LD	Sobic.002G115700	14235461..14236989	AT5G13930 (TT4)	62%	chalcone synthase
rs283516	Chr02	17695838	9.62	0.44	0.48	TC	FarmCPU	20GY					
rs290110	Chr02	18829547	10.00	0.07	0.69	EC	FarmCPU	18GY					
rs297298	Chr02	20527786	7.65	0.07	-1.48	EC	GLM	19GY					
rs301695	Chr02	23473667	8.27	0.20	0.31	MC	FarmCPU	20LD					
rs339852	Chr02	40556659	8.77	0.07	0.26	TA	Farm CPU	LD20					
rs354154	Chr02	46205421	8.09	0.06	NA	MC	Blink, FarmCPU	20LD					
rs408531	Chr02	62771164	10.97	0.10	-0.69	EC	GLM, FarmCPU	19GY	Sobic.002G231600	62299796..62301505	Zm00001d032969 (BZ2)	56.60%	glutathione S-transferase
rs414975	Chr02	64401432	8.17	0.06	-0.57	TC	FarmCPU	20LD					
rs452039	Chr02	76474297	12.73	0.16	-0.26	MC	FarmCPU	20GY					
rs460802	Chr03	2837597	10.20	0.11	NA	EC	Blink	18GY	Sobic.003G031100	2833692..2837326	AT5G63650 (EGL1) /OsbHLH025	70.4% / 66.7%	bHLH transcription factor
rs549597	Chr03	44677014	8.56	0.08	0.69	EC	FarmCPU	20LD					
rs565552	Chr03	48904117	8.76	0.20	NA	EC	Blink	20LD	Sobic.003G183800	48914544..48917277	AT5G35550 (TT2)/MYB61	75.40%	MYB trancription factor
rs567919	Chr03	50230721	8.00	0.26	0.11	TA	Farm CPU	GY20					
rs705082	Chr04	12223742	16.57	0.05	NA	TC	Blink	20GY					
rs734999	Chr04	25184100	8.78	0.11	-0.39	TC	FarmCPU	20GY					
rs774984	Chr04	47172062	9.49	0.07	-0.64	EC	FarmCPU	20GY					
rs816473	Chr04	57984828	11.02	0.23	0.35	EC	FarmCPU	20GY	Sobic.004G230000	57980100..57981252	AT5G41220	51%	glutathione S-transferase
rs817518	Chr04	58255983	8.19	0.08	1.15	EC	GLM	18GY	Sobic.004G231700	58095961..58097637	AT5G35550 (TT2)	76.20%	MYB transcription factor
rs817519	Chr04	58256070	8.21	0.08	-1.18	EC	GLM	18GY					
rs817523	Chr04	58256282	8.45	0.09	-1.13	EC, TA	GLM	18GY, 20LD					
rs817524	Chr04	58256717	7.97	0.08	1.13	EC	GLM	18GY					



rs817525	Chr04	58256777	9.27	0.07	1.30	EC	GLM	18GY, 19GY, 20LD						
rs817526	Chr04	58256812	8.15	0.07	-1.21	EC	GLM	18GY						
rs817529	Chr04	58257640	7.95	0.07	-1.06	EC	GLM	20LD						
rs817530	Chr04	58257772	9.16	0.08	1.25	EC	GLM	18GY, 19GY						
rs817532	Chr04	58257830	8.48	0.08	1.20	EC	GLM	18GY						
rs817536	Chr04	58259076	8.24	0.06	-1.36	EC	GLM	18GY, 19GY, 20LD						
rs817542	Chr04	58260906	8.77	0.07	1.29	EC	GLM	18GY, 19GY, 20LD						
rs817543	Chr04	58261016	9.92	0.07	-0.39	TC	GLM, FarmCPU	18GY, 19GY, 20GY						
rs817544	Chr04	58261021	9.40	0.07	-1.33	EC	GLM	18GY, 19GY						
rs817545	Chr04	58261025	10.64	0.07	NA	EC, TC	GLM, Blink	18GY, 19GY, 20GY						
rs817546	Chr04	58261042	9.17	0.07	1.32	EC	GLM	18GY,19GY						
rs817548	Chr04	58261095	8.16	0.07	-1.12	EC	GLM	18GY, 20LD						
rs817549	Chr04	58261412	8.51	0.07	-1.19	EC	GLM	18GY, 19GY						
rs817550	Chr04	58261426	8.28	0.07	1.18	EC	GLM	18GY, 19GY, 20GY						
rs817555	Chr04	58262499	8.52	0.08	1.19	EC	GLM	18GY, 20LD						
rs817566	Chr04	58263284	9.15	0.07	1.28	EC	GLM	18GY, 19GY, 20GY						
rs817584	Chr04	58264569	7.76	0.09	-1.10	EC	GLM	18GY						
rs817656	Chr04	58266849	7.73	0.10	-1.06	EC	GLM	18GY						
rs817710	Chr04	58271851	8.85	0.07	-1.27	EC	GLM	18GY, 19GY, 20GY						
rs817722	Chr04	58274109	8.79	0.07	1.27	EC	GLM	18GY, 19GY, 20LD						
rs817724	Chr04	58275091	9.54	0.07	-1.35	EC	GLM	18GY, 19GY, 20LD						
rs817738	Chr04	58277952	9.60	0.06	-1.35	EC	GLM	18GY, 19GY, 20LD						
rs817740	Chr04	58278177	8.09	0.06	1.35	EC	GLM	18GY, 19GY, 20LD	Sobic.004G236000	58381946..58385197	AT5G48100 (TT10)	70.20%	Laccase/Diphenol oxidase family protein	
rs817748	Chr04	58279856	8.10	0.08	-1.14	EC	GLM	18GY						
rs818491	Chr04	58511192	7.63	0.31	0.79	EC	GLM	19GY						
rs818593	Chr04	58542395	10.22	0.18	0.90	EC	GLM	19GY, 20LD						
rs818594	Chr04	58542825	8.55	0.19	-0.77	EC	GLM	19GY, 20LD						
rs818595	Chr04	58542930	9.72	0.18	-0.86	EC	GLM	18GY, 19GY, 20LD						
rs818596	Chr04	58543283	9.59	0.22	0.89	EC	GLM	19GY, 20LD						
rs818597	Chr04	58543356	9.44	0.22	-0.90	EC	GLM	18GY, 19GY, 20LD						
rs818598	Chr04	58543590	7.80	0.21	-0.81	EC	GLM	19GY						
rs818600	Chr04	58544486	8.60	0.23	0.85	EC	GLM	19GY						
rs818601	Chr04	58544750	9.47	0.22	0.89	EC	GLM	19GY, 20LD						
rs818602	Chr04	58544873	9.85	0.22	0.92	EC	GLM	19GY, 20LD						
rs818603	Chr04	58545050	11.06	0.24	1.05	EC	GLM, MLM	18GY, 19GY, 20LD						
rs818604	Chr04	58545077	11.22	0.21	-1.04	EC	GLM, MLM	18GY, 19GY, 20LD						
rs818605	Chr04	58545131	10.52	0.22	0.98	EC	GLM	18GY, 19GY, 20LD						
rs818606	Chr04	58545161	8.89	0.21	-0.90	EC	GLM	18GY, 19GY						
rs818607	Chr04	58545198	9.04	0.21	0.91	EC	GLM	18GY, 19GY						
rs818608	Chr04	58545331	8.59	0.21	-0.87	EC	GLM	19GY						
rs818609	Chr04	58545720	8.34	0.22	-0.83	EC	GLM	19GY, 20LD						
rs818610	Chr04	58545836	9.84	0.23	0.91	EC	GLM	18GY, 19GY, 20LD						
rs818611	Chr04	58546496	8.33	0.22	-0.83	EC	GLM	19GY						
rs818612	Chr04	58546567	9.51	0.22	-0.91	EC	GLM	19GY, 20LD						
rs818613	Chr04	58546586	10.68	0.21	-1.01	EC	GLM, MLM	18GY, 19GY, 20GY, 20LD						
rs818614	Chr04	58546627	10.16	0.21	-0.97	EC	GLM	18GY, 19GY, 20LD						
rs818615	Chr04	58546655	9.05	0.20	-0.92	EC	GLM	19GY, 20LD						
rs818616	Chr04	58546786	9.05	0.21	0.91	EC	GLM	19GY						
rs818619	Chr04	58547497	10.02	0.21	-0.98	EC	GLM	18GY, 19GY, 20LD						
rs818620	Chr04	58547841	8.10	0.21	0.85	EC	GLM	19GY						
rs818621	Chr04	58547965	9.23	0.23	0.87	EC	GLM	18GY, 19GY						
rs818622	Chr04	58548037	7.83	0.21	-0.83	EC	GLM	19GY						
rs818623	Chr04	58548121	9.02	0.20	-0.90	EC	GLM	19GY, 20LD						
rs818624	Chr04	58548261	10.44	0.23	0.96	EC	GLM, MLM	18GY, 19GY, 20GY, 20LD						
rs818625	Chr04	58548323	10.73	0.22	-0.97	EC	GLM, MLM	18GY, 19GY, 20GY, 20LD						
rs818626	Chr04	58548611	10.18	0.22	0.95	EC	GLM	18GY, 19GY, 20LD						
rs818627	Chr04	58548615	9.79	0.21	0.94	EC	GLM	18GY, 19GY, 20LD						
rs818628	Chr04	58548682	9.48	0.21	0.91	EC	GLM	18GY, 19GY, 20LD						
rs818629	Chr04	58548811	8.86	0.22	-0.87	EC	GLM	19GY						
rs818630	Chr04	58549716	9.01	0.22	0.89	EC	GLM	19GY						
rs818631	Chr04	58549848	10.03	0.22	0.92	EC	GLM	18GY, 19GY, 20LD						
rs818632	Chr04	58551216	8.99	0.22	0.87	EC	GLM	19GY, 20LD						
rs818634	Chr04	58552028	9.98	0.23	-0.91	EC	GLM	18GY, 19GY, 20LD						
rs818635	Chr04	58552072	10.10	0.22	-0.93	EC	GLM	18GY, 19GY, 20LD						
rs818636	Chr04	58552379	9.93	0.22	0.92	EC	GLM	18GY, 19GY, 20LD						



rs818637	Chr04	58561522	8.39	0.21	0.89	EC	GLM	19GY					
rs818638	Chr04	58561584	8.16	0.21	0.85	EC	GLM	19GY					
rs818639	Chr04	58561867	9.19	0.23	0.88	EC	GLM	19GY, 20LD					
rs818640	Chr04	58561885	8.02	0.21	0.85	EC	GLM	19GY					
rs818641	Chr04	58564734	9.99	0.22	0.91	EC	GLM	18GY, 19GY, 20LD					
rs818642	Chr04	58565766	10.47	0.22	0.95	EC	GLM	18GY, 19GY, 20LD					
rs818643	Chr04	58566271	8.68	0.22	0.86	EC	GLM	19GY					
rs818644	Chr04	58568033	9.71	0.24	-0.89	EC	GLM	18GY, 19GY, 20LD					
rs818645	Chr04	58568121	9.85	0.21	-0.94	EC	GLM	18GY, 19GY, 20LD					
rs818646	Chr04	58568616	9.85	0.23	-0.91	EC	GLM	18GY, 19GY, 20LD					
rs818647	Chr04	58569766	9.97	0.21	-0.93	EC	GLM	18GY, 19GY, 20LD					
rs818648	Chr04	58570859	8.34	0.22	-0.86	EC	GLM	19GY					
rs818718	Chr04	58580095	10.18	0.20	-0.99	EC	GLM	18GY, 19GY, 20LD					
rs818720	Chr04	58580910	8.83	0.20	-0.91	EC	GLM	19GY					
rs818721	Chr04	58581243	8.36	0.22	-0.87	EC	GLM	19GY					
rs818722	Chr04	58581306	8.48	0.22	0.86	EC	GLM	19GY, 20LD					
rs818723	Chr04	58581317	8.65	0.21	-0.89	EC	GLM	19GY, 20LD					
rs818724	Chr04	58581998	9.60	0.22	0.91	EC	GLM	18GY, 19GY, 20LD					
rs818725	Chr04	58582238	10.10	0.23	-0.93	EC	GLM	18GY, 19GY, 20LD					
rs818726	Chr04	58584255	9.36	0.22	0.90	EC	GLM	19GY, 20LD					
rs818727	Chr04	58585562	8.28	0.21	-0.85	EC	GLM	19GY					
rs818728	Chr04	58585616	8.30	0.21	0.84	EC	GLM	19GY					
rs818729	Chr04	58585736	10.12	0.23	-0.92	EC	GLM	18GY, 19GY, 20LD					
rs818730	Chr04	58585844	10.35	0.23	-0.93	EC	GLM	18GY, 19GY, 20LD					
rs818731	Chr04	58586912	9.36	0.22	0.90	EC	GLM	18GY, 19GY, 20LD					
rs818732	Chr04	58586950	8.40	0.22	0.84	EC	GLM	19GY					
rs818733	Chr04	58587000	10.39	0.21	0.98	EC	GLM	18GY, 19GY, 20LD					
rs818734	Chr04	58587081	8.71	0.19	0.94	EC	GLM	19GY, 20LD					
rs818735	Chr04	58587094	8.39	0.17	1.01	EC	GLM	19GY					
rs818736	Chr04	58587148	7.77	0.18	0.94	EC	GLM	19GY					
rs818737	Chr04	58587475	10.63	0.22	-0.97	EC	GLM	18GY, 19GY, 20LD					
rs818738	Chr04	58587489	10.66	0.22	-0.96	EC	GLM	18GY, 19GY, 20LD					
rs818739	Chr04	58587509	10.94	0.22	-0.97	EC	GLM	18GY, 19GY, 20LD					
rs818740	Chr04	58587795	10.40	0.22	0.94	EC	GLM	18GY, 19GY, 20LD					
rs818741	Chr04	58587942	9.05	0.22	-0.87	EC	GLM	19GY, 20LD					
rs818743	Chr04	58588152	8.12	0.21	-0.84	EC	GLM	19GY					
rs818744	Chr04	58588300	9.93	0.21	0.93	EC	GLM	18GY, 19GY, 20LD					
rs818745	Chr04	58588790	9.70	0.23	-0.89	EC	GLM	18GY, 19GY, 20LD					
rs818746	Chr04	58588946	8.32	0.22	0.83	EC	GLM	19GY					
rs818747	Chr04	58589143	9.45	0.22	-0.88	EC	GLM	19GY, 20LD					
rs818749	Chr04	58589434	9.23	0.21	0.89	EC	GLM	18GY, 19GY, 20LD					
rs818750	Chr04	58589752	10.11	0.23	-0.93	EC	GLM	18GY, 19GY, 20LD					
rs818751	Chr04	58589849	9.74	0.23	0.88	EC	GLM	19GY, 20LD					
rs818752	Chr04	58589858	9.83	0.23	0.89	EC	GLM	18GY, 19GY, 20LD					
rs818753	Chr04	58589941	9.91	0.23	-0.90	EC	GLM	18GY, 19GY, 20LD					
rs818754	Chr04	58590266	9.53	0.21	-0.92	EC	GLM	18GY, 19GY, 20LD					
rs818755	Chr04	58590987	9.92	0.23	-0.90	EC	GLM	18GY, 19GY, 20LD					
rs818756	Chr04	58592183	10.45	0.23	-0.97	EC	GLM	18GY, 19GY, 20LD					
rs818757	Chr04	58592443	9.75	0.22	-0.94	EC	GLM	18GY, 19GY, 20LD					
rs818758	Chr04	58592591	9.97	0.23	0.93	EC	GLM	18GY, 19GY, 20LD					
rs818759	Chr04	58592715	10.35	0.23	-0.94	EC	GLM	18GY, 19GY, 20LD					
rs818760	Chr04	58594362	9.01	0.24	-0.87	EC	GLM	18GY, 19GY, 20LD					
rs818761	Chr04	58595900	10.41	0.23	0.95	EC	GLM	18GY, 19GY, 20LD					
rs818762	Chr04	58595901	10.41	0.23	-0.95	EC	GLM	18GY, 19GY, 20LD					
rs818763	Chr04	58596249	10.14	0.24	0.94	EC	GLM	18GY, 19GY, 20LD					
rs818764	Chr04	58596399	8.93	0.23	0.90	EC	GLM	18GY, 19GY, 20LD					
rs818765	Chr04	58597093	10.39	0.25	0.92	EC	GLM	18GY, 19GY, 20LD					
rs818766	Chr04	58598056	9.71	0.29	-0.86	EC	GLM	18GY, 19GY, 20LD					
rs818773	Chr04	58607153	7.80	0.37	-0.78	EC	GLM	19GY					
rs818774	Chr04	58607321	7.71	0.22	0.86	EC	GLM	19GY					
rs818775	Chr04	58607356	8.93	0.33	0.84	EC	GLM	18GY, 19GY					
rs818776	Chr04	58607453	7.86	0.31	-0.80	EC	GLM	19GY					
rs818777	Chr04	58607627	7.91	0.25	-0.82	EC	GLM	19GY					
rs818780	Chr04	58608732	7.79	0.36	0.74	EC	GLM	19GY					
rs818781	Chr04	58609106	7.77	0.34	0.78	EC	GLM	19GY					



rs18784	Chr4	58610803	7.71	0.33	-0.79	EC	GLM	19GY					
rs818790	Chr04	58611171	8.90	0.32	-0.82	EC	GLM	18GY, 19GY, 20LD					
rs818791	Chr04	58612347	8.16	0.32	-0.80	EC	GLM	19GY, 20LD					
rs818791	Chr04	58612650	7.76	0.33	-0.77	EC	GLM	19GY					
rs818792	Chr04	58612652	7.76	0.33	0.77	EC	GLM	19GY					
rs818802	Chr04	58615950	8.37	0.33	0.80	EC	GLM	19GY					
rs818803	Chr04	58616224	7.93	0.28	-0.79	EC	GLM	19GY					
rs818804	Chr04	58616234	8.72	0.32	-0.81	EC	GLM	19GY					
rs818812	Chr04	58631559	9.53	0.18	-0.86	EC	GLM	19GY, 20LD					
rs818949	Chr04	58792489	9.65	0.15	-0.96	EC	GLM	20LD					
rs819085	Chr04	58875087	7.67	0.17	-0.76	EC	GLM	20LD					
rs819476	Chr04	58997039	7.87	0.34	0.81	EC	GLM	19GY					
rs819645	Chr04	59107008	8.25	0.26	-0.71	EC	GLM	20LD					
rs819646	Chr04	59130765	8.00	0.26	0.79	EC	GLM	19GY					
rs819647	Chr04	59131128	7.87	0.28	-0.77	EC	GLM	19GY					
rs819648	Chr04	59131458	8.21	0.27	0.82	EC	GLM	19GY					
rs819649	Chr04	59131483	7.85	0.27	0.80	EC	GLM	19GY					
rs819654	Chr04	59132207	8.47	0.26	-0.84	EC	GLM	19GY, 20LD					
rs819655	Chr04	59132964	7.92	0.26	0.83	EC	GLM	19GY					
rs819658	Chr04	59133902	8.35	0.27	-0.84	EC	GLM	19GY, 20LD					
rs819659	Chr04	59133903	7.93	0.26	0.84	EC	GLM	19GY					
rs819662	Chr04	59135388	8.50	0.28	0.82	EC	GLM	19GY, 20LD					
rs819663	Chr04	59135684	8.27	0.26	0.83	EC	GLM	19GY					
rs819664	Chr04	59135724	8.19	0.28	0.79	EC	GLM	19GY, 20LD					
rs819665	Chr04	59135989	8.22	0.29	0.80	EC	GLM	19GY, 20LD					
rs819666	Chr04	59136216	7.60	0.27	0.66	EC	GLM	20LD					
rs906558	Chr05	12580908	10.67	0.27	-0.14	TA	Farm CPU	LD20					
rs1128953	Chr06	5660012	11.21	0.06	-0.53	TC	FarmCPU	20GY					
rs1227192	Chr06	49977736	8.04	0.30	0.32	EC	FarmCPU	20LD					
rs1228171	Chr06	50218998	9.66	0.08	NA	EC	Blink	20GY, 20LD					
rs1287933	Chr07	4555938	7.92	0.16	0.12	TA	Farm CPU	LD20					
rs1340021	Chr07	24356625	7.76	0.12	0.41	EC	FarmCPU	20GY					
rs1373101	Chr07	39465273	12.13	0.10	-0.55	TC	FarmCPU	20LD					
rs1378959	Chr07	41302381	9.52	0.34	-0.42	TC	FarmCPU	20LD	Sobic.007G111700	42061203..42066842	AT5G17220 (TT19)	51.20%	glutathione S-transferase
rs1393706	Chr07	48120629	10.21	0.38	0.56	EC	FarmCPU	19GY					
rs1406905	Chr07	53542151	8.87	0.27	NA	EC	Blink	18GY					
rs1413861	Chr07	55281957	8.49	0.30	0.32	EC	FarmCPU	20LD	Sobic.007G132600	55272193..55274367	AT5G35550 (TT2)	73.80%	MYB trancription factor
rs1444175	Chr07	61701838	10.45	0.08	0.69	TC	FarmCPU	20LD	Sobic.007G183200	61641933..61646818	AT4G09820 (TT8)	75.50%	bHLH transcription factor
rs1447139	Chr07	62672940	13.53	0.43	0.39	TC	FarmCPU	20LD					
rs1516994	Chr08	16443895	7.90	0.06	NA	EC	Blink	18GY					
rs1583347	Chr08	48591962	17.94	0.07	-0.62	MC	FarmCPU, Blink	20GY					
rs1607600	Chr08	54420851	9.13	0.41	0.24	EC	FarmCPU	20GY	Sobic.008G122800	54551889..54554095	AT5G07990 (TT7)	46.30%	flavonoid 3'-monooxygenase
rs1637430	Chr08	60826776	8.33	0.43	0.21	TC	FarmCPU	20LD	Sobic.008G171600	60536621..60539482	AT3G59030 (TT12)	80%	multidrug resistance protein // protein transparent testa 12
rs1659155	Chr09	3575029	7.87	0.07	NA	TC	Blink	20LD					
rs1721463	Chr09	26255522	8.29	0.14	-0.41	TC	FarmCPU	20LD					
rs1733612	Chr09	33612738	10.21	0.17	-0.50	EC	FarmCPU	20GY					
rs1739667	Chr09	36301937	10.07	0.17	-0.20	TA	Farm CPU	LD20					
rs1789454	Chr09	51494677	8.57	0.24	-0.24	TC	FarmCPU	20GY					
rs1849128	Chr10	7459027	7.89	0.23	-0.22	EC	FarmCPU	20GY					
rs1872240	Chr10	12296082	10.85	0.14	0.39	MC	FarmCPU	20LD					
rs1879296	Chr10	13336862	8.78	0.13	0.19	TA	Farm CPU	LD20					
rs1982003	Chr10	51623911	9.95	0.09	-0.59	EC	FarmCPU, Blink	19GY					
rs1983370	Chr10	51930491	9.28	0.20	-0.12	TA	Farm CPU	GY20					
rs2008621	Chr10	58403535	12.29	0.10	-0.46	EC	FarmCPU	19GY	Sobic.010G242100	58339538..58342447	AT5G07990 (TT7)	46.50%	flavonoid 3'-monooxygenase